

A Study for the U.S. Department of the Interior,
Minerals Management Service



MMS Department of the Interior

**Decommissioning Cost Update for Removing Pacific OCS Region
Offshore Oil and Gas Facilities, January 2010, Volume 2**
USDOL Contract M09PC00024

Conducted by



PROSERV OFFSHORE
HOUSTON, TX
PROJECT NO. 29056-11

JANUARY, 2010

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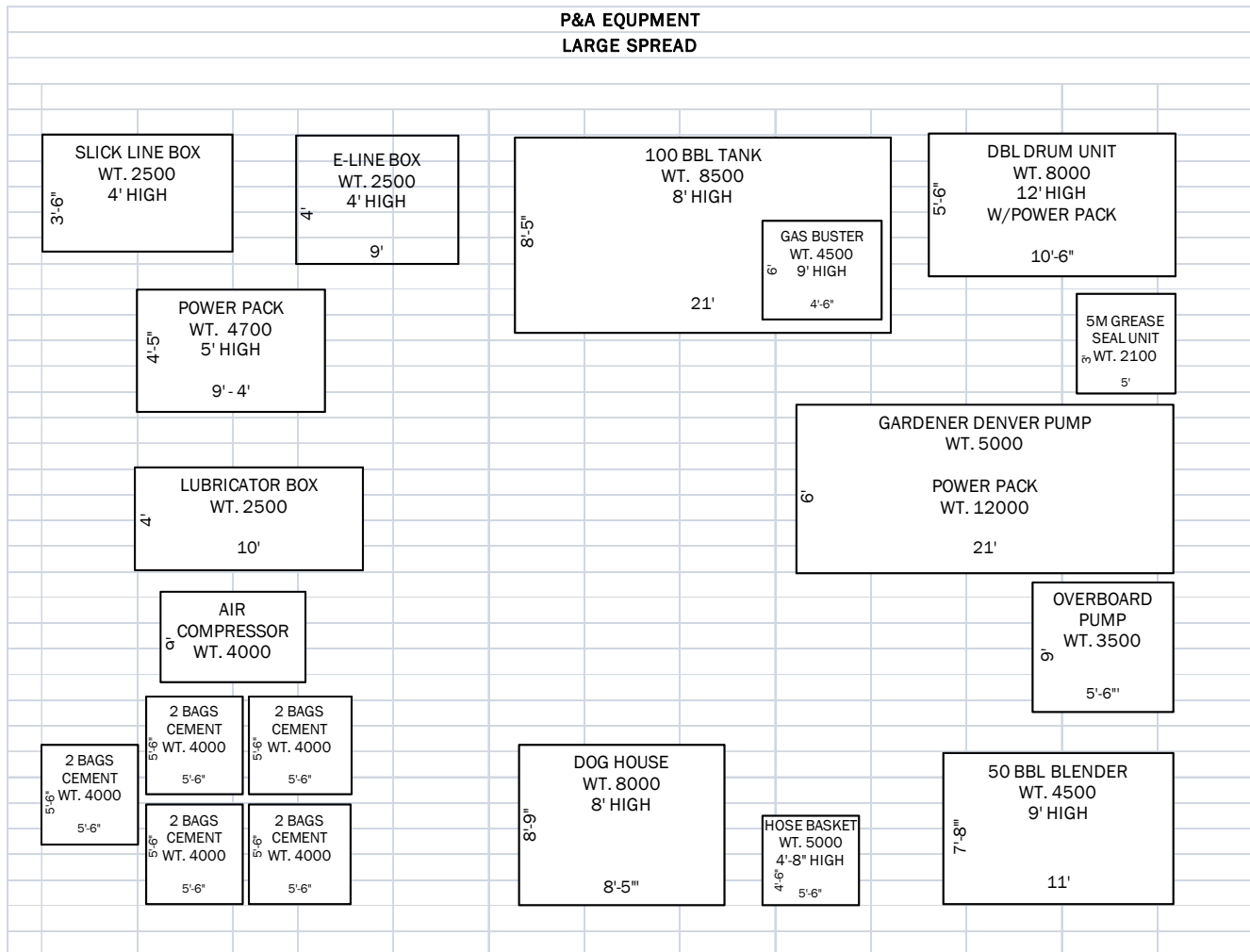
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Appendices

Appendix 1: Typical Rig-Less P&A Spread Footprint





Appendix 2: Complete Rig-Less Well P&A Estimates

Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
A	52	0.1	0.15	0.08	45	5	1	1	13	168
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		170	\$306,000.00				
Rental Crane	174	days	\$800.00	\$139,200.00	1	\$139,200.00				
Supply Boat	170	days	\$7,500.00	\$1,275,000.00	1	\$1,275,000.00				
Catering, Meals & Lodging	170	days	\$1,200.00	\$204,000.00	1	\$204,000.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$1,720,200.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		172	\$1,403,520.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		172	\$868,944.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		172	\$430,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		3.9	\$62,400.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	52	\$234,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	52	\$520,000.00				
			Misc. Total=			\$3,518,864.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
** Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges										
				Total w/o Cont.:		\$5,239,064.00				
						Cost per Well	\$	100,751		



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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
B	57	0.1	0.15	0.08	49	6	1	1	13	184
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		186	\$334,800.00				
Rental Crane	190	days	\$800.00	\$152,000.00	1	\$152,000.00				
Supply Boat	186	days	\$7,500.00	\$1,395,000.00	1	\$1,395,000.00				
Catering, Meals & Lodging	186	days	\$1,200.00	\$223,200.00	1	\$223,200.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$1,881,800.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		188	\$1,534,080.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		188	\$949,776.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		188	\$470,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		3.9	\$62,400.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	57	\$256,500.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	57	\$570,000.00				
			Misc. Total=			\$3,842,756.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$5,724,556.00				
					Cost per Well	\$ 100,431				



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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
C	38	0.1	0.15	0.08	33	3	1	1	13	124
					Well Complexity Work Days Table					
					Well Complexity	Low	Med-Low	Med-High	High	
					Days/Well	3	4	5	8	
					</					



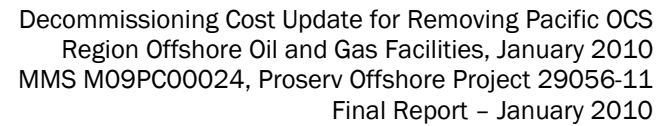
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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Edith	18	0.05	0.15	0.08	12	4	1	1	13	65
						Well Complexity Work Days Table				
						Well Complexity Days/Well	Low	Med-Low	Med-High	High
							3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		67	\$120,600.00				
Rental Crane	71	days	\$800.00	\$56,800.00	1	\$56,800.00				
Supply Boat	67	days	\$7,500.00	\$502,500.00	1	\$502,500.00				
Catering, Meals & Lodging	67	days	\$1,200.00	\$80,400.00	1	\$80,400.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$679,900.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		69	\$563,040.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		69	\$348,588.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		69	\$172,500.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		3.9	\$62,400.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	18	\$81,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	18	\$180,000.00				
			Misc. Total=			\$1,407,528.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$2,087,428.00				
						Cost Per Well	\$	115,968		



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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Ellen	61	0.05	0.15	0.08	18	39	3	1	23	233
					Well Complexity Work Days Table					
					Well Complexity Days/Well	Low	Med-Low	Med-High	High	
						3	4	5	8	
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		235	\$423,000.00				
Rental Crane	239	days	\$800.00	\$191,200.00	1	\$191,200.00				
Supply Boat	235	days	\$7,500.00	\$1,762,500.00	1	\$1,762,500.00				
Catering, Meals & Lodging	235	days	\$1,200.00	\$282,000.00	1	\$282,000.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$2,376,700.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		237	\$1,933,920.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		237	\$1,197,324.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		237	\$592,500.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		6.9	\$110,400.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	61	\$274,500.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	61	\$610,000.00				
			Misc. Total=			\$4,718,644.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$7,095,344.00				
					Cost Per Well	\$ 116,317				

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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Gail	24	0.1	0.15	0.08	0	19	2	3	34	110
						Well Complexity Work Days Table				
					Well Complexity	Low	Med-Low	Med-High	High	
					Days/Well	3	4	5	8	
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		112	\$201,600.00				
Rental Crane	116	days	\$800.00	\$92,800.00	1	\$92,800.00				
Supply Boat	112	days	\$7,500.00	\$840,000.00	1	\$840,000.00				
Catering, Meals & Lodging	112	days	\$1,200.00	\$134,400.00	1	\$134,400.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$1,134,400.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		114	\$930,240.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		114	\$575,928.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		114	\$285,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		10.2	\$163,200.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	24	\$108,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	24	\$240,000.00				
			Misc. Total=			\$2,302,368.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$3,436,768.00				
					Cost per Well	\$ 143,199				



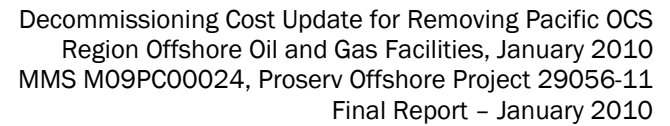
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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Gilda	63	0.1	0.15	0.08	8	47	6	2	46	258
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		260	\$468,000.00				
Rental Crane	264	days	\$800.00	\$211,200.00	1	\$211,200.00				
Supply Boat	260	days	\$7,500.00	\$1,950,000.00	1	\$1,950,000.00				
Catering, Meals & Lodging	260	days	\$1,200.00	\$312,000.00	1	\$312,000.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$2,629,200.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		262	\$2,137,920.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		262	\$1,323,624.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		262	\$655,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		13.8	\$220,800.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	63	\$283,500.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	63	\$630,000.00				
			Misc. Total=			\$5,250,844.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges										
				Total w/o Cont.:		\$7,880,044.00				
						Cost per Well	\$	125,080		



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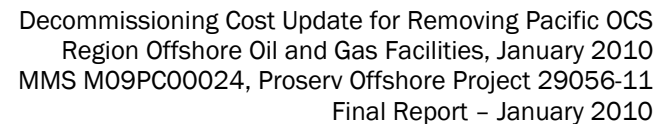
Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Gina	12	0.1	0.15	0.08	7	3	1	1	13	46
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		48	\$86,400.00				
Rental Crane	52	days	\$800.00	\$41,600.00	1	\$41,600.00				
Supply Boat	48	days	\$7,500.00	\$360,000.00	1	\$360,000.00				
Catering, Meals & Lodging	48	days	\$1,200.00	\$57,600.00	1	\$57,600.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$488,000.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		50	\$408,000.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		50	\$252,600.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		50	\$125,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		3.9	\$62,400.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	12	\$54,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	12	\$120,000.00				
			Misc. Total=			\$1,022,000.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges										
				Total w/o Cont.:		\$1,510,000.00				
						Cost Per Well	\$ 125,833			

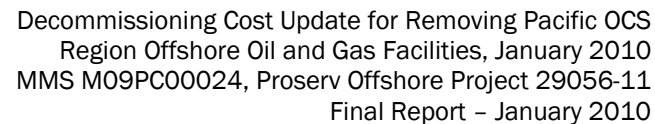
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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Habitat	20	0.1	0.15	0.08	1	16	2	1	18	85
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		87	\$156,600.00				
Rental Crane	91	days	\$800.00	\$72,800.00	1	\$72,800.00				
Supply Boat	87	days	\$7,500.00	\$652,500.00	1	\$652,500.00				
Catering, Meals & Lodging	87	days	\$1,200.00	\$104,400.00	1	\$104,400.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$881,900.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		89	\$726,240.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		89	\$449,628.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		89	\$222,500.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		5.4	\$86,400.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	20	\$90,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	20	\$200,000.00				
			Misc. Total=			\$1,774,768.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
** Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$2,656,668.00				
						Cost Per Well	\$	132,833		

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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Henry	23	0.1	0.15	0.08	20	1	1	1	13	77
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		79	\$142,200.00				
Rental Crane	83	days	\$800.00	\$66,400.00	1	\$66,400.00				
Supply Boat	79	days	\$7,500.00	\$592,500.00	1	\$592,500.00				
Catering, Meals & Lodging	79	days	\$1,200.00	\$94,800.00	1	\$94,800.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$801,100.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		81	\$660,960.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		81	\$409,212.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		81	\$202,500.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		3.9	\$62,400.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	23	\$103,500.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	23	\$230,000.00				
			Misc. Total=			\$1,668,572.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$2,469,672.00				
						Cost Per Well	\$	107,377		



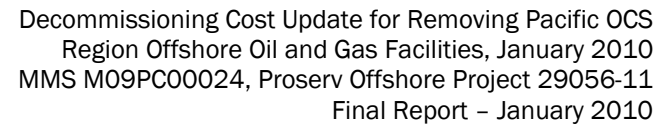
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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Heritage	48	0.1	0.15	0.08	0	0	25	23	309	309
					Well Complexity Work Days Table					
					Well Complexity	Low	Med-Low	Med-High	High	
					Days/Well	3	4	5	8	
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		311	\$559,800.00				
Rental Crane	315	days	\$800.00	\$252,000.00	1	\$252,000.00				
Supply Boat	311	days	\$7,500.00	\$2,332,500.00	1	\$2,332,500.00				
Catering, Meals & Lodging	311	days	\$1,200.00	\$373,200.00	1	\$373,200.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$3,144,300.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		313	\$2,554,080.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		313	\$1,581,276.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		313	\$782,500.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		92.7	\$1,483,200.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	48	\$216,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	48	\$480,000.00				
			Misc. Total=			\$7,097,056.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$10,241,356.00				
					Cost Per Well	\$ 213,362				



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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Hermosa	13	0.15	0.15	0.08	0	0	10	3	74	74
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		76	\$136,800.00				
Rental Crane	80	days	\$800.00	\$64,000.00	1	\$64,000.00				
Supply Boat	76	days	\$7,500.00	\$570,000.00	1	\$570,000.00				
Catering, Meals & Lodging	76	days	\$1,200.00	\$91,200.00	1	\$91,200.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$770,800.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		78	\$636,480.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		78	\$394,056.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		78	\$195,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		22.2	\$355,200.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	13	\$58,500.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	13	\$130,000.00				
			Misc. Total=			\$1,769,236.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$2,540,036.00				
						Cost Per well	\$	195,387		

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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Hillhouse	47	0.1	0.15	0.08	40	5	1	1	13	153
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		155	\$279,000.00				
Rental Crane	159	days	\$800.00	\$127,200.00	1	\$127,200.00				
Supply Boat	155	days	\$7,500.00	\$1,162,500.00	1	\$1,162,500.00				
Catering, Meals & Lodging	155	days	\$1,200.00	\$186,000.00	1	\$186,000.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$1,568,700.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		157	\$1,281,120.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		157	\$793,164.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		157	\$392,500.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		3.9	\$62,400.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	47	\$211,500.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	47	\$470,000.00				
			Misc. Total=			\$3,210,684.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
** Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges						Total w/o Cont.:	\$4,779,384.00			
						Cost Per well	\$ 101,689			



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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Hogan	39	0.1	0.15	0.08	13	18	4	4	52	163
					Well Complexity Work Days Table					
					Well Complexity	Low	Med-Low	Med-High	High	
					Days/Well	3	4	5	8	
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		165	\$297,000.00				
Rental Crane	169	days	\$800.00	\$135,200.00	1	\$135,200.00				
Supply Boat	165	days	\$7,500.00	\$1,237,500.00	1	\$1,237,500.00				
Catering, Meals & Lodging	165	days	\$1,200.00	\$198,000.00	1	\$198,000.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$1,669,700.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		167	\$1,362,720.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		167	\$843,684.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		167	\$417,500.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		15.6	\$249,600.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	39	\$175,500.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	39	\$390,000.00				
			Misc. Total=			\$3,439,004.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$5,108,704.00				
					Cost Per Well	\$ 130,992				



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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Hondo	28	0.1	0.15	0.08	0	0	24	4	152	152
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		154	\$277,200.00				
Rental Crane	158	days	\$800.00	\$126,400.00	1	\$126,400.00				
Supply Boat	154	days	\$7,500.00	\$1,155,000.00	1	\$1,155,000.00				
Catering, Meals & Lodging	154	days	\$1,200.00	\$184,800.00	1	\$184,800.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$1,558,600.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		156	\$1,272,960.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		156	\$788,112.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		156	\$390,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		45.6	\$729,600.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	28	\$126,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	28	\$280,000.00				
			Misc. Total=			\$3,586,672.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$5,145,272.00				
						Cost Per well	\$	183,760		



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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Houchin	36	0.1	0.15	0.08	12	16	4	4	52	152
						Well Complexity Work Days Table				
						Well Complexity	Low	Med-Low	Med-High	High
						Days/Well	3	4	5	8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		154	\$277,200.00				
Rental Crane	158	days	\$800.00	\$126,400.00	1	\$126,400.00				
Supply Boat	154	days	\$7,500.00	\$1,155,000.00	1	\$1,155,000.00				
Catering, Meals & Lodging	154	days	\$1,200.00	\$184,800.00	1	\$184,800.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$1,558,600.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		156	\$1,272,960.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		156	\$788,112.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		156	\$390,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		15.6	\$249,600.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	36	\$162,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	36	\$360,000.00				
			Misc. Total=			\$3,222,672.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$4,781,272.00				
						Cost Per Well	\$	132,813		



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Platform Rig-less Estimate										
Platform	Wells to P&A	Weather Cont.	Provisional Cont.	Engineering Cont.	Low # of Wells	Med Low # of Wells	Med High # of Wells	High # of Wells	# Med-High and High Well P&A Days	Well P&A Work Days
Irene	24	0.15	0.15	0.08	0	2	20	2	116	124
						Well Complexity Work Days Table				
						Well Complexity Days/Well	Low 3	Med-Low 4	Med-High 5	High 8
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost	Qty.	Subtotals				
Well P&A Fuel Costs	3-8	days (See Table)	\$1,800.00		126	\$226,800.00				
Rental Crane	130	days	\$800.00	\$104,000.00	1	\$104,000.00				
Supply Boat	126	days	\$7,500.00	\$945,000.00	1	\$945,000.00				
Catering, Meals & Lodging	126	days	\$1,200.00	\$151,200.00	1	\$151,200.00				
Workboat to Mob/Demob equipment and crew	4	days	\$7,500.00	\$30,000.00	1	\$30,000.00				
			Spread Total=			\$1,275,800.00				
DESCRIPTION	DURATION	UNITS	RATE	Estimated Cost						
Miscellaneous										
Crew and Spread travel/shipping costs from GOM (round trip)	1	Lump Sum	\$27,968.00	\$27,968.00	1	\$27,968.00				
10 Man P&A Crew (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$8,160.00		128	\$1,044,480.00				
10k P&A Equip Spread (Includes Mob/Demob)	3-8	days (See Table)	\$5,052.00		128	\$646,656.00				
Rentals (Includes Setup, Breakdown, Mob/Demob)	3-8	days (See Table)	\$2,500.00		128	\$320,000.00				
Coiled Tubing Unit*	2-3	days (See Table)	\$16,000.00		34.8	\$556,800.00				
Cement	300	sacks per well	\$15.00	\$4,500.00	24	\$108,000.00				
Misc. Consumables**	1	per well	\$10,000.00	\$10,000.00	24	\$240,000.00				
			Misc. Total=			\$2,915,936.00				
* Coil Tubing Unit only used on Med-High & High complexity wells @ 30% of P&A work days										
**Consumables include Cast Iron Bridge Plugs, Perforating Charges, and Tubular Cutting Charges				Total w/o Cont.:		\$4,191,736.00				
						Average Cost Per well	\$ 174,656			

Appendix 3: Conductor Removal Cost Calculations

Conductor Removal																	
Platform	Distance to Port (mi)	Number of Wells to Plug	Number of Conductors to Remove	Water Depth (ft)	Conductor Length (ft)	Weight per Foot (lb)	Weight per Conductor (lb)	Weight per Conductor (Ton)	Jack Cost during mob	Ft/section	Sections per conductor	Cut & Pull time per section (Hr)	Cut & Pull Time per conductor (Hr)	Cost per Abrasive Cut	Abrasive Cut Cost per Platform	Abr. Lump Mob/Demob Costs from GOM to POCS	
A	73	52	55	188	268	400	107200	53.6	\$6,514	40	6.7	4	26.8	\$2,486	\$136,730	\$13,984	
B	73	57	57	190	270	400	108000	54	\$6,514	40	6.75	4	27	\$2,486	\$141,702	\$13,984	
C	73	38	43	192	272	400	108800	54.4	\$6,514	40	6.8	4	27.2	\$2,486	\$106,898	\$13,984	
Edith	10	18	23	161	241	400	96400	48.2	\$4,086	40	6.025	4	24.1	\$2,486	\$57,178	\$27,968	
Ellen	10	61	64	265	345	400	138000	69	\$4,086	40	8.625	4	34.5	\$2,486	\$159,104	\$27,968	
Elly	10	0	0	257	0	400	0	0	\$0	40	0	4	0	\$2,486	\$0	\$0	
Eureka	10	50	60	700	780	400	312000	156	\$4,086	40	19.5	4	78	\$2,486	\$149,160	\$27,968	
Gail	45	24	24	739	819	400	327600	163.8	\$5,434	40	20.475	4	81.9	\$2,486	\$59,664	\$16,781	
Gilda	48	63	64	205	285	400	114000	57	\$5,550	40	7.125	4	28.5	\$2,486	\$159,104	\$27,968	
Gina	48	12	12	95	175	400	70000	35	\$5,550	40	4.375	4	17.5	\$2,486	\$29,832	\$13,984	
Grace	48	28	36	318	398	400	159200	79.6	\$5,550	40	9.95	4	39.8	\$2,486	\$89,496	\$16,781	
Habitat	70	20	20	29	370	400	148000	74	\$6,398	40	9.25	4	37	\$2,486	\$49,720	\$27,968	
Harmony	87	34	52	1198	1278	400	511200	255.6	\$7,053	40	31.95	4	127.8	\$2,486	\$129,272	\$27,968	
Harvest	140	19	25	675	755	400	302000	151	\$9,096	40	18.875	4	75.5	\$2,486	\$62,150	\$16,781	
Henry	73	23	24	173	253	400	101200	50.6	\$6,514	40	6.325	4	25.3	\$2,486	\$59,664	\$13,984	
Heritage	88	48	49	1075	1155	400	462000	231	\$7,092	40	28.875	4	115.5	\$2,486	\$121,814	\$27,968	
Hermosa	140	13	16	603	683	400	273200	136.6	\$9,096	40	17.075	4	68.3	\$2,486	\$39,776	\$16,781	
Hidalgo	140	14	14	430	510	400	204000	102	\$9,096	40	12.75	4	51	\$2,486	\$34,804	\$16,781	
Hillhouse	73	47	52	192	272	400	108800	54.4	\$6,514	40	6.8	4	27.2	\$2,486	\$129,272	\$13,984	
Hogan	71	39	39	154	234	400	93600	46.8	\$6,437	40	5.85	4	23.4	\$2,486	\$96,954	\$41,952	
Hondo	86	28	28	842	922	400	368800	184.4	\$7,015	40	23.05	4	92.2	\$2,486	\$69,608	\$27,968	
Houchin	71	36	36	163	243	400	97200	48.6	\$6,437	40	6.075	4	24.3	\$2,486	\$89,496	\$41,952	
Irene	149	24	24	242	322	400	128800	64.4	\$9,443	40	8.05	4	32.2	\$2,486	\$59,664	\$27,968	
Total			817														
									Load & unload							10998	
									Crew Airfare per person times 10 heads from LFT to LAX							4218	
									Crew Hourly pay 12 hrs times 10 heads							48000	
									Spread Shipping Costs per mile times distance from Houma to LA (Abrasive Spread)							20688	
									Total							83904	



Decommissioning Cost Update for Removing Pacific OCS
Region Offshore Oil and Gas Facilities, January 2010
MMS M09PC00024, Proserv Offshore Project 29056-11
Final Report – January 2010

Mob + DeMob Time (Hr)	Sever Time (Hr)	Removal Time (Hr)	Setup + Rigdown Time (Hr)	Support Vessel Cost/hr	Support Vessel Quantity	Total Support Vessel Costs/hr	Abrasive Cutter Spread /hr	Crew&Eq uipment/ Hr	Platform Support Crew & Equip/hr	Casing Jack Rental /hr	Rental Crane/hr	Mob + DeMob Costs	Setup + Rigdown Costs	Severing Costs	Removal Costs
42.25	248.23008	1474	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$107,758	\$18,092	\$698,103	\$3,333,456
42.25	257.25663	1539	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$107,758	\$18,092	\$723,489	\$3,480,454
42.25	194.07079	1169.6	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$107,758	\$18,092	\$545,790	\$2,645,054
26.5	103.8053	554.3	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$86,785	\$18,092	\$291,934	\$1,253,551
26.5	288.84954	2208	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$86,785	\$18,092	\$812,338	\$4,993,399
0	0	0	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$0	\$18,092	\$0	\$0
26.5	270.79645	4680	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$86,785	\$18,092	\$761,567	\$10,583,836
35.25	108.31858	1965.6	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$95,018	\$18,092	\$304,627	\$4,445,211
36	288.84954	1824	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$107,870	\$18,092	\$812,338	\$4,124,982
36	54.159289	210	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$93,886	\$18,092	\$152,313	\$474,916
36	162.47787	1432.8	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$96,683	\$18,092	\$456,940	\$3,240,282
41.5	90.265482	740	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$120,077	\$18,092	\$253,856	\$1,673,512
45.75	234.69025	6645.6	12	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$129,510	\$27,138	\$660,025	\$15,029,047
59	112.83185	1887.5	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$147,731	\$18,092	\$317,320	\$4,268,588
42.25	108.31858	607.2	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$107,758	\$18,092	\$304,627	\$1,373,185
46	221.15043	5659.5	12	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$130,065	\$27,138	\$621,946	\$12,798,978
59	72.212386	1092.8	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$147,731	\$18,092	\$203,085	\$2,471,371
59	63.185838	714	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$147,731	\$18,092	\$177,699	\$1,614,713
42.25	234.69025	1414.4	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$107,758	\$18,092	\$660,025	\$3,198,670
41.75	176.01769	912.6	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$134,616	\$18,092	\$495,019	\$2,063,848
45.5	126.37168	2581.6	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$128,955	\$18,092	\$355,398	\$5,838,297
41.75	162.47787	874.8	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$134,616	\$18,092	\$456,940	\$1,978,363
61.25	108.31858	772.8	8	500	2	\$1,000	\$625	\$407	\$42	\$154	\$33	\$163,913	\$18,092	\$304,627	\$1,747,690

Removal Cost w/ Casing Jacks (USD)	Removal cost/ft w/ Jacks (USD)
\$4,157,409	\$282
\$4,329,792	\$281
\$3,316,694	\$284
\$1,650,362	\$298
\$5,910,614	\$268
\$0	\$0
\$11,450,280	\$245
\$4,862,948	\$247
\$5,063,282	\$278
\$739,207	\$352
\$3,811,997	\$266
\$2,065,538	\$279
\$15,845,720	\$238
\$4,751,731	\$252
\$1,803,662	\$297
\$13,578,128	\$240
\$2,840,279	\$260
\$1,958,236	\$274
\$3,984,545	\$282
\$2,711,575	\$297
\$6,340,742	\$246
\$2,588,012	\$296
\$2,234,321	\$289
Total	\$105,995,074
Average per Conductor	\$130,055
Average per foot	\$259

Appendix 4: Power Cable Removal Cost Calculations

Cable Origin	Cable Terminus	Length (ft)	Depth (ft)	Mobilization	Cargo Barge Mobilization	Remove cable from J-Tube	Reel Cable	Demobilization	Weather	Cargo Barge Demob	Total Excluding Engineering Contingencies
A	B	2640	188-190	\$5,364	\$6,050	\$60,390	\$56,236	\$5,364	10%	\$6,050	\$168,611
B	C	2640	190-192	\$5,364	\$6,050	\$60,390	\$56,236	\$5,364	10%	\$6,050	\$168,611
C	Shore	26400	160-0	\$5,364	\$12,100	\$120,780	\$562,362	\$5,364	10%	\$12,100	\$888,856
Edith	Shore	36960	160-0	\$16,093	\$12,100	\$120,780	\$787,307	\$16,093	5%	\$12,100	\$1,146,090
Ellen^		0									\$0
Elly		0									\$0
Eureka	Ellen (2)	15297	700-265	\$16,093	\$12,100	\$80,520	\$162,925	\$16,093	5%	\$12,100	\$348,520
Gail		0									\$0
Gilda	Shore	36960	205-0	\$10,729	\$12,100	\$120,780	\$787,307	\$10,729	10%	\$12,100	\$1,180,766
Gina	Shore	1584	90-0	\$5,364	\$12,100	\$120,780	\$33,742	\$5,364	10%	\$12,100	\$228,081
Grace		0									\$0
Habitat	P/F A	19536	290-188	\$10,729	\$12,100	\$120,780	\$416,148	\$10,729	10%	\$12,100	\$716,817
Harmony	Shore (2)	59664	1198-0	\$10,729	\$12,100	\$144,936	\$635,469	\$10,729	10%	\$12,100	\$1,021,164
Harvest		0									\$0
Henry	Hillhouse	13200	173-190	\$5,364	\$12,100	\$120,780	\$281,181	\$5,364	10%	\$12,100	\$537,380
Heritage	Harmony	39072	1075-1198	\$5,364	\$12,100	\$144,936	\$2,226,953	\$5,364	10%	\$12,100	\$2,999,790
Heritage	Shore	104544	1075-0	\$5,364	\$12,100	\$144,936	\$832,296	\$5,364	10%	\$12,100	\$1,256,468
Hermosa		0									\$0
Hildalgo		0									\$0
Hillhouse	Shore	17952	175-0	\$5,364	\$12,100	\$120,780	\$382,406	\$5,364	10%	\$12,100	\$663,911
Hogan	Shore	4752	154-0	\$22,143	\$12,100	\$120,780	\$101,225	\$22,143	10%	\$12,100	\$345,992
Hondo	Harmony (2)	47520	842-1198	\$10,729	\$12,100	\$144,936	\$506,126	\$10,729	10%	\$12,100	\$859,484
Houchin	Hogan	3800	163-154	\$22,143	\$12,100	\$120,780	\$80,946	\$22,143	10%	\$12,100	\$320,644
Irene	Shore	14784	242-0	\$10,729	\$12,100	\$120,780	\$314,923	\$10,729	15%	\$12,100	\$612,071
Total											\$13,463,257
Resource	Cost/Hr										
Workboat	\$583										
ROV	\$650										
PL Survey	\$230										
Cargo Barge 180 & Tug	\$550										
Spread Rate	\$2,013										

Appendix 5: Schnitzer Disposal Proposal

The following disposal estimate was developed by Schnitzer Steel Products Company in 1996 and revalidated in 2004:

100 Site Preparation

A. Scope

Engineer and provide labor, material and equipment to prepare a site suitable for the receipt, transport, handling, storage, demolition and scrap processing.

Prepare a graded, graveled and drained site of about 30 acres. Provide additional compacted gravel areas for crane and crawler transporter haul roads. Install drainage basins and piping. Install protection for under ground utilities. Install protection for railroad crossings. Provide security fencing and temporary lighting.

Construct a barge reception facility suitable for barges to 150 feet in beam and 450 feet in length and 20 feet loaded draft. Install structures adequate for the anticipated ground loading of up to 10,000 psf. Installation will include a sheet pile dock structure with tie backs. To accommodate a range of river stages, provide for adding courses to the dock.

Install barge mooring fittings. Install barge utility connections for water and electricity. Perform maintenance dredging in way of the barge approach.

B. Key Assumptions

1. Twelve months is adequate to perform the project.
2. Use of a 30 acre site is adequate for the project.
3. There is no allowance for unknowns in the geo-technical qualities of the site.
4. Use of a single live loading facility is adequate for the project.

C. Estimate Accuracy

To improve estimate accuracy, the following steps are recommended:

1. Perform a detailed project review to determine optimum project schedule.
2. Analyze the site logistics, material and scrap operational work flow to determine optimum site.
3. Perform a rough geo-technical study of the site.
4. Prepare preliminary engineering for the live loading facility.

200 Lampson Material Handling

A. Scope

Engineer and provide labor, material and equipment to move offshore platform topsides and jackets. These movements include removal from the delivery barges, movements to and from site storage, movement to demolition and scrap preparation operations.

Engineering effort include design of the connecting structures between crawler transporters, cranes and the platform sections.

Engineering effort includes assistance with site layout, live loading facilities, haul roads and collaboration with Chevron and Twitchman, Snyder & Thornton engineering effort. The collaboration will strive for a seamless project engineering result.

Mobilize, demobilize and operate the following equipment:

- Two—Transilift 1100 Cranes
- Two—Manitowoc 230 Ton 4100 Cranes
- One—35 Ton Rough Terrain Crane
- One—Mobile Rigging Loft
- Three—2,000 Ton Crawler Transporters
- One—70 Ton Rough Terrain Crane
- One—30 Ton Forklift
- One—Set Heavy Rigging Equipment

B. Key Assumptions

1. Fabrication of the connecting structures between cranes, crawlers and platform pieces in not included.
2. Pricing is subject to further definition of the project requirements.
3. One Transilift crane will operate for 9 months the other will operate for 12 months.

4. Transilift 1100 cranes will directly offload smaller sections from the delivery barge.

C. Estimate Accuracy

To improve estimate accuracy, the following steps are recommended:

1. Provide data and perform engineering analysis to define transport interface structures.
2. Analyze the site logistics, material and scrap operational work flow to determine optimum site.

300 Platform Offloading

A. Scope

Provide labor and equipment to receive, offload and let go barges delivering the platform sections to the scrap facility.

Provide labor to tie up, standby and let go the barges during the offloading cycle. Provide standby tugs during the heavy lift transfer operations. Provide idle berths, electric and water support utilities for towing tugs and their barges.

Provide labor to assist with the installation of the connecting framing and rigging for the crane and crawler transport operation. Remove and re-use this framing to extent possible.

Install, position and adjust temporary support structures in the onshore storage locations.

Perform a material investigation of each section for hazardous materials, non-ferrous metals, re-usable machinery and equipment, and safety hazards.

B. Key Assumptions

1. There is a total of 47 platform sections with a total weight of 37,000 short tons.
2. There is a total of 16 barges arriving over a nine month period. Best effort will be made for a barge turnaround of about 72 hours.
3. Labor and equipment for ballast additions and adjustments for offloading will be provided by the barge operator.
4. Fabrication of the connecting structure between cranes, crawlers and platform sections is not included.

C. Estimate Accuracy

To improve estimate accuracy, the following steps are recommended:

1. Perform a detailed project review to determine optimum project schedule.
2. Provide data and perform engineering analysis to define transport interface structures.

400 Platform Scrapping

A. Scope

Provide labor, material and equipment for the demolition and scrap processing of 37,000 tons of offshore platform topside structures.

Remove and properly dispose of asbestos, PCB's and other hazardous materials. Perform the personnel safety procedures required by federal, state and local regulations.

Remove major non-ferrous materials for recycling.

Remove major machinery and equipment items that are found appropriate for resale, and reconditioning for resale.

Process the platform steel to a suitable grade for steel mill recycling.

B. Key Assumptions

1. Demolition of the large platform structures to 40 or 50 ton pieces is not well defined. Processing the 40 to 50 ton pieces is well defined.
2. Total platform topsides weigh 37,000 short tons according to Twatchman, Snyder & Thornton drawing take off and estimates. More or less weight will impact the estimate.
3. This estimate provides for minimal measures for dealing with lead or other heavy metals.

C. Estimate Accuracy

To improve estimate accuracy, the following steps are recommended:

1. Perform an analysis of the platform demolition process.
2. Perform an analysis of platform weights.
3. Perform an analysis of hazardous materials including asbestos, PCB's, and heavy metals.

500 Jacket & Piling Offloading

A. Scope

Provide labor and equipment to receive, offload and let go barges delivering the jacket and piling sections to the scrap facility.

Provide labor to tie up, standby and let go the barges during the offloading cycle. Provide standby tugs during the heavy lift transfer operations. Provide idle berths, electric and water support utilities for towing tugs and their barges.

Provide labor to assist with the installation of the connecting framing and rigging for the crane and crawler transport operation. Remove and re-use this framing to extent possible.

Install, position and adjust temporary support structures in the onshore storage locations.

Perform a material investigation of each section for hazardous materials, non-ferrous metals, re-usable machinery and equipment, and safety hazards.

B. Key Assumptions

1. There is a total of 28 jacket sections with a total weight of 81,300 short tons.
2. There is a total of 28 barges arriving over a nine month period. Best effort will be made for a barge turnaround of about 72 hours.
3. Labor and equipment for ballast additions and adjustments for offloading will be provided by the barge operator.
4. Fabrication of the connecting structure between cranes, crawlers and jacket and piling sections is not included.

C. Estimate Accuracy

To improve estimate accuracy, the following steps are recommended:

1. Perform a detailed project review to determine optimum project schedule.
2. Provide data and perform engineering analysis to define transport interface structures for the 28 jacket and piling sections

600 Jacket Demolition

A. Scope

Engineer and provide labor, material and equipment for the demolition of 81,300 tons of offshore platform jacket structures.

Remove and dispose of marine growth from the topmost sections of each of five jackets. Provide other health and safety precautions as required by federal, state and local regulations.

Design the rigging and cutting scheme to reduce the jacket section on “on ground” parts as rapidly as possible. Reduce the major sections to 40 and 50 ton sections for delivery to scrap processing operations.

Remove and dispose of the grout installed between the piling and jacket components.

Process the platform steel to a suitable grade for steel mill recycling.

B. Key Assumptions

1. Demolition of the large platform structures to 40 or 50 ton pieces is not well defined. Processing the 40 to 50 ton pieces is well defined.
2. There is a total of 28 jacket sections with a total weight of 81,300 short tons according to Twitchman, Snyder & Thornton drawing take off and estimates. More or less weight will impact the estimate.
3. Lampson crawler and crane equipment will be used to reposition the jacket sections and “unroll” them in the most convenient method.
4. Grout between pilings and jacket sections in low density concrete without aggregate.

C. Estimate Accuracy

To improve estimate accuracy, the following steps are recommended:

1. Perform an analysis of the platform demolition process.
2. Perform an analysis of platform weights.
3. Perform an analysis of hazardous materials including heavy metals.

700 Jacket Scrap Processing

A. Scope

Provide labor, material and equipment for scrap processing of 81,300 tons of offshore platform jacket structures.

Process the platform steel to a suitable grade for steel mill recycling.

B. Key Assumptions

1. Scrap processing the 40 to 50 ton pieces is well defined.
2. There is a total of 28 jacket sections with a total weight of 81,300 short tons according to Twatchman, Snyder & Thornton drawing take off and estimates. More or less weight will impact the estimate.

C. Estimate Accuracy

To improve estimate accuracy, the following steps are recommended:

1. Perform an analysis of platform weights.
2. Perform an analysis of hazardous materials including heavy metals.

800 Scrap Credit

A. Scope

Provide a credit for the steel scrap obtained from the scrap processing operations.

Provide a credit for the non-ferrous scrap obtained from the scrap processing operations.

Provide a credit for the resale machinery and equipment items that are removed from the topside platform sections.

B. Key Assumptions

1. The scrap credit is subject to further discussions and understanding of Chevron's expectations.
2. Schnitzer Steel Products Company has a sister company specializing in the reconditioning and resale market that can provide an assessment of the platform's potential.
3. Credit for scrap will be determined by the then-prevailing scrap price posted in "American Metal Market" (a daily publication of the scrap industry) for the Portland-Seattle market area.
4. Today's prevailing price for mill delivered short ton (2,000 pounds) is \$77 to \$79.
5. The credit is estimated to include 121,300 short tons of steel, 60 short tons of non-ferrous, 80 major items of reusable machinery and equipment.

C. Estimate Accuracy

To improve estimate accuracy, the following steps are recommended:

1. Perform an analysis of platform weights.
2. Perform an analysis of hazardous materials including heavy metals.
3. Provide and analysis of the resale market for platform machinery and equipment.

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate						
Item	Description	Unit	Quantity	Unit Cost	Total	Price/Ton
	Program Summary					
100	Site Preparation				\$3,581,850	\$30
200	Lampson Material Handling				\$8,504,496	\$72
300	Platform Offloading				\$1,600,750	\$14
400	Platform Scrapping				\$7,179,000	\$61
500	Jacket & Piling Offloading				\$3,010,000	\$25
600	Jacket & Piling Demolition				\$10,383,600	\$88
700	Jacket & Piling Scrap Processing				\$5,203,200	\$44
	Subtotal				\$39,462,896	\$334
	Contingency			15%	\$5,919,434	\$50
	Program Total				\$45,382,330	\$384
800	Scrap Credit				Negotiable	

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Platform & Jacket Steel Weights				
Item	Description	Short Tons	Total	Total
	Topside Platform Structure			
1	GAIL	6,817		
2	GRACE	3,460		
3	HERMOSA	6,632		
4	HIDALGO	6,775		
5	HARVEST	8,500		
	Subtotal		32,184	
	Jacket			
6	GAIL	14,390		
7	GRACE	3,262		
8	HERMOSA	14,702		
9	HIDALGO	8,896		
10	HARVEST	14,350		
	Subtotal		55,600	
	Piling			
11	GAIL	3,099		
12	GRACE	1,746		
13	HERMOSA	3,953		
14	HIDALGO	2,689		
15	HARVEST	3,631		
	Subtotal		15,118	
	Other Components			
16	Conductors	3,500		
17	Anodes, Non-Ferrous	3,000		
	Subtotal		6,500	
	Total			102,902
18	Additions & Not Detailed		15%	15,435
	Total			118,337

Schnitzer Steel Products Offshore Platform Scrapping Program Lay Down Foot Print						
Item	Description	Length	Width	Item Area	50 Foot Access	Total
GAIL Topsides						
1	Flare Boom	140	12	1,680	10,100	
2	Sulferox	50	50	2,500	7,500	
3	Compressor-Scrubber	130	64	8,320	12,200	
4	Driller	130	50	6,500	11,500	
5	Quarters-Helo	70	70	4,900	9,500	
6	Generator-Switchgear	130	64	8,320	12,200	
7	West Deck	141	108	15,228	14,950	
8	East Deck	137	104	14,248	14,550	
	Subtotal			61,696	92,500	154,196
GRACE Topsides						
1	Flare Boom	120	21	2,520	9,550	
2	Cantilever	70	15	1,050	6,750	
3	Compressor	124	50	6,200	11,200	
4	BOP	120	40	4,800	10,500	
5	Process	142	50	7,100	12,100	
6	Wellhead	138	40	5,520	11,400	
7	Quarters-Helo	70	70	4,900	9,500	
8	MUD	90	65	5,850	10,250	
9	Personnell-MCC	61	66	4,026	8,850	
10	Generator	70	80	5,600	10,000	
11	West Cap Truss	119	62	7,378	11,550	
12	East Cap Truss	119	82	9,758	12,550	
	Subtotal			64,702	124,200	188,902
HERMOSA Topsides						
1	Flare Boom	117	12	1,404	8950	
2	Quarters-Helo	67	61	4,087	8900	
3	Power	156	50	7,800	12800	
4	Pipe Rack	100	73	7,300	11150	
5	Utility	156	50	7,800	12800	
6	Compression	156	40	6,240	12300	
7	Production	156	40	6,240	12300	
8	Well Head	156	49	7,644	12750	
9	Cap Truss	210	100	21,000	18000	
	Subtotal			69,515	61,696	131,211

Schnitzer Steel Products Offshore Platform Scrapping Program Lay Down Foot Print						
Item	Description	Length	Width	Item Area	50 Foot Access	Total
HIDALGO Topsides						
1	Flare Boom	115	12	1,380	8,850	
2	Quarters-Helo	67	63	4,221	9,000	
3	Power	156	49	7,644	12,750	
4	Pipe Rack	101	69	6,969	11,000	
5	Utility	156	49	7,644	12,750	
6	Compression	156	37	5,772	12,150	
7	Production	156	37	5,772	12,150	
8	Well Head	156	49	7,644	12,750	
9	Cap Truss	210	100	21,000	18,000	
	Subtotal			68,046	109,400	177,446
HARVEST Topsides						
1	Flare Boom	115	12	1,380	8850	
2	Quarters-Helo	67	63	4,221	9000	
3	Power	156	49	7,644	12750	
4	Pipe Rack	101	69	6,969	11000	
5	Utility	156	49	7,644	12750	
6	Compression	156	37	5,772	12150	
7	Production	156	37	5,772	12150	
8	Well Head	156	49	7,644	12750	
9	Cap Truss	210	100	21,000	18000	
	Subtotal			68,046	109,400	177,446
GAIL Jacket						
1	A-Top	90	190	17,100	16,500	
2	B	112	212	23,744	18,700	
3	C	137	237	32,469	21,200	
4	D	164	264	43,296	23,900	
5	E	180	280	50,400	25,500	
6	F-Bottom	197	297	58,509	27,200	
	Subtotal			225,518	133,000	358,518
GRACE Jacket						
1	A-Top	113	168	18,984	16,550	
2	B	141	196	27,636	19,350	
3	C-Bottom	158	213	33,654	21,050	
	Subtotal			80,274	56,950	137,224

Schnitzer Steel Products Offshore Platform Scrapping Program Lay Down Foot Print						
Item	Description	Length	Width	Item Area	50 Foot Access	Total
	HERMOSA Jacket					
1	A-Top	118	198	23,364	18,300	
2	B	137	218	29,866	20,250	
3	C	149	229	34,121	21,400	
4	D	161	241	38,801	22,600	
5	E	173	253	43,769	23,800	
6	F	187	267	49,929	25,200	
7	G-Bottom	200	279	55,800	26,450	
	Subtotal			275,650	158,000	433,650
	HIDALGO Jacket					
1	A-Top	123	203	24,969	18,800	
2	B	149	229	34,121	21,400	
3	C-Bottom	176	257	45,232	24,150	
	Subtotal			104,322	64,350	168,672
	HARVEST Jacket					
1	A-Top	201	62	12,462	15,650	
2	B	212	75	15,900	16,850	
3	C	225	90	20,250	18,250	
4	D	237	105	24,885	19,600	
5	E	251	121	30,371	21,100	
6	F	257	139	35,723	22,300	
7	G	281	158	44,398	24,450	
8	H	298	178	53,044	26,300	
9	I-Bottom	315	200	63,000	28,250	
	Subtotal			300,033	192,750	492,783
	Total Square Feet			1,092,284	969,246	2,061,530
	Total Acres			25	22	47
Note: "Fifty (50) foot access" is a clear "L" shaped crane access and traffic way allowance on the one (1) length and one (1) width of each item. This must be balanced in requirements for small topside sections and large jacket sections.						

Schnitzer Steel Products Co. Offshore Platform Scrapping Program 100 x 400 Barge Loads				
Item	Description	Barges	Total	Total
	Topside Platform Structure			
1	GAIL	3		
2	GRACE	4		
3	HERMOSA	3		
4	HIDALGO	3		
5	HARVEST	3		
	Subtotal		16	
	Jacket			
6	GAIL	7		
7	GRACE	3		
8	HERMOSA	7		
9	HIDALGO	7		
10	HARVEST	7		
	Subtotal		31	
	Piling			
11	GAIL	Included		
12	GRACE	Included		
13	HERMOSA	Included		
14	HIDALGO	Included		
15	HARVEST	Included		
	Subtotal		0	
	Total			47
Important Note: All the barges will be 100 x 400 Alaska Sealift-Type, except one. This exception will be 150 x 450.				

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
100	Site Preparation				
	Assumes: 30 acre site, fenced, graded, graveled, portable work lights, fire protection, drainage, underground utility protection, Willamette greenway measures.				
110	Engineering				
	Design site layout	hours	320	\$95	\$30,400
	Design live loading facility	hours	640	\$95	\$60,800
	Layout for cranes & crawlers	hours	240	\$95	\$22,800
	Geo-technical investigation	hours	240	\$95	\$22,800
	Other studies & permits	hours	240	\$95	\$22,800
	Subtotal				\$159,600
120	Site Construction				
	Assumes: No geo-technical difficulties				
	Site preparations	acres	30	\$1,000	\$30,000
	Grade, 6" lift, <3/4" gravel, 30 acres	cu. yd.	24,250	\$30	\$727,500
	Grade, 6" lift, <3/4" gravel, 15 acres	cu. yd.	12,125	\$30	\$363,750
	Drainage piping & tiles	lot	1	\$100,000	\$100,000
	Protect underground utilities	lot	1	\$50,000	\$50,000
	Protect rail crossings	lot	1	\$50,000	\$50,000
	Other measures	lot	1	\$50,000	\$50,000
	Subtotal				\$1,371,250
120	Site Utilization				
	Assumes: Site utilization of 18 months including construction.				
	Rental equivalent rate	acre-mo.	540	\$750	\$405,000
	Utilities	acre-mo.	360	\$100	\$36,000
	Subtotal				\$441,000

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
130	Offloading Facility Construction				
	Assumes: One live loading position for barges to 150 foot beam, 450 foot length, 20 foot draft, adjustable for river stages by addition of tied back portable concrete barriers in 2 foot increments.				
	Excavation & back fill	cu. yd.	10,000	\$20	\$200,000
	Sheet pile bulkhead, 60 feet deep	lin. ft.	300	\$3,500	\$1,050,000
	Tie backs & anchoring arrangement	lot	1	\$200,000	\$200,000
	Adjustable concrete structures	lot	1	\$60,000	\$60,000
	Barge mooring arrangements	lot	1	\$25,000	\$25,000
	Barge electric & water utility station	lot	1	\$25,000	\$25,000
	Barge slip maintenance dredging	lot	1	\$50,000	\$50,000
	Subtotal				\$1,610,000
100	Total Site Preparation				\$3,581,850

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
200	Lampson Material Handling				
210	Engineering				
	Layout cranes & crawlers	hours	400	\$100	\$40,000
	Design crawler-component interface	hours	400	\$100	\$40,000
	Rigging design	hours	400	\$100	\$40,000
	Logistic coordination	hours	200	\$100	\$20,000
	Obtain permits	hours	100	\$100	\$10,000
	Subtotal				\$150,000
220	Equipment Mobilization				
	Transilift 1100	each	1	\$60,000	\$60,000
	Transilift 1100	each	1	\$50,000	\$50,000
	Crawler transporter 2,000 tons	each	3	\$15,000	\$45,000
	Manitowoc 4100 crane, 230 tons	each	1	\$10,000	\$10,000
	Rigging loft & gear	each	1	\$2,000	\$2,000
	Stop logs for portable supports	lot-70	1	\$20,000	\$20,000
	70 ton rough terrain crane	each	1	\$3,500	\$3,500
	35 ton rough terrain crane	each	1	\$3,500	\$3,500
	25 ton fork lift	each	1	\$3,500	\$3,500
	Subtotal				\$197,500
230	Equipment Demobilization				
	Transilift 1100	each	1	\$60,000	\$60,000
	Transilift 1100	each	1	\$50,000	\$50,000
	Crawler transporter 2,000 tons	each	3	\$15,000	\$45,000
	Manitowoc 4100 crane, 230 tons	each	1	\$10,000	\$10,000
	Rigging loft & gear	each	1	\$2,000	\$2,000
	Stop logs for portable supports	lot-70	1	\$20,000	\$20,000
	70 ton rough terrain crane	each	1	\$3,500	\$3,500
	35 ton rough terrain crane	each	1	\$3,500	\$3,500
	25 ton fork lift	each	1	\$3,500	\$3,500
	Subtotal				\$197,500

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
240	Equipment Use				
	Transilift 1100	month	9	\$150,000	\$1,350,000
	Transilift 1100	month	12	\$135,000	\$1,620,000
	Crawler transporter 2,000 tons	month	36	\$50,000	\$1,800,000
	Manitowoc 4100 crane, 230 tons	month	24	\$15,000	\$360,000
	Rigging loft & gear	month	12	\$6,000	\$72,000
	Stop logs for portable supports	month	12	\$5,000	\$60,000
	70 ton rough terrain crane	month	12	\$6,500	\$78,000
	35 ton rough terrain crane	month	12	\$5,500	\$66,000
	25 ton fork lift	month	12	\$4,500	\$54,000
	Subtotal				\$5,460,000
250	Operating Labor				
	Superintendent	hours	4,242	\$60	\$254,520
	Transilift crew	hours	12,672	\$56	\$709,632
	Crawler transporter operators	hours	6,336	\$56	\$354,816
	Crane & fork lift operators	hours	6,336	\$50	\$316,800
	Crane oiler	hours	4,224	\$45	\$190,080
	Rigging crew	hours	6,336	\$50	\$316,800
	Subtotal				\$2,142,648
260	Operator Lodging & Subsistence				
	Lodging	crew-mo.	12		\$162,624
	Subsistence	crew-mo.	12		\$162,624
	Mobilization & mileage	crew-mo.	12		\$31,600
	Subtotal				\$356,848
200	Total Lampson Material Handling				\$8,504,496

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
300	Platform Offloading				
310	Barge Receipt				
	Assumes: 16 barges with 72 hour turnaround, over a 9 month period, labor & equipment for barge ballasting provided by barge operator.				
	Tie up & let go barge	event	32	\$2,000	\$64,000
	Offloading standby labor	event	32	\$2,000	\$64,000
	Offloading standby tugs	event	16	\$10,000	\$160,000
	Utility and other assistance	event	16	\$2,000	\$32,000
	Subtotal				\$320,000
320	Crawler & Crane Connecting Frames				
	Assumes: 5 platforms, 47 topside sections, 32,184 short tons + 15% margin = 37,000 short tons. Estimate does not include fabrication of connecting frames.				
	Assemble connecting frames	each	94	\$2,500	\$235,000
	Install connecting frames	each	94	\$5,000	\$470,000
	Remove connecting frames for re-use	each	94	\$2,500	\$235,000
	Subtotal				\$940,000
330	Topsides Rigging Assistance				
	Assist Lampson with rigging	section	47	\$3,500	\$164,500
	Position stop log supports	section	47	\$500	\$23,500
	Other Lampson support	section	47	\$500	\$23,500
	Subtotal				\$211,500

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
340	Topsides Material Investigation				
	HazMat survey	section	47	\$750	\$35,250
	Non-ferrous material survey	section	47	\$750	\$35,250
	Re-usable equipment survey	section	47	\$750	\$35,250
	Signage & safety measures	section	47	\$500	\$23,500
	Subtotal				\$129,250
300	Total Platform Offloading				\$1,600,750

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
400	Platform Scrapping				
410	HazMat Removal				
	Remove asbestos	tons	20	\$5,000	\$100,000
	Dispose of asbestos	tons	20	\$5,000	\$100,000
	Remove PCB's	tons	10	\$5,000	\$50,000
	Dispose of PCB's	tons	10	\$10,000	\$100,000
	Other HazMat removal & disposal	tons	10	\$5,000	\$50,000
	Subtotal				\$400,000
420	Remove Major Non-Ferrous				
	Remove copper	tons	20	\$750	\$15,000
	Remove stainless steel	tons	20	\$750	\$15,000
	Other non-ferrous materials	tons	20	\$750	\$15,000
	Subtotal				\$45,000
430	Remove Major Resale Machinery				
	Remove, support, store & handle	each	80	\$3,000	\$240,000
440	Topside Demolition				
	Assumes: Reducing topside sections into 40 and 50 short ton units for scrap processing.				
	Demolition of topsides	short tons	37,000	\$118	\$4,366,000
450	Topside Scrap Processing				
	Assumes: 37,000 short tons reduced to charging size.				
	Scrap processing of topsides	short tons	37,000	\$64	\$2,368,000
400	Total Platform Scrapping				\$7,419,000

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
500	Jacket & Piling Offloading				
510	Barge Receipt				
	Assumes: 28 barges and 72 hour turnaround each. Labor and pumping equipment for ballast handling provided by barge operator.				
	Barge tie up and let go	event	56	\$2,000	\$112,000
	Offloading standby labor	event	56	\$2,000	\$112,000
	Offloading standby tugs	event	28	\$10,000	\$280,000
	Utility and other assistance	event	28	\$2,000	\$56,000
	Subtotal				\$560,000
520	Crawler & Crane Connecting Frames				
	Assumes: Total 28 jacket & piling sections, 2,000 to 4,000 short tons each, 70,700 short tons + 15% margin, total 81,300 short tons. Each has 3 connecting frames. Fabrication of frames is not included.				
	Assemble connecting frames	each	84	\$6,500	\$546,000
	Install connecting frames	each	84	\$12,500	\$1,050,000
	Remove connecting frames for re-use	each	84	\$6,500	\$546,000
	Subtotal				\$2,142,000
530	Jacket Rigging Assistance				
	Assist Lampson with rigging	section	28	\$5,000	\$140,000
	Position stop log supports	section	28	\$1,000	\$28,000
	Other Lampson support	section	28	\$3,500	\$98,000
	Subtotal				\$266,000
540	Jacket Investigation				
	Hazardous materials survey	section	28	\$1,000	\$28,000
	Signage & safety measures	section	28	\$500	\$14,000
	Subtotal				\$42,000
500	Total Jacket & Piling Offloading				\$3,010,000

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
600	Jacket & Piling Demolition				
610	Engineering				
	Assumes: 28 jacket & piling sections, 2,000 to 4,000 short tons each, 70,000 short tons + 15% margin, total 81,300 short tons reduced to 40 and 50 short ton units.				
	Design cutting arrangements	jackets	28	\$5,000	\$140,000
	Design rigging arrangements	sections	1,626	\$200	\$325,200
	Subtotal				\$465,200
620	Marine Growth Measures				
	Assumes: 10 uppermost jacket sections have marine growth to 6 inches.				
	Remove marine growth	sections	10	\$15,000	\$150,000
	Dispose of marine growth	tons	500	\$150	\$75,000
	Measures for health & safety	lot	5	\$5,000	\$25,000
	Subtotal				\$250,000
630	Jacket & Piling Demolition				
	Assumes: Use of cranes & crawlers to "unroll" jacket sections and place large sections a ground level quickly.				
	Demolition of jacket & piling	short tons	81,300	\$118	\$9,593,400
640	Piling & Grout Removal				
	Assumes: Aggregate free grout in one annular space between jacket & piling.				
	Remove & dispose of grout	tons	1,000	\$75	\$75,000
600	Total Jacket & Piling Demolition				\$10,383,600

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
700	Jacket & Piling Scrap Processing				
710	Jacket & Piling Scrap Processing				
	Assumes: 81,300 short tons reduced from 40 and 50 short ton units to charging size.				
	Jacket & piling section processing	tons	81,300	\$64	\$5,203,200

Schnitzer Steel Products Co. Offshore Platform Scrapping Program Rough Order of Magnitude Estimate					
Item	Description	Unit	Quantity	Unit Cost	Total
800	Scrap Credit				
	Assumes: Scrap credit is subject to further discussions and understanding of Chevron's expectations. Credits will be based on the then prevailing prices in "American Metal Market" for Portland-Seattle.				
320	Credit Securing Frames				
	Net value of securing frames	each	94	Negotiable	Negotiable
420	Credit Copper & Stainless				
	Net value of copper & stainless	short tons	60	Negotiable	Negotiable
430	Resale Machinery & Equipment				
	Net value of machinery & equipment	each	80	Negotiable	Negotiable
440	Topsides Steel				
	Net value of topside steel	short tons	37,000	Negotiable	Negotiable
520	Barge Securing Frames				
	Net value of barge securing frames	each	84	Negotiable	Negotiable
710	Jacket & Piling Scrap				
	Net value of jacket & piling scrap	short tons	81,300	Negotiable	Negotiable
800	Total Scrap Credit			Negotiable	Negotiable

Appendix 6: Conductor Trucking Disposal Example Calculations

Platform	Total Conductor Length / Platform (ft)	Total Conductor Weight / Platform* (Tons)	Trucks per platform**	Cost per platform disposal fee*** (\$)	Cost per platform Trucking fee**** (\$)	Total Onshore Conductor Disposal
A	14740	2948	137.1163	\$294,800	\$68,558	\$363,358
B	15390	3078	143.1628	\$307,800	\$71,581	\$379,381
C	11696	2339.2	108.8	\$233,920	\$54,400	\$288,320
Edith	5543	1108.6	51.56279	\$110,860	\$25,781	\$136,641
Ellen	22080	4416	205.3953	\$441,600	\$102,698	\$544,298
Elly	0	0	0	\$0	\$0	\$0
Eureka	46800	9360	435.3488	\$936,000	\$217,674	\$1,153,674
Gail	19656	3931.2	182.8465	\$393,120	\$91,423	\$484,543
Gilda	18240	3648	169.6744	\$364,800	\$84,837	\$449,637
Gina	2100	420	19.53488	\$42,000	\$9,767	\$51,767
Grace	14328	2865.6	133.2837	\$286,560	\$66,642	\$353,202
Habitat	7400	1480	68.83721	\$148,000	\$34,419	\$182,419
Harmony	66456	13291.2	618.1953	\$1,329,120	\$309,098	\$1,638,218
Harvest	18875	3775	175.5814	\$377,500	\$87,791	\$465,291
Henry	6072	1214.4	56.48372	\$121,440	\$28,242	\$149,682
Heritage	56595	11319	526.4651	\$1,131,900	\$263,233	\$1,395,133
Hermosa	10928	2185.6	101.6558	\$218,560	\$50,828	\$269,388
Hidalgo	7140	1428	66.4186	\$142,800	\$33,209	\$176,009
Hillhouse	14144	2828.8	131.5721	\$282,880	\$65,786	\$348,666
Hogan	9126	1825.2	84.89302	\$182,520	\$42,447	\$224,967
Hondo	25816	5163.2	240.1488	\$516,320	\$120,074	\$636,394
Houchin	8748	1749.6	81.37674	\$174,960	\$40,688	\$215,648
Irene	7728	1545.6	71.88837	\$154,560	\$35,944	\$190,504
Total	409601	81920.2	3810.242	\$8,192,020	\$1,905,121	\$10,097,141

* Assumes conductor/casing/annulus cement weighs 400 lbs/ft

** Assumes 21.5 tons per truckload

*** Assumes cost per truckload is \$500

**** Assumes site disposal fee per ton is \$100

Appendix 7: Explosives Rates and Supplemental Data



PRICE LIST – as of 02 February 2009
Proprietary Information

	<u>Charge type</u>	
<u>BULK CHARGE</u>		
a.	Bulk charge (50#)	\$ 3,200.00
b.	Bulk charge (80#)	\$ 5,120.00
c.	Bulk charge (100#)	\$ 6,400.00
d.	Bulk charge (150# with centralizer)	\$11,200.00
e.	Bulk charge (200# with centralizer)	\$ 14,400.00
f.	Bulk charge for subsea well (50#)	\$ 4,000.00
 <u>SWEDE CHARGE*</u>		
g.	33" SWEDE for 42" Pile/Caisson (50#)	\$ 9,000.00
h.	39" SWEDE for 48" Pile/Caisson (50#)	\$10,000.00
i.	SWEDE for 54" Pile/Caisson	upon request

* SWEDE charges are special order items that require a minimum of 4 weeks for fabrication.
Please notify DEMEX as soon as possible if the task requires SWEDES

<u>FLEXIBLE LINEAR BULK CHARGE+</u>		
j.	Flexible Linear Bulk Charge for 60" Pile/Caisson (120#)	
	16 linear ft.	\$ 9,600.00
k.	Flexible Linear Bulk Charge for 72" Pile/Caisson (142.5#)	
	19 linear ft.	\$ 11,400.00
l.	Flexible Linear Bulk Charge for 84" Pile/Caisson (165#)	
	22 linear ft.	\$ 13,200.00

<u>ADVANCED CUTTING EXPLOSIVES (ACE)</u>		
j.	ACE - \$2000 to open case plus \$300 per ft of what is used.	

2. EXPLOSIVE PERSONNEL

a.	Explosive Consultant	\$ 1,800.00 per day
b.	Senior Explosive Supervisor	\$ 1,100.00 per day
c.	Assistant Explosive Technician	\$ 900.00 per day

3. MOBILIZATION/DEMOBILIZATION

a.	Mobilization of material to Berwick or Venice	\$ 3,200.00, per occurrence
b.	Mobilization/demobilization to Sabine Pass, Texas	\$ 3,900.00, per occurrence
c.	Mobilization of material to Port O'Connor	\$ 4,800.00, per occurrence
d.	Mobilization of material to Aransas Pass	\$ 5,300.00, per occurrence
e.	Mobilization/Demobilization of personnel	\$ 2.00, per mile

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phone: 281-246-4738 fax: 281-246-4739
www.demex.us



4. **DOCK USAGE FEES**

a. Berry Bros. Dock, Berwick	\$ 3,450.00, per occurrence
b. Martin Midstream Dock, Sabine Pass, Texas	\$ 2,300.00, per occurrence

EXTRA WORK RATES:

Composition C-4	\$ 90.00 per pound
Composition B	\$ 75.00 per pound
Detonating Cord	\$ 1.00 per foot
Detonators/Delays	\$ 15.00 each
1/4" rope	\$ 0.30 per foot
1/2" wire rope	\$ 1.50 per foot



Appendix 8: Complete Structure and Pipeline Estimates

A MMS POCS 29056



MMS

Platform Salvage Option

A MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform A will be removed along with Platforms Hillhouse, B, C, Gina and Henry.
- Platform A is a 12-pile platform installed in 1968 in 188' of water.
- The estimated removal weight is the deck weight is 1,357 tons and the jacket weight is 1,500 tons.
- The platform has a total of 52 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 55 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and one 400' cargo barge will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 3 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The three pipelines (oil, gas, water) on the OCS will be totally removed to the state



MMS

Platform Salvage Option

A MMS POCS 29056 (Ver 1)

water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

A MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$25,595,026

Estimated Decommissioning Net Cost = \$25,595,026



MMS

Basic Information

A MMS POCS 29056 (Ver 1)

General Data

Platform:	A MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	188'
Pre 461H?:	Yes
Year Installed:	1968
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0241
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	52
# Pipelines to Abandon:	3
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$18,572,320	\$18,572,320
Well Plugging & Abandonment:	\$6,548,830	\$6,548,830
Pipeline Abandonment:	\$473,876	\$473,876
Total Decommissioning Cost:	\$25,595,026	\$25,595,026



MMS

Platform Information

A MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	12	40"	0.5"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	112 x 134	70
Middle:	90 x 115	43
Lower:	10 x 40	28

Conductors

Number of Slots:	57
Number Installed:	55
Outside Diameter:	20"
Wall Thickness:	0.3"
Number Slanted:	20

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:		 	
Dry:	1500.00	 	
Jacket Installation Date:	9/14/68		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	1357 Tons
Number of Padeyes Required:	12
Deck Installation Date:	9/14/68
Deck Contractor:	Unknown



MMS

Platform Information

A MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 400 x 100	Jkt > 700T	Conductors	Conductors	

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$1,694,346.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

A MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,238,172.00	6.67%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.05%	\$425,833.00	2.29%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.05%	\$4,157,409.00	22.38%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.04%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.05%	\$957,710.00	5.16%
Mobilize DB 2000	Mob from Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	10.08%	\$1,530,000.00	8.24%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.14%	\$72,296.00	0.39%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.14%	\$36,600.00	0.20%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	10.30	0.52%	\$46,556.00	0.25%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.34%	\$84,510.00	0.46%
Cut Deck/Equip/Misc	Seperate 4 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	1.21%	\$324,000.00	1.74%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	1.21%	\$324,000.00	1.74%
Remove 8 Pile Deck	Remove 12 Pile Deck, 4 modules	<input checked="" type="checkbox"/>	48.00	2.42%	\$648,000.00	3.49%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.14%	\$44,296.00	0.24%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	2.32%	\$621,920.00	3.35%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	61.68	3.11%	\$893,577.60	4.81%
Remove Jacket - Meth 1		<input checked="" type="checkbox"/>	20.75	1.05%	\$280,540.00	1.51%
Demob CB 400 & Tug	Demob to Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.14%	\$22,600.00	0.12%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.34%	\$84,510.00	0.46%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	10.30	0.52%	\$46,556.00	0.25%
Demob DB 2000	Demob to Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	10.08%	\$1,530,000.00	8.24%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	3.63%	\$709,000.00	3.82%
Offload CB 300		<input type="checkbox"/>	672.00	33.87%	\$177,760.00	0.96%
Offload CB 400		<input type="checkbox"/>	408.00	20.57%	\$126,080.00	0.68%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.04%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$168,611.00	0.91%
Task Total			1905.93	96.07%	\$14,564,522.60	78.42%
Misc. Work Provision (15.00%)			46.79	2.36%	\$1,388,068.00	7.47%
Weather Contingency (10.00%)			31.19	1.57%	\$925,378.80	4.98%
Consumables					\$0.00	0.00%
Waste Disposal					\$1,694,346.00	9.12%
Structure & Equipment Disposal					\$0.00	0.00%



MMS

Platform Decommission Task Information

A MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost	
		Offloading		\$0.00	0.00%
		Storage / Scrapping		\$0.00	0.00%
		Reef Donation		\$0.00	0.00%
		Cost of Engineering (0.00%)		\$0.00	0.00%
			Total:	1983.91 100.00%	18,572,315.40 100.00%



MMS

Platform Decommission Resources Breakdown

A MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$161,581.25	0.87%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$137,760.00	0.74%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$106,080.00	0.57%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$182,672.00	0.98%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$173,630.00	0.93%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$60,000.00	0.32%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$5,082,405.00	27.37%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$818,247.45	4.41%
Manual Calculation	\$0.00	Independently Calculated	\$7,670,721.00	41.30%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$59,664.00	0.32%
Pipeline Survey	\$230.00	per Hour	\$59,461.90	0.32%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.15%
Rig Up CB 400	\$14,000.00	per Barge	\$14,000.00	0.08%
Work Boat	\$500.00	per Hour	\$10,300.00	0.06%



MMS

Platform Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,238,172.00	6.67%
Manual Calculation			\$1,238,172.00	
NMFS Marine Observation	1.00	0.05%	\$425,833.00	2.29%
Manual Calculation			\$425,833.00	
Sever Conductors- Abrasive	1.00	0.05%	\$4,157,409.00	22.38%
Manual Calculation			\$4,157,409.00	
Mobilize Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.04%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	
Platform Removal Preparation	1.00	0.05%	\$957,710.00	5.16%
Manual Calculation			\$957,710.00	
Mobilize DB 2000	200.00	10.08%	\$1,530,000.00	8.24%
Derrick Barge 2000			\$1,530,000.00	
Mobilize CB 300 & Tug	22.60	1.14%	\$72,296.00	0.39%
CB 300 & Tug			\$44,296.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	22.60	1.14%	\$36,600.00	0.20%
Rig Up CB 400			\$14,000.00	
CB 400 & Tug			\$22,600.00	
Mobilize Dive Spread	10.30	0.52%	\$46,556.00	0.25%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Setup Derrick Barge	6.75	0.34%	\$84,510.00	0.46%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	1.21%	\$324,000.00	1.74%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Remove Equipment		24.00	1.21%	\$324,000.00	1.74%
	Derrick Barge 2000	\$204,000.00			
	Dive Basic Spread Saturation	\$75,960.00			
	Pipeline Survey	\$5,520.00			
	Abrasive Cutter Spread	\$15,000.00			
	CB 300 & Tug	\$23,520.00			
Remove 8 Pile Deck		48.00	2.42%	\$648,000.00	3.49%
	Derrick Barge 2000	\$408,000.00			
	Dive Basic Spread Saturation	\$151,920.00			
	Pipeline Survey	\$11,040.00			
	Abrasive Cutter Spread	\$30,000.00			
	CB 300 & Tug	\$47,040.00			
Demob CB 300 & Tug		22.60	1.14%	\$44,296.00	0.24%
	CB 300 & Tug	\$44,296.00			
Jet/Airlift Pile Mud Plug		46.00	2.32%	\$621,920.00	3.35%
	Derrick Barge 2000	\$391,000.00			
	Dive Basic Spread Saturation	\$145,590.00			
	Pipeline Survey	\$10,580.00			
	Abrasive Cutter Spread	\$28,750.00			
	CB 400 & Tug	\$46,000.00			



MMS

Platform Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Sever Piles- Abrasive	61.68	3.11%	\$893,577.60	4.81%
Derrick Barge 2000			\$524,280.00	
Dive Basic Spread Saturation			\$195,217.20	
Pipeline Survey			\$14,186.40	
Abrasive Cutter Spread			\$38,550.00	
CB 400 & Tug			\$61,680.00	
Pile Abrasive Cut 7 to 48 inches			\$59,664.00	
Remove Jacket - Meth 1	20.75	1.05%	\$280,540.00	1.51%
Derrick Barge 2000			\$176,375.00	
Dive Basic Spread Saturation			\$65,673.75	
Pipeline Survey			\$4,772.50	
Abrasive Cutter Spread			\$12,968.75	
CB 400 & Tug			\$20,750.00	
Demob CB 400 & Tug	22.60	1.14%	\$22,600.00	0.12%
CB 400 & Tug			\$22,600.00	
Pick Up DB Anchors	6.75	0.34%	\$84,510.00	0.46%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	



MMS

Platform Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	10.30	0.52%	\$46,556.00	0.25%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Demob DB 2000	200.00	10.08%	\$1,530,000.00	8.24%
Derrick Barge 2000			\$1,530,000.00	
Site Clearance - with Divers	72.00	3.63%	\$709,000.00	3.82%
Manual Calculation			\$709,000.00	
Offload CB 300	672.00	33.87%	\$177,760.00	0.96%
Cargo Barge 300			\$137,760.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	408.00	20.57%	\$126,080.00	0.68%
Cargo Barge 400			\$106,080.00	
CB Damage Deduct			\$20,000.00	
Demob Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.04%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	



MMS

Platform Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$168,611.00	0.91%
Manual Calculation			\$168,611.00	
Total	1905.93	96.07%	\$14,564,522.60	78.42%



MMS

Pipeline Information

A MMS POCS 29056 (Ver1) Segment#:1030241

General Data

Water Depth:	188'
Origin / Terminus:	Origin
Opposite End Name:	B
Opposite End Water Depth:	190'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6.625"	Wall Thickness:		Length:	3974'
Depth of Burial:		# Crossings:		Product:	H2O
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to a tie-in associated with B platform. It is estimated as abandoned in place.



MMS

Pipeline Information

A MMS POCS 29056 (Ver1) Segment#:810241

General Data

Water Depth:	188'
Origin / Terminus:	Origin
Opposite End Name:	B
Opposite End Water Depth:	190'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	8"	Wall Thickness:		Length:	3974'
Depth of Burial:		# Crossings:		Product:	OIL
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to a tie-in associated with B platform. It is estimated as abandoned in place.



MMS

Pipeline Information

A MMS POCS 29056 (Ver1) Segment#:920241

General Data

Water Depth:	188'
Origin / Terminus:	Origin
Opposite End Name:	B
Opposite End Water Depth:	190'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	8"	Wall Thickness:		Length:	3974'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to a tie-in associated with B platform. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

A MMS POCS 29056 (Ver 1) Segment#:1030241

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	2.37	2.75%	\$4,290.88	2.75%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.32%	\$3,621.00	2.32%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	4.63%	\$7,242.00	4.63%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	4.63%	\$7,242.00	4.63%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Reposition Workboat		<input checked="" type="checkbox"/>	3.08	3.57%	\$5,576.34	3.57%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	4.63%	\$7,242.00	4.63%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	4.63%	\$7,242.00	4.63%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Demob Work Boat		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Task Total			72.47	83.94%	\$131,206.94	83.94%
Misc. Work Provision (15.00%)			8.32	9.64%	\$15,064.27	9.64%
ather Contingency (10.00%)			5.55	6.42%	\$10,042.84	6.42%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			86.34	100.00%	\$156,314.05	100.00%



MMS

Pipeline Decommission Task Information

A MMS POCS 29056 (Ver 1) Segment#:810241

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	5.70%	\$9,052.50	5.70%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.70%	\$9,052.50	5.70%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	3.46	3.95%	\$6,264.33	3.95%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.28%	\$3,621.00	2.28%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.27%	\$11,550.99	7.27%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.27%	\$11,550.99	7.27%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	4.56%	\$7,242.00	4.56%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	4.56%	\$7,242.00	4.56%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.85%	\$7,694.63	4.85%
Reposition Workboat		<input checked="" type="checkbox"/>	3.08	3.51%	\$5,576.34	3.51%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.27%	\$11,550.99	7.27%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.27%	\$11,550.99	7.27%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	4.56%	\$7,242.00	4.56%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	4.56%	\$7,242.00	4.56%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.85%	\$7,694.63	4.85%
Demob Work Boat		<input type="checkbox"/>	5.00	5.70%	\$9,052.50	5.70%
Task Total			73.56	83.88%	\$133,180.39	83.88%
Misc. Work Provision (15.00%)			8.48	9.67%	\$15,360.28	9.67%
ather Contingency (10.00%)			5.66	6.45%	\$10,240.19	6.45%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			87.70	100.00%	\$158,780.86	100.00%



MMS

Pipeline Decommission Task Information

A MMS POCS 29056 (Ver 1) Segment#:920241

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	5.70%	\$9,052.50	5.70%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.70%	\$9,052.50	5.70%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	3.46	3.95%	\$6,264.33	3.95%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.28%	\$3,621.00	2.28%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.27%	\$11,550.99	7.27%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.27%	\$11,550.99	7.27%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	4.56%	\$7,242.00	4.56%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	4.56%	\$7,242.00	4.56%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.85%	\$7,694.63	4.85%
Reposition Workboat		<input checked="" type="checkbox"/>	3.08	3.51%	\$5,576.34	3.51%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.27%	\$11,550.99	7.27%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.27%	\$11,550.99	7.27%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	4.56%	\$7,242.00	4.56%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	4.56%	\$7,242.00	4.56%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.85%	\$7,694.63	4.85%
Demob Work Boat		<input type="checkbox"/>	5.00	5.70%	\$9,052.50	5.70%
Task Total			73.56	83.88%	\$133,180.39	83.88%
Misc. Work Provision (15.00%)			8.48	9.67%	\$15,360.28	9.67%
ather Contingency (10.00%)			5.66	6.45%	\$10,240.19	6.45%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			87.70	100.00%	\$158,780.86	100.00%



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MMS

Pipeline Decommission Resources Breakdown

A MMS POCS 29056 (Ver 1) Segment#:1030241

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,152.88	5.22%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$64,135.95	41.03%
Pipeline Surveying	\$230.00	per Hour	\$16,668.10	10.66%
Work Boat	\$583.00	per Hour	\$42,250.01	27.03%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

A MMS POCS 29056 (Ver 1) Segment#:810241

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,275.51	5.21%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$65,100.60	41.00%
Pipeline Surveying	\$230.00	per Hour	\$16,918.80	10.66%
Work Boat	\$583.00	per Hour	\$42,885.48	27.01%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

A MMS POCS 29056 (Ver 1) Segment#:920241

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,275.51	5.21%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$65,100.60	41.00%
Pipeline Surveying	\$230.00	per Hour	\$16,918.80	10.66%
Work Boat	\$583.00	per Hour	\$42,885.48	27.01%



MMS

Pipeline Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1) Segment#:1030241

Task		Task Hours		Task Cost	
Mobilize Work Boat		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Rig Up Decomm Equipment		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		2.37	2.75%	\$4,290.88	2.75%
Work Boat	\$1,381.71				
Dive Basic Spread- Mixed Gas	\$2,097.45				
Decommissioning Crew	\$266.62				
Pipeline Surveying	\$545.10				
Derig Decomm Equipment		2.00	2.32%	\$3,621.00	2.32%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.00	4.63%	\$7,242.00	4.63%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Remove Tube Turn		4.00	4.63%	\$7,242.00	4.63%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Bury Pipeline		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.08	3.57%	\$5,576.34	3.57%
Work Boat	\$1,795.64				
Dive Basic Spread- Mixed Gas	\$2,725.80				
Decommissioning Crew	\$346.50				
Pipeline Surveying	\$708.40				
Expose Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.00	4.63%	\$7,242.00	4.63%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Remove Tube Turn		4.00	4.63%	\$7,242.00	4.63%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Bury Pipeline		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Total		72.47	83.94%	\$131,206.94	83.94%



MMS

Pipeline Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1) Segment#:810241

Task		Task Hours		Task Cost	
Mobilize Work Boat		5.00	5.70%	\$9,052.50	5.70%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Rig Up Decomm Equipment		5.00	5.70%	\$9,052.50	5.70%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		3.46	3.95%	\$6,264.33	3.95%
Work Boat	\$2,017.18				
Dive Basic Spread- Mixed Gas	\$3,062.10				
Decommissioning Crew	\$389.25				
Pipeline Surveying	\$795.80				
Derig Decomm Equipment		2.00	2.28%	\$3,621.00	2.28%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		6.38	7.27%	\$11,550.99	7.27%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.27%	\$11,550.99	7.27%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.00	4.56%	\$7,242.00	4.56%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Remove Tube Turn		4.00	4.56%	\$7,242.00	4.56%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Bury Pipeline		4.25	4.85%	\$7,694.63	4.85%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.08	3.51%	\$5,576.34	3.51%
Work Boat	\$1,795.64				
Dive Basic Spread- Mixed Gas	\$2,725.80				
Decommissioning Crew	\$346.50				
Pipeline Surveying	\$708.40				
Expose Pipeline		6.38	7.27%	\$11,550.99	7.27%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.27%	\$11,550.99	7.27%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.00	4.56%	\$7,242.00	4.56%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Remove Tube Turn		4.00	4.56%	\$7,242.00	4.56%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Bury Pipeline		4.25	4.85%	\$7,694.63	4.85%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		5.00	5.70%	\$9,052.50	5.70%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Total		73.56	83.88%	\$133,180.39	83.88%



MMS

Pipeline Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1) Segment#:920241

Task		Task Hours		Task Cost	
Mobilize Work Boat		5.00	5.70%	\$9,052.50	5.70%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Rig Up Decomm Equipment		5.00	5.70%	\$9,052.50	5.70%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		3.46	3.95%	\$6,264.33	3.95%
Work Boat	\$2,017.18				
Dive Basic Spread- Mixed Gas	\$3,062.10				
Decommissioning Crew	\$389.25				
Pipeline Surveying	\$795.80				
Derig Decomm Equipment		2.00	2.28%	\$3,621.00	2.28%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		6.38	7.27%	\$11,550.99	7.27%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.27%	\$11,550.99	7.27%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.00	4.56%	\$7,242.00	4.56%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Remove Tube Turn		4.00	4.56%	\$7,242.00	4.56%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Bury Pipeline		4.25	4.85%	\$7,694.63	4.85%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.08	3.51%	\$5,576.34	3.51%
Work Boat	\$1,795.64				
Dive Basic Spread- Mixed Gas	\$2,725.80				
Decommissioning Crew	\$346.50				
Pipeline Surveying	\$708.40				
Expose Pipeline		6.38	7.27%	\$11,550.99	7.27%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.27%	\$11,550.99	7.27%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.00	4.56%	\$7,242.00	4.56%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Remove Tube Turn		4.00	4.56%	\$7,242.00	4.56%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Bury Pipeline		4.25	4.85%	\$7,694.63	4.85%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		5.00	5.70%	\$9,052.50	5.70%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Total		73.56	83.88%	\$133,180.39	83.88%



MMS

Well Information

A MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

A MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$5,239,064.00 80.00%
Task Total			0.00	\$5,239,064.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$785,859.63 12.00%
ather Contingency (10.00%)			0.00	\$523,906.41 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$6,548,830.04 100.00%



TWACHTMAN SNYDER & BYRD, INC.

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Well Decommission Resources Breakdown

A MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$5,239,064.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

A MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$5,239,064.00	80.00%
Manual Calculation			\$5,239,064.00	
Total	0.00	0.00%	\$5,239,064.00	80.00%

B MMS POCS 29056



MMS

Platform Salvage Option

B MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform B will be removed along with Platforms A, C, Hillhouse, Gina and Henry.
- Platform B is a 12-pile platform installed in 1968 in 190' of water.
- The estimated removal weight is the deck weight is 1,357 tons and the jacket weight is 1,500 tons.
- The platform has a total of 57 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 57 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and one 400' cargo barge will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 3 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The three pipelines (oil, gas, water) on the OCS will be totally removed to the state



MMS

Platform Salvage Option

B MMS POCS 29056 (Ver 1)

water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

B MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$30,548,963

Estimated Decommissioning Net Cost = \$30,548,963



MMS

Basic Information

B MMS POCS 29056 (Ver 1)

General Data

Platform:	B MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	190'
Pre 461H?:	Yes
Year Installed:	1968
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0241
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	57
# Pipelines to Abandon:	3
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$19,503,130	\$19,503,130
Well Plugging & Abandonment:	\$7,155,695	\$7,155,695
Pipeline Abandonment:	\$3,890,138	\$3,890,138
Total Decommissioning Cost:	\$30,548,963	\$30,548,963



MMS

Platform Information

B MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	12	40"	0.5"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	112 x 134	70
Middle:	90 x 115	43
Lower:	10 x 40	39

Conductors

Number of Slots:	63
Number Installed:	57
Outside Diameter:	20"
Wall Thickness:	0.3"
Number Slanted:	20

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	1500.00		
Jacket Installation Date:	11/8/68		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	1357 Tons
Number of Padeyes Required:	12
Deck Installation Date:	11/8/68
Deck Contractor:	Unknown



MMS

Platform Information

B MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 400 x 100	Jkt > 700T	Conductors	Conductors	

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$2,137,769.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

B MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,510,081.00	7.74%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.05%	\$425,833.00	2.18%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.05%	\$4,329,792.00	22.20%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.04%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.05%	\$957,710.00	4.91%
Mobilize DB 2000	Mob from Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	10.08%	\$1,530,000.00	7.84%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.14%	\$72,296.00	0.37%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.14%	\$36,600.00	0.19%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	10.30	0.52%	\$46,556.00	0.24%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.34%	\$84,510.00	0.43%
Cut Deck/Equip/Misc	Seperate 4 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	1.21%	\$324,000.00	1.66%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	1.21%	\$324,000.00	1.66%
Remove 8 Pile Deck	Remove 12 Pile Deck, 4 modules	<input checked="" type="checkbox"/>	48.00	2.42%	\$648,000.00	3.32%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.14%	\$44,296.00	0.23%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	2.32%	\$621,920.00	3.19%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	61.68	3.11%	\$893,577.60	4.58%
Remove Jacket - Meth 1		<input checked="" type="checkbox"/>	20.75	1.05%	\$280,540.00	1.44%
Demob CB 400 & Tug	Demob to Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.14%	\$22,600.00	0.12%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.34%	\$84,510.00	0.43%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	10.30	0.52%	\$46,556.00	0.24%
Demob DB 2000	Demob to Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	10.08%	\$1,530,000.00	7.84%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	3.63%	\$709,000.00	3.64%
Offload CB 300		<input type="checkbox"/>	672.00	33.87%	\$177,760.00	0.91%
Offload CB 400		<input type="checkbox"/>	408.00	20.57%	\$126,080.00	0.65%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.04%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$168,611.00	0.86%
Task Total			1905.93	96.07%	\$15,008,814.60	76.96%
Misc. Work Provision (15.00%)			46.79	2.36%	\$1,413,926.00	7.25%
Weather Contingency (10.00%)			31.19	1.57%	\$942,617.10	4.83%
Consumables					\$0.00	0.00%
Waste Disposal					\$2,137,769.00	10.96%
Structure & Equipment Disposal					\$0.00	0.00%



MMS

Platform Decommission Task Information

B MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost	
		Offloading		\$0.00	0.00%
		Storage / Scrapping		\$0.00	0.00%
		Reef Donation		\$0.00	0.00%
		Cost of Engineering (0.00%)		\$0.00	0.00%
			Total:	1983.91 100.00%	19,503,126.70 100.00%



MMS

Platform Decommission Resources Breakdown

B MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$161,581.25	0.83%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$137,760.00	0.71%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$106,080.00	0.54%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$182,672.00	0.94%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$173,630.00	0.89%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$60,000.00	0.31%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$5,082,405.00	26.06%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$818,247.45	4.20%
Manual Calculation	\$0.00	Independently Calculated	\$8,115,013.00	41.61%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$59,664.00	0.31%
Pipeline Survey	\$230.00	per Hour	\$59,461.90	0.30%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.14%
Rig Up CB 400	\$14,000.00	per Barge	\$14,000.00	0.07%
Work Boat	\$500.00	per Hour	\$10,300.00	0.05%



MMS

Platform Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,510,081.00	7.74%
Manual Calculation			\$1,510,081.00	
NMFS Marine Observation	1.00	0.05%	\$425,833.00	2.18%
Manual Calculation			\$425,833.00	
Sever Conductors- Abrasive	1.00	0.05%	\$4,329,792.00	22.20%
Manual Calculation			\$4,329,792.00	
Mobilize Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.04%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	
Platform Removal Preparation	1.00	0.05%	\$957,710.00	4.91%
Manual Calculation			\$957,710.00	
Mobilize DB 2000	200.00	10.08%	\$1,530,000.00	7.84%
Derrick Barge 2000			\$1,530,000.00	
Mobilize CB 300 & Tug	22.60	1.14%	\$72,296.00	0.37%
CB 300 & Tug			\$44,296.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	22.60	1.14%	\$36,600.00	0.19%
Rig Up CB 400			\$14,000.00	
CB 400 & Tug			\$22,600.00	
Mobilize Dive Spread	10.30	0.52%	\$46,556.00	0.24%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Setup Derrick Barge	6.75	0.34%	\$84,510.00	0.43%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	1.21%	\$324,000.00	1.66%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	1.21%	\$324,000.00	1.66%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	48.00	2.42%	\$648,000.00	3.32%
Derrick Barge 2000			\$408,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Demob CB 300 & Tug	22.60	1.14%	\$44,296.00	0.23%
CB 300 & Tug			\$44,296.00	
Jet/Airlift Pile Mud Plug	46.00	2.32%	\$621,920.00	3.19%
Derrick Barge 2000			\$391,000.00	
Dive Basic Spread Saturation			\$145,590.00	
Pipeline Survey			\$10,580.00	
Abrasive Cutter Spread			\$28,750.00	
CB 400 & Tug			\$46,000.00	



MMS

Platform Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Sever Piles- Abrasive	61.68	3.11%	\$893,577.60	4.58%
Derrick Barge 2000			\$524,280.00	
Dive Basic Spread Saturation			\$195,217.20	
Pipeline Survey			\$14,186.40	
Abrasive Cutter Spread			\$38,550.00	
CB 400 & Tug			\$61,680.00	
Pile Abrasive Cut 7 to 48 inches			\$59,664.00	
Remove Jacket - Meth 1	20.75	1.05%	\$280,540.00	1.44%
Derrick Barge 2000			\$176,375.00	
Dive Basic Spread Saturation			\$65,673.75	
Pipeline Survey			\$4,772.50	
Abrasive Cutter Spread			\$12,968.75	
CB 400 & Tug			\$20,750.00	
Demob CB 400 & Tug	22.60	1.14%	\$22,600.00	0.12%
CB 400 & Tug			\$22,600.00	
Pick Up DB Anchors	6.75	0.34%	\$84,510.00	0.43%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	



MMS

Platform Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	10.30	0.52%	\$46,556.00	0.24%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Demob DB 2000	200.00	10.08%	\$1,530,000.00	7.84%
Derrick Barge 2000			\$1,530,000.00	
Site Clearance - with Divers	72.00	3.63%	\$709,000.00	3.64%
Manual Calculation			\$709,000.00	
Offload CB 300	672.00	33.87%	\$177,760.00	0.91%
Cargo Barge 300			\$137,760.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	408.00	20.57%	\$126,080.00	0.65%
Cargo Barge 400			\$106,080.00	
CB Damage Deduct			\$20,000.00	
Demob Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.04%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	



MMS

Platform Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$168,611.00	0.86%
Manual Calculation			\$168,611.00	
Total	1905.93	96.07%	\$15,008,814.60	76.96%



MMS

Pipeline Information

B MMS POCS 29056 (Ver1) Segment#:1110241-Sho

General Data

Water Depth:	190'
Origin / Terminus:	Origin
Opposite End Name:	Rincon
Opposite End Water Depth:	10'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	12.75"	Wall Thickness:	0.688"	Length:	35582'
Depth of Burial:	3'	# Crossings:		Product:	Oil
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This pipeline runs to the Rincon Onshore facility.
Pipeline Removed to State Waters
Estimated that ~35582' Removed



MMS

Pipeline Information

B MMS POCS 29056 (Ver1) Segment#:1220241-Sho

General Data

Water Depth:	190'
Origin / Terminus:	Origin
Opposite End Name:	Rincon
Opposite End Water Depth:	10'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	12.75"	Wall Thickness:	0.688"	Length:	35582'
Depth of Burial:	3'	# Crossings:		Product:	Gas
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This pipeline runs to the Rincon Onshore facility.
Pipeline Removed to State Waters
Estimated that ~35582' Removed



MMS

Pipeline Information

B MMS POCS 29056 (Ver1) Segment#:1330241-Sho

General Data

Water Depth:	190'
Origin / Terminus:	Origin
Opposite End Name:	Rincon
Opposite End Water Depth:	10'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6"	Wall Thickness:	0.432"	Length:	35582'
Depth of Burial:	3'	# Crossings:		Product:	Water
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This pipeline runs to the Rincon Onshore facility.
Pipeline Removed to State Waters
Estimated that ~35582' Removed



MMS

Pipeline Decommission Task Information

B MMS POCS 29056 (Ver 1) Segment#:1110241-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	0.80%	\$3,477.50	0.27%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.80%	\$3,477.50	0.27%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	42.00	6.72%	\$29,211.00	2.23%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.32%	\$1,391.00	0.11%
Demob Work Boat		<input type="checkbox"/>	10.30	1.65%	\$7,163.65	0.55%
Mob P/L Removal Spread		<input type="checkbox"/>	5.00	0.80%	\$15,345.00	1.17%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	1.02%	\$20,297.97	1.55%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	0.64%	\$12,726.00	0.97%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	0.64%	\$12,726.00	0.97%
Mobilize Vessel		<input checked="" type="checkbox"/>	5.00	0.80%	\$21,500.00	1.64%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	1.02%	\$23,089.22	1.76%
Remove Pipeline		<input checked="" type="checkbox"/>	228.00	36.46%	\$825,132.00	63.07%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	0.68%	\$15,380.75	1.18%
Demob Vessel		<input checked="" type="checkbox"/>	5.00	0.80%	\$5,500.00	0.42%
Demob P/L Removal Spread		<input type="checkbox"/>	5.00	0.80%	\$18,095.00	1.38%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	26.87%	\$41,000.00	3.13%
Task Total			505.31	80.81%	\$1,055,512.59	80.67%
Misc. Work Provision (15.00%)			72.00	11.51%	\$151,714.72	11.60%
ather Contingency (10.00%)			48.00	7.68%	\$101,143.15	7.73%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			625.31	100.00%	\$1,308,370.46	100.00%



MMS

Pipeline Decommission Task Information

B MMS POCS 29056 (Ver 1) Segment#:1220241-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	0.80%	\$3,477.50	0.27%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.80%	\$3,477.50	0.27%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	42.00	6.72%	\$29,211.00	2.23%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.32%	\$1,391.00	0.11%
Demob Work Boat		<input type="checkbox"/>	10.30	1.65%	\$7,163.65	0.55%
Mob P/L Removal Spread		<input type="checkbox"/>	5.00	0.80%	\$15,345.00	1.17%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	1.02%	\$20,297.97	1.55%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	0.64%	\$12,726.00	0.97%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	0.64%	\$12,726.00	0.97%
Mobilize Vessel		<input checked="" type="checkbox"/>	5.00	0.80%	\$21,500.00	1.64%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	1.02%	\$23,089.22	1.76%
Remove Pipeline		<input checked="" type="checkbox"/>	228.00	36.46%	\$825,132.00	63.07%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	0.68%	\$15,380.75	1.18%
Demob Vessel		<input checked="" type="checkbox"/>	5.00	0.80%	\$5,500.00	0.42%
Demob P/L Removal Spread		<input type="checkbox"/>	5.00	0.80%	\$18,095.00	1.38%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	26.87%	\$41,000.00	3.13%
Task Total			505.31	80.81%	\$1,055,512.59	80.67%
Misc. Work Provision (15.00%)			72.00	11.51%	\$151,714.72	11.60%
ather Contingency (10.00%)			48.00	7.68%	\$101,143.15	7.73%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			625.31	100.00%	\$1,308,370.46	100.00%



MMS

Pipeline Decommission Task Information

B MMS POCS 29056 (Ver 1) Segment#:1330241-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	0.85%	\$3,477.50	0.27%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.85%	\$3,477.50	0.27%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	9.00	1.53%	\$6,259.50	0.49%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.34%	\$1,391.00	0.11%
Demob Work Boat		<input type="checkbox"/>	10.30	1.75%	\$7,163.65	0.56%
Mob P/L Removal Spread		<input type="checkbox"/>	5.00	0.85%	\$15,345.00	1.21%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	1.09%	\$20,297.97	1.59%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.00	0.68%	\$12,726.00	1.00%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.00	0.68%	\$12,726.00	1.00%
Mobilize Vessel		<input checked="" type="checkbox"/>	10.30	1.75%	\$27,330.00	2.15%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	1.09%	\$23,089.22	1.81%
Remove Pipeline		<input checked="" type="checkbox"/>	225.00	38.33%	\$814,275.00	63.95%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	0.72%	\$15,380.75	1.21%
Demob Vessel		<input checked="" type="checkbox"/>	5.00	0.85%	\$5,500.00	0.43%
Demob P/L Removal Spread		<input type="checkbox"/>	5.00	0.85%	\$18,095.00	1.42%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	28.62%	\$41,000.00	3.22%
Task Total			474.61	80.86%	\$1,027,534.09	80.69%
Misc. Work Provision (15.00%)			67.40	11.48%	\$147,517.95	11.58%
ather Contingency (10.00%)			44.93	7.66%	\$98,345.30	7.72%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			586.94	100.00%	\$1,273,397.33	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

B MMS POCS 29056 (Ver 1) Segment#:1110241-Sh

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	1.61%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$144,996.50	11.08%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	1.53%
Decommissioning Crew	\$0.00	Calculated from tables	\$8,851.50	0.68%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$232,763.85	17.79%
Manual Calculation	\$0.00	Independently Calculated	\$0.00	0.00%
Pipelay Barge	\$1,954.00	per Hour	\$513,921.54	39.28%
Pipeline Surveying	\$230.00	per Hour	\$60,492.30	4.62%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	1.22%
Work Boat	\$583.00	per Hour	\$37,486.90	2.87%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

B MMS POCS 29056 (Ver 1) Segment#:1220241-Sh

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	1.61%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$144,996.50	11.08%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	1.53%
Decommissioning Crew	\$0.00	Calculated from tables	\$8,851.50	0.68%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$232,763.85	17.79%
Manual Calculation	\$0.00	Independently Calculated	\$0.00	0.00%
Pipelay Barge	\$1,954.00	per Hour	\$513,921.54	39.28%
Pipeline Surveying	\$230.00	per Hour	\$60,492.30	4.62%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	1.22%
Work Boat	\$583.00	per Hour	\$37,486.90	2.87%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

B MMS POCS 29056 (Ver 1) Segment#:1330241-Sh

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	1.65%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$149,176.50	11.71%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	1.57%
Decommissioning Crew	\$0.00	Calculated from tables	\$5,139.00	0.40%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$230,108.85	18.07%
Manual Calculation	\$0.00	Independently Calculated	\$0.00	0.00%
Pipelay Barge	\$1,954.00	per Hour	\$508,059.54	39.90%
Pipeline Surveying	\$230.00	per Hour	\$59,802.30	4.70%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	1.26%
Work Boat	\$583.00	per Hour	\$18,247.90	1.43%



MMS

Pipeline Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1) Segment#:1110241-Sh

Task		Task Hours	Task Cost
Mobilize Work Boat		5.00 0.80%	\$3,477.50 0.27%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Rig Up Decomm Equipment		5.00 0.80%	\$3,477.50 0.27%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		42.00 6.72%	\$29,211.00 2.23%
Work Boat	\$24,486.00		
Decommissioning Crew	\$4,725.00		
Derig Decomm Equipment		2.00 0.32%	\$1,391.00 0.11%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		10.30 1.65%	\$7,163.65 0.55%
Work Boat	\$6,004.90		
Decommissioning Crew	\$1,158.75		
Mob P/L Removal Spread		5.00 0.80%	\$15,345.00 1.17%
Dive Basic Spread- Mixed Gas	\$4,425.00		
Pipeline Surveying	\$1,150.00		
Pipelay Barge	\$9,770.00		
Manual Calculation	\$0.00		
Cut & Plug Pipeline		6.38 1.02%	\$20,297.97 1.55%
Dive Basic Spread- Mixed Gas	\$5,646.30		
Pipeline Surveying	\$1,467.40		
Pipelay Barge	\$12,466.52		
Decommissioning Crew	\$717.75		
Cut Pipeline Riser		4.00 0.64%	\$12,726.00 0.97%
Dive Basic Spread- Mixed Gas	\$3,540.00		
Pipeline Surveying	\$920.00		
Pipelay Barge	\$7,816.00		
Decommissioning Crew	\$450.00		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		4.00	0.64%	\$12,726.00	0.97%
Dive Basic Spread- Mixed Gas	\$3,540.00				
Pipeline Surveying	\$920.00				
Pipelay Barge	\$7,816.00				
Decommissioning Crew	\$450.00				
Mobilize Vessel		5.00	0.80%	\$21,500.00	1.64%
CB 180 & Tug	\$5,500.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		6.38	1.02%	\$23,089.22	1.76%
Pipeline Surveying	\$1,467.40				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Pipelay Barge	\$12,466.52				
CB 180 & Tug	\$3,509.00				
Remove Pipeline		228.00	36.46%	\$825,132.00	63.07%
Pipeline Surveying	\$52,440.00				
Dive Basic Spread- Mixed Gas	\$201,780.00				
Pipelay Barge	\$445,512.00				
CB 180 & Tug	\$125,400.00				
Bury Pipeline		4.25	0.68%	\$15,380.75	1.18%
Pipeline Surveying	\$977.50				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Pipelay Barge	\$8,304.50				
CB 180 & Tug	\$2,337.50				
Demob Vessel		5.00	0.80%	\$5,500.00	0.42%
CB 180 & Tug	\$5,500.00				
Demob P/L Removal Spread		5.00	0.80%	\$18,095.00	1.38%
Pipeline Surveying	\$1,150.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Pipelay Barge	\$9,770.00				
CB 180 & Tug	\$2,750.00				
Offload CB 180		168.00	26.87%	\$41,000.00	3.13%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		505.31	80.81%	\$1,055,512.59	80.67%



MMS

Pipeline Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1) Segment#:1220241-Sh

Task		Task Hours	Task Cost
Mobilize Work Boat		5.00 0.80%	\$3,477.50 0.27%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Rig Up Decomm Equipment		5.00 0.80%	\$3,477.50 0.27%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		42.00 6.72%	\$29,211.00 2.23%
Work Boat	\$24,486.00		
Decommissioning Crew	\$4,725.00		
Derig Decomm Equipment		2.00 0.32%	\$1,391.00 0.11%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		10.30 1.65%	\$7,163.65 0.55%
Work Boat	\$6,004.90		
Decommissioning Crew	\$1,158.75		
Mob P/L Removal Spread		5.00 0.80%	\$15,345.00 1.17%
Dive Basic Spread- Mixed Gas	\$4,425.00		
Pipeline Surveying	\$1,150.00		
Pipelay Barge	\$9,770.00		
Manual Calculation	\$0.00		
Cut & Plug Pipeline		6.38 1.02%	\$20,297.97 1.55%
Dive Basic Spread- Mixed Gas	\$5,646.30		
Pipeline Surveying	\$1,467.40		
Pipelay Barge	\$12,466.52		
Decommissioning Crew	\$717.75		
Cut Pipeline Riser		4.00 0.64%	\$12,726.00 0.97%
Dive Basic Spread- Mixed Gas	\$3,540.00		
Pipeline Surveying	\$920.00		
Pipelay Barge	\$7,816.00		
Decommissioning Crew	\$450.00		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		4.00	0.64%	\$12,726.00	0.97%
Dive Basic Spread- Mixed Gas	\$3,540.00				
Pipeline Surveying	\$920.00				
Pipelay Barge	\$7,816.00				
Decommissioning Crew	\$450.00				
Mobilize Vessel		5.00	0.80%	\$21,500.00	1.64%
CB 180 & Tug	\$5,500.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		6.38	1.02%	\$23,089.22	1.76%
Pipeline Surveying	\$1,467.40				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Pipelay Barge	\$12,466.52				
CB 180 & Tug	\$3,509.00				
Remove Pipeline		228.00	36.46%	\$825,132.00	63.07%
Pipeline Surveying	\$52,440.00				
Dive Basic Spread- Mixed Gas	\$201,780.00				
Pipelay Barge	\$445,512.00				
CB 180 & Tug	\$125,400.00				
Bury Pipeline		4.25	0.68%	\$15,380.75	1.18%
Pipeline Surveying	\$977.50				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Pipelay Barge	\$8,304.50				
CB 180 & Tug	\$2,337.50				
Demob Vessel		5.00	0.80%	\$5,500.00	0.42%
CB 180 & Tug	\$5,500.00				
Demob P/L Removal Spread		5.00	0.80%	\$18,095.00	1.38%
Pipeline Surveying	\$1,150.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Pipelay Barge	\$9,770.00				
CB 180 & Tug	\$2,750.00				
Offload CB 180		168.00	26.87%	\$41,000.00	3.13%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		505.31	80.81%	\$1,055,512.59	80.67%



MMS

Pipeline Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1) Segment#:1330241-Sh

Task		Task Hours	Task Cost
Mobilize Work Boat		5.00 0.85%	\$3,477.50 0.27%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Rig Up Decomm Equipment		5.00 0.85%	\$3,477.50 0.27%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		9.00 1.53%	\$6,259.50 0.49%
Work Boat	\$5,247.00		
Decommissioning Crew	\$1,012.50		
Derig Decomm Equipment		2.00 0.34%	\$1,391.00 0.11%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		10.30 1.75%	\$7,163.65 0.56%
Work Boat	\$6,004.90		
Decommissioning Crew	\$1,158.75		
Mob P/L Removal Spread		5.00 0.85%	\$15,345.00 1.21%
Dive Basic Spread- Mixed Gas	\$4,425.00		
Pipeline Surveying	\$1,150.00		
Pipelay Barge	\$9,770.00		
Manual Calculation	\$0.00		
Cut & Plug Pipeline		6.38 1.09%	\$20,297.97 1.59%
Dive Basic Spread- Mixed Gas	\$5,646.30		
Pipeline Surveying	\$1,467.40		
Pipelay Barge	\$12,466.52		
Decommissioning Crew	\$717.75		
Cut Pipeline Riser		4.00 0.68%	\$12,726.00 1.00%
Dive Basic Spread- Mixed Gas	\$3,540.00		
Pipeline Surveying	\$920.00		
Pipelay Barge	\$7,816.00		
Decommissioning Crew	\$450.00		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		4.00	0.68%	\$12,726.00	1.00%
Dive Basic Spread- Mixed Gas	\$3,540.00				
Pipeline Surveying	\$920.00				
Pipelay Barge	\$7,816.00				
Decommissioning Crew	\$450.00				
Mobilize Vessel		10.30	1.75%	\$27,330.00	2.15%
CB 180 & Tug	\$11,330.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		6.38	1.09%	\$23,089.22	1.81%
Pipeline Surveying	\$1,467.40				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Pipelay Barge	\$12,466.52				
CB 180 & Tug	\$3,509.00				
Remove Pipeline		225.00	38.33%	\$814,275.00	63.95%
Pipeline Surveying	\$51,750.00				
Dive Basic Spread- Mixed Gas	\$199,125.00				
Pipelay Barge	\$439,650.00				
CB 180 & Tug	\$123,750.00				
Bury Pipeline		4.25	0.72%	\$15,380.75	1.21%
Pipeline Surveying	\$977.50				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Pipelay Barge	\$8,304.50				
CB 180 & Tug	\$2,337.50				
Demob Vessel		5.00	0.85%	\$5,500.00	0.43%
CB 180 & Tug	\$5,500.00				
Demob P/L Removal Spread		5.00	0.85%	\$18,095.00	1.42%
Pipeline Surveying	\$1,150.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Pipelay Barge	\$9,770.00				
CB 180 & Tug	\$2,750.00				
Offload CB 180		168.00	28.62%	\$41,000.00	3.22%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		474.61	80.86%	\$1,027,534.09	80.69%



MMS

Well Information

B MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

B MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$5,724,556.00 80.00%
Task Total			0.00	\$5,724,556.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$858,683.43 12.00%
ather Contingency (10.00%)			0.00	\$572,455.61 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$7,155,695.04 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

B MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost		Cost	
Manual Calculation	\$0.00	Independently Calculated	\$5,724,556.00	80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

B MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$5,724,556.00	80.00%
Manual Calculation			\$5,724,556.00	
Total	0.00	0.00%	\$5,724,556.00	80.00%

C MMS POCS 29056



MMS

Platform Salvage Option

C MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform C will be removed along with Platforms A, B, Hillhouse, Gina and Henry.
- Platform C is a 12-pile platform installed in 1977 in 192' of water.
- The estimated removal weight is the deck weight is 1,357 tons and the jacket weight is 1,500 tons.
- The platform has a total of 38 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 43 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and one 400' cargo barge will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 3 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The three pipelines (oil, gas, water) on the OCS will be totally removed to the state



MMS

Platform Salvage Option

C MMS POCS 29056 (Ver 1)

water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

C MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$23,683,644

Estimated Decommissioning Net Cost = \$23,683,644



MMS

Basic Information

C MMS POCS 29056 (Ver 1)

General Data

Platform:	C MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	192'
Pre 461H?:	Yes
Year Installed:	1977
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0241
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	38
# Pipelines to Abandon:	3
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$18,339,350	\$18,339,350
Well Plugging & Abandonment:	\$4,875,420	\$4,875,420
Pipeline Abandonment:	\$468,874	\$468,874
Total Decommissioning Cost:	\$23,683,644	\$23,683,644



MMS

Platform Information

C MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	12	40"	0.5"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	112 x 134	70
Middle:	90 x 115	43
Lower:	10 x 40	39

Conductors

Number of Slots:	60
Number Installed:	43
Outside Diameter:	20"
Wall Thickness:	0.3"
Number Slanted:	10

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	1500.00		
Jacket Installation Date:	2/28/77		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	1357 Tons
Number of Padeyes Required:	12
Deck Installation Date:	2/28/77
Deck Contractor:	Unknown



MMS

Platform Information

C MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 400 x 100	Jkt > 700T	Conductors	Conductors	

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$1,636,808.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

C MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,126,663.00	6.14%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.05%	\$425,833.00	2.32%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.05%	\$3,316,694.00	18.09%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.04%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.05%	\$957,710.00	5.22%
Mobilize DB 2000	Mob from Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	10.08%	\$1,530,000.00	8.34%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.14%	\$72,296.00	0.39%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.14%	\$36,600.00	0.20%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	10.30	0.52%	\$46,556.00	0.25%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.34%	\$84,510.00	0.46%
Cut Deck/Equip/Misc	Seperate 4 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	1.21%	\$324,000.00	1.77%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	1.21%	\$324,000.00	1.77%
Remove 8 Pile Deck	Remove 12 Pile Deck, 4 modules	<input checked="" type="checkbox"/>	48.00	2.42%	\$648,000.00	3.53%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.14%	\$44,296.00	0.24%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	2.32%	\$621,920.00	3.39%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	61.68	3.11%	\$962,913.60	5.25%
Remove Jacket - Meth 1		<input checked="" type="checkbox"/>	20.75	1.05%	\$280,540.00	1.53%
Demob CB 400 & Tug	Demob to Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.14%	\$22,600.00	0.12%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.34%	\$84,510.00	0.46%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	10.30	0.52%	\$46,556.00	0.25%
Demob DB 2000	Demob to Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	10.08%	\$1,530,000.00	8.34%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	3.63%	\$709,000.00	3.87%
Offload CB 300		<input type="checkbox"/>	672.00	33.87%	\$177,760.00	0.97%
Offload CB 400		<input type="checkbox"/>	408.00	20.57%	\$126,080.00	0.69%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.04%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$888,856.00	4.85%
Task Total			1905.93	96.07%	\$14,401,879.60	78.53%
Misc. Work Provision (15.00%)			46.79	2.36%	\$1,380,398.00	7.53%
Weather Contingency (10.00%)			31.19	1.57%	\$920,265.40	5.02%
Consumables					\$0.00	0.00%
Waste Disposal					\$1,636,808.00	8.93%
Structure & Equipment Disposal					\$0.00	0.00%



MMS

Platform Decommission Task Information

C MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost	
		Offloading		\$0.00	0.00%
		Storage / Scrapping		\$0.00	0.00%
		Reef Donation		\$0.00	0.00%
		Cost of Engineering (0.00%)		\$0.00	0.00%
			Total:	1983.91 100.00%	18,339,351.00 100.00%



MMS

Platform Decommission Resources Breakdown

C MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$161,581.25	0.88%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$137,760.00	0.75%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$106,080.00	0.58%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$182,672.00	1.00%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$173,630.00	0.95%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$60,000.00	0.33%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$5,082,405.00	27.71%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$818,247.45	4.46%
Manual Calculation	\$0.00	Independently Calculated	\$7,438,742.00	40.56%
Pile Abrasive Cut 70 to 96 inches	\$5,375.00	per Cut	\$129,000.00	0.70%
Pipeline Survey	\$230.00	per Hour	\$59,461.90	0.32%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.15%
Rig Up CB 400	\$14,000.00	per Barge	\$14,000.00	0.08%
Work Boat	\$500.00	per Hour	\$10,300.00	0.06%



MMS

Platform Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,126,663.00	6.14%
Manual Calculation			\$1,126,663.00	
NMFS Marine Observation	1.00	0.05%	\$425,833.00	2.32%
Manual Calculation			\$425,833.00	
Sever Conductors- Abrasive	1.00	0.05%	\$3,316,694.00	18.09%
Manual Calculation			\$3,316,694.00	
Mobilize Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.04%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	
Platform Removal Preparation	1.00	0.05%	\$957,710.00	5.22%
Manual Calculation			\$957,710.00	
Mobilize DB 2000	200.00	10.08%	\$1,530,000.00	8.34%
Derrick Barge 2000			\$1,530,000.00	
Mobilize CB 300 & Tug	22.60	1.14%	\$72,296.00	0.39%
CB 300 & Tug			\$44,296.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	22.60	1.14%	\$36,600.00	0.20%
Rig Up CB 400			\$14,000.00	
CB 400 & Tug			\$22,600.00	
Mobilize Dive Spread	10.30	0.52%	\$46,556.00	0.25%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Setup Derrick Barge	6.75	0.34%	\$84,510.00	0.46%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	1.21%	\$324,000.00	1.77%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	1.21%	\$324,000.00	1.77%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	48.00	2.42%	\$648,000.00	3.53%
Derrick Barge 2000			\$408,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Demob CB 300 & Tug	22.60	1.14%	\$44,296.00	0.24%
CB 300 & Tug			\$44,296.00	
Jet/Airlift Pile Mud Plug	46.00	2.32%	\$621,920.00	3.39%
Derrick Barge 2000			\$391,000.00	
Dive Basic Spread Saturation			\$145,590.00	
Pipeline Survey			\$10,580.00	
Abrasive Cutter Spread			\$28,750.00	
CB 400 & Tug			\$46,000.00	



MMS

Platform Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Sever Piles- Abrasive	61.68	3.11%	\$962,913.60	5.25%
Derrick Barge 2000			\$524,280.00	
Dive Basic Spread Saturation			\$195,217.20	
Pipeline Survey			\$14,186.40	
Abrasive Cutter Spread			\$38,550.00	
CB 400 & Tug			\$61,680.00	
Pile Abrasive Cut 70 to 96 inches			\$129,000.00	
Remove Jacket - Meth 1	20.75	1.05%	\$280,540.00	1.53%
Derrick Barge 2000			\$176,375.00	
Dive Basic Spread Saturation			\$65,673.75	
Pipeline Survey			\$4,772.50	
Abrasive Cutter Spread			\$12,968.75	
CB 400 & Tug			\$20,750.00	
Demob CB 400 & Tug	22.60	1.14%	\$22,600.00	0.12%
CB 400 & Tug			\$22,600.00	
Pick Up DB Anchors	6.75	0.34%	\$84,510.00	0.46%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	



MMS

Platform Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	10.30	0.52%	\$46,556.00	0.25%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Demob DB 2000	200.00	10.08%	\$1,530,000.00	8.34%
Derrick Barge 2000			\$1,530,000.00	
Site Clearance - with Divers	72.00	3.63%	\$709,000.00	3.87%
Manual Calculation			\$709,000.00	
Offload CB 300	672.00	33.87%	\$177,760.00	0.97%
Cargo Barge 300			\$137,760.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	408.00	20.57%	\$126,080.00	0.69%
Cargo Barge 400			\$106,080.00	
CB Damage Deduct			\$20,000.00	
Demob Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.04%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	



MMS

Platform Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$888,856.00	4.85%
Manual Calculation			\$888,856.00	
Total	1905.93	96.07%	\$14,401,879.60	78.53%



MMS

Pipeline Information

C MMS POCS 29056 (Ver1) Segment#:510241

General Data

Water Depth:	192'
Origin / Terminus:	Origin
Opposite End Name:	DC B Self
Opposite End Water Depth:	190'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6"	Wall Thickness:	0.432"	Length:	2839'
Depth of Burial:	3'	# Crossings:		Product:	Oil
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the B platform. It is estimated as abandoned in place.



MMS

Pipeline Information

C MMS POCS 29056 (Ver1) Segment#:620241

General Data

Water Depth:	192'
Origin / Terminus:	Origin
Opposite End Name:	DC B Self
Opposite End Water Depth:	190'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6"	Wall Thickness:	0.432"	Length:	2839'
Depth of Burial:	3'	# Crossings:		Product:	Gas
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the B platform. It is estimated as abandoned in place.



MMS

Pipeline Information

C MMS POCS 29056 (Ver1) Segment#:730241

General Data

Water Depth:	192'
Origin / Terminus:	Origin
Opposite End Name:	DC B Self
Opposite End Water Depth:	190'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6"	Wall Thickness:	0.432"	Length:	2839'
Depth of Burial:	3'	# Crossings:		Product:	Water
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the B platform. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

C MMS POCS 29056 (Ver 1) Segment#:510241

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	1.39	1.61%	\$2,516.59	1.61%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.32%	\$3,621.00	2.32%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Reposition Workboat		<input checked="" type="checkbox"/>	3.05	3.53%	\$5,522.02	3.53%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Demob Work Boat		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Task Total			72.46	83.94%	\$131,188.85	83.94%
Misc. Work Provision (15.00%)			8.32	9.64%	\$15,061.55	9.64%
ather Contingency (10.00%)			5.55	6.42%	\$10,041.04	6.42%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			86.33	100.00%	\$156,291.44	100.00%



MMS

Pipeline Decommission Task Information

C MMS POCS 29056 (Ver 1) Segment#:620241

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	1.39	1.61%	\$2,516.59	1.61%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.32%	\$3,621.00	2.32%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Reposition Workboat		<input checked="" type="checkbox"/>	3.05	3.53%	\$5,522.02	3.53%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Demob Work Boat		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Task Total			72.46	83.94%	\$131,188.85	83.94%
Misc. Work Provision (15.00%)			8.32	9.64%	\$15,061.55	9.64%
ather Contingency (10.00%)			5.55	6.42%	\$10,041.04	6.42%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			86.33	100.00%	\$156,291.44	100.00%



MMS

Pipeline Decommission Task Information

C MMS POCS 29056 (Ver 1) Segment#:730241

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	1.39	1.61%	\$2,516.59	1.61%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.32%	\$3,621.00	2.32%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Reposition Workboat		<input checked="" type="checkbox"/>	3.05	3.53%	\$5,522.02	3.53%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	7.39%	\$11,550.99	7.39%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.92%	\$7,694.63	4.92%
Demob Work Boat		<input type="checkbox"/>	5.00	5.79%	\$9,052.50	5.79%
Task Total			72.46	83.94%	\$131,188.85	83.94%
Misc. Work Provision (15.00%)			8.32	9.64%	\$15,061.55	9.64%
ather Contingency (10.00%)			5.55	6.42%	\$10,041.04	6.42%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			86.33	100.00%	\$156,291.44	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

C MMS POCS 29056 (Ver 1) Segment#:510241

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,151.77	5.22%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$64,127.10	41.03%
Pipeline Surveying	\$230.00	per Hour	\$16,665.80	10.66%
Work Boat	\$583.00	per Hour	\$42,244.18	27.03%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

C MMS POCS 29056 (Ver 1) Segment#:620241

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,151.77	5.22%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$64,127.10	41.03%
Pipeline Surveying	\$230.00	per Hour	\$16,665.80	10.66%
Work Boat	\$583.00	per Hour	\$42,244.18	27.03%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

C MMS POCS 29056 (Ver 1) Segment#:730241

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,151.77	5.22%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$64,127.10	41.03%
Pipeline Surveying	\$230.00	per Hour	\$16,665.80	10.66%
Work Boat	\$583.00	per Hour	\$42,244.18	27.03%



MMS

Pipeline Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1) Segment#:510241

Task		Task Hours		Task Cost	
Mobilize Work Boat		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Rig Up Decomm Equipment		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		1.39	1.61%	\$2,516.59	1.61%
Work Boat	\$810.37				
Dive Basic Spread- Mixed Gas	\$1,230.15				
Decommissioning Crew	\$156.37				
Pipeline Surveying	\$319.70				
Derig Decomm Equipment		2.00	2.32%	\$3,621.00	2.32%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.05	3.53%	\$5,522.02	3.53%
Work Boat	\$1,778.15				
Dive Basic Spread- Mixed Gas	\$2,699.25				
Decommissioning Crew	\$343.12				
Pipeline Surveying	\$701.50				
Expose Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Total		72.46	83.94%	\$131,188.85	83.94%



MMS

Pipeline Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1) Segment#:620241

Task		Task Hours		Task Cost	
Mobilize Work Boat		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Rig Up Decomm Equipment		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		1.39	1.61%	\$2,516.59	1.61%
Work Boat	\$810.37				
Dive Basic Spread- Mixed Gas	\$1,230.15				
Decommissioning Crew	\$156.37				
Pipeline Surveying	\$319.70				
Derig Decomm Equipment		2.00	2.32%	\$3,621.00	2.32%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.05	3.53%	\$5,522.02	3.53%
Work Boat	\$1,778.15				
Dive Basic Spread- Mixed Gas	\$2,699.25				
Decommissioning Crew	\$343.12				
Pipeline Surveying	\$701.50				
Expose Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Total		72.46	83.94%	\$131,188.85	83.94%



MMS

Pipeline Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1) Segment#:730241

Task		Task Hours		Task Cost	
Mobilize Work Boat		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Rig Up Decomm Equipment		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		1.39	1.61%	\$2,516.59	1.61%
Work Boat	\$810.37				
Dive Basic Spread- Mixed Gas	\$1,230.15				
Decommissioning Crew	\$156.37				
Pipeline Surveying	\$319.70				
Derig Decomm Equipment		2.00	2.32%	\$3,621.00	2.32%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.05	3.53%	\$5,522.02	3.53%
Work Boat	\$1,778.15				
Dive Basic Spread- Mixed Gas	\$2,699.25				
Decommissioning Crew	\$343.12				
Pipeline Surveying	\$701.50				
Expose Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	7.39%	\$11,550.99	7.39%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.92%	\$7,694.63	4.92%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		5.00	5.79%	\$9,052.50	5.79%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Total		72.46	83.94%	\$131,188.85	83.94%



MMS

Well Information

C MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

C MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$3,900,336.00 80.00%
Task Total			0.00	\$3,900,336.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$585,050.42 12.00%
ather Contingency (10.00%)			0.00	\$390,033.61 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$4,875,420.03 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

C MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$3,900,336.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

C MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$3,900,336.00	80.00%
Manual Calculation			\$3,900,336.00	
Total	0.00	0.00%	\$3,900,336.00	80.00%

Edith MMS POCS 29056



MMS

Platform Salvage Option

Edith MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Edith will be removed along with Platforms Eureka, Ellen and Elly.
- Platform Edith is a 12-pile platform installed in 1983 in 161' of water.
- The estimated removal weight is the deck weight is 4,134 tons and the jacket weight is 3,454 tons.
- The platform has a total of 18 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 23 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The two pipelines (oil, gas) on the OCS will be totally removed to the state water



MMS

Platform Salvage Option

Edith MMS POCS 29056 (Ver 1)

boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 5% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

Edith MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$29,178,546

Estimated Decommissioning Net Cost = \$29,178,546



MMS

Basic Information

Edith MMS POCS 29056 (Ver 1)

General Data

Platform:	Edith MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	161'
Pre 461H?:	No
Year Installed:	1983
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0296
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	18
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$26,387,740	\$26,387,740
Well Plugging & Abandonment:	\$2,504,914	\$2,504,914
Pipeline Abandonment:	\$285,893	\$285,893
Total Decommissioning Cost:	\$29,178,546	\$29,178,546



MMS

Platform Information

Edith MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	12	48"	1.75"	Yes	No	
Skirt/Braced	24	60"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	116 x 66	63
Middle:		
Lower:	170 x 194	46

Conductors

Number of Slots:	70
Number Installed:	23
Outside Diameter:	26"
Wall Thickness:	1.25"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	3454.00		
Jacket Installation Date:	1/12/83		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	4134 Tons
Number of Padeyes Required:	12
Deck Installation Date:	1/12/83
Deck Contractor:	Unknown



MMS

Platform Information

Edith MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 300 x 100	Deck > 500T	Deck 100-500T	Deck 100-500T	Deck 100-500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Jkt > 700T	Deck > 500T	Deck > 500T	
CB 400 x 100	Jkt > 700T	Jkt > 700T		

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	50.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	5.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$3,272,233.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Edith MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,310,058.00	4.96%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.02%	\$638,750.00	2.42%
Mobilize Abrasive Cutting Spread	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input type="checkbox"/>	1.00	0.02%	\$10,488.00	0.04%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet. Assume Planning can accommodate DB arrival immediately following conductor removal completion, allowing Abrasive spread to remain in LA/ Long Beach.	<input checked="" type="checkbox"/>	1.00	0.02%	\$1,650,362.00	6.25%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.02%	\$1,163,564.00	4.41%
Mobilize DB 2000	Mob from Asia, 50 days divided by 4 platforms	<input type="checkbox"/>	300.00	5.33%	\$2,295,000.00	8.70%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	10.00	0.18%	\$47,600.00	0.18%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	10.00	0.18%	\$72,000.00	0.27%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	4.00	0.07%	\$18,080.00	0.07%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.12%	\$84,510.00	0.32%
Cut Deck/Equip/Misc	Seperate 12 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.43%	\$324,000.00	1.23%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.43%	\$324,000.00	1.23%
Remove 8 Pile Deck	Remove 8 Pile Deck, 12 modules	<input checked="" type="checkbox"/>	96.00	1.71%	\$1,296,000.00	4.91%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	10.00	0.18%	\$19,600.00	0.07%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	0.82%	\$621,920.00	2.36%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	230.26	4.09%	\$3,473,115.16	13.16%
Cut Jacket	16 Hours per section, times 3 section(s), per MMS	<input checked="" type="checkbox"/>	48.00	0.85%	\$827,952.00	3.14%
Remove Jacket - Meth 1	24 Hours per section, times 3 section(s), per MMS	<input checked="" type="checkbox"/>	72.00	1.28%	\$973,440.00	3.69%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	10.00	0.18%	\$30,000.00	0.11%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.12%	\$84,510.00	0.32%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	4.00	0.07%	\$18,080.00	0.07%
Demob DB 2000	Mob from Asia, 50 days divided by 4 platforms	<input type="checkbox"/>	300.00	5.33%	\$2,295,000.00	8.70%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.28%	\$709,000.00	2.69%
Offload CB 300		<input type="checkbox"/>	1128.00	20.04%	\$271,240.00	1.03%
Offload CB 400		<input type="checkbox"/>	3096.00	55.01%	\$864,960.00	3.28%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.02%	\$10,488.00	0.04%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$1,146,090.00	4.34%
Task Total			5502.76	97.77%	\$20,579,807.16	77.99%
Misc. Work Provision (15.00%)			94.16	1.67%	\$1,901,770.00	7.21%
Weather Contingency (5.00%)			31.39	0.56%	\$633,923.20	2.40%



MMS

Platform Decommission Task Information

Edith MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Consumables		\$0.00 0.00%
		Waste Disposal		\$3,272,233.00 12.40%
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
		Total:	5628.31 100.00%	\$26,387,733.36 100.00%



MMS

Platform Decommission Resources Breakdown

Edith MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$351,100.00	1.33%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$231,240.00	0.88%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$804,960.00	3.05%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$180,320.00	0.68%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$456,259.98	1.73%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.38%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$9,296,960.00	35.23%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$1,777,970.38	6.74%
Manual Calculation	\$0.00	Independently Calculated	\$6,638,800.00	25.16%
Pile Abrasive Cut 49 to 69 inches	\$5,000.00	per Cut	\$360,000.00	1.36%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$178,992.00	0.68%
Pipeline Survey	\$230.00	per Hour	\$129,204.80	0.49%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.11%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.16%
Work Boat	\$500.00	per Hour	\$4,000.00	0.02%



MMS

Platform Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,310,058.00	4.96%
Manual Calculation			\$1,310,058.00	
NMFS Marine Observation	1.00	0.02%	\$638,750.00	2.42%
Manual Calculation			\$638,750.00	
Mobilize Abrasive Cutting Spread	1.00	0.02%	\$10,488.00	0.04%
Manual Calculation			\$1,374.75	
Manual Calculation			\$527.25	
Manual Calculation			\$6,000.00	
Manual Calculation			\$2,586.00	
Sever Conductors- Abrasive	1.00	0.02%	\$1,650,362.00	6.25%
Manual Calculation			\$1,650,362.00	
Platform Removal Preparation	1.00	0.02%	\$1,163,564.00	4.41%
Manual Calculation			\$1,163,564.00	
Mobilize DB 2000	300.00	5.33%	\$2,295,000.00	8.70%
Derrick Barge 2000			\$2,295,000.00	
Mobilize CB 300 & Tug	10.00	0.18%	\$47,600.00	0.18%
CB 300 & Tug			\$19,600.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	10.00	0.18%	\$72,000.00	0.27%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$30,000.00	
Mobilize Dive Spread	4.00	0.07%	\$18,080.00	0.07%
Work Boat			\$2,000.00	
Dive Basic Spread Saturation			\$12,660.00	
Abrasive Cutter Spread			\$2,500.00	
Pipeline Survey			\$920.00	
Setup Derrick Barge	6.75	0.12%	\$84,510.00	0.32%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	0.43%	\$324,000.00	1.23%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.43%	\$324,000.00	1.23%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	96.00	1.71%	\$1,296,000.00	4.91%
Derrick Barge 2000			\$816,000.00	
Dive Basic Spread Saturation			\$303,840.00	
Pipeline Survey			\$22,080.00	
Abrasive Cutter Spread			\$60,000.00	
CB 300 & Tug			\$94,080.00	
Demob CB 300 & Tug	10.00	0.18%	\$19,600.00	0.07%
CB 300 & Tug			\$19,600.00	
Jet/Airlift Pile Mud Plug	46.00	0.82%	\$621,920.00	2.36%
Derrick Barge 2000			\$391,000.00	
Dive Basic Spread Saturation			\$145,590.00	
Pipeline Survey			\$10,580.00	
Abrasive Cutter Spread			\$28,750.00	
CB 400 & Tug			\$46,000.00	



MMS

Platform Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		230.26	4.09%	\$3,473,115.16	13.16%
	Derrick Barge 2000	\$1,957,210.00			
	Dive Basic Spread Saturation	\$728,772.88			
	Pipeline Survey	\$52,959.80			
	Abrasive Cutter Spread	\$143,912.50			
	CB 400 & Tug	\$230,259.98			
	Pile Abrasive Cut 49 to 69 inches	\$360,000.00			
Cut Jacket		48.00	0.85%	\$827,952.00	3.14%
	Derrick Barge 2000	\$408,000.00			
	Dive Basic Spread Saturation	\$151,920.00			
	Pipeline Survey	\$11,040.00			
	Abrasive Cutter Spread	\$30,000.00			
	CB 400 & Tug	\$48,000.00			
	Pile Abrasive Cut 7 to 48 inches	\$178,992.00			
Remove Jacket - Meth 1		72.00	1.28%	\$973,440.00	3.69%
	Derrick Barge 2000	\$612,000.00			
	Dive Basic Spread Saturation	\$227,880.00			
	Pipeline Survey	\$16,560.00			
	Abrasive Cutter Spread	\$45,000.00			
	CB 400 & Tug	\$72,000.00			
Demob CB 400 & Tug		10.00	0.18%	\$30,000.00	0.11%
	CB 400 & Tug	\$30,000.00			



MMS

Platform Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.12%	\$84,510.00	0.32%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Demob Dive Spread	4.00	0.07%	\$18,080.00	0.07%
Work Boat			\$2,000.00	
Dive Basic Spread Saturation			\$12,660.00	
Abrasive Cutter Spread			\$2,500.00	
Pipeline Survey			\$920.00	
Demob DB 2000	300.00	5.33%	\$2,295,000.00	8.70%
Derrick Barge 2000			\$2,295,000.00	
Site Clearance - with Divers	72.00	1.28%	\$709,000.00	2.69%
Manual Calculation			\$709,000.00	
Offload CB 300	1128.00	20.04%	\$271,240.00	1.03%
Cargo Barge 300			\$231,240.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	3096.00	55.01%	\$864,960.00	3.28%
Cargo Barge 400			\$804,960.00	
CB Damage Deduct			\$60,000.00	



MMS

Platform Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.02%	\$10,488.00	0.04%
Manual Calculation			\$1,374.75	
Manual Calculation			\$527.25	
Manual Calculation			\$6,000.00	
Manual Calculation			\$2,586.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,146,090.00	4.34%
Manual Calculation			\$1,146,090.00	
Total	5502.76	97.77%	\$20,579,807.16	77.99%



MMS

Pipeline Information

Edith MMS POCS 29056 (Ver1) Segment#:3610296

General Data

Water Depth: 161'
Origin / Terminus: Origin
Opposite End Name: Elly
Opposite End Water Depth: 257'
Pipeline Operator: Spirit 76
Provision for Misc. Work%: 15.00%
Weather Contingency %: 5.00%

Pipeline Data

Outside Diameter: 6"	Wall Thickness: 0.432"	Length: 6336'
Depth of Burial: 3'	# Crossings:	Product: Oil
Installation Date:	Weight Coating: No	J Tube: No
Riser?: Yes	Riser Guard?: No	

Comments

This segment runs to Elly. It is estimated as abandoned in place.



MMS

Pipeline Information

Edith MMS POCS 29056 (Ver1) Segment#:3720296

General Data

Water Depth: 161'
Origin / Terminus: Origin
Opposite End Name: Eva
Opposite End Water Depth: 60'
Pipeline Operator: Spirit 76
Provision for Misc. Work%: 15.00%
Weather Contingency %: 5.00%

Pipeline Data

Outside Diameter: 6"	Wall Thickness: 0.432"	Length: 26849'
Depth of Burial: 3'	# Crossings:	Product: Gas
Installation Date:	Weight Coating: No	J Tube: No
Riser?: Yes	Riser Guard?: No	

Comments

This segment runs to Eva. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Edith MMS POCS 29056 (Ver 1) Segment#:3610296

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	4.00	5.49%	\$7,242.00	5.49%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	6.86%	\$9,052.50	6.86%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	3.10	4.25%	\$5,612.55	4.25%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.74%	\$3,621.00	2.74%
Expose Pipeline		<input checked="" type="checkbox"/>	5.21	7.14%	\$9,432.71	7.14%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.21	7.14%	\$9,432.71	7.14%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.47	4.76%	\$6,282.44	4.76%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.47	4.76%	\$6,282.44	4.76%
Bury Pipeline		<input checked="" type="checkbox"/>	3.47	4.76%	\$6,282.44	4.76%
Reposition Workboat		<input checked="" type="checkbox"/>	3.51	4.81%	\$6,354.85	4.81%
Expose Pipeline		<input checked="" type="checkbox"/>	5.21	7.14%	\$9,432.71	7.14%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.21	7.14%	\$9,432.71	7.14%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.47	4.76%	\$6,282.44	4.76%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.47	4.76%	\$6,282.44	4.76%
Bury Pipeline		<input checked="" type="checkbox"/>	3.47	4.76%	\$6,282.44	4.76%
Demob Work Boat		<input type="checkbox"/>	4.00	5.49%	\$7,242.00	5.49%
Task Total			63.27	86.76%	\$114,550.38	86.76%
Misc. Work Provision (15.00%)			7.24	9.93%	\$13,108.93	9.93%
Weather Contingency (5.00%)			2.41	3.31%	\$4,369.64	3.31%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			72.92	100.00%	\$132,028.96	100.00%



MMS

Pipeline Decommission Task Information

Edith MMS POCS 29056 (Ver 1) Segment#:3720296

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	4.00	4.71%	\$7,242.00	4.71%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.88%	\$9,052.50	5.88%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	13.15	15.47%	\$23,808.07	15.47%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.35%	\$3,621.00	2.35%
Expose Pipeline		<input checked="" type="checkbox"/>	5.21	6.13%	\$9,432.71	6.13%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.21	6.13%	\$9,432.71	6.13%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.47	4.08%	\$6,282.44	4.08%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.47	4.08%	\$6,282.44	4.08%
Bury Pipeline		<input checked="" type="checkbox"/>	3.47	4.08%	\$6,282.44	4.08%
Reposition Workboat		<input checked="" type="checkbox"/>	3.51	4.13%	\$6,354.85	4.13%
Expose Pipeline		<input checked="" type="checkbox"/>	5.21	6.13%	\$9,432.71	6.13%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.21	6.13%	\$9,432.71	6.13%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.47	4.08%	\$6,282.44	4.08%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.47	4.08%	\$6,282.44	4.08%
Bury Pipeline		<input checked="" type="checkbox"/>	3.47	4.08%	\$6,282.44	4.08%
Demob Work Boat		<input type="checkbox"/>	4.00	4.71%	\$7,242.00	4.71%
Task Total			73.32	86.28%	\$132,745.90	86.28%
Misc. Work Provision (15.00%)			8.75	10.29%	\$15,838.26	10.29%
Weather Contingency (5.00%)			2.92	3.43%	\$5,279.42	3.43%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			84.98	100.00%	\$153,863.58	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Edith MMS POCS 29056 (Ver 1) Segment#:361029

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$7,117.92	5.39%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$55,993.95	42.41%
Pipeline Surveying	\$230.00	per Hour	\$14,552.10	11.02%
Work Boat	\$583.00	per Hour	\$36,886.41	27.94%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Edith MMS POCS 29056 (Ver 1) Segment#:372029

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,248.54	5.36%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$64,888.20	42.17%
Pipeline Surveying	\$230.00	per Hour	\$16,863.60	10.96%
Work Boat	\$583.00	per Hour	\$42,745.56	27.78%



MMS

Pipeline Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1) Segment#:3610296

Task		Task Hours		Task Cost	
Mobilize Work Boat		4.00	5.49%	\$7,242.00	5.49%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Rig Up Decomm Equipment		5.00	6.86%	\$9,052.50	6.86%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		3.10	4.25%	\$5,612.55	4.25%
Work Boat	\$1,807.30				
Dive Basic Spread- Mixed Gas	\$2,743.50				
Decommissioning Crew	\$348.75				
Pipeline Surveying	\$713.00				
Derig Decomm Equipment		2.00	2.74%	\$3,621.00	2.74%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		5.21	7.14%	\$9,432.71	7.14%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				
Cut & Plug Pipeline		5.21	7.14%	\$9,432.71	7.14%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.47	4.76%	\$6,282.44	4.76%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Remove Tube Turn		3.47	4.76%	\$6,282.44	4.76%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Bury Pipeline		3.47	4.76%	\$6,282.44	4.76%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Reposition Workboat		3.51	4.81%	\$6,354.85	4.81%
Work Boat	\$2,046.33				
Dive Basic Spread- Mixed Gas	\$3,106.35				
Decommissioning Crew	\$394.87				
Pipeline Surveying	\$807.30				
Expose Pipeline		5.21	7.14%	\$9,432.71	7.14%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				
Cut & Plug Pipeline		5.21	7.14%	\$9,432.71	7.14%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.47	4.76%	\$6,282.44	4.76%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Remove Tube Turn		3.47	4.76%	\$6,282.44	4.76%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Bury Pipeline		3.47	4.76%	\$6,282.44	4.76%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Demob Work Boat		4.00	5.49%	\$7,242.00	5.49%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Total		63.27	86.76%	\$114,550.38	86.76%



MMS

Pipeline Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1) Segment#:3720296

Task		Task Hours		Task Cost	
Mobilize Work Boat		4.00	4.71%	\$7,242.00	4.71%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Rig Up Decomm Equipment		5.00	5.88%	\$9,052.50	5.88%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		13.15	15.47%	\$23,808.07	15.47%
Work Boat	\$7,666.45				
Dive Basic Spread- Mixed Gas	\$11,637.75				
Decommissioning Crew	\$1,479.37				
Pipeline Surveying	\$3,024.50				
Derig Decomm Equipment		2.00	2.35%	\$3,621.00	2.35%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		5.21	6.13%	\$9,432.71	6.13%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				
Cut & Plug Pipeline		5.21	6.13%	\$9,432.71	6.13%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.47	4.08%	\$6,282.44	4.08%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Remove Tube Turn		3.47	4.08%	\$6,282.44	4.08%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Bury Pipeline		3.47	4.08%	\$6,282.44	4.08%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Reposition Workboat		3.51	4.13%	\$6,354.85	4.13%
Work Boat	\$2,046.33				
Dive Basic Spread- Mixed Gas	\$3,106.35				
Decommissioning Crew	\$394.87				
Pipeline Surveying	\$807.30				
Expose Pipeline		5.21	6.13%	\$9,432.71	6.13%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				
Cut & Plug Pipeline		5.21	6.13%	\$9,432.71	6.13%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.47	4.08%	\$6,282.44	4.08%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Remove Tube Turn		3.47	4.08%	\$6,282.44	4.08%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Bury Pipeline		3.47	4.08%	\$6,282.44	4.08%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Demob Work Boat		4.00	4.71%	\$7,242.00	4.71%
Work Boat	\$2,332.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Decommissioning Crew	\$450.00				
Pipeline Surveying	\$920.00				
Total		73.32	86.28%	\$132,745.90	86.28%



MMS

Well Information

Edith MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 5.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Edith MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$2,087,428.00 83.33%
Task Total			0.00	\$2,087,428.00 83.33%
Misc. Work Provision (15.00%)			0.00	\$313,114.21 12.50%
Weather Contingency (5.00%)			0.00	\$104,371.40 4.17%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$2,504,913.61 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Edith MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$2,087,428.00 83.33%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Edith MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$2,087,428.00	83.33%
Manual Calculation			\$2,087,428.00	
Total	0.00	0.00%	\$2,087,428.00	83.33%

Ellen MMS POCS 29056



MMS

Platform Salvage Option

Ellen MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Ellen will be removed along with Platforms Eureka, Edith and Elly.
- Platform Ellen is an 8-pile platform installed in 1980 in 265' of water.
- The estimated removal weight is the deck weight is 5,300 tons and the jacket weight is 3,200 tons.
- The platform has a total of 61 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 64 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.
- Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.
- Platform Removal cost displayed on the next page includes the following costs: All of



MMS

Platform Salvage Option

Ellen MMS POCS 29056 (Ver 1)

the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 5% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Site Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$35,919,113

Estimated Decommissioning Net Cost = \$35,919,113



MMS

Basic Information

Ellen MMS POCS 29056 (Ver 1)

General Data

Platform:	Ellen MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	265'
Pre 461H?:	Yes
Year Installed:	1980
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0300
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	61
# Pipelines to Abandon:	0
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Pacific Energy Resources, Ltd	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$27,404,700	\$27,404,700
Well Plugging & Abandonment:	\$8,514,413	\$8,514,413
Pipeline Abandonment:	\$0	\$0
Total Decommissioning Cost:	\$35,919,113	\$35,919,113



MMS

Platform Information

Ellen MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	60"	2.25"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	155 x 132	64
Middle:	0	0
Lower:	175 x 108	46

Conductors

Number of Slots:	80
Number Installed:	64
Outside Diameter:	24"
Wall Thickness:	0.625"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	3200.00		
Jacket Installation Date:	1/1/80		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	5300 Tons
Number of Padeyes Required:	16
Deck Installation Date:	1/1/80
Deck Contractor:	Unknown



MMS

Platform Information

Ellen MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Top Members		Underwater Members	
Size	Qty	Size	Qty
36.00	16.00	0.00	0.00
54.00	4.00		
72.00	4.00		

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Equipment	Equipment
CB 300 x 100	Deck 100-500T	Deck 100-500T	Deck 100-500T	Deck 100-500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck 100-500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck 100-500T
CB 400 x 100	Jkt > 700T	Jkt > 700T		

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	5.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$4,230,698.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Ellen MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,669,514.00	6.09%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.02%	\$638,750.00	2.33%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.02%	\$10,488.00	0.04%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.02%	\$5,910,614.00	21.57%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.02%	\$1,215,564.00	4.44%
Mobilize DB 2000	Mob from Asia, 50 days divided by 4 platforms	<input type="checkbox"/>	300.00	6.14%	\$2,295,000.00	8.37%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	10.00	0.20%	\$47,600.00	0.17%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	10.00	0.20%	\$72,000.00	0.26%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	4.00	0.08%	\$18,080.00	0.07%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.14%	\$84,510.00	0.31%
Cut Deck/Equip/Misc	Seperate 12 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.49%	\$324,000.00	1.18%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.49%	\$324,000.00	1.18%
Remove 8 Pile Deck	Remove 12 Pile Deck, 12 modules	<input checked="" type="checkbox"/>	96.00	1.96%	\$1,296,000.00	4.73%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	10.00	0.20%	\$19,600.00	0.07%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	31.00	0.63%	\$419,120.00	1.53%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	53.68	1.10%	\$805,753.60	2.94%
Cut Jacket	24 Hours per section, times 2 section(s), per MMS	<input checked="" type="checkbox"/>	48.00	0.98%	\$688,736.00	2.51%
Remove Jacket - Meth 1	24 Hours per section, times 2 section(s), per MMS	<input checked="" type="checkbox"/>	48.00	0.98%	\$648,960.00	2.37%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	10.00	0.20%	\$30,000.00	0.11%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.14%	\$84,510.00	0.31%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	4.00	0.08%	\$18,080.00	0.07%
Demob DB 2000	Mob from Asia, 50 days divided by 4 platforms	<input type="checkbox"/>	300.00	6.14%	\$2,295,000.00	8.37%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.47%	\$709,000.00	2.59%
Offload CB 300		<input type="checkbox"/>	672.00	13.74%	\$177,760.00	0.65%
Offload CB 400		<input type="checkbox"/>	3072.00	62.83%	\$858,720.00	3.13%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.02%	\$10,488.00	0.04%
Task Total			4807.18	98.31%	\$20,671,847.60	75.43%
Misc. Work Provision (15.00%)			61.83	1.26%	\$1,876,615.00	6.85%
Weather Contingency (5.00%)			20.61	0.42%	\$625,538.40	2.28%
Consumables					\$0.00	0.00%
Waste Disposal					\$4,230,698.00	15.44%
Structure & Equipment Disposal					\$0.00	0.00%



MMS

Platform Decommission Task Information

Ellen MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost	
		Offloading		\$0.00	0.00%
		Storage / Scrapping		\$0.00	0.00%
		Reef Donation		\$0.00	0.00%
		Cost of Engineering (0.00%)		\$0.00	0.00%
			Total:	4889.62	100.00%
				127,404,699.00	100.00%



MMS

Platform Decommission Resources Breakdown

Ellen MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$216,362.50	0.79%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$137,760.00	0.50%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$798,720.00	2.91%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$180,320.00	0.66%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$240,680.00	0.88%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.36%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$7,464,530.00	27.24%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$1,095,659.70	4.00%
Manual Calculation	\$0.00	Independently Calculated	10,164,418.00	37.09%
Pile Abrasive Cut 49 to 69 inches	\$5,000.00	per Cut	\$80,000.00	0.29%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$39,776.00	0.15%
Pipeline Survey	\$230.00	per Hour	\$79,621.40	0.29%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.10%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.15%
Work Boat	\$500.00	per Hour	\$4,000.00	0.01%



MMS

Platform Decommission Cost Breakdown

Ellen MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,669,514.00	6.09%
Manual Calculation			\$1,669,514.00	
NMFS Marine Observation	1.00	0.02%	\$638,750.00	2.33%
Manual Calculation			\$638,750.00	
Mobilize Abrasive Cutting Spread	1.00	0.02%	\$10,488.00	0.04%
Manual Calculation			\$1,374.75	
Manual Calculation			\$527.25	
Manual Calculation			\$6,000.00	
Manual Calculation			\$2,586.00	
Sever Conductors- Abrasive	1.00	0.02%	\$5,910,614.00	21.57%
Manual Calculation			\$5,910,614.00	
Platform Removal Preparation	1.00	0.02%	\$1,215,564.00	4.44%
Manual Calculation			\$1,215,564.00	
Mobilize DB 2000	300.00	6.14%	\$2,295,000.00	8.37%
Derrick Barge 2000			\$2,295,000.00	
Mobilize CB 300 & Tug	10.00	0.20%	\$47,600.00	0.17%
CB 300 & Tug			\$19,600.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Ellen MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	10.00	0.20%	\$72,000.00	0.26%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$30,000.00	
Mobilize Dive Spread	4.00	0.08%	\$18,080.00	0.07%
Work Boat			\$2,000.00	
Dive Basic Spread Saturation			\$12,660.00	
Abrasive Cutter Spread			\$2,500.00	
Pipeline Survey			\$920.00	
Setup Derrick Barge	6.75	0.14%	\$84,510.00	0.31%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	0.49%	\$324,000.00	1.18%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

Ellen MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.49%	\$324,000.00	1.18%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	96.00	1.96%	\$1,296,000.00	4.73%
Derrick Barge 2000			\$816,000.00	
Dive Basic Spread Saturation			\$303,840.00	
Pipeline Survey			\$22,080.00	
Abrasive Cutter Spread			\$60,000.00	
CB 300 & Tug			\$94,080.00	
Demob CB 300 & Tug	10.00	0.20%	\$19,600.00	0.07%
CB 300 & Tug			\$19,600.00	
Jet/Airlift Pile Mud Plug	31.00	0.63%	\$419,120.00	1.53%
Derrick Barge 2000			\$263,500.00	
Dive Basic Spread Saturation			\$98,115.00	
Pipeline Survey			\$7,130.00	
Abrasive Cutter Spread			\$19,375.00	
CB 400 & Tug			\$31,000.00	



MMS

Platform Decommission Cost Breakdown

Ellen MMS POCS 29056 (Ver 1)

Task		Task Hours		Task Cost	
Sever Piles- Abrasive		53.68	1.10%	\$805,753.60	2.94%
	Derrick Barge 2000			\$456,280.00	
	Dive Basic Spread Saturation			\$169,897.20	
	Pipeline Survey			\$12,346.40	
	Abrasive Cutter Spread			\$33,550.00	
	CB 400 & Tug			\$53,680.00	
	Pile Abrasive Cut 49 to 69 inches			\$80,000.00	
Cut Jacket		48.00	0.98%	\$688,736.00	2.51%
	Derrick Barge 2000			\$408,000.00	
	Dive Basic Spread Saturation			\$151,920.00	
	Pipeline Survey			\$11,040.00	
	Abrasive Cutter Spread			\$30,000.00	
	CB 400 & Tug			\$48,000.00	
	Pile Abrasive Cut 7 to 48 inches			\$39,776.00	
Remove Jacket - Meth 1		48.00	0.98%	\$648,960.00	2.37%
	Derrick Barge 2000			\$408,000.00	
	Dive Basic Spread Saturation			\$151,920.00	
	Pipeline Survey			\$11,040.00	
	Abrasive Cutter Spread			\$30,000.00	
	CB 400 & Tug			\$48,000.00	
Demob CB 400 & Tug		10.00	0.20%	\$30,000.00	0.11%
	CB 400 & Tug			\$30,000.00	



MMS

Platform Decommission Cost Breakdown

Ellen MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.14%	\$84,510.00	0.31%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Demob Dive Spread	4.00	0.08%	\$18,080.00	0.07%
Work Boat			\$2,000.00	
Dive Basic Spread Saturation			\$12,660.00	
Abrasive Cutter Spread			\$2,500.00	
Pipeline Survey			\$920.00	
Demob DB 2000	300.00	6.14%	\$2,295,000.00	8.37%
Derrick Barge 2000			\$2,295,000.00	
Site Clearance - with Divers	72.00	1.47%	\$709,000.00	2.59%
Manual Calculation			\$709,000.00	
Offload CB 300	672.00	13.74%	\$177,760.00	0.65%
Cargo Barge 300			\$137,760.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	3072.00	62.83%	\$858,720.00	3.13%
Cargo Barge 400			\$798,720.00	
CB Damage Deduct			\$60,000.00	



MMS

Platform Decommission Cost Breakdown

Ellen MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.02%	\$10,488.00	0.04%
Manual Calculation			\$1,374.75	
Manual Calculation			\$527.25	
Manual Calculation			\$6,000.00	
Manual Calculation			\$2,586.00	
Total	4807.18	98.31%	\$20,671,847.60	75.43%



MMS

Well Information

Ellen MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 5.00%

Partner Data

Partner	Working Interest
1 Pacific Energy Resources, Ltd	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Ellen MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$7,095,344.00 83.33%
Task Total			0.00	\$7,095,344.00 83.33%
Misc. Work Provision (15.00%)			0.00	\$1,064,301.64 12.50%
Weather Contingency (5.00%)			0.00	\$354,767.21 4.17%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$8,514,412.85 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Ellen MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$7,095,344.00 83.33%



MMS

Well Decommission Cost Breakdown

Ellen MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$7,095,344.00	83.33%
Manual Calculation			\$7,095,344.00	
Total	0.00	0.00%	\$7,095,344.00	83.33%

Elly MMS POCS 29056



MMS

Platform Salvage Option

Elly MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Elly will be removed along with Platforms Edith, Ellen and Eureka.
- Platform Elly is a 12-pile platform installed in 1980 in 255' of water.
- The estimated removal weight is the deck weight is 4,700 tons and the jacket weight is 3,300 tons.
- The platform has a total of 0 wells that will be plugged and abandoned.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.
- The one pipeline (oil) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.
- A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.
- Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.



MMS

Platform Salvage Option

Elly MMS POCS 29056 (Ver 1)

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 5% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Site Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$21,360,857

Estimated Decommissioning Net Cost = \$21,360,857



MMS

Basic Information

Elly MMS POCS 29056 (Ver 1)

General Data

Platform:	Elly MMS POCS 29056
Function:	SELF CONTAINED
Type:	Steel
Water Depth:	257'
Pre 461H?:	Yes
Year Installed:	1980
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0300
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	0
# Pipelines to Abandon:	1
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Pacific Energy Resources, Ltd	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$20,613,070	\$20,613,070
Well Plugging & Abandonment:	\$0	\$0
Pipeline Abandonment:	\$747,787	\$747,787
Total Decommissioning Cost:	\$21,360,857	\$21,360,857



MMS

Platform Information

Elly MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	12	48"	2"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:	250 x 200	43

Conductors

Number of Slots:	0
Number Installed:	0
Outside Diameter:	
Wall Thickness:	
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	3300.00		
Jacket Installation Date:	1/1/80		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	4700 Tons
Number of Padeyes Required:	10
Deck Installation Date:	1/1/80
Deck Contractor:	Unknown



MMS

Platform Information

Elly MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Top Members	
Size	Qty
36.00	6.00
54.00	12.00

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Equipment	Equipment
CB 300 x 100	Deck 100-500T	Deck 100-500T	Deck 100-500T	Deck 100-500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Deck > 500T	Jkt > 700T	
CB 400 x 100	Jkt > 700T	Jkt > 700T		

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	5.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$3,704,800.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Elly MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$794,189.00	3.85%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.02%	\$638,750.00	3.10%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.02%	\$10,488.00	0.05%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.02%	\$1,891,564.00	9.18%
Mobilize DB 2000	Mob from Asia, 50 days divided by 4 platforms	<input type="checkbox"/>	300.00	6.03%	\$2,295,000.00	11.13%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	10.00	0.20%	\$47,600.00	0.23%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	10.00	0.20%	\$72,000.00	0.35%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	4.00	0.08%	\$18,080.00	0.09%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.14%	\$84,510.00	0.41%
Cut Deck/Equip/Misc	Seperate 10 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.48%	\$324,000.00	1.57%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.48%	\$324,000.00	1.57%
Remove 8 Pile Deck	Remove 12 Pile Deck, 10 modules	<input checked="" type="checkbox"/>	72.00	1.45%	\$972,000.00	4.72%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	10.00	0.20%	\$19,600.00	0.10%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	0.92%	\$621,920.00	3.02%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	69.22	1.39%	\$995,518.40	4.83%
Cut Jacket	24 Hours per section, times 3 section(s), per MMS	<input checked="" type="checkbox"/>	72.00	1.45%	\$1,033,104.00	5.01%
Remove Jacket - Meth 1	24 Hours per section, times 3 section(s), per MMS	<input checked="" type="checkbox"/>	72.00	1.45%	\$973,440.00	4.72%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	10.00	0.20%	\$30,000.00	0.15%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.14%	\$84,510.00	0.41%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	4.00	0.08%	\$18,080.00	0.09%
Demob DB 2000	Mob from Asia, 50 days divided by 4 platforms	<input type="checkbox"/>	300.00	6.03%	\$2,295,000.00	11.13%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.45%	\$709,000.00	3.44%
Offload CB 300		<input type="checkbox"/>	672.00	13.50%	\$177,760.00	0.86%
Offload CB 400		<input type="checkbox"/>	3096.00	62.20%	\$864,960.00	4.20%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.02%	\$10,488.00	0.05%
Task Total			4884.72	98.13%	\$15,305,561.40	74.25%
Misc. Work Provision (15.00%)			69.86	1.40%	\$1,202,035.00	5.83%
Weather Contingency (5.00%)			23.29	0.47%	\$400,678.30	1.94%
Consumables					\$0.00	0.00%
Waste Disposal					\$3,704,800.00	17.97%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%



MMS

Platform Decommission Task Information

Elly MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
		Total:	4977.87 100.00%	20,613,074.70 100.00%



MMS

Platform Decommission Resources Breakdown

Elly MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$250,450.00	1.22%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$137,760.00	0.67%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$804,960.00	3.91%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$156,800.00	0.76%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$319,220.00	1.55%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.49%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$7,928,120.00	38.46%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$1,268,278.80	6.15%
Manual Calculation	\$0.00	Independently Calculated	\$4,054,479.00	19.67%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$119,328.00	0.58%
Pipeline Survey	\$230.00	per Hour	\$92,165.60	0.45%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.14%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.20%
Work Boat	\$500.00	per Hour	\$4,000.00	0.02%



MMS

Platform Decommission Cost Breakdown

Elly MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$794,189.00	3.85%
Manual Calculation			\$794,189.00	
NMFS Marine Observation	1.00	0.02%	\$638,750.00	3.10%
Manual Calculation			\$638,750.00	
Mobilize Abrasive Cutting Spread	1.00	0.02%	\$10,488.00	0.05%
Manual Calculation			\$1,374.75	
Manual Calculation			\$527.25	
Manual Calculation			\$6,000.00	
Manual Calculation			\$2,586.00	
Platform Removal Preparation	1.00	0.02%	\$1,891,564.00	9.18%
Manual Calculation			\$1,891,564.00	
Mobilize DB 2000	300.00	6.03%	\$2,295,000.00	11.13%
Derrick Barge 2000			\$2,295,000.00	
Mobilize CB 300 & Tug	10.00	0.20%	\$47,600.00	0.23%
CB 300 & Tug			\$19,600.00	
Rig Up CB 300			\$28,000.00	
Mobilize CB 400 & Tug	10.00	0.20%	\$72,000.00	0.35%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$30,000.00	



MMS

Platform Decommission Cost Breakdown

Elly MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize Dive Spread	4.00	0.08%	\$18,080.00	0.09%
Work Boat			\$2,000.00	
Dive Basic Spread Saturation			\$12,660.00	
Abrasive Cutter Spread			\$2,500.00	
Pipeline Survey			\$920.00	
Setup Derrick Barge	6.75	0.14%	\$84,510.00	0.41%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	0.48%	\$324,000.00	1.57%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove Equipment	24.00	0.48%	\$324,000.00	1.57%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

Elly MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove 8 Pile Deck	72.00	1.45%	\$972,000.00	4.72%
Derrick Barge 2000			\$612,000.00	
Dive Basic Spread Saturation			\$227,880.00	
Pipeline Survey			\$16,560.00	
Abrasive Cutter Spread			\$45,000.00	
CB 300 & Tug			\$70,560.00	
Demob CB 300 & Tug	10.00	0.20%	\$19,600.00	0.10%
CB 300 & Tug			\$19,600.00	
Jet/Airlift Pile Mud Plug	46.00	0.92%	\$621,920.00	3.02%
Derrick Barge 2000			\$391,000.00	
Dive Basic Spread Saturation			\$145,590.00	
Pipeline Survey			\$10,580.00	
Abrasive Cutter Spread			\$28,750.00	
CB 400 & Tug			\$46,000.00	
Sever Piles- Abrasive	69.22	1.39%	\$995,518.40	4.83%
Derrick Barge 2000			\$588,370.00	
Dive Basic Spread Saturation			\$219,081.30	
Pipeline Survey			\$15,920.60	
Abrasive Cutter Spread			\$43,262.50	
CB 400 & Tug			\$69,220.00	
Pile Abrasive Cut 7 to 48 inches			\$59,664.00	



MMS

Platform Decommission Cost Breakdown

Elly MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Cut Jacket		72.00	1.45%	\$1,033,104.00	5.01%
	Derrick Barge 2000	\$612,000.00			
	Dive Basic Spread Saturation	\$227,880.00			
	Pipeline Survey	\$16,560.00			
	Abrasive Cutter Spread	\$45,000.00			
	CB 400 & Tug	\$72,000.00			
	Pile Abrasive Cut 7 to 48 inches	\$59,664.00			
Remove Jacket - Meth 1		72.00	1.45%	\$973,440.00	4.72%
	Derrick Barge 2000	\$612,000.00			
	Dive Basic Spread Saturation	\$227,880.00			
	Pipeline Survey	\$16,560.00			
	Abrasive Cutter Spread	\$45,000.00			
	CB 400 & Tug	\$72,000.00			
Demob CB 400 & Tug		10.00	0.20%	\$30,000.00	0.15%
	CB 400 & Tug	\$30,000.00			
Pick Up DB Anchors		6.75	0.14%	\$84,510.00	0.41%
	Derrick Barge 2000	\$57,375.00			
	Dive Basic Spread Saturation	\$21,363.75			
	Pipeline Survey	\$1,552.50			
	Abrasive Cutter Spread	\$4,218.75			



MMS

Platform Decommission Cost Breakdown

Elly MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	4.00	0.08%	\$18,080.00	0.09%
Work Boat			\$2,000.00	
Dive Basic Spread Saturation			\$12,660.00	
Abrasive Cutter Spread			\$2,500.00	
Pipeline Survey			\$920.00	
Demob DB 2000	300.00	6.03%	\$2,295,000.00	11.13%
Derrick Barge 2000			\$2,295,000.00	
Site Clearance - with Divers	72.00	1.45%	\$709,000.00	3.44%
Manual Calculation			\$709,000.00	
Offload CB 300	672.00	13.50%	\$177,760.00	0.86%
Cargo Barge 300			\$137,760.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	3096.00	62.20%	\$864,960.00	4.20%
Cargo Barge 400			\$804,960.00	
CB Damage Deduct			\$60,000.00	
Demob Abrasive Cutting Spread	1.00	0.02%	\$10,488.00	0.05%
Manual Calculation			\$1,374.75	
Manual Calculation			\$527.25	
Manual Calculation			\$6,000.00	
Manual Calculation			\$2,586.00	
Total	4884.72	98.13%	\$15,305,561.40	74.25%



MMS

Pipeline Information

Elly MMS POCS 29056 (Ver1) Segment#:2610300-S

General Data

Water Depth: 255'
Origin / Terminus: Origin
Opposite End Name: Beta Pum
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 5.00%

Pipeline Data

Outside Diameter: 16"	Wall Thickness:	Length: 33677'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to an Onshore facility.
Remove pipeline to state waters.
Estimate ~23760' removed



MMS

Pipeline Decommission Task Information

Elly MMS POCS 29056 (Ver 1) Segment#:2610300-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	2.00	0.46%	\$1,391.00	0.19%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.16%	\$3,477.50	0.47%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	52.00	12.02%	\$36,166.00	4.84%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.46%	\$1,391.00	0.19%
Demob Work Boat		<input type="checkbox"/>	2.00	0.46%	\$1,391.00	0.19%
Mob P/L Removal Spread		<input type="checkbox"/>	4.00	0.92%	\$112,276.00	15.01%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	9.10	2.10%	\$28,951.65	3.87%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	6.07	1.40%	\$19,311.71	2.58%
Remove Tube Turn		<input checked="" type="checkbox"/>	6.07	1.40%	\$19,311.71	2.58%
Mobilize Vessel		<input checked="" type="checkbox"/>	4.00	0.92%	\$20,400.00	2.73%
Expose Pipeline		<input checked="" type="checkbox"/>	9.10	2.10%	\$32,932.90	4.40%
Remove Pipeline		<input checked="" type="checkbox"/>	79.00	18.27%	\$285,901.00	38.23%
Bury Pipeline		<input checked="" type="checkbox"/>	6.07	1.40%	\$21,967.33	2.94%
Demob Vessel		<input checked="" type="checkbox"/>	4.00	0.92%	\$4,400.00	0.59%
Demob P/L Removal Spread		<input type="checkbox"/>	4.00	0.92%	\$14,476.00	1.94%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	38.84%	\$41,000.00	5.48%
Task Total			362.41	83.80%	\$644,744.80	86.22%
Misc. Work Provision (15.00%)			52.56	12.15%	\$77,281.62	10.33%
Weather Contingency (5.00%)			17.52	4.05%	\$25,760.54	3.44%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			432.49	100.00%	\$747,786.97	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Elly MMS POCS 29056 (Ver 1) Segment#:2610300-

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	2.81%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$62,793.50	8.40%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	2.67%
Decommissioning Crew	\$0.00	Calculated from tables	\$9,477.01	1.27%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$109,217.85	14.61%
Manual Calculation	\$0.00	Independently Calculated	\$100,000.00	13.37%
Pipelay Barge	\$1,954.00	per Hour	\$241,143.14	32.25%
Pipeline Surveying	\$230.00	per Hour	\$28,384.30	3.80%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	2.14%
Work Boat	\$583.00	per Hour	\$36,729.00	4.91%



MMS

Pipeline Decommission Cost Breakdown

Elly MMS POCS 29056 (Ver 1) Segment#:2610300-

Task		Task Hours	Task Cost
Mobilize Work Boat		2.00 0.46%	\$1,391.00 0.19%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Rig Up Decomm Equipment		5.00 1.16%	\$3,477.50 0.47%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		52.00 12.02%	\$36,166.00 4.84%
Work Boat	\$30,316.00		
Decommissioning Crew	\$5,850.00		
Derig Decomm Equipment		2.00 0.46%	\$1,391.00 0.19%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		2.00 0.46%	\$1,391.00 0.19%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Mob P/L Removal Spread		4.00 0.92%	\$112,276.00 15.01%
Dive Basic Spread- Mixed Gas	\$3,540.00		
Pipeline Surveying	\$920.00		
Pipelay Barge	\$7,816.00		
Manual Calculation	\$100,000.00		
Cut & Plug Pipeline		9.10 2.10%	\$28,951.65 3.87%
Dive Basic Spread- Mixed Gas	\$8,053.50		
Pipeline Surveying	\$2,093.00		
Pipelay Barge	\$17,781.40		
Decommissioning Crew	\$1,023.75		
Cut Pipeline Riser		6.07 1.40%	\$19,311.71 2.58%
Dive Basic Spread- Mixed Gas	\$5,371.95		
Pipeline Surveying	\$1,396.10		
Pipelay Barge	\$11,860.78		
Decommissioning Crew	\$682.88		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		6.07	1.40%	\$19,311.71	2.58%
Dive Basic Spread- Mixed Gas	\$5,371.95				
Pipeline Surveying	\$1,396.10				
Pipelay Barge	\$11,860.78				
Decommissioning Crew	\$682.88				
Mobilize Vessel		4.00	0.92%	\$20,400.00	2.73%
CB 180 & Tug	\$4,400.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		9.10	2.10%	\$32,932.90	4.40%
Pipeline Surveying	\$2,093.00				
Dive Basic Spread- Mixed Gas	\$8,053.50				
Pipelay Barge	\$17,781.40				
CB 180 & Tug	\$5,005.00				
Remove Pipeline		79.00	18.27%	\$285,901.00	38.23%
Pipeline Surveying	\$18,170.00				
Dive Basic Spread- Mixed Gas	\$69,915.00				
Pipelay Barge	\$154,366.00				
CB 180 & Tug	\$43,450.00				
Bury Pipeline		6.07	1.40%	\$21,967.33	2.94%
Pipeline Surveying	\$1,396.10				
Dive Basic Spread- Mixed Gas	\$5,371.95				
Pipelay Barge	\$11,860.78				
CB 180 & Tug	\$3,338.50				
Demob Vessel		4.00	0.92%	\$4,400.00	0.59%
CB 180 & Tug	\$4,400.00				
Demob P/L Removal Spread		4.00	0.92%	\$14,476.00	1.94%
Pipeline Surveying	\$920.00				
Dive Basic Spread- Mixed Gas	\$3,540.00				
Pipelay Barge	\$7,816.00				
CB 180 & Tug	\$2,200.00				
Offload CB 180		168.00	38.84%	\$41,000.00	5.48%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		362.41	83.80%	\$644,744.80	86.22%

Eureka MMS POCS 29056



MMS

Platform Salvage Option

Eureka MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Eureka will be removed along with Platforms Edith, Ellen and Elly.
- Platform Eureka is an 8-leg platform (24 Skirt Pile) installed in 1985 in 700' of water.
- The estimated removal weight is the deck weight is 8,000 tons and the jacket weight is 19,000 tons.
- The platform has a total of 50 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 60 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Four 300' cargo barges will transport the deck modules to shore and six 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 10 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The three pipelines (2 oil, 1 gas) on the OCS will be totally removed to the state water



MMS

Platform Salvage Option

Eureka MMS POCS 29056 (Ver 1)

boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 5% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

Eureka MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$94,234,597

Estimated Decommissioning Net Cost = \$94,234,597



MMS

Basic Information

Eureka MMS POCS 29056 (Ver 1)

General Data

Platform:	Eureka MMS POCS 29056
Function:	SELF CONTAINED
Type:	Steel
Water Depth:	700'
Pre 461H?:	No
Year Installed:	1985
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0301
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	50
# Pipelines to Abandon:	3
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Pacific Energy Resources, Ltd	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$77,236,656	\$77,236,656
Well Plugging & Abandonment:	\$7,451,381	\$7,451,381
Pipeline Abandonment:	\$9,546,560	\$9,546,560
Total Decommissioning Cost:	\$94,234,597	\$94,234,597



MMS

Platform Information

Eureka MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	0			Yes	No	
Skirt/Braced	24	60"	2.75"	No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	165 x 160	71
Middle:		
Lower:	175 x 180	45

Conductors

Number of Slots:	60
Number Installed:	60
Outside Diameter:	24"
Wall Thickness:	0.75"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	19000.00		
Jacket Installation Date:	1/1/85		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	8000 Tons
Number of Padeyes Required:	8
Deck Installation Date:	1/1/85
Deck Contractor:	Unknown



MMS

Platform Information

Eureka MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Top Members	
Size	Qty
42.00	16.00
72.00	8.00

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Jkt 300-700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt 300-700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt 300-700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	5.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$12,309,974.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Eureka MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$4,911,102.00	6.36%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.01%	\$638,750.00	0.83%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.01%	\$10,488.00	0.01%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.01%	\$11,450,280.00	14.82%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.01%	\$2,628,383.00	3.40%
Mobilize DB 2000	Mob from Asia, 50 days divided by 4 platforms	<input type="checkbox"/>	300.00	2.42%	\$2,295,000.00	2.97%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 4)	<input type="checkbox"/>	10.00	0.08%	\$95,200.00	0.12%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 6)	<input type="checkbox"/>	10.00	0.08%	\$144,000.00	0.19%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	4.00	0.03%	\$18,080.00	0.02%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.05%	\$95,310.00	0.12%
Cut Deck/Equip/Misc	Seperate 10 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.19%	\$362,400.00	0.47%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.19%	\$362,400.00	0.47%
Remove 8 Pile Deck	Remove 8 Pile Deck, 10 modules	<input checked="" type="checkbox"/>	72.00	0.58%	\$1,087,200.00	1.41%
Demob CB 300 & Tug	Demob to Port of LA (Qty 4)	<input type="checkbox"/>	10.00	0.08%	\$39,200.00	0.05%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	35.00	0.28%	\$529,200.00	0.69%
Sever Piles- Abrasive	Manual calc resource is cost per pile cut @ \$10,000 per skirt pile	<input checked="" type="checkbox"/>	161.04	1.30%	\$2,674,924.76	3.46%
Cut Jacket	38 Hours per section, times 19 section(s), per MMS. Man Calc Resource is cost per jkt leg cut @ \$4972 per leg cut x qty 48 cuts.	<input checked="" type="checkbox"/>	731.00	5.89%	\$11,291,366.00	14.62%
Remove Jacket - Meth 1	38 Hours per section, times 19 section(s), per MMS	<input checked="" type="checkbox"/>	731.00	5.89%	\$11,052,720.00	14.31%
Demob CB 400 & Tug	Demob to Port of LA (Qty 6)	<input type="checkbox"/>	10.00	0.08%	\$60,000.00	0.08%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.05%	\$95,310.00	0.12%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	4.00	0.03%	\$18,080.00	0.02%
Demob DB 2000	Mob from Asia, 50 days divided by 4 platforms	<input type="checkbox"/>	300.00	2.42%	\$2,295,000.00	2.97%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	0.58%	\$1,282,000.00	1.66%
Offload CB 300	10 deck modules	<input type="checkbox"/>	3600.00	28.99%	\$818,000.00	1.06%
Offload CB 400	19 jacket sections	<input type="checkbox"/>	5928.00	47.74%	\$1,661,280.00	2.15%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.01%	\$10,488.00	0.01%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$348,520.00	0.45%
Task Total			12044.54	97.00%	\$56,274,681.76	72.86%
Misc. Work Provision (15.00%)			279.83	2.25%	\$6,489,003.00	8.40%
Weather Contingency (5.00%)			93.28	0.75%	\$2,163,001.00	2.80%



MMS

Platform Decommission Task Information

Eureka MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Consumables		\$0.00 0.00%
		Waste Disposal	12,309,970.00	15.94%
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			12417.65 100.00%	177,236,655.76 100.00%



MMS

Platform Decommission Resources Breakdown

Eureka MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$1,124,712.50	1.46%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$738,000.00	0.96%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$1,541,280.00	2.00%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$196,000.00	0.25%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$1,778,039.98	2.30%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$200,000.00	0.26%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$19,818,090.00	25.66%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$5,695,544.09	7.37%
Manual Calculation	\$0.00	Independently Calculated	\$21,758,657.00	28.17%
Pipeline Survey	\$230.00	per Hour	\$413,894.20	0.54%
Rem. Operated Vehicle	\$800.00	per Hour	\$2,866,463.98	3.71%
Rig Up CB 300	\$14,000.00	per Barge	\$56,000.00	0.07%
Rig Up CB 400	\$14,000.00	per Barge	\$84,000.00	0.11%
Work Boat	\$500.00	per Hour	\$4,000.00	0.01%



MMS

Platform Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$4,911,102.00	6.36%
Manual Calculation			\$4,911,102.00	
NMFS Marine Observation	1.00	0.01%	\$638,750.00	0.83%
Manual Calculation			\$638,750.00	
Mobilize Abrasive Cutting Spread	1.00	0.01%	\$10,488.00	0.01%
Manual Calculation			\$1,374.75	
Manual Calculation			\$527.25	
Manual Calculation			\$6,000.00	
Manual Calculation			\$2,586.00	
Sever Conductors- Abrasive	1.00	0.01%	\$11,450,280.00	14.82%
Manual Calculation			\$11,450,280.00	
Platform Removal Preparation	1.00	0.01%	\$2,628,383.00	3.40%
Manual Calculation			\$2,628,383.00	
Mobilize DB 2000	300.00	2.42%	\$2,295,000.00	2.97%
Derrick Barge 2000			\$2,295,000.00	
Mobilize CB 300 & Tug	10.00	0.08%	\$95,200.00	0.12%
CB 300 & Tug			\$39,200.00	
Rig Up CB 300			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	10.00	0.08%	\$144,000.00	0.19%
Rig Up CB 400			\$84,000.00	
CB 400 & Tug			\$60,000.00	
Mobilize Dive Spread	4.00	0.03%	\$18,080.00	0.02%
Work Boat			\$2,000.00	
Dive Basic Spread Saturation			\$12,660.00	
Abrasive Cutter Spread			\$2,500.00	
Pipeline Survey			\$920.00	
Setup Derrick Barge	6.75	0.05%	\$95,310.00	0.12%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	24.00	0.19%	\$362,400.00	0.47%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	



MMS

Platform Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.19%	\$362,400.00	0.47%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	
Remove 8 Pile Deck	72.00	0.58%	\$1,087,200.00	1.41%
Derrick Barge 2000			\$612,000.00	
Dive Basic Spread Saturation			\$227,880.00	
Pipeline Survey			\$16,560.00	
Abrasive Cutter Spread			\$45,000.00	
CB 300 & Tug			\$70,560.00	
Rem. Operated Vehicle			\$115,200.00	
Demob CB 300 & Tug	10.00	0.08%	\$39,200.00	0.05%
CB 300 & Tug			\$39,200.00	
Jet/Airlift Pile Mud Plug	35.00	0.28%	\$529,200.00	0.69%
Derrick Barge 2000			\$297,500.00	
Dive Basic Spread Saturation			\$110,775.00	
Pipeline Survey			\$8,050.00	
Abrasive Cutter Spread			\$21,875.00	
CB 400 & Tug			\$35,000.00	
Rem. Operated Vehicle			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		161.04	1.30%	\$2,674,924.76	3.46%
Derrick Barge 2000	\$1,368,840.00				
Dive Basic Spread Saturation	\$509,691.59				
Pipeline Survey	\$37,039.20				
Abrasive Cutter Spread	\$100,650.00				
CB 400 & Tug	\$161,039.98				
Manual Calculation	\$240,000.00				
Rem. Operated Vehicle	\$257,663.98				
Cut Jacket		731.00	5.89%	\$11,291,366.00	14.62%
Derrick Barge 2000	\$6,213,500.00				
Dive Basic Spread Saturation	\$2,313,615.00				
Pipeline Survey	\$168,130.00				
Abrasive Cutter Spread	\$456,875.00				
CB 400 & Tug	\$731,000.00				
Manual Calculation	\$238,646.00				
Rem. Operated Vehicle	\$1,169,600.00				
Remove Jacket - Meth 1		731.00	5.89%	\$11,052,720.00	14.31%
Derrick Barge 2000	\$6,213,500.00				
Dive Basic Spread Saturation	\$2,313,615.00				
Pipeline Survey	\$168,130.00				
Abrasive Cutter Spread	\$456,875.00				
CB 400 & Tug	\$731,000.00				
Rem. Operated Vehicle	\$1,169,600.00				
Demob CB 400 & Tug		10.00	0.08%	\$60,000.00	0.08%
CB 400 & Tug	\$60,000.00				



MMS

Platform Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.05%	\$95,310.00	0.12%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Demob Dive Spread	4.00	0.03%	\$18,080.00	0.02%
Work Boat			\$2,000.00	
Dive Basic Spread Saturation			\$12,660.00	
Abrasive Cutter Spread			\$2,500.00	
Pipeline Survey			\$920.00	
Demob DB 2000	300.00	2.42%	\$2,295,000.00	2.97%
Derrick Barge 2000			\$2,295,000.00	
Site Clearance - with Divers	72.00	0.58%	\$1,282,000.00	1.66%
Manual Calculation			\$1,282,000.00	
Offload CB 300	3600.00	28.99%	\$818,000.00	1.06%
Cargo Barge 300			\$738,000.00	
CB Damage Deduct			\$80,000.00	
Offload CB 400	5928.00	47.74%	\$1,661,280.00	2.15%
Cargo Barge 400			\$1,541,280.00	
CB Damage Deduct			\$120,000.00	



MMS

Platform Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.01%	\$10,488.00	0.01%
Manual Calculation			\$1,374.75	
Manual Calculation			\$527.25	
Manual Calculation			\$6,000.00	
Manual Calculation			\$2,586.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$348,520.00	0.45%
Manual Calculation			\$348,520.00	
Total	12044.54	97.00%	\$56,274,681.76	72.86%



MMS

Pipeline Information

Eureka MMS POCS 29056 (Ver1) Segment#:391030

General Data

Water Depth: 700'
Origin / Terminus: Origin
Opposite End Name: ELLY
Opposite End Water Depth: 255'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 5.00%

Pipeline Data

Outside Diameter: 12.75"	Wall Thickness:	Length: 9330'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to Elly. It is estimated as abandoned in place.



MMS

Pipeline Information

Eureka MMS POCS 29056 (Ver1) Segment#:402030

General Data

Water Depth: 700'
Origin / Terminus: Origin
Opposite End Name: ELLY
Opposite End Water Depth: 255'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 5.00%

Pipeline Data

Outside Diameter: 6"	Wall Thickness:	Length: 9330'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to Elly. It is estimated as abandoned in place.



MMS

Pipeline Information

Eureka MMS POCS 29056 (Ver1) Segment#:413030

General Data

Water Depth: 700'
Origin / Terminus: Origin
Opposite End Name: Elly
Opposite End Water Depth: 255'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 5.00%

Pipeline Data

Outside Diameter: 10"	Wall Thickness:	Length: 9330'
Depth of Burial:	# Crossings:	Product: GAS
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to Elly. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Eureka MMS POCS 29056 (Ver 1) Segment#:3910301

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat	Shared between 3	<input type="checkbox"/>	330.00	40.68%	\$1,089,000.00	33.53%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.37%	\$53,755.50	1.66%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.62%	\$34,037.50	1.05%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	20.63	2.54%	\$140,438.72	4.32%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.25%	\$13,615.00	0.42%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.42%	\$78,626.63	2.42%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.42%	\$78,626.63	2.42%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	0.95%	\$52,417.75	1.61%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	0.95%	\$52,417.75	1.61%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	0.95%	\$52,417.75	1.61%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.37%	\$20,422.50	0.63%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.42%	\$78,626.63	2.42%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.42%	\$78,626.63	2.42%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	0.95%	\$52,417.75	1.61%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	0.95%	\$52,417.75	1.61%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	0.95%	\$52,417.75	1.61%
Demob Dive Boat	Shared between 3	<input type="checkbox"/>	330.00	40.68%	\$1,089,000.00	33.53%
Task Total			786.03	96.89%	\$3,069,282.24	94.51%
Misc. Work Provision (15.00%)			18.90	2.33%	\$133,692.34	4.12%
Weather Contingency (5.00%)			6.30	0.78%	\$44,564.11	1.37%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			811.24	100.00%	\$3,247,538.69	100.00%



MMS

Pipeline Decommission Task Information

Eureka MMS POCS 29056 (Ver 1) Segment#:4020301

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	330.00	41.67%	\$1,089,000.00	34.94%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.38%	\$53,755.50	1.72%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.63%	\$34,037.50	1.09%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	4.57	0.58%	\$31,110.28	1.00%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.25%	\$13,615.00	0.44%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.46%	\$78,626.63	2.52%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.46%	\$78,626.63	2.52%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	0.97%	\$52,417.75	1.68%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	0.97%	\$52,417.75	1.68%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	0.97%	\$52,417.75	1.68%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.38%	\$20,422.50	0.66%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.46%	\$78,626.63	2.52%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.46%	\$78,626.63	2.52%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	0.97%	\$52,417.75	1.68%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	0.97%	\$52,417.75	1.68%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	0.97%	\$52,417.75	1.68%
Demob Dive Boat		<input type="checkbox"/>	330.00	41.67%	\$1,089,000.00	34.94%
Task Total			769.97	97.22%	\$2,959,953.80	94.98%
Misc. Work Provision (15.00%)			16.50	2.08%	\$117,293.07	3.76%
Weather Contingency (5.00%)			5.50	0.69%	\$39,097.69	1.25%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			791.96	100.00%	\$3,116,344.57	100.00%



MMS

Pipeline Decommission Task Information

Eureka MMS POCS 29056 (Ver 1) Segment#:4130301

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	330.00	41.16%	\$1,089,000.00	34.22%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.37%	\$53,755.50	1.69%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.62%	\$34,037.50	1.07%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	12.69	1.58%	\$86,387.17	2.71%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.25%	\$13,615.00	0.43%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.44%	\$78,626.63	2.47%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.44%	\$78,626.63	2.47%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	0.96%	\$52,417.75	1.65%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	0.96%	\$52,417.75	1.65%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	0.96%	\$52,417.75	1.65%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.37%	\$20,422.50	0.64%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.44%	\$78,626.63	2.47%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.44%	\$78,626.63	2.47%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	0.96%	\$52,417.75	1.65%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	0.96%	\$52,417.75	1.65%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	0.96%	\$52,417.75	1.65%
Demob Dive Boat		<input type="checkbox"/>	330.00	41.16%	\$1,089,000.00	34.22%
Task Total			778.09	97.05%	\$3,015,230.69	94.74%
Misc. Work Provision (15.00%)			17.71	2.21%	\$125,584.61	3.95%
Weather Contingency (5.00%)			5.90	0.74%	\$41,861.54	1.32%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			801.71	100.00%	\$3,182,676.84	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Eureka MMS POCS 29056 (Ver 1) Segment#:39103

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$14,178.39	0.44%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$398,884.95	12.28%
DP Dive Boat	\$3,300.00	per Hour	\$2,593,899.00	79.87%
Manual Calculation	\$0.00	Independently Calculated	\$33,333.00	1.03%
Pipeline Surveying	\$230.00	per Hour	\$28,986.90	0.89%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Eureka MMS POCS 29056 (Ver 1) Segment#:40203

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$12,371.65	0.40%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$348,055.05	11.17%
DP Dive Boat	\$3,300.00	per Hour	\$2,540,901.00	81.53%
Manual Calculation	\$0.00	Independently Calculated	\$33,333.00	1.07%
Pipeline Surveying	\$230.00	per Hour	\$25,293.10	0.81%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Eureka MMS POCS 29056 (Ver 1) Segment#:41303

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$13,285.14	0.42%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$373,754.85	11.74%
DP Dive Boat	\$3,300.00	per Hour	\$2,567,697.00	80.68%
Manual Calculation	\$0.00	Independently Calculated	\$33,333.00	1.05%
Pipeline Surveying	\$230.00	per Hour	\$27,160.70	0.85%



MMS

Pipeline Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1) Segment#:39103

Task	Task Hours	Task Cost
Mobilize Dive Boat	330.00 40.68%	\$1,089,000.00 33.53%
DP Dive Boat		\$1,089,000.00
Set Up Dive Boat	3.00 0.37%	\$53,755.50 1.66%
DP Dive Boat		\$9,900.00
Dive Basic Spread Saturation		\$9,495.00
Decommissioning Crew		\$337.50
Pipeline Surveying		\$690.00
Manual Calculation		\$33,333.00
Rig Up Decomm Equipment	5.00 0.62%	\$34,037.50 1.05%
DP Dive Boat		\$16,500.00
Dive Basic Spread Saturation		\$15,825.00
Decommissioning Crew		\$562.50
Pipeline Surveying		\$1,150.00
Pig & Flush Pipeline	20.63 2.54%	\$140,438.72 4.32%
DP Dive Boat		\$68,079.00
Dive Basic Spread Saturation		\$65,293.95
Decommissioning Crew		\$2,320.87
Pipeline Surveying		\$4,744.90
Derig Decomm Equipment	2.00 0.25%	\$13,615.00 0.42%
DP Dive Boat		\$6,600.00
Dive Basic Spread Saturation		\$6,330.00
Decommissioning Crew		\$225.00
Pipeline Surveying		\$460.00
Expose Pipeline	11.55 1.42%	\$78,626.63 2.42%
DP Dive Boat		\$38,115.00
Dive Basic Spread Saturation		\$36,555.75
Decommissioning Crew		\$1,299.38
Pipeline Surveying		\$2,656.50



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	1.42%	\$78,626.63	2.42%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	0.95%	\$52,417.75	1.61%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	0.95%	\$52,417.75	1.61%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	0.95%	\$52,417.75	1.61%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.37%	\$20,422.50	0.63%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	1.42%	\$78,626.63	2.42%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	1.42%	\$78,626.63	2.42%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	0.95%	\$52,417.75	1.61%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	0.95%	\$52,417.75	1.61%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	0.95%	\$52,417.75	1.61%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		330.00	40.68%	\$1,089,000.00	33.53%
DP Dive Boat	\$1,089,000.00				
Total		786.03	96.89%	\$3,069,282.24	94.51%



MMS

Pipeline Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1) Segment#:40203

Task		Task Hours	Task Cost
Mobilize Dive Boat		330.00 41.67%	\$1,089,000.00 34.94%
DP Dive Boat	\$1,089,000.00		
Set Up Dive Boat		3.00 0.38%	\$53,755.50 1.72%
DP Dive Boat	\$9,900.00		
Dive Basic Spread Saturation	\$9,495.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Manual Calculation	\$33,333.00		
Rig Up Decomm Equipment		5.00 0.63%	\$34,037.50 1.09%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		4.57 0.58%	\$31,110.28 1.00%
DP Dive Boat	\$15,081.00		
Dive Basic Spread Saturation	\$14,464.05		
Decommissioning Crew	\$514.13		
Pipeline Surveying	\$1,051.10		
Derig Decomm Equipment		2.00 0.25%	\$13,615.00 0.44%
DP Dive Boat	\$6,600.00		
Dive Basic Spread Saturation	\$6,330.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		11.55 1.46%	\$78,626.63 2.52%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	1.46%	\$78,626.63	2.52%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	0.97%	\$52,417.75	1.68%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	0.97%	\$52,417.75	1.68%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	0.97%	\$52,417.75	1.68%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.38%	\$20,422.50	0.66%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	1.46%	\$78,626.63	2.52%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	1.46%	\$78,626.63	2.52%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	0.97%	\$52,417.75	1.68%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	0.97%	\$52,417.75	1.68%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	0.97%	\$52,417.75	1.68%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		330.00	41.67%	\$1,089,000.00	34.94%
DP Dive Boat	\$1,089,000.00				
Total		769.97	97.22%	\$2,959,953.80	94.98%



MMS

Pipeline Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1) Segment#:41303

Task		Task Hours	Task Cost
Mobilize Dive Boat		330.00 41.16%	\$1,089,000.00 34.22%
DP Dive Boat	\$1,089,000.00		
Set Up Dive Boat		3.00 0.37%	\$53,755.50 1.69%
DP Dive Boat	\$9,900.00		
Dive Basic Spread Saturation	\$9,495.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Manual Calculation	\$33,333.00		
Rig Up Decomm Equipment		5.00 0.62%	\$34,037.50 1.07%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		12.69 1.58%	\$86,387.17 2.71%
DP Dive Boat	\$41,877.00		
Dive Basic Spread Saturation	\$40,163.85		
Decommissioning Crew	\$1,427.62		
Pipeline Surveying	\$2,918.70		
Derig Decomm Equipment		2.00 0.25%	\$13,615.00 0.43%
DP Dive Boat	\$6,600.00		
Dive Basic Spread Saturation	\$6,330.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		11.55 1.44%	\$78,626.63 2.47%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	1.44%	\$78,626.63	2.47%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	0.96%	\$52,417.75	1.65%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	0.96%	\$52,417.75	1.65%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	0.96%	\$52,417.75	1.65%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.37%	\$20,422.50	0.64%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	1.44%	\$78,626.63	2.47%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	1.44%	\$78,626.63	2.47%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	0.96%	\$52,417.75	1.65%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	0.96%	\$52,417.75	1.65%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	0.96%	\$52,417.75	1.65%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		330.00	41.16%	\$1,089,000.00	34.22%
DP Dive Boat	\$1,089,000.00				
Total		778.09	97.05%	\$3,015,230.69	94.74%



MMS

Well Information

Eureka MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 5.00%

Partner Data

Partner	Working Interest
1 Pacific Energy Resources, Ltd	100.00%

Well Data

Diameter	Depth	Surface Pressure
----------	-------	------------------

Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Eureka MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$6,209,484.00 83.33%
Task Total			0.00	\$6,209,484.00 83.33%
Misc. Work Provision (15.00%)			0.00	\$931,422.64 12.50%
Weather Contingency (5.00%)			0.00	\$310,474.20 4.17%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$7,451,380.84 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Eureka MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$6,209,484.00 83.33%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Eureka MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$6,209,484.00	83.33%
Manual Calculation			\$6,209,484.00	
Total	0.00	0.00%	\$6,209,484.00	83.33%

Gail MMS POCS 29056



MMS

Platform Salvage Option

Gail MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

-Platform Gail will be removed along with Platforms Harvest, Hermosa, Hidalgo and Grace.

-Platform Gail is an 8-pile platform installed in 1987 in 739' of water.

-The estimated removal weight is the deck weight is 7,693 tons and the jacket weight is 18,300 tons.

-The platform has a total of 24 wells that will be plugged and abandoned.

-The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR

-Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.

-A total of 24 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.

-The platform topsides and jacket will be removed by a DB 4000 that will be mobilized from the GOM or North Sea. The total mob/demob time will be 200 days.

-The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.

-Four 300' cargo barges will transport the deck modules to shore and six 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 10 cargo barge trips will be required.

-The three pipelines (1 oil, 2 gas) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total



MMS

Platform Salvage Option

Gail MMS POCS 29056 (Ver 1)

mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Huenem Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix 1 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management,



MMS

Platform Salvage Option

Gail MMS POCS 29056 (Ver 1)

Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$88,839,895

Estimated Decommissioning Net Cost = \$88,839,895



MMS

Basic Information

Gail MMS POCS 29056 (Ver 1)

General Data

Platform:	Gail MMS POCS 29056
Function:	SELF CONTAINED
Type:	Steel
Water Depth:	739'
Pre 461H?:	No
Year Installed:	1987
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0205
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	24
# Pipelines to Abandon:	3
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Venoco, Inc.	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$79,721,208	\$79,721,208
Well Plugging & Abandonment:	\$4,295,960	\$4,295,960
Pipeline Abandonment:	\$4,822,727	\$4,822,727
Total Decommissioning Cost:	\$88,839,895	\$88,839,895



MMS

Platform Information

Gail MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	60"		Yes	No	
Skirt/Braced	12	72"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	36
Number Installed:	24
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	18300.00		
Jacket Installation Date:	1/1/1987		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	7693 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1987
Deck Contractor:	Unknown



MMS

Platform Information

Gail MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Deck > 500T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$12,001,855.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Gail MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$4,104,205.00	5.15%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.01%	\$511,000.00	0.64%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.01%	\$8,391.00	0.01%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.01%	\$4,862,948.00	6.10%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.01%	\$3,264,383.00	4.09%
Mobilize DB 4000	Mob from GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	4.93%	\$4,536,000.00	5.69%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 4)	<input type="checkbox"/>	17.00	0.17%	\$122,640.00	0.15%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 6)	<input type="checkbox"/>	17.00	0.17%	\$186,000.00	0.23%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	7.50	0.08%	\$33,900.00	0.04%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.14%
Cut Deck/Equip/Misc	Seperate 7 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.25%	\$410,400.00	0.51%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.25%	\$410,400.00	0.51%
Remove 8 Pile Deck	Remove 8 Pile Deck, 7 modules	<input checked="" type="checkbox"/>	48.00	0.49%	\$820,800.00	1.03%
Demob CB 300 & Tug	Demob to Port of LA (Qty 4)	<input type="checkbox"/>	17.00	0.17%	\$66,640.00	0.08%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	35.00	0.36%	\$599,200.00	0.75%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	145.50	1.49%	\$2,690,960.00	3.38%
Cut Jacket	41 Hours per section, times 19 section(s), per MMS	<input checked="" type="checkbox"/>	780.00	8.01%	\$13,453,040.00	16.88%
Remove Jacket - Meth 1	41 Hours per section, times 19 section(s), per MMS	<input checked="" type="checkbox"/>	780.00	8.01%	\$13,353,600.00	16.75%
Demob CB 400 & Tug	Demob to Port of LA (Qty 6)	<input type="checkbox"/>	17.00	0.17%	\$102,000.00	0.13%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.14%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	7.50	0.08%	\$33,900.00	0.04%
Demob DB 4000	Demob to GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	4.93%	\$4,536,000.00	5.69%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	0.74%	\$1,282,000.00	1.61%
Offload CB 300		<input type="checkbox"/>	1296.00	13.31%	\$345,680.00	0.43%
Offload CB 400		<input type="checkbox"/>	4992.00	51.26%	\$1,417,920.00	1.78%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.01%	\$8,391.00	0.01%
Task Total			9258.00	95.06%	\$7,378,018.00	71.97%
Misc. Work Provision (15.00%)			288.6	2.96%	\$6,204,803.00	7.78%
Weather Contingency (10.00%)			192.4	1.98%	\$4,136,535.00	5.19%
Consumables					\$0.00	0.00%
Waste Disposal					\$12,001,860.00	15.05%



MMS

Platform Decommission Task Information

Gail MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			9739.00 100.00%	179,721,216.00 100.00%



MMS

Platform Decommission Resources Breakdown

Gail MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$1,165,625.00	1.46%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$265,680.00	0.33%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$1,297,920.00	1.63%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$227,360.00	0.29%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$1,944,500.00	2.44%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$200,000.00	0.25%
Derrick Barge 4000	\$10,500.00	per Hour per barge	28,497,000.00	35.75%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$5,902,725.00	7.40%
Manual Calculation	\$0.00	Independently Calculated	14,041,318.00	17.61%
Pile Abrasive Cut 49 to 69 inches	\$5,000.00	per Cut	\$200,000.00	0.25%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$99,440.00	0.12%
Pipeline Survey	\$230.00	per Hour	\$428,950.00	0.54%
Rem. Operated Vehicle	\$800.00	per Hour	\$2,960,000.00	3.71%
Rig Up CB 300	\$14,000.00	per Barge	\$56,000.00	0.07%
Rig Up CB 400	\$14,000.00	per Barge	\$84,000.00	0.11%
Work Boat	\$500.00	per Hour	\$7,500.00	0.01%



MMS

Platform Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$4,104,205.00	5.15%
Manual Calculation			\$4,104,205.00	
NMFS Marine Observation	1.00	0.01%	\$511,000.00	0.64%
Manual Calculation			\$511,000.00	
Mobilize Abrasive Cutting Spread	1.00	0.01%	\$8,391.00	0.01%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Sever Conductors- Abrasive	1.00	0.01%	\$4,862,948.00	6.10%
Manual Calculation			\$4,862,948.00	
Platform Removal Preparation	1.00	0.01%	\$3,264,383.00	4.09%
Manual Calculation			\$3,264,383.00	
Mobilize DB 4000	480.00	4.93%	\$4,536,000.00	5.69%
Derrick Barge 4000			\$4,536,000.00	
Mobilize CB 300 & Tug	17.00	0.17%	\$122,640.00	0.15%
CB 300 & Tug			\$66,640.00	
Rig Up CB 300			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	17.00	0.17%	\$186,000.00	0.23%
Rig Up CB 400			\$84,000.00	
CB 400 & Tug			\$102,000.00	
Mobilize Dive Spread	7.50	0.08%	\$33,900.00	0.04%
Work Boat			\$3,750.00	
Dive Basic Spread Saturation			\$23,737.50	
Abrasive Cutter Spread			\$4,687.50	
Pipeline Survey			\$1,725.00	
Setup Derrick Barge	6.75	0.07%	\$108,810.00	0.14%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	24.00	0.25%	\$410,400.00	0.51%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	



MMS

Platform Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.25%	\$410,400.00	0.51%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	
Remove 8 Pile Deck	48.00	0.49%	\$820,800.00	1.03%
Derrick Barge 4000			\$504,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Rem. Operated Vehicle			\$76,800.00	
Demob CB 300 & Tug	17.00	0.17%	\$66,640.00	0.08%
CB 300 & Tug			\$66,640.00	
Jet/Airlift Pile Mud Plug	35.00	0.36%	\$599,200.00	0.75%
Derrick Barge 4000			\$367,500.00	
Dive Basic Spread Saturation			\$110,775.00	
Pipeline Survey			\$8,050.00	
Abrasive Cutter Spread			\$21,875.00	
CB 400 & Tug			\$35,000.00	
Rem. Operated Vehicle			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		145.50	1.49%	\$2,690,960.00	3.38%
Derrick Barge 4000	\$1,527,750.00				
Dive Basic Spread Saturation	\$460,507.50				
Pipeline Survey	\$33,465.00				
Abrasive Cutter Spread	\$90,937.50				
CB 400 & Tug	\$145,500.00				
Pile Abrasive Cut 49 to 69 inches	\$200,000.00				
Rem. Operated Vehicle	\$232,800.00				
Cut Jacket		780.00	8.01%	\$13,453,040.00	16.88%
Derrick Barge 4000	\$8,190,000.00				
Dive Basic Spread Saturation	\$2,468,700.00				
Pipeline Survey	\$179,400.00				
Abrasive Cutter Spread	\$487,500.00				
CB 400 & Tug	\$780,000.00				
Pile Abrasive Cut 7 to 48 inches	\$99,440.00				
Rem. Operated Vehicle	\$1,248,000.00				
Remove Jacket - Meth 1		780.00	8.01%	\$13,353,600.00	16.75%
Derrick Barge 4000	\$8,190,000.00				
Dive Basic Spread Saturation	\$2,468,700.00				
Pipeline Survey	\$179,400.00				
Abrasive Cutter Spread	\$487,500.00				
CB 400 & Tug	\$780,000.00				
Rem. Operated Vehicle	\$1,248,000.00				
Demob CB 400 & Tug		17.00	0.17%	\$102,000.00	0.13%
CB 400 & Tug	\$102,000.00				



MMS

Platform Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.07%	\$108,810.00	0.14%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Demob Dive Spread	7.50	0.08%	\$33,900.00	0.04%
Work Boat			\$3,750.00	
Dive Basic Spread Saturation			\$23,737.50	
Abrasive Cutter Spread			\$4,687.50	
Pipeline Survey			\$1,725.00	
Demob DB 4000	480.00	4.93%	\$4,536,000.00	5.69%
Derrick Barge 4000			\$4,536,000.00	
Site Clearance - with Divers	72.00	0.74%	\$1,282,000.00	1.61%
Manual Calculation			\$1,282,000.00	
Offload CB 300	1296.00	13.31%	\$345,680.00	0.43%
Cargo Barge 300			\$265,680.00	
CB Damage Deduct			\$80,000.00	
Offload CB 400	4992.00	51.26%	\$1,417,920.00	1.78%
Cargo Barge 400			\$1,297,920.00	
CB Damage Deduct			\$120,000.00	



MMS

Platform Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.01%	\$8,391.00	0.01%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Total	9258.00	95.06%	\$57,378,018.00	71.97%



MMS

Pipeline Information

Gail MMS POCS 29056 (Ver1) Segment#:5110205

General Data

Water Depth: 739'
Origin / Terminus: Origin
Opposite End Name: Grace
Opposite End Water Depth: 320'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter: 8.625"	Wall Thickness:	Length: 33264'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to the Grace Platform.
It is estimated as abandoned in place.



MMS

Pipeline Information

Gail MMS POCS 29056 (Ver1) Segment#:5220205

General Data

Water Depth:	739'
Origin / Terminus:	Origin
Opposite End Name:	Grace
Opposite End Water Depth:	320'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	8.625"	Wall Thickness:		Length:	33400'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Grace Platform.
It is estimated as abandoned in place.



MMS

Pipeline Information

Gail MMS POCS 29056 (Ver1) Segment#:5300205

General Data

Water Depth: 739'
Origin / Terminus: Origin
Opposite End Name: Grace
Opposite End Water Depth: 320'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter: 8.625"	Wall Thickness:	Length: 31680'
Depth of Burial:	# Crossings:	Product: SPRE
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to the Grace Platform.
It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Gail MMS POCS 29056 (Ver 1) Segment#:5110205

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	80.00	25.06%	\$264,000.00	16.25%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.94%	\$30,422.50	1.87%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.57%	\$34,037.50	2.10%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	22.00	6.89%	\$149,765.00	9.22%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.63%	\$13,615.00	0.84%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.62%	\$78,626.63	4.84%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.62%	\$78,626.63	4.84%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.41%	\$52,417.75	3.23%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.41%	\$52,417.75	3.23%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.41%	\$52,417.75	3.23%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.94%	\$20,422.50	1.26%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.62%	\$78,626.63	4.84%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.62%	\$78,626.63	4.84%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.41%	\$52,417.75	3.23%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.41%	\$52,417.75	3.23%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.41%	\$52,417.75	3.23%
Demob Dive Boat		<input type="checkbox"/>	80.00	25.06%	\$264,000.00	16.25%
Task Total			287.40	90.02%	\$1,405,275.52	86.50%
Misc. Work Provision (15.00%)			19.11	5.99%	\$131,591.33	8.10%
Other Contingency (10.00%)			12.74	3.99%	\$87,727.55	5.40%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			319.25	100.00%	\$1,624,594.41	100.00%



MMS

Pipeline Decommission Task Information

Gail MMS POCS 29056 (Ver 1) Segment#:5220205

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	80.00	25.26%	\$264,000.00	16.42%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.95%	\$30,422.50	1.89%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.58%	\$34,037.50	2.12%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	20.00	6.31%	\$136,150.00	8.47%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.63%	\$13,615.00	0.85%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.65%	\$78,626.63	4.89%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.65%	\$78,626.63	4.89%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.43%	\$52,417.75	3.26%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.43%	\$52,417.75	3.26%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.43%	\$52,417.75	3.26%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.95%	\$20,422.50	1.27%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.65%	\$78,626.63	4.89%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.65%	\$78,626.63	4.89%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.43%	\$52,417.75	3.26%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.43%	\$52,417.75	3.26%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.43%	\$52,417.75	3.26%
Demob Dive Boat		<input type="checkbox"/>	80.00	25.26%	\$264,000.00	16.42%
Task Total			285.40	90.10%	\$1,391,660.52	86.57%
Misc. Work Provision (15.00%)			18.81	5.94%	\$129,549.08	8.06%
Other Contingency (10.00%)			12.54	3.96%	\$86,366.05	5.37%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			316.75	100.00%	\$1,607,575.66	100.00%



MMS

Pipeline Decommission Task Information

Gail MMS POCS 29056 (Ver 1) Segment#:5300205

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	80.00	25.46%	\$264,000.00	16.60%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.95%	\$30,422.50	1.91%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.59%	\$34,037.50	2.14%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	18.00	5.73%	\$122,535.00	7.70%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.64%	\$13,615.00	0.86%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.68%	\$78,626.63	4.94%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.68%	\$78,626.63	4.94%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.45%	\$52,417.75	3.30%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.45%	\$52,417.75	3.30%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.45%	\$52,417.75	3.30%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.95%	\$20,422.50	1.28%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.68%	\$78,626.63	4.94%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.68%	\$78,626.63	4.94%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.45%	\$52,417.75	3.30%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.45%	\$52,417.75	3.30%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.45%	\$52,417.75	3.30%
Demob Dive Boat		<input type="checkbox"/>	80.00	25.46%	\$264,000.00	16.60%
Task Total			283.40	90.18%	\$1,378,045.52	86.64%
Misc. Work Provision (15.00%)			18.51	5.89%	\$127,506.83	8.02%
Other Contingency (10.00%)			12.34	3.93%	\$85,004.55	5.34%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			314.25	100.00%	\$1,590,556.91	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Gail MMS POCS 29056 (Ver 1) Segment#:5110205

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$14,332.52	0.88%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$403,221.00	24.82%
DP Dive Boat	\$3,300.00	per Hour	\$948,420.00	58.38%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.62%
Pipeline Surveying	\$230.00	per Hour	\$29,302.00	1.80%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Gail MMS POCS 29056 (Ver 1) Segment#:5220205

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$14,107.52	0.88%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$396,891.00	24.69%
DP Dive Boat	\$3,300.00	per Hour	\$941,820.00	58.59%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.62%
Pipeline Surveying	\$230.00	per Hour	\$28,842.00	1.79%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Gail MMS POCS 29056 (Ver 1) Segment#:5300205

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$13,882.52	0.87%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$390,561.00	24.55%
DP Dive Boat	\$3,300.00	per Hour	\$935,220.00	58.80%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.63%
Pipeline Surveying	\$230.00	per Hour	\$28,382.00	1.78%



MMS

Pipeline Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1) Segment#:5110205

Task	Task Hours	Task Cost
Mobilize Dive Boat	80.00 25.06%	\$264,000.00 16.25%
DP Dive Boat		\$264,000.00
Set Up Dive Boat	3.00 0.94%	\$30,422.50 1.87%
DP Dive Boat		\$9,900.00
Dive Basic Spread Saturation		\$9,495.00
Decommissioning Crew		\$337.50
Pipeline Surveying		\$690.00
Manual Calculation		\$10,000.00
Rig Up Decomm Equipment	5.00 1.57%	\$34,037.50 2.10%
DP Dive Boat		\$16,500.00
Dive Basic Spread Saturation		\$15,825.00
Decommissioning Crew		\$562.50
Pipeline Surveying		\$1,150.00
Pig & Flush Pipeline	22.00 6.89%	\$149,765.00 9.22%
DP Dive Boat		\$72,600.00
Dive Basic Spread Saturation		\$69,630.00
Decommissioning Crew		\$2,475.00
Pipeline Surveying		\$5,060.00
Derig Decomm Equipment	2.00 0.63%	\$13,615.00 0.84%
DP Dive Boat		\$6,600.00
Dive Basic Spread Saturation		\$6,330.00
Decommissioning Crew		\$225.00
Pipeline Surveying		\$460.00
Expose Pipeline	11.55 3.62%	\$78,626.63 4.84%
DP Dive Boat		\$38,115.00
Dive Basic Spread Saturation		\$36,555.75
Decommissioning Crew		\$1,299.38
Pipeline Surveying		\$2,656.50



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.62%	\$78,626.63	4.84%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.41%	\$52,417.75	3.23%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.41%	\$52,417.75	3.23%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.41%	\$52,417.75	3.23%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.94%	\$20,422.50	1.26%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	3.62%	\$78,626.63	4.84%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.62%	\$78,626.63	4.84%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.41%	\$52,417.75	3.23%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.41%	\$52,417.75	3.23%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.41%	\$52,417.75	3.23%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		80.00	25.06%	\$264,000.00	16.25%
DP Dive Boat	\$264,000.00				
Total		287.40	90.02%	\$1,405,275.52	86.50%



MMS

Pipeline Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1) Segment#:5220205

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 25.26%	\$264,000.00 16.42%
DP Dive Boat	\$264,000.00		
Set Up Dive Boat		3.00 0.95%	\$30,422.50 1.89%
DP Dive Boat	\$9,900.00		
Dive Basic Spread Saturation	\$9,495.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Manual Calculation	\$10,000.00		
Rig Up Decomm Equipment		5.00 1.58%	\$34,037.50 2.12%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		20.00 6.31%	\$136,150.00 8.47%
DP Dive Boat	\$66,000.00		
Dive Basic Spread Saturation	\$63,300.00		
Decommissioning Crew	\$2,250.00		
Pipeline Surveying	\$4,600.00		
Derig Decomm Equipment		2.00 0.63%	\$13,615.00 0.85%
DP Dive Boat	\$6,600.00		
Dive Basic Spread Saturation	\$6,330.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		11.55 3.65%	\$78,626.63 4.89%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.65%	\$78,626.63	4.89%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.43%	\$52,417.75	3.26%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.43%	\$52,417.75	3.26%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.43%	\$52,417.75	3.26%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.95%	\$20,422.50	1.27%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	3.65%	\$78,626.63	4.89%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.65%	\$78,626.63	4.89%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.43%	\$52,417.75	3.26%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.43%	\$52,417.75	3.26%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.43%	\$52,417.75	3.26%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		80.00	25.26%	\$264,000.00	16.42%
DP Dive Boat	\$264,000.00				
Total		285.40	90.10%	\$1,391,660.52	86.57%



MMS

Pipeline Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1) Segment#:5300205

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 25.46%	\$264,000.00 16.60%
DP Dive Boat	\$264,000.00		
Set Up Dive Boat		3.00 0.95%	\$30,422.50 1.91%
DP Dive Boat	\$9,900.00		
Dive Basic Spread Saturation	\$9,495.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Manual Calculation	\$10,000.00		
Rig Up Decomm Equipment		5.00 1.59%	\$34,037.50 2.14%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		18.00 5.73%	\$122,535.00 7.70%
DP Dive Boat	\$59,400.00		
Dive Basic Spread Saturation	\$56,970.00		
Decommissioning Crew	\$2,025.00		
Pipeline Surveying	\$4,140.00		
Derig Decomm Equipment		2.00 0.64%	\$13,615.00 0.86%
DP Dive Boat	\$6,600.00		
Dive Basic Spread Saturation	\$6,330.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		11.55 3.68%	\$78,626.63 4.94%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.68%	\$78,626.63	4.94%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.45%	\$52,417.75	3.30%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.45%	\$52,417.75	3.30%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.45%	\$52,417.75	3.30%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.95%	\$20,422.50	1.28%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	3.68%	\$78,626.63	4.94%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.68%	\$78,626.63	4.94%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.45%	\$52,417.75	3.30%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.45%	\$52,417.75	3.30%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.45%	\$52,417.75	3.30%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		80.00	25.46%	\$264,000.00	16.60%
DP Dive Boat	\$264,000.00				
Total		283.40	90.18%	\$1,378,045.52	86.64%



MMS

Well Information

Gail MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Venoco, Inc.	100.00%

Well Data

Diameter	Depth	Surface Pressure
----------	-------	------------------

Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Gail MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$3,436,768.00 80.00%
Task Total			0.00	\$3,436,768.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$515,515.22 12.00%
ather Contingency (10.00%)			0.00	\$343,676.81 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$4,295,960.03 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Gail MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$3,436,768.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Gail MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$3,436,768.00	80.00%
Manual Calculation			\$3,436,768.00	
Total	0.00	0.00%	\$3,436,768.00	80.00%

Gilda MMS POCS 29056



MMS

Platform Salvage Option

Gilda MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Gilda will be removed along with Platforms Irene and Habitat.
- Platform Gilda is a 12-pile platform installed in 1981 in 205' of water.
- The estimated removal weight is the deck weight is 3,792 tons and the jacket weight is 3,220 tons.
- The platform has a total of 63 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 64 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The two pipelines (oil, gas) on the OCS will be totally removed to the state water



MMS

Platform Salvage Option

Gilda MMS POCS 29056 (Ver 1)

boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

Gilda MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$42,788,807

Estimated Decommissioning Net Cost = \$42,788,807



MMS

Basic Information

Gilda MMS POCS 29056 (Ver 1)

General Data

Platform:	Gilda MMS POCS 29056
Function:	DRILL/PROD
Type:	Steel
Water Depth:	205'
Pre 461H?:	Yes
Year Installed:	1981
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0216
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	63
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$30,410,920	\$30,410,920
Well Plugging & Abandonment:	\$9,850,055	\$9,850,055
Pipeline Abandonment:	\$2,527,832	\$2,527,832
Total Decommissioning Cost:	\$42,788,807	\$42,788,807



MMS

Platform Information

Gilda MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	12	48"	2"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	155 x 132	75
Middle:	155 x 132	48
Lower:		

Conductors

Number of Slots:	96
Number Installed:	64
Outside Diameter:	20"
Wall Thickness:	0.5"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	3220.00		
Jacket Installation Date:	1/6/81		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	3792 Tons
Number of Padeyes Required:	12
Deck Installation Date:	1/6/81
Deck Contractor:	Unknown



MMS

Platform Information

Gilda MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description		
CB 300 x 100	Deck 100-500T	Equipment	Equipment
CB 300 x 100	Deck > 500T	Deck > 500T	
CB 400 x 100	Deck > 500T	Deck > 500T	Equipment
CB 400 x 100	Deck 100-500T	Jkt > 700T	
CB 400 x 100	Jkt > 700T	Jkt > 700T	

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$3,850,765.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Gilda MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,942,794.00	6.39%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.02%	\$851,667.00	2.80%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.02%	\$13,984.00	0.05%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.02%	\$5,063,282.00	16.65%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.02%	\$1,839,564.00	6.05%
Mobilize DB 2000	Mob from Asia, 50 days divided by 3 platforms	<input type="checkbox"/>	400.00	9.71%	\$3,060,000.00	10.06%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	17.60	0.43%	\$62,496.00	0.21%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	17.60	0.43%	\$94,800.00	0.31%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	7.80	0.19%	\$35,256.00	0.12%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.16%	\$84,510.00	0.28%
Cut Deck/Equip/Misc	Seperate 6 Modules, per MMS	<input checked="" type="checkbox"/>	12.00	0.29%	\$162,000.00	0.53%
Remove Equipment		<input checked="" type="checkbox"/>	12.00	0.29%	\$162,000.00	0.53%
Remove 8 Pile Deck	Remove 12 Pile Deck, 6 modules	<input checked="" type="checkbox"/>	48.00	1.17%	\$648,000.00	2.13%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	17.60	0.43%	\$34,496.00	0.11%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	1.12%	\$621,920.00	2.05%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	69.22	1.68%	\$995,518.40	3.27%
Cut Jacket	20 Hours per section, times 3 section(s), per MMS	<input checked="" type="checkbox"/>	60.00	1.46%	\$870,864.00	2.86%
Remove Jacket - Meth 1	20 Hours per section, times 3 section(s), per MMS	<input checked="" type="checkbox"/>	60.00	1.46%	\$811,200.00	2.67%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	17.60	0.43%	\$52,800.00	0.17%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.16%	\$84,510.00	0.28%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	7.80	0.19%	\$35,256.00	0.12%
Demob DB 2000	Demob to Asia, 50 days divided by 3 platforms	<input type="checkbox"/>	400.00	9.71%	\$3,060,000.00	10.06%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.75%	\$709,000.00	2.33%
Offload CB 300		<input type="checkbox"/>	912.00	22.14%	\$226,960.00	0.75%
Offload CB 400		<input type="checkbox"/>	1824.00	44.29%	\$534,240.00	1.76%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.02%	\$13,984.00	0.05%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$1,180,766.00	3.88%
Task Total			4019.72	97.60%	\$23,251,867.40	76.46%
Misc. Work Provision (15.00%)			59.21	1.44%	\$1,984,970.00	6.53%
Weather Contingency (10.00%)			39.47	0.96%	\$1,323,314.00	4.35%
Consumables					\$0.00	0.00%
Waste Disposal					\$3,850,765.00	12.66%



MMS

Platform Decommission Task Information

Gilda MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			4118.40 100.00%	30,410,916.40 100.00%



MMS

Platform Decommission Resources Breakdown

Gilda MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$210,200.00	0.69%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$186,960.00	0.61%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$474,240.00	1.56%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$139,552.00	0.46%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$340,820.00	1.12%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.33%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$8,846,120.00	29.09%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$1,064,452.80	3.50%
Manual Calculation	\$0.00	Independently Calculated	11,615,041.00	38.19%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$119,328.00	0.39%
Pipeline Survey	\$230.00	per Hour	\$77,353.60	0.25%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.09%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.14%
Work Boat	\$500.00	per Hour	\$7,800.00	0.03%



MMS

Platform Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,942,794.00	6.39%
Manual Calculation			\$1,942,794.00	
NMFS Marine Observation	1.00	0.02%	\$851,667.00	2.80%
Manual Calculation			\$851,667.00	
Mobilize Abrasive Cutting Spread	1.00	0.02%	\$13,984.00	0.05%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Sever Conductors- Abrasive	1.00	0.02%	\$5,063,282.00	16.65%
Manual Calculation			\$5,063,282.00	
Platform Removal Preparation	1.00	0.02%	\$1,839,564.00	6.05%
Manual Calculation			\$1,839,564.00	
Mobilize DB 2000	400.00	9.71%	\$3,060,000.00	10.06%
Derrick Barge 2000			\$3,060,000.00	
Mobilize CB 300 & Tug	17.60	0.43%	\$62,496.00	0.21%
CB 300 & Tug			\$34,496.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	17.60	0.43%	\$94,800.00	0.31%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$52,800.00	
Mobilize Dive Spread	7.80	0.19%	\$35,256.00	0.12%
Work Boat			\$3,900.00	
Dive Basic Spread Saturation			\$24,687.00	
Abrasive Cutter Spread			\$4,875.00	
Pipeline Survey			\$1,794.00	
Setup Derrick Barge	6.75	0.16%	\$84,510.00	0.28%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	12.00	0.29%	\$162,000.00	0.53%
Derrick Barge 2000			\$102,000.00	
Dive Basic Spread Saturation			\$37,980.00	
Pipeline Survey			\$2,760.00	
Abrasive Cutter Spread			\$7,500.00	
CB 300 & Tug			\$11,760.00	



MMS

Platform Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	12.00	0.29%	\$162,000.00	0.53%
Derrick Barge 2000			\$102,000.00	
Dive Basic Spread Saturation			\$37,980.00	
Pipeline Survey			\$2,760.00	
Abrasive Cutter Spread			\$7,500.00	
CB 300 & Tug			\$11,760.00	
Remove 8 Pile Deck	48.00	1.17%	\$648,000.00	2.13%
Derrick Barge 2000			\$408,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Demob CB 300 & Tug	17.60	0.43%	\$34,496.00	0.11%
CB 300 & Tug			\$34,496.00	
Jet/Airlift Pile Mud Plug	46.00	1.12%	\$621,920.00	2.05%
Derrick Barge 2000			\$391,000.00	
Dive Basic Spread Saturation			\$145,590.00	
Pipeline Survey			\$10,580.00	
Abrasive Cutter Spread			\$28,750.00	
CB 400 & Tug			\$46,000.00	



MMS

Platform Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Sever Piles- Abrasive	69.22	1.68%	\$995,518.40	3.27%
Derrick Barge 2000			\$588,370.00	
Dive Basic Spread Saturation			\$219,081.30	
Pipeline Survey			\$15,920.60	
Abrasive Cutter Spread			\$43,262.50	
CB 400 & Tug			\$69,220.00	
Pile Abrasive Cut 7 to 48 inches			\$59,664.00	
Cut Jacket	60.00	1.46%	\$870,864.00	2.86%
Derrick Barge 2000			\$510,000.00	
Dive Basic Spread Saturation			\$189,900.00	
Pipeline Survey			\$13,800.00	
Abrasive Cutter Spread			\$37,500.00	
CB 400 & Tug			\$60,000.00	
Pile Abrasive Cut 7 to 48 inches			\$59,664.00	
Remove Jacket - Meth 1	60.00	1.46%	\$811,200.00	2.67%
Derrick Barge 2000			\$510,000.00	
Dive Basic Spread Saturation			\$189,900.00	
Pipeline Survey			\$13,800.00	
Abrasive Cutter Spread			\$37,500.00	
CB 400 & Tug			\$60,000.00	
Demob CB 400 & Tug	17.60	0.43%	\$52,800.00	0.17%
CB 400 & Tug			\$52,800.00	



MMS

Platform Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.16%	\$84,510.00	0.28%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Demob Dive Spread	7.80	0.19%	\$35,256.00	0.12%
Work Boat			\$3,900.00	
Dive Basic Spread Saturation			\$24,687.00	
Abrasive Cutter Spread			\$4,875.00	
Pipeline Survey			\$1,794.00	
Demob DB 2000	400.00	9.71%	\$3,060,000.00	10.06%
Derrick Barge 2000			\$3,060,000.00	
Site Clearance - with Divers	72.00	1.75%	\$709,000.00	2.33%
Manual Calculation			\$709,000.00	
Offload CB 300	912.00	22.14%	\$226,960.00	0.75%
Cargo Barge 300			\$186,960.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	1824.00	44.29%	\$534,240.00	1.76%
Cargo Barge 400			\$474,240.00	
CB Damage Deduct			\$60,000.00	



MMS

Platform Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.02%	\$13,984.00	0.05%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,180,766.00	3.88%
Manual Calculation			\$1,180,766.00	
Total	4019.72	97.60%	\$23,251,867.40	76.46%



MMS

Pipeline Information

Gilda MMS POCS 29056 (Ver1) Segment#:3210216-

General Data

Water Depth:	205'
Origin / Terminus:	Origin
Opposite End Name:	Mandalay
Opposite End Water Depth:	62'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	12"	Wall Thickness:	0.668"	Length:	32928'
Depth of Burial:	3'	# Crossings:		Product:	Oil
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the Mandalay Onshore facility.
Estimate reflects removing to state waters.
Total estimated length removed is ~32928'



MMS

Pipeline Information

Gilda MMS POCS 29056 (Ver1) Segment#:3320216-

General Data

Water Depth:	205'
Origin / Terminus:	Origin
Opposite End Name:	Mandalay
Opposite End Water Depth:	62'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	10"	Wall Thickness:	0.365"	Length:	32928'
Depth of Burial:	3'	# Crossings:		Product:	Gas
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the Mandalay Onshore facility.
Estimate reflects removing to state waters.
Total estimated length removed is ~32928'



MMS

Pipeline Decommission Task Information

Gilda MMS POCS 29056 (Ver 1) Segment#:3210216-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	7.80	1.25%	\$5,424.90	0.42%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.80%	\$3,477.50	0.27%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	58.00	9.28%	\$40,339.00	3.15%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.32%	\$1,391.00	0.11%
Demob Work Boat		<input type="checkbox"/>	7.80	1.25%	\$5,424.90	0.42%
Mob P/L Removal Spread		<input type="checkbox"/>	7.80	1.25%	\$73,938.20	5.78%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.64	1.06%	\$21,125.16	1.65%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.43	0.71%	\$14,094.04	1.10%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.43	0.71%	\$14,094.04	1.10%
Mobilize Vessel		<input checked="" type="checkbox"/>	7.80	1.25%	\$24,580.00	1.92%
Expose Pipeline		<input checked="" type="checkbox"/>	6.64	1.06%	\$24,030.16	1.88%
Remove Pipeline		<input checked="" type="checkbox"/>	200.00	31.99%	\$723,800.00	56.60%
Bury Pipeline		<input checked="" type="checkbox"/>	4.43	0.71%	\$16,032.17	1.25%
Demob Vessel		<input checked="" type="checkbox"/>	7.80	1.25%	\$8,580.00	0.67%
Demob P/L Removal Spread		<input type="checkbox"/>	7.80	1.25%	\$28,228.20	2.21%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	26.87%	\$41,000.00	3.21%
Task Total			506.37	81.00%	\$1,045,559.27	81.77%
Misc. Work Provision (15.00%)			71.28	11.40%	\$139,881.47	10.94%
ather Contingency (10.00%)			47.52	7.60%	\$93,254.31	7.29%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			625.16	100.00%	\$1,278,695.04	100.00%



MMS

Pipeline Decommission Task Information

Gilda MMS POCS 29056 (Ver 1) Segment#:3320216-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	7.80	1.34%	\$5,424.90	0.43%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.86%	\$3,477.50	0.28%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	24.00	4.12%	\$16,692.00	1.34%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.34%	\$1,391.00	0.11%
Demob Work Boat		<input type="checkbox"/>	7.80	1.34%	\$5,424.90	0.43%
Mob P/L Removal Spread		<input type="checkbox"/>	7.80	1.34%	\$73,938.20	5.92%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.64	1.14%	\$21,125.16	1.69%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.43	0.76%	\$14,094.04	1.13%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.43	0.76%	\$14,094.04	1.13%
Mobilize Vessel		<input checked="" type="checkbox"/>	7.80	1.34%	\$24,580.00	1.97%
Expose Pipeline		<input checked="" type="checkbox"/>	6.64	1.14%	\$24,030.16	1.92%
Remove Pipeline		<input checked="" type="checkbox"/>	200.00	34.33%	\$723,800.00	57.94%
Bury Pipeline		<input checked="" type="checkbox"/>	4.43	0.76%	\$16,032.17	1.28%
Demob Vessel		<input checked="" type="checkbox"/>	7.80	1.34%	\$8,580.00	0.69%
Demob P/L Removal Spread		<input type="checkbox"/>	7.80	1.34%	\$28,228.20	2.26%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	28.83%	\$41,000.00	3.28%
Task Total			472.37	81.07%	\$1,021,912.27	81.81%
Misc. Work Provision (15.00%)			66.18	11.36%	\$136,334.42	10.91%
ather Contingency (10.00%)			44.12	7.57%	\$90,889.61	7.28%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			582.66	100.00%	\$1,249,136.29	100.00%



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MMS

Pipeline Decommission Resources Breakdown

Gilda MMS POCS 29056 (Ver 1) Segment#:321021

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	1.64%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$137,538.50	10.76%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	1.56%
Decommissioning Crew	\$0.00	Calculated from tables	\$10,811.24	0.85%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$214,320.45	16.76%
Manual Calculation	\$0.00	Independently Calculated	\$50,000.00	3.91%
Pipelay Barge	\$1,954.00	per Hour	\$473,200.18	37.01%
Pipeline Surveying	\$230.00	per Hour	\$55,699.10	4.36%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	1.25%
Work Boat	\$583.00	per Hour	\$46,989.80	3.67%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Gilda MMS POCS 29056 (Ver 1) Segment#:332021

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	1.68%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$137,538.50	11.01%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	1.60%
Decommissioning Crew	\$0.00	Calculated from tables	\$6,986.24	0.56%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$214,320.45	17.16%
Manual Calculation	\$0.00	Independently Calculated	\$50,000.00	4.00%
Pipelay Barge	\$1,954.00	per Hour	\$473,200.18	37.88%
Pipeline Surveying	\$230.00	per Hour	\$55,699.10	4.46%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	1.28%
Work Boat	\$583.00	per Hour	\$27,167.80	2.17%



MMS

Pipeline Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1) Segment#:3210216

Task		Task Hours	Task Cost
Mobilize Work Boat		7.80 1.25%	\$5,424.90 0.42%
Work Boat	\$4,547.40		
Decommissioning Crew	\$877.50		
Rig Up Decomm Equipment		5.00 0.80%	\$3,477.50 0.27%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		58.00 9.28%	\$40,339.00 3.15%
Work Boat	\$33,814.00		
Decommissioning Crew	\$6,525.00		
Derig Decomm Equipment		2.00 0.32%	\$1,391.00 0.11%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		7.80 1.25%	\$5,424.90 0.42%
Work Boat	\$4,547.40		
Decommissioning Crew	\$877.50		
Mob P/L Removal Spread		7.80 1.25%	\$73,938.20 5.78%
Dive Basic Spread- Mixed Gas	\$6,903.00		
Pipeline Surveying	\$1,794.00		
Pipelay Barge	\$15,241.20		
Manual Calculation	\$50,000.00		
Cut & Plug Pipeline		6.64 1.06%	\$21,125.16 1.65%
Dive Basic Spread- Mixed Gas	\$5,876.40		
Pipeline Surveying	\$1,527.20		
Pipelay Barge	\$12,974.56		
Decommissioning Crew	\$747.00		
Cut Pipeline Riser		4.43 0.71%	\$14,094.04 1.10%
Dive Basic Spread- Mixed Gas	\$3,920.55		
Pipeline Surveying	\$1,018.90		
Pipelay Barge	\$8,656.22		
Decommissioning Crew	\$498.37		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		4.43	0.71%	\$14,094.04	1.10%
Dive Basic Spread- Mixed Gas	\$3,920.55				
Pipeline Surveying	\$1,018.90				
Pipelay Barge	\$8,656.22				
Decommissioning Crew	\$498.37				
Mobilize Vessel		7.80	1.25%	\$24,580.00	1.92%
CB 180 & Tug	\$8,580.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		6.64	1.06%	\$24,030.16	1.88%
Pipeline Surveying	\$1,527.20				
Dive Basic Spread- Mixed Gas	\$5,876.40				
Pipelay Barge	\$12,974.56				
CB 180 & Tug	\$3,652.00				
Remove Pipeline		200.00	31.99%	\$723,800.00	56.60%
Pipeline Surveying	\$46,000.00				
Dive Basic Spread- Mixed Gas	\$177,000.00				
Pipelay Barge	\$390,800.00				
CB 180 & Tug	\$110,000.00				
Bury Pipeline		4.43	0.71%	\$16,032.17	1.25%
Pipeline Surveying	\$1,018.90				
Dive Basic Spread- Mixed Gas	\$3,920.55				
Pipelay Barge	\$8,656.22				
CB 180 & Tug	\$2,436.50				
Demob Vessel		7.80	1.25%	\$8,580.00	0.67%
CB 180 & Tug	\$8,580.00				
Demob P/L Removal Spread		7.80	1.25%	\$28,228.20	2.21%
Pipeline Surveying	\$1,794.00				
Dive Basic Spread- Mixed Gas	\$6,903.00				
Pipelay Barge	\$15,241.20				
CB 180 & Tug	\$4,290.00				
Offload CB 180		168.00	26.87%	\$41,000.00	3.21%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		506.37	81.00%	\$1,045,559.27	81.77%



MMS

Pipeline Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1) Segment#:3320216

Task		Task Hours	Task Cost
Mobilize Work Boat		7.80 1.34%	\$5,424.90 0.43%
Work Boat	\$4,547.40		
Decommissioning Crew	\$877.50		
Rig Up Decomm Equipment		5.00 0.86%	\$3,477.50 0.28%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		24.00 4.12%	\$16,692.00 1.34%
Work Boat	\$13,992.00		
Decommissioning Crew	\$2,700.00		
Derig Decomm Equipment		2.00 0.34%	\$1,391.00 0.11%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		7.80 1.34%	\$5,424.90 0.43%
Work Boat	\$4,547.40		
Decommissioning Crew	\$877.50		
Mob P/L Removal Spread		7.80 1.34%	\$73,938.20 5.92%
Dive Basic Spread- Mixed Gas	\$6,903.00		
Pipeline Surveying	\$1,794.00		
Pipelay Barge	\$15,241.20		
Manual Calculation	\$50,000.00		
Cut & Plug Pipeline		6.64 1.14%	\$21,125.16 1.69%
Dive Basic Spread- Mixed Gas	\$5,876.40		
Pipeline Surveying	\$1,527.20		
Pipelay Barge	\$12,974.56		
Decommissioning Crew	\$747.00		
Cut Pipeline Riser		4.43 0.76%	\$14,094.04 1.13%
Dive Basic Spread- Mixed Gas	\$3,920.55		
Pipeline Surveying	\$1,018.90		
Pipelay Barge	\$8,656.22		
Decommissioning Crew	\$498.37		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		4.43	0.76%	\$14,094.04	1.13%
Dive Basic Spread- Mixed Gas	\$3,920.55				
Pipeline Surveying	\$1,018.90				
Pipelay Barge	\$8,656.22				
Decommissioning Crew	\$498.37				
Mobilize Vessel		7.80	1.34%	\$24,580.00	1.97%
CB 180 & Tug	\$8,580.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		6.64	1.14%	\$24,030.16	1.92%
Pipeline Surveying	\$1,527.20				
Dive Basic Spread- Mixed Gas	\$5,876.40				
Pipelay Barge	\$12,974.56				
CB 180 & Tug	\$3,652.00				
Remove Pipeline		200.00	34.33%	\$723,800.00	57.94%
Pipeline Surveying	\$46,000.00				
Dive Basic Spread- Mixed Gas	\$177,000.00				
Pipelay Barge	\$390,800.00				
CB 180 & Tug	\$110,000.00				
Bury Pipeline		4.43	0.76%	\$16,032.17	1.28%
Pipeline Surveying	\$1,018.90				
Dive Basic Spread- Mixed Gas	\$3,920.55				
Pipelay Barge	\$8,656.22				
CB 180 & Tug	\$2,436.50				
Demob Vessel		7.80	1.34%	\$8,580.00	0.69%
CB 180 & Tug	\$8,580.00				
Demob P/L Removal Spread		7.80	1.34%	\$28,228.20	2.26%
Pipeline Surveying	\$1,794.00				
Dive Basic Spread- Mixed Gas	\$6,903.00				
Pipelay Barge	\$15,241.20				
CB 180 & Tug	\$4,290.00				
Offload CB 180		168.00	28.83%	\$41,000.00	3.28%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		472.37	81.07%	\$1,021,912.27	81.81%



MMS

Well Information

Gilda MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Gilda MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$7,880,044.00 80.00%
Task Total			0.00	\$7,880,044.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$1,182,006.65 12.00%
ather Contingency (10.00%)			0.00	\$788,004.41 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$9,850,055.06 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Gilda MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$7,880,044.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Gilda MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$7,880,044.00	80.00%
Manual Calculation			\$7,880,044.00	
Total	0.00	0.00%	\$7,880,044.00	80.00%

Gina MMS POCS 29056



MMS

Platform Salvage Option

Gina MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Gina will be removed along with Platforms A, B, C, Hillhouse and Henry.
- Platform Gina is a 6-pile platform installed in 1980 in 95' of water.
- The estimated removal weight is the deck weight is 447 tons and the jacket weight is 434 tons.
- The platform has a total of 12 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 12 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- One 240' cargo barge will transport the deck modules to shore and one 180' cargo barge will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 2 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The two pipelines (gas, water) on the OCS will be totally removed to the state water



MMS

Platform Salvage Option

Gina MMS POCS 29056 (Ver 1)

boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

Gina MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$12,022,676

Estimated Decommissioning Net Cost = \$12,022,676



MMS

Basic Information

Gina MMS POCS 29056 (Ver 1)

General Data

Platform:	Gina MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	95'
Pre 461H?:	Yes
Year Installed:	1980
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0202
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	12
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$9,485,749	\$9,485,749
Well Plugging & Abandonment:	\$1,887,500	\$1,887,500
Pipeline Abandonment:	\$649,427	\$649,427
Total Decommissioning Cost:	\$12,022,676	\$12,022,676



MMS

Platform Information

Gina MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	6	48"	2"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	80 x 120	63
Middle:	40 x 103	43
Lower:	40 x 40	27

Conductors

Number of Slots:	15
Number Installed:	12
Outside Diameter:	20"
Wall Thickness:	1.25"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	434.00		
Jacket Installation Date:	12/11/80		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	447 Tons
Number of Padeyes Required:	4
Deck Installation Date:	12/11/80
Deck Contractor:	Unknown



MMS

Platform Information

Gina MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Underwater Members

Size	Qty
10.00	8.00
18.00	4.00
22.00	4.00

Cargo Descriptions

Cargo Barge Size	Cargo Description		
CB 240 x 72	Deck 100-500T	Deck 100-500T	Equipment
CB 180 x 54	Jkt 300-700T	Conductors	

Miscellaneous Data

Derrick Barge Anchors:	4
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$452,971.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Gina MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$493,780.00	5.21%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.07%	\$425,833.00	4.49%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.07%	\$739,207.00	7.79%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.07%	\$6,993.00	0.07%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.07%	\$745,891.00	7.86%
Mobilize DB 2000	Mob from Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	14.66%	\$1,530,000.00	16.13%
Mobilize CB 240 & Tug	Mob From Port of LA (Qty 1)	<input type="checkbox"/>	17.60	1.29%	\$25,616.00	0.27%
Mobilize CB 180 & Tug	Mob From Port of LA (Qty 1)	<input type="checkbox"/>	17.60	1.29%	\$17,680.00	0.19%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	7.80	0.57%	\$35,256.00	0.37%
Setup Derrick Barge		<input checked="" type="checkbox"/>	3.75	0.27%	\$38,418.75	0.41%
Cut Deck/Equip/Misc	Seperate 2 Modules, per MMS	<input checked="" type="checkbox"/>	12.00	0.88%	\$130,860.00	1.38%
Remove Equipment		<input checked="" type="checkbox"/>	12.00	0.88%	\$130,860.00	1.38%
Remove 6 Pile Deck	Remove 6 Pile Deck, 2 modules	<input checked="" type="checkbox"/>	24.00	1.76%	\$261,720.00	2.76%
Demob CB 240 & Tug	Demob to Port of LA (Qty 1)	<input type="checkbox"/>	17.60	1.29%	\$11,616.00	0.12%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	16.00	1.17%	\$172,720.00	1.82%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	34.61	2.54%	\$403,446.95	4.25%
Remove Jacket - Meth 1		<input checked="" type="checkbox"/>	20.75	1.52%	\$223,996.25	2.36%
Demob CB 180 & Tug	Demob to Port of LA (Qty 1)	<input type="checkbox"/>	17.60	1.29%	\$9,680.00	0.10%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	3.75	0.27%	\$38,418.75	0.41%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	7.80	0.57%	\$35,256.00	0.37%
Demob DB 2000	Demob to Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	14.66%	\$1,530,000.00	16.13%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	5.28%	\$709,000.00	7.47%
Offload CB 240		<input type="checkbox"/>	312.00	22.87%	\$66,800.00	0.70%
Offload CB 180		<input type="checkbox"/>	312.00	22.87%	\$59,000.00	0.62%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.07%	\$6,993.00	0.07%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$228,081.00	2.40%
Task Total			1313.86	96.32%	\$8,077,122.70	85.15%
Misc. Work Provision (15.00%)			30.13	2.21%	\$573,393.00	6.04%
Weather Contingency (10.00%)			20.09	1.47%	\$382,262.00	4.03%
Consumables					\$0.00	0.00%
Waste Disposal					\$452,971.00	4.78%
Structure & Equipment Disposal					\$0.00	0.00%



MMS

Platform Decommission Task Information

Gina MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:				1364.08 100.00% \$9,485,748.70 100.00%



MMS

Platform Decommission Resources Breakdown

Gina MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$89,037.50	0.94%
Cargo Barge 180	\$3,000.00	per Day per Barge	\$39,000.00	0.41%
Cargo Barge 240	\$3,600.00	per Day per Barge	\$46,800.00	0.49%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$58,608.00	0.62%
CB 240 & Tug	\$660.00	per Hour per Barge/Tug	\$54,912.00	0.58%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$40,000.00	0.42%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$4,138,310.00	43.63%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$49,374.00	0.52%
Dive Basic Spread- Mixed Gas	\$890.00	Per Hour	\$112,905.40	1.19%
Manual Calculation	\$0.00	Independently Calculated	\$3,355,778.00	35.38%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$29,832.00	0.31%
Pipeline Survey	\$230.00	per Hour	\$32,765.80	0.35%
Rig Up CB 180	\$8,000.00	per Barge	\$8,000.00	0.08%
Rig Up CB 240	\$14,000.00	per Barge	\$14,000.00	0.15%
Work Boat	\$500.00	per Hour	\$7,800.00	0.08%



MMS

Platform Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$493,780.00	5.21%
Manual Calculation			\$493,780.00	
NMFS Marine Observation	1.00	0.07%	\$425,833.00	4.49%
Manual Calculation			\$425,833.00	
Sever Conductors- Abrasive	1.00	0.07%	\$739,207.00	7.79%
Manual Calculation			\$739,207.00	
Mobilize Abrasive Cutting Spread	1.00	0.07%	\$6,993.00	0.07%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	
Platform Removal Preparation	1.00	0.07%	\$745,891.00	7.86%
Manual Calculation			\$745,891.00	
Mobilize DB 2000	200.00	14.66%	\$1,530,000.00	16.13%
Derrick Barge 2000			\$1,530,000.00	
Mobilize CB 240 & Tug	17.60	1.29%	\$25,616.00	0.27%
CB 240 & Tug			\$11,616.00	
Rig Up CB 240			\$14,000.00	



MMS

Platform Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 180 & Tug	17.60	1.29%	\$17,680.00	0.19%
Rig Up CB 180			\$8,000.00	
CB 180 & Tug			\$9,680.00	
Mobilize Dive Spread	7.80	0.57%	\$35,256.00	0.37%
Work Boat			\$3,900.00	
Dive Basic Spread Saturation			\$24,687.00	
Abrasive Cutter Spread			\$4,875.00	
Pipeline Survey			\$1,794.00	
Setup Derrick Barge	3.75	0.27%	\$38,418.75	0.41%
Derrick Barge 2000			\$31,875.00	
Dive Basic Spread- Mixed Gas			\$3,337.50	
Pipeline Survey			\$862.50	
Abrasive Cutter Spread			\$2,343.75	
Cut Deck/Equip/Misc	12.00	0.88%	\$130,860.00	1.38%
Derrick Barge 2000			\$102,000.00	
Dive Basic Spread- Mixed Gas			\$10,680.00	
Pipeline Survey			\$2,760.00	
Abrasive Cutter Spread			\$7,500.00	
CB 240 & Tug			\$7,920.00	



MMS

Platform Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	12.00	0.88%	\$130,860.00	1.38%
Derrick Barge 2000			\$102,000.00	
Dive Basic Spread- Mixed Gas			\$10,680.00	
Pipeline Survey			\$2,760.00	
Abrasive Cutter Spread			\$7,500.00	
CB 240 & Tug			\$7,920.00	
Remove 6 Pile Deck	24.00	1.76%	\$261,720.00	2.76%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread- Mixed Gas			\$21,360.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 240 & Tug			\$15,840.00	
Demob CB 240 & Tug	17.60	1.29%	\$11,616.00	0.12%
CB 240 & Tug			\$11,616.00	
Jet/Airlift Pile Mud Plug	16.00	1.17%	\$172,720.00	1.82%
Derrick Barge 2000			\$136,000.00	
Dive Basic Spread- Mixed Gas			\$14,240.00	
Pipeline Survey			\$3,680.00	
Abrasive Cutter Spread			\$10,000.00	
CB 180 & Tug			\$8,800.00	



MMS

Platform Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Sever Piles- Abrasive	34.61	2.54%	\$403,446.95	4.25%
Derrick Barge 2000			\$294,185.00	
Dive Basic Spread- Mixed Gas			\$30,802.90	
Pipeline Survey			\$7,960.30	
Abrasive Cutter Spread			\$21,631.25	
CB 180 & Tug			\$19,035.50	
Pile Abrasive Cut 7 to 48 inches			\$29,832.00	
Remove Jacket - Meth 1	20.75	1.52%	\$223,996.25	2.36%
Derrick Barge 2000			\$176,375.00	
Dive Basic Spread- Mixed Gas			\$18,467.50	
Pipeline Survey			\$4,772.50	
CB 180 & Tug			\$11,412.50	
Abrasive Cutter Spread			\$12,968.75	
Demob CB 180 & Tug	17.60	1.29%	\$9,680.00	0.10%
CB 180 & Tug			\$9,680.00	
Pick Up DB Anchors	3.75	0.27%	\$38,418.75	0.41%
Derrick Barge 2000			\$31,875.00	
Dive Basic Spread- Mixed Gas			\$3,337.50	
Pipeline Survey			\$862.50	
Abrasive Cutter Spread			\$2,343.75	



MMS

Platform Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	7.80	0.57%	\$35,256.00	0.37%
Work Boat			\$3,900.00	
Dive Basic Spread Saturation			\$24,687.00	
Abrasive Cutter Spread			\$4,875.00	
Pipeline Survey			\$1,794.00	
Demob DB 2000	200.00	14.66%	\$1,530,000.00	16.13%
Derrick Barge 2000			\$1,530,000.00	
Site Clearance - with Divers	72.00	5.28%	\$709,000.00	7.47%
Manual Calculation			\$709,000.00	
Offload CB 240	312.00	22.87%	\$66,800.00	0.70%
Cargo Barge 240			\$46,800.00	
CB Damage Deduct			\$20,000.00	
Offload CB 180	312.00	22.87%	\$59,000.00	0.62%
Cargo Barge 180			\$39,000.00	
CB Damage Deduct			\$20,000.00	
Demob Abrasive Cutting Spread	1.00	0.07%	\$6,993.00	0.07%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	



MMS

Platform Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$228,081.00	2.40%
Manual Calculation			\$228,081.00	
Total	1313.86	96.32%	\$8,077,122.70	85.15%



MMS

Pipeline Information

Gina MMS POCS 29056 (Ver1) Segment#:3010202-

General Data

Water Depth:	95'
Origin / Terminus:	Origin
Opposite End Name:	Shore Mandalay
Opposite End Water Depth:	10'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	10"	Wall Thickness:	0.365"	Length:	1587'
Depth of Burial:	3'	# Crossings:		Product:	Water
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This pipeline runs to the Mandalay Onshore facility.
Pipeline is removed to state waters.
Estimated ~1587' removed



MMS

Pipeline Information

Gina MMS POCS 29056 (Ver1) Segment#:3130202-

General Data

Water Depth:	95'
Origin / Terminus:	Origin
Opposite End Name:	Shore Mandalay
Opposite End Water Depth:	10'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6"	Wall Thickness:	0.432"	Length:	1587'
Depth of Burial:	3'	# Crossings:		Product:	Gas
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This pipeline runs to the Mandalay Onshore facility.
Pipeline is removed to state waters.
Estimated ~1587' removed



MMS

Pipeline Decommission Task Information

Gina MMS POCS 29056 (Ver 1) Segment#:3010202-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	7.80	2.38%	\$5,424.90	1.63%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.52%	\$3,477.50	1.05%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	24.00	7.32%	\$16,692.00	5.03%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.61%	\$1,391.00	0.42%
Demob Work Boat		<input type="checkbox"/>	7.80	2.38%	\$5,424.90	1.63%
Mob P/L Removal Spread		<input type="checkbox"/>	7.80	2.38%	\$73,938.20	22.26%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	3.22	0.98%	\$10,244.43	3.08%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	2.15	0.66%	\$6,840.23	2.06%
Remove Tube Turn		<input checked="" type="checkbox"/>	2.15	0.66%	\$6,840.23	2.06%
Mobilize Vessel		<input checked="" type="checkbox"/>	7.80	2.38%	\$24,580.00	7.40%
Expose Pipeline		<input checked="" type="checkbox"/>	3.22	0.98%	\$11,653.18	3.51%
Remove Pipeline		<input checked="" type="checkbox"/>	10.00	3.05%	\$36,190.00	10.90%
Bury Pipeline		<input checked="" type="checkbox"/>	2.15	0.66%	\$7,780.85	2.34%
Demob Vessel		<input checked="" type="checkbox"/>	7.80	2.38%	\$8,580.00	2.58%
Demob P/L Removal Spread		<input type="checkbox"/>	7.80	2.38%	\$28,228.20	8.50%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	51.21%	\$41,000.00	12.35%
Task Total			268.69	81.90%	\$288,285.62	86.81%
Misc. Work Provision (15.00%)			35.62	10.86%	\$26,290.41	7.92%
ather Contingency (10.00%)			23.75	7.24%	\$17,526.94	5.28%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			328.06	100.00%	\$332,102.98	100.00%



MMS

Pipeline Decommission Task Information

Gina MMS POCS 29056 (Ver 1) Segment#:3130202-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	7.80	2.54%	\$5,424.90	1.71%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.63%	\$3,477.50	1.10%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	7.00	2.28%	\$4,868.50	1.53%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.65%	\$1,391.00	0.44%
Demob Work Boat		<input type="checkbox"/>	7.80	2.54%	\$5,424.90	1.71%
Mob P/L Removal Spread		<input type="checkbox"/>	7.80	2.54%	\$73,938.20	23.30%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	3.22	1.05%	\$10,244.43	3.23%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	2.15	0.70%	\$6,840.23	2.16%
Remove Tube Turn		<input checked="" type="checkbox"/>	2.15	0.70%	\$6,840.23	2.16%
Mobilize Vessel		<input checked="" type="checkbox"/>	7.80	2.54%	\$24,580.00	7.75%
Expose Pipeline		<input checked="" type="checkbox"/>	3.22	1.05%	\$11,653.18	3.67%
Remove Pipeline		<input checked="" type="checkbox"/>	10.00	3.26%	\$36,190.00	11.40%
Bury Pipeline		<input checked="" type="checkbox"/>	2.15	0.70%	\$7,780.85	2.45%
Demob Vessel		<input checked="" type="checkbox"/>	7.80	2.54%	\$8,580.00	2.70%
Demob P/L Removal Spread		<input type="checkbox"/>	7.80	2.54%	\$28,228.20	8.90%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	54.76%	\$41,000.00	12.92%
Task Total			251.69	82.03%	\$276,462.12	87.12%
Misc. Work Provision (15.00%)			33.07	10.78%	\$24,516.89	7.73%
ather Contingency (10.00%)			22.05	7.19%	\$16,344.59	5.15%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			306.81	100.00%	\$317,323.60	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Gina MMS POCS 29056 (Ver 1) Segment#:3010202

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	6.32%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$29,903.50	9.00%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	6.02%
Decommissioning Crew	\$0.00	Calculated from tables	\$6,088.51	1.83%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$34,063.65	10.26%
Manual Calculation	\$0.00	Independently Calculated	\$50,000.00	15.06%
Pipelay Barge	\$1,954.00	per Hour	\$75,209.46	22.65%
Pipeline Surveying	\$230.00	per Hour	\$8,852.70	2.67%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	4.82%
Work Boat	\$583.00	per Hour	\$27,167.80	8.18%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Gina MMS POCS 29056 (Ver 1) Segment#:3130202

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	6.62%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$29,903.50	9.42%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	6.30%
Decommissioning Crew	\$0.00	Calculated from tables	\$4,176.01	1.32%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$34,063.65	10.73%
Manual Calculation	\$0.00	Independently Calculated	\$50,000.00	15.76%
Pipelay Barge	\$1,954.00	per Hour	\$75,209.46	23.70%
Pipeline Surveying	\$230.00	per Hour	\$8,852.70	2.79%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	5.04%
Work Boat	\$583.00	per Hour	\$17,256.80	5.44%



MMS

Pipeline Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1) Segment#:3010202-

Task		Task Hours	Task Cost
Mobilize Work Boat		7.80 2.38%	\$5,424.90 1.63%
Work Boat	\$4,547.40		
Decommissioning Crew	\$877.50		
Rig Up Decomm Equipment		5.00 1.52%	\$3,477.50 1.05%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		24.00 7.32%	\$16,692.00 5.03%
Work Boat	\$13,992.00		
Decommissioning Crew	\$2,700.00		
Derig Decomm Equipment		2.00 0.61%	\$1,391.00 0.42%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		7.80 2.38%	\$5,424.90 1.63%
Work Boat	\$4,547.40		
Decommissioning Crew	\$877.50		
Mob P/L Removal Spread		7.80 2.38%	\$73,938.20 22.26%
Dive Basic Spread- Mixed Gas	\$6,903.00		
Pipeline Surveying	\$1,794.00		
Pipelay Barge	\$15,241.20		
Manual Calculation	\$50,000.00		
Cut & Plug Pipeline		3.22 0.98%	\$10,244.43 3.08%
Dive Basic Spread- Mixed Gas	\$2,849.70		
Pipeline Surveying	\$740.60		
Pipelay Barge	\$6,291.88		
Decommissioning Crew	\$362.25		
Cut Pipeline Riser		2.15 0.66%	\$6,840.23 2.06%
Dive Basic Spread- Mixed Gas	\$1,902.75		
Pipeline Surveying	\$494.50		
Pipelay Barge	\$4,201.10		
Decommissioning Crew	\$241.88		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		2.15	0.66%	\$6,840.23	2.06%
Dive Basic Spread- Mixed Gas	\$1,902.75				
Pipeline Surveying	\$494.50				
Pipelay Barge	\$4,201.10				
Decommissioning Crew	\$241.88				
Mobilize Vessel		7.80	2.38%	\$24,580.00	7.40%
CB 180 & Tug	\$8,580.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		3.22	0.98%	\$11,653.18	3.51%
Pipeline Surveying	\$740.60				
Dive Basic Spread- Mixed Gas	\$2,849.70				
Pipelay Barge	\$6,291.88				
CB 180 & Tug	\$1,771.00				
Remove Pipeline		10.00	3.05%	\$36,190.00	10.90%
Pipeline Surveying	\$2,300.00				
Dive Basic Spread- Mixed Gas	\$8,850.00				
Pipelay Barge	\$19,540.00				
CB 180 & Tug	\$5,500.00				
Bury Pipeline		2.15	0.66%	\$7,780.85	2.34%
Pipeline Surveying	\$494.50				
Dive Basic Spread- Mixed Gas	\$1,902.75				
Pipelay Barge	\$4,201.10				
CB 180 & Tug	\$1,182.50				
Demob Vessel		7.80	2.38%	\$8,580.00	2.58%
CB 180 & Tug	\$8,580.00				
Demob P/L Removal Spread		7.80	2.38%	\$28,228.20	8.50%
Pipeline Surveying	\$1,794.00				
Dive Basic Spread- Mixed Gas	\$6,903.00				
Pipelay Barge	\$15,241.20				
CB 180 & Tug	\$4,290.00				
Offload CB 180		168.00	51.21%	\$41,000.00	12.35%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		268.69	81.90%	\$288,285.62	86.81%



MMS

Pipeline Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1) Segment#:3130202-

Task		Task Hours	Task Cost
Mobilize Work Boat		7.80 2.54%	\$5,424.90 1.71%
Work Boat	\$4,547.40		
Decommissioning Crew	\$877.50		
Rig Up Decomm Equipment		5.00 1.63%	\$3,477.50 1.10%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		7.00 2.28%	\$4,868.50 1.53%
Work Boat	\$4,081.00		
Decommissioning Crew	\$787.50		
Derig Decomm Equipment		2.00 0.65%	\$1,391.00 0.44%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		7.80 2.54%	\$5,424.90 1.71%
Work Boat	\$4,547.40		
Decommissioning Crew	\$877.50		
Mob P/L Removal Spread		7.80 2.54%	\$73,938.20 23.30%
Dive Basic Spread- Mixed Gas	\$6,903.00		
Pipeline Surveying	\$1,794.00		
Pipelay Barge	\$15,241.20		
Manual Calculation	\$50,000.00		
Cut & Plug Pipeline		3.22 1.05%	\$10,244.43 3.23%
Dive Basic Spread- Mixed Gas	\$2,849.70		
Pipeline Surveying	\$740.60		
Pipelay Barge	\$6,291.88		
Decommissioning Crew	\$362.25		
Cut Pipeline Riser		2.15 0.70%	\$6,840.23 2.16%
Dive Basic Spread- Mixed Gas	\$1,902.75		
Pipeline Surveying	\$494.50		
Pipelay Barge	\$4,201.10		
Decommissioning Crew	\$241.88		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		2.15	0.70%	\$6,840.23	2.16%
Dive Basic Spread- Mixed Gas	\$1,902.75				
Pipeline Surveying	\$494.50				
Pipelay Barge	\$4,201.10				
Decommissioning Crew	\$241.88				
Mobilize Vessel		7.80	2.54%	\$24,580.00	7.75%
CB 180 & Tug	\$8,580.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		3.22	1.05%	\$11,653.18	3.67%
Pipeline Surveying	\$740.60				
Dive Basic Spread- Mixed Gas	\$2,849.70				
Pipelay Barge	\$6,291.88				
CB 180 & Tug	\$1,771.00				
Remove Pipeline		10.00	3.26%	\$36,190.00	11.40%
Pipeline Surveying	\$2,300.00				
Dive Basic Spread- Mixed Gas	\$8,850.00				
Pipelay Barge	\$19,540.00				
CB 180 & Tug	\$5,500.00				
Bury Pipeline		2.15	0.70%	\$7,780.85	2.45%
Pipeline Surveying	\$494.50				
Dive Basic Spread- Mixed Gas	\$1,902.75				
Pipelay Barge	\$4,201.10				
CB 180 & Tug	\$1,182.50				
Demob Vessel		7.80	2.54%	\$8,580.00	2.70%
CB 180 & Tug	\$8,580.00				
Demob P/L Removal Spread		7.80	2.54%	\$28,228.20	8.90%
Pipeline Surveying	\$1,794.00				
Dive Basic Spread- Mixed Gas	\$6,903.00				
Pipelay Barge	\$15,241.20				
CB 180 & Tug	\$4,290.00				
Offload CB 180		168.00	54.76%	\$41,000.00	12.92%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		251.69	82.03%	\$276,462.12	87.12%



MMS

Well Information

Gina MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Gina MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$1,510,000.00 80.00%
Task Total			0.00	\$1,510,000.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$226,500.01 12.00%
ather Contingency (10.00%)			0.00	\$151,000.00 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$1,887,500.01 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Gina MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$1,510,000.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Gina MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$1,510,000.00	80.00%
Manual Calculation			\$1,510,000.00	
Total	0.00	0.00%	\$1,510,000.00	80.00%

Grace MMS POCS 29056



MMS

Platform Salvage Option

Grace MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

-Platform Grace will be removed along with Platforms Harvest, Hermosa, Hidalgo and Gail.

-Platform Grace is a 12-pile platform installed in 1979 in 318' of water.

-The estimated removal weight is the deck weight is 3,800 tons and the jacket weight is 3,090 tons.

-The platform has a total of 28 wells that will be plugged and abandoned.

-The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR

-Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.

-A total of 36 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.

-The platform topsides and jacket will be removed by a DB 4000 that will be mobilized from the GOM or North Sea. The total mob/demob time will be 200 days.

-The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.

-Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.

-The two pipelines (2 oil) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total



MMS

Platform Salvage Option

Grace MMS POCS 29056 (Ver 1)

mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix 1 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management,



MMS

Platform Salvage Option

Grace MMS POCS 29056 (Ver 1)

Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$41,645,337

Estimated Decommissioning Net Cost = \$41,645,337



MMS

Basic Information

Grace MMS POCS 29056 (Ver 1)

General Data

Platform:	Grace MMS POCS 29056
Function:	DRILL/PROD
Type:	Steel
Water Depth:	318'
Pre 461H?:	Yes
Year Installed:	1979
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0217
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	28
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Venoco, Inc.	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$32,514,610	\$32,514,610
Well Plugging & Abandonment:	\$5,392,555	\$5,392,555
Pipeline Abandonment:	\$3,738,172	\$3,738,172
Total Decommissioning Cost:	\$41,645,337	\$41,645,337



MMS

Platform Information

Grace MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	12	42"		Yes	No	
Skirt/Braced	8	48"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	48
Number Installed:	36
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	3090.00		
Jacket Installation Date:	1/1/1979		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	3800 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1979
Deck Contractor:	Unknown



MMS

Platform Information

Grace MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description		
CB 300 x 100	Deck > 500T	Equipment	Equipment
CB 300 x 100	Deck > 500T	Deck > 500T	
CB 400 x 100	Deck > 500T	Deck > 500T	Equipment
CB 400 x 100	Jkt > 700T	Deck > 500T	
CB 400 x 100	Jkt > 700T	Jkt > 700T	

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$3,672,362.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Grace MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,731,671.00	5.33%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.02%	\$511,000.00	1.57%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.02%	\$8,391.00	0.03%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.02%	\$3,811,997.00	11.72%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.02%	\$1,605,564.00	4.94%
Mobilize DB 4000	Mob from GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	10.08%	\$4,536,000.00	13.95%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	17.60	0.37%	\$62,496.00	0.19%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	17.60	0.37%	\$94,800.00	0.29%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	7.80	0.16%	\$35,256.00	0.11%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.14%	\$108,810.00	0.33%
Cut Deck/Equip/Misc	Seperate 6 Modules, per MMS	<input checked="" type="checkbox"/>	12.00	0.25%	\$205,200.00	0.63%
Remove Equipment		<input checked="" type="checkbox"/>	12.00	0.25%	\$205,200.00	0.63%
Remove 8 Pile Deck	Remove 12 Pile Deck, 6 modules	<input checked="" type="checkbox"/>	48.00	1.01%	\$820,800.00	2.52%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	17.60	0.37%	\$34,496.00	0.11%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	0.97%	\$787,520.00	2.42%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	109.70	2.30%	\$1,977,504.00	6.08%
Cut Jacket	20 Hours per section, times 3 section(s), per MMS	<input checked="" type="checkbox"/>	60.00	1.26%	\$1,126,640.00	3.47%
Remove Jacket - Meth 1	20 Hours per section, times 3 section(s), per MMS	<input checked="" type="checkbox"/>	60.00	1.26%	\$1,027,200.00	3.16%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	17.60	0.37%	\$52,800.00	0.16%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.14%	\$108,810.00	0.33%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	7.80	0.16%	\$35,256.00	0.11%
Demob DB 4000	Demob to GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	10.08%	\$4,536,000.00	13.95%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.51%	\$1,282,000.00	3.94%
Offload CB 300		<input type="checkbox"/>	1128.00	23.69%	\$271,240.00	0.83%
Offload CB 400		<input type="checkbox"/>	2040.00	42.85%	\$590,400.00	1.82%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.02%	\$8,391.00	0.03%
Task Total			4652.20	97.71%	\$25,575,442.00	78.66%
Misc. Work Provision (15.00%)			65.28	1.37%	\$1,960,087.00	6.03%
Weather Contingency (10.00%)			43.52	0.91%	\$1,306,725.00	4.02%
Consumables					\$0.00	0.00%
Waste Disposal					\$3,672,362.00	11.29%



MMS

Platform Decommission Task Information

Grace MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			4761.00 100.00%	\$32,514,616.00 100.00%



MMS

Platform Decommission Resources Breakdown

Grace MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$235,500.00	0.72%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$231,240.00	0.71%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$530,400.00	1.63%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$139,552.00	0.43%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$381,300.00	1.17%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.31%
Derrick Barge 4000	\$10,500.00	per Hour per barge	\$12,864,600.00	39.57%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$1,192,572.00	3.67%
Manual Calculation	\$0.00	Independently Calculated	\$8,959,014.00	27.55%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$198,880.00	0.61%
Pipeline Survey	\$230.00	per Hour	\$86,664.00	0.27%
Rem. Operated Vehicle	\$800.00	per Hour	\$577,920.00	1.78%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.09%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.13%
Work Boat	\$500.00	per Hour	\$7,800.00	0.02%



MMS

Platform Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,731,671.00	5.33%
Manual Calculation			\$1,731,671.00	
NMFS Marine Observation	1.00	0.02%	\$511,000.00	1.57%
Manual Calculation			\$511,000.00	
Mobilize Abrasive Cutting Spread	1.00	0.02%	\$8,391.00	0.03%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Sever Conductors- Abrasive	1.00	0.02%	\$3,811,997.00	11.72%
Manual Calculation			\$3,811,997.00	
Platform Removal Preparation	1.00	0.02%	\$1,605,564.00	4.94%
Manual Calculation			\$1,605,564.00	
Mobilize DB 4000	480.00	10.08%	\$4,536,000.00	13.95%
Derrick Barge 4000			\$4,536,000.00	
Mobilize CB 300 & Tug	17.60	0.37%	\$62,496.00	0.19%
CB 300 & Tug			\$34,496.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	17.60	0.37%	\$94,800.00	0.29%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$52,800.00	
Mobilize Dive Spread	7.80	0.16%	\$35,256.00	0.11%
Work Boat			\$3,900.00	
Dive Basic Spread Saturation			\$24,687.00	
Abrasive Cutter Spread			\$4,875.00	
Pipeline Survey			\$1,794.00	
Setup Derrick Barge	6.75	0.14%	\$108,810.00	0.33%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	12.00	0.25%	\$205,200.00	0.63%
Derrick Barge 4000			\$126,000.00	
Dive Basic Spread Saturation			\$37,980.00	
Pipeline Survey			\$2,760.00	
Abrasive Cutter Spread			\$7,500.00	
CB 300 & Tug			\$11,760.00	
Rem. Operated Vehicle			\$19,200.00	



MMS

Platform Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	12.00	0.25%	\$205,200.00	0.63%
Derrick Barge 4000			\$126,000.00	
Dive Basic Spread Saturation			\$37,980.00	
Pipeline Survey			\$2,760.00	
Abrasive Cutter Spread			\$7,500.00	
CB 300 & Tug			\$11,760.00	
Rem. Operated Vehicle			\$19,200.00	
Remove 8 Pile Deck	48.00	1.01%	\$820,800.00	2.52%
Derrick Barge 4000			\$504,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Rem. Operated Vehicle			\$76,800.00	
Demob CB 300 & Tug	17.60	0.37%	\$34,496.00	0.11%
CB 300 & Tug			\$34,496.00	
Jet/Airlift Pile Mud Plug	46.00	0.97%	\$787,520.00	2.42%
Derrick Barge 4000			\$483,000.00	
Dive Basic Spread Saturation			\$145,590.00	
Pipeline Survey			\$10,580.00	
Abrasive Cutter Spread			\$28,750.00	
CB 400 & Tug			\$46,000.00	
Rem. Operated Vehicle			\$73,600.00	



MMS

Platform Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		109.70	2.30%	\$1,977,504.00	6.08%
Derrick Barge 4000	\$1,151,850.00				
Dive Basic Spread Saturation	\$347,200.50				
Pipeline Survey	\$25,231.00				
Abrasive Cutter Spread	\$68,562.50				
CB 400 & Tug	\$109,700.00				
Pile Abrasive Cut 7 to 48 inches	\$99,440.00				
Rem. Operated Vehicle	\$175,520.00				
Cut Jacket		60.00	1.26%	\$1,126,640.00	3.47%
Derrick Barge 4000	\$630,000.00				
Dive Basic Spread Saturation	\$189,900.00				
Pipeline Survey	\$13,800.00				
Abrasive Cutter Spread	\$37,500.00				
CB 400 & Tug	\$60,000.00				
Pile Abrasive Cut 7 to 48 inches	\$99,440.00				
Rem. Operated Vehicle	\$96,000.00				
Remove Jacket - Meth 1		60.00	1.26%	\$1,027,200.00	3.16%
Derrick Barge 4000	\$630,000.00				
Dive Basic Spread Saturation	\$189,900.00				
Pipeline Survey	\$13,800.00				
Abrasive Cutter Spread	\$37,500.00				
CB 400 & Tug	\$60,000.00				
Rem. Operated Vehicle	\$96,000.00				
Demob CB 400 & Tug		17.60	0.37%	\$52,800.00	0.16%
CB 400 & Tug	\$52,800.00				



MMS

Platform Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.14%	\$108,810.00	0.33%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Demob Dive Spread	7.80	0.16%	\$35,256.00	0.11%
Work Boat			\$3,900.00	
Dive Basic Spread Saturation			\$24,687.00	
Abrasive Cutter Spread			\$4,875.00	
Pipeline Survey			\$1,794.00	
Demob DB 4000	480.00	10.08%	\$4,536,000.00	13.95%
Derrick Barge 4000			\$4,536,000.00	
Site Clearance - with Divers	72.00	1.51%	\$1,282,000.00	3.94%
Manual Calculation			\$1,282,000.00	
Offload CB 300	1128.00	23.69%	\$271,240.00	0.83%
Cargo Barge 300			\$231,240.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	2040.00	42.85%	\$590,400.00	1.82%
Cargo Barge 400			\$530,400.00	
CB Damage Deduct			\$60,000.00	



MMS

Platform Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.02%	\$8,391.00	0.03%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Total	4652.20	97.71%	\$25,575,442.00	78.66%



MMS

Pipeline Information

Grace MMS POCS 29056 (Ver1) Segment#:2120217

General Data

Water Depth: 320'
Origin / Terminus: Origin
Opposite End Name: CARPINT
Opposite End Water Depth: 140'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter: 10"	Wall Thickness:	Length: 61500'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to the Carpinteria Onshore facility.
Pipeline is estimated to be removed from <200' WD and to state waters.
Estimated Removal Length in this estimate ~12144'



MMS

Pipeline Information

Grace MMS POCS 29056 (Ver1) Segment#:2220217

General Data

Water Depth: 320'
Origin / Terminus: Origin
Opposite End Name: CARPINT
Opposite End Water Depth: 140'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter: 12"	Wall Thickness:	Length: 61500'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to the Carpinteria Onshore facility.
Pipeline is estimated to be removed from <200' WD and to state waters.
Estimated Removal Length in this estimate ~12144'



MMS

Pipeline Decommission Task Information

Grace MMS POCS 29056 (Ver 1) Segment#:2120217

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat	To Grace	<input type="checkbox"/>	80.00	11.65%	\$264,000.00	12.58%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.73%	\$34,037.50	1.62%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	56.00	8.15%	\$381,220.00	18.16%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.68%	\$78,626.63	3.75%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.40	1.08%	\$50,375.50	2.40%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.40	1.08%	\$50,375.50	2.40%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	1.12%	\$52,417.75	2.50%
Demob Dive Boat		<input checked="" type="checkbox"/>	80.00	11.65%	\$264,000.00	12.58%
Mob P/L Removal Spread	Relocate to a point along the pipeline where the water depth is 200'	<input type="checkbox"/>	7.80	1.14%	\$28,228.20	1.34%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.68%	\$41,799.45	1.99%
Cut & Plug Pipeline	Plug the upstream end going To Grace	<input checked="" type="checkbox"/>	11.55	1.68%	\$41,799.45	1.99%
Bury Pipeline	Bury the upstream end going To Grace	<input checked="" type="checkbox"/>	7.70	1.12%	\$27,866.30	1.33%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.68%	\$41,799.45	1.99%
Remove Pipeline		<input checked="" type="checkbox"/>	80.00	11.65%	\$289,520.00	13.79%
Bury Pipeline	Bury the end going to shore	<input checked="" type="checkbox"/>	7.70	1.12%	\$27,866.30	1.33%
Demob P/L Removal Spread		<input type="checkbox"/>	7.80	1.14%	\$28,228.20	1.34%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	24.46%	\$41,000.00	1.95%
Task Total			568.70	82.78%	\$1,743,160.23	83.05%
Misc. Work Provision (15.00%)			70.97	10.33%	\$213,405.58	10.17%
ather Contingency (10.00%)			47.31	6.89%	\$142,270.38	6.78%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			686.98	100.00%	\$2,098,836.20	100.00%



MMS

Pipeline Decommission Task Information

Grace MMS POCS 29056 (Ver 1) Segment#:2220217

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat	To Grace	<input type="checkbox"/>	7.80	1.46%	\$25,740.00	1.57%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.93%	\$34,037.50	2.08%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	65.00	12.13%	\$442,487.50	26.99%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	2.16%	\$78,626.63	4.80%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.40	1.38%	\$50,375.50	3.07%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.40	1.38%	\$50,375.50	3.07%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	1.44%	\$52,417.75	3.20%
Demob Dive Boat		<input checked="" type="checkbox"/>	7.80	1.46%	\$25,740.00	1.57%
Mob P/L Removal Spread	Relocate to a point along the pipeline where the water depth is 200'	<input type="checkbox"/>	7.80	1.46%	\$28,228.20	1.72%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	2.16%	\$41,799.45	2.55%
Cut & Plug Pipeline	Plug the upstream end going To Grace	<input checked="" type="checkbox"/>	11.55	2.16%	\$41,799.45	2.55%
Bury Pipeline	Bury the upstream end going To Grace	<input checked="" type="checkbox"/>	7.70	1.44%	\$27,866.30	1.70%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	2.16%	\$41,799.45	2.55%
Remove Pipeline		<input checked="" type="checkbox"/>	80.00	14.93%	\$289,520.00	17.66%
Bury Pipeline	Bury the end going to shore	<input checked="" type="checkbox"/>	7.70	1.44%	\$27,866.30	1.70%
Demob P/L Removal Spread		<input type="checkbox"/>	7.80	1.46%	\$28,228.20	1.72%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	31.36%	\$41,000.00	2.50%
Task Total			433.30	80.87%	\$1,327,907.73	81.00%
Misc. Work Provision (15.00%)			61.49	11.48%	\$186,856.71	11.40%
ather Contingency (10.00%)			40.99	7.65%	\$124,571.13	7.60%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			535.78	100.00%	\$1,639,335.57	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Grace MMS POCS 29056 (Ver 1) Segment#:212021

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	1.00%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$80,107.50	3.82%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	0.95%
Decommissioning Crew	\$0.00	Calculated from tables	\$10,693.13	0.51%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$300,833.25	14.33%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$128,900.25	6.14%
DP Dive Boat	\$3,300.00	per Hour	\$841,665.00	40.10%
Manual Calculation	\$0.00	Independently Calculated	\$0.00	0.00%
Pipelay Barge	\$1,954.00	per Hour	\$284,600.10	13.56%
Pipeline Surveying	\$230.00	per Hour	\$55,361.00	2.64%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Grace MMS POCS 29056 (Ver 1) Segment#:222021

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	1.28%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$80,107.50	4.89%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	1.22%
Decommissioning Crew	\$0.00	Calculated from tables	\$11,705.63	0.71%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$329,318.25	20.09%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$128,900.25	7.86%
DP Dive Boat	\$3,300.00	per Hour	\$394,845.00	24.09%
Manual Calculation	\$0.00	Independently Calculated	\$0.00	0.00%
Pipelay Barge	\$1,954.00	per Hour	\$284,600.10	17.36%
Pipeline Surveying	\$230.00	per Hour	\$57,431.00	3.50%



MMS

Pipeline Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1) Segment#:212021

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 11.65%	\$264,000.00 12.58%
DP Dive Boat	\$264,000.00		
Rig Up Decomm Equipment		5.00 0.73%	\$34,037.50 1.62%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Manual Calculation	\$0.00		
Pig & Flush Pipeline		56.00 8.15%	\$381,220.00 18.16%
DP Dive Boat	\$184,800.00		
Dive Basic Spread Saturation	\$177,240.00		
Decommissioning Crew	\$6,300.00		
Pipeline Surveying	\$12,880.00		
Cut & Plug Pipeline		11.55 1.68%	\$78,626.63 3.75%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		
Cut Pipeline Riser		7.40 1.08%	\$50,375.50 2.40%
DP Dive Boat	\$24,420.00		
Dive Basic Spread Saturation	\$23,421.00		
Decommissioning Crew	\$832.50		
Pipeline Surveying	\$1,702.00		
Remove Tube Turn		7.40 1.08%	\$50,375.50 2.40%
DP Dive Boat	\$24,420.00		
Dive Basic Spread Saturation	\$23,421.00		
Decommissioning Crew	\$832.50		
Pipeline Surveying	\$1,702.00		



MMS

Pipeline Decommission Cost Breakdown

Bury Pipeline		7.70	1.12%	\$52,417.75	2.50%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
<hr/>					
Demob Dive Boat		80.00	11.65%	\$264,000.00	12.58%
DP Dive Boat	\$264,000.00				
<hr/>					
Mob P/L Removal Spread		7.80	1.14%	\$28,228.20	1.34%
Pipeline Surveying	\$1,794.00				
Dive Basic Spread- Mixed Gas	\$6,903.00				
Pipelay Barge	\$15,241.20				
CB 180 & Tug	\$4,290.00				
<hr/>					
Expose Pipeline		11.55	1.68%	\$41,799.45	1.99%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					
Cut & Plug Pipeline		11.55	1.68%	\$41,799.45	1.99%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					
Bury Pipeline		7.70	1.12%	\$27,866.30	1.33%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
<hr/>					
Expose Pipeline		11.55	1.68%	\$41,799.45	1.99%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					



MMS

Pipeline Decommission Cost Breakdown

Remove Pipeline		80.00	11.65%	\$289,520.00	13.79%
Pipeline Surveying	\$18,400.00				
Dive Basic Spread- Mixed Gas	\$70,800.00				
Pipelay Barge	\$156,320.00				
CB 180 & Tug	\$44,000.00				
Bury Pipeline		7.70	1.12%	\$27,866.30	1.33%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
Demob P/L Removal Spread		7.80	1.14%	\$28,228.20	1.34%
Pipeline Surveying	\$1,794.00				
Dive Basic Spread- Mixed Gas	\$6,903.00				
Pipelay Barge	\$15,241.20				
CB 180 & Tug	\$4,290.00				
Offload CB 180		168.00	24.46%	\$41,000.00	1.95%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		568.70	82.78%	\$1,743,160.23	83.05%



MMS

Pipeline Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1) Segment#:222021

Task		Task Hours	Task Cost
Mobilize Dive Boat		7.80 1.46%	\$25,740.00 1.57%
DP Dive Boat	\$25,740.00		
Rig Up Decomm Equipment		5.00 0.93%	\$34,037.50 2.08%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Manual Calculation	\$0.00		
Pig & Flush Pipeline		65.00 12.13%	\$442,487.50 26.99%
DP Dive Boat	\$214,500.00		
Dive Basic Spread Saturation	\$205,725.00		
Decommissioning Crew	\$7,312.50		
Pipeline Surveying	\$14,950.00		
Cut & Plug Pipeline		11.55 2.16%	\$78,626.63 4.80%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		
Cut Pipeline Riser		7.40 1.38%	\$50,375.50 3.07%
DP Dive Boat	\$24,420.00		
Dive Basic Spread Saturation	\$23,421.00		
Decommissioning Crew	\$832.50		
Pipeline Surveying	\$1,702.00		
Remove Tube Turn		7.40 1.38%	\$50,375.50 3.07%
DP Dive Boat	\$24,420.00		
Dive Basic Spread Saturation	\$23,421.00		
Decommissioning Crew	\$832.50		
Pipeline Surveying	\$1,702.00		



MMS

Pipeline Decommission Cost Breakdown

Bury Pipeline		7.70	1.44%	\$52,417.75	3.20%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
<hr/>					
Demob Dive Boat		7.80	1.46%	\$25,740.00	1.57%
DP Dive Boat	\$25,740.00				
<hr/>					
Mob P/L Removal Spread		7.80	1.46%	\$28,228.20	1.72%
Pipeline Surveying	\$1,794.00				
Dive Basic Spread- Mixed Gas	\$6,903.00				
Pipelay Barge	\$15,241.20				
CB 180 & Tug	\$4,290.00				
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Expose Pipeline		11.55	2.16%	\$41,799.45	2.55%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					
Cut & Plug Pipeline		11.55	2.16%	\$41,799.45	2.55%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
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Bury Pipeline		7.70	1.44%	\$27,866.30	1.70%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
<hr/>					
Expose Pipeline		11.55	2.16%	\$41,799.45	2.55%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
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MMS

Pipeline Decommission Cost Breakdown

Remove Pipeline		80.00	14.93%	\$289,520.00	17.66%
Pipeline Surveying	\$18,400.00				
Dive Basic Spread- Mixed Gas	\$70,800.00				
Pipelay Barge	\$156,320.00				
CB 180 & Tug	\$44,000.00				
Bury Pipeline		7.70	1.44%	\$27,866.30	1.70%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
Demob P/L Removal Spread		7.80	1.46%	\$28,228.20	1.72%
Pipeline Surveying	\$1,794.00				
Dive Basic Spread- Mixed Gas	\$6,903.00				
Pipelay Barge	\$15,241.20				
CB 180 & Tug	\$4,290.00				
Offload CB 180		168.00	31.36%	\$41,000.00	2.50%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		433.30	80.87%	\$1,327,907.73	81.00%



MMS

Well Information

Grace MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Venoco, Inc.	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Grace MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$4,314,044.00 80.00%
Task Total			0.00	\$4,314,044.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$647,106.63 12.00%
ather Contingency (10.00%)			0.00	\$431,404.41 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$5,392,555.03 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Grace MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$4,314,044.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Grace MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$4,314,044.00	80.00%
Manual Calculation			\$4,314,044.00	
Total	0.00	0.00%	\$4,314,044.00	80.00%

Habitat MMS POCS 29056



MMS

Platform Salvage Option

Habitat MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Habitat will be removed along with Platforms Irene and Gilda.
- Platform Habitat is an 8-pile platform installed in 1981 in 290' of water.
- The estimated removal weight is the deck weight is 3,514 tons and the jacket weight is 2,550 tons.
- The platform has a total of 20 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 20 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The one pipeline (gas) on the OCS will be totally removed to the state water boundary



MMS

Platform Salvage Option

Habitat MMS POCS 29056 (Ver 1)

when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

Habitat MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$28,653,894

Estimated Decommissioning Net Cost = \$28,653,894



MMS

Basic Information

Habitat MMS POCS 29056 (Ver 1)

General Data

Platform:	Habitat MMS POCS 29056
Function:	DRILL/PROD
Type:	Steel
Water Depth:	290'
Pre 461H?:	Yes
Year Installed:	1981
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0234
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	20
# Pipelines to Abandon:	0
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$24,489,310	\$24,489,310
Well Plugging & Abandonment:	\$3,320,835	\$3,320,835
Pipeline Abandonment:	\$843,749	\$843,749
Total Decommissioning Cost:	\$28,653,894	\$28,653,894



MMS

Platform Information

Habitat MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	54"	1.5"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	75 x 165	57
Middle:		
Lower:	85 x 165	40

Conductors

Number of Slots:	24
Number Installed:	20
Outside Diameter:	24"
Wall Thickness:	0.5"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	2550.00		
Jacket Installation Date:	10/8/81		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	3514 Tons
Number of Padeyes Required:	8
Deck Installation Date:	10/8/81
Deck Contractor:	Unknown



MMS

Platform Information

Habitat MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Top Members		Underwater Members	
Size	Qty	Size	Qty
36.00	16.00	36.00	6.00
54.00	8.00	54.00	8.00

Cargo Descriptions

Cargo Barge Size	Cargo Description		
CB 300 x 100	Deck > 500T	Equipment	Equipment
CB 300 x 100	Deck > 500T	Equipment	
CB 400 x 100	Deck > 500T	Deck > 500T	
CB 400 x 100	Deck > 500T	Deck > 500T	
CB 400 x 100	Jkt > 700T	Jkt > 700T	

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$3,130,995.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Habitat MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,135,696.00	4.64%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.02%	\$851,667.00	3.48%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.02%	\$13,984.00	0.06%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.02%	\$2,065,538.00	8.43%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.02%	\$1,709,564.00	6.98%
Mobilize DB 2000	Mob from Asia, 50 days divided by 3 platforms	<input type="checkbox"/>	400.00	9.48%	\$3,060,000.00	12.50%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	22.00	0.52%	\$71,120.00	0.29%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	22.00	0.52%	\$108,000.00	0.44%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	10.00	0.24%	\$45,200.00	0.18%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.16%	\$95,310.00	0.39%
Cut Deck/Equip/Misc	Seperate 6 Modules, per MMS	<input checked="" type="checkbox"/>	12.00	0.28%	\$181,200.00	0.74%
Remove Equipment		<input checked="" type="checkbox"/>	12.00	0.28%	\$181,200.00	0.74%
Remove 8 Pile Deck	Remove 8 Pile Deck, 6 modules	<input checked="" type="checkbox"/>	48.00	1.14%	\$724,800.00	2.96%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	22.00	0.52%	\$43,120.00	0.18%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	31.00	0.74%	\$468,720.00	1.91%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	49.91	1.18%	\$834,639.21	3.41%
Cut Jacket	30 Hours per section, times 2 section(s), per MMS	<input checked="" type="checkbox"/>	60.00	1.42%	\$946,976.00	3.87%
Remove Jacket - Meth 1	30 Hours per section, times 2 section(s), per MMS	<input checked="" type="checkbox"/>	60.00	1.42%	\$907,200.00	3.70%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	22.00	0.52%	\$66,000.00	0.27%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.16%	\$95,310.00	0.39%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	10.00	0.24%	\$45,200.00	0.18%
Demob DB 2000	Demob to Asia, 50 days divided by 3 platforms	<input type="checkbox"/>	400.00	9.48%	\$3,060,000.00	12.50%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.71%	\$709,000.00	2.90%
Offload CB 300		<input type="checkbox"/>	792.00	18.78%	\$202,360.00	0.83%
Offload CB 400		<input type="checkbox"/>	2064.00	48.94%	\$596,640.00	2.44%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.02%	\$13,984.00	0.06%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$716,817.00	2.93%
Task Total			4127.41	97.86%	\$18,949,245.21	77.38%
Misc. Work Provision (15.00%)			54.06	1.28%	\$1,445,441.00	5.90%
Weather Contingency (10.00%)			36.04	0.85%	\$963,627.40	3.93%
Consumables					\$0.00	0.00%
Waste Disposal					\$3,130,995.00	12.79%



MMS

Platform Decommission Task Information

Habitat MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost	
		Structure & Equipment Disposal		\$0.00	0.00%
		Offloading		\$0.00	0.00%
		Storage / Scrapping		\$0.00	0.00%
		Reef Donation		\$0.00	0.00%
		Cost of Engineering (0.00%)		\$0.00	0.00%
Total:			4217.51	100.00%	\$24,489,308.61 100.00%



MMS

Platform Decommission Resources Breakdown

Habitat MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$191,506.25	0.78%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$162,360.00	0.66%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$536,640.00	2.19%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$156,800.00	0.64%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$332,910.00	1.36%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.41%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$8,554,485.00	34.93%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$969,787.66	3.96%
Manual Calculation	\$0.00	Independently Calculated	\$7,216,250.00	29.47%
Pile Abrasive Cut 49 to 69 inches	\$5,000.00	per Cut	\$80,000.00	0.33%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$39,776.00	0.16%
Pipeline Survey	\$230.00	per Hour	\$70,474.30	0.29%
Rem. Operated Vehicle	\$800.00	per Hour	\$458,256.00	1.87%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.11%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.17%
Work Boat	\$500.00	per Hour	\$10,000.00	0.04%



MMS

Platform Decommission Cost Breakdown

Habitat MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,135,696.00	4.64%
Manual Calculation			\$1,135,696.00	
NMFS Marine Observation	1.00	0.02%	\$851,667.00	3.48%
Manual Calculation			\$851,667.00	
Mobilize Abrasive Cutting Spread	1.00	0.02%	\$13,984.00	0.06%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Sever Conductors- Abrasive	1.00	0.02%	\$2,065,538.00	8.43%
Manual Calculation			\$2,065,538.00	
Platform Removal Preparation	1.00	0.02%	\$1,709,564.00	6.98%
Manual Calculation			\$1,709,564.00	
Mobilize DB 2000	400.00	9.48%	\$3,060,000.00	12.50%
Derrick Barge 2000			\$3,060,000.00	
Mobilize CB 300 & Tug	22.00	0.52%	\$71,120.00	0.29%
CB 300 & Tug			\$43,120.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Habitat MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	22.00	0.52%	\$108,000.00	0.44%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$66,000.00	
Mobilize Dive Spread	10.00	0.24%	\$45,200.00	0.18%
Work Boat			\$5,000.00	
Dive Basic Spread Saturation			\$31,650.00	
Abrasive Cutter Spread			\$6,250.00	
Pipeline Survey			\$2,300.00	
Setup Derrick Barge	6.75	0.16%	\$95,310.00	0.39%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	12.00	0.28%	\$181,200.00	0.74%
Derrick Barge 2000			\$102,000.00	
Dive Basic Spread Saturation			\$37,980.00	
Pipeline Survey			\$2,760.00	
Abrasive Cutter Spread			\$7,500.00	
CB 300 & Tug			\$11,760.00	
Rem. Operated Vehicle			\$19,200.00	



MMS

Platform Decommission Cost Breakdown

Habitat MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	12.00	0.28%	\$181,200.00	0.74%
Derrick Barge 2000			\$102,000.00	
Dive Basic Spread Saturation			\$37,980.00	
Pipeline Survey			\$2,760.00	
Abrasive Cutter Spread			\$7,500.00	
CB 300 & Tug			\$11,760.00	
Rem. Operated Vehicle			\$19,200.00	
Remove 8 Pile Deck	48.00	1.14%	\$724,800.00	2.96%
Derrick Barge 2000			\$408,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Rem. Operated Vehicle			\$76,800.00	
Demob CB 300 & Tug	22.00	0.52%	\$43,120.00	0.18%
CB 300 & Tug			\$43,120.00	
Jet/Airlift Pile Mud Plug	31.00	0.74%	\$468,720.00	1.91%
Derrick Barge 2000			\$263,500.00	
Dive Basic Spread Saturation			\$98,115.00	
Pipeline Survey			\$7,130.00	
Abrasive Cutter Spread			\$19,375.00	
CB 400 & Tug			\$31,000.00	
Rem. Operated Vehicle			\$49,600.00	



MMS

Platform Decommission Cost Breakdown

Habitat MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		49.91	1.18%	\$834,639.21	3.41%
	Derrick Barge 2000	\$424,235.00			
	Dive Basic Spread Saturation	\$157,965.16			
	Pipeline Survey	\$11,479.30			
	Abrasive Cutter Spread	\$31,193.75			
	CB 400 & Tug	\$49,910.00			
	Pile Abrasive Cut 49 to 69 inches	\$80,000.00			
	Rem. Operated Vehicle	\$79,856.00			
Cut Jacket		60.00	1.42%	\$946,976.00	3.87%
	Derrick Barge 2000	\$510,000.00			
	Dive Basic Spread Saturation	\$189,900.00			
	Pipeline Survey	\$13,800.00			
	Abrasive Cutter Spread	\$37,500.00			
	CB 400 & Tug	\$60,000.00			
	Pile Abrasive Cut 7 to 48 inches	\$39,776.00			
	Rem. Operated Vehicle	\$96,000.00			
Remove Jacket - Meth 1		60.00	1.42%	\$907,200.00	3.70%
	Derrick Barge 2000	\$510,000.00			
	Dive Basic Spread Saturation	\$189,900.00			
	Pipeline Survey	\$13,800.00			
	Abrasive Cutter Spread	\$37,500.00			
	CB 400 & Tug	\$60,000.00			
	Rem. Operated Vehicle	\$96,000.00			
Demob CB 400 & Tug		22.00	0.52%	\$66,000.00	0.27%
	CB 400 & Tug	\$66,000.00			



MMS

Platform Decommission Cost Breakdown

Habitat MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.16%	\$95,310.00	0.39%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Demob Dive Spread	10.00	0.24%	\$45,200.00	0.18%
Work Boat			\$5,000.00	
Dive Basic Spread Saturation			\$31,650.00	
Abrasive Cutter Spread			\$6,250.00	
Pipeline Survey			\$2,300.00	
Demob DB 2000	400.00	9.48%	\$3,060,000.00	12.50%
Derrick Barge 2000			\$3,060,000.00	
Site Clearance - with Divers	72.00	1.71%	\$709,000.00	2.90%
Manual Calculation			\$709,000.00	
Offload CB 300	792.00	18.78%	\$202,360.00	0.83%
Cargo Barge 300			\$162,360.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	2064.00	48.94%	\$596,640.00	2.44%
Cargo Barge 400			\$536,640.00	
CB Damage Deduct			\$60,000.00	



MMS

Platform Decommission Cost Breakdown

Habitat MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.02%	\$13,984.00	0.06%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$716,817.00	2.93%
Manual Calculation			\$716,817.00	
Total	4127.41	97.86%	\$18,949,245.21	77.38%



MMS

Pipeline Information

Habitat MMS POCS 29056 (Ver1) Segment#:382045

General Data

Water Depth: 290'
Origin / Terminus: Origin
Opposite End Name: POPCO
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter: 12"	Wall Thickness:	Length: 42000'
Depth of Burial:	# Crossings:	Product:
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to the La Conchita Onshore facility.
Pipeline is estimated to be removed between <200' WD and to state waters.
Estimated Length to be removed in this estimate ~4500'



MMS

Pipeline Decommission Task Information

Habitat MMS POCS 29056 (Ver 1) Segment#:3820454-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat	To Habitat	<input type="checkbox"/>	10.00	2.40%	\$40,905.00	4.85%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.20%	\$20,452.50	2.42%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	20.00	4.80%	\$81,810.00	9.70%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	10.50	2.52%	\$42,950.25	5.09%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	6.77	1.62%	\$27,692.68	3.28%
Remove Tube Turn		<input checked="" type="checkbox"/>	6.77	1.62%	\$27,692.68	3.28%
Bury Pipeline		<input checked="" type="checkbox"/>	7.00	1.68%	\$28,633.50	3.39%
Demob Work Boat		<input checked="" type="checkbox"/>	10.00	2.40%	\$40,905.00	4.85%
Mob P/L Removal Spread	Relocate to a point along the pipeline where the water depth is 200'	<input type="checkbox"/>	10.00	2.40%	\$36,190.00	4.29%
Expose Pipeline		<input checked="" type="checkbox"/>	10.50	2.52%	\$37,999.50	4.50%
Cut & Plug Pipeline	Plug the upstream end going To Habitat	<input checked="" type="checkbox"/>	10.50	2.52%	\$37,999.50	4.50%
Bury Pipeline	Bury the upstream end going To Habitat	<input checked="" type="checkbox"/>	7.00	1.68%	\$25,333.00	3.00%
Expose Pipeline		<input checked="" type="checkbox"/>	10.50	2.52%	\$37,999.50	4.50%
Remove Pipeline		<input checked="" type="checkbox"/>	30.00	7.20%	\$108,570.00	12.87%
Bury Pipeline	Bury the end going to shore	<input checked="" type="checkbox"/>	7.00	1.68%	\$25,333.00	3.00%
Demob P/L Removal Spread		<input type="checkbox"/>	10.00	2.40%	\$36,190.00	4.29%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	40.30%	\$41,000.00	4.86%
Task Total			339.54	81.44%	\$697,656.11	82.69%
Misc. Work Provision (15.00%)			46.43	11.14%	\$87,655.67	10.39%
ather Contingency (10.00%)			30.95	7.42%	\$58,437.11	6.93%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			416.93	100.00%	\$843,748.89	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Habitat MMS POCS 29056 (Ver 1) Segment#:38204

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	2.49%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$52,525.00	6.23%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	2.37%
Decommissioning Crew	\$0.00	Calculated from tables	\$8,554.49	1.01%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$240,666.60	28.52%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$84,517.50	10.02%
Pipelay Barge	\$1,954.00	per Hour	\$186,607.00	22.12%
Pipeline Surveying	\$230.00	per Hour	\$39,454.20	4.68%
Work Boat	\$583.00	per Hour	\$44,331.32	5.25%



MMS

Pipeline Decommission Cost Breakdown

Habitat MMS POCS 29056 (Ver 1) Segment#:38204

Task	Task Hours		Task Cost	
Mobilize Work Boat	10.00	2.40%	\$40,905.00	4.85%
Work Boat			\$5,830.00	
Dive Basic Spread Saturation			\$31,650.00	
Decommissioning Crew			\$1,125.00	
Pipeline Surveying			\$2,300.00	
Rig Up Decomm Equipment	5.00	1.20%	\$20,452.50	2.42%
Work Boat			\$2,915.00	
Decommissioning Crew			\$562.50	
Dive Basic Spread Saturation			\$15,825.00	
Pipeline Surveying			\$1,150.00	
Pig & Flush Pipeline	20.00	4.80%	\$81,810.00	9.70%
Work Boat			\$11,660.00	
Dive Basic Spread Saturation			\$63,300.00	
Decommissioning Crew			\$2,250.00	
Pipeline Surveying			\$4,600.00	
Cut & Plug Pipeline	10.50	2.52%	\$42,950.25	5.09%
Work Boat			\$6,121.50	
Decommissioning Crew			\$1,181.25	
Dive Basic Spread Saturation			\$33,232.50	
Pipeline Surveying			\$2,415.00	
Cut Pipeline Riser	6.77	1.62%	\$27,692.68	3.28%
Work Boat			\$3,946.91	
Decommissioning Crew			\$761.62	
Dive Basic Spread Saturation			\$21,427.05	
Pipeline Surveying			\$1,557.10	
Remove Tube Turn	6.77	1.62%	\$27,692.68	3.28%
Work Boat			\$3,946.91	
Dive Basic Spread Saturation			\$21,427.05	
Decommissioning Crew			\$761.62	
Pipeline Surveying			\$1,557.10	



MMS

Pipeline Decommission Cost Breakdown

Bury Pipeline		7.00	1.68%	\$28,633.50	3.39%
Work Boat	\$4,081.00				
Decommissioning Crew	\$787.50				
Dive Basic Spread Saturation	\$22,155.00				
Pipeline Surveying	\$1,610.00				
<hr/>					
Demob Work Boat		10.00	2.40%	\$40,905.00	4.85%
Work Boat	\$5,830.00				
Decommissioning Crew	\$1,125.00				
Dive Basic Spread Saturation	\$31,650.00				
Pipeline Surveying	\$2,300.00				
<hr/>					
Mob P/L Removal Spread		10.00	2.40%	\$36,190.00	4.29%
Pipeline Surveying	\$2,300.00				
Dive Basic Spread- Mixed Gas	\$8,850.00				
Pipelay Barge	\$19,540.00				
CB 180 & Tug	\$5,500.00				
<hr/>					
Expose Pipeline		10.50	2.52%	\$37,999.50	4.50%
Pipeline Surveying	\$2,415.00				
Dive Basic Spread- Mixed Gas	\$9,292.50				
Pipelay Barge	\$20,517.00				
CB 180 & Tug	\$5,775.00				
<hr/>					
Cut & Plug Pipeline		10.50	2.52%	\$37,999.50	4.50%
Pipeline Surveying	\$2,415.00				
Dive Basic Spread- Mixed Gas	\$9,292.50				
Pipelay Barge	\$20,517.00				
CB 180 & Tug	\$5,775.00				
<hr/>					
Bury Pipeline		7.00	1.68%	\$25,333.00	3.00%
Pipeline Surveying	\$1,610.00				
Dive Basic Spread- Mixed Gas	\$6,195.00				
Pipelay Barge	\$13,678.00				
CB 180 & Tug	\$3,850.00				
<hr/>					



MMS

Pipeline Decommission Cost Breakdown

Expose Pipeline		10.50	2.52%	\$37,999.50	4.50%
Pipeline Surveying	\$2,415.00				
Dive Basic Spread- Mixed Gas	\$9,292.50				
Pipelay Barge	\$20,517.00				
CB 180 & Tug	\$5,775.00				
Remove Pipeline		30.00	7.20%	\$108,570.00	12.87%
Pipeline Surveying	\$6,900.00				
Dive Basic Spread- Mixed Gas	\$26,550.00				
Pipelay Barge	\$58,620.00				
CB 180 & Tug	\$16,500.00				
Bury Pipeline		7.00	1.68%	\$25,333.00	3.00%
Pipeline Surveying	\$1,610.00				
Dive Basic Spread- Mixed Gas	\$6,195.00				
Pipelay Barge	\$13,678.00				
CB 180 & Tug	\$3,850.00				
Demob P/L Removal Spread		10.00	2.40%	\$36,190.00	4.29%
Pipeline Surveying	\$2,300.00				
Dive Basic Spread- Mixed Gas	\$8,850.00				
Pipelay Barge	\$19,540.00				
CB 180 & Tug	\$5,500.00				
Offload CB 180		168.00	40.30%	\$41,000.00	4.86%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		339.54	81.44%	\$697,656.11	82.69%



MMS

Well Information

Habitat MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Habitat MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$2,656,668.00 80.00%
Task Total			0.00	\$2,656,668.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$398,500.22 12.00%
ather Contingency (10.00%)			0.00	\$265,666.80 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$3,320,835.02 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Habitat MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$2,656,668.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Habitat MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$2,656,668.00	80.00%
Manual Calculation			\$2,656,668.00	
Total	0.00	0.00%	\$2,656,668.00	80.00%

Harmony MMS POCS 29056



MMS

Platform Salvage Option

Harmony MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Harmony will be removed along with Platforms Hondo and Heritage.
- Platform Harmony is an 8-pile platform installed in 1989 in 1198' of water.
- The estimated removal weight is the deck weight is 9,839 tons and the jacket weight is 42,900 tons.
- The platform has a total of 34 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 52 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 4000 that will be mobilized from the GOM or North Sea. The total mob/demob time will be 200 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Fourteen 400' cargo barges will transport the deck modules and jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 14 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The three pipelines (oil, gas, water) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments



MMS

Platform Salvage Option

Harmony MMS POCS 29056 (Ver 1)

running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this



MMS

Platform Salvage Option

Harmony MMS POCS 29056 (Ver 1)

estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$155,913,781

Estimated Decommissioning Net Cost = \$155,913,781



MMS

Basic Information

Harmony MMS POCS 29056 (Ver 1)

General Data

Platform: Harmony MMS POCS 29056
Function: SELF CONTAINED
Type: Steel
Water Depth: 1198'
Pre 461H?: No
Year Installed: 1989
Year Estimate Developed: 2009
District: California
Lease Number: OCS-P 0190
Account Code: TSB - 29056
Amortization: 1.00
Wells to P & A: 34
Pipelines to Abandon: 3
Estimate Complete?: Yes

Partner Data

Partner	Working Interest
1 Exxon Mobil Corporation	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$140,688,496	\$140,688,496
Well Plugging & Abandonment:	\$8,836,240	\$8,836,240
Pipeline Abandonment:	\$6,389,045	\$6,389,045
Total Decommissioning Cost:	\$155,913,781	\$155,913,781



MMS

Platform Information

Harmony MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	72"		Yes	No	
Skirt/Braced	20	84"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	60
Number Installed:	52
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	42900.00		
Jacket Installation Date:	1/1/1989		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	9839 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1989
Deck Contractor:	Unknown



MMS

Platform Information

Harmony MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$26,735,494.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Harmony MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$6,886,459.00	4.89%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.01%	\$851,667.00	0.61%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.01%	\$13,984.00	0.01%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.01%	\$15,845,720.00	11.26%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.01%	\$4,865,911.00	3.46%
Mobilize DB 4000	Mob from GOM or North Sea, 100 days divided by 3 platforms	<input type="checkbox"/>	800.00	6.63%	\$7,560,000.00	5.37%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 14)	<input type="checkbox"/>	25.40	0.21%	\$551,600.00	0.39%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	11.70	0.10%	\$52,884.00	0.04%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.06%	\$108,810.00	0.08%
Cut Deck/Equip/Misc	Separate 13 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.20%	\$410,400.00	0.29%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.20%	\$410,400.00	0.29%
Remove 8 Pile Deck	Remove 8 Pile Deck, 13 modules	<input checked="" type="checkbox"/>	120.00	0.99%	\$2,052,000.00	1.46%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	0.00	0.00%	\$0.00	0.00%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	233.10	1.93%	\$4,291,672.02	3.05%
Cut Jacket	27 Hours per section, times 43 section(s), per MMS	<input checked="" type="checkbox"/>	1164.00	9.65%	\$20,066,896.00	14.26%
Remove Jacket - Meth 1	27 Hours per section, times 43 section(s), per MMS	<input checked="" type="checkbox"/>	1164.00	9.65%	\$19,927,680.00	14.16%
Demob CB 400 & Tug	Demob to Port of LA (Qty 14)	<input type="checkbox"/>	25.40	0.21%	\$355,600.00	0.25%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.06%	\$108,810.00	0.08%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	11.70	0.10%	\$52,884.00	0.04%
Demob DB 4000	Demob to GOM or North Sea, 100 days divided by 3 platforms	<input type="checkbox"/>	800.00	6.63%	\$7,560,000.00	5.37%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	0.60%	\$1,282,000.00	0.91%
Offload CB 400		<input type="checkbox"/>	6864.00	56.91%	\$2,064,640.00	1.47%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.01%	\$13,984.00	0.01%
Platform Abandonment - Manual Calculation	Removal of Power Cable Using Work Boat Method	<input checked="" type="checkbox"/>	0.00	0.00%	\$1,021,164.00	0.73%
Task Total			11357.80	94.16%	\$96,355,165.02	68.49%
Misc. Work Provision (15.00%)			422.49	3.50%	\$10,558,720.00	7.51%
Weather Contingency (10.00%)			281.66	2.34%	\$7,039,147.00	5.00%
Consumables					\$0.00	0.00%
Waste Disposal					\$26,735,490.00	19.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%



MMS

Platform Decommission Task Information

Harmony MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
		Total:	12061.95 100.00% 40,688,522.02	100.00%



MMS

Platform Decommission Resources Breakdown

Harmony MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$1,728,750.00	1.23%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$1,784,640.00	1.27%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$164,640.00	0.12%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$3,272,300.02	2.33%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$280,000.00	0.20%
Derrick Barge 4000	\$10,500.00	per Hour per barge	43,917,300.00	31.22%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$8,754,390.00	6.22%
Manual Calculation	\$0.00	Independently Calculated	30,780,889.00	21.88%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$139,216.00	0.10%
Pile Abrasive Cut 70 to 96 inches	\$5,375.00	per Cut	\$301,000.00	0.21%
Pipeline Survey	\$230.00	per Hour	\$636,180.00	0.45%
Rem. Operated Vehicle	\$800.00	per Hour	\$4,388,160.00	3.12%
Rig Up CB 400	\$14,000.00	per Barge	\$196,000.00	0.14%
Work Boat	\$500.00	per Hour	\$11,700.00	0.01%



MMS

Platform Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$6,886,459.00	4.89%
Manual Calculation			\$6,886,459.00	
NMFS Marine Observation	1.00	0.01%	\$851,667.00	0.61%
Manual Calculation			\$851,667.00	
Mobilize Abrasive Cutting Spread	1.00	0.01%	\$13,984.00	0.01%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Sever Conductors- Abrasive	1.00	0.01%	\$15,845,720.00	11.26%
Manual Calculation			\$15,845,720.00	
Platform Removal Preparation	1.00	0.01%	\$4,865,911.00	3.46%
Manual Calculation			\$4,865,911.00	
Mobilize DB 4000	800.00	6.63%	\$7,560,000.00	5.37%
Derrick Barge 4000			\$7,560,000.00	
Mobilize CB 400 & Tug	25.40	0.21%	\$551,600.00	0.39%
Rig Up CB 400			\$196,000.00	
CB 400 & Tug			\$355,600.00	



MMS

Platform Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize Dive Spread	11.70	0.10%	\$52,884.00	0.04%
Work Boat			\$5,850.00	
Dive Basic Spread Saturation			\$37,030.50	
Abrasive Cutter Spread			\$7,312.50	
Pipeline Survey			\$2,691.00	
Setup Derrick Barge	6.75	0.06%	\$108,810.00	0.08%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	24.00	0.20%	\$410,400.00	0.29%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	
Remove Equipment	24.00	0.20%	\$410,400.00	0.29%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	



MMS

Platform Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove 8 Pile Deck	120.00	0.99%	\$2,052,000.00	1.46%
Derrick Barge 4000			\$1,260,000.00	
Dive Basic Spread Saturation			\$379,800.00	
Pipeline Survey			\$27,600.00	
Abrasive Cutter Spread			\$75,000.00	
CB 300 & Tug			\$117,600.00	
Rem. Operated Vehicle			\$192,000.00	
Jet/Airlift Pile Mud Plug	0.00	0.00%	\$0.00	0.00%
Derrick Barge 4000			\$0.00	
Dive Basic Spread Saturation			\$0.00	
Pipeline Survey			\$0.00	
Abrasive Cutter Spread			\$0.00	
CB 400 & Tug			\$0.00	
Rem. Operated Vehicle			\$0.00	
Sever Piles- Abrasive	233.10	1.93%	\$4,291,672.02	3.05%
Derrick Barge 4000			\$2,447,550.00	
Dive Basic Spread Saturation			\$737,761.50	
Pipeline Survey			\$53,613.00	
Abrasive Cutter Spread			\$145,687.50	
CB 400 & Tug			\$233,100.02	
Pile Abrasive Cut 70 to 96 inches			\$301,000.00	
Rem. Operated Vehicle			\$372,960.00	



MMS

Platform Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Cut Jacket		1164.00	9.65%	\$20,066,896.00	14.26%
	Derrick Barge 4000	\$12,222,000.00			
	Dive Basic Spread Saturation	\$3,684,060.00			
	Pipeline Survey	\$267,720.00			
	Abrasive Cutter Spread	\$727,500.00			
	CB 400 & Tug	\$1,164,000.00			
	Pile Abrasive Cut 7 to 48 inches	\$139,216.00			
	Rem. Operated Vehicle	\$1,862,400.00			
Remove Jacket - Meth 1		1164.00	9.65%	\$19,927,680.00	14.16%
	Derrick Barge 4000	\$12,222,000.00			
	Dive Basic Spread Saturation	\$3,684,060.00			
	Pipeline Survey	\$267,720.00			
	Abrasive Cutter Spread	\$727,500.00			
	CB 400 & Tug	\$1,164,000.00			
	Rem. Operated Vehicle	\$1,862,400.00			
Demob CB 400 & Tug		25.40	0.21%	\$355,600.00	0.25%
	CB 400 & Tug	\$355,600.00			
Pick Up DB Anchors		6.75	0.06%	\$108,810.00	0.08%
	Derrick Barge 4000	\$70,875.00			
	Dive Basic Spread Saturation	\$21,363.75			
	Pipeline Survey	\$1,552.50			
	Abrasive Cutter Spread	\$4,218.75			
	Rem. Operated Vehicle	\$10,800.00			



MMS

Platform Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	11.70	0.10%	\$52,884.00	0.04%
Work Boat			\$5,850.00	
Dive Basic Spread Saturation			\$37,030.50	
Abrasive Cutter Spread			\$7,312.50	
Pipeline Survey			\$2,691.00	
Demob DB 4000	800.00	6.63%	\$7,560,000.00	5.37%
Derrick Barge 4000			\$7,560,000.00	
Site Clearance - with Divers	72.00	0.60%	\$1,282,000.00	0.91%
Manual Calculation			\$1,282,000.00	
Offload CB 400	6864.00	56.91%	\$2,064,640.00	1.47%
Cargo Barge 400			\$1,784,640.00	
CB Damage Deduct			\$280,000.00	
Demob Abrasive Cutting Spread	1.00	0.01%	\$13,984.00	0.01%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,021,164.00	0.73%
Manual Calculation			\$1,021,164.00	
Total	11357.80	94.16%	\$96,355,165.02	68.49%



MMS

Pipeline Information

Harmony MMS POCS 29056 (Ver1) Segment#:5510

General Data

Water Depth: 1198'
Origin / Terminus: Origin
Opposite End Name: Las Flor
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter: 20"	Wall Thickness:	Length: 24396'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This pipeline runs to the Los Flores Onshore facility.
Pipeline is estimated to be removed from <200' WD and to state waters.
Estimated Removal Length in this estimate ~3000'



MMS

Pipeline Information

Harmony MMS POCS 29056 (Ver1) Segment#:5630

General Data

Water Depth: 1198'
Origin / Terminus: Origin
Opposite End Name: Las Flor
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter: 12"	Wall Thickness:	Length: 24678'
Depth of Burial:	# Crossings:	Product: Water
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This pipeline runs to the Los Flores Onshore facility.
Pipeline is estimated to be removed from <200' WD and to state waters.
Estimated Length in this estimate ~3000'



MMS

Pipeline Information

Harmony MMS POCS 29056 (Ver1) Segment#:5720

General Data

Water Depth:	1198'
Origin / Terminus:	Origin
Opposite End Name:	Hondo
Opposite End Water Depth:	842'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	12"	Wall Thickness:		Length:	17327'
Depth of Burial:		# Crossings:		Product:	Gas
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Hondo platform.
It is estimated to be abandoned in place.



MMS

Pipeline Decommission Task Information

Harmony MMS POCS 29056 (Ver 1) Segment#:5510190-shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat	To Harmony	<input type="checkbox"/>	140.00	17.49%	\$462,000.00	19.74%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.62%	\$49,882.50	2.13%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	90.00	11.24%	\$447,885.00	19.13%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.85	1.48%	\$58,971.53	2.52%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.83	0.98%	\$38,965.99	1.66%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.83	0.98%	\$38,965.99	1.66%
Bury Pipeline		<input checked="" type="checkbox"/>	7.90	0.99%	\$39,314.35	1.68%
Demob Dive Boat		<input checked="" type="checkbox"/>	140.00	17.49%	\$462,000.00	19.74%
Mob P/L Removal Spread	Relocate to a point along the pipeline where the water depth is 200'	<input type="checkbox"/>	11.70	1.46%	\$42,342.30	1.81%
Expose Pipeline		<input checked="" type="checkbox"/>	11.85	1.48%	\$42,885.15	1.83%
Cut & Plug Pipeline	Plug the upstream end going To Harmony	<input checked="" type="checkbox"/>	11.85	1.48%	\$42,885.15	1.83%
Bury Pipeline	Bury the upstream end going To Harmony	<input checked="" type="checkbox"/>	7.90	0.99%	\$28,590.10	1.22%
Expose Pipeline		<input checked="" type="checkbox"/>	11.85	1.48%	\$42,885.15	1.83%
Remove Pipeline		<input checked="" type="checkbox"/>	20.00	2.50%	\$72,380.00	3.09%
Bury Pipeline	Bury the end going to shore	<input checked="" type="checkbox"/>	7.90	0.99%	\$28,590.10	1.22%
Demob P/L Removal Spread		<input type="checkbox"/>	11.70	1.46%	\$42,342.30	1.81%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	20.98%	\$41,000.00	1.75%
Task Total			673.16	84.08%	\$1,981,885.61	84.67%
Misc. Work Provision (15.00%)			76.46	9.55%	\$215,280.16	9.20%
ather Contingency (10.00%)			50.98	6.37%	\$143,520.10	6.13%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			800.60	100.00%	\$2,340,685.87	100.00%



MMS

Pipeline Decommission Task Information

Harmony MMS POCS 29056 (Ver 1) Segment#:5630190-shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat	To Harmony	<input type="checkbox"/>	140.00	17.49%	\$462,000.00	19.74%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.62%	\$49,882.50	2.13%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	90.00	11.24%	\$447,885.00	19.13%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.85	1.48%	\$58,971.53	2.52%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.83	0.98%	\$38,965.99	1.66%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.83	0.98%	\$38,965.99	1.66%
Bury Pipeline		<input checked="" type="checkbox"/>	7.90	0.99%	\$39,314.35	1.68%
Demob Dive Boat		<input checked="" type="checkbox"/>	140.00	17.49%	\$462,000.00	19.74%
Mob P/L Removal Spread	Relocate to a point along the pipeline where the water depth is 200'	<input type="checkbox"/>	11.70	1.46%	\$42,342.30	1.81%
Expose Pipeline		<input checked="" type="checkbox"/>	11.85	1.48%	\$42,885.15	1.83%
Cut & Plug Pipeline	Plug the upstream end going To Harmony	<input checked="" type="checkbox"/>	11.85	1.48%	\$42,885.15	1.83%
Bury Pipeline	Bury the upstream end going To Harmony	<input checked="" type="checkbox"/>	7.90	0.99%	\$28,590.10	1.22%
Expose Pipeline		<input checked="" type="checkbox"/>	11.85	1.48%	\$42,885.15	1.83%
Remove Pipeline		<input checked="" type="checkbox"/>	20.00	2.50%	\$72,380.00	3.09%
Bury Pipeline	Bury the end going to shore	<input checked="" type="checkbox"/>	7.90	0.99%	\$28,590.10	1.22%
Demob P/L Removal Spread		<input type="checkbox"/>	11.70	1.46%	\$42,342.30	1.81%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	20.98%	\$41,000.00	1.75%
Task Total			673.16	84.08%	\$1,981,885.61	84.67%
Misc. Work Provision (15.00%)			76.46	9.55%	\$215,280.16	9.20%
ather Contingency (10.00%)			50.98	6.37%	\$143,520.10	6.13%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			800.60	100.00%	\$2,340,685.87	100.00%



MMS

Pipeline Decommission Task Information

Harmony MMS POCS 29056 (Ver 1) Segment#:5720190

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	140.00	31.86%	\$462,000.00	27.05%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.68%	\$39,239.50	2.30%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.14%	\$20,397.50	1.19%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	17.00	3.87%	\$80,690.50	4.73%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.46%	\$9,493.00	0.56%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.68%	\$14,239.50	0.83%
Expose Pipeline		<input checked="" type="checkbox"/>	11.85	2.70%	\$56,246.03	3.29%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.85	2.70%	\$56,246.03	3.29%
Bury Pipeline		<input checked="" type="checkbox"/>	7.90	1.80%	\$37,497.35	2.20%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.83	1.78%	\$37,165.09	2.18%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.83	1.78%	\$37,165.09	2.18%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.68%	\$14,239.50	0.83%
Expose Pipeline		<input checked="" type="checkbox"/>	11.85	2.70%	\$56,246.03	3.29%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.85	2.70%	\$56,246.03	3.29%
Bury Pipeline		<input checked="" type="checkbox"/>	7.90	1.80%	\$37,497.35	2.20%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.83	1.78%	\$37,165.09	2.18%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.83	1.78%	\$37,165.09	2.18%
Demob Dive Boat		<input type="checkbox"/>	140.00	31.86%	\$462,000.00	27.05%
Task Total			407.52	92.74%	\$1,550,938.68	90.82%
Misc. Work Provision (15.00%)			19.13	4.35%	\$94,040.81	5.51%
ather Contingency (10.00%)			12.75	2.90%	\$62,693.87	3.67%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			439.40	100.00%	\$1,707,673.35	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Harmony MMS POCS 29056 (Ver 1) Segment#:551

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	0.90%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$52,112.50	2.23%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	0.85%
Decommissioning Crew	\$0.00	Calculated from tables	\$14,671.12	0.63%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$83,853.75	3.58%
DP Dive Boat	\$3,300.00	per Hour	\$1,354,353.00	57.86%
Manual Calculation	\$0.00	Independently Calculated	\$25,000.00	1.07%
Pipelay Barge	\$1,954.00	per Hour	\$185,141.50	7.91%
Pipeline Surveying	\$230.00	per Hour	\$51,786.80	2.21%
Rem. Operated Vehicle	\$667.00	per Hour	\$173,966.94	7.43%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Harmony MMS POCS 29056 (Ver 1) Segment#:563

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	0.90%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$52,112.50	2.23%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	0.85%
Decommissioning Crew	\$0.00	Calculated from tables	\$14,671.12	0.63%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$83,853.75	3.58%
DP Dive Boat	\$3,300.00	per Hour	\$1,354,353.00	57.86%
Manual Calculation	\$0.00	Independently Calculated	\$25,000.00	1.07%
Pipelay Barge	\$1,954.00	per Hour	\$185,141.50	7.91%
Pipeline Surveying	\$230.00	per Hour	\$51,786.80	2.21%
Rem. Operated Vehicle	\$667.00	per Hour	\$173,966.94	7.43%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Harmony MMS POCS 29056 (Ver 1) Segment#:572

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$14,346.00	0.84%
DP Dive Boat	\$3,300.00	per Hour	\$1,344,816.00	78.75%
Manual Calculation	\$0.00	Independently Calculated	\$25,000.00	1.46%
Rem. Operated Vehicle	\$667.00	per Hour	\$166,776.68	9.77%



MMS

Pipeline Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1) Segment#:5510

Task	Task Hours	Task Cost
Mobilize Dive Boat	140.00 17.49%	\$462,000.00 19.74%
DP Dive Boat		\$462,000.00
Rig Up Decomm Equipment	5.00 0.62%	\$49,882.50 2.13%
DP Dive Boat		\$16,500.00
Rem. Operated Vehicle		\$6,670.00
Decommissioning Crew		\$562.50
Pipeline Surveying		\$1,150.00
Manual Calculation		\$25,000.00
Pig & Flush Pipeline	90.00 11.24%	\$447,885.00 19.13%
DP Dive Boat		\$297,000.00
Rem. Operated Vehicle		\$120,060.00
Decommissioning Crew		\$10,125.00
Pipeline Surveying		\$20,700.00
Cut & Plug Pipeline	11.85 1.48%	\$58,971.53 2.52%
DP Dive Boat		\$39,105.00
Rem. Operated Vehicle		\$15,807.90
Decommissioning Crew		\$1,333.13
Pipeline Surveying		\$2,725.50
Cut Pipeline Riser	7.83 0.98%	\$38,965.99 1.66%
DP Dive Boat		\$25,839.00
Rem. Operated Vehicle		\$10,445.22
Decommissioning Crew		\$880.87
Pipeline Surveying		\$1,800.90
Remove Tube Turn	7.83 0.98%	\$38,965.99 1.66%
DP Dive Boat		\$25,839.00
Rem. Operated Vehicle		\$10,445.22
Decommissioning Crew		\$880.87
Pipeline Surveying		\$1,800.90



MMS

Pipeline Decommission Cost Breakdown

Bury Pipeline		7.90	0.99%	\$39,314.35	1.68%
DP Dive Boat	\$26,070.00				
Rem. Operated Vehicle	\$10,538.60				
Decommissioning Crew	\$888.75				
Pipeline Surveying	\$1,817.00				
<hr/>					
Demob Dive Boat		140.00	17.49%	\$462,000.00	19.74%
DP Dive Boat	\$462,000.00				
<hr/>					
Mob P/L Removal Spread		11.70	1.46%	\$42,342.30	1.81%
Pipeline Surveying	\$2,691.00				
Dive Basic Spread- Mixed Gas	\$10,354.50				
Pipelay Barge	\$22,861.80				
CB 180 & Tug	\$6,435.00				
<hr/>					
Expose Pipeline		11.85	1.48%	\$42,885.15	1.83%
Pipeline Surveying	\$2,725.50				
Dive Basic Spread- Mixed Gas	\$10,487.25				
Pipelay Barge	\$23,154.90				
CB 180 & Tug	\$6,517.50				
<hr/>					
Cut & Plug Pipeline		11.85	1.48%	\$42,885.15	1.83%
Pipeline Surveying	\$2,725.50				
Dive Basic Spread- Mixed Gas	\$10,487.25				
Pipelay Barge	\$23,154.90				
CB 180 & Tug	\$6,517.50				
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Bury Pipeline		7.90	0.99%	\$28,590.10	1.22%
Pipeline Surveying	\$1,817.00				
Dive Basic Spread- Mixed Gas	\$6,991.50				
Pipelay Barge	\$15,436.60				
CB 180 & Tug	\$4,345.00				
<hr/>					
Expose Pipeline		11.85	1.48%	\$42,885.15	1.83%
Pipeline Surveying	\$2,725.50				
Dive Basic Spread- Mixed Gas	\$10,487.25				
Pipelay Barge	\$23,154.90				
CB 180 & Tug	\$6,517.50				
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MMS

Pipeline Decommission Cost Breakdown

Remove Pipeline		20.00	2.50%	\$72,380.00	3.09%
Pipeline Surveying	\$4,600.00				
Dive Basic Spread- Mixed Gas	\$17,700.00				
Pipelay Barge	\$39,080.00				
CB 180 & Tug	\$11,000.00				
Bury Pipeline		7.90	0.99%	\$28,590.10	1.22%
Pipeline Surveying	\$1,817.00				
Dive Basic Spread- Mixed Gas	\$6,991.50				
Pipelay Barge	\$15,436.60				
CB 180 & Tug	\$4,345.00				
Demob P/L Removal Spread		11.70	1.46%	\$42,342.30	1.81%
Pipeline Surveying	\$2,691.00				
Dive Basic Spread- Mixed Gas	\$10,354.50				
Pipelay Barge	\$22,861.80				
CB 180 & Tug	\$6,435.00				
Offload CB 180		168.00	20.98%	\$41,000.00	1.75%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		673.16	84.08%	\$1,981,885.61	84.67%



MMS

Pipeline Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1) Segment#:5630

Task		Task Hours	Task Cost
Mobilize Dive Boat		140.00 17.49%	\$462,000.00 19.74%
DP Dive Boat	\$462,000.00		
Rig Up Decomm Equipment		5.00 0.62%	\$49,882.50 2.13%
DP Dive Boat	\$16,500.00		
Rem. Operated Vehicle	\$6,670.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Manual Calculation	\$25,000.00		
Pig & Flush Pipeline		90.00 11.24%	\$447,885.00 19.13%
DP Dive Boat	\$297,000.00		
Rem. Operated Vehicle	\$120,060.00		
Decommissioning Crew	\$10,125.00		
Pipeline Surveying	\$20,700.00		
Cut & Plug Pipeline		11.85 1.48%	\$58,971.53 2.52%
DP Dive Boat	\$39,105.00		
Rem. Operated Vehicle	\$15,807.90		
Decommissioning Crew	\$1,333.13		
Pipeline Surveying	\$2,725.50		
Cut Pipeline Riser		7.83 0.98%	\$38,965.99 1.66%
DP Dive Boat	\$25,839.00		
Rem. Operated Vehicle	\$10,445.22		
Decommissioning Crew	\$880.87		
Pipeline Surveying	\$1,800.90		
Remove Tube Turn		7.83 0.98%	\$38,965.99 1.66%
DP Dive Boat	\$25,839.00		
Rem. Operated Vehicle	\$10,445.22		
Decommissioning Crew	\$880.87		
Pipeline Surveying	\$1,800.90		



MMS

Pipeline Decommission Cost Breakdown

Bury Pipeline		7.90	0.99%	\$39,314.35	1.68%
DP Dive Boat	\$26,070.00				
Rem. Operated Vehicle	\$10,538.60				
Decommissioning Crew	\$888.75				
Pipeline Surveying	\$1,817.00				
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Demob Dive Boat		140.00	17.49%	\$462,000.00	19.74%
DP Dive Boat	\$462,000.00				
<hr/>					
Mob P/L Removal Spread		11.70	1.46%	\$42,342.30	1.81%
Pipeline Surveying	\$2,691.00				
Dive Basic Spread- Mixed Gas	\$10,354.50				
Pipelay Barge	\$22,861.80				
CB 180 & Tug	\$6,435.00				
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Expose Pipeline		11.85	1.48%	\$42,885.15	1.83%
Pipeline Surveying	\$2,725.50				
Dive Basic Spread- Mixed Gas	\$10,487.25				
Pipelay Barge	\$23,154.90				
CB 180 & Tug	\$6,517.50				
<hr/>					
Cut & Plug Pipeline		11.85	1.48%	\$42,885.15	1.83%
Pipeline Surveying	\$2,725.50				
Dive Basic Spread- Mixed Gas	\$10,487.25				
Pipelay Barge	\$23,154.90				
CB 180 & Tug	\$6,517.50				
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Bury Pipeline		7.90	0.99%	\$28,590.10	1.22%
Pipeline Surveying	\$1,817.00				
Dive Basic Spread- Mixed Gas	\$6,991.50				
Pipelay Barge	\$15,436.60				
CB 180 & Tug	\$4,345.00				
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Expose Pipeline		11.85	1.48%	\$42,885.15	1.83%
Pipeline Surveying	\$2,725.50				
Dive Basic Spread- Mixed Gas	\$10,487.25				
Pipelay Barge	\$23,154.90				
CB 180 & Tug	\$6,517.50				
<hr/>					



MMS

Pipeline Decommission Cost Breakdown

Remove Pipeline		20.00	2.50%	\$72,380.00	3.09%
Pipeline Surveying	\$4,600.00				
Dive Basic Spread- Mixed Gas	\$17,700.00				
Pipelay Barge	\$39,080.00				
CB 180 & Tug	\$11,000.00				
Bury Pipeline		7.90	0.99%	\$28,590.10	1.22%
Pipeline Surveying	\$1,817.00				
Dive Basic Spread- Mixed Gas	\$6,991.50				
Pipelay Barge	\$15,436.60				
CB 180 & Tug	\$4,345.00				
Demob P/L Removal Spread		11.70	1.46%	\$42,342.30	1.81%
Pipeline Surveying	\$2,691.00				
Dive Basic Spread- Mixed Gas	\$10,354.50				
Pipelay Barge	\$22,861.80				
CB 180 & Tug	\$6,435.00				
Offload CB 180		168.00	20.98%	\$41,000.00	1.75%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		673.16	84.08%	\$1,981,885.61	84.67%



MMS

Pipeline Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1) Segment#:5720

Task		Task Hours	Task Cost
Mobilize Dive Boat		140.00 31.86%	\$462,000.00 27.05%
DP Dive Boat	\$462,000.00		
Set Up Dive Boat		3.00 0.68%	\$39,239.50 2.30%
DP Dive Boat	\$9,900.00		
Rem. Operated Vehicle	\$4,002.00		
Manual Calculation	\$25,000.00		
Decommissioning Crew	\$337.50		
Rig Up Decomm Equipment		5.00 1.14%	\$20,397.50 1.19%
DP Dive Boat	\$16,500.00		
Rem. Operated Vehicle	\$3,335.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		17.00 3.87%	\$80,690.50 4.73%
DP Dive Boat	\$56,100.00		
Rem. Operated Vehicle	\$22,678.00		
Decommissioning Crew	\$1,912.50		
Derig Decomm Equipment		2.00 0.46%	\$9,493.00 0.56%
DP Dive Boat	\$6,600.00		
Rem. Operated Vehicle	\$2,668.00		
Decommissioning Crew	\$225.00		
Set Up Dive Boat		3.00 0.68%	\$14,239.50 0.83%
DP Dive Boat	\$9,900.00		
Rem. Operated Vehicle	\$4,002.00		
Decommissioning Crew	\$337.50		
Expose Pipeline		11.85 2.70%	\$56,246.03 3.29%
DP Dive Boat	\$39,105.00		
Rem. Operated Vehicle	\$15,807.90		
Decommissioning Crew	\$1,333.13		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.85	2.70%	\$56,246.03	3.29%
DP Dive Boat	\$39,105.00				
Rem. Operated Vehicle	\$15,807.90				
Decommissioning Crew	\$1,333.13				
Bury Pipeline		7.90	1.80%	\$37,497.35	2.20%
DP Dive Boat	\$26,070.00				
Rem. Operated Vehicle	\$10,538.60				
Decommissioning Crew	\$888.75				
Cut Pipeline Riser		7.83	1.78%	\$37,165.09	2.18%
DP Dive Boat	\$25,839.00				
Rem. Operated Vehicle	\$10,445.22				
Decommissioning Crew	\$880.87				
Remove Tube Turn		7.83	1.78%	\$37,165.09	2.18%
DP Dive Boat	\$25,839.00				
Rem. Operated Vehicle	\$10,445.22				
Decommissioning Crew	\$880.87				
Set Up Dive Boat		3.00	0.68%	\$14,239.50	0.83%
DP Dive Boat	\$9,900.00				
Rem. Operated Vehicle	\$4,002.00				
Decommissioning Crew	\$337.50				
Expose Pipeline		11.85	2.70%	\$56,246.03	3.29%
DP Dive Boat	\$39,105.00				
Rem. Operated Vehicle	\$15,807.90				
Decommissioning Crew	\$1,333.13				
Cut & Plug Pipeline		11.85	2.70%	\$56,246.03	3.29%
DP Dive Boat	\$39,105.00				
Rem. Operated Vehicle	\$15,807.90				
Decommissioning Crew	\$1,333.13				
Bury Pipeline		7.90	1.80%	\$37,497.35	2.20%
DP Dive Boat	\$26,070.00				
Rem. Operated Vehicle	\$10,538.60				
Decommissioning Crew	\$888.75				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		7.83	1.78%	\$37,165.09	2.18%
DP Dive Boat	\$25,839.00				
Rem. Operated Vehicle	\$10,445.22				
Decommissioning Crew	\$880.87				
Remove Tube Turn		7.83	1.78%	\$37,165.09	2.18%
DP Dive Boat	\$25,839.00				
Rem. Operated Vehicle	\$10,445.22				
Decommissioning Crew	\$880.87				
Demob Dive Boat		140.00	31.86%	\$462,000.00	27.05%
DP Dive Boat	\$462,000.00				
Total		407.52	92.74%	\$1,550,938.68	90.82%



MMS

Well Information

Harmony MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Exxon Mobil Corporation	100.00%

Well Data

Diameter	Depth	Surface Pressure
----------	-------	------------------

Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Harmony MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$7,068,992.00 80.00%
Task Total			0.00	\$7,068,992.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$1,060,348.84 12.00%
ather Contingency (10.00%)			0.00	\$706,899.21 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$8,836,240.05 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Harmony MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$7,068,992.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Harmony MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$7,068,992.00	80.00%
Manual Calculation			\$7,068,992.00	
Total	0.00	0.00%	\$7,068,992.00	80.00%

Harvest MMS POCS 29056



MMS

Platform Salvage Option

Harvest MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

-Platform Harvest will be removed along with Platforms Hermosa, Hidalgo, Gail and Grace.

-Platform Harvest is an 8-pile platform installed in 1985 in 675' of water.

-The estimated removal weight is the deck weight is 9,024 tons and the jacket weight is 16,633 tons.

-The platform has a total of 19 wells that will be plugged and abandoned.

-The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR

-Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.

-A total of 25 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.

-The platform topsides and jacket will be removed by a DB 4000 that will be mobilized from the GOM or North Sea. The total mob/demob time will be 200 days.

-The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.

-Four 300' cargo barges will transport the deck modules to shore and six 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 10 cargo barge trips will be required.

-The two pipelines (oil, gas) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total



MMS

Platform Salvage Option

Harvest MMS POCS 29056 (Ver 1)

mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 15% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management,



MMS

Platform Salvage Option

Harvest MMS POCS 29056 (Ver 1)

Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$88,278,478

Estimated Decommissioning Net Cost = \$88,278,478



MMS

Basic Information

Harvest MMS POCS 29056 (Ver 1)

General Data

Platform:	Harvest MMS POCS 29056
Function:	SELF CONTAINED
Type:	Steel
Water Depth:	675'
Pre 461H?:	No
Year Installed:	1985
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0315
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	19
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Plains Exploration & Production Company	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$80,226,520	\$80,226,520
Well Plugging & Abandonment:	\$4,847,788	\$4,847,788
Pipeline Abandonment:	\$3,204,170	\$3,204,170
Total Decommissioning Cost:	\$88,278,478	\$88,278,478



MMS

Platform Information

Harvest MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	60"		Yes	No	
Skirt/Braced	20	72"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	50
Number Installed:	25
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	16663.00		
Jacket Installation Date:	1/1/1985		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	9024 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1985
Deck Contractor:	Unknown



MMS

Platform Information

Harvest MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	15.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$11,616,651.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Harvest MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$3,955,828.00	4.93%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.01%	\$511,000.00	0.64%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.01%	\$8,391.00	0.01%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.01%	\$4,751,731.00	5.92%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.01%	\$3,900,383.00	4.86%
Mobilize DB 4000	Mob from GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	4.85%	\$4,536,000.00	5.65%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 4)	<input type="checkbox"/>	36.00	0.36%	\$197,120.00	0.25%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 6)	<input type="checkbox"/>	36.00	0.36%	\$300,000.00	0.37%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	17.00	0.17%	\$76,840.00	0.10%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.14%
Cut Deck/Equip/Misc	Seperate 9 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.24%	\$410,400.00	0.51%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.24%	\$410,400.00	0.51%
Remove 8 Pile Deck	Remove 8 Pile Deck, 9 modules	<input checked="" type="checkbox"/>	72.00	0.73%	\$1,231,200.00	1.53%
Demob CB 300 & Tug	Demob to Port of LA (Qty 4)	<input type="checkbox"/>	36.00	0.36%	\$141,120.00	0.18%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	35.00	0.35%	\$599,200.00	0.75%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	206.72	2.09%	\$3,840,046.41	4.79%
Cut Jacket	40 Hours per section, times 17 section(s), per MMS	<input checked="" type="checkbox"/>	684.00	6.92%	\$11,849,296.00	14.77%
Remove Jacket - Meth 1	40 Hours per section, times 17 section(s), per MMS	<input checked="" type="checkbox"/>	684.00	6.92%	\$11,710,080.00	14.60%
Demob CB 400 & Tug	Demob to Port of LA (Qty 6)	<input type="checkbox"/>	36.00	0.36%	\$216,000.00	0.27%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.14%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	17.00	0.17%	\$76,840.00	0.10%
Demob DB 4000	Demob to GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	4.85%	\$4,536,000.00	5.65%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	0.73%	\$1,282,000.00	1.60%
Offload CB 300		<input type="checkbox"/>	1392.00	14.08%	\$365,360.00	0.46%
Offload CB 400		<input type="checkbox"/>	4992.00	50.49%	\$1,417,920.00	1.77%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.01%	\$8,391.00	0.01%
Task Total			9342.22	94.49%	\$56,549,166.41	70.49%
Misc. Work Provision (15.00%)			272.58	2.76%	\$6,030,354.00	7.52%
Weather Contingency (15.00%)			272.58	2.76%	\$6,030,354.00	7.52%
Consumables					\$0.00	0.00%
Waste Disposal					\$11,616,650.00	14.48%



MMS

Platform Decommission Task Information

Harvest MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			9887.38 100.00%	\$0,226,524.41 100.00%



MMS

Platform Decommission Resources Breakdown

Harvest MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$1,110,762.50	1.38%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$285,360.00	0.36%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$1,297,920.00	1.62%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$399,840.00	0.50%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$2,041,720.00	2.54%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$200,000.00	0.25%
Derrick Barge 4000	\$10,500.00	per Hour per barge	27,375,810.00	34.12%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$5,624,901.31	7.01%
Manual Calculation	\$0.00	Independently Calculated	14,417,724.00	17.97%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$139,216.00	0.17%
Pile Abrasive Cut 70 to 96 inches	\$5,375.00	per Cut	\$301,000.00	0.38%
Pipeline Survey	\$230.00	per Hour	\$408,760.60	0.51%
Rem. Operated Vehicle	\$800.00	per Hour	\$2,789,152.00	3.48%
Rig Up CB 300	\$14,000.00	per Barge	\$56,000.00	0.07%
Rig Up CB 400	\$14,000.00	per Barge	\$84,000.00	0.10%
Work Boat	\$500.00	per Hour	\$17,000.00	0.02%



MMS

Platform Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$3,955,828.00	4.93%
Manual Calculation			\$3,955,828.00	
NMFS Marine Observation	1.00	0.01%	\$511,000.00	0.64%
Manual Calculation			\$511,000.00	
Mobilize Abrasive Cutting Spread	1.00	0.01%	\$8,391.00	0.01%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Sever Conductors- Abrasive	1.00	0.01%	\$4,751,731.00	5.92%
Manual Calculation			\$4,751,731.00	
Platform Removal Preparation	1.00	0.01%	\$3,900,383.00	4.86%
Manual Calculation			\$3,900,383.00	
Mobilize DB 4000	480.00	4.85%	\$4,536,000.00	5.65%
Derrick Barge 4000			\$4,536,000.00	
Mobilize CB 300 & Tug	36.00	0.36%	\$197,120.00	0.25%
CB 300 & Tug			\$141,120.00	
Rig Up CB 300			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	36.00	0.36%	\$300,000.00	0.37%
Rig Up CB 400			\$84,000.00	
CB 400 & Tug			\$216,000.00	
Mobilize Dive Spread	17.00	0.17%	\$76,840.00	0.10%
Work Boat			\$8,500.00	
Dive Basic Spread Saturation			\$53,805.00	
Abrasive Cutter Spread			\$10,625.00	
Pipeline Survey			\$3,910.00	
Setup Derrick Barge	6.75	0.07%	\$108,810.00	0.14%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	24.00	0.24%	\$410,400.00	0.51%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	



MMS

Platform Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.24%	\$410,400.00	0.51%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	
Remove 8 Pile Deck	72.00	0.73%	\$1,231,200.00	1.53%
Derrick Barge 4000			\$756,000.00	
Dive Basic Spread Saturation			\$227,880.00	
Pipeline Survey			\$16,560.00	
Abrasive Cutter Spread			\$45,000.00	
CB 300 & Tug			\$70,560.00	
Rem. Operated Vehicle			\$115,200.00	
Demob CB 300 & Tug	36.00	0.36%	\$141,120.00	0.18%
CB 300 & Tug			\$141,120.00	
Jet/Airlift Pile Mud Plug	35.00	0.35%	\$599,200.00	0.75%
Derrick Barge 4000			\$367,500.00	
Dive Basic Spread Saturation			\$110,775.00	
Pipeline Survey			\$8,050.00	
Abrasive Cutter Spread			\$21,875.00	
CB 400 & Tug			\$35,000.00	
Rem. Operated Vehicle			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		206.72	2.09%	\$3,840,046.41	4.79%
Derrick Barge 4000	\$2,170,560.00				
Dive Basic Spread Saturation	\$654,268.81				
Pipeline Survey	\$47,545.60				
Abrasive Cutter Spread	\$129,200.00				
CB 400 & Tug	\$206,720.00				
Pile Abrasive Cut 70 to 96 inches	\$301,000.00				
Rem. Operated Vehicle	\$330,752.00				
Cut Jacket		684.00	6.92%	\$11,849,296.00	14.77%
Derrick Barge 4000	\$7,182,000.00				
Dive Basic Spread Saturation	\$2,164,860.00				
Pipeline Survey	\$157,320.00				
Abrasive Cutter Spread	\$427,500.00				
CB 400 & Tug	\$684,000.00				
Pile Abrasive Cut 7 to 48 inches	\$139,216.00				
Rem. Operated Vehicle	\$1,094,400.00				
Remove Jacket - Meth 1		684.00	6.92%	\$11,710,080.00	14.60%
Derrick Barge 4000	\$7,182,000.00				
Dive Basic Spread Saturation	\$2,164,860.00				
Pipeline Survey	\$157,320.00				
Abrasive Cutter Spread	\$427,500.00				
CB 400 & Tug	\$684,000.00				
Rem. Operated Vehicle	\$1,094,400.00				
Demob CB 400 & Tug		36.00	0.36%	\$216,000.00	0.27%
CB 400 & Tug	\$216,000.00				



MMS

Platform Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.07%	\$108,810.00	0.14%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Demob Dive Spread	17.00	0.17%	\$76,840.00	0.10%
Work Boat			\$8,500.00	
Dive Basic Spread Saturation			\$53,805.00	
Abrasive Cutter Spread			\$10,625.00	
Pipeline Survey			\$3,910.00	
Demob DB 4000	480.00	4.85%	\$4,536,000.00	5.65%
Derrick Barge 4000			\$4,536,000.00	
Site Clearance - with Divers	72.00	0.73%	\$1,282,000.00	1.60%
Manual Calculation			\$1,282,000.00	
Offload CB 300	1392.00	14.08%	\$365,360.00	0.46%
Cargo Barge 300			\$285,360.00	
CB Damage Deduct			\$80,000.00	
Offload CB 400	4992.00	50.49%	\$1,417,920.00	1.77%
Cargo Barge 400			\$1,297,920.00	
CB Damage Deduct			\$120,000.00	



MMS

Platform Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.01%	\$8,391.00	0.01%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Total	9342.22	94.49%	\$56,549,166.41	70.49%



MMS

Pipeline Information

Harvest MMS POCS 29056 (Ver1) Segment#:42103

General Data

Water Depth:	675'
Origin / Terminus:	Origin
Opposite End Name:	Hermosa
Opposite End Water Depth:	603'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	15.00%

Pipeline Data

Outside Diameter:	12.75"	Wall Thickness:		Length:	17212'
Depth of Burial:		# Crossings:		Product:	OIL
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Hermosa platform. It is estimated as abandoned in place.



MMS

Pipeline Information

Harvest MMS POCS 29056 (Ver1) Segment#:43203

General Data

Water Depth:	675'
Origin / Terminus:	Origin
Opposite End Name:	Hermosa
Opposite End Water Depth:	603'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	15.00%

Pipeline Data

Outside Diameter:	8.625"	Wall Thickness:		Length:	17212'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Hermosa platform. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Harvest MMS POCS 29056 (Ver 1) Segment#:4210315

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	80.00	24.77%	\$264,000.00	15.99%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.93%	\$30,422.50	1.84%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.55%	\$34,037.50	2.06%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	20.00	6.19%	\$136,150.00	8.25%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.62%	\$13,615.00	0.82%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.58%	\$78,626.63	4.76%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.58%	\$78,626.63	4.76%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.93%	\$20,422.50	1.24%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.58%	\$78,626.63	4.76%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.58%	\$78,626.63	4.76%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Demob Dive Boat		<input type="checkbox"/>	80.00	24.77%	\$264,000.00	15.99%
Task Total			285.40	88.35%	\$1,391,660.52	84.30%
Misc. Work Provision (15.00%)			18.81	5.82%	\$129,549.08	7.85%
Other Contingency (15.00%)			18.81	5.82%	\$129,549.08	7.85%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			323.02	100.00%	\$1,650,758.69	100.00%



MMS

Pipeline Decommission Task Information

Harvest MMS POCS 29056 (Ver 1) Segment#:4320315

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	80.00	25.91%	\$264,000.00	16.99%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.97%	\$30,422.50	1.96%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.62%	\$34,037.50	2.19%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	9.00	2.92%	\$61,267.50	3.94%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.65%	\$13,615.00	0.88%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.74%	\$78,626.63	5.06%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.74%	\$78,626.63	5.06%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.49%	\$52,417.75	3.37%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.49%	\$52,417.75	3.37%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.49%	\$52,417.75	3.37%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.97%	\$20,422.50	1.31%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.74%	\$78,626.63	5.06%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.74%	\$78,626.63	5.06%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.49%	\$52,417.75	3.37%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.49%	\$52,417.75	3.37%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.49%	\$52,417.75	3.37%
Demob Dive Boat		<input type="checkbox"/>	80.00	25.91%	\$264,000.00	16.99%
Task Total			274.40	88.88%	\$1,316,778.02	84.77%
Misc. Work Provision (15.00%)			17.16	5.56%	\$118,316.71	7.62%
ather Contingency (15.00%)			17.16	5.56%	\$118,316.71	7.62%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			308.72	100.00%	\$1,553,411.44	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Harvest MMS POCS 29056 (Ver 1) Segment#:4210

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$14,107.52	0.85%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$396,891.00	24.04%
DP Dive Boat	\$3,300.00	per Hour	\$941,820.00	57.05%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.61%
Pipeline Surveying	\$230.00	per Hour	\$28,842.00	1.75%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Harvest MMS POCS 29056 (Ver 1) Segment#:4320

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$12,870.02	0.83%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$362,076.00	23.31%
DP Dive Boat	\$3,300.00	per Hour	\$905,520.00	58.29%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.64%
Pipeline Surveying	\$230.00	per Hour	\$26,312.00	1.69%



MMS

Pipeline Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1) Segment#:42103

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 24.77%	\$264,000.00 15.99%
DP Dive Boat	\$264,000.00		
Set Up Dive Boat		3.00 0.93%	\$30,422.50 1.84%
DP Dive Boat	\$9,900.00		
Dive Basic Spread Saturation	\$9,495.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Manual Calculation	\$10,000.00		
Rig Up Decomm Equipment		5.00 1.55%	\$34,037.50 2.06%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		20.00 6.19%	\$136,150.00 8.25%
DP Dive Boat	\$66,000.00		
Dive Basic Spread Saturation	\$63,300.00		
Decommissioning Crew	\$2,250.00		
Pipeline Surveying	\$4,600.00		
Derig Decomm Equipment		2.00 0.62%	\$13,615.00 0.82%
DP Dive Boat	\$6,600.00		
Dive Basic Spread Saturation	\$6,330.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		11.55 3.58%	\$78,626.63 4.76%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.58%	\$78,626.63	4.76%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.93%	\$20,422.50	1.24%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	3.58%	\$78,626.63	4.76%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.58%	\$78,626.63	4.76%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		80.00	24.77%	\$264,000.00	15.99%
DP Dive Boat	\$264,000.00				
Total		285.40	88.35%	\$1,391,660.52	84.30%



MMS

Pipeline Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1) Segment#:43203

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 25.91%	\$264,000.00 16.99%
DP Dive Boat	\$264,000.00		
Set Up Dive Boat		3.00 0.97%	\$30,422.50 1.96%
DP Dive Boat	\$9,900.00		
Dive Basic Spread Saturation	\$9,495.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Manual Calculation	\$10,000.00		
Rig Up Decomm Equipment		5.00 1.62%	\$34,037.50 2.19%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		9.00 2.92%	\$61,267.50 3.94%
DP Dive Boat	\$29,700.00		
Dive Basic Spread Saturation	\$28,485.00		
Decommissioning Crew	\$1,012.50		
Pipeline Surveying	\$2,070.00		
Derig Decomm Equipment		2.00 0.65%	\$13,615.00 0.88%
DP Dive Boat	\$6,600.00		
Dive Basic Spread Saturation	\$6,330.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		11.55 3.74%	\$78,626.63 5.06%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.74%	\$78,626.63	5.06%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.49%	\$52,417.75	3.37%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.49%	\$52,417.75	3.37%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.49%	\$52,417.75	3.37%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.97%	\$20,422.50	1.31%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	3.74%	\$78,626.63	5.06%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.74%	\$78,626.63	5.06%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.49%	\$52,417.75	3.37%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.49%	\$52,417.75	3.37%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.49%	\$52,417.75	3.37%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		80.00	25.91%	\$264,000.00	16.99%
DP Dive Boat	\$264,000.00				
Total		274.40	88.88%	\$1,316,778.02	84.77%



MMS

Well Information

Harvest MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 15.00%

Partner Data

Partner	Working Interest
1 Plains Exploration & Production Company	100.00%

Well Data

Diameter	Depth	Surface Pressure
----------	-------	------------------

Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Harvest MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$3,729,068.00 76.92%
Task Total			0.00	\$3,729,068.00 76.92%
Misc. Work Provision (15.00%)			0.00	\$559,360.22 11.54%
ather Contingency (15.00%)			0.00	\$559,360.22 11.54%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$4,847,788.44 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Harvest MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$3,729,068.00 76.92%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Harvest MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$3,729,068.00	76.92%
Manual Calculation			\$3,729,068.00	
Total	0.00	0.00%	\$3,729,068.00	76.92%

Henry MMS POCS 29056



MMS

Platform Salvage Option

Henry MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Henry will be removed along with Platforms A, B, C, Hillhouse and Gina.
- Platform Henry is an 8-pile platform installed in 1979 in 173' of water.
- The estimated removal weight is the deck weight is 1,371 tons and the jacket weight is 1,311 tons.
- The platform has a total of 23 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 24 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and one 400' cargo barge will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 2 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The three pipelines (oil, gas, water) on the OCS will be totally removed to the state



MMS

Platform Salvage Option

Henry MMS POCS 29056 (Ver 1)

water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

Henry MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$18,621,652

Estimated Decommissioning Net Cost = \$18,621,652



MMS

Basic Information

Henry MMS POCS 29056 (Ver 1)

General Data

Platform:	Henry MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	173'
Pre 461H?:	Yes
Year Installed:	1979
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0240
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	23
# Pipelines to Abandon:	3
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$15,032,080	\$15,032,080
Well Plugging & Abandonment:	\$3,087,090	\$3,087,090
Pipeline Abandonment:	\$502,482	\$502,482
Total Decommissioning Cost:	\$18,621,652	\$18,621,652



MMS

Platform Information

Henry MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	42"	0.5"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	24
Number Installed:	24
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	1311.00		
Jacket Installation Date:	8/31/79		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	1371 Tons
Number of Padeyes Required:	12
Deck Installation Date:	8/31/79
Deck Contractor:	Unknown



MMS

Platform Information

Henry MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 400 x 100	Jkt > 700T	Conductors		

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$1,254,670.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Henry MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$845,846.00	5.63%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.05%	\$425,833.00	2.83%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.05%	\$1,803,662.00	12.00%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.05%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.05%	\$1,269,710.00	8.45%
Mobilize DB 2000	Mob from Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	10.57%	\$1,530,000.00	10.18%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.19%	\$72,296.00	0.48%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.19%	\$36,600.00	0.24%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	10.30	0.54%	\$46,556.00	0.31%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.36%	\$84,510.00	0.56%
Cut Deck/Equip/Misc	Seperate 4 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	1.27%	\$324,000.00	2.16%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	1.27%	\$324,000.00	2.16%
Remove 8 Pile Deck	Remove 12 Pile Deck, 4 modules	<input checked="" type="checkbox"/>	48.00	2.54%	\$648,000.00	4.31%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.19%	\$44,296.00	0.29%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	31.00	1.64%	\$419,120.00	2.79%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	42.38	2.24%	\$612,753.60	4.08%
Remove Jacket - Meth 1		<input checked="" type="checkbox"/>	20.75	1.10%	\$280,540.00	1.87%
Demob CB 400 & Tug	Demob to Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.19%	\$22,600.00	0.15%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.36%	\$84,510.00	0.56%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	10.30	0.54%	\$46,556.00	0.31%
Demob DB 2000	Demob to Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	10.57%	\$1,530,000.00	10.18%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	3.80%	\$709,000.00	4.72%
Offload CB 300		<input type="checkbox"/>	672.00	35.50%	\$177,760.00	1.18%
Offload CB 400		<input type="checkbox"/>	360.00	19.02%	\$113,600.00	0.76%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.05%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$537,380.00	3.57%
Task Total			1823.63	96.33%	\$12,003,114.60	79.85%
Misc. Work Provision (15.00%)			41.64	2.20%	\$1,064,578.00	7.08%
Weather Contingency (10.00%)			27.76	1.47%	\$709,718.60	4.72%
Consumables					\$0.00	0.00%
Waste Disposal					\$1,254,670.00	8.35%
Structure & Equipment Disposal					\$0.00	0.00%



MMS

Platform Decommission Task Information

Henry MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
			Total:	1893.03 100.00% ;15,032,081.20 100.00%



MMS

Platform Decommission Resources Breakdown

Henry MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$140,143.75	0.93%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$137,760.00	0.92%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$93,600.00	0.62%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$182,672.00	1.22%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$139,330.00	0.93%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$60,000.00	0.40%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$4,790,855.00	31.87%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$709,687.95	4.72%
Manual Calculation	\$0.00	Independently Calculated	\$5,605,417.00	37.29%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$39,776.00	0.26%
Pipeline Survey	\$230.00	per Hour	\$51,572.90	0.34%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.19%
Rig Up CB 400	\$14,000.00	per Barge	\$14,000.00	0.09%
Work Boat	\$500.00	per Hour	\$10,300.00	0.07%



MMS

Platform Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$845,846.00	5.63%
Manual Calculation			\$845,846.00	
NMFS Marine Observation	1.00	0.05%	\$425,833.00	2.83%
Manual Calculation			\$425,833.00	
Sever Conductors- Abrasive	1.00	0.05%	\$1,803,662.00	12.00%
Manual Calculation			\$1,803,662.00	
Mobilize Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.05%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	
Platform Removal Preparation	1.00	0.05%	\$1,269,710.00	8.45%
Manual Calculation			\$1,269,710.00	
Mobilize DB 2000	200.00	10.57%	\$1,530,000.00	10.18%
Derrick Barge 2000			\$1,530,000.00	
Mobilize CB 300 & Tug	22.60	1.19%	\$72,296.00	0.48%
CB 300 & Tug			\$44,296.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	22.60	1.19%	\$36,600.00	0.24%
Rig Up CB 400			\$14,000.00	
CB 400 & Tug			\$22,600.00	
Mobilize Dive Spread	10.30	0.54%	\$46,556.00	0.31%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Setup Derrick Barge	6.75	0.36%	\$84,510.00	0.56%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	1.27%	\$324,000.00	2.16%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	1.27%	\$324,000.00	2.16%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	48.00	2.54%	\$648,000.00	4.31%
Derrick Barge 2000			\$408,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Demob CB 300 & Tug	22.60	1.19%	\$44,296.00	0.29%
CB 300 & Tug			\$44,296.00	
Jet/Airlift Pile Mud Plug	31.00	1.64%	\$419,120.00	2.79%
Derrick Barge 2000			\$263,500.00	
Dive Basic Spread Saturation			\$98,115.00	
Pipeline Survey			\$7,130.00	
Abrasive Cutter Spread			\$19,375.00	
CB 400 & Tug			\$31,000.00	



MMS

Platform Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Sever Piles- Abrasive	42.38	2.24%	\$612,753.60	4.08%
Derrick Barge 2000			\$360,230.00	
Dive Basic Spread Saturation			\$134,132.70	
Pipeline Survey			\$9,747.40	
Abrasive Cutter Spread			\$26,487.50	
CB 400 & Tug			\$42,380.00	
Pile Abrasive Cut 7 to 48 inches			\$39,776.00	
Remove Jacket - Meth 1	20.75	1.10%	\$280,540.00	1.87%
Derrick Barge 2000			\$176,375.00	
Dive Basic Spread Saturation			\$65,673.75	
Pipeline Survey			\$4,772.50	
Abrasive Cutter Spread			\$12,968.75	
CB 400 & Tug			\$20,750.00	
Demob CB 400 & Tug	22.60	1.19%	\$22,600.00	0.15%
CB 400 & Tug			\$22,600.00	
Pick Up DB Anchors	6.75	0.36%	\$84,510.00	0.56%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	



MMS

Platform Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	10.30	0.54%	\$46,556.00	0.31%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Demob DB 2000	200.00	10.57%	\$1,530,000.00	10.18%
Derrick Barge 2000			\$1,530,000.00	
Site Clearance - with Divers	72.00	3.80%	\$709,000.00	4.72%
Manual Calculation			\$709,000.00	
Offload CB 300	672.00	35.50%	\$177,760.00	1.18%
Cargo Barge 300			\$137,760.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	360.00	19.02%	\$113,600.00	0.76%
Cargo Barge 400			\$93,600.00	
CB Damage Deduct			\$20,000.00	
Demob Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.05%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	



MMS

Platform Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$537,380.00	3.57%
Manual Calculation			\$537,380.00	
Total	1823.63	96.33%	\$12,003,114.60	79.85%



MMS

Pipeline Information

Henry MMS POCS 29056 (Ver1) Segment#:2320240

General Data

Water Depth:	173'
Origin / Terminus:	Origin
Opposite End Name:	Hillhouse
Opposite End Water Depth:	190'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6"	Wall Thickness:	0.432"	Length:	13148'
Depth of Burial:	3'	# Crossings:		Product:	Gas
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the Hillhouse Platform. It is estimated as abandoned in place.



MMS

Pipeline Information

Henry MMS POCS 29056 (Ver1) Segment#:2410240

General Data

Water Depth:	173'
Origin / Terminus:	Origin
Opposite End Name:	Hillhouse
Opposite End Water Depth:	190'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	8"	Wall Thickness:	0.5"	Length:	13148'
Depth of Burial:	3'	# Crossings:		Product:	Oil
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the Hillhouse Platform. It is estimated as abandoned in place.



MMS

Pipeline Information

Henry MMS POCS 29056 (Ver1) Segment#:2530240

General Data

Water Depth:	173'
Origin / Terminus:	Origin
Opposite End Name:	Hillhouse
Opposite End Water Depth:	190'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6"	Wall Thickness:	0.432"	Length:	13148'
Depth of Burial:	3'	# Crossings:		Product:	Water
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the Hillhouse Platform. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Henry MMS POCS 29056 (Ver 1) Segment#:2320240

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	10.30	11.29%	\$18,648.15	11.29%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.48%	\$9,052.50	5.48%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	3.00	3.29%	\$5,431.50	3.29%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.19%	\$3,621.00	2.19%
Expose Pipeline		<input checked="" type="checkbox"/>	5.59	6.13%	\$10,120.70	6.13%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.59	6.13%	\$10,120.70	6.13%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Bury Pipeline		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Reposition Workboat		<input checked="" type="checkbox"/>	3.25	3.56%	\$5,884.13	3.56%
Expose Pipeline		<input checked="" type="checkbox"/>	5.59	6.13%	\$10,120.70	6.13%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.59	6.13%	\$10,120.70	6.13%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Bury Pipeline		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Demob Work Boat		<input type="checkbox"/>	10.30	11.29%	\$18,648.15	11.29%
Task Total			78.53	86.05%	\$142,178.59	86.05%
Misc. Work Provision (15.00%)			7.64	8.37%	\$13,831.32	8.37%
ather Contingency (10.00%)			5.09	5.58%	\$9,220.88	5.58%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			91.26	100.00%	\$165,230.79	100.00%



MMS

Pipeline Decommission Task Information

Henry MMS POCS 29056 (Ver 1) Segment#:2410240

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	10.30	10.84%	\$18,648.15	10.84%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.26%	\$9,052.50	5.26%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	6.00	6.31%	\$10,863.00	6.31%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.10%	\$3,621.00	2.10%
Expose Pipeline		<input checked="" type="checkbox"/>	5.59	5.88%	\$10,120.70	5.88%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.59	5.88%	\$10,120.70	5.88%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.72	3.92%	\$6,735.06	3.92%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.72	3.92%	\$6,735.06	3.92%
Bury Pipeline		<input checked="" type="checkbox"/>	3.72	3.92%	\$6,735.06	3.92%
Reposition Workboat		<input checked="" type="checkbox"/>	3.25	3.42%	\$5,884.13	3.42%
Expose Pipeline		<input checked="" type="checkbox"/>	5.59	5.88%	\$10,120.70	5.88%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.59	5.88%	\$10,120.70	5.88%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.72	3.92%	\$6,735.06	3.92%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.72	3.92%	\$6,735.06	3.92%
Bury Pipeline		<input checked="" type="checkbox"/>	3.72	3.92%	\$6,735.06	3.92%
Demob Work Boat		<input type="checkbox"/>	10.30	10.84%	\$18,648.15	10.84%
Task Total			81.53	85.81%	\$147,610.09	85.81%
Misc. Work Provision (15.00%)			8.09	8.51%	\$14,646.04	8.51%
ather Contingency (10.00%)			5.39	5.68%	\$9,764.03	5.68%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			95.01	100.00%	\$172,020.16	100.00%



MMS

Pipeline Decommission Task Information

Henry MMS POCS 29056 (Ver 1) Segment#:2530240

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	10.30	11.29%	\$18,648.15	11.29%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.48%	\$9,052.50	5.48%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	3.00	3.29%	\$5,431.50	3.29%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.19%	\$3,621.00	2.19%
Expose Pipeline		<input checked="" type="checkbox"/>	5.59	6.13%	\$10,120.70	6.13%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.59	6.13%	\$10,120.70	6.13%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Bury Pipeline		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Reposition Workboat		<input checked="" type="checkbox"/>	3.25	3.56%	\$5,884.13	3.56%
Expose Pipeline		<input checked="" type="checkbox"/>	5.59	6.13%	\$10,120.70	6.13%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.59	6.13%	\$10,120.70	6.13%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Bury Pipeline		<input checked="" type="checkbox"/>	3.72	4.08%	\$6,735.06	4.08%
Demob Work Boat		<input type="checkbox"/>	10.30	11.29%	\$18,648.15	11.29%
Task Total			78.53	86.05%	\$142,178.59	86.05%
Misc. Work Provision (15.00%)			7.64	8.37%	\$13,831.32	8.37%
ather Contingency (10.00%)			5.09	5.58%	\$9,220.88	5.58%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			91.26	100.00%	\$165,230.79	100.00%



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MMS

Pipeline Decommission Resources Breakdown

Henry MMS POCS 29056 (Ver 1) Segment#:232024

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,834.65	5.35%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$69,499.05	42.06%
Pipeline Surveying	\$230.00	per Hour	\$18,061.90	10.93%
Work Boat	\$583.00	per Hour	\$45,782.99	27.71%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Henry MMS POCS 29056 (Ver 1) Segment#:241024

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$9,172.15	5.33%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$72,154.05	41.95%
Pipeline Surveying	\$230.00	per Hour	\$18,751.90	10.90%
Work Boat	\$583.00	per Hour	\$47,531.99	27.63%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Henry MMS POCS 29056 (Ver 1) Segment#:253024

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$8,834.65	5.35%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$69,499.05	42.06%
Pipeline Surveying	\$230.00	per Hour	\$18,061.90	10.93%
Work Boat	\$583.00	per Hour	\$45,782.99	27.71%



MMS

Pipeline Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1) Segment#:232024

Task		Task Hours	Task Cost
Mobilize Work Boat		10.30 11.29%	\$18,648.15 11.29%
Work Boat	\$6,004.90		
Dive Basic Spread- Mixed Gas	\$9,115.50		
Decommissioning Crew	\$1,158.75		
Pipeline Surveying	\$2,369.00		
Rig Up Decomm Equipment		5.00 5.48%	\$9,052.50 5.48%
Work Boat	\$2,915.00		
Dive Basic Spread- Mixed Gas	\$4,425.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		3.00 3.29%	\$5,431.50 3.29%
Work Boat	\$1,749.00		
Dive Basic Spread- Mixed Gas	\$2,655.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Derig Decomm Equipment		2.00 2.19%	\$3,621.00 2.19%
Work Boat	\$1,166.00		
Dive Basic Spread- Mixed Gas	\$1,770.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		5.59 6.13%	\$10,120.70 6.13%
Work Boat	\$3,258.97		
Dive Basic Spread- Mixed Gas	\$4,947.15		
Decommissioning Crew	\$628.88		
Pipeline Surveying	\$1,285.70		
Cut & Plug Pipeline		5.59 6.13%	\$10,120.70 6.13%
Work Boat	\$3,258.97		
Dive Basic Spread- Mixed Gas	\$4,947.15		
Decommissioning Crew	\$628.88		
Pipeline Surveying	\$1,285.70		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Remove Tube Turn		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Bury Pipeline		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Reposition Workboat		3.25	3.56%	\$5,884.13	3.56%
Work Boat	\$1,894.75				
Dive Basic Spread- Mixed Gas	\$2,876.25				
Decommissioning Crew	\$365.63				
Pipeline Surveying	\$747.50				
Expose Pipeline		5.59	6.13%	\$10,120.70	6.13%
Work Boat	\$3,258.97				
Dive Basic Spread- Mixed Gas	\$4,947.15				
Decommissioning Crew	\$628.88				
Pipeline Surveying	\$1,285.70				
Cut & Plug Pipeline		5.59	6.13%	\$10,120.70	6.13%
Work Boat	\$3,258.97				
Dive Basic Spread- Mixed Gas	\$4,947.15				
Decommissioning Crew	\$628.88				
Pipeline Surveying	\$1,285.70				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Remove Tube Turn		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Bury Pipeline		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Demob Work Boat		10.30	11.29%	\$18,648.15	11.29%
Work Boat	\$6,004.90				
Dive Basic Spread- Mixed Gas	\$9,115.50				
Decommissioning Crew	\$1,158.75				
Pipeline Surveying	\$2,369.00				
Total		78.53	86.05%	\$142,178.59	86.05%



MMS

Pipeline Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1) Segment#:241024

Task		Task Hours	Task Cost
Mobilize Work Boat		10.30 10.84%	\$18,648.15 10.84%
Work Boat	\$6,004.90		
Dive Basic Spread- Mixed Gas	\$9,115.50		
Decommissioning Crew	\$1,158.75		
Pipeline Surveying	\$2,369.00		
Rig Up Decomm Equipment		5.00 5.26%	\$9,052.50 5.26%
Work Boat	\$2,915.00		
Dive Basic Spread- Mixed Gas	\$4,425.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		6.00 6.31%	\$10,863.00 6.31%
Work Boat	\$3,498.00		
Dive Basic Spread- Mixed Gas	\$5,310.00		
Decommissioning Crew	\$675.00		
Pipeline Surveying	\$1,380.00		
Derig Decomm Equipment		2.00 2.10%	\$3,621.00 2.10%
Work Boat	\$1,166.00		
Dive Basic Spread- Mixed Gas	\$1,770.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		5.59 5.88%	\$10,120.70 5.88%
Work Boat	\$3,258.97		
Dive Basic Spread- Mixed Gas	\$4,947.15		
Decommissioning Crew	\$628.88		
Pipeline Surveying	\$1,285.70		
Cut & Plug Pipeline		5.59 5.88%	\$10,120.70 5.88%
Work Boat	\$3,258.97		
Dive Basic Spread- Mixed Gas	\$4,947.15		
Decommissioning Crew	\$628.88		
Pipeline Surveying	\$1,285.70		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.72	3.92%	\$6,735.06	3.92%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Remove Tube Turn		3.72	3.92%	\$6,735.06	3.92%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Bury Pipeline		3.72	3.92%	\$6,735.06	3.92%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Reposition Workboat		3.25	3.42%	\$5,884.13	3.42%
Work Boat	\$1,894.75				
Dive Basic Spread- Mixed Gas	\$2,876.25				
Decommissioning Crew	\$365.63				
Pipeline Surveying	\$747.50				
Expose Pipeline		5.59	5.88%	\$10,120.70	5.88%
Work Boat	\$3,258.97				
Dive Basic Spread- Mixed Gas	\$4,947.15				
Decommissioning Crew	\$628.88				
Pipeline Surveying	\$1,285.70				
Cut & Plug Pipeline		5.59	5.88%	\$10,120.70	5.88%
Work Boat	\$3,258.97				
Dive Basic Spread- Mixed Gas	\$4,947.15				
Decommissioning Crew	\$628.88				
Pipeline Surveying	\$1,285.70				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.72	3.92%	\$6,735.06	3.92%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Remove Tube Turn		3.72	3.92%	\$6,735.06	3.92%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Bury Pipeline		3.72	3.92%	\$6,735.06	3.92%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Demob Work Boat		10.30	10.84%	\$18,648.15	10.84%
Work Boat	\$6,004.90				
Dive Basic Spread- Mixed Gas	\$9,115.50				
Decommissioning Crew	\$1,158.75				
Pipeline Surveying	\$2,369.00				
Total		81.53	85.81%	\$147,610.09	85.81%



MMS

Pipeline Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1) Segment#:253024

Task		Task Hours	Task Cost
Mobilize Work Boat		10.30 11.29%	\$18,648.15 11.29%
Work Boat	\$6,004.90		
Dive Basic Spread- Mixed Gas	\$9,115.50		
Decommissioning Crew	\$1,158.75		
Pipeline Surveying	\$2,369.00		
Rig Up Decomm Equipment		5.00 5.48%	\$9,052.50 5.48%
Work Boat	\$2,915.00		
Dive Basic Spread- Mixed Gas	\$4,425.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		3.00 3.29%	\$5,431.50 3.29%
Work Boat	\$1,749.00		
Dive Basic Spread- Mixed Gas	\$2,655.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Derig Decomm Equipment		2.00 2.19%	\$3,621.00 2.19%
Work Boat	\$1,166.00		
Dive Basic Spread- Mixed Gas	\$1,770.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		5.59 6.13%	\$10,120.70 6.13%
Work Boat	\$3,258.97		
Dive Basic Spread- Mixed Gas	\$4,947.15		
Decommissioning Crew	\$628.88		
Pipeline Surveying	\$1,285.70		
Cut & Plug Pipeline		5.59 6.13%	\$10,120.70 6.13%
Work Boat	\$3,258.97		
Dive Basic Spread- Mixed Gas	\$4,947.15		
Decommissioning Crew	\$628.88		
Pipeline Surveying	\$1,285.70		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Remove Tube Turn		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Bury Pipeline		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Reposition Workboat		3.25	3.56%	\$5,884.13	3.56%
Work Boat	\$1,894.75				
Dive Basic Spread- Mixed Gas	\$2,876.25				
Decommissioning Crew	\$365.63				
Pipeline Surveying	\$747.50				
Expose Pipeline		5.59	6.13%	\$10,120.70	6.13%
Work Boat	\$3,258.97				
Dive Basic Spread- Mixed Gas	\$4,947.15				
Decommissioning Crew	\$628.88				
Pipeline Surveying	\$1,285.70				
Cut & Plug Pipeline		5.59	6.13%	\$10,120.70	6.13%
Work Boat	\$3,258.97				
Dive Basic Spread- Mixed Gas	\$4,947.15				
Decommissioning Crew	\$628.88				
Pipeline Surveying	\$1,285.70				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Remove Tube Turn		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Bury Pipeline		3.72	4.08%	\$6,735.06	4.08%
Work Boat	\$2,168.76				
Dive Basic Spread- Mixed Gas	\$3,292.20				
Decommissioning Crew	\$418.50				
Pipeline Surveying	\$855.60				
Demob Work Boat		10.30	11.29%	\$18,648.15	11.29%
Work Boat	\$6,004.90				
Dive Basic Spread- Mixed Gas	\$9,115.50				
Decommissioning Crew	\$1,158.75				
Pipeline Surveying	\$2,369.00				
Total		78.53	86.05%	\$142,178.59	86.05%



MMS

Well Information

Henry MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Henry MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$2,469,672.00 80.00%
Task Total			0.00	\$2,469,672.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$370,450.81 12.00%
ather Contingency (10.00%)			0.00	\$246,967.20 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$3,087,090.02 100.00%



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MMS

Well Decommission Resources Breakdown

Henry MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$2,469,672.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Henry MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$2,469,672.00	80.00%
Manual Calculation			\$2,469,672.00	
Total	0.00	0.00%	\$2,469,672.00	80.00%

Heritage MMS POCS 29056



MMS

Platform Salvage Option

Heritage MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Heritage will be removed along with Platforms Hondo and Harmony.
- Platform Heritage is an 8-pile platform installed in 1989 in 1075' of water.
- The estimated removal weight is the deck weight is 9,826 tons and the jacket weight is 32,420 tons.
- The platform has a total of 48 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 49 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 4000 that will be mobilized from the GOM or North Sea. The total mob/demob time will be 200 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Fourteen 400' cargo barges will transport the deck modules and jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 14 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The two pipelines (oil, gas) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running



MMS

Platform Salvage Option

Heritage MMS POCS 29056 (Ver 1)

from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Huenem, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this



MMS

Platform Salvage Option

Heritage MMS POCS 29056 (Ver 1)

estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$149,600,073

Estimated Decommissioning Net Cost = \$149,600,073



MMS

Basic Information

Heritage MMS POCS 29056 (Ver 1)

General Data

Platform:	Heritage MMS POCS 29056
Function:	SELF CONTAINED
Type:	Steel
Water Depth:	1075'
Pre 461H?:	No
Year Installed:	1989
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0182
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	48
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Exxon Mobil Corporation	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$133,002,496	\$133,002,496
Well Plugging & Abandonment:	\$12,801,695	\$12,801,695
Pipeline Abandonment:	\$3,795,882	\$3,795,882
Total Decommissioning Cost:	\$149,600,073	\$149,600,073



MMS

Platform Information

Heritage MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	72"		Yes	No	
Skirt/Braced	26	84"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	60
Number Installed:	49
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	32420.00		
Jacket Installation Date:	1/1/1989		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	9826 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1989
Deck Contractor:	Unknown



MMS

Platform Information

Heritage MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$23,123,496.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Heritage MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$6,724,543.00	5.06%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.01%	\$851,667.00	0.64%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.01%	\$13,984.00	0.01%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.01%	\$13,578,128.00	10.21%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.01%	\$4,306,129.00	3.24%
Mobilize DB 4000	Mob from GOM or North Sea, 100 days divided by 3 platforms	<input type="checkbox"/>	800.00	6.78%	\$7,560,000.00	5.68%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 14)	<input type="checkbox"/>	25.60	0.22%	\$554,400.00	0.42%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	11.80	0.10%	\$53,336.00	0.04%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.06%	\$108,810.00	0.08%
Cut Deck/Equip/Misc	Seperate 13 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.20%	\$410,400.00	0.31%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.20%	\$410,400.00	0.31%
Remove 8 Pile Deck	Remove 8 Pile Deck, 13 modules	<input checked="" type="checkbox"/>	120.00	1.02%	\$2,052,000.00	1.54%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	0.00	0.00%	\$0.00	0.00%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	284.66	2.41%	\$5,238,879.24	3.94%
Cut Jacket	31 Hours per section, times 33 section(s), per MMS	<input checked="" type="checkbox"/>	1032.00	8.75%	\$17,836,888.00	13.41%
Remove Jacket - Meth 1	31 Hours per section, times 33 section(s), per MMS	<input checked="" type="checkbox"/>	1032.00	8.75%	\$17,667,840.00	13.28%
Demob CB 400 & Tug	Demob to Port of LA (Qty 14)	<input type="checkbox"/>	25.60	0.22%	\$358,400.00	0.27%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.06%	\$108,810.00	0.08%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	11.80	0.10%	\$53,336.00	0.04%
Demob DB 4000	Demob to GOM or North Sea, 100 days divided by 3 platforms	<input type="checkbox"/>	800.00	6.78%	\$7,560,000.00	5.68%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	0.61%	\$1,282,000.00	0.96%
Offload CB 400		<input type="checkbox"/>	6864.00	58.18%	\$2,064,640.00	1.55%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.01%	\$13,984.00	0.01%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$4,256,258.00	3.20%
Task Total			11145.96	94.48%	\$93,064,832.24	69.97%
Misc. Work Provision (15.00%)			390.62	3.31%	\$10,088,480.00	7.59%
Weather Contingency (10.00%)			260.42	2.21%	\$6,725,655.00	5.06%
Consumables					\$0.00	0.00%
Waste Disposal					\$23,123,500.00	17.39%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%



MMS

Platform Decommission Task Information

Heritage MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:				11797.00 100.00% 33,002,467.24 100.00%



MMS

Platform Decommission Resources Breakdown

Heritage MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$1,596,100.00	1.20%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$1,784,640.00	1.34%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$164,640.00	0.12%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$3,065,460.00	2.30%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$280,000.00	0.21%
Derrick Barge 4000	\$10,500.00	per Hour per barge	41,686,680.00	31.34%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$8,082,650.44	6.08%
Manual Calculation	\$0.00	Independently Calculated	31,026,693.00	23.33%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$169,048.00	0.13%
Pile Abrasive Cut 70 to 96 inches	\$5,375.00	per Cut	\$365,500.00	0.27%
Pipeline Survey	\$230.00	per Hour	\$587,364.80	0.44%
Rem. Operated Vehicle	\$800.00	per Hour	\$4,048,256.00	3.04%
Rig Up CB 400	\$14,000.00	per Barge	\$196,000.00	0.15%
Work Boat	\$500.00	per Hour	\$11,800.00	0.01%



MMS

Platform Decommission Cost Breakdown

Heritage MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$6,724,543.00	5.06%
Manual Calculation			\$6,724,543.00	
NMFS Marine Observation	1.00	0.01%	\$851,667.00	0.64%
Manual Calculation			\$851,667.00	
Mobilize Abrasive Cutting Spread	1.00	0.01%	\$13,984.00	0.01%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Sever Conductors- Abrasive	1.00	0.01%	\$13,578,128.00	10.21%
Manual Calculation			\$13,578,128.00	
Platform Removal Preparation	1.00	0.01%	\$4,306,129.00	3.24%
Manual Calculation			\$4,306,129.00	
Mobilize DB 4000	800.00	6.78%	\$7,560,000.00	5.68%
Derrick Barge 4000			\$7,560,000.00	
Mobilize CB 400 & Tug	25.60	0.22%	\$554,400.00	0.42%
Rig Up CB 400			\$196,000.00	
CB 400 & Tug			\$358,400.00	



MMS

Platform Decommission Cost Breakdown

Heritage MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize Dive Spread	11.80	0.10%	\$53,336.00	0.04%
Work Boat			\$5,900.00	
Dive Basic Spread Saturation			\$37,347.00	
Abrasive Cutter Spread			\$7,375.00	
Pipeline Survey			\$2,714.00	
Setup Derrick Barge	6.75	0.06%	\$108,810.00	0.08%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	24.00	0.20%	\$410,400.00	0.31%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	
Remove Equipment	24.00	0.20%	\$410,400.00	0.31%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	



MMS

Platform Decommission Cost Breakdown

Heritage MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove 8 Pile Deck	120.00	1.02%	\$2,052,000.00	1.54%
Derrick Barge 4000			\$1,260,000.00	
Dive Basic Spread Saturation			\$379,800.00	
Pipeline Survey			\$27,600.00	
Abrasive Cutter Spread			\$75,000.00	
CB 300 & Tug			\$117,600.00	
Rem. Operated Vehicle			\$192,000.00	
Jet/Airlift Pile Mud Plug	0.00	0.00%	\$0.00	0.00%
Derrick Barge 4000			\$0.00	
Dive Basic Spread Saturation			\$0.00	
Pipeline Survey			\$0.00	
Abrasive Cutter Spread			\$0.00	
CB 400 & Tug			\$0.00	
Rem. Operated Vehicle			\$0.00	
Sever Piles- Abrasive	284.66	2.41%	\$5,238,879.24	3.94%
Derrick Barge 4000			\$2,988,930.00	
Dive Basic Spread Saturation			\$900,948.94	
Pipeline Survey			\$65,471.80	
Abrasive Cutter Spread			\$177,912.50	
CB 400 & Tug			\$284,660.00	
Pile Abrasive Cut 70 to 96 inches			\$365,500.00	
Rem. Operated Vehicle			\$455,456.00	



MMS

Platform Decommission Cost Breakdown

Heritage MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Cut Jacket		1032.00	8.75%	\$17,836,888.00	13.41%
	Derrick Barge 4000	\$10,836,000.00			
	Dive Basic Spread Saturation	\$3,266,280.00			
	Pipeline Survey	\$237,360.00			
	Abrasive Cutter Spread	\$645,000.00			
	CB 400 & Tug	\$1,032,000.00			
	Pile Abrasive Cut 7 to 48 inches	\$169,048.00			
	Rem. Operated Vehicle	\$1,651,200.00			
Remove Jacket - Meth 1		1032.00	8.75%	\$17,667,840.00	13.28%
	Derrick Barge 4000	\$10,836,000.00			
	Dive Basic Spread Saturation	\$3,266,280.00			
	Pipeline Survey	\$237,360.00			
	Abrasive Cutter Spread	\$645,000.00			
	CB 400 & Tug	\$1,032,000.00			
	Rem. Operated Vehicle	\$1,651,200.00			
Demob CB 400 & Tug		25.60	0.22%	\$358,400.00	0.27%
	CB 400 & Tug	\$358,400.00			
Pick Up DB Anchors		6.75	0.06%	\$108,810.00	0.08%
	Derrick Barge 4000	\$70,875.00			
	Dive Basic Spread Saturation	\$21,363.75			
	Pipeline Survey	\$1,552.50			
	Abrasive Cutter Spread	\$4,218.75			
	Rem. Operated Vehicle	\$10,800.00			



MMS

Platform Decommission Cost Breakdown

Heritage MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	11.80	0.10%	\$53,336.00	0.04%
Work Boat			\$5,900.00	
Dive Basic Spread Saturation			\$37,347.00	
Abrasive Cutter Spread			\$7,375.00	
Pipeline Survey			\$2,714.00	
Demob DB 4000	800.00	6.78%	\$7,560,000.00	5.68%
Derrick Barge 4000			\$7,560,000.00	
Site Clearance - with Divers	72.00	0.61%	\$1,282,000.00	0.96%
Manual Calculation			\$1,282,000.00	
Offload CB 400	6864.00	58.18%	\$2,064,640.00	1.55%
Cargo Barge 400			\$1,784,640.00	
CB Damage Deduct			\$280,000.00	
Demob Abrasive Cutting Spread	1.00	0.01%	\$13,984.00	0.01%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$4,256,258.00	3.20%
Manual Calculation			\$4,256,258.00	
Total	11145.96	94.48%	\$93,064,832.24	69.97%



MMS

Pipeline Information

Heritage MMS POCS 29056 (Ver1) Segment#:58101

General Data

Water Depth:	1075'
Origin / Terminus:	Origin
Opposite End Name:	Harmony
Opposite End Water Depth:	1198'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	20"	Wall Thickness:		Length:	38223'
Depth of Burial:		# Crossings:		Product:	OIL
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Harmony Platform.
It is estimated as abandoned in place.



MMS

Pipeline Information

Heritage MMS POCS 29056 (Ver1) Segment#:59201

General Data

Water Depth:	1075'
Origin / Terminus:	Origin
Opposite End Name:	Harmony
Opposite End Water Depth:	1198'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	12"	Wall Thickness:		Length:	36496'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Harmony Platform.
It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Heritage MMS POCS 29056 (Ver 1) Segment#:5810182

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	140.00	28.69%	\$462,000.00	23.79%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.61%	\$39,239.50	2.02%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.02%	\$23,732.50	1.22%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	75.00	15.37%	\$355,987.50	18.33%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.41%	\$9,493.00	0.49%
Expose Pipeline		<input checked="" type="checkbox"/>	11.75	2.41%	\$55,771.38	2.87%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.75	2.41%	\$55,771.38	2.87%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.83	1.60%	\$37,165.09	1.91%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.83	1.60%	\$37,165.09	1.91%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.61%	\$14,239.50	0.73%
Expose Pipeline		<input checked="" type="checkbox"/>	11.75	2.41%	\$55,771.38	2.87%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.75	2.41%	\$55,771.38	2.87%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.83	1.60%	\$37,165.09	1.91%
Bury Pipeline		<input checked="" type="checkbox"/>	7.83	1.60%	\$37,165.09	1.91%
Demob Dive Boat		<input type="checkbox"/>	140.00	28.69%	\$462,000.00	23.79%
Task Total			446.32	91.48%	\$1,738,437.88	89.52%
Misc. Work Provision (15.00%)			24.95	5.11%	\$122,165.69	6.29%
Other Contingency (10.00%)			16.63	3.41%	\$81,443.79	4.19%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			487.90	100.00%	\$1,942,047.35	100.00%



MMS

Pipeline Decommission Task Information

Heritage MMS POCS 29056 (Ver 1) Segment#:5920182

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	140.00	32.81%	\$462,000.00	24.92%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.70%	\$39,239.50	2.12%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.17%	\$23,732.50	1.28%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	26.00	6.09%	\$123,409.00	6.66%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.47%	\$9,493.00	0.51%
Expose Pipeline		<input checked="" type="checkbox"/>	11.75	2.75%	\$55,771.38	3.01%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.75	2.75%	\$55,771.38	3.01%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.83	1.84%	\$37,165.09	2.00%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.83	1.84%	\$37,165.09	2.00%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.70%	\$14,239.50	0.77%
Expose Pipeline		<input checked="" type="checkbox"/>	11.75	2.75%	\$55,771.38	3.01%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.75	2.75%	\$55,771.38	3.01%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.83	1.84%	\$37,165.09	2.00%
Bury Pipeline		<input checked="" type="checkbox"/>	7.83	1.84%	\$37,165.09	2.00%
Demob Dive Boat		<input type="checkbox"/>	140.00	32.81%	\$664,510.00	35.85%
Task Total			397.32	93.13%	\$1,708,369.38	92.15%
Misc. Work Provision (15.00%)			17.60	4.12%	\$87,278.91	4.71%
Other Contingency (10.00%)			11.73	2.75%	\$58,185.94	3.14%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			426.65	100.00%	\$1,853,834.23	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Heritage MMS POCS 29056 (Ver 1) Segment#:5810

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$18,711.00	0.96%
DP Dive Boat	\$3,300.00	per Hour	\$1,472,856.00	75.84%
Manual Calculation	\$0.00	Independently Calculated	\$25,000.00	1.29%
Rem. Operated Vehicle	\$667.00	per Hour	\$221,870.88	11.42%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Heritage MMS POCS 29056 (Ver 1) Segment#:5920

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$28,948.50	1.56%
DP Dive Boat	\$3,300.00	per Hour	\$1,311,156.00	70.73%
Manual Calculation	\$0.00	Independently Calculated	\$25,000.00	1.35%
Rem. Operated Vehicle	\$667.00	per Hour	\$343,264.88	18.52%



MMS

Pipeline Decommission Cost Breakdown

Heritage MMS POCS 29056 (Ver 1) Segment#:5810

Task		Task Hours	Task Cost
Mobilize Dive Boat		140.00 28.69%	\$462,000.00 23.79%
DP Dive Boat	\$462,000.00		
Set Up Dive Boat		3.00 0.61%	\$39,239.50 2.02%
DP Dive Boat	\$9,900.00		
Decommissioning Crew	\$337.50		
Rem. Operated Vehicle	\$4,002.00		
Manual Calculation	\$25,000.00		
Rig Up Decomm Equipment		5.00 1.02%	\$23,732.50 1.22%
DP Dive Boat	\$16,500.00		
Decommissioning Crew	\$562.50		
Rem. Operated Vehicle	\$6,670.00		
Pig & Flush Pipeline		75.00 15.37%	\$355,987.50 18.33%
DP Dive Boat	\$247,500.00		
Decommissioning Crew	\$8,437.50		
Rem. Operated Vehicle	\$100,050.00		
Derig Decomm Equipment		2.00 0.41%	\$9,493.00 0.49%
DP Dive Boat	\$6,600.00		
Decommissioning Crew	\$225.00		
Rem. Operated Vehicle	\$2,668.00		
Expose Pipeline		11.75 2.41%	\$55,771.38 2.87%
DP Dive Boat	\$38,775.00		
Decommissioning Crew	\$1,321.88		
Rem. Operated Vehicle	\$15,674.50		
Cut & Plug Pipeline		11.75 2.41%	\$55,771.38 2.87%
DP Dive Boat	\$38,775.00		
Decommissioning Crew	\$1,321.88		
Rem. Operated Vehicle	\$15,674.50		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		7.83	1.60%	\$37,165.09	1.91%
DP Dive Boat	\$25,839.00				
Decommissioning Crew	\$880.87				
Rem. Operated Vehicle	\$10,445.22				
Remove Tube Turn		7.83	1.60%	\$37,165.09	1.91%
DP Dive Boat	\$25,839.00				
Decommissioning Crew	\$880.87				
Rem. Operated Vehicle	\$10,445.22				
Set Up Dive Boat		3.00	0.61%	\$14,239.50	0.73%
DP Dive Boat	\$9,900.00				
Decommissioning Crew	\$337.50				
Rem. Operated Vehicle	\$4,002.00				
Expose Pipeline		11.75	2.41%	\$55,771.38	2.87%
DP Dive Boat	\$38,775.00				
Decommissioning Crew	\$1,321.88				
Rem. Operated Vehicle	\$15,674.50				
Cut & Plug Pipeline		11.75	2.41%	\$55,771.38	2.87%
DP Dive Boat	\$38,775.00				
Decommissioning Crew	\$1,321.88				
Rem. Operated Vehicle	\$15,674.50				
Remove Tube Turn		7.83	1.60%	\$37,165.09	1.91%
DP Dive Boat	\$25,839.00				
Decommissioning Crew	\$880.87				
Rem. Operated Vehicle	\$10,445.22				
Bury Pipeline		7.83	1.60%	\$37,165.09	1.91%
DP Dive Boat	\$25,839.00				
Decommissioning Crew	\$880.87				
Rem. Operated Vehicle	\$10,445.22				
Demob Dive Boat		140.00	28.69%	\$462,000.00	23.79%
DP Dive Boat	\$462,000.00				
Total		446.32	91.48%	\$1,738,437.88	89.52%



MMS

Pipeline Decommission Cost Breakdown

Heritage MMS POCS 29056 (Ver 1) Segment#:5920

Task		Task Hours	Task Cost
Mobilize Dive Boat		140.00 32.81%	\$462,000.00 24.92%
DP Dive Boat	\$462,000.00		
Set Up Dive Boat		3.00 0.70%	\$39,239.50 2.12%
DP Dive Boat	\$9,900.00		
Decommissioning Crew	\$337.50		
Rem. Operated Vehicle	\$4,002.00		
Manual Calculation	\$25,000.00		
Rig Up Decomm Equipment		5.00 1.17%	\$23,732.50 1.28%
DP Dive Boat	\$16,500.00		
Decommissioning Crew	\$562.50		
Rem. Operated Vehicle	\$6,670.00		
Pig & Flush Pipeline		26.00 6.09%	\$123,409.00 6.66%
DP Dive Boat	\$85,800.00		
Decommissioning Crew	\$2,925.00		
Rem. Operated Vehicle	\$34,684.00		
Derig Decomm Equipment		2.00 0.47%	\$9,493.00 0.51%
DP Dive Boat	\$6,600.00		
Decommissioning Crew	\$225.00		
Rem. Operated Vehicle	\$2,668.00		
Expose Pipeline		11.75 2.75%	\$55,771.38 3.01%
DP Dive Boat	\$38,775.00		
Decommissioning Crew	\$1,321.88		
Rem. Operated Vehicle	\$15,674.50		
Cut & Plug Pipeline		11.75 2.75%	\$55,771.38 3.01%
DP Dive Boat	\$38,775.00		
Decommissioning Crew	\$1,321.88		
Rem. Operated Vehicle	\$15,674.50		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		7.83	1.84%	\$37,165.09	2.00%
DP Dive Boat	\$25,839.00				
Decommissioning Crew	\$880.87				
Rem. Operated Vehicle	\$10,445.22				
Remove Tube Turn		7.83	1.84%	\$37,165.09	2.00%
DP Dive Boat	\$25,839.00				
Decommissioning Crew	\$880.87				
Rem. Operated Vehicle	\$10,445.22				
Set Up Dive Boat		3.00	0.70%	\$14,239.50	0.77%
DP Dive Boat	\$9,900.00				
Decommissioning Crew	\$337.50				
Rem. Operated Vehicle	\$4,002.00				
Expose Pipeline		11.75	2.75%	\$55,771.38	3.01%
DP Dive Boat	\$38,775.00				
Decommissioning Crew	\$1,321.88				
Rem. Operated Vehicle	\$15,674.50				
Cut & Plug Pipeline		11.75	2.75%	\$55,771.38	3.01%
DP Dive Boat	\$38,775.00				
Decommissioning Crew	\$1,321.88				
Rem. Operated Vehicle	\$15,674.50				
Remove Tube Turn		7.83	1.84%	\$37,165.09	2.00%
DP Dive Boat	\$25,839.00				
Decommissioning Crew	\$880.87				
Rem. Operated Vehicle	\$10,445.22				
Bury Pipeline		7.83	1.84%	\$37,165.09	2.00%
DP Dive Boat	\$25,839.00				
Decommissioning Crew	\$880.87				
Rem. Operated Vehicle	\$10,445.22				
Demob Dive Boat		140.00	32.81%	\$664,510.00	35.85%
DP Dive Boat	\$462,000.00				
Decommissioning Crew	\$15,750.00				
Rem. Operated Vehicle	\$186,760.00				
Total		397.32	93.13%	\$1,708,369.38	92.15%



MMS

Well Information

Heritage MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Exxon Mobil Corporation	100.00%

Well Data

Diameter	Depth	Surface Pressure
----------	-------	------------------

Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Heritage MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	10,241,356.00 80.00%
Task Total			0.00	10,241,356.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$1,536,203.46 12.00%
Further Contingency (10.00%)			0.00	\$1,024,135.62 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	12,801,695.08 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Heritage MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$10,241,356.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Heritage MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$10,241,356.00	80.00%
Manual Calculation			\$10,241,356.00	
Total	0.00	0.00%	\$10,241,356.00	80.00%

Hermosa MMS POCS 29056



MMS

Platform Salvage Option

Hermosa MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

-Platform Hermosa will be removed along with Platforms Harvest, Hidalgo, Gail and Grace.

-Platform Hermosa is an 8-pile platform installed in 1985 in 603' of water.

-The estimated removal weight is the deck weight is 7,830 tons and the jacket weight is 17,000 tons.

-The platform has a total of 13 wells that will be plugged and abandoned.

-The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR

-Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.

-A total of 16 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.

-The platform topsides and jacket will be removed by a DB 4000 that will be mobilized from the GOM or North Sea. The total mob/demob time will be 200 days.

-The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.

-Four 300' cargo barges will transport the deck modules to shore and six 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 10 cargo barge trips will be required.

-The two pipelines (oil, gas) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total



MMS

Platform Salvage Option

Hermosa MMS POCS 29056 (Ver 1)

mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 15% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management,



MMS

Platform Salvage Option

Hermosa MMS POCS 29056 (Ver 1)

Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$80,351,470

Estimated Decommissioning Net Cost = \$80,351,470



MMS

Basic Information

Hermosa MMS POCS 29056 (Ver 1)

General Data

Platform:	Hermosa MMS POCS 29056
Function:	SELF CONTAINED
Type:	Steel
Water Depth:	603'
Pre 461H?:	No
Year Installed:	1985
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0316
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	13
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Plains Exploration & Production Company	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$72,606,072	\$72,606,072
Well Plugging & Abandonment:	\$3,302,047	\$3,302,047
Pipeline Abandonment:	\$4,443,351	\$4,443,351
Total Decommissioning Cost:	\$80,351,470	\$80,351,470



MMS

Platform Information

Hermosa MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	60"		Yes	No	
Skirt/Braced	8	72"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	48
Number Installed:	16
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	17000.00		
Jacket Installation Date:	1/1/1985		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	7830 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1985
Deck Contractor:	Unknown



MMS

Platform Information

Hermosa MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	15.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$10,788,108.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Hermosa MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$3,539,419.00	4.87%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.01%	\$511,000.00	0.70%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.01%	\$8,391.00	0.01%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.01%	\$2,840,279.00	3.91%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.01%	\$3,900,383.00	5.37%
Mobilize DB 4000	Mob from GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	4.96%	\$4,536,000.00	6.25%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 4)	<input type="checkbox"/>	36.00	0.37%	\$197,120.00	0.27%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 6)	<input type="checkbox"/>	36.00	0.37%	\$300,000.00	0.41%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	17.00	0.18%	\$76,840.00	0.11%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.15%
Cut Deck/Equip/Misc	Seperate 8 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.25%	\$410,400.00	0.57%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.25%	\$410,400.00	0.57%
Remove 8 Pile Deck	Remove 8 Pile Deck, 8 modules	<input checked="" type="checkbox"/>	48.00	0.50%	\$820,800.00	1.13%
Demob CB 300 & Tug	Demob to Port of LA (Qty 4)	<input type="checkbox"/>	36.00	0.37%	\$141,120.00	0.19%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	35.00	0.36%	\$599,200.00	0.83%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	114.90	1.19%	\$2,139,088.00	2.95%
Cut Jacket	39 Hours per section, times 17 section(s), per MMS	<input checked="" type="checkbox"/>	660.00	6.82%	\$11,378,752.00	15.67%
Remove Jacket - Meth 1	39 Hours per section, times 17 section(s), per MMS	<input checked="" type="checkbox"/>	660.00	6.82%	\$11,299,200.00	15.56%
Demob CB 400 & Tug	Demob to Port of LA (Qty 6)	<input type="checkbox"/>	36.00	0.37%	\$216,000.00	0.30%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.15%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	17.00	0.18%	\$76,840.00	0.11%
Demob DB 4000	Demob to GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	4.96%	\$4,536,000.00	6.25%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	0.74%	\$1,282,000.00	1.77%
Offload CB 300		<input type="checkbox"/>	1392.00	14.39%	\$365,360.00	0.50%
Offload CB 400		<input type="checkbox"/>	4992.00	51.60%	\$1,417,920.00	1.95%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.01%	\$8,391.00	0.01%
Task Total			9178.40	94.87%	\$1,228,523.00	70.56%
Misc. Work Provision (15.00%)			248.01	2.56%	\$5,294,719.00	7.29%
Weather Contingency (15.00%)			248.01	2.56%	\$5,294,719.00	7.29%
Consumables					\$0.00	0.00%
Waste Disposal					\$10,788,110.00	14.86%



MMS

Platform Decommission Task Information

Hermosa MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost	
		Structure & Equipment Disposal		\$0.00	0.00%
		Offloading		\$0.00	0.00%
		Storage / Scrapping		\$0.00	0.00%
		Reef Donation		\$0.00	0.00%
		Cost of Engineering (0.00%)		\$0.00	0.00%
Total:			9674.42	100.00%	172,606,071.00 100.00%



MMS

Platform Decommission Resources Breakdown

Hermosa MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$1,008,375.00	1.39%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$285,360.00	0.39%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$1,297,920.00	1.79%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$376,320.00	0.52%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$1,901,900.00	2.62%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$200,000.00	0.28%
Derrick Barge 4000	\$10,500.00	per Hour per barge	25,655,700.00	35.34%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$5,106,411.00	7.03%
Manual Calculation	\$0.00	Independently Calculated	12,089,863.00	16.65%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$79,552.00	0.11%
Pile Abrasive Cut 70 to 96 inches	\$5,375.00	per Cut	\$172,000.00	0.24%
Pipeline Survey	\$230.00	per Hour	\$371,082.00	0.51%
Rem. Operated Vehicle	\$800.00	per Hour	\$2,527,040.00	3.48%
Rig Up CB 300	\$14,000.00	per Barge	\$56,000.00	0.08%
Rig Up CB 400	\$14,000.00	per Barge	\$84,000.00	0.12%
Work Boat	\$500.00	per Hour	\$17,000.00	0.02%



MMS

Platform Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$3,539,419.00	4.87%
Manual Calculation			\$3,539,419.00	
NMFS Marine Observation	1.00	0.01%	\$511,000.00	0.70%
Manual Calculation			\$511,000.00	
Mobilize Abrasive Cutting Spread	1.00	0.01%	\$8,391.00	0.01%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Sever Conductors- Abrasive	1.00	0.01%	\$2,840,279.00	3.91%
Manual Calculation			\$2,840,279.00	
Platform Removal Preparation	1.00	0.01%	\$3,900,383.00	5.37%
Manual Calculation			\$3,900,383.00	
Mobilize DB 4000	480.00	4.96%	\$4,536,000.00	6.25%
Derrick Barge 4000			\$4,536,000.00	
Mobilize CB 300 & Tug	36.00	0.37%	\$197,120.00	0.27%
CB 300 & Tug			\$141,120.00	
Rig Up CB 300			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	36.00	0.37%	\$300,000.00	0.41%
Rig Up CB 400			\$84,000.00	
CB 400 & Tug			\$216,000.00	
Mobilize Dive Spread	17.00	0.18%	\$76,840.00	0.11%
Work Boat			\$8,500.00	
Dive Basic Spread Saturation			\$53,805.00	
Abrasive Cutter Spread			\$10,625.00	
Pipeline Survey			\$3,910.00	
Setup Derrick Barge	6.75	0.07%	\$108,810.00	0.15%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	24.00	0.25%	\$410,400.00	0.57%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	



MMS

Platform Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.25%	\$410,400.00	0.57%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	
Remove 8 Pile Deck	48.00	0.50%	\$820,800.00	1.13%
Derrick Barge 4000			\$504,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Rem. Operated Vehicle			\$76,800.00	
Demob CB 300 & Tug	36.00	0.37%	\$141,120.00	0.19%
CB 300 & Tug			\$141,120.00	
Jet/Airlift Pile Mud Plug	35.00	0.36%	\$599,200.00	0.83%
Derrick Barge 4000			\$367,500.00	
Dive Basic Spread Saturation			\$110,775.00	
Pipeline Survey			\$8,050.00	
Abrasive Cutter Spread			\$21,875.00	
CB 400 & Tug			\$35,000.00	
Rem. Operated Vehicle			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		114.90	1.19%	\$2,139,088.00	2.95%
Derrick Barge 4000	\$1,206,450.00				
Dive Basic Spread Saturation	\$363,658.50				
Pipeline Survey	\$26,427.00				
Abrasive Cutter Spread	\$71,812.50				
CB 400 & Tug	\$114,900.00				
Pile Abrasive Cut 70 to 96 inches	\$172,000.00				
Rem. Operated Vehicle	\$183,840.00				
Cut Jacket		660.00	6.82%	\$11,378,752.00	15.67%
Derrick Barge 4000	\$6,930,000.00				
Dive Basic Spread Saturation	\$2,088,900.00				
Pipeline Survey	\$151,800.00				
Abrasive Cutter Spread	\$412,500.00				
CB 400 & Tug	\$660,000.00				
Pile Abrasive Cut 7 to 48 inches	\$79,552.00				
Rem. Operated Vehicle	\$1,056,000.00				
Remove Jacket - Meth 1		660.00	6.82%	\$11,299,200.00	15.56%
Derrick Barge 4000	\$6,930,000.00				
Dive Basic Spread Saturation	\$2,088,900.00				
Pipeline Survey	\$151,800.00				
Abrasive Cutter Spread	\$412,500.00				
CB 400 & Tug	\$660,000.00				
Rem. Operated Vehicle	\$1,056,000.00				
Demob CB 400 & Tug		36.00	0.37%	\$216,000.00	0.30%
CB 400 & Tug	\$216,000.00				



MMS

Platform Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.07%	\$108,810.00	0.15%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Demob Dive Spread	17.00	0.18%	\$76,840.00	0.11%
Work Boat			\$8,500.00	
Dive Basic Spread Saturation			\$53,805.00	
Abrasive Cutter Spread			\$10,625.00	
Pipeline Survey			\$3,910.00	
Demob DB 4000	480.00	4.96%	\$4,536,000.00	6.25%
Derrick Barge 4000			\$4,536,000.00	
Site Clearance - with Divers	72.00	0.74%	\$1,282,000.00	1.77%
Manual Calculation			\$1,282,000.00	
Offload CB 300	1392.00	14.39%	\$365,360.00	0.50%
Cargo Barge 300			\$285,360.00	
CB Damage Deduct			\$80,000.00	
Offload CB 400	4992.00	51.60%	\$1,417,920.00	1.95%
Cargo Barge 400			\$1,297,920.00	
CB Damage Deduct			\$120,000.00	



MMS

Platform Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.01%	\$8,391.00	0.01%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Total	9178.40	94.87%	\$51,228,523.00	70.56%



MMS

Pipeline Information

Hermosa MMS POCS 29056 (Ver1) Segment#:4410

General Data

Water Depth: 603'
Origin / Terminus: Origin
Opposite End Name: Gaviota
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 15.00%

Pipeline Data

Outside Diameter: 24"	Wall Thickness:	Length: 31700'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to the Gaviota Onshore facility.
Pipeline is estimated to be removed between <200' WD and to state waters.
Estimated Length in this estimate ~3000'



MMS

Pipeline Information

Hermosa MMS POCS 29056 (Ver1) Segment#:4520

General Data

Water Depth: 603'
Origin / Terminus: Origin
Opposite End Name: Gaviota
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 15.00%

Pipeline Data

Outside Diameter: 20"	Wall Thickness:	Length: 31700'
Depth of Burial:	# Crossings:	Product: GAS
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to the Gaviota Onshore facility.
Pipeline is estimated to be removed from <200' WD and to state waters.
Estimated Length in this estimate ~3000'



MMS

Pipeline Decommission Task Information

Hermosa MMS POCS 29056 (Ver 1) Segment#:4410316-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat	To Hermosa	<input type="checkbox"/>	80.00	11.49%	\$264,000.00	11.61%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.72%	\$44,037.50	1.94%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	90.00	12.93%	\$612,675.00	26.95%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.66%	\$78,626.63	3.46%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	1.11%	\$52,417.75	2.31%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	1.11%	\$52,417.75	2.31%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	1.11%	\$52,417.75	2.31%
Demob Dive Boat		<input checked="" type="checkbox"/>	80.00	11.49%	\$264,000.00	11.61%
Mob P/L Removal Spread	Relocate to a point along the pipeline where the water depth is 200'	<input type="checkbox"/>	17.00	2.44%	\$61,523.00	2.71%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.66%	\$41,799.45	1.84%
Cut & Plug Pipeline	Plug the upstream end going To Hermosa	<input checked="" type="checkbox"/>	11.55	1.66%	\$41,799.45	1.84%
Bury Pipeline	Bury the upstream end going To Hermosa	<input checked="" type="checkbox"/>	7.70	1.11%	\$27,866.30	1.23%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.66%	\$41,799.45	1.84%
Remove Pipeline		<input checked="" type="checkbox"/>	20.00	2.87%	\$72,380.00	3.18%
Bury Pipeline	Bury the end going to shore	<input checked="" type="checkbox"/>	7.70	1.11%	\$27,866.30	1.23%
Demob P/L Removal Spread		<input type="checkbox"/>	17.00	2.44%	\$61,523.00	2.71%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	24.14%	\$41,000.00	1.80%
Task Total			561.70	80.70%	\$1,838,149.33	80.85%
Misc. Work Provision (15.00%)			67.16	9.65%	\$217,665.51	9.57%
ather Contingency (15.00%)			67.16	9.65%	\$217,665.51	9.57%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			696.01	100.00%	\$2,273,480.34	100.00%



MMS

Pipeline Decommission Task Information

Hermosa MMS POCS 29056 (Ver 1) Segment#:4520316-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat	To Hermosa	<input type="checkbox"/>	80.00	14.23%	\$264,000.00	12.17%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.89%	\$44,037.50	2.03%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	80.00	14.23%	\$544,600.00	25.10%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	2.05%	\$78,626.63	3.62%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	1.37%	\$52,417.75	2.42%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	1.37%	\$52,417.75	2.42%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	1.37%	\$52,417.75	2.42%
Demob Dive Boat		<input checked="" type="checkbox"/>	80.00	14.23%	\$264,000.00	12.17%
Mob P/L Removal Spread	Relocate to a point along the pipeline where the water depth is 200'	<input type="checkbox"/>	17.00	3.02%	\$61,523.00	2.84%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	2.05%	\$41,799.45	1.93%
Cut & Plug Pipeline	Plug the upstream end going To Hermosa	<input checked="" type="checkbox"/>	11.55	2.05%	\$41,799.45	1.93%
Bury Pipeline	Bury the upstream end going To Hermosa	<input checked="" type="checkbox"/>	7.70	1.37%	\$27,866.30	1.28%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	2.05%	\$41,799.45	1.93%
Remove Pipeline		<input checked="" type="checkbox"/>	20.00	3.56%	\$72,380.00	3.34%
Bury Pipeline	Bury the end going to shore	<input checked="" type="checkbox"/>	7.70	1.37%	\$27,866.30	1.28%
Demob P/L Removal Spread		<input type="checkbox"/>	17.00	3.02%	\$61,523.00	2.84%
Offload CB 180		<input checked="" type="checkbox"/>	75.00	13.34%	\$29,375.00	1.35%
Task Total			458.70	81.60%	\$1,758,449.33	81.04%
Misc. Work Provision (15.00%)			51.71	9.20%	\$205,710.51	9.48%
ather Contingency (15.00%)			51.71	9.20%	\$205,710.51	9.48%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			562.11	100.00%	\$2,169,870.34	100.00%



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Pipeline Decommission Resources Breakdown

Hermosa MMS POCS 29056 (Ver 1) Segment#:441

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	0.92%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$57,227.50	2.52%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	0.88%
Decommissioning Crew	\$0.00	Calculated from tables	\$14,585.63	0.64%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$410,342.25	18.05%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$92,084.25	4.05%
DP Dive Boat	\$3,300.00	per Hour	\$955,845.00	42.04%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.44%
Pipelay Barge	\$1,954.00	per Hour	\$203,313.70	8.94%
Pipeline Surveying	\$230.00	per Hour	\$53,751.00	2.36%



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MMS

Pipeline Decommission Resources Breakdown

Hermosa MMS POCS 29056 (Ver 1) Segment#:452

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$9,375.00	0.43%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$57,227.50	2.64%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	0.92%
Decommissioning Crew	\$0.00	Calculated from tables	\$13,460.63	0.62%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$378,692.25	17.45%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$92,084.25	4.24%
DP Dive Boat	\$3,300.00	per Hour	\$922,845.00	42.53%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.46%
Pipelay Barge	\$1,954.00	per Hour	\$203,313.70	9.37%
Pipeline Surveying	\$230.00	per Hour	\$51,451.00	2.37%



MMS

Pipeline Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1) Segment#:4410

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 11.49%	\$264,000.00 11.61%
DP Dive Boat	\$264,000.00		
Rig Up Decomm Equipment		5.00 0.72%	\$44,037.50 1.94%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Manual Calculation	\$10,000.00		
Pig & Flush Pipeline		90.00 12.93%	\$612,675.00 26.95%
DP Dive Boat	\$297,000.00		
Dive Basic Spread Saturation	\$284,850.00		
Decommissioning Crew	\$10,125.00		
Pipeline Surveying	\$20,700.00		
Cut & Plug Pipeline		11.55 1.66%	\$78,626.63 3.46%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		
Cut Pipeline Riser		7.70 1.11%	\$52,417.75 2.31%
DP Dive Boat	\$25,410.00		
Dive Basic Spread Saturation	\$24,370.50		
Decommissioning Crew	\$866.25		
Pipeline Surveying	\$1,771.00		
Remove Tube Turn		7.70 1.11%	\$52,417.75 2.31%
DP Dive Boat	\$25,410.00		
Dive Basic Spread Saturation	\$24,370.50		
Decommissioning Crew	\$866.25		
Pipeline Surveying	\$1,771.00		



MMS

Pipeline Decommission Cost Breakdown

Bury Pipeline		7.70	1.11%	\$52,417.75	2.31%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
<hr/>					
Demob Dive Boat		80.00	11.49%	\$264,000.00	11.61%
DP Dive Boat	\$264,000.00				
<hr/>					
Mob P/L Removal Spread		17.00	2.44%	\$61,523.00	2.71%
Pipeline Surveying	\$3,910.00				
Dive Basic Spread- Mixed Gas	\$15,045.00				
Pipelay Barge	\$33,218.00				
CB 180 & Tug	\$9,350.00				
<hr/>					
Expose Pipeline		11.55	1.66%	\$41,799.45	1.84%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					
Cut & Plug Pipeline		11.55	1.66%	\$41,799.45	1.84%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					
Bury Pipeline		7.70	1.11%	\$27,866.30	1.23%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
<hr/>					
Expose Pipeline		11.55	1.66%	\$41,799.45	1.84%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
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MMS

Pipeline Decommission Cost Breakdown

Remove Pipeline		20.00	2.87%	\$72,380.00	3.18%
Pipeline Surveying	\$4,600.00				
Dive Basic Spread- Mixed Gas	\$17,700.00				
Pipelay Barge	\$39,080.00				
CB 180 & Tug	\$11,000.00				
Bury Pipeline		7.70	1.11%	\$27,866.30	1.23%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
Demob P/L Removal Spread		17.00	2.44%	\$61,523.00	2.71%
Pipeline Surveying	\$3,910.00				
Dive Basic Spread- Mixed Gas	\$15,045.00				
Pipelay Barge	\$33,218.00				
CB 180 & Tug	\$9,350.00				
Offload CB 180		168.00	24.14%	\$41,000.00	1.80%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		561.70	80.70%	\$1,838,149.33	80.85%



MMS

Pipeline Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1) Segment#:4520

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 14.23%	\$264,000.00 12.17%
DP Dive Boat	\$264,000.00		
Rig Up Decomm Equipment		5.00 0.89%	\$44,037.50 2.03%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Manual Calculation	\$10,000.00		
Pig & Flush Pipeline		80.00 14.23%	\$544,600.00 25.10%
DP Dive Boat	\$264,000.00		
Dive Basic Spread Saturation	\$253,200.00		
Decommissioning Crew	\$9,000.00		
Pipeline Surveying	\$18,400.00		
Cut & Plug Pipeline		11.55 2.05%	\$78,626.63 3.62%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		
Cut Pipeline Riser		7.70 1.37%	\$52,417.75 2.42%
DP Dive Boat	\$25,410.00		
Dive Basic Spread Saturation	\$24,370.50		
Decommissioning Crew	\$866.25		
Pipeline Surveying	\$1,771.00		
Remove Tube Turn		7.70 1.37%	\$52,417.75 2.42%
DP Dive Boat	\$25,410.00		
Dive Basic Spread Saturation	\$24,370.50		
Decommissioning Crew	\$866.25		
Pipeline Surveying	\$1,771.00		



MMS

Pipeline Decommission Cost Breakdown

Bury Pipeline		7.70	1.37%	\$52,417.75	2.42%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
<hr/>					
Demob Dive Boat		80.00	14.23%	\$264,000.00	12.17%
DP Dive Boat	\$264,000.00				
<hr/>					
Mob P/L Removal Spread		17.00	3.02%	\$61,523.00	2.84%
Pipeline Surveying	\$3,910.00				
Dive Basic Spread- Mixed Gas	\$15,045.00				
Pipelay Barge	\$33,218.00				
CB 180 & Tug	\$9,350.00				
<hr/>					
Expose Pipeline		11.55	2.05%	\$41,799.45	1.93%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					
Cut & Plug Pipeline		11.55	2.05%	\$41,799.45	1.93%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
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Bury Pipeline		7.70	1.37%	\$27,866.30	1.28%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
<hr/>					
Expose Pipeline		11.55	2.05%	\$41,799.45	1.93%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
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MMS

Pipeline Decommission Cost Breakdown

Remove Pipeline		20.00	3.56%	\$72,380.00	3.34%
Pipeline Surveying	\$4,600.00				
Dive Basic Spread- Mixed Gas	\$17,700.00				
Pipelay Barge	\$39,080.00				
CB 180 & Tug	\$11,000.00				
Bury Pipeline		7.70	1.37%	\$27,866.30	1.28%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
Demob P/L Removal Spread		17.00	3.02%	\$61,523.00	2.84%
Pipeline Surveying	\$3,910.00				
Dive Basic Spread- Mixed Gas	\$15,045.00				
Pipelay Barge	\$33,218.00				
CB 180 & Tug	\$9,350.00				
Offload CB 180		75.00	13.34%	\$29,375.00	1.35%
Cargo Barge 180	\$9,375.00				
CB Damage Deduct	\$20,000.00				
Total		458.70	81.60%	\$1,758,449.33	81.04%



MMS

Well Information

Hermosa MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 15.00%

Partner Data

Partner	Working Interest
1 Plains Exploration & Production Company	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Hermosa MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$2,540,036.00 76.92%
Task Total			0.00	\$2,540,036.00 76.92%
Misc. Work Provision (15.00%)			0.00	\$381,005.42 11.54%
ather Contingency (15.00%)			0.00	\$381,005.42 11.54%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$3,302,046.83 100.00%



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Well Decommission Resources Breakdown

Hermosa MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$2,540,036.00 76.92%



TWACHTMAN SNYDER & BYRD, INC.

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Well Decommission Cost Breakdown

Hermosa MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$2,540,036.00	76.92%
Manual Calculation			\$2,540,036.00	
Total	0.00	0.00%	\$2,540,036.00	76.92%

Hidalgo MMS POCS 29056



MMS

Platform Salvage Option

Hidalgo MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

-Platform Hidalgo will be removed along with Platforms Harvest, Hermosa, Gail and Grace.

-Platform Hidalgo is an 8-pile platform installed in 1986 in 430' of water.

-The estimated removal weight is the deck weight is 8,100 tons and the jacket weight is 10,950 tons.

-The platform has a total of 14 wells that will be plugged and abandoned.

-The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR

-Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.

-A total of 14 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.

-The platform topsides and jacket will be removed by a DB 4000 that will be mobilized from the GOM or North Sea. The total mob/demob time will be 200 days.

-The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.

-Three 300' cargo barges will transport the deck modules to shore and six 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 9 cargo barge trips will be required.

-The two pipelines (oil, gas) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total



MMS

Platform Salvage Option

Hidalgo MMS POCS 29056 (Ver 1)

mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Huenem Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 15% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management,



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Platform Salvage Option

Hidalgo MMS POCS 29056 (Ver 1)

Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$67,918,548

Estimated Decommissioning Net Cost = \$67,918,548



MMS

Basic Information

Hidalgo MMS POCS 29056 (Ver 1)

General Data

Platform:	Hidalgo MMS POCS 29056
Function:	SELF CONTAINED
Type:	Steel
Water Depth:	430'
Pre 461H?:	No
Year Installed:	1986
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0450
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	14
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Plains Exploration & Production Company	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$60,517,752	\$60,517,752
Well Plugging & Abandonment:	\$3,878,035	\$3,878,035
Pipeline Abandonment:	\$3,522,761	\$3,522,761
Total Decommissioning Cost:	\$67,918,548	\$67,918,548



MMS

Platform Information

Hidalgo MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	60"		Yes	No	
Skirt/Braced	8	72"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	56
Number Installed:	14
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	10950.00		
Jacket Installation Date:	1/1/1986		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	8100 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1986
Deck Contractor:	Unknown



MMS

Platform Information

Hidalgo MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Equipment	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	15.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$8,259,209.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Hidalgo MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$2,968,095.00	4.90%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.01%	\$511,000.00	0.84%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.01%	\$8,391.00	0.01%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.01%	\$1,958,236.00	3.24%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.01%	\$3,302,492.00	5.46%
Mobilize DB 4000	Mob from GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	5.21%	\$4,536,000.00	7.50%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	36.00	0.39%	\$147,840.00	0.24%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 6)	<input type="checkbox"/>	36.00	0.39%	\$300,000.00	0.50%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	17.00	0.18%	\$76,840.00	0.13%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.18%
Cut Deck/Equip/Misc	Seperate 8 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.26%	\$410,400.00	0.68%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.26%	\$410,400.00	0.68%
Remove 8 Pile Deck	Remove 8 Pile Deck, 8 modules	<input checked="" type="checkbox"/>	72.00	0.78%	\$1,231,200.00	2.03%
Demob CB 300 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	36.00	0.39%	\$105,840.00	0.17%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	35.00	0.38%	\$599,200.00	0.99%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	114.90	1.25%	\$2,139,088.00	3.53%
Cut Jacket	45 Hours per section, times 11 section(s), per MMS	<input checked="" type="checkbox"/>	492.00	5.34%	\$8,502,592.00	14.05%
Remove Jacket - Meth 1	45 Hours per section, times 11 section(s), per MMS	<input checked="" type="checkbox"/>	492.00	5.34%	\$8,423,040.00	13.92%
Demob CB 400 & Tug	Demob to Port of LA (Qty 6)	<input type="checkbox"/>	36.00	0.39%	\$216,000.00	0.36%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.18%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	17.00	0.18%	\$76,840.00	0.13%
Demob DB 4000	Demob to GOM or North Sea, 100 days divided by 5 platforms	<input type="checkbox"/>	480.00	5.21%	\$4,536,000.00	7.50%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	0.78%	\$1,282,000.00	2.12%
Offload CB 300		<input type="checkbox"/>	1440.00	15.62%	\$355,200.00	0.59%
Offload CB 400		<input type="checkbox"/>	4896.00	53.10%	\$1,392,960.00	2.30%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.01%	\$8,391.00	0.01%
Task Total			8818.40	95.64%	\$43,715,665.00	72.24%
Misc. Work Provision (15.00%)			201.21	2.18%	\$4,271,441.00	7.06%
Weather Contingency (15.00%)			201.21	2.18%	\$4,271,441.00	7.06%
Consumables					\$0.00	0.00%
Waste Disposal					\$8,259,209.00	13.65%



MMS

Platform Decommission Task Information

Hidalgo MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost	
		Structure & Equipment Disposal		\$0.00	0.00%
		Offloading		\$0.00	0.00%
		Storage / Scrapping		\$0.00	0.00%
		Reef Donation		\$0.00	0.00%
		Cost of Engineering (0.00%)		\$0.00	0.00%
Total:			9220.82	100.00%	\$60,517,756.00 100.00%



MMS

Platform Decommission Resources Breakdown

Hidalgo MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$813,375.00	1.34%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$295,200.00	0.49%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$1,272,960.00	2.10%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$329,280.00	0.54%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$1,565,900.00	2.59%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$180,000.00	0.30%
Derrick Barge 4000	\$10,500.00	per Hour per barge	22,379,700.00	36.98%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$4,118,931.00	6.81%
Manual Calculation	\$0.00	Independently Calculated	10,038,605.00	16.59%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$79,552.00	0.13%
Pile Abrasive Cut 70 to 96 inches	\$5,375.00	per Cut	\$172,000.00	0.28%
Pipeline Survey	\$230.00	per Hour	\$299,322.00	0.49%
Rem. Operated Vehicle	\$800.00	per Hour	\$2,027,840.00	3.35%
Rig Up CB 300	\$14,000.00	per Barge	\$42,000.00	0.07%
Rig Up CB 400	\$14,000.00	per Barge	\$84,000.00	0.14%
Work Boat	\$500.00	per Hour	\$17,000.00	0.03%



MMS

Platform Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$2,968,095.00	4.90%
Manual Calculation			\$2,968,095.00	
NMFS Marine Observation	1.00	0.01%	\$511,000.00	0.84%
Manual Calculation			\$511,000.00	
Mobilize Abrasive Cutting Spread	1.00	0.01%	\$8,391.00	0.01%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Sever Conductors- Abrasive	1.00	0.01%	\$1,958,236.00	3.24%
Manual Calculation			\$1,958,236.00	
Platform Removal Preparation	1.00	0.01%	\$3,302,492.00	5.46%
Manual Calculation			\$3,302,492.00	
Mobilize DB 4000	480.00	5.21%	\$4,536,000.00	7.50%
Derrick Barge 4000			\$4,536,000.00	
Mobilize CB 300 & Tug	36.00	0.39%	\$147,840.00	0.24%
CB 300 & Tug			\$105,840.00	
Rig Up CB 300			\$42,000.00	



MMS

Platform Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	36.00	0.39%	\$300,000.00	0.50%
Rig Up CB 400			\$84,000.00	
CB 400 & Tug			\$216,000.00	
Mobilize Dive Spread	17.00	0.18%	\$76,840.00	0.13%
Work Boat			\$8,500.00	
Dive Basic Spread Saturation			\$53,805.00	
Abrasive Cutter Spread			\$10,625.00	
Pipeline Survey			\$3,910.00	
Setup Derrick Barge	6.75	0.07%	\$108,810.00	0.18%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	24.00	0.26%	\$410,400.00	0.68%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	



MMS

Platform Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.26%	\$410,400.00	0.68%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	
Remove 8 Pile Deck	72.00	0.78%	\$1,231,200.00	2.03%
Derrick Barge 4000			\$756,000.00	
Dive Basic Spread Saturation			\$227,880.00	
Pipeline Survey			\$16,560.00	
Abrasive Cutter Spread			\$45,000.00	
CB 300 & Tug			\$70,560.00	
Rem. Operated Vehicle			\$115,200.00	
Demob CB 300 & Tug	36.00	0.39%	\$105,840.00	0.17%
CB 300 & Tug			\$105,840.00	
Jet/Airlift Pile Mud Plug	35.00	0.38%	\$599,200.00	0.99%
Derrick Barge 4000			\$367,500.00	
Dive Basic Spread Saturation			\$110,775.00	
Pipeline Survey			\$8,050.00	
Abrasive Cutter Spread			\$21,875.00	
CB 400 & Tug			\$35,000.00	
Rem. Operated Vehicle			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		114.90	1.25%	\$2,139,088.00	3.53%
Derrick Barge 4000	\$1,206,450.00				
Dive Basic Spread Saturation	\$363,658.50				
Pipeline Survey	\$26,427.00				
Abrasive Cutter Spread	\$71,812.50				
CB 400 & Tug	\$114,900.00				
Pile Abrasive Cut 70 to 96 inches	\$172,000.00				
Rem. Operated Vehicle	\$183,840.00				
Cut Jacket		492.00	5.34%	\$8,502,592.00	14.05%
Derrick Barge 4000	\$5,166,000.00				
Dive Basic Spread Saturation	\$1,557,180.00				
Pipeline Survey	\$113,160.00				
Abrasive Cutter Spread	\$307,500.00				
CB 400 & Tug	\$492,000.00				
Pile Abrasive Cut 7 to 48 inches	\$79,552.00				
Rem. Operated Vehicle	\$787,200.00				
Remove Jacket - Meth 1		492.00	5.34%	\$8,423,040.00	13.92%
Derrick Barge 4000	\$5,166,000.00				
Dive Basic Spread Saturation	\$1,557,180.00				
Pipeline Survey	\$113,160.00				
Abrasive Cutter Spread	\$307,500.00				
CB 400 & Tug	\$492,000.00				
Rem. Operated Vehicle	\$787,200.00				
Demob CB 400 & Tug		36.00	0.39%	\$216,000.00	0.36%
CB 400 & Tug	\$216,000.00				



MMS

Platform Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.07%	\$108,810.00	0.18%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Demob Dive Spread	17.00	0.18%	\$76,840.00	0.13%
Work Boat			\$8,500.00	
Dive Basic Spread Saturation			\$53,805.00	
Abrasive Cutter Spread			\$10,625.00	
Pipeline Survey			\$3,910.00	
Demob DB 4000	480.00	5.21%	\$4,536,000.00	7.50%
Derrick Barge 4000			\$4,536,000.00	
Site Clearance - with Divers	72.00	0.78%	\$1,282,000.00	2.12%
Manual Calculation			\$1,282,000.00	
Offload CB 300	1440.00	15.62%	\$355,200.00	0.59%
Cargo Barge 300			\$295,200.00	
CB Damage Deduct			\$60,000.00	
Offload CB 400	4896.00	53.10%	\$1,392,960.00	2.30%
Cargo Barge 400			\$1,272,960.00	
CB Damage Deduct			\$120,000.00	



MMS

Platform Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.01%	\$8,391.00	0.01%
Manual Calculation			\$1,100.00	
Manual Calculation			\$422.00	
Manual Calculation			\$4,800.00	
Manual Calculation			\$2,069.00	
Total	8818.40	95.64%	\$43,715,665.00	72.24%



MMS

Pipeline Information

Hidalgo MMS POCS 29056 (Ver1) Segment#:492045

General Data

Water Depth:	430'
Origin / Terminus:	Origin
Opposite End Name:	Hermosa
Opposite End Water Depth:	604'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	15.00%

Pipeline Data

Outside Diameter:	10"	Wall Thickness:		Length:	28500'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Hermosa platform. It is estimated as abandoned in place.



MMS

Pipeline Information

Hidalgo MMS POCS 29056 (Ver1) Segment#:501045

General Data

Water Depth: 430'
Origin / Terminus: Origin
Opposite End Name: Hermosa
Opposite End Water Depth: 604'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 15.00%

Pipeline Data

Outside Diameter: 16"	Wall Thickness:	Length: 25872'
Depth of Burial:	# Crossings:	Product: OIL
Installation Date:	Weight Coating: No	J Tube: No
Riser?: No	Riser Guard?: No	

Comments

This segment runs to the Hermosa platform. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Hidalgo MMS POCS 29056 (Ver 1) Segment#:4920450

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	80.00	24.77%	\$264,000.00	15.99%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.93%	\$30,422.50	1.84%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.55%	\$34,037.50	2.06%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	20.00	6.19%	\$136,150.00	8.25%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.62%	\$13,615.00	0.82%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.58%	\$78,626.63	4.76%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.58%	\$78,626.63	4.76%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.93%	\$20,422.50	1.24%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.58%	\$78,626.63	4.76%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.58%	\$78,626.63	4.76%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.38%	\$52,417.75	3.18%
Demob Dive Boat		<input type="checkbox"/>	80.00	24.77%	\$264,000.00	15.99%
Task Total			285.40	88.35%	\$1,391,660.52	84.30%
Misc. Work Provision (15.00%)			18.81	5.82%	\$129,549.08	7.85%
ather Contingency (15.00%)			18.81	5.82%	\$129,549.08	7.85%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			323.02	100.00%	\$1,650,758.69	100.00%



MMS

Pipeline Decommission Task Information

Hidalgo MMS POCS 29056 (Ver 1) Segment#:5010450

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	80.00	22.50%	\$264,000.00	14.10%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.84%	\$30,422.50	1.63%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.41%	\$34,037.50	1.82%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	45.00	12.66%	\$306,337.50	16.36%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.56%	\$13,615.00	0.73%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.25%	\$78,626.63	4.20%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.25%	\$78,626.63	4.20%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.17%	\$52,417.75	2.80%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.17%	\$52,417.75	2.80%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.17%	\$52,417.75	2.80%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.84%	\$20,422.50	1.09%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	3.25%	\$78,626.63	4.20%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	3.25%	\$78,626.63	4.20%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	2.17%	\$52,417.75	2.80%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	2.17%	\$52,417.75	2.80%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	2.17%	\$52,417.75	2.80%
Demob Dive Boat		<input type="checkbox"/>	80.00	22.50%	\$264,000.00	14.10%
Task Total			310.40	87.31%	\$1,561,848.02	83.43%
Misc. Work Provision (15.00%)			22.56	6.35%	\$155,077.21	8.28%
ather Contingency (15.00%)			22.56	6.35%	\$155,077.21	8.28%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			355.52	100.00%	\$1,872,002.44	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hidalgo MMS POCS 29056 (Ver 1) Segment#:4920

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$14,107.52	0.85%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$396,891.00	24.04%
DP Dive Boat	\$3,300.00	per Hour	\$941,820.00	57.05%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.61%
Pipeline Surveying	\$230.00	per Hour	\$28,842.00	1.75%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hidalgo MMS POCS 29056 (Ver 1) Segment#:5010

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$16,920.02	0.90%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$476,016.00	25.43%
DP Dive Boat	\$3,300.00	per Hour	\$1,024,320.00	54.72%
Manual Calculation	\$0.00	Independently Calculated	\$10,000.00	0.53%
Pipeline Surveying	\$230.00	per Hour	\$34,592.00	1.85%



MMS

Pipeline Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1) Segment#:49204

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 24.77%	\$264,000.00 15.99%
DP Dive Boat	\$264,000.00		
Set Up Dive Boat		3.00 0.93%	\$30,422.50 1.84%
DP Dive Boat	\$9,900.00		
Dive Basic Spread Saturation	\$9,495.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Manual Calculation	\$10,000.00		
Rig Up Decomm Equipment		5.00 1.55%	\$34,037.50 2.06%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		20.00 6.19%	\$136,150.00 8.25%
DP Dive Boat	\$66,000.00		
Dive Basic Spread Saturation	\$63,300.00		
Decommissioning Crew	\$2,250.00		
Pipeline Surveying	\$4,600.00		
Derig Decomm Equipment		2.00 0.62%	\$13,615.00 0.82%
DP Dive Boat	\$6,600.00		
Dive Basic Spread Saturation	\$6,330.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		11.55 3.58%	\$78,626.63 4.76%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.58%	\$78,626.63	4.76%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.93%	\$20,422.50	1.24%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	3.58%	\$78,626.63	4.76%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.58%	\$78,626.63	4.76%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.38%	\$52,417.75	3.18%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		80.00	24.77%	\$264,000.00	15.99%
DP Dive Boat	\$264,000.00				
Total		285.40	88.35%	\$1,391,660.52	84.30%



MMS

Pipeline Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1) Segment#:50104

Task		Task Hours	Task Cost
Mobilize Dive Boat		80.00 22.50%	\$264,000.00 14.10%
DP Dive Boat	\$264,000.00		
Set Up Dive Boat		3.00 0.84%	\$30,422.50 1.63%
DP Dive Boat	\$9,900.00		
Dive Basic Spread Saturation	\$9,495.00		
Decommissioning Crew	\$337.50		
Pipeline Surveying	\$690.00		
Manual Calculation	\$10,000.00		
Rig Up Decomm Equipment		5.00 1.41%	\$34,037.50 1.82%
DP Dive Boat	\$16,500.00		
Dive Basic Spread Saturation	\$15,825.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		45.00 12.66%	\$306,337.50 16.36%
DP Dive Boat	\$148,500.00		
Dive Basic Spread Saturation	\$142,425.00		
Decommissioning Crew	\$5,062.50		
Pipeline Surveying	\$10,350.00		
Derig Decomm Equipment		2.00 0.56%	\$13,615.00 0.73%
DP Dive Boat	\$6,600.00		
Dive Basic Spread Saturation	\$6,330.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		11.55 3.25%	\$78,626.63 4.20%
DP Dive Boat	\$38,115.00		
Dive Basic Spread Saturation	\$36,555.75		
Decommissioning Crew	\$1,299.38		
Pipeline Surveying	\$2,656.50		



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.25%	\$78,626.63	4.20%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.17%	\$52,417.75	2.80%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.17%	\$52,417.75	2.80%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.17%	\$52,417.75	2.80%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Set Up Dive Boat		3.00	0.84%	\$20,422.50	1.09%
DP Dive Boat	\$9,900.00				
Dive Basic Spread Saturation	\$9,495.00				
Decommissioning Crew	\$337.50				
Pipeline Surveying	\$690.00				
Expose Pipeline		11.55	3.25%	\$78,626.63	4.20%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				



MMS

Pipeline Decommission Cost Breakdown

Cut & Plug Pipeline		11.55	3.25%	\$78,626.63	4.20%
DP Dive Boat	\$38,115.00				
Dive Basic Spread Saturation	\$36,555.75				
Decommissioning Crew	\$1,299.38				
Pipeline Surveying	\$2,656.50				
Cut Pipeline Riser		7.70	2.17%	\$52,417.75	2.80%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Remove Tube Turn		7.70	2.17%	\$52,417.75	2.80%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Bury Pipeline		7.70	2.17%	\$52,417.75	2.80%
DP Dive Boat	\$25,410.00				
Dive Basic Spread Saturation	\$24,370.50				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
Demob Dive Boat		80.00	22.50%	\$264,000.00	14.10%
DP Dive Boat	\$264,000.00				
Total		310.40	87.31%	\$1,561,848.02	83.43%



MMS

Well Information

Hidalgo MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 15.00%

Partner Data

Partner	Working Interest
1 Plains Exploration & Production Company	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Hidalgo MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$2,983,104.00 76.92%
Task Total			0.00	\$2,983,104.00 76.92%
Misc. Work Provision (15.00%)			0.00	\$447,465.62 11.54%
ather Contingency (15.00%)			0.00	\$447,465.62 11.54%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$3,878,035.24 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Hidalgo MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$2,983,104.00 76.92%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Hidalgo MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$2,983,104.00	76.92%
Manual Calculation			\$2,983,104.00	
Total	0.00	0.00%	\$2,983,104.00	76.92%

Hillhouse MMS POCS 29056



MMS

Platform Salvage Option

Hillhouse MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Hillhouse will be removed along with Platforms A, B, C, Gina and Henry.
- Platform Hillhouse is an 8-pile platform installed in 1969 in 190' of water.
- The estimated removal weight is the deck weight is 1,200 tons and the jacket weight is 1,500 tons.
- The platform has a total of 47 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 52 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and one 400' cargo barge will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 3 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The three pipelines (1 oil, 2 gas) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running



MMS

Platform Salvage Option

Hillhouse MMS POCS 29056 (Ver 1)

from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this



MMS

Platform Salvage Option

Hillhouse MMS POCS 29056 (Ver 1)

estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$26,025,229

Estimated Decommissioning Net Cost = \$26,025,229



MMS

Basic Information

Hillhouse MMS POCS 29056 (Ver 1)

General Data

Platform:	Hillhouse MMS POCS 29056
Function:	DRILL/PROD
Type:	Steel
Water Depth:	192'
Pre 461H?:	Yes
Year Installed:	1969
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0240
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	47
# Pipelines to Abandon:	3
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$19,518,010	\$19,518,010
Well Plugging & Abandonment:	\$5,974,230	\$5,974,230
Pipeline Abandonment:	\$532,989	\$532,989
Total Decommissioning Cost:	\$26,025,229	\$26,025,229



MMS

Platform Information

Hillhouse MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	39"	0.5"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	60
Number Installed:	52
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	1500.00		
Jacket Installation Date:	11/26/69		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	1200 Tons
Number of Padeyes Required:	12
Deck Installation Date:	11/26/69
Deck Contractor:	Unknown



MMS

Platform Information

Hillhouse MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 400 x 100	Jkt > 700T	Conductors	Conductors	

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$1,562,866.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Hillhouse MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,272,823.00	6.52%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.05%	\$425,833.00	2.18%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.04%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.05%	\$3,984,545.00	20.41%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.05%	\$1,295,710.00	6.64%
Mobilize DB 2000	Mob from Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	9.99%	\$1,530,000.00	7.84%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.13%	\$72,296.00	0.37%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.13%	\$36,600.00	0.19%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	10.30	0.51%	\$46,556.00	0.24%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.34%	\$84,510.00	0.43%
Cut Deck/Equip/Misc	Seperate 4 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	1.20%	\$324,000.00	1.66%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	1.20%	\$324,000.00	1.66%
Remove 8 Pile Deck	Remove 8 Pile Deck, 4 modules	<input checked="" type="checkbox"/>	48.00	2.40%	\$648,000.00	3.32%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	22.60	1.13%	\$44,296.00	0.23%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	2.30%	\$621,920.00	3.19%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	60.74	3.03%	\$860,980.81	4.41%
Remove Jacket - Meth 1		<input checked="" type="checkbox"/>	36.00	1.80%	\$486,720.00	2.49%
Demob CB 400 & Tug	Demob to Port of LA (Qty 1)	<input type="checkbox"/>	22.60	1.13%	\$22,600.00	0.12%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.34%	\$84,510.00	0.43%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	10.30	0.51%	\$46,556.00	0.24%
Demob DB 2000	Demob to Asia, 50 days divided by 6 platforms	<input type="checkbox"/>	200.00	9.99%	\$1,530,000.00	7.84%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	3.60%	\$709,000.00	3.63%
Offload CB 300		<input type="checkbox"/>	672.00	33.57%	\$177,760.00	0.91%
Offload CB 400		<input type="checkbox"/>	408.00	20.38%	\$126,080.00	0.65%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.05%	\$6,993.00	0.04%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$663,911.00	3.40%
Task Total			1920.24	95.93%	\$15,433,192.81	79.07%
Misc. Work Provision (15.00%)			48.94	2.44%	\$1,513,171.00	7.75%
Weather Contingency (10.00%)			32.62	1.63%	\$1,008,781.00	5.17%
Consumables					\$0.00	0.00%
Waste Disposal					\$1,562,866.00	8.01%
Structure & Equipment Disposal					\$0.00	0.00%



MMS

Platform Decommission Task Information

Hillhouse MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost	
		Offloading		\$0.00	0.00%
		Storage / Scrapping		\$0.00	0.00%
		Reef Donation		\$0.00	0.00%
		Cost of Engineering (0.00%)		\$0.00	0.00%
			Total:	2001.80 100.00%	19,518,010.81 100.00%



MMS

Platform Decommission Resources Breakdown

Hillhouse MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$170,525.00	0.87%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$137,760.00	0.71%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$106,080.00	0.54%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$182,672.00	0.94%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$187,940.00	0.96%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$60,000.00	0.31%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$5,204,040.00	26.66%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$863,538.61	4.42%
Manual Calculation	\$0.00	Independently Calculated	\$8,365,808.00	42.86%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$39,776.00	0.20%
Pipeline Survey	\$230.00	per Hour	\$62,753.20	0.32%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.14%
Rig Up CB 400	\$14,000.00	per Barge	\$14,000.00	0.07%
Work Boat	\$500.00	per Hour	\$10,300.00	0.05%



MMS

Platform Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,272,823.00	6.52%
Manual Calculation			\$1,272,823.00	
NMFS Marine Observation	1.00	0.05%	\$425,833.00	2.18%
Manual Calculation			\$425,833.00	
Mobilize Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.04%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	
Sever Conductors- Abrasive	1.00	0.05%	\$3,984,545.00	20.41%
Manual Calculation			\$3,984,545.00	
Platform Removal Preparation	1.00	0.05%	\$1,295,710.00	6.64%
Manual Calculation			\$1,295,710.00	
Mobilize DB 2000	200.00	9.99%	\$1,530,000.00	7.84%
Derrick Barge 2000			\$1,530,000.00	
Mobilize CB 300 & Tug	22.60	1.13%	\$72,296.00	0.37%
CB 300 & Tug			\$44,296.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	22.60	1.13%	\$36,600.00	0.19%
Rig Up CB 400			\$14,000.00	
CB 400 & Tug			\$22,600.00	
Mobilize Dive Spread	10.30	0.51%	\$46,556.00	0.24%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Setup Derrick Barge	6.75	0.34%	\$84,510.00	0.43%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	1.20%	\$324,000.00	1.66%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	1.20%	\$324,000.00	1.66%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	48.00	2.40%	\$648,000.00	3.32%
Derrick Barge 2000			\$408,000.00	
Dive Basic Spread Saturation			\$151,920.00	
Pipeline Survey			\$11,040.00	
Abrasive Cutter Spread			\$30,000.00	
CB 300 & Tug			\$47,040.00	
Demob CB 300 & Tug	22.60	1.13%	\$44,296.00	0.23%
CB 300 & Tug			\$44,296.00	
Jet/Airlift Pile Mud Plug	46.00	2.30%	\$621,920.00	3.19%
Derrick Barge 2000			\$391,000.00	
Dive Basic Spread Saturation			\$145,590.00	
Pipeline Survey			\$10,580.00	
Abrasive Cutter Spread			\$28,750.00	
CB 400 & Tug			\$46,000.00	



MMS

Platform Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Sever Piles- Abrasive	60.74	3.03%	\$860,980.81	4.41%
Derrick Barge 2000			\$516,290.00	
Dive Basic Spread Saturation			\$192,242.11	
Pipeline Survey			\$13,970.20	
Abrasive Cutter Spread			\$37,962.50	
CB 400 & Tug			\$60,740.00	
Pile Abrasive Cut 7 to 48 inches			\$39,776.00	
Remove Jacket - Meth 1	36.00	1.80%	\$486,720.00	2.49%
Derrick Barge 2000			\$306,000.00	
Dive Basic Spread Saturation			\$113,940.00	
Pipeline Survey			\$8,280.00	
Abrasive Cutter Spread			\$22,500.00	
CB 400 & Tug			\$36,000.00	
Demob CB 400 & Tug	22.60	1.13%	\$22,600.00	0.12%
CB 400 & Tug			\$22,600.00	
Pick Up DB Anchors	6.75	0.34%	\$84,510.00	0.43%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	



MMS

Platform Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Dive Spread	10.30	0.51%	\$46,556.00	0.24%
Work Boat			\$5,150.00	
Dive Basic Spread Saturation			\$32,599.50	
Abrasive Cutter Spread			\$6,437.50	
Pipeline Survey			\$2,369.00	
Demob DB 2000	200.00	9.99%	\$1,530,000.00	7.84%
Derrick Barge 2000			\$1,530,000.00	
Site Clearance - with Divers	72.00	3.60%	\$709,000.00	3.63%
Manual Calculation			\$709,000.00	
Offload CB 300	672.00	33.57%	\$177,760.00	0.91%
Cargo Barge 300			\$137,760.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	408.00	20.38%	\$126,080.00	0.65%
Cargo Barge 400			\$106,080.00	
CB Damage Deduct			\$20,000.00	
Demob Abrasive Cutting Spread	1.00	0.05%	\$6,993.00	0.04%
Manual Calculation			\$917.00	
Manual Calculation			\$352.00	
Manual Calculation			\$4,000.00	
Manual Calculation			\$1,724.00	



MMS

Platform Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$663,911.00	3.40%
Manual Calculation			\$663,911.00	
Total	1920.24	95.93%	\$15,433,192.81	79.07%



MMS

Pipeline Information

Hillhouse MMS POCS 29056 (Ver1) Segment#:1810

General Data

Water Depth:	190'
Origin / Terminus:	Origin
Opposite End Name:	A
Opposite End Water Depth:	188'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	8.625"	Wall Thickness:	0.5"	Length:	2811'
Depth of Burial:	3'	# Crossings:		Product:	Oil
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the A Platform. It is estimated as abandoned in place.



MMS

Pipeline Information

Hillhouse MMS POCS 29056 (Ver1) Segment#:1920

General Data

Water Depth:	190'
Origin / Terminus:	Origin
Opposite End Name:	A
Opposite End Water Depth:	190'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	8.625"	Wall Thickness:		Length:	2811'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the A Platform. It is estimated as abandoned in place.



MMS

Pipeline Information

Hillhouse MMS POCS 29056 (Ver1) Segment#:2030

General Data

Water Depth:	190'
Origin / Terminus:	Origin
Opposite End Name:	A
Opposite End Water Depth:	188'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	6"	Wall Thickness:	0.432"	Length:	2811'
Depth of Burial:	3'	# Crossings:		Product:	Gas
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the A Platform. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Hillhouse MMS POCS 29056 (Ver 1) Segment#:1810240

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	10.30	10.43%	\$18,648.15	10.43%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.06%	\$9,052.50	5.06%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	2.84	2.88%	\$5,141.82	2.88%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.03%	\$3,621.00	2.03%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	6.46%	\$11,550.99	6.46%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	6.46%	\$11,550.99	6.46%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Reposition Workboat		<input checked="" type="checkbox"/>	3.05	3.09%	\$5,522.02	3.09%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	6.46%	\$11,550.99	6.46%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	6.46%	\$11,550.99	6.46%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Demob Work Boat		<input type="checkbox"/>	10.30	10.43%	\$18,648.15	10.43%
Task Total			84.51	85.59%	\$153,005.38	85.59%
Misc. Work Provision (15.00%)			8.54	8.65%	\$15,455.34	8.65%
ather Contingency (10.00%)			5.69	5.76%	\$10,303.56	5.76%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			98.74	100.00%	\$178,764.27	100.00%



MMS

Pipeline Decommission Task Information

Hillhouse MMS POCS 29056 (Ver 1) Segment#:1920240

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	10.30	10.43%	\$18,648.15	10.43%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.06%	\$9,052.50	5.06%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	2.84	2.88%	\$5,141.82	2.88%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.03%	\$3,621.00	2.03%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	6.46%	\$11,550.99	6.46%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	6.46%	\$11,550.99	6.46%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Reposition Workboat		<input checked="" type="checkbox"/>	3.05	3.09%	\$5,522.02	3.09%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	6.46%	\$11,550.99	6.46%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	6.46%	\$11,550.99	6.46%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.30%	\$7,694.63	4.30%
Demob Work Boat		<input type="checkbox"/>	10.30	10.43%	\$18,648.15	10.43%
Task Total			84.51	85.59%	\$153,005.38	85.59%
Misc. Work Provision (15.00%)			8.54	8.65%	\$15,455.34	8.65%
ather Contingency (10.00%)			5.69	5.76%	\$10,303.56	5.76%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			98.74	100.00%	\$178,764.27	100.00%



MMS

Pipeline Decommission Task Information

Hillhouse MMS POCS 29056 (Ver 1) Segment#:2030240

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	10.30	10.63%	\$18,648.15	10.63%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	5.16%	\$9,052.50	5.16%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	1.38	1.42%	\$2,498.49	1.42%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.06%	\$3,621.00	2.06%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	6.58%	\$11,550.99	6.58%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	6.58%	\$11,550.99	6.58%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.39%	\$7,694.63	4.39%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.39%	\$7,694.63	4.39%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.39%	\$7,694.63	4.39%
Reposition Workboat		<input checked="" type="checkbox"/>	3.05	3.15%	\$5,522.02	3.15%
Expose Pipeline		<input checked="" type="checkbox"/>	6.38	6.58%	\$11,550.99	6.58%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	6.38	6.58%	\$11,550.99	6.58%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	4.25	4.39%	\$7,694.63	4.39%
Remove Tube Turn		<input checked="" type="checkbox"/>	4.25	4.39%	\$7,694.63	4.39%
Bury Pipeline		<input checked="" type="checkbox"/>	4.25	4.39%	\$7,694.63	4.39%
Demob Work Boat		<input type="checkbox"/>	10.30	10.63%	\$18,648.15	10.63%
Task Total			83.05	85.70%	\$150,362.05	85.70%
Misc. Work Provision (15.00%)			8.32	8.58%	\$15,058.84	8.58%
ather Contingency (10.00%)			5.55	5.72%	\$10,039.23	5.72%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			96.91	100.00%	\$175,460.11	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hillhouse MMS POCS 29056 (Ver 1) Segment#:181

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$9,507.40	5.32%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$74,791.35	41.84%
Pipeline Surveying	\$230.00	per Hour	\$19,437.30	10.87%
Work Boat	\$583.00	per Hour	\$49,269.33	27.56%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hillhouse MMS POCS 29056 (Ver 1) Segment#:192

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$9,507.40	5.32%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$74,791.35	41.84%
Pipeline Surveying	\$230.00	per Hour	\$19,437.30	10.87%
Work Boat	\$583.00	per Hour	\$49,269.33	27.56%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hillhouse MMS POCS 29056 (Ver 1) Segment#:203

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$9,343.15	5.32%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$73,499.25	41.89%
Pipeline Surveying	\$230.00	per Hour	\$19,101.50	10.89%
Work Boat	\$583.00	per Hour	\$48,418.15	27.59%



MMS

Pipeline Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1) Segment#:1810

Task		Task Hours	Task Cost
Mobilize Work Boat		10.30 10.43%	\$18,648.15 10.43%
Work Boat	\$6,004.90		
Dive Basic Spread- Mixed Gas	\$9,115.50		
Decommissioning Crew	\$1,158.75		
Pipeline Surveying	\$2,369.00		
Rig Up Decomm Equipment		5.00 5.06%	\$9,052.50 5.06%
Work Boat	\$2,915.00		
Dive Basic Spread- Mixed Gas	\$4,425.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		2.84 2.88%	\$5,141.82 2.88%
Work Boat	\$1,655.72		
Dive Basic Spread- Mixed Gas	\$2,513.40		
Decommissioning Crew	\$319.50		
Pipeline Surveying	\$653.20		
Derig Decomm Equipment		2.00 2.03%	\$3,621.00 2.03%
Work Boat	\$1,166.00		
Dive Basic Spread- Mixed Gas	\$1,770.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		6.38 6.46%	\$11,550.99 6.46%
Work Boat	\$3,719.54		
Dive Basic Spread- Mixed Gas	\$5,646.30		
Decommissioning Crew	\$717.75		
Pipeline Surveying	\$1,467.40		
Cut & Plug Pipeline		6.38 6.46%	\$11,550.99 6.46%
Work Boat	\$3,719.54		
Dive Basic Spread- Mixed Gas	\$5,646.30		
Decommissioning Crew	\$717.75		
Pipeline Surveying	\$1,467.40		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.05	3.09%	\$5,522.02	3.09%
Work Boat	\$1,778.15				
Dive Basic Spread- Mixed Gas	\$2,699.25				
Decommissioning Crew	\$343.12				
Pipeline Surveying	\$701.50				
Expose Pipeline		6.38	6.46%	\$11,550.99	6.46%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	6.46%	\$11,550.99	6.46%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		10.30	10.43%	\$18,648.15	10.43%
Work Boat	\$6,004.90				
Dive Basic Spread- Mixed Gas	\$9,115.50				
Decommissioning Crew	\$1,158.75				
Pipeline Surveying	\$2,369.00				
Total		84.51	85.59%	\$153,005.38	85.59%



MMS

Pipeline Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1) Segment#:1920

Task		Task Hours	Task Cost
Mobilize Work Boat		10.30 10.43%	\$18,648.15 10.43%
Work Boat	\$6,004.90		
Dive Basic Spread- Mixed Gas	\$9,115.50		
Decommissioning Crew	\$1,158.75		
Pipeline Surveying	\$2,369.00		
Rig Up Decomm Equipment		5.00 5.06%	\$9,052.50 5.06%
Work Boat	\$2,915.00		
Dive Basic Spread- Mixed Gas	\$4,425.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		2.84 2.88%	\$5,141.82 2.88%
Work Boat	\$1,655.72		
Dive Basic Spread- Mixed Gas	\$2,513.40		
Decommissioning Crew	\$319.50		
Pipeline Surveying	\$653.20		
Derig Decomm Equipment		2.00 2.03%	\$3,621.00 2.03%
Work Boat	\$1,166.00		
Dive Basic Spread- Mixed Gas	\$1,770.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		6.38 6.46%	\$11,550.99 6.46%
Work Boat	\$3,719.54		
Dive Basic Spread- Mixed Gas	\$5,646.30		
Decommissioning Crew	\$717.75		
Pipeline Surveying	\$1,467.40		
Cut & Plug Pipeline		6.38 6.46%	\$11,550.99 6.46%
Work Boat	\$3,719.54		
Dive Basic Spread- Mixed Gas	\$5,646.30		
Decommissioning Crew	\$717.75		
Pipeline Surveying	\$1,467.40		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.05	3.09%	\$5,522.02	3.09%
Work Boat	\$1,778.15				
Dive Basic Spread- Mixed Gas	\$2,699.25				
Decommissioning Crew	\$343.12				
Pipeline Surveying	\$701.50				
Expose Pipeline		6.38	6.46%	\$11,550.99	6.46%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	6.46%	\$11,550.99	6.46%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.30%	\$7,694.63	4.30%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		10.30	10.43%	\$18,648.15	10.43%
Work Boat	\$6,004.90				
Dive Basic Spread- Mixed Gas	\$9,115.50				
Decommissioning Crew	\$1,158.75				
Pipeline Surveying	\$2,369.00				
Total		84.51	85.59%	\$153,005.38	85.59%



MMS

Pipeline Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1) Segment#:2030

Task		Task Hours	Task Cost
Mobilize Work Boat		10.30 10.63%	\$18,648.15 10.63%
Work Boat	\$6,004.90		
Dive Basic Spread- Mixed Gas	\$9,115.50		
Decommissioning Crew	\$1,158.75		
Pipeline Surveying	\$2,369.00		
Rig Up Decomm Equipment		5.00 5.16%	\$9,052.50 5.16%
Work Boat	\$2,915.00		
Dive Basic Spread- Mixed Gas	\$4,425.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		1.38 1.42%	\$2,498.49 1.42%
Work Boat	\$804.54		
Dive Basic Spread- Mixed Gas	\$1,221.30		
Decommissioning Crew	\$155.25		
Pipeline Surveying	\$317.40		
Derig Decomm Equipment		2.00 2.06%	\$3,621.00 2.06%
Work Boat	\$1,166.00		
Dive Basic Spread- Mixed Gas	\$1,770.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		6.38 6.58%	\$11,550.99 6.58%
Work Boat	\$3,719.54		
Dive Basic Spread- Mixed Gas	\$5,646.30		
Decommissioning Crew	\$717.75		
Pipeline Surveying	\$1,467.40		
Cut & Plug Pipeline		6.38 6.58%	\$11,550.99 6.58%
Work Boat	\$3,719.54		
Dive Basic Spread- Mixed Gas	\$5,646.30		
Decommissioning Crew	\$717.75		
Pipeline Surveying	\$1,467.40		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.39%	\$7,694.63	4.39%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.39%	\$7,694.63	4.39%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.39%	\$7,694.63	4.39%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Reposition Workboat		3.05	3.15%	\$5,522.02	3.15%
Work Boat	\$1,778.15				
Dive Basic Spread- Mixed Gas	\$2,699.25				
Decommissioning Crew	\$343.12				
Pipeline Surveying	\$701.50				
Expose Pipeline		6.38	6.58%	\$11,550.99	6.58%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				
Cut & Plug Pipeline		6.38	6.58%	\$11,550.99	6.58%
Work Boat	\$3,719.54				
Dive Basic Spread- Mixed Gas	\$5,646.30				
Decommissioning Crew	\$717.75				
Pipeline Surveying	\$1,467.40				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		4.25	4.39%	\$7,694.63	4.39%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Remove Tube Turn		4.25	4.39%	\$7,694.63	4.39%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Bury Pipeline		4.25	4.39%	\$7,694.63	4.39%
Work Boat	\$2,477.75				
Dive Basic Spread- Mixed Gas	\$3,761.25				
Decommissioning Crew	\$478.13				
Pipeline Surveying	\$977.50				
Demob Work Boat		10.30	10.63%	\$18,648.15	10.63%
Work Boat	\$6,004.90				
Dive Basic Spread- Mixed Gas	\$9,115.50				
Decommissioning Crew	\$1,158.75				
Pipeline Surveying	\$2,369.00				
Total		83.05	85.70%	\$150,362.05	85.70%



MMS

Well Information

Hillhouse MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Dos Cuadras Offshore LLC	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Hillhouse MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$4,779,384.00 80.00%
Task Total			0.00	\$4,779,384.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$716,907.63 12.00%
ather Contingency (10.00%)			0.00	\$477,938.41 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$5,974,230.04 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Hillhouse MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost		Cost	
Manual Calculation	\$0.00	Independently Calculated	\$4,779,384.00	80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Hillhouse MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$4,779,384.00	80.00%
Manual Calculation			\$4,779,384.00	
Total	0.00	0.00%	\$4,779,384.00	80.00%

Hogan MMS POCS 29056



MMS

Platform Salvage Option

Hogan MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Hogan will be removed along with Platform Houchin.
- Platform Hogan is a 12-pile platform installed in 1967 in 154' of water.
- The estimated removal weight is the deck weight is 2,259 tons and the jacket weight is 1,263 tons.
- The platform has a total of 39 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 39 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 500 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.



MMS

Platform Salvage Option

Hogan MMS POCS 29056 (Ver 1)

-The four pipelines (oil, gas, gas lift, water return) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipelines to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.



MMS

Platform Salvage Option

Hogan MMS POCS 29056 (Ver 1)

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Platform Removal; Site Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Material Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$34,453,019

Estimated Decommissioning Net Cost = \$34,453,019



MMS

Basic Information

Hogan MMS POCS 29056 (Ver 1)

General Data

Platform:	Hogan MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	154'
Pre 461H?:	Yes
Year Installed:	1967
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0166
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	39
# Pipelines to Abandon:	4
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Pacific Operators Offshore, Inc.	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$27,183,200	\$27,183,200
Well Plugging & Abandonment:	\$6,385,880	\$6,385,880
Pipeline Abandonment:	\$883,939	\$883,939
Total Decommissioning Cost:	\$34,453,019	\$34,453,019



MMS

Platform Information

Hogan MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	12	36"		Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:	86x170	
Middle:	86x170	
Lower:	87x170	

Conductors

Number of Slots:	60
Number Installed:	39
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	1263.00		
Jacket Installation Date:	1/1/1967		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	2259 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1967
Deck Contractor:	Unknown



MMS

Platform Information

Hogan MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Equipment	Equipment	Deck 100-500T	Deck 100-500T
CB 300 x 100	Deck 100-500T	Deck 100-500T	Deck 100-500T	Deck 100-500T
CB 400 x 100	Deck 100-500T	Deck 100-500T	Jkt < 300T	
CB 400 x 100	Jkt 300-700T	Jkt 300-700T		
CB 400 x 100	Jkt 300-700T	Jkt 300-700T		

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$1,654,215.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Hogan MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,493,591.00	5.49%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.02%	\$1,277,500.00	4.70%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.02%	\$20,977.00	0.08%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.02%	\$2,711,575.00	9.98%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.02%	\$957,710.00	3.52%
Mobilize DB 500	Mob from Asia, 50 days divided by 2 platforms	<input type="checkbox"/>	600.00	13.11%	\$3,510,000.00	12.91%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	22.20	0.49%	\$71,512.00	0.26%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	22.20	0.49%	\$108,600.00	0.40%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	10.10	0.22%	\$45,652.00	0.17%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.15%	\$71,010.00	0.26%
Cut Deck/Equip/Misc	Seperate 8 Modules	<input checked="" type="checkbox"/>	24.00	0.52%	\$276,000.00	1.02%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.52%	\$276,000.00	1.02%
Remove 8 Pile Deck	Remove 12 Pile Deck Modules (Qty 8)	<input checked="" type="checkbox"/>	192.00	4.20%	\$2,208,000.00	8.12%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	22.20	0.49%	\$43,512.00	0.16%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	46.00	1.01%	\$529,920.00	1.95%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	57.91	1.27%	\$726,787.21	2.67%
Cut Jacket	24 Hours per section, times 5 sections, per MMS	<input checked="" type="checkbox"/>	120.00	2.62%	\$1,442,064.00	5.30%
Remove Jacket - Meth 1	24 Hours per section, times 5 sections, per MMS	<input checked="" type="checkbox"/>	120.00	2.62%	\$1,382,400.00	5.09%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	22.20	0.49%	\$66,600.00	0.25%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.15%	\$71,010.00	0.26%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	10.10	0.22%	\$45,652.00	0.17%
Demob DB 500	Demob to Asia, 50 days divided by 2 platforms	<input type="checkbox"/>	600.00	13.11%	\$3,510,000.00	12.91%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.57%	\$709,000.00	2.61%
Offload CB 300		<input type="checkbox"/>	912.00	19.93%	\$226,960.00	0.83%
Offload CB 400		<input type="checkbox"/>	1512.00	33.05%	\$453,120.00	1.67%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.02%	\$20,977.00	0.08%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$345,992.00	1.27%
Task Total			4407.41	96.33%	\$22,602,121.21	83.15%
Misc. Work Provision (15.00%)			100.71	2.20%	\$1,756,120.00	6.46%
Weather Contingency (10.00%)			67.14	1.47%	\$1,170,747.00	4.31%
Consumables					\$0.00	0.00%
Waste Disposal					\$1,654,215.00	6.09%



MMS

Platform Decommission Task Information

Hogan MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			4575.26 100.00%	27,183,203.21 100.00%



MMS

Platform Decommission Resources Breakdown

Hogan MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$386,006.25	1.42%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$186,960.00	0.69%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$393,120.00	1.45%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$322,224.00	1.19%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$477,110.00	1.76%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.37%
Derrick Barge 500	\$6,500.00	per Hour	\$10,903,165.00	40.11%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$1,954,735.66	7.19%
Manual Calculation	\$0.00	Independently Calculated	\$7,537,322.00	27.73%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$119,328.00	0.44%
Pipeline Survey	\$230.00	per Hour	\$142,050.30	0.52%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.10%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.15%
Work Boat	\$500.00	per Hour	\$10,100.00	0.04%



MMS

Platform Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,493,591.00	5.49%
Manual Calculation			\$1,493,591.00	
NMFS Marine Observation	1.00	0.02%	\$1,277,500.00	4.70%
Manual Calculation			\$1,277,500.00	
Mobilize Abrasive Cutting Spread	1.00	0.02%	\$20,977.00	0.08%
Manual Calculation			\$2,750.00	
Manual Calculation			\$1,055.00	
Manual Calculation			\$12,000.00	
Manual Calculation			\$5,172.00	
Sever Conductors- Abrasive	1.00	0.02%	\$2,711,575.00	9.98%
Manual Calculation			\$2,711,575.00	
Platform Removal Preparation	1.00	0.02%	\$957,710.00	3.52%
Manual Calculation			\$957,710.00	
Mobilize DB 500	600.00	13.11%	\$3,510,000.00	12.91%
Derrick Barge 500			\$3,510,000.00	
Mobilize CB 300 & Tug	22.20	0.49%	\$71,512.00	0.26%
CB 300 & Tug			\$43,512.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	22.20	0.49%	\$108,600.00	0.40%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$66,600.00	
Mobilize Dive Spread	10.10	0.22%	\$45,652.00	0.17%
Work Boat			\$5,050.00	
Dive Basic Spread Saturation			\$31,966.50	
Abrasive Cutter Spread			\$6,312.50	
Pipeline Survey			\$2,323.00	
Setup Derrick Barge	6.75	0.15%	\$71,010.00	0.26%
Derrick Barge 500			\$43,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	0.52%	\$276,000.00	1.02%
Derrick Barge 500			\$156,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.52%	\$276,000.00	1.02%
Derrick Barge 500			\$156,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	192.00	4.20%	\$2,208,000.00	8.12%
Derrick Barge 500			\$1,248,000.00	
Dive Basic Spread Saturation			\$607,680.00	
Pipeline Survey			\$44,160.00	
Abrasive Cutter Spread			\$120,000.00	
CB 300 & Tug			\$188,160.00	
Demob CB 300 & Tug	22.20	0.49%	\$43,512.00	0.16%
CB 300 & Tug			\$43,512.00	
Jet/Airlift Pile Mud Plug	46.00	1.01%	\$529,920.00	1.95%
Derrick Barge 500			\$299,000.00	
Dive Basic Spread Saturation			\$145,590.00	
Pipeline Survey			\$10,580.00	
Abrasive Cutter Spread			\$28,750.00	
CB 400 & Tug			\$46,000.00	



MMS

Platform Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		57.91	1.27%	\$726,787.21	2.67%
Derrick Barge 500	\$376,415.00				
Dive Basic Spread Saturation	\$183,285.16				
Pipeline Survey	\$13,319.30				
Abrasive Cutter Spread	\$36,193.75				
CB 400 & Tug	\$57,910.00				
Pile Abrasive Cut 7 to 48 inches	\$59,664.00				
Cut Jacket		120.00	2.62%	\$1,442,064.00	5.30%
Derrick Barge 500	\$780,000.00				
Dive Basic Spread Saturation	\$379,800.00				
Pipeline Survey	\$27,600.00				
Abrasive Cutter Spread	\$75,000.00				
CB 400 & Tug	\$120,000.00				
Pile Abrasive Cut 7 to 48 inches	\$59,664.00				
Remove Jacket - Meth 1		120.00	2.62%	\$1,382,400.00	5.09%
Derrick Barge 500	\$780,000.00				
Dive Basic Spread Saturation	\$379,800.00				
Pipeline Survey	\$27,600.00				
CB 400 & Tug	\$120,000.00				
Abrasive Cutter Spread	\$75,000.00				
Demob CB 400 & Tug		22.20	0.49%	\$66,600.00	0.25%
CB 400 & Tug	\$66,600.00				



MMS

Platform Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.15%	\$71,010.00	0.26%
Derrick Barge 500			\$43,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Demob Dive Spread	10.10	0.22%	\$45,652.00	0.17%
Work Boat			\$5,050.00	
Dive Basic Spread Saturation			\$31,966.50	
Abrasive Cutter Spread			\$6,312.50	
Pipeline Survey			\$2,323.00	
Demob DB 500	600.00	13.11%	\$3,510,000.00	12.91%
Derrick Barge 500			\$3,510,000.00	
Site Clearance - with Divers	72.00	1.57%	\$709,000.00	2.61%
Manual Calculation			\$709,000.00	
Offload CB 300	912.00	19.93%	\$226,960.00	0.83%
Cargo Barge 300			\$186,960.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	1512.00	33.05%	\$453,120.00	1.67%
Cargo Barge 400			\$393,120.00	
CB Damage Deduct			\$60,000.00	



MMS

Platform Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.02%	\$20,977.00	0.08%
Manual Calculation			\$2,750.00	
Manual Calculation			\$1,055.00	
Manual Calculation			\$12,000.00	
Manual Calculation			\$5,172.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$345,992.00	1.27%
Manual Calculation			\$345,992.00	
Total	4407.41	96.33%	\$22,602,121.21	83.15%



MMS

Pipeline Information

Hogan MMS POCS 29056 (Ver1) Segment#:110166-

General Data

Water Depth:	154'
Origin / Terminus:	Origin
Opposite End Name:	La Conch
Opposite End Water Depth:	154'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	10.75"	Wall Thickness:		Length:	17522.4'
Depth of Burial:		# Crossings:		Product:	OIL
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the La Conchita Onshore facility.
Pipeline removed to state waters.
Estimated ~1600' Removed



MMS

Pipeline Information

Hogan MMS POCS 29056 (Ver1) Segment#:163016

General Data

Water Depth:	154'
Origin / Terminus:	Origin
Opposite End Name:	Houchin
Opposite End Water Depth:	163'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	4.5"	Wall Thickness:		Length:	3355'
Depth of Burial:		# Crossings:		Product:	H2O
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to Houchin. It is estimated as abandoned in place.



MMS

Pipeline Information

Hogan MMS POCS 29056 (Ver1) Segment#:172016

General Data

Water Depth:	154'
Origin / Terminus:	Origin
Opposite End Name:	Houchin
Opposite End Water Depth:	163'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	10.75"	Wall Thickness:		Length:	3355'
Depth of Burial:		# Crossings:		Product:	Lift
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to Houchin. It is estimated as abandoned in place.



MMS

Pipeline Information

Hogan MMS POCS 29056 (Ver1) Segment#:220166-

General Data

Water Depth:	154'
Origin / Terminus:	Origin
Opposite End Name:	La Conch
Opposite End Water Depth:	154'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	12.75"	Wall Thickness:		Length:	17522.4'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the La Conchita Onshore facility.
Pipeline removed to state waters.
Estimated ~1600' Removed



MMS

Pipeline Decommission Task Information

Hogan MMS POCS 29056 (Ver 1) Segment#:110166-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	1.68	0.55%	\$1,168.44	0.37%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.65%	\$3,477.50	1.09%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	18.00	5.93%	\$12,519.00	3.94%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.66%	\$1,391.00	0.44%
Demob Work Boat		<input type="checkbox"/>	1.68	0.55%	\$1,168.44	0.37%
Mob P/L Removal Spread	Shared between 2 pipelines.	<input type="checkbox"/>	5.00	1.65%	\$65,345.00	20.56%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	4.76	1.57%	\$15,143.94	4.77%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.17	1.04%	\$10,085.36	3.17%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.17	1.04%	\$10,085.36	3.17%
Mobilize Vessel		<input checked="" type="checkbox"/>	5.00	1.65%	\$21,500.00	6.77%
Expose Pipeline		<input checked="" type="checkbox"/>	4.76	1.57%	\$17,226.44	5.42%
Remove Pipeline		<input checked="" type="checkbox"/>	10.00	3.30%	\$36,190.00	11.39%
Bury Pipeline		<input checked="" type="checkbox"/>	3.17	1.04%	\$11,472.23	3.61%
Demob Vessel		<input checked="" type="checkbox"/>	5.00	1.65%	\$5,500.00	1.73%
Demob P/L Removal Spread		<input type="checkbox"/>	5.00	1.65%	\$18,095.00	5.69%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	55.37%	\$41,000.00	12.90%
Task Total			245.39	80.88%	\$271,367.71	85.40%
Misc. Work Provision (15.00%)			34.80	11.47%	\$27,838.63	8.76%
ather Contingency (10.00%)			23.20	7.65%	\$18,559.08	5.84%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			303.40	100.00%	\$317,765.42	100.00%



MMS

Pipeline Decommission Task Information

Hogan MMS POCS 29056 (Ver 1) Segment#:1630166

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	2.50	3.79%	\$4,526.25	3.79%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	7.59%	\$9,052.50	7.59%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	2.00	3.03%	\$3,621.00	3.03%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	3.03%	\$3,621.00	3.03%
Expose Pipeline		<input checked="" type="checkbox"/>	4.76	7.22%	\$8,617.98	7.22%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	4.76	7.22%	\$8,617.98	7.22%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.17	4.81%	\$5,739.29	4.81%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.17	4.81%	\$5,739.29	4.81%
Bury Pipeline		<input checked="" type="checkbox"/>	3.17	4.81%	\$5,739.29	4.81%
Reposition Workboat		<input checked="" type="checkbox"/>	3.06	4.64%	\$5,540.13	4.64%
Expose Pipeline		<input checked="" type="checkbox"/>	4.76	7.22%	\$8,617.98	7.22%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	4.76	7.22%	\$8,617.98	7.22%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.17	4.81%	\$5,739.29	4.81%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.17	4.81%	\$5,739.29	4.81%
Bury Pipeline		<input checked="" type="checkbox"/>	3.17	4.81%	\$5,739.29	4.81%
Demob Work Boat		<input type="checkbox"/>	2.50	3.79%	\$4,526.25	3.79%
Task Total			55.12	83.64%	\$99,794.79	83.64%
Misc. Work Provision (15.00%)			6.47	9.81%	\$11,710.32	9.81%
ather Contingency (10.00%)			4.31	6.54%	\$7,806.88	6.54%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			65.90	100.00%	\$119,311.99	100.00%



MMS

Pipeline Decommission Task Information

Hogan MMS POCS 29056 (Ver 1) Segment#:1720166

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	2.50	3.87%	\$4,526.25	3.87%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	7.75%	\$9,052.50	7.75%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	0.92	1.43%	\$1,665.66	1.43%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	3.10%	\$3,621.00	3.10%
Expose Pipeline		<input checked="" type="checkbox"/>	4.76	7.37%	\$8,617.98	7.37%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	4.76	7.37%	\$8,617.98	7.37%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.17	4.91%	\$5,739.29	4.91%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.17	4.91%	\$5,739.29	4.91%
Bury Pipeline		<input checked="" type="checkbox"/>	3.17	4.91%	\$5,739.29	4.91%
Reposition Workboat		<input checked="" type="checkbox"/>	3.06	4.74%	\$5,540.13	4.74%
Expose Pipeline		<input checked="" type="checkbox"/>	4.76	7.37%	\$8,617.98	7.37%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	4.76	7.37%	\$8,617.98	7.37%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.17	4.91%	\$5,739.29	4.91%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.17	4.91%	\$5,739.29	4.91%
Bury Pipeline		<input checked="" type="checkbox"/>	3.17	4.91%	\$5,739.29	4.91%
Demob Work Boat		<input type="checkbox"/>	2.50	3.87%	\$4,526.25	3.87%
Task Total			54.04	83.72%	\$97,839.45	83.72%
Misc. Work Provision (15.00%)			6.31	9.77%	\$11,417.02	9.77%
ather Contingency (10.00%)			4.20	6.51%	\$7,611.35	6.51%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			64.55	100.00%	\$116,867.81	100.00%



MMS

Pipeline Decommission Task Information

Hogan MMS POCS 29056 (Ver 1) Segment#:220166-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	1.68	0.53%	\$1,168.44	0.35%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.58%	\$3,477.50	1.05%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	24.00	7.56%	\$16,692.00	5.06%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.63%	\$1,391.00	0.42%
Demob Work Boat		<input type="checkbox"/>	1.68	0.53%	\$1,168.44	0.35%
Mob P/L Removal Spread	Shared between 2 pipelines.	<input type="checkbox"/>	5.00	1.58%	\$65,345.00	19.80%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	4.76	1.50%	\$15,143.94	4.59%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.17	1.00%	\$10,085.36	3.06%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.17	1.00%	\$10,085.36	3.06%
Mobilize Vessel		<input checked="" type="checkbox"/>	10.10	3.18%	\$27,110.00	8.22%
Expose Pipeline		<input checked="" type="checkbox"/>	4.76	1.50%	\$17,226.44	5.22%
Remove Pipeline		<input checked="" type="checkbox"/>	10.00	3.15%	\$36,190.00	10.97%
Bury Pipeline		<input checked="" type="checkbox"/>	3.17	1.00%	\$11,472.23	3.48%
Demob Vessel		<input checked="" type="checkbox"/>	5.00	1.58%	\$5,500.00	1.67%
Demob P/L Removal Spread		<input type="checkbox"/>	5.00	1.58%	\$18,095.00	5.48%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	52.95%	\$41,000.00	12.42%
Task Total			256.49	80.84%	\$281,150.71	85.20%
Misc. Work Provision (15.00%)			36.47	11.49%	\$29,306.08	8.88%
ather Contingency (10.00%)			24.31	7.66%	\$19,537.38	5.92%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			317.27	100.00%	\$329,994.17	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hogan MMS POCS 29056 (Ver 1) Segment#:11016

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	6.61%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$23,611.50	7.43%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	6.29%
Decommissioning Crew	\$0.00	Calculated from tables	\$4,439.26	1.40%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$34,541.55	10.87%
Manual Calculation	\$0.00	Independently Calculated	\$50,000.00	15.73%
Pipelay Barge	\$1,954.00	per Hour	\$76,264.62	24.00%
Pipeline Surveying	\$230.00	per Hour	\$8,976.90	2.83%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	5.04%
Work Boat	\$583.00	per Hour	\$16,533.88	5.20%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hogan MMS POCS 29056 (Ver 1) Segment#:16301

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$6,201.03	5.20%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$48,781.20	40.89%
Pipeline Surveying	\$230.00	per Hour	\$12,677.60	10.63%
Work Boat	\$583.00	per Hour	\$32,134.96	26.93%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hogan MMS POCS 29056 (Ver 1) Segment#:17201

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$6,079.53	5.20%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$47,825.40	40.92%
Pipeline Surveying	\$230.00	per Hour	\$12,429.20	10.64%
Work Boat	\$583.00	per Hour	\$31,505.32	26.96%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hogan MMS POCS 29056 (Ver 1) Segment#:22016

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	6.36%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$29,221.50	8.86%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	6.06%
Decommissioning Crew	\$0.00	Calculated from tables	\$5,114.26	1.55%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$34,541.55	10.47%
Manual Calculation	\$0.00	Independently Calculated	\$50,000.00	15.15%
Pipelay Barge	\$1,954.00	per Hour	\$76,264.62	23.11%
Pipeline Surveying	\$230.00	per Hour	\$8,976.90	2.72%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	4.85%
Work Boat	\$583.00	per Hour	\$20,031.88	6.07%



MMS

Pipeline Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1) Segment#:110166

Task		Task Hours	Task Cost
Mobilize Work Boat		1.68 0.55%	\$1,168.44 0.37%
Work Boat	\$979.44		
Decommissioning Crew	\$189.00		
Rig Up Decomm Equipment		5.00 1.65%	\$3,477.50 1.09%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		18.00 5.93%	\$12,519.00 3.94%
Work Boat	\$10,494.00		
Decommissioning Crew	\$2,025.00		
Derig Decomm Equipment		2.00 0.66%	\$1,391.00 0.44%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		1.68 0.55%	\$1,168.44 0.37%
Work Boat	\$979.44		
Decommissioning Crew	\$189.00		
Mob P/L Removal Spread		5.00 1.65%	\$65,345.00 20.56%
Dive Basic Spread- Mixed Gas	\$4,425.00		
Pipeline Surveying	\$1,150.00		
Pipelay Barge	\$9,770.00		
Manual Calculation	\$50,000.00		
Cut & Plug Pipeline		4.76 1.57%	\$15,143.94 4.77%
Dive Basic Spread- Mixed Gas	\$4,212.60		
Pipeline Surveying	\$1,094.80		
Pipelay Barge	\$9,301.04		
Decommissioning Crew	\$535.50		
Cut Pipeline Riser		3.17 1.04%	\$10,085.36 3.17%
Dive Basic Spread- Mixed Gas	\$2,805.45		
Pipeline Surveying	\$729.10		
Pipelay Barge	\$6,194.18		
Decommissioning Crew	\$356.63		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		3.17	1.04%	\$10,085.36	3.17%
Dive Basic Spread- Mixed Gas	\$2,805.45				
Pipeline Surveying	\$729.10				
Pipelay Barge	\$6,194.18				
Decommissioning Crew	\$356.63				
Mobilize Vessel		5.00	1.65%	\$21,500.00	6.77%
CB 180 & Tug	\$5,500.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		4.76	1.57%	\$17,226.44	5.42%
Pipeline Surveying	\$1,094.80				
Dive Basic Spread- Mixed Gas	\$4,212.60				
Pipelay Barge	\$9,301.04				
CB 180 & Tug	\$2,618.00				
Remove Pipeline		10.00	3.30%	\$36,190.00	11.39%
Pipeline Surveying	\$2,300.00				
Dive Basic Spread- Mixed Gas	\$8,850.00				
Pipelay Barge	\$19,540.00				
CB 180 & Tug	\$5,500.00				
Bury Pipeline		3.17	1.04%	\$11,472.23	3.61%
Pipeline Surveying	\$729.10				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Pipelay Barge	\$6,194.18				
CB 180 & Tug	\$1,743.50				
Demob Vessel		5.00	1.65%	\$5,500.00	1.73%
CB 180 & Tug	\$5,500.00				
Demob P/L Removal Spread		5.00	1.65%	\$18,095.00	5.69%
Pipeline Surveying	\$1,150.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Pipelay Barge	\$9,770.00				
CB 180 & Tug	\$2,750.00				
Offload CB 180		168.00	55.37%	\$41,000.00	12.90%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		245.39	80.88%	\$271,367.71	85.40%



MMS

Pipeline Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1) Segment#:163016

Task		Task Hours	Task Cost
Mobilize Work Boat		2.50 3.79%	\$4,526.25 3.79%
Work Boat	\$1,457.50		
Dive Basic Spread- Mixed Gas	\$2,212.50		
Decommissioning Crew	\$281.25		
Pipeline Surveying	\$575.00		
Rig Up Decomm Equipment		5.00 7.59%	\$9,052.50 7.59%
Work Boat	\$2,915.00		
Dive Basic Spread- Mixed Gas	\$4,425.00		
Decommissioning Crew	\$562.50		
Pipeline Surveying	\$1,150.00		
Pig & Flush Pipeline		2.00 3.03%	\$3,621.00 3.03%
Work Boat	\$1,166.00		
Dive Basic Spread- Mixed Gas	\$1,770.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Derig Decomm Equipment		2.00 3.03%	\$3,621.00 3.03%
Work Boat	\$1,166.00		
Dive Basic Spread- Mixed Gas	\$1,770.00		
Decommissioning Crew	\$225.00		
Pipeline Surveying	\$460.00		
Expose Pipeline		4.76 7.22%	\$8,617.98 7.22%
Work Boat	\$2,775.08		
Dive Basic Spread- Mixed Gas	\$4,212.60		
Decommissioning Crew	\$535.50		
Pipeline Surveying	\$1,094.80		
Cut & Plug Pipeline		4.76 7.22%	\$8,617.98 7.22%
Work Boat	\$2,775.08		
Dive Basic Spread- Mixed Gas	\$4,212.60		
Decommissioning Crew	\$535.50		
Pipeline Surveying	\$1,094.80		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.17	4.81%	\$5,739.29	4.81%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Remove Tube Turn		3.17	4.81%	\$5,739.29	4.81%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Bury Pipeline		3.17	4.81%	\$5,739.29	4.81%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Reposition Workboat		3.06	4.64%	\$5,540.13	4.64%
Work Boat	\$1,783.98				
Dive Basic Spread- Mixed Gas	\$2,708.10				
Decommissioning Crew	\$344.25				
Pipeline Surveying	\$703.80				
Expose Pipeline		4.76	7.22%	\$8,617.98	7.22%
Work Boat	\$2,775.08				
Dive Basic Spread- Mixed Gas	\$4,212.60				
Decommissioning Crew	\$535.50				
Pipeline Surveying	\$1,094.80				
Cut & Plug Pipeline		4.76	7.22%	\$8,617.98	7.22%
Work Boat	\$2,775.08				
Dive Basic Spread- Mixed Gas	\$4,212.60				
Decommissioning Crew	\$535.50				
Pipeline Surveying	\$1,094.80				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.17	4.81%	\$5,739.29	4.81%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Remove Tube Turn		3.17	4.81%	\$5,739.29	4.81%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Bury Pipeline		3.17	4.81%	\$5,739.29	4.81%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Demob Work Boat		2.50	3.79%	\$4,526.25	3.79%
Work Boat	\$1,457.50				
Dive Basic Spread- Mixed Gas	\$2,212.50				
Decommissioning Crew	\$281.25				
Pipeline Surveying	\$575.00				
Total		55.12	83.64%	\$99,794.79	83.64%



MMS

Pipeline Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1) Segment#:172016

Task		Task Hours		Task Cost	
Mobilize Work Boat		2.50	3.87%	\$4,526.25	3.87%
Work Boat	\$1,457.50				
Dive Basic Spread- Mixed Gas	\$2,212.50				
Decommissioning Crew	\$281.25				
Pipeline Surveying	\$575.00				
Rig Up Decomm Equipment		5.00	7.75%	\$9,052.50	7.75%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		0.92	1.43%	\$1,665.66	1.43%
Work Boat	\$536.36				
Dive Basic Spread- Mixed Gas	\$814.20				
Decommissioning Crew	\$103.50				
Pipeline Surveying	\$211.60				
Derig Decomm Equipment		2.00	3.10%	\$3,621.00	3.10%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		4.76	7.37%	\$8,617.98	7.37%
Work Boat	\$2,775.08				
Dive Basic Spread- Mixed Gas	\$4,212.60				
Decommissioning Crew	\$535.50				
Pipeline Surveying	\$1,094.80				
Cut & Plug Pipeline		4.76	7.37%	\$8,617.98	7.37%
Work Boat	\$2,775.08				
Dive Basic Spread- Mixed Gas	\$4,212.60				
Decommissioning Crew	\$535.50				
Pipeline Surveying	\$1,094.80				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.17	4.91%	\$5,739.29	4.91%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Remove Tube Turn		3.17	4.91%	\$5,739.29	4.91%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Bury Pipeline		3.17	4.91%	\$5,739.29	4.91%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Reposition Workboat		3.06	4.74%	\$5,540.13	4.74%
Work Boat	\$1,783.98				
Dive Basic Spread- Mixed Gas	\$2,708.10				
Decommissioning Crew	\$344.25				
Pipeline Surveying	\$703.80				
Expose Pipeline		4.76	7.37%	\$8,617.98	7.37%
Work Boat	\$2,775.08				
Dive Basic Spread- Mixed Gas	\$4,212.60				
Decommissioning Crew	\$535.50				
Pipeline Surveying	\$1,094.80				
Cut & Plug Pipeline		4.76	7.37%	\$8,617.98	7.37%
Work Boat	\$2,775.08				
Dive Basic Spread- Mixed Gas	\$4,212.60				
Decommissioning Crew	\$535.50				
Pipeline Surveying	\$1,094.80				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.17	4.91%	\$5,739.29	4.91%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Remove Tube Turn		3.17	4.91%	\$5,739.29	4.91%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Bury Pipeline		3.17	4.91%	\$5,739.29	4.91%
Work Boat	\$1,848.11				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Decommissioning Crew	\$356.63				
Pipeline Surveying	\$729.10				
Demob Work Boat		2.50	3.87%	\$4,526.25	3.87%
Work Boat	\$1,457.50				
Dive Basic Spread- Mixed Gas	\$2,212.50				
Decommissioning Crew	\$281.25				
Pipeline Surveying	\$575.00				
Total		54.04	83.72%	\$97,839.45	83.72%



MMS

Pipeline Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1) Segment#:220166

Task		Task Hours	Task Cost
Mobilize Work Boat		1.68 0.53%	\$1,168.44 0.35%
Work Boat	\$979.44		
Decommissioning Crew	\$189.00		
Rig Up Decomm Equipment		5.00 1.58%	\$3,477.50 1.05%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		24.00 7.56%	\$16,692.00 5.06%
Work Boat	\$13,992.00		
Decommissioning Crew	\$2,700.00		
Derig Decomm Equipment		2.00 0.63%	\$1,391.00 0.42%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		1.68 0.53%	\$1,168.44 0.35%
Work Boat	\$979.44		
Decommissioning Crew	\$189.00		
Mob P/L Removal Spread		5.00 1.58%	\$65,345.00 19.80%
Dive Basic Spread- Mixed Gas	\$4,425.00		
Pipeline Surveying	\$1,150.00		
Pipelay Barge	\$9,770.00		
Manual Calculation	\$50,000.00		
Cut & Plug Pipeline		4.76 1.50%	\$15,143.94 4.59%
Dive Basic Spread- Mixed Gas	\$4,212.60		
Pipeline Surveying	\$1,094.80		
Pipelay Barge	\$9,301.04		
Decommissioning Crew	\$535.50		
Cut Pipeline Riser		3.17 1.00%	\$10,085.36 3.06%
Dive Basic Spread- Mixed Gas	\$2,805.45		
Pipeline Surveying	\$729.10		
Pipelay Barge	\$6,194.18		
Decommissioning Crew	\$356.63		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		3.17	1.00%	\$10,085.36	3.06%
Dive Basic Spread- Mixed Gas	\$2,805.45				
Pipeline Surveying	\$729.10				
Pipelay Barge	\$6,194.18				
Decommissioning Crew	\$356.63				
Mobilize Vessel		10.10	3.18%	\$27,110.00	8.22%
CB 180 & Tug	\$11,110.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		4.76	1.50%	\$17,226.44	5.22%
Pipeline Surveying	\$1,094.80				
Dive Basic Spread- Mixed Gas	\$4,212.60				
Pipelay Barge	\$9,301.04				
CB 180 & Tug	\$2,618.00				
Remove Pipeline		10.00	3.15%	\$36,190.00	10.97%
Pipeline Surveying	\$2,300.00				
Dive Basic Spread- Mixed Gas	\$8,850.00				
Pipelay Barge	\$19,540.00				
CB 180 & Tug	\$5,500.00				
Bury Pipeline		3.17	1.00%	\$11,472.23	3.48%
Pipeline Surveying	\$729.10				
Dive Basic Spread- Mixed Gas	\$2,805.45				
Pipelay Barge	\$6,194.18				
CB 180 & Tug	\$1,743.50				
Demob Vessel		5.00	1.58%	\$5,500.00	1.67%
CB 180 & Tug	\$5,500.00				
Demob P/L Removal Spread		5.00	1.58%	\$18,095.00	5.48%
Pipeline Surveying	\$1,150.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Pipelay Barge	\$9,770.00				
CB 180 & Tug	\$2,750.00				
Offload CB 180		168.00	52.95%	\$41,000.00	12.42%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		256.49	80.84%	\$281,150.71	85.20%



MMS

Well Information

Hogan MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Pacific Operators Offshore, Inc.	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Hogan MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$5,108,704.00 80.00%
Task Total			0.00	\$5,108,704.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$766,305.63 12.00%
ather Contingency (10.00%)			0.00	\$510,870.41 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$6,385,880.04 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Hogan MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$5,108,704.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Hogan MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$5,108,704.00	80.00%
Manual Calculation			\$5,108,704.00	
Total	0.00	0.00%	\$5,108,704.00	80.00%

Hondo MMS POCS 29056



MMS

Platform Salvage Option

Hondo MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Hondo will be removed along with Platforms Heritage and Harmony.
- Platform Hondo is an 8-pile platform installed in 1976 in 842' of water.
- The estimated removal weight is the deck weight is 8,450 tons and the jacket weight is 12,200 tons.
- The platform has a total of 28 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 28 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 4000 that will be mobilized from the GOM or North Sea. The total mob/demob time will be 200 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Four 300' cargo barges will transport the deck modules to shore and six 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 10 cargo barge trips will be required.
- The two pipelines (oil, gas) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.
- A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The



MMS

Platform Salvage Option

Hondo MMS POCS 29056 (Ver 1)

total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix 1 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management,



MMS

Platform Salvage Option

Hondo MMS POCS 29056 (Ver 1)

Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$91,690,516

Estimated Decommissioning Net Cost = \$91,690,516



MMS

Basic Information

Hondo MMS POCS 29056 (Ver 1)

General Data

Platform:	Hondo MMS POCS 29056
Function:	SELF CONTAINED
Type:	Steel
Water Depth:	842'
Pre 461H?:	Yes
Year Installed:	1976
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0188
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	28
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Exxon Mobil Corporation	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$81,789,088	\$81,789,088
Well Plugging & Abandonment:	\$6,431,590	\$6,431,590
Pipeline Abandonment:	\$3,469,838	\$3,469,838
Total Decommissioning Cost:	\$91,690,516	\$91,690,516



MMS

Platform Information

Hondo MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	48"		Yes	No	
Skirt/Braced	12	54"		No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	28
Number Installed:	28
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	12220.00		
Jacket Installation Date:	1/1/1976		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	8450 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1976
Deck Contractor:	Unknown



MMS

Platform Information

Hondo MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Deck > 500T
CB 400 x 100	Deck > 500T	Deck > 500T	Deck > 500T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T
CB 400 x 100	Jkt > 700T	Jkt > 700T	Jkt > 700T	Jkt > 700T

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$9,754,894.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Hondo MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$4,029,009.00	4.93%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.01%	\$851,667.00	1.04%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.01%	\$13,984.00	0.02%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.01%	\$6,340,742.00	7.75%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.01%	\$3,635,383.00	4.44%
Mobilize DB 4000	Mob from GOM or North Sea, 100 days divided by 3 platforms	<input type="checkbox"/>	800.00	7.71%	\$7,560,000.00	9.24%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 4)	<input type="checkbox"/>	25.20	0.24%	\$154,784.00	0.19%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 6)	<input type="checkbox"/>	25.20	0.24%	\$235,200.00	0.29%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	11.60	0.11%	\$52,432.00	0.06%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.13%
Cut Deck/Equip/Misc	Seperate 13 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.23%	\$410,400.00	0.50%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.23%	\$410,400.00	0.50%
Remove 8 Pile Deck	Remove 8 Pile Deck, 13 modules	<input checked="" type="checkbox"/>	120.00	1.16%	\$2,052,000.00	2.51%
Demob CB 300 & Tug	Demob to Port of LA (Qty 4)	<input type="checkbox"/>	25.20	0.24%	\$98,784.00	0.12%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	35.00	0.34%	\$599,200.00	0.73%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	121.01	1.17%	\$2,271,691.21	2.78%
Cut Jacket	48 Hours per section, times 13 section(s), per MMS	<input checked="" type="checkbox"/>	624.00	6.01%	\$10,782,320.00	13.18%
Remove Jacket - Meth 1	48 Hours per section, times 13 section(s), per MMS	<input checked="" type="checkbox"/>	624.00	6.01%	\$10,682,880.00	13.06%
Demob CB 400 & Tug	Demob to Port of LA (Qty 6)	<input type="checkbox"/>	25.20	0.24%	\$151,200.00	0.18%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.07%	\$108,810.00	0.13%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	11.60	0.11%	\$52,432.00	0.06%
Demob DB 4000	Demob to GOM or North Sea, 100 days divided by 3 platforms	<input type="checkbox"/>	800.00	7.71%	\$7,560,000.00	9.24%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	0.69%	\$1,282,000.00	1.57%
Offload CB 300		<input type="checkbox"/>	1440.00	13.88%	\$375,200.00	0.46%
Offload CB 400		<input type="checkbox"/>	5136.00	49.49%	\$1,455,360.00	1.78%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.01%	\$13,984.00	0.02%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$859,484.00	1.05%
Task Total			9962.51	96.00%	\$62,148,156.21	75.99%
Misc. Work Provision (15.00%)			248.93	2.40%	\$5,931,619.00	7.25%
Weather Contingency (10.00%)			165.95	1.60%	\$3,954,412.00	4.83%
Consumables					\$0.00	0.00%



MMS

Platform Decommission Task Information

Hondo MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Waste Disposal		\$9,754,894.00 11.93%
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			10377.39 100.00%	\$1,789,081.21 100.00%



MMS

Platform Decommission Resources Breakdown

Hondo MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$1,005,443.75	1.23%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$295,200.00	0.36%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$1,335,360.00	1.63%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$362,208.00	0.44%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$1,706,410.00	2.09%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$200,000.00	0.24%
Derrick Barge 4000	\$10,500.00	per Hour per barge	\$31,767,855.00	38.84%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$5,091,567.16	6.23%
Manual Calculation	\$0.00	Independently Calculated	\$17,026,253.00	20.82%
Pile Abrasive Cut 49 to 69 inches	\$5,000.00	per Cut	\$200,000.00	0.24%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$99,440.00	0.12%
Pipeline Survey	\$230.00	per Hour	\$370,003.30	0.45%
Rem. Operated Vehicle	\$800.00	per Hour	\$2,536,816.00	3.10%
Rig Up CB 300	\$14,000.00	per Barge	\$56,000.00	0.07%
Rig Up CB 400	\$14,000.00	per Barge	\$84,000.00	0.10%
Work Boat	\$500.00	per Hour	\$11,600.00	0.01%



MMS

Platform Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$4,029,009.00	4.93%
Manual Calculation			\$4,029,009.00	
NMFS Marine Observation	1.00	0.01%	\$851,667.00	1.04%
Manual Calculation			\$851,667.00	
Mobilize Abrasive Cutting Spread	1.00	0.01%	\$13,984.00	0.02%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Sever Conductors- Abrasive	1.00	0.01%	\$6,340,742.00	7.75%
Manual Calculation			\$6,340,742.00	
Platform Removal Preparation	1.00	0.01%	\$3,635,383.00	4.44%
Manual Calculation			\$3,635,383.00	
Mobilize DB 4000	800.00	7.71%	\$7,560,000.00	9.24%
Derrick Barge 4000			\$7,560,000.00	
Mobilize CB 300 & Tug	25.20	0.24%	\$154,784.00	0.19%
CB 300 & Tug			\$98,784.00	
Rig Up CB 300			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	25.20	0.24%	\$235,200.00	0.29%
Rig Up CB 400			\$84,000.00	
CB 400 & Tug			\$151,200.00	
Mobilize Dive Spread	11.60	0.11%	\$52,432.00	0.06%
Work Boat			\$5,800.00	
Dive Basic Spread Saturation			\$36,714.00	
Abrasive Cutter Spread			\$7,250.00	
Pipeline Survey			\$2,668.00	
Setup Derrick Barge	6.75	0.07%	\$108,810.00	0.13%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Cut Deck/Equip/Misc	24.00	0.23%	\$410,400.00	0.50%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	



MMS

Platform Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.23%	\$410,400.00	0.50%
Derrick Barge 4000			\$252,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Rem. Operated Vehicle			\$38,400.00	
Remove 8 Pile Deck	120.00	1.16%	\$2,052,000.00	2.51%
Derrick Barge 4000			\$1,260,000.00	
Dive Basic Spread Saturation			\$379,800.00	
Pipeline Survey			\$27,600.00	
Abrasive Cutter Spread			\$75,000.00	
CB 300 & Tug			\$117,600.00	
Rem. Operated Vehicle			\$192,000.00	
Demob CB 300 & Tug	25.20	0.24%	\$98,784.00	0.12%
CB 300 & Tug			\$98,784.00	
Jet/Airlift Pile Mud Plug	35.00	0.34%	\$599,200.00	0.73%
Derrick Barge 4000			\$367,500.00	
Dive Basic Spread Saturation			\$110,775.00	
Pipeline Survey			\$8,050.00	
Abrasive Cutter Spread			\$21,875.00	
CB 400 & Tug			\$35,000.00	
Rem. Operated Vehicle			\$56,000.00	



MMS

Platform Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		121.01	1.17%	\$2,271,691.21	2.78%
Derrick Barge 4000	\$1,270,605.00				
Dive Basic Spread Saturation	\$382,996.66				
Pipeline Survey	\$27,832.30				
Abrasive Cutter Spread	\$75,631.25				
CB 400 & Tug	\$121,010.00				
Pile Abrasive Cut 49 to 69 inches	\$200,000.00				
Rem. Operated Vehicle	\$193,616.00				
Cut Jacket		624.00	6.01%	\$10,782,320.00	13.18%
Derrick Barge 4000	\$6,552,000.00				
Dive Basic Spread Saturation	\$1,974,960.00				
Pipeline Survey	\$143,520.00				
Abrasive Cutter Spread	\$390,000.00				
CB 400 & Tug	\$624,000.00				
Pile Abrasive Cut 7 to 48 inches	\$99,440.00				
Rem. Operated Vehicle	\$998,400.00				
Remove Jacket - Meth 1		624.00	6.01%	\$10,682,880.00	13.06%
Derrick Barge 4000	\$6,552,000.00				
Dive Basic Spread Saturation	\$1,974,960.00				
Pipeline Survey	\$143,520.00				
Abrasive Cutter Spread	\$390,000.00				
CB 400 & Tug	\$624,000.00				
Rem. Operated Vehicle	\$998,400.00				
Demob CB 400 & Tug		25.20	0.24%	\$151,200.00	0.18%
CB 400 & Tug	\$151,200.00				



MMS

Platform Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.07%	\$108,810.00	0.13%
Derrick Barge 4000			\$70,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Rem. Operated Vehicle			\$10,800.00	
Demob Dive Spread	11.60	0.11%	\$52,432.00	0.06%
Work Boat			\$5,800.00	
Dive Basic Spread Saturation			\$36,714.00	
Abrasive Cutter Spread			\$7,250.00	
Pipeline Survey			\$2,668.00	
Demob DB 4000	800.00	7.71%	\$7,560,000.00	9.24%
Derrick Barge 4000			\$7,560,000.00	
Site Clearance - with Divers	72.00	0.69%	\$1,282,000.00	1.57%
Manual Calculation			\$1,282,000.00	
Offload CB 300	1440.00	13.88%	\$375,200.00	0.46%
Cargo Barge 300			\$295,200.00	
CB Damage Deduct			\$80,000.00	
Offload CB 400	5136.00	49.49%	\$1,455,360.00	1.78%
Cargo Barge 400			\$1,335,360.00	
CB Damage Deduct			\$120,000.00	



MMS

Platform Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.01%	\$13,984.00	0.02%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$859,484.00	1.05%
Manual Calculation			\$859,484.00	
Total	9962.51	96.00%	\$62,148,156.21	75.99%



MMS

Pipeline Information

Hondo MMS POCS 29056 (Ver1) Segment#:271018

General Data

Water Depth: 842'
Origin / Terminus: Origin
Opposite End Name: SALM
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter:	Wall Thickness:	Length:	8300'
Depth of Burial:	# Crossings:	Product:	
Installation Date:	Weight Coating: No	J Tube:	No
Riser?: No	Riser Guard?: No		

Comments

Abandoned



MMS

Pipeline Information

Hondo MMS POCS 29056 (Ver1) Segment#:283018

General Data

Water Depth: 842'
Origin / Terminus: Origin
Opposite End Name: SALM
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter:	Wall Thickness:	Length:	8300'
Depth of Burial:	# Crossings:	Product:	
Installation Date:	Weight Coating: No	J Tube:	No
Riser?: No	Riser Guard?: No		

Comments

Abandoned



MMS

Pipeline Information

Hondo MMS POCS 29056 (Ver1) Segment#:294018

General Data

Water Depth: 842'
Origin / Terminus: Origin
Opposite End Name: SALM
Opposite End Water Depth:
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter:	Wall Thickness:	Length:	8300'
Depth of Burial:	# Crossings:	Product:	
Installation Date:	Weight Coating: No	J Tube:	No
Riser?: No	Riser Guard?: No		

Comments

Abandoned



MMS

Pipeline Information

Hondo MMS POCS 29056 (Ver1) Segment#:352018

General Data

Water Depth: 842'
Origin / Terminus: Origin
Opposite End Name: LAS FLOR
Opposite End Water Depth: 200'
Pipeline Operator:
Provision for Misc. Work%: 15.00%
Weather Contingency %: 10.00%

Pipeline Data

Outside Diameter:	12.75"	Wall Thickness:		Length:	10980'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Los Flores Onshore Facility.
Pipeline is estimated to be removed between <200' WD and to state waters.
Estimated Removal Length in this estimate ~3000'



MMS

Pipeline Information

Hondo MMS POCS 29056 (Ver1) Segment#:541018

General Data

Water Depth:	842'
Origin / Terminus:	Origin
Opposite End Name:	Harmony
Opposite End Water Depth:	1198'
Pipeline Operator:	
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	14"	Wall Thickness:		Length:	17332'
Depth of Burial:		# Crossings:		Product:	OIL
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to the Harmony platform. It is estimated to be abandoned in place.



MMS

Pipeline Decommission Task Information

Hondo MMS POCS 29056 (Ver 1) Segment#:3520188-shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat	To Hondo	<input type="checkbox"/>	140.00	19.99%	\$462,000.00	25.05%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.71%	\$49,882.50	2.70%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	12.00	1.71%	\$59,718.00	3.24%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	1.65%	\$57,478.58	3.12%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	1.10%	\$38,319.05	2.08%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	1.10%	\$38,319.05	2.08%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	1.10%	\$38,319.05	2.08%
Demob Dive Boat		<input checked="" type="checkbox"/>	140.00	19.99%	\$462,000.00	25.05%
Mob P/L Removal Spread	Relocate to a point along the pipeline where the water depth is 200'	<input type="checkbox"/>	11.60	1.66%	\$41,980.40	2.28%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.65%	\$41,799.45	2.27%
Cut & Plug Pipeline	Plug the upstream end going To Hondo	<input checked="" type="checkbox"/>	11.55	1.65%	\$41,799.45	2.27%
Bury Pipeline	Bury the upstream end going To Hondo	<input checked="" type="checkbox"/>	7.70	1.10%	\$27,866.30	1.51%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	1.65%	\$41,799.45	2.27%
Remove Pipeline		<input checked="" type="checkbox"/>	20.00	2.86%	\$72,380.00	3.92%
Bury Pipeline	Bury the end going to shore	<input checked="" type="checkbox"/>	7.70	1.10%	\$27,866.30	1.51%
Demob P/L Removal Spread		<input type="checkbox"/>	11.60	1.66%	\$41,980.40	2.28%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	23.99%	\$41,000.00	2.22%
Task Total			592.90	84.66%	\$1,584,507.98	85.92%
Misc. Work Provision (15.00%)			64.46	9.20%	\$155,782.08	8.45%
ather Contingency (10.00%)			42.97	6.14%	\$103,854.72	5.63%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			700.33	100.00%	\$1,844,144.78	100.00%



MMS

Pipeline Decommission Task Information

Hondo MMS POCS 29056 (Ver 1) Segment#:5410188

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Dive Boat		<input type="checkbox"/>	140.00	33.23%	\$462,000.00	28.42%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.71%	\$39,239.50	2.41%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	1.19%	\$23,732.50	1.46%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	23.00	5.46%	\$109,169.50	6.72%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.47%	\$9,493.00	0.58%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	2.74%	\$54,822.08	3.37%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	2.74%	\$54,822.08	3.37%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	7.70	1.83%	\$36,548.05	2.25%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	1.83%	\$36,548.05	2.25%
Set Up Dive Boat		<input checked="" type="checkbox"/>	3.00	0.71%	\$14,239.50	0.88%
Expose Pipeline		<input checked="" type="checkbox"/>	11.55	2.74%	\$54,822.08	3.37%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	11.55	2.74%	\$54,822.08	3.37%
Remove Tube Turn		<input checked="" type="checkbox"/>	7.70	1.83%	\$36,548.05	2.25%
Bury Pipeline		<input checked="" type="checkbox"/>	7.70	1.83%	\$36,548.05	2.25%
Demob Dive Boat		<input type="checkbox"/>	140.00	33.23%	\$462,000.00	28.42%
Task Total			393.00	93.29%	\$1,485,354.52	91.37%
Misc. Work Provision (15.00%)			16.95	4.02%	\$84,203.18	5.18%
Other Contingency (10.00%)			11.30	2.68%	\$56,135.45	3.45%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			421.25	100.00%	\$1,625,693.15	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hondo MMS POCS 29056 (Ver 1) Segment#:35201

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	1.14%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$51,287.50	2.78%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	1.08%
Decommissioning Crew	\$0.00	Calculated from tables	\$5,810.63	0.32%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$82,526.25	4.48%
DP Dive Boat	\$3,300.00	per Hour	\$1,094,445.00	59.35%
Manual Calculation	\$0.00	Independently Calculated	\$25,000.00	1.36%
Pipelay Barge	\$1,954.00	per Hour	\$182,210.50	9.88%
Pipeline Surveying	\$230.00	per Hour	\$33,327.00	1.81%
Rem. Operated Vehicle	\$667.00	per Hour	\$68,901.10	3.74%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Hondo MMS POCS 29056 (Ver 1) Segment#:54101

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$12,712.52	0.78%
DP Dive Boat	\$3,300.00	per Hour	\$1,296,900.00	79.78%
Manual Calculation	\$0.00	Independently Calculated	\$25,000.00	1.54%
Rem. Operated Vehicle	\$667.00	per Hour	\$150,742.00	9.27%



MMS

Pipeline Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1) Segment#:352018

Task	Task Hours	Task Cost
Mobilize Dive Boat	140.00 19.99%	\$462,000.00 25.05%
DP Dive Boat		\$462,000.00
Rig Up Decomm Equipment	5.00 0.71%	\$49,882.50 2.70%
DP Dive Boat		\$16,500.00
Rem. Operated Vehicle		\$6,670.00
Decommissioning Crew		\$562.50
Pipeline Surveying		\$1,150.00
Manual Calculation		\$25,000.00
Pig & Flush Pipeline	12.00 1.71%	\$59,718.00 3.24%
DP Dive Boat		\$39,600.00
Rem. Operated Vehicle		\$16,008.00
Decommissioning Crew		\$1,350.00
Pipeline Surveying		\$2,760.00
Cut & Plug Pipeline	11.55 1.65%	\$57,478.58 3.12%
DP Dive Boat		\$38,115.00
Rem. Operated Vehicle		\$15,407.70
Decommissioning Crew		\$1,299.38
Pipeline Surveying		\$2,656.50
Cut Pipeline Riser	7.70 1.10%	\$38,319.05 2.08%
DP Dive Boat		\$25,410.00
Rem. Operated Vehicle		\$10,271.80
Decommissioning Crew		\$866.25
Pipeline Surveying		\$1,771.00
Remove Tube Turn	7.70 1.10%	\$38,319.05 2.08%
DP Dive Boat		\$25,410.00
Rem. Operated Vehicle		\$10,271.80
Decommissioning Crew		\$866.25
Pipeline Surveying		\$1,771.00



MMS

Pipeline Decommission Cost Breakdown

Bury Pipeline		7.70	1.10%	\$38,319.05	2.08%
DP Dive Boat	\$25,410.00				
Rem. Operated Vehicle	\$10,271.80				
Decommissioning Crew	\$866.25				
Pipeline Surveying	\$1,771.00				
<hr/>					
Demob Dive Boat		140.00	19.99%	\$462,000.00	25.05%
DP Dive Boat	\$462,000.00				
<hr/>					
Mob P/L Removal Spread		11.60	1.66%	\$41,980.40	2.28%
Pipeline Surveying	\$2,668.00				
Dive Basic Spread- Mixed Gas	\$10,266.00				
Pipelay Barge	\$22,666.40				
CB 180 & Tug	\$6,380.00				
<hr/>					
Expose Pipeline		11.55	1.65%	\$41,799.45	2.27%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					
Cut & Plug Pipeline		11.55	1.65%	\$41,799.45	2.27%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					
Bury Pipeline		7.70	1.10%	\$27,866.30	1.51%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
<hr/>					
Expose Pipeline		11.55	1.65%	\$41,799.45	2.27%
Pipeline Surveying	\$2,656.50				
Dive Basic Spread- Mixed Gas	\$10,221.75				
Pipelay Barge	\$22,568.70				
CB 180 & Tug	\$6,352.50				
<hr/>					



MMS

Pipeline Decommission Cost Breakdown

Remove Pipeline		20.00	2.86%	\$72,380.00	3.92%
Pipeline Surveying	\$4,600.00				
Dive Basic Spread- Mixed Gas	\$17,700.00				
Pipelay Barge	\$39,080.00				
CB 180 & Tug	\$11,000.00				
Bury Pipeline		7.70	1.10%	\$27,866.30	1.51%
Pipeline Surveying	\$1,771.00				
Dive Basic Spread- Mixed Gas	\$6,814.50				
Pipelay Barge	\$15,045.80				
CB 180 & Tug	\$4,235.00				
Demob P/L Removal Spread		11.60	1.66%	\$41,980.40	2.28%
Pipeline Surveying	\$2,668.00				
Dive Basic Spread- Mixed Gas	\$10,266.00				
Pipelay Barge	\$22,666.40				
CB 180 & Tug	\$6,380.00				
Offload CB 180		168.00	23.99%	\$41,000.00	2.22%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		592.90	84.66%	\$1,584,507.98	85.92%



MMS

Pipeline Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1) Segment#:541018

Task		Task Hours	Task Cost
Mobilize Dive Boat		140.00 33.23%	\$462,000.00 28.42%
DP Dive Boat	\$462,000.00		
Set Up Dive Boat		3.00 0.71%	\$39,239.50 2.41%
DP Dive Boat	\$9,900.00		
Decommissioning Crew	\$337.50		
Rem. Operated Vehicle	\$4,002.00		
Manual Calculation	\$25,000.00		
Rig Up Decomm Equipment		5.00 1.19%	\$23,732.50 1.46%
DP Dive Boat	\$16,500.00		
Decommissioning Crew	\$562.50		
Rem. Operated Vehicle	\$6,670.00		
Pig & Flush Pipeline		23.00 5.46%	\$109,169.50 6.72%
DP Dive Boat	\$75,900.00		
Decommissioning Crew	\$2,587.50		
Rem. Operated Vehicle	\$30,682.00		
Derig Decomm Equipment		2.00 0.47%	\$9,493.00 0.58%
DP Dive Boat	\$6,600.00		
Decommissioning Crew	\$225.00		
Rem. Operated Vehicle	\$2,668.00		
Expose Pipeline		11.55 2.74%	\$54,822.08 3.37%
DP Dive Boat	\$38,115.00		
Decommissioning Crew	\$1,299.38		
Rem. Operated Vehicle	\$15,407.70		
Cut & Plug Pipeline		11.55 2.74%	\$54,822.08 3.37%
DP Dive Boat	\$38,115.00		
Decommissioning Crew	\$1,299.38		
Rem. Operated Vehicle	\$15,407.70		



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		7.70	1.83%	\$36,548.05	2.25%
DP Dive Boat	\$25,410.00				
Decommissioning Crew	\$866.25				
Rem. Operated Vehicle	\$10,271.80				
Remove Tube Turn		7.70	1.83%	\$36,548.05	2.25%
DP Dive Boat	\$25,410.00				
Decommissioning Crew	\$866.25				
Rem. Operated Vehicle	\$10,271.80				
Set Up Dive Boat		3.00	0.71%	\$14,239.50	0.88%
DP Dive Boat	\$9,900.00				
Decommissioning Crew	\$337.50				
Rem. Operated Vehicle	\$4,002.00				
Expose Pipeline		11.55	2.74%	\$54,822.08	3.37%
DP Dive Boat	\$38,115.00				
Decommissioning Crew	\$1,299.38				
Rem. Operated Vehicle	\$15,407.70				
Cut & Plug Pipeline		11.55	2.74%	\$54,822.08	3.37%
DP Dive Boat	\$38,115.00				
Decommissioning Crew	\$1,299.38				
Rem. Operated Vehicle	\$15,407.70				
Remove Tube Turn		7.70	1.83%	\$36,548.05	2.25%
DP Dive Boat	\$25,410.00				
Decommissioning Crew	\$866.25				
Rem. Operated Vehicle	\$10,271.80				
Bury Pipeline		7.70	1.83%	\$36,548.05	2.25%
DP Dive Boat	\$25,410.00				
Decommissioning Crew	\$866.25				
Rem. Operated Vehicle	\$10,271.80				
Demob Dive Boat		140.00	33.23%	\$462,000.00	28.42%
DP Dive Boat	\$462,000.00				
Total		393.00	93.29%	\$1,485,354.52	91.37%



MMS

Well Information

Hondo MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Exxon Mobil Corporation	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Hondo MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$5,145,272.00 80.00%
Task Total			0.00	\$5,145,272.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$771,790.83 12.00%
ather Contingency (10.00%)			0.00	\$514,527.21 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$6,431,590.04 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Hondo MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$5,145,272.00 80.00%



MMS

Well Decommission Cost Breakdown

Hondo MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$5,145,272.00	80.00%
Manual Calculation			\$5,145,272.00	
Total	0.00	0.00%	\$5,145,272.00	80.00%

Houchin MMS POCS 29056



MMS

Platform Salvage Option

Houchin MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Houchin will be removed along with Platform Hogan.
- Platform Houchin is an 8-pile platform installed in 1968 in 163' of water.
- The estimated removal weight is the deck weight is 2,591 tons and the jacket weight is 1,486 tons.
- The platform has a total of 36 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 36 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 500 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.



MMS

Platform Salvage Option

Houchin MMS POCS 29056 (Ver 1)

-The two pipelines (oil, gas) on the OCS will be totally removed to the state water boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipelines to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 10% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.



MMS

Platform Salvage Option

Houchin MMS POCS 29056 (Ver 1)

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$33,027,035

Estimated Decommissioning Net Cost = \$33,027,035



MMS

Basic Information

Houchin MMS POCS 29056 (Ver 1)

General Data

Platform:	Houchin MMS POCS 29056
Function:	FACILITIES
Type:	Steel
Water Depth:	163'
Pre 461H?:	Yes
Year Installed:	1968
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0166
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	36
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Pacific Operators Offshore, Inc.	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$26,775,860	\$26,775,860
Well Plugging & Abandonment:	\$5,976,590	\$5,976,590
Pipeline Abandonment:	\$274,585	\$274,585
Total Decommissioning Cost:	\$33,027,035	\$33,027,035



MMS

Platform Information

Houchin MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	48"		Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	60
Number Installed:	36
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	1486.00		
Jacket Installation Date:	1/1/1968		
Jacket Contractor:			

Deck Data

Deck Lift Weight with Equipment:	2591 Tons
Number of Padeyes Required:	0
Deck Installation Date:	1/1/1968
Deck Contractor:	



MMS

Platform Information

Houchin MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Underwater Members

Size	Qty
24.00	17.00
36.00	12.00

Cargo Descriptions

Cargo Barge Size	Cargo Description			
CB 300 x 100	Deck 100-500T	Deck 100-500T	Deck 100-500T	Equipment
CB 300 x 100	Deck 100-500T	Deck 100-500T	Deck 100-500T	Equipment
CB 400 x 100	Deck 100-500T	Deck 100-500T	Deck 100-500T	
CB 400 x 100	Jkt < 300T	Jkt 300-700T	Jkt 300-700T	
CB 400 x 100	Jkt 300-700T	Jkt 300-700T		

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	0.00
Provision for Misc. Work%:	15.00%
Weather Contingency%:	10.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$1,843,716.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Houchin MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,394,402.00	5.21%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.02%	\$1,277,500.00	4.77%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.02%	\$20,977.00	0.08%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.02%	\$2,588,012.00	9.67%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.02%	\$957,710.00	3.58%
Mobilize DB 500	Mob from Asia, 50 days divided by 2 platforms	<input type="checkbox"/>	600.00	12.78%	\$3,510,000.00	13.11%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	22.20	0.47%	\$71,512.00	0.27%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	22.20	0.47%	\$108,600.00	0.41%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	10.10	0.22%	\$45,652.00	0.17%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.14%	\$71,010.00	0.27%
Cut Deck/Equip/Misc	Seperate 9 Modules	<input checked="" type="checkbox"/>	24.00	0.51%	\$276,000.00	1.03%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.51%	\$276,000.00	1.03%
Remove 8 Pile Deck	Remove 8 Pile Deck Modules (Qty 9)	<input checked="" type="checkbox"/>	198.00	4.22%	\$2,277,000.00	8.50%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	22.20	0.47%	\$43,512.00	0.16%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	31.00	0.66%	\$357,120.00	1.33%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	46.14	0.98%	\$571,308.79	2.13%
Cut Jacket	24 Hours per section, times 5 sections, per MMS	<input checked="" type="checkbox"/>	120.00	2.56%	\$1,422,176.00	5.31%
Remove Jacket - Meth 1	24 Hours per section, times 5 sections, per MMS	<input checked="" type="checkbox"/>	120.00	2.56%	\$1,382,400.00	5.16%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	22.20	0.47%	\$66,600.00	0.25%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.14%	\$71,010.00	0.27%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	10.10	0.22%	\$45,652.00	0.17%
Demob DB 500	Demob to Asia, 50 days divided by 2 platforms	<input type="checkbox"/>	600.00	12.78%	\$3,510,000.00	13.11%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.53%	\$709,000.00	2.65%
Offload CB 300		<input type="checkbox"/>	912.00	19.43%	\$226,960.00	0.85%
Offload CB 400		<input type="checkbox"/>	1656.00	35.28%	\$490,560.00	1.83%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.02%	\$20,977.00	0.08%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$320,644.00	1.20%
Task Total			4530.64	96.53%	\$22,112,294.79	82.58%
Misc. Work Provision (15.00%)			97.6	2.08%	\$1,691,909.00	6.32%
Weather Contingency (10.00%)			65.06	1.39%	\$1,127,939.00	4.21%
Consumables					\$0.00	0.00%
Waste Disposal					\$1,843,716.00	6.89%



MMS

Platform Decommission Task Information

Houchin MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			4693.30 100.00%	26,775,858.79 100.00%



MMS

Platform Decommission Resources Breakdown

Houchin MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$373,025.00	1.39%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$186,960.00	0.70%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$430,560.00	1.61%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$328,104.00	1.23%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$450,340.00	1.68%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.37%
Derrick Barge 500	\$6,500.00	per Hour	\$10,768,160.00	40.22%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$1,888,998.59	7.05%
Manual Calculation	\$0.00	Independently Calculated	\$7,289,222.00	27.22%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$79,552.00	0.30%
Pipeline Survey	\$230.00	per Hour	\$137,273.20	0.51%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.10%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.16%
Work Boat	\$500.00	per Hour	\$10,100.00	0.04%



MMS

Platform Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,394,402.00	5.21%
Manual Calculation			\$1,394,402.00	
NMFS Marine Observation	1.00	0.02%	\$1,277,500.00	4.77%
Manual Calculation			\$1,277,500.00	
Mobilize Abrasive Cutting Spread	1.00	0.02%	\$20,977.00	0.08%
Manual Calculation			\$2,750.00	
Manual Calculation			\$1,055.00	
Manual Calculation			\$12,000.00	
Manual Calculation			\$5,172.00	
Sever Conductors- Abrasive	1.00	0.02%	\$2,588,012.00	9.67%
Manual Calculation			\$2,588,012.00	
Platform Removal Preparation	1.00	0.02%	\$957,710.00	3.58%
Manual Calculation			\$957,710.00	
Mobilize DB 500	600.00	12.78%	\$3,510,000.00	13.11%
Derrick Barge 500			\$3,510,000.00	
Mobilize CB 300 & Tug	22.20	0.47%	\$71,512.00	0.27%
CB 300 & Tug			\$43,512.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	22.20	0.47%	\$108,600.00	0.41%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$66,600.00	
Mobilize Dive Spread	10.10	0.22%	\$45,652.00	0.17%
Work Boat			\$5,050.00	
Dive Basic Spread Saturation			\$31,966.50	
Abrasive Cutter Spread			\$6,312.50	
Pipeline Survey			\$2,323.00	
Setup Derrick Barge	6.75	0.14%	\$71,010.00	0.27%
Derrick Barge 500			\$43,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	0.51%	\$276,000.00	1.03%
Derrick Barge 500			\$156,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.51%	\$276,000.00	1.03%
Derrick Barge 500			\$156,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	198.00	4.22%	\$2,277,000.00	8.50%
Derrick Barge 500			\$1,287,000.00	
Dive Basic Spread Saturation			\$626,670.00	
Pipeline Survey			\$45,540.00	
Abrasive Cutter Spread			\$123,750.00	
CB 300 & Tug			\$194,040.00	
Demob CB 300 & Tug	22.20	0.47%	\$43,512.00	0.16%
CB 300 & Tug			\$43,512.00	
Jet/Airlift Pile Mud Plug	31.00	0.66%	\$357,120.00	1.33%
Derrick Barge 500			\$201,500.00	
Dive Basic Spread Saturation			\$98,115.00	
Pipeline Survey			\$7,130.00	
Abrasive Cutter Spread			\$19,375.00	
CB 400 & Tug			\$31,000.00	



MMS

Platform Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1)

		Task Hours		Task Cost	
Task					
Sever Piles- Abrasive		46.14	0.98%	\$571,308.79	2.13%
Derrick Barge 500	\$299,910.00				
Dive Basic Spread Saturation	\$146,033.09				
Pipeline Survey	\$10,612.20				
Abrasive Cutter Spread	\$28,837.50				
CB 400 & Tug	\$46,140.00				
Pile Abrasive Cut 7 to 48 inches	\$39,776.00				
Cut Jacket		120.00	2.56%	\$1,422,176.00	5.31%
Derrick Barge 500	\$780,000.00				
Dive Basic Spread Saturation	\$379,800.00				
Pipeline Survey	\$27,600.00				
Abrasive Cutter Spread	\$75,000.00				
CB 400 & Tug	\$120,000.00				
Pile Abrasive Cut 7 to 48 inches	\$39,776.00				
Remove Jacket - Meth 1		120.00	2.56%	\$1,382,400.00	5.16%
Derrick Barge 500	\$780,000.00				
Dive Basic Spread Saturation	\$379,800.00				
Pipeline Survey	\$27,600.00				
CB 400 & Tug	\$120,000.00				
Abrasive Cutter Spread	\$75,000.00				
Demob CB 400 & Tug		22.20	0.47%	\$66,600.00	0.25%
CB 400 & Tug	\$66,600.00				



MMS

Platform Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.14%	\$71,010.00	0.27%
Derrick Barge 500			\$43,875.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Demob Dive Spread	10.10	0.22%	\$45,652.00	0.17%
Work Boat			\$5,050.00	
Dive Basic Spread Saturation			\$31,966.50	
Abrasive Cutter Spread			\$6,312.50	
Pipeline Survey			\$2,323.00	
Demob DB 500	600.00	12.78%	\$3,510,000.00	13.11%
Derrick Barge 500			\$3,510,000.00	
Site Clearance - with Divers	72.00	1.53%	\$709,000.00	2.65%
Manual Calculation			\$709,000.00	
Offload CB 300	912.00	19.43%	\$226,960.00	0.85%
Cargo Barge 300			\$186,960.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	1656.00	35.28%	\$490,560.00	1.83%
Cargo Barge 400			\$430,560.00	
CB Damage Deduct			\$60,000.00	



MMS

Platform Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.02%	\$20,977.00	0.08%
Manual Calculation			\$2,750.00	
Manual Calculation			\$1,055.00	
Manual Calculation			\$12,000.00	
Manual Calculation			\$5,172.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$320,644.00	1.20%
Manual Calculation			\$320,644.00	
Total	4530.64	96.53%	\$22,112,294.79	82.58%



MMS

Pipeline Information

Houchin MMS POCS 29056 (Ver1) Segment#:14101

General Data

Water Depth:	163'
Origin / Terminus:	Origin
Opposite End Name:	Hogan
Opposite End Water Depth:	163'
Pipeline Operator:	Pacific Operators Offshore, Inc.
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	10.75"	Wall Thickness:		Length:	3355'
Depth of Burial:		# Crossings:		Product:	OIL
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to Hogan. It is estimated as abandoned in place.



MMS

Pipeline Information

Houchin MMS POCS 29056 (Ver1) Segment#:15201

General Data

Water Depth:	163'
Origin / Terminus:	Origin
Opposite End Name:	Hogan
Opposite End Water Depth:	163'
Pipeline Operator:	Pacific Operators Offshore, Inc.
Provision for Misc. Work%:	15.00%
Weather Contingency %:	10.00%

Pipeline Data

Outside Diameter:	12.75"	Wall Thickness:		Length:	3355'
Depth of Burial:		# Crossings:		Product:	GAS
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	No	Riser Guard?:	No		

Comments

This segment runs to Hogan. It is estimated as abandoned in place.



MMS

Pipeline Decommission Task Information

Houchin MMS POCS 29056 (Ver 1) Segment#:1410166

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	2.50	3.36%	\$4,526.25	3.36%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	6.71%	\$9,052.50	6.71%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	5.27	7.08%	\$9,541.33	7.08%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.69%	\$3,621.00	2.69%
Expose Pipeline		<input checked="" type="checkbox"/>	5.21	6.99%	\$9,432.71	6.99%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.21	6.99%	\$9,432.71	6.99%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.47	4.66%	\$6,282.44	4.66%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.47	4.66%	\$6,282.44	4.66%
Bury Pipeline		<input checked="" type="checkbox"/>	3.47	4.66%	\$6,282.44	4.66%
Reposition Workboat		<input checked="" type="checkbox"/>	3.06	4.11%	\$5,540.13	4.11%
Expose Pipeline		<input checked="" type="checkbox"/>	5.21	6.99%	\$9,432.71	6.99%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.21	6.99%	\$9,432.71	6.99%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.47	4.66%	\$6,282.44	4.66%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.47	4.66%	\$6,282.44	4.66%
Bury Pipeline		<input checked="" type="checkbox"/>	3.47	4.66%	\$6,282.44	4.66%
Demob Work Boat		<input type="checkbox"/>	2.50	3.36%	\$4,526.25	3.36%
Task Total			61.99	83.22%	\$112,232.94	83.22%
Misc. Work Provision (15.00%)			7.50	10.07%	\$13,576.04	10.07%
ather Contingency (10.00%)			5.00	6.71%	\$9,050.69	6.71%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			74.49	100.00%	\$134,859.68	100.00%



MMS

Pipeline Decommission Task Information

Houchin MMS POCS 29056 (Ver 1) Segment#:1520166

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	2.50	3.24%	\$4,526.25	3.24%
Rig Up Decomm Equipment		<input type="checkbox"/>	5.00	6.48%	\$9,052.50	6.48%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	7.42	9.61%	\$13,433.91	9.61%
Derig Decomm Equipment		<input type="checkbox"/>	2.00	2.59%	\$3,621.00	2.59%
Expose Pipeline		<input checked="" type="checkbox"/>	5.21	6.75%	\$9,432.71	6.75%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.21	6.75%	\$9,432.71	6.75%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.47	4.50%	\$6,282.44	4.50%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.47	4.50%	\$6,282.44	4.50%
Bury Pipeline		<input checked="" type="checkbox"/>	3.47	4.50%	\$6,282.44	4.50%
Reposition Workboat		<input checked="" type="checkbox"/>	3.06	3.97%	\$5,540.13	3.97%
Expose Pipeline		<input checked="" type="checkbox"/>	5.21	6.75%	\$9,432.71	6.75%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	5.21	6.75%	\$9,432.71	6.75%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	3.47	4.50%	\$6,282.44	4.50%
Remove Tube Turn		<input checked="" type="checkbox"/>	3.47	4.50%	\$6,282.44	4.50%
Bury Pipeline		<input checked="" type="checkbox"/>	3.47	4.50%	\$6,282.44	4.50%
Demob Work Boat		<input type="checkbox"/>	2.50	3.24%	\$4,526.25	3.24%
Task Total			64.14	83.11%	\$116,125.52	83.11%
Misc. Work Provision (15.00%)			7.82	10.13%	\$14,159.93	10.13%
ather Contingency (10.00%)			5.21	6.76%	\$9,439.95	6.76%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			77.18	100.00%	\$139,725.40	100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Houchin MMS POCS 29056 (Ver 1) Segment#:1410

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$6,973.92	5.17%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$54,861.15	40.68%
Pipeline Surveying	\$230.00	per Hour	\$14,257.70	10.57%
Work Boat	\$583.00	per Hour	\$36,140.17	26.80%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Houchin MMS POCS 29056 (Ver 1) Segment#:1520

Resource Used	Unit Cost		Cost	
Decommissioning Crew	\$0.00	Calculated from tables	\$7,215.80	5.16%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$56,763.90	40.63%
Pipeline Surveying	\$230.00	per Hour	\$14,752.20	10.56%
Work Boat	\$583.00	per Hour	\$37,393.62	26.76%



MMS

Pipeline Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1) Segment#:14101

Task		Task Hours		Task Cost	
Mobilize Work Boat		2.50	3.36%	\$4,526.25	3.36%
Work Boat	\$1,457.50				
Dive Basic Spread- Mixed Gas	\$2,212.50				
Decommissioning Crew	\$281.25				
Pipeline Surveying	\$575.00				
Rig Up Decomm Equipment		5.00	6.71%	\$9,052.50	6.71%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		5.27	7.08%	\$9,541.33	7.08%
Work Boat	\$3,072.41				
Dive Basic Spread- Mixed Gas	\$4,663.95				
Decommissioning Crew	\$592.87				
Pipeline Surveying	\$1,212.10				
Derig Decomm Equipment		2.00	2.69%	\$3,621.00	2.69%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		5.21	6.99%	\$9,432.71	6.99%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				
Cut & Plug Pipeline		5.21	6.99%	\$9,432.71	6.99%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.47	4.66%	\$6,282.44	4.66%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Remove Tube Turn		3.47	4.66%	\$6,282.44	4.66%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Bury Pipeline		3.47	4.66%	\$6,282.44	4.66%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Reposition Workboat		3.06	4.11%	\$5,540.13	4.11%
Work Boat	\$1,783.98				
Dive Basic Spread- Mixed Gas	\$2,708.10				
Decommissioning Crew	\$344.25				
Pipeline Surveying	\$703.80				
Expose Pipeline		5.21	6.99%	\$9,432.71	6.99%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				
Cut & Plug Pipeline		5.21	6.99%	\$9,432.71	6.99%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.47	4.66%	\$6,282.44	4.66%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Remove Tube Turn		3.47	4.66%	\$6,282.44	4.66%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Bury Pipeline		3.47	4.66%	\$6,282.44	4.66%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Demob Work Boat		2.50	3.36%	\$4,526.25	3.36%
Work Boat	\$1,457.50				
Dive Basic Spread- Mixed Gas	\$2,212.50				
Decommissioning Crew	\$281.25				
Pipeline Surveying	\$575.00				
Total		61.99	83.22%	\$112,232.94	83.22%



MMS

Pipeline Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1) Segment#:15201

Task		Task Hours		Task Cost	
Mobilize Work Boat		2.50	3.24%	\$4,526.25	3.24%
Work Boat	\$1,457.50				
Dive Basic Spread- Mixed Gas	\$2,212.50				
Decommissioning Crew	\$281.25				
Pipeline Surveying	\$575.00				
Rig Up Decomm Equipment		5.00	6.48%	\$9,052.50	6.48%
Work Boat	\$2,915.00				
Dive Basic Spread- Mixed Gas	\$4,425.00				
Decommissioning Crew	\$562.50				
Pipeline Surveying	\$1,150.00				
Pig & Flush Pipeline		7.42	9.61%	\$13,433.91	9.61%
Work Boat	\$4,325.86				
Dive Basic Spread- Mixed Gas	\$6,566.70				
Decommissioning Crew	\$834.75				
Pipeline Surveying	\$1,706.60				
Derig Decomm Equipment		2.00	2.59%	\$3,621.00	2.59%
Work Boat	\$1,166.00				
Dive Basic Spread- Mixed Gas	\$1,770.00				
Decommissioning Crew	\$225.00				
Pipeline Surveying	\$460.00				
Expose Pipeline		5.21	6.75%	\$9,432.71	6.75%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				
Cut & Plug Pipeline		5.21	6.75%	\$9,432.71	6.75%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.47	4.50%	\$6,282.44	4.50%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Remove Tube Turn		3.47	4.50%	\$6,282.44	4.50%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Bury Pipeline		3.47	4.50%	\$6,282.44	4.50%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Reposition Workboat		3.06	3.97%	\$5,540.13	3.97%
Work Boat	\$1,783.98				
Dive Basic Spread- Mixed Gas	\$2,708.10				
Decommissioning Crew	\$344.25				
Pipeline Surveying	\$703.80				
Expose Pipeline		5.21	6.75%	\$9,432.71	6.75%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				
Cut & Plug Pipeline		5.21	6.75%	\$9,432.71	6.75%
Work Boat	\$3,037.43				
Dive Basic Spread- Mixed Gas	\$4,610.85				
Decommissioning Crew	\$586.13				
Pipeline Surveying	\$1,198.30				



MMS

Pipeline Decommission Cost Breakdown

Cut Pipeline Riser		3.47	4.50%	\$6,282.44	4.50%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Remove Tube Turn		3.47	4.50%	\$6,282.44	4.50%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Bury Pipeline		3.47	4.50%	\$6,282.44	4.50%
Work Boat	\$2,023.01				
Dive Basic Spread- Mixed Gas	\$3,070.95				
Decommissioning Crew	\$390.38				
Pipeline Surveying	\$798.10				
Demob Work Boat		2.50	3.24%	\$4,526.25	3.24%
Work Boat	\$1,457.50				
Dive Basic Spread- Mixed Gas	\$2,212.50				
Decommissioning Crew	\$281.25				
Pipeline Surveying	\$575.00				
Total		64.14	83.11%	\$116,125.52	83.11%



MMS

Well Information

Houchin MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 10.00%

Partner Data

Partner	Working Interest
1 Pacific Operators Offshore, Inc.	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Houchin MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$4,781,272.00 80.00%
Task Total			0.00	\$4,781,272.00 80.00%
Misc. Work Provision (15.00%)			0.00	\$717,190.83 12.00%
ather Contingency (10.00%)			0.00	\$478,127.21 8.00%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$5,976,590.04 100.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Resources Breakdown

Houchin MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$4,781,272.00 80.00%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Well Decommission Cost Breakdown

Houchin MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$4,781,272.00	80.00%
Manual Calculation			\$4,781,272.00	
Total	0.00	0.00%	\$4,781,272.00	80.00%

Irene MMS POCS 29056



MMS

Platform Salvage Option

Irene MMS POCS 29056 (Ver 1)

COMPLETE REMOVAL

- Platform Irene will be removed along with Platforms Habitat and Gilda.
- Platform Irene is an 8-pile platform installed in 1985 in 242' of water.
- The estimated removal weight is the deck weight is 2,500 tons and the jacket weight is 3,100 tons.
- The platform has a total of 24 wells that will be plugged and abandoned.
- The wells will be plugged and abandoned by a Gulf of Mexico Region well service company using rig-less methods mobilized from the Gulf of Mexico to the POCSR
- Abrasive cutting equipment and crews will be mobilized from the GOM to conduct conductor and platform removal operations.
- A total of 24 conductors will be removed. The conductors will be removed by a local well service company using contracted casing jacks prior to the arrival of the DB. The conductors will be transported to shore by workboat and from there transported by truck to a disposal facility located near Bakersfield, California.
- The platform topsides and jacket will be removed by a DB 2000 that will be mobilized from southeast Asia. The total mob/demob time will be 100 days.
- The deck modules and the jacket sections will be transported on barges to Los Angeles or Long Beach and scrapped.
- Two 300' cargo barges will transport the deck modules to shore and three 400' cargo barges will transport the jacket sections to shore. The barges will be mobilized locally. The mob/demob time will be 2 days round trip. A total of 5 cargo barge trips will be required.
- The power cable servicing the platform will be totally removed from the ocean floor. A workboat will be used to remove the power cable and will be mobilized from local ports. The mob/demob time will be 2 days round trip.
- The power cable will be transported to shore on cargo barges to Port Hueneme or Los Angeles/Long Beach where it will be cut into segments and from there transported by truck a distance of approximately 150 miles to a recycling facility or disposal facility located near Bakersfield, California.
- The three pipelines (oil, gas) on the OCS will be totally removed to the state water



MMS

Platform Salvage Option

Irene MMS POCS 29056 (Ver 1)

boundary when running to shore and in less than 200 feet of water. Segments running from platform to platform or in greater than 200 ft of water will be abandoned in place. The pipeline sections to be removed will be taken out using a small crane barge and cargo barges that will be mobilized from Los Angeles or Long Beach. The mob/demob time for the crane barge and cargo barges will be 1 day.

-A dynamically positioned (DP) dive vessel will be mobilized from southeast Asia to support the pipeline abandonment operations in greater than 200 feet of water. The total mob/demob time for the DP dive vessel will be 100 days round-trip.

-Site clearance procedures will be undertaken to ensure the area impacted by decommissioning operations (platform site and pipeline and power cable routes) is cleared of all obstructions to other activities. Pre-demolition and post-demolition high resolution side-scan surveys will be conducted using a local survey vessel or workboat. A workboat will be mobilized from a local port (Santa Barbara, Port Hueneme, Los Angeles/Long Beach) to support ROV/diver target identification and recovery of obstructions. Following these operations, a local fishing vessel will be deployed to test trawl the platform site and other selected locations.

-Platform Removal cost displayed on the next page includes the following costs: All of the Project Management, Engineering and Planning; All Permitting and Regulatory Compliance; Platform Prep and Marine Growth Removal; Conductor Removal; Mobilization and Demobilization Of Derrick Barge; Platform Removal; Site Clearance; Power Cable Removal; All Material Disposal; All the previously listed categories' respective Weather Contingencies (when applicable); All the previously listed categories' Misc. Work Provision;

-Well Plugging and Abandonment cost displayed on the next page includes the following costs: Rig-less Well P&A; Well P&A Weather Contingency; Well P&A Misc. Work Provision;

-Pipeline Abandonment cost displayed on the next page includes the following costs: Pipeline Abandonment; Pipeline Abandonment Weather Contingency; Pipeline Abandonment Misc. Work Provision;

-Weather Contingencies were calculated by taking 15% of each task cost listed with a check in the contingency box under each Task Information section of this estimate. Weather Contingency costs for each task are then summed and displayed in Appendix I and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

--Misc. Work Provision costs were calculated by taking 15% of every task cost listed



MMS

Platform Salvage Option

Irene MMS POCS 29056 (Ver 1)

with a check in the contingency box under each Task Information section of this estimate. Misc. Work Provision costs for each task are then summed and displayed in Appendix 2 and are also already included in their respective Platform Removal, Well P&A, and Pipeline Abandonment Totals listed on the next page.

-Project Management, Engineering and Planning costs are listed as a single line item under Platform Decommission Task Information section of this estimate and therefore are included in Platform Removal costs listed on the next page. Project Management, Engineering and Planning costs are also displayed in Appendix 2 of the report. Project Management, Engineering and Planning costs are calculated by taking 8% of the following categories' costs: Platform Prep; Conductor Removal; Platform Removal; Sit Clearance; Power Cable Removal; Pipeline Abandonment; Well P&A. The 8% Project Management, Engineering and Planning costs are not applied to the following categories: Permitting and Regulatory Compliance; Mobilization and Demobilization of Derrick Barge; Materials Disposal; Weather Contingencies; Misc. Work Provision;

Estimated Decommissioning Gross Cost = \$32,645,793

Estimated Decommissioning Net Cost = \$32,645,793



MMS

Basic Information

Irene MMS POCS 29056 (Ver 1)

General Data

Platform:	Irene MMS POCS 29056
Function:	DRILL/PROD
Type:	Steel
Water Depth:	242'
Pre 461H?:	No
Year Installed:	1985
Year Estimate Developed:	2009
District:	California
Lease Number:	OCS-P 0441
Account Code:	TSB - 29056
Amortization:	1.00
# Wells to P & A:	24
# Pipelines to Abandon:	2
Estimate Complete?:	Yes

Partner Data

Partner	Working Interest
1 Plains Exploration & Production Company	100.00%

Estimated Costs

	Gross Cost	Net Cost
Platform Removal:	\$25,456,230	\$25,456,230
Well Plugging & Abandonment:	\$5,449,257	\$5,449,257
Pipeline Abandonment:	\$1,740,306	\$1,740,306
Total Decommissioning Cost:	\$32,645,793	\$32,645,793



MMS

Platform Information

Irene MMS POCS 29056 (Ver 1)

Pile/Tendon Data

	Number	Outside Diameter	Wall Thickness	Grout Annulus	Grout Internal	Depth Below Mudline
Main:	8	60"	0.688"	Yes	No	
Skirt/Braced	0			No	No	
Anchor:	0					
Dolphin:	0					

Deck Dimensions

	Dimensions	Elevation
Upper:		
Middle:		
Lower:		

Conductors

Number of Slots:	72
Number Installed:	24
Outside Diameter:	24"
Wall Thickness:	0.375"
Number Slanted:	0

Jacket Data

	Weight (Tons)	With Piles	With Piles & Grout
Submerged:			
Dry:	3100.00		
Jacket Installation Date:	8/7/85		
Jacket Contractor:	Unknown		

Deck Data

Deck Lift Weight with Equipment:	2500 Tons
Number of Padeyes Required:	12
Deck Installation Date:	8/7/85
Deck Contractor:	Unknown



MMS

Platform Information

Irene MMS POCS 29056 (Ver 1)

Equipment Lift Weights

Members to be Cut Data

Cargo Descriptions

Cargo Barge Size	Cargo Description		
CB 300 x 100	Equipment	Equipment	Equipment
CB 300 x 100	Deck 100-500T	Equipment	
CB 400 x 100	Deck > 500T	Deck > 500T	
CB 400 x 100	Deck > 500T	Deck > 500T	
CB 400 x 100	Jkt > 700T	Jkt > 700T	

Miscellaneous Data

Derrick Barge Anchors:	8
Assist Derrick Barge Anchors:	0
Tow Distance:	
Provision for Misc. Work%:	15.00%
Weather Contingency%:	15.00%
Engineering%:	0.00%

Miscellaneous Cost

Consumables:	\$0.00
Waste Disposal:	\$3,033,604.00
Structure & Equipment Disposal:	\$0.00
Reef Donation:	\$0.00
Cost of Engineering:	\$0.00



MMS

Platform Decommission Task Information

Irene MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	Project Management, Engineering & Planning Costs	<input type="checkbox"/>	0.00	0.00%	\$1,342,230.00	5.27%
NMFS Marine Observation	Representative of all permitting and regulation costs	<input type="checkbox"/>	1.00	0.03%	\$851,667.00	3.35%
Mobilize Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from Houma to LA+ Loading and Unloading costs	<input type="checkbox"/>	1.00	0.03%	\$13,984.00	0.05%
Sever Conductors- Abrasive	Abrasive severing and casing jack removal prior to DB arrival. See Conductor Removal spreadsheet.	<input checked="" type="checkbox"/>	1.00	0.03%	\$2,234,321.00	8.78%
Platform Removal Preparation	Manual Calculation	<input checked="" type="checkbox"/>	1.00	0.03%	\$1,605,564.00	6.31%
Mobilize DB 2000	Mob from Asia, 50 days divided by 3 platforms	<input type="checkbox"/>	400.00	10.44%	\$3,060,000.00	12.02%
Mobilize CB 300 & Tug	Mob From Port of LA (Qty 2)	<input type="checkbox"/>	37.80	0.99%	\$102,088.00	0.40%
Mobilize CB 400 & Tug	Mob From Port of LA (Qty 3)	<input type="checkbox"/>	37.80	0.99%	\$155,400.00	0.61%
Mobilize Dive Spread	Mob of PI Survey, Dive Spread and Abrasive Spread from LA/Long Beach to DB on location.	<input type="checkbox"/>	17.90	0.47%	\$80,908.00	0.32%
Setup Derrick Barge		<input checked="" type="checkbox"/>	6.75	0.18%	\$84,510.00	0.33%
Cut Deck/Equip/Misc	Seperate 5 Modules, per MMS	<input checked="" type="checkbox"/>	24.00	0.63%	\$324,000.00	1.27%
Remove Equipment		<input checked="" type="checkbox"/>	24.00	0.63%	\$324,000.00	1.27%
Remove 8 Pile Deck	Remove 8 Pile Deck, 5 modules	<input checked="" type="checkbox"/>	72.00	1.88%	\$972,000.00	3.82%
Demob CB 300 & Tug	Demob to Port of LA (Qty 2)	<input type="checkbox"/>	37.80	0.99%	\$74,088.00	0.29%
Jet/Airlift Pile Mud Plug		<input checked="" type="checkbox"/>	31.00	0.81%	\$419,120.00	1.65%
Sever Piles- Abrasive		<input checked="" type="checkbox"/>	53.68	1.40%	\$805,753.60	3.17%
Cut Jacket	30 Hours per section, times 2 section(s), per MMS	<input checked="" type="checkbox"/>	60.00	1.57%	\$850,976.00	3.34%
Remove Jacket - Meth 1	30 Hours per section, times 2 section(s), per MMS	<input checked="" type="checkbox"/>	60.00	1.57%	\$811,200.00	3.19%
Demob CB 400 & Tug	Demob to Port of LA (Qty 3)	<input type="checkbox"/>	37.80	0.99%	\$113,400.00	0.45%
Pick Up DB Anchors		<input checked="" type="checkbox"/>	6.75	0.18%	\$84,510.00	0.33%
Demob Dive Spread	Demob of PI Survey, Dive Spread and Abrasive Spread from DB on location to LA/Long Beach.	<input type="checkbox"/>	17.90	0.47%	\$80,908.00	0.32%
Demob DB 2000	Demob to Asia, 50 days divided by 3 platforms	<input type="checkbox"/>	400.00	10.44%	\$3,060,000.00	12.02%
Site Clearance - with Divers	Represents All Site Clearance Operations in Section 14	<input checked="" type="checkbox"/>	72.00	1.88%	\$709,000.00	2.79%
Offload CB 300		<input type="checkbox"/>	240.00	6.27%	\$89,200.00	0.35%
Offload CB 400		<input type="checkbox"/>	2064.00	53.89%	\$596,640.00	2.34%
Demob Abrasive Cutting Spread	Crew travel hourly pay + Crew Airfare + Spread Shipping costs from LA to Houma + Loading and Unloading Costs	<input type="checkbox"/>	1.00	0.03%	\$13,984.00	0.05%
Platform Abandonment - Manual Calculation	Power Cable Removal	<input checked="" type="checkbox"/>	0.00	0.00%	\$612,071.00	2.40%
Task Total			3706.18	96.77%	\$19,471,522.60	76.49%
Misc. Work Provision (15.00%)			61.83	1.61%	\$1,475,554.00	5.80%
Weather Contingency (15.00%)			61.83	1.61%	\$1,475,554.00	5.80%
Consumables					\$0.00	0.00%
Waste Disposal					\$3,033,604.00	11.92%



MMS

Platform Decommission Task Information

Irene MMS POCS 29056 (Ver 1)

Task	Note	Contingency	Task Hours	Task Cost
		Structure & Equipment Disposal		\$0.00 0.00%
		Offloading		\$0.00 0.00%
		Storage / Scrapping		\$0.00 0.00%
		Reef Donation		\$0.00 0.00%
		Cost of Engineering (0.00%)		\$0.00 0.00%
Total:			3829.84 100.00%	25,456,234.60 100.00%



MMS

Platform Decommission Resources Breakdown

Irene MMS POCS 29056 (Ver 1)

Resource Used	Unit Cost		Cost	
Abrasive Cutter Spread	\$625.00	per Hour	\$233,737.50	0.92%
Cargo Barge 300	\$4,920.00	per Day per Barge	\$49,200.00	0.19%
Cargo Barge 400	\$6,240.00	per Day per Barge	\$536,640.00	2.11%
CB 300 & Tug	\$980.00	per Hour per Barge/Tug	\$265,776.00	1.04%
CB 400 & Tug	\$1,000.00	per Hour per Barge/Tug	\$431,480.00	1.69%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$100,000.00	0.39%
Derrick Barge 2000	\$8,500.00	per Hour per barge	\$8,994,530.00	35.33%
Dive Basic Spread Saturation	\$3,165.00	Per Hour	\$1,183,646.70	4.65%
Manual Calculation	\$0.00	Independently Calculated	\$7,382,821.00	29.00%
Pile Abrasive Cut 49 to 69 inches	\$5,000.00	per Cut	\$80,000.00	0.31%
Pile Abrasive Cut 7 to 48 inches	\$2,486.00	per Cut	\$39,776.00	0.16%
Pipeline Survey	\$230.00	per Hour	\$86,015.40	0.34%
Rig Up CB 300	\$14,000.00	per Barge	\$28,000.00	0.11%
Rig Up CB 400	\$14,000.00	per Barge	\$42,000.00	0.16%
Work Boat	\$500.00	per Hour	\$17,900.00	0.07%



MMS

Platform Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$1,342,230.00	5.27%
Manual Calculation			\$1,342,230.00	
NMFS Marine Observation	1.00	0.03%	\$851,667.00	3.35%
Manual Calculation			\$851,667.00	
Mobilize Abrasive Cutting Spread	1.00	0.03%	\$13,984.00	0.05%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Sever Conductors- Abrasive	1.00	0.03%	\$2,234,321.00	8.78%
Manual Calculation			\$2,234,321.00	
Platform Removal Preparation	1.00	0.03%	\$1,605,564.00	6.31%
Manual Calculation			\$1,605,564.00	
Mobilize DB 2000	400.00	10.44%	\$3,060,000.00	12.02%
Derrick Barge 2000			\$3,060,000.00	
Mobilize CB 300 & Tug	37.80	0.99%	\$102,088.00	0.40%
CB 300 & Tug			\$74,088.00	
Rig Up CB 300			\$28,000.00	



MMS

Platform Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Mobilize CB 400 & Tug	37.80	0.99%	\$155,400.00	0.61%
Rig Up CB 400			\$42,000.00	
CB 400 & Tug			\$113,400.00	
Mobilize Dive Spread	17.90	0.47%	\$80,908.00	0.32%
Work Boat			\$8,950.00	
Dive Basic Spread Saturation			\$56,653.50	
Abrasive Cutter Spread			\$11,187.50	
Pipeline Survey			\$4,117.00	
Setup Derrick Barge	6.75	0.18%	\$84,510.00	0.33%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Cut Deck/Equip/Misc	24.00	0.63%	\$324,000.00	1.27%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	



MMS

Platform Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Remove Equipment	24.00	0.63%	\$324,000.00	1.27%
Derrick Barge 2000			\$204,000.00	
Dive Basic Spread Saturation			\$75,960.00	
Pipeline Survey			\$5,520.00	
Abrasive Cutter Spread			\$15,000.00	
CB 300 & Tug			\$23,520.00	
Remove 8 Pile Deck	72.00	1.88%	\$972,000.00	3.82%
Derrick Barge 2000			\$612,000.00	
Dive Basic Spread Saturation			\$227,880.00	
Pipeline Survey			\$16,560.00	
Abrasive Cutter Spread			\$45,000.00	
CB 300 & Tug			\$70,560.00	
Demob CB 300 & Tug	37.80	0.99%	\$74,088.00	0.29%
CB 300 & Tug			\$74,088.00	
Jet/Airlift Pile Mud Plug	31.00	0.81%	\$419,120.00	1.65%
Derrick Barge 2000			\$263,500.00	
Dive Basic Spread Saturation			\$98,115.00	
Pipeline Survey			\$7,130.00	
Abrasive Cutter Spread			\$19,375.00	
CB 400 & Tug			\$31,000.00	



MMS

Platform Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Sever Piles- Abrasive	53.68	1.40%	\$805,753.60	3.17%
Derrick Barge 2000			\$456,280.00	
Dive Basic Spread Saturation			\$169,897.20	
Pipeline Survey			\$12,346.40	
Abrasive Cutter Spread			\$33,550.00	
CB 400 & Tug			\$53,680.00	
Pile Abrasive Cut 49 to 69 inches			\$80,000.00	
Cut Jacket	60.00	1.57%	\$850,976.00	3.34%
Derrick Barge 2000			\$510,000.00	
Dive Basic Spread Saturation			\$189,900.00	
Pipeline Survey			\$13,800.00	
Abrasive Cutter Spread			\$37,500.00	
CB 400 & Tug			\$60,000.00	
Pile Abrasive Cut 7 to 48 inches			\$39,776.00	
Remove Jacket - Meth 1	60.00	1.57%	\$811,200.00	3.19%
Derrick Barge 2000			\$510,000.00	
Dive Basic Spread Saturation			\$189,900.00	
Pipeline Survey			\$13,800.00	
Abrasive Cutter Spread			\$37,500.00	
CB 400 & Tug			\$60,000.00	
Demob CB 400 & Tug	37.80	0.99%	\$113,400.00	0.45%
CB 400 & Tug			\$113,400.00	



MMS

Platform Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Pick Up DB Anchors	6.75	0.18%	\$84,510.00	0.33%
Derrick Barge 2000			\$57,375.00	
Dive Basic Spread Saturation			\$21,363.75	
Pipeline Survey			\$1,552.50	
Abrasive Cutter Spread			\$4,218.75	
Demob Dive Spread	17.90	0.47%	\$80,908.00	0.32%
Work Boat			\$8,950.00	
Dive Basic Spread Saturation			\$56,653.50	
Abrasive Cutter Spread			\$11,187.50	
Pipeline Survey			\$4,117.00	
Demob DB 2000	400.00	10.44%	\$3,060,000.00	12.02%
Derrick Barge 2000			\$3,060,000.00	
Site Clearance - with Divers	72.00	1.88%	\$709,000.00	2.79%
Manual Calculation			\$709,000.00	
Offload CB 300	240.00	6.27%	\$89,200.00	0.35%
Cargo Barge 300			\$49,200.00	
CB Damage Deduct			\$40,000.00	
Offload CB 400	2064.00	53.89%	\$596,640.00	2.34%
Cargo Barge 400			\$536,640.00	
CB Damage Deduct			\$60,000.00	



MMS

Platform Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1)

Task	Task Hours		Task Cost	
Demob Abrasive Cutting Spread	1.00	0.03%	\$13,984.00	0.05%
Manual Calculation			\$1,833.00	
Manual Calculation			\$703.00	
Manual Calculation			\$8,000.00	
Manual Calculation			\$3,448.00	
Platform Abandonment - Manual Calculation	0.00	0.00%	\$612,071.00	2.40%
Manual Calculation			\$612,071.00	
Total	3706.18	96.77%	\$19,471,522.60	76.49%



MMS

Pipeline Information

Irene MMS POCS 29056 (Ver1) Segment#:4610441-

General Data

Water Depth:	242'
Origin / Terminus:	Origin
Opposite End Name:	LOMPOC
Opposite End Water Depth:	190'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	15.00%

Pipeline Data

Outside Diameter:	20"	Wall Thickness:	1.031"	Length:	12100'
Depth of Burial:	3'	# Crossings:		Product:	Oil
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the LOMPOC Onshore facility.
Estimate reflects removing to state waters.
Total estimated length removed is ~12100'



MMS

Pipeline Information

Irene MMS POCS 29056 (Ver1) Segment#:4820441-

General Data

Water Depth:	242'
Origin / Terminus:	Origin
Opposite End Name:	LOMPOC
Opposite End Water Depth:	190'
Pipeline Operator:	Spirit 76
Provision for Misc. Work%:	15.00%
Weather Contingency %:	15.00%

Pipeline Data

Outside Diameter:	8"	Wall Thickness:	0.5"	Length:	12100'
Depth of Burial:	3'	# Crossings:		Product:	Gas
Installation Date:		Weight Coating:	No	J Tube:	No
Riser?:	Yes	Riser Guard?:	No		

Comments

This segment runs to the LOMPOC Onshore facility.
Estimate reflects removing to state waters.
Total estimated length removed is ~12840'



MMS

Pipeline Decommission Task Information

Irene MMS POCS 29056 (Ver 1) Segment#:4610441-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	17.90	3.23%	\$12,449.45	1.41%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.90%	\$3,477.50	0.39%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	48.00	8.67%	\$33,384.00	3.77%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.36%	\$1,391.00	0.16%
Demob Work Boat		<input type="checkbox"/>	17.90	3.23%	\$12,449.45	1.41%
Mob P/L Removal Spread		<input type="checkbox"/>	17.90	3.23%	\$104,935.10	11.86%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	7.95	1.44%	\$25,292.92	2.86%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	5.30	0.96%	\$16,861.95	1.91%
Remove Tube Turn		<input checked="" type="checkbox"/>	5.30	0.96%	\$16,861.95	1.91%
Mobilize Vessel		<input checked="" type="checkbox"/>	17.90	3.23%	\$35,690.00	4.03%
Expose Pipeline		<input checked="" type="checkbox"/>	7.95	1.44%	\$28,771.05	3.25%
Remove Pipeline		<input checked="" type="checkbox"/>	80.00	14.46%	\$289,520.00	32.71%
Bury Pipeline		<input checked="" type="checkbox"/>	5.30	0.96%	\$19,180.70	2.17%
Demob Vessel		<input checked="" type="checkbox"/>	17.90	3.23%	\$19,690.00	2.22%
Demob P/L Removal Spread		<input type="checkbox"/>	17.90	3.23%	\$64,780.10	7.32%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	30.36%	\$41,000.00	4.63%
Task Total			442.20	79.91%	\$725,735.17	82.00%
Misc. Work Provision (15.00%)			55.59	10.05%	\$79,668.16	9.00%
ather Contingency (15.00%)			55.59	10.05%	\$79,668.16	9.00%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			553.38	100.00%	\$885,071.50	100.00%



MMS

Pipeline Decommission Task Information

Irene MMS POCS 29056 (Ver 1) Segment#:4820441-Shore

Task	Note	Contingency	Task Hours		Task Cost	
Mobilize Work Boat		<input type="checkbox"/>	17.90	3.51%	\$12,449.45	1.46%
Rig Up Decomm Equipment		<input checked="" type="checkbox"/>	5.00	0.98%	\$3,477.50	0.41%
Pig & Flush Pipeline		<input checked="" type="checkbox"/>	15.00	2.94%	\$10,432.50	1.22%
Derig Decomm Equipment		<input checked="" type="checkbox"/>	2.00	0.39%	\$1,391.00	0.16%
Demob Work Boat		<input type="checkbox"/>	17.90	3.51%	\$12,449.45	1.46%
Mob P/L Removal Spread		<input type="checkbox"/>	17.90	3.51%	\$104,935.10	12.27%
Cut & Plug Pipeline		<input checked="" type="checkbox"/>	7.95	1.56%	\$25,292.92	2.96%
Cut Pipeline Riser		<input checked="" type="checkbox"/>	5.30	1.04%	\$16,861.95	1.97%
Remove Tube Turn		<input checked="" type="checkbox"/>	5.30	1.04%	\$16,861.95	1.97%
Mobilize Vessel		<input checked="" type="checkbox"/>	17.90	3.51%	\$35,690.00	4.17%
Expose Pipeline		<input checked="" type="checkbox"/>	7.95	1.56%	\$28,771.05	3.36%
Remove Pipeline		<input checked="" type="checkbox"/>	80.00	15.67%	\$289,520.00	33.85%
Bury Pipeline		<input checked="" type="checkbox"/>	5.30	1.04%	\$19,180.70	2.24%
Demob Vessel		<input checked="" type="checkbox"/>	17.90	3.51%	\$19,690.00	2.30%
Demob P/L Removal Spread		<input type="checkbox"/>	17.90	3.51%	\$64,780.10	7.57%
Offload CB 180		<input checked="" type="checkbox"/>	168.00	32.91%	\$41,000.00	4.79%
Task Total			409.20	80.16%	\$702,783.67	82.17%
Misc. Work Provision (15.00%)			50.64	9.92%	\$76,225.44	8.91%
ather Contingency (15.00%)			50.64	9.92%	\$76,225.44	8.91%
Consumables					\$0.00	0.00%
Waste Disposal					\$0.00	0.00%
Structure & Equipment Disposal					\$0.00	0.00%
Offloading					\$0.00	0.00%
Storage / Scrapping					\$0.00	0.00%
Reef Donation					\$0.00	0.00%
Cost of Engineering (0.00%)					\$0.00	0.00%
Total:			510.48	100.00%	\$855,234.55	100.00%



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MMS

Pipeline Decommission Resources Breakdown

Irene MMS POCS 29056 (Ver 1) Segment#:461044

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	2.37%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$100,512.50	11.36%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	2.26%
Decommissioning Crew	\$0.00	Calculated from tables	\$12,301.87	1.39%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$130,626.00	14.76%
Manual Calculation	\$0.00	Independently Calculated	\$50,000.00	5.65%
Pipelay Barge	\$1,954.00	per Hour	\$288,410.40	32.59%
Pipeline Surveying	\$230.00	per Hour	\$33,948.00	3.84%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	1.81%
Work Boat	\$583.00	per Hour	\$52,936.40	5.98%



TWACHTMAN SNYDER & BYRD, INC.

MMS

Pipeline Decommission Resources Breakdown

Irene MMS POCS 29056 (Ver 1) Segment#:482044

Resource Used	Unit Cost		Cost	
Cargo Barge 180	\$3,000.00	per Day per Barge	\$21,000.00	2.46%
CB 180 & Tug	\$550.00	per Hour per Barge/Tug	\$100,512.50	11.75%
CB Damage Deduct	\$20,000.00	per Cargo Barge	\$20,000.00	2.34%
Decommissioning Crew	\$0.00	Calculated from tables	\$8,589.37	1.00%
Dive Basic Spread- Mixed Gas	\$885.00	Per Hour	\$130,626.00	15.27%
Manual Calculation	\$0.00	Independently Calculated	\$50,000.00	5.85%
Pipelay Barge	\$1,954.00	per Hour	\$288,410.40	33.72%
Pipeline Surveying	\$230.00	per Hour	\$33,948.00	3.97%
Rig Up CB 180	\$8,000.00	per Barge	\$16,000.00	1.87%
Work Boat	\$583.00	per Hour	\$33,697.40	3.94%



MMS

Pipeline Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1) Segment#:4610441

Task		Task Hours	Task Cost
Mobilize Work Boat		17.90 3.23%	\$12,449.45 1.41%
Work Boat	\$10,435.70		
Decommissioning Crew	\$2,013.75		
Rig Up Decomm Equipment		5.00 0.90%	\$3,477.50 0.39%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		48.00 8.67%	\$33,384.00 3.77%
Work Boat	\$27,984.00		
Decommissioning Crew	\$5,400.00		
Derig Decomm Equipment		2.00 0.36%	\$1,391.00 0.16%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		17.90 3.23%	\$12,449.45 1.41%
Work Boat	\$10,435.70		
Decommissioning Crew	\$2,013.75		
Mob P/L Removal Spread		17.90 3.23%	\$104,935.10 11.86%
Dive Basic Spread- Mixed Gas	\$15,841.50		
Pipeline Surveying	\$4,117.00		
Pipelay Barge	\$34,976.60		
Manual Calculation	\$50,000.00		
Cut & Plug Pipeline		7.95 1.44%	\$25,292.92 2.86%
Dive Basic Spread- Mixed Gas	\$7,035.75		
Pipeline Surveying	\$1,828.50		
Pipelay Barge	\$15,534.30		
Decommissioning Crew	\$894.37		
Cut Pipeline Riser		5.30 0.96%	\$16,861.95 1.91%
Dive Basic Spread- Mixed Gas	\$4,690.50		
Pipeline Surveying	\$1,219.00		
Pipelay Barge	\$10,356.20		
Decommissioning Crew	\$596.25		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		5.30	0.96%	\$16,861.95	1.91%
Dive Basic Spread- Mixed Gas	\$4,690.50				
Pipeline Surveying	\$1,219.00				
Pipelay Barge	\$10,356.20				
Decommissioning Crew	\$596.25				
Mobilize Vessel		17.90	3.23%	\$35,690.00	4.03%
CB 180 & Tug	\$19,690.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		7.95	1.44%	\$28,771.05	3.25%
Pipeline Surveying	\$1,828.50				
Dive Basic Spread- Mixed Gas	\$7,035.75				
Pipelay Barge	\$15,534.30				
CB 180 & Tug	\$4,372.50				
Remove Pipeline		80.00	14.46%	\$289,520.00	32.71%
Pipeline Surveying	\$18,400.00				
Dive Basic Spread- Mixed Gas	\$70,800.00				
Pipelay Barge	\$156,320.00				
CB 180 & Tug	\$44,000.00				
Bury Pipeline		5.30	0.96%	\$19,180.70	2.17%
Pipeline Surveying	\$1,219.00				
Dive Basic Spread- Mixed Gas	\$4,690.50				
Pipelay Barge	\$10,356.20				
CB 180 & Tug	\$2,915.00				
Demob Vessel		17.90	3.23%	\$19,690.00	2.22%
CB 180 & Tug	\$19,690.00				
Demob P/L Removal Spread		17.90	3.23%	\$64,780.10	7.32%
Pipeline Surveying	\$4,117.00				
Dive Basic Spread- Mixed Gas	\$15,841.50				
Pipelay Barge	\$34,976.60				
CB 180 & Tug	\$9,845.00				
Offload CB 180		168.00	30.36%	\$41,000.00	4.63%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		442.20	79.91%	\$725,735.17	82.00%



MMS

Pipeline Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1) Segment#:4820441

Task		Task Hours	Task Cost
Mobilize Work Boat		17.90 3.51%	\$12,449.45 1.46%
Work Boat	\$10,435.70		
Decommissioning Crew	\$2,013.75		
Rig Up Decomm Equipment		5.00 0.98%	\$3,477.50 0.41%
Work Boat	\$2,915.00		
Decommissioning Crew	\$562.50		
Pig & Flush Pipeline		15.00 2.94%	\$10,432.50 1.22%
Work Boat	\$8,745.00		
Decommissioning Crew	\$1,687.50		
Derig Decomm Equipment		2.00 0.39%	\$1,391.00 0.16%
Work Boat	\$1,166.00		
Decommissioning Crew	\$225.00		
Demob Work Boat		17.90 3.51%	\$12,449.45 1.46%
Work Boat	\$10,435.70		
Decommissioning Crew	\$2,013.75		
Mob P/L Removal Spread		17.90 3.51%	\$104,935.10 12.27%
Dive Basic Spread- Mixed Gas	\$15,841.50		
Pipeline Surveying	\$4,117.00		
Pipelay Barge	\$34,976.60		
Manual Calculation	\$50,000.00		
Cut & Plug Pipeline		7.95 1.56%	\$25,292.92 2.96%
Dive Basic Spread- Mixed Gas	\$7,035.75		
Pipeline Surveying	\$1,828.50		
Pipelay Barge	\$15,534.30		
Decommissioning Crew	\$894.37		
Cut Pipeline Riser		5.30 1.04%	\$16,861.95 1.97%
Dive Basic Spread- Mixed Gas	\$4,690.50		
Pipeline Surveying	\$1,219.00		
Pipelay Barge	\$10,356.20		
Decommissioning Crew	\$596.25		



MMS

Pipeline Decommission Cost Breakdown

Remove Tube Turn		5.30	1.04%	\$16,861.95	1.97%
Dive Basic Spread- Mixed Gas	\$4,690.50				
Pipeline Surveying	\$1,219.00				
Pipelay Barge	\$10,356.20				
Decommissioning Crew	\$596.25				
Mobilize Vessel		17.90	3.51%	\$35,690.00	4.17%
CB 180 & Tug	\$19,690.00				
Rig Up CB 180	\$16,000.00				
Expose Pipeline		7.95	1.56%	\$28,771.05	3.36%
Pipeline Surveying	\$1,828.50				
Dive Basic Spread- Mixed Gas	\$7,035.75				
Pipelay Barge	\$15,534.30				
CB 180 & Tug	\$4,372.50				
Remove Pipeline		80.00	15.67%	\$289,520.00	33.85%
Pipeline Surveying	\$18,400.00				
Dive Basic Spread- Mixed Gas	\$70,800.00				
Pipelay Barge	\$156,320.00				
CB 180 & Tug	\$44,000.00				
Bury Pipeline		5.30	1.04%	\$19,180.70	2.24%
Pipeline Surveying	\$1,219.00				
Dive Basic Spread- Mixed Gas	\$4,690.50				
Pipelay Barge	\$10,356.20				
CB 180 & Tug	\$2,915.00				
Demob Vessel		17.90	3.51%	\$19,690.00	2.30%
CB 180 & Tug	\$19,690.00				
Demob P/L Removal Spread		17.90	3.51%	\$64,780.10	7.57%
Pipeline Surveying	\$4,117.00				
Dive Basic Spread- Mixed Gas	\$15,841.50				
Pipelay Barge	\$34,976.60				
CB 180 & Tug	\$9,845.00				
Offload CB 180		168.00	32.91%	\$41,000.00	4.79%
Cargo Barge 180	\$21,000.00				
CB Damage Deduct	\$20,000.00				
Total		409.20	80.16%	\$702,783.67	82.17%



MMS

Well Information

Irene MMS POCS 29056 (Ver 1) Well#:All

General Data

Status:

Number of Completions:

Subsea Completion: Nb

Spud Date:

Last Production:

Rig Type Required:

Crane Capacity:

Living Quarters Capacity:

Deck Space:

Helideck Capacity:

Provision for Misc. Work%: 15.00%

Weather Contingency %: 15.00%

Partner Data

Partner	Working Interest
1 Plains Exploration & Production Company	100.00%

Well Data

Diameter	Depth	Surface Pressure
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Tubing:

Production Casing:

Liner:

Protective Casing:

Surface Casing:

Drive Pipe:

Caisson:

Perforated Depth:

Comments



MMS

Well Decommission Task Information

Irene MMS POCS 29056 (Ver 1) Well#:All

Task	Note	Contingency	Task Hours	Task Cost
Well Abandonment - Manual Calculation		<input checked="" type="checkbox"/>	0.00	\$4,191,736.00 76.92%
Task Total			0.00	\$4,191,736.00 76.92%
Misc. Work Provision (15.00%)			0.00	\$628,760.42 11.54%
ather Contingency (15.00%)			0.00	\$628,760.42 11.54%
Consumables				\$0.00 0.00%
Waste Disposal				\$0.00 0.00%
Structure & Equipment Disposal				\$0.00 0.00%
Offloading				\$0.00 0.00%
Storage / Scrapping				\$0.00 0.00%
Reef Donation				\$0.00 0.00%
Cost of Engineering (0.00%)				\$0.00 0.00%
Total:			0.00 100.00%	\$5,449,256.85 100.00%



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Well Decommission Resources Breakdown

Irene MMS POCS 29056 (Ver 1) Well#:All

Resource Used	Unit Cost	Cost
Manual Calculation	\$0.00 Independently Calculated	\$4,191,736.00 76.92%



TWACHTMAN SNYDER & BYRD, INC.

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Well Decommission Cost Breakdown

Irene MMS POCS 29056 (Ver 1) Well#:All

Task	Task Hours		Task Cost	
Well Abandonment - Manual Calculation	0.00	0.00%	\$4,191,736.00	76.92%
Manual Calculation			\$4,191,736.00	
Total	0.00	0.00%	\$4,191,736.00	76.92%