Received Regional Director - Alaska OCS BSEE
January 31, 2012

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf of Mexico Inc. Suite 1000 3601 C Street Anchorage, AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 2280 #001 (Burger A)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)	WELL AT SURFACE
12. LEASE NO. OCS-Y 2280	17. LEASE NO. OCS-Y 2280
13. AREA NAME Posey	18. AREA NAME Posey
14. BLOCK NO. 6764 (Lat. N71 deg 18' 30.92"; Long. W163 deg 12' 43.17")	19. BLOCK NO. 6764 (Lat. N71 deg 18' 30.92"; Long. W163 deg 12' 43.17")
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)
	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)
	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE January 31, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☐ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☐ N/A	
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☐ YES ☐ NO ☐ N/A	
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☐ N/A	
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☐ YES ☐ NO ☐ N/A	
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☐ N/A	
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☐ NO ☐ N/A	

Received Regional Director - Alaska OCS BSEE January 31, 2012

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Gulf of Mexico Inc.	2) Well Name (Proposed): 001 (Burger A) ST:	BP:
3) Bottom Hole Lease: OCS-Y 2280	4) Surface Lease: OCS-Y 2280	
5) API Number: n/a	6)Type of Well: [x] Exploratory [ ] Development	
7) H_2S: [ ] Absent [ ] Known [x] Unknown	8) H_2S Activation Plan Depth (TVD) (ft): 0	
9) Rig Name: Noble Discoverer	10) SubSea BOP: [x] Yes [ ] No	
11) Water Depth (ft): 150	12) RKB Height (ft):	13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):	16)Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: 1 **Type:** Drive Pipe **Name:** Structural

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: 2 **Type:** Casing **Name:** Conductor

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: 3 **Type:** Casing **Name:** Surface

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Forms BSEE-0123 and BSEE-0123S is estimated to average 100 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Public Information Copy

Received Regional Director - Alaska OCS BSEE
January 31, 2012

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	00689	Shell Offshore Inc. Suite 1000 3601 C Street Anchorage, AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 1941 #001 (Torpedo H)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 10, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO. OCS-Y 1941		17. LEASE NO. OCS-Y 1941	
13. AREA NAME Flaxman Island		18. AREA NAME Flaxman Island	
14. BLOCK NO. 6610 (Lat. N70 deg 27' 01.62"; Long. W145 deg 49' 32.07")		19. BLOCK NO. 6610 (Lat. N70 deg 27' 01.62"; Long. W145 deg 49' 32.07")	
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE: Susan Childs	32. DATE: January 31, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Received Regional Director - Alaska OCS BSEE
January 31, 2012

Public Information Copy

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet

Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☐ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☐ N/A	
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☐ YES ☐ NO ☐ N/A	
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☐ N/A	
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☐ YES ☐ NO ☐ N/A	
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☐ N/A	
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☐ NO ☐ N/A	

Received Regional Director - Alaska OCS BSEE
January 31, 2012

1101-02b(5) APD Inspection Version

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Offshore Inc.	2) Well Name (Proposed): 001 (Torpedo H) ST:	BP:
3) Bottom Hole Lease: OCS-Y 1941	4) Surface Lease: OCS-Y 1941	
5) API Number: n/a	6)Type of Well: [x] Exploratory [ ] Development	
7) H_2S: [x] Absent [ ] Known [ ] Unknown	8) H_2S Activation Plan Depth (TVD) (ft): N/A	
9) Rig Name: CDU Kulluk	10) SubSea BOP: [x] Yes [ ] No	
11) Water Depth (ft): 120	12) RKB Height (ft):	13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):	16)Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: 1 **Type:** Drive Pipe **Name:** Structural

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: 2 **Type:** Casing **Name:** Conductor

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: 3 **Type:** Casing **Name:** Surface

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

Burger A

- In the calculations for Burst Safety Factors for the 30" structural it states, "see MASP calcs" which were not provided for this string of casing. Fixed…removed Structural Casing From Calculations
- 250.414(g)
    - They state they will use permafrost cement, but do not include estimated depths to permafrost. Fixed…Although they will use permafrost cement, they don't expect to encounter any.
    - Also, if permafrost is present, need to address 250.415(d) Fixed…don't expect to encounter permafrost.
- On form BSEE-0123
    - 33) F IN the remarks states that the proposed well "will be drilled from a conical drilling unit, not from a platform." Fixed…changed to floating drillship.
- On form BSEE-0123s
    - Interval Number 3 and 4 pore pressure listed, does not match the pore pressure plot provided Fixed interval 3, but not 4. Fixed on April 17th submittal.
    - Have to put the open hole section of the well on this form Fixed…open hole section included.

Received Regional Director - Alaska OCS BSEE
March 16, 2012

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf of Mexico Inc. Suite 1000 3601 C Street Anchorage, AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 2280 #001 (Burger A)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision	11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)			WELL AT SURFACE		
12. LEASE NO. OCS-Y 2280			17. LEASE NO. OCS-Y 2280		
13. AREA NAME Posey			18. AREA NAME Posey		
14. BLOCK NO. 6764 (Lat. N71 deg 18' 30.92"; Long. W163 deg 12' 43.17")			19. BLOCK NO. 6764 (Lat. N71 deg 18' 30.92"; Long. W163 deg 12' 43.17")		
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)		20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE: Susan Childs	32. DATE: January 31, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☐ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☐ N/A	
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☐ YES ☐ NO ☐ N/A	
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☐ N/A	
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☐ YES ☐ NO ☐ N/A	
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☐ N/A	
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☐ NO ☐ N/A	

Received Regional Director - Alaska OCS BSEE
March 16, 2012

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Gulf of Mexico Inc.	2) Well Name (Proposed): 001 (Burger A) ST:	BP:
3) Bottom Hole Lease: OCS-Y 2280	4) Surface Lease: OCS-Y 2280	
5) API Number: n/a	6)Type of Well: [x] Exploratory [ ] Development	
7) H_2S: [ ] Absent [ ] Known [x] Unknown	8) H_2S Activation Plan Depth (TVD) (ft): 0	
9) Rig Name: Noble Discoverer	10) SubSea BOP: [x] Yes [ ] No	
11) Water Depth (ft): 150	12) RKB Height (ft):	13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):	16)Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: 1 **Type:** Drive Pipe **Name:** Structural

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: 2 **Type:** Casing **Name:** Conductor

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: 3 **Type:** Casing **Name:** Surface

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

Public Information Copy 1101-02b(1) APD Torepedo H ver. 2

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	00689	Shell Offshore Inc. Suite 1000 3601 C Street Anchorage, AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 1941 #001 (Torpedo H)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 10, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO. OCS-Y 1941		17. LEASE NO. OCS-Y 1941	
13. AREA NAME Flaxman Island		18. AREA NAME Flaxman Island	
14. BLOCK NO. 6610 (Lat. N70 deg 27' 01.62"; Long. W145 deg 49' 32.07")		19. BLOCK NO. 6610 (Lat. N70 deg 27' 01.62"; Long. W145 deg 49' 32.07")	
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE January 31, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☐ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☐ N/A	
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☐ YES ☐ NO ☐ N/A	
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☐ N/A	
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☐ YES ☐ NO ☐ N/A	
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☐ N/A	
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☐ NO ☐ N/A	

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

OMB Control Number 1014-0025
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Offshore Inc.		2) Well Name (Proposed): 001 (Torpedo H) ST:	BP:
3) Bottom Hole Lease: OCS-Y 1941		4) Surface Lease: OCS-Y 1941	
5) API Number: n/a		6)Type of Well: [x] Exploratory [ ] Development	
7) H_2S: [X] Absent [ ] Known [ ] Unknown		8) H_2S Activation Plan Depth (TVD) (ft): N/A	
9) Rig Name: CDU Kulluk		10) SubSea BOP: [x] Yes [ ] No	
11) Water Depth (ft): 120	12) RKB Height (ft):		13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):		16)Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: 1 **Type:** Drive Pipe **Name:** Structural

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: 2 **Type:** Casing **Name:** Conductor

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: 3 **Type:** Casing **Name:** Surface

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

Shell Exploration & Production

Mark Fesmire
Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

March 16, 2012

Re: Shell Gulf of Mexico Inc. - Application for Permit to Drill – Alaska Outer Continental Shelf Lease No. OCS-Y 2280; Area Name: Posey; Block No. 6764 Burger A (#001); Second Submission of Information

Dear Mr. Fesmire:

Shell Gulf of Mexico Inc. (Shell) hereby submits additional information in support of its Application for Permit to Drill (APD) for the Burger A drill site (OCS-Y 2280 #001).

On January 31, 2011, Shell submitted initial information in support of its APD. The documents submitted on January 31 included all the subsurface information for the Burger A well. This second submission includes information related to surface operations and procedures, in addition to the re-submission of the subsurface information. Since the submission of the subsurface information, some of that information has been modified. The modifications result from changes to the well design and addressing requests for additional information, received February 21, 2012 from the Bureau of Safety and Environmental Enforcement (BSEE). The subsurface documents that have been modified are identified in the APD table of contents. This APD includes forms BSEE-0123 and BSEE-0123S. Note that BSEE-0123S has also been modified since submitted on January 31.

Shell asserts all materials submitted with this letter, except for the public information version of forms BSEE-0123 and -0123S, remain proprietary and are not subject to requests under the Freedom of Information Act (FOIA). Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management. Shell will inform BSEE at the time of submittal if any additional documentation is not subject to FOIA assertion by Shell.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Thank you,

Susan Childs
Alaska Venture Support Integrator, Manager

Torpedo H comments

-418h, 420a6 – wrong well name is referenced on 2nd page. (Sivulliq N vs. Torpedo H)

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf of Mexico Inc. Suite 1000 3601 C Street Anchorage, AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 2280 #001 (Burger A)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS): n/a

10. [ ] Revision

11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)	WELL AT SURFACE
12. LEASE NO.: OCS-Y 2280	17. LEASE NO.: OCS-Y 2280
13. AREA NAME: Posey	18. AREA NAME: Posey
14. BLOCK NO.: 6764 (Lat. N71 deg 18' 30.92"; Long. W163 deg 12' 43.17")	19. BLOCK NO.: 6764 (Lat. N71 deg 18' 30.92"; Long. W163 deg 12' 43.17")

15. LATITUDE	16. LONGITUDE	20. LATITUDE	21. LONGITUDE
([X] NAD 83 / [ ] NAD 27)	([X] NAD 83 / [ ] NAD 27)	([X] NAD 83 / [ ] NAD 27)	([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE: Susan Childs	32. DATE: 4/17/12

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drillship in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0005.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Public Information Copy

Received Regional Director - Alaska OCS BSEE April 17, 2012

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Gulf of Mexico Inc.	2) Well Name (Proposed): 001 (Burger A) ST: BP:	
3) Bottom Hole Lease:	4) Surface Lease: OCS-Y 2280	
5) API Number: n/a	6)Type of Well: [x] Exploratory [ ] Development	
7) H_2S: [ ] Absent [ ] Known [ ] Unknown	8) H_2S Activation Plan Depth (TVD) (ft):	
9) Rig Name: Noble Discoverer	10) SubSea BOP: [x] Yes [ ] No	
11) Water Depth (ft): 150	12) RKB Height (ft):	13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):	16)Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: **Type:** **Name:**

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: **Type:** **Name:**

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: **Type:** **Name:**

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Forms BSEE-0123 and BSEE-0123S is estimated to average 100 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Received Regional Director - Alaska OCS BSEE
April 17, 2012

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf Of Mexico Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 2321 #001 (Burger J)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS): n/a

10. [ ] Revision | 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO.: OCS-Y 2321		17. LEASE NO.: OCS-Y 2321	
13. AREA NAME: Posey		18. AREA NAME: Posey	
14. BLOCK NO.: 6912 (N71 deg 10' 24.03"; W163 deg 28' 18.52")		19. BLOCK NO.: 6912 (N71 deg 10' 24.03"; W163 deg 28' 18.52")	
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE: Susan Childs	32. DATE: 4/17/12

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drillship in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0004.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Received Regional Director - Alaska OCS BSEE
April 17, 2012

U.S. Department of the Interior
Bureau of Safety and Environmental
Enforcement (BSEE)

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Gulf of Mexico Inc.	2) Well Name (Proposed): 001 (Burger J) ST: BP:	
3) Bottom Hole Lease:	4) Surface Lease: OCS-Y 2321	
5) API Number: n/a	6)Type of Well: [x] Exploratory [ ] Development	
7) H_2S: [ ] Absent [ ] Known [ ] Unknown	8) H_2S Activation Plan Depth (TVD) (ft):	
9) Rig Name: Noble Discoverer	10) SubSea BOP: [x] Yes [ ] No	
11) Water Depth (ft): 144	12) RKB Height (ft):	13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):	16)Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Forms BSEE-0123 and BSEE-0123S is estimated to average 100 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Received Regional Director - Alaska OCS BSEE
April 17, 2012

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf Of Mexico Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 2324 #001 (Burger V)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS): n/a

10. [ ] Revision	11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)	WELL AT SURFACE
12. LEASE NO.: OCS-Y 2324	17. LEASE NO.: OCS-Y 2324
13. AREA NAME: Posey	18. AREA NAME: Posey
14. BLOCK NO.: 6915 (N71 deg 10' 33.39"; W163 deg 04' 21.23")	19. BLOCK NO.: 6915 (N71 deg 10' 33.39"; W163 deg 04' 21.23")

15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE: Susan Childs	32. DATE: 4/17/12

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drillship in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0019.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Received Regional Director - Alaska OCS BSEE
April 17, 2012

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Gulf of Mexico Inc.	2) Well Name (Proposed): 001 (Burger V) ST: BP:	
3) Bottom Hole Lease:	4) Surface Lease: OCS-Y 2324	
5) API Number: n/a	6) Type of Well: [x] Exploratory [ ] Development	
7) H_2S: [ ] Absent [ ] Known [ ] Unknown	8) H_2S Activation Plan Depth (TVD) (ft):	
9) Rig Name: Noble Discoverer	10) SubSea BOP: [x] Yes [ ] No	
11) Water Depth (ft): 147	12) RKB Height (ft):	13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):	16) Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	00689	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 1805 #001 (Sivulliq N)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 10, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision	11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO. OCS-Y 1805		17. LEASE NO. OCS-Y 1805	
13. AREA NAME Flaxman Island		18. AREA NAME Flaxman Island	
14. BLOCK NO. 6658 (N70 deg 23' 29.58"; W145 deg 58' 52.53")		19. BLOCK NO. 6658 (N70 deg 23' 29.58"; W145 deg 58' 52.53")	
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (*Type or print name*)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE 4/17/12

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet

Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	[x] YES [ ] NO [ ] N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	[ ] YES [ ] NO [x] N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	[x] YES [ ] NO [ ] N/A	Kill weight mud will be stored on the drilling vessel in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~857 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	[ ] YES [ ] NO [x] N/A	Conductor casing to be installed at a depth of approximately 857 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	[x] YES [ ] NO [ ] N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0009.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	[ ] YES [ ] NO [x] N/A	The proposed well will be drilled from a floating drilling vessel, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	[ ] YES [x] NO [ ] N/A	

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Offshore Inc.	2) Well Name (Proposed): 001 (Sivulliq N) ST: BP:
3) Bottom Hole Lease:	4) Surface Lease: OCS-Y 6658
5) API Number: n/a	6)Type of Well: [x] Exploratory [ ] Development
7) H_2S: [ ] Absent [ ] Known [ ] Unknown	8) H_2S Activation Plan Depth (TVD) (ft):
9) Rig Name: CDU Kulluk	10) SubSea BOP: [x] Yes [ ] No

11) Water Depth (ft): 107	12) RKB Height (ft):	13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):	16)Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: **Type:** **Name:**

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	**PREVENTER INFORMATION**	**TEST INFORMATION**
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: **Type:** **Name:**

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	**PREVENTER INFORMATION**	**TEST INFORMATION**
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: **Type:** **Name:**

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	**PREVENTER INFORMATION**	**TEST INFORMATION**
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Forms BSEE-0123 and BSEE-0123S is estimated to average 100 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	00689	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 1941 #001 (Torpedo H)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 10, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO. OCS-Y 1941		17. LEASE NO. OCS-Y 1941	
13. AREA NAME Flaxman Island		18. AREA NAME Flaxman Island	
14. BLOCK NO. 6610 (N70 deg 27' 01.62"; W145 deg 49' 32.07")		19. BLOCK NO. 6610 (N70 deg 27' 01.62"; W145 deg 49' 32.07")	
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (*Type or print name*)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE: Susan Childs	32. DATE: 4/17/12

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet

Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	[x] YES [ ] NO [ ] N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	[ ] YES [ ] NO [x] N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	[x] YES [ ] NO [ ] N/A	Kill weight mud will be stored on the drilling vessel in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1045 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	[ ] YES [ ] NO [x] N/A	Conductor casing to be installed at a depth of approximately 1045 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	[x] YES [ ] NO [ ] N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0010.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	[ ] YES [ ] NO [x] N/A	The proposed well will be drilled from a floating drilling vessel, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	[ ] YES [x] NO [ ] N/A	

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Supplemental APD Information Sheet (Casing Design)

1) Operator Name: Shell Offshore Inc.	2) Well Name (Proposed): 001 (Torpedo H) ST: BP:	
3) Bottom Hole Lease:	4) Surface Lease: OCS-Y 1941	
5) API Number: n/a	6)Type of Well: [x] Exploratory [ ] Development	
7) H_2S: [ ] Absent [ ] Known [ ] Unknown	8) H_2S Activation Plan Depth (TVD) (ft):	
9) Rig Name: CDU Kulluk	10) SubSea BOP: [x] Yes [ ] No	
11) Water Depth (ft): 120	12) RKB Height (ft):	13) Mineral Code: n/a
14) Drive Pipe Size (in):	15) Drive Pipe Depth (ft):	16)Anchors [x] Yes [ ] No

17) Well Design Information

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

Interval Number: Type: Name:

Section Number	Casing Size (in)	Casing Weight (#/ft)	Casing Grade	Burst Rating (psi)		Collapse Rating (psi)	Depth (ft) MD	TVD	Pore Pressure (ppg)

GENERAL INFORMATION	PREVENTER INFORMATION	TEST INFORMATION
Hole Size (in)	Type	Annular Test (psi)
Mud Weight (ppg)	Size (in)	BOP/Diverter Test (psi)
Mud Type Code	Wellhead Rating (psi)	Mud Test Weight (ppg)
Frac Gradient (ppg)	Annular Rating (psi)	Casing/Liner Test (psi)
Liner Top Depth (ft)	BOP/Diverter Rating (psi)	Formation Test (ppg)
Cement Volume (ft^3)		

* NOTE* For additional casing/liner intervals, please submit an additional Form 0123S.

Shell Exploration & Production

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

April 17, 2012

Re: Shell Gulf of Mexico Inc. - Applications for Permit to Drill for Burger A, F, J, R, S and V wells – Alaska Outer Continental Shelf, Chukchi Sea

Dear Mr. Fesmire:

Shell Gulf of Mexico Inc. (Shell) hereby submits Applications for Permit to Drill (APD) for the following drill sites in the Chukchi Sea:

- Lease # OCS-Y 2280, Posey Block 6764, Burger A (#001)
- Lease # OCS-Y 2267, Posey Block 6714, Burger F (#001)
- Lease # OCS-Y 2321, Posey Block 6912, Burger J (#001)
- Lease # OCS-Y 2294, Posey Block 6812, Burger R (#001)
- Lease # OCS-Y 2278, Posey Block 6762, Burger S (#001)
- Lease # OCS-Y 2324, Posey Block 6915, Burger V (#001)

The APD submittals for Burger F, J, R, S and V are new applications. The Burger A APD is the third submittal of information for this proposed well. The initial Burger A APD was submitted on January 31, 2012. On February 21, 2012, Shell received a request for additional information (RFAI) from the Bureau of Safety and Environmental Enforcement (BSEE) on the Burger A APD submittal. A second Burger A APD submittal, containing additional information and responses to BSEE's RFAIs occurred on March 16, 2012. On April 24, 2012, Shell received a second RFAI from BSEE on the Burger A APD submittal. This third APD submittal contains updated information and responses to BSEE's second RFAI on the Burger A APD, plus where applicable, BSEE's RFAIs have been addressed in the remaining new APDs for proposed drill sites at Burger.

These APD submittals are presented in the form of two volumes. One volume contains information that is specific to the drillship *Noble Discoverer* and the Burger Prospect area. Three copies of this information are submitted for the six Burger APDs. As per regulation 30 CFR 250.417(g) this information will only be submitted once, conditioned on being approved by BSEE. If this information changes, these changes will be submitted to BSEE. The second volume contains the subsurface information specific to each APD (e.g. Burger A, F, J, R, S and V). Three copies of this second volume are submitted for each drill site.

In addition to the APD documents, also attached are the following:

- Signed BSEE-0123 forms for each APD drill site
- A spreadsheet defining the second RFAI for Burger A APD from BSEE and Shell's responses
- A copy of an updated H_2S Contingency Plan (the H_2S Contingency Plan, submitted November 2011 with the Revised Chukchi Sea Exploration Plan, is not part of these APD submittals)

Shell requests that the Burger A APD submittal be given priority of review, followed by Burger J, Burger V, Burger F, Burger S then Burger R.

Shell asserts all materials submitted with this letter, except for the public information version of forms BSEE-0123 and -0123S, remain proprietary and are not subject to requests under the Freedom of Information Act (FOIA). Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management. Shell will inform BSEE at the time of submittal if any additional documentation is not subject to FOIA assertion by Shell.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely,

Susan Childs
AK Venture Support Integrator, Manager

Attachments:

BSEE RFAI Comment and Response spreadsheet
Signed BSEE-0123 Forms (Proprietary and Public)
M/V *Noble Discoverer* and Burger Area Specific Documents (3 copies)
Burger A APD documents (3 copies)
Burger F APD documents (3 copies)
Burger J APD documents (3 copies)
Burger R APD documents (3 copies)
Burger S APD documents (3 copies)
Burger V APD documents (3 copies)
H_2S Contingency Plan

Shell Exploration & Production

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

April 17, 2012

Re: Shell Offshore Inc. - Applications for Permit to Drill for Sivulliq N and G and Torpedo H and J wells – Alaska Outer Continental Shelf, Beaufort Sea

Dear Mr. Fesmire:

Shell Offshore Inc. (Shell) hereby submits Applications for Permit to Drill (APD) for the following drill sites in the Camden Bay area of the Beaufort Sea:

- Lease # OCS-Y 1805, Flaxman Island Block 6658, Sivulliq N (#001)
- Lease # OCS-Y 1805, Flaxman Island Block 6658, Sivulliq G (#002)
- Lease # OCS-Y 1941, Flaxman Island Block 6610, Torpedo H (#001)
- Lease # OCS-Y 1936, Flaxman Island Block 6559, Torpedo J (#001)

The APD submittals for Sivulliq G and N, and Torpedo J are new applications. The Torpedo H APD is the third submittal of information for this proposed well. The initial Torpedo H APD was submitted on January 31, 2012. On February 21, 2012, Shell received a request for additional information (RFAI) from the Bureau of Safety and Environmental Enforcement (BSEE) on the Torpedo H APD submittal. A second Torpedo H APD submittal, containing additional information and responses to BSEE's RFAIs occurred on March 16, 2012. On April 24, 2012, Shell received a second RFAI from BSEE on the Torpedo H APD. This third APD submittal contains updated information and responses to BSEE's second RFAI on the Torpedo H APD, plus where applicable, BSEE's RFAIs have been addressed in the remaining APDs for proposed drill sites at Torpedo and Sivulliq.

These APD submittals are presented in the form of two volumes. One volume contains information that is specific to the conical drilling unit *Kulluk* and the Sivulliq and Torpedo Prospects area. Three copies of this information are submitted for the four Sivulliq and Torpedo APDs. As per regulation 30 CFR 250.417(g) this information will only be submitted once, conditioned on being approved by BSEE. If this information changes, these changes will be submitted to BSEE. The second volume contains the subsurface information specific to each APD (e.g., Sivulliq G, N or Torpedo H or J). Three copies of this second volume are submitted for each drill site.

In addition to the APD documents, also attached are the following:

- Signed BSEE-0123 forms for each APD;
- Spreadsheet defining the second RFAI for Torpedo H APD from BSEE and Shell's responses.

Shell requests that the Torpedo H APD submittal be given priority of review, followed by Sivulliq N, Torpedo J and Sivulliq G.

Shell asserts all materials submitted with this letter, except for the public information version of forms BSEE-0123 and -0123S, remain proprietary and are not subject to requests under the Freedom of Information Act (FOIA). Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management. Shell will inform BSEE at the time of submittal if any additional documentation is not subject to FOIA assertion by Shell.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely.

Susan Childs
AK Venture Support Integrator, Manager

Attachments:

BSEE RFAI Comment and Response spreadsheet

Signed BSEE-0123 Forms (Proprietary and Public)

Kulluk, Torpedo and Sivulliq Area Specific Documents (3 copies)

Sivulliq G APD documents (3 copies)

Sivulliq N APD documents (3 copies)

Torpedo H APD documents (3 copies)

Torpedo J APD documents (3 copies)

Burger A

- Interval 2 has wrong diverter rating Fixed
- Interval 3 pore pressure does not match plot Fixed
- Interval 4 casing test is not 500 above masp Fixed
- 12 & 14 do have to be filled out on BSEE-123s Fixed
- Need to be consistent in saying what they will test to between departures, procedures and forms Fixed
- Fill up line waiver is not necessary Not Fixed Fixed July 18
- Request not testing at casing point unless 7 day test due, but in drilling procedure it states they will be testing at the casing point…need to be consistent. Fixed
- On surface casing, used wrong burst pressure in calculation Fixed
- No BOP control diagrams Fixed
- Third party verifications are still provisional Not Fixed Part of APD Approval Letter
- No USCG letter of compliance Not Fixed Fixed July 18
- Normal minimal water depth is listed at 300 ft on specs yet water depth for well is 150 Not Fixed Fixed July 18
- Requesting waiver to not have flare system, yet plan talks about. Not Fixed Fixed July 18
- Areas in plan that state n/a because only applicapable to h2s present or unknown. Classified as h2s unknown. Not Fixed Fixed July 18
- Contact info for BSEE needs updating. Not Fixed Fixed July 18
- States attending vessels will be identified...when? Not Fixed Fixed July 18
- Noble Safety Policy Manual SPM-505 4.1.3 bullet 2 states that in addition to the above, the fire watch shall make periodic checks with gas monitoring equipment. 250.113 (c) (2)(iv) states must maintain a continuous surveillance with a portable gas detector during welding and burning operation if welding occurs in an area not equipped with a gas detector. Not Fixed Fixed July 18
- Don't see any standards or requirements for welders 250.110(a) written within the plan. Fixed
- Provide test procedures for a successful test for proper installation of casing. Fixed
- Are there 18 or 20 dedicated deadman bottles? Not Fixed Fixed July 18

Burger J

- 15 & 16 do not have to be filled out on BSEE-123 Fixed
- 12 & 14 do have to be filled out on BSEE-123s but 16 does Fixed
- Need to be consistent in saying what they will test to between departures, procedures and forms Fixed
- Fill up line waiver is not necessary Not Fixed Fixed July 18
- Request not testing at casing point unless 7 day test due, but in drilling procedure it states they will be testing at the casing point…need to be consistent. Fixed
- On surface casing, used wrong burst pressure in calculation Fixed
- No BOP control diagrams Fixed
- Third party verifications are still provisional Not Fixed Part of APD Approval Letter
- No USCG letter of compliance Not Fixed Fixed July 18
- Normal minimal water depth is listed at 300 ft on specs yet water depth for well is 150 Not Fixed Fixed July 18
- Requesting waiver to not have flare system, yet plan talks about. Not Fixed Fixed July 18
- Areas in plan that state n/a because only applicapable to h2s present or unknown. Classified as h2s unknown. Not Fixed Fixed July 18
- Contact info for BSEE needs updating. Not Fixed Fixed July 18
- States attending vessels will be identified...when? Not Fixed Fixed July 18
- Noble Safety Policy Manual SPM-505 4.1.3 bullet 2 states that in addition to the above, the fire watch shall make periodic checks with gas monitoring equipment. 250.113 (c) (2)(iv) states must maintain a continuous surveillance with a portable gas detector during welding and burning operation if welding occurs in an area not equipped with a gas detector. Not Fixed Fixed July 18
- Don't see any standards or requirements for welders 250.110(a) written within the plan. Fixed
- Provide test procedures for a successful test for proper installation of casing. Fixed
- Are there 18 or 20 dedicated deadman bottles? Not Fixed Fixed July 18

Burger A

- Three copies of the APD need to be submitted and only one public copy. In the future, do not include the public copy as part of the APD binder; submit them along with the APD. Hopefully will fix for future submittals
- Requested departure from 250.443(e) is not necessary. Either remove from departure page or change to "info." Fixed
- The cement volumes listed for interval 2 and 3 are less than the BSEE calculated necessary cement volumes. Fixed with cementing strategy letter submitted
- Independent third party verification of the BOP stack are provisional…when will we receive non provisional verification? Not Fixed Part of APD Approval Letter
- No USCG Certificate of Inspection or Letter of Compliance present. Fixed
- The welding plan letter dated June 9th still states that only periodic monitoring will occur if outside the safe welding area. Per 30 CFR 250.113(c)(2)(iv), this is unacceptable. Fixed
- Are there 18 or 20 bottles for the Deadman? This needs to be made clear within the APD. Fixed

Burger J

- Three copies of the APD need to be submitted and only one public copy. In the future, do not include the public copy as part of the APD binder; submit them along with the APD. Fix for future
- Requested departure from 250.443(e) is not necessary. Either remove from departure page or change to "info." Fixed
- The cement volumes listed for interval 2 and 3 are less than the BSEE calculated necessary cement volumes. Fixed with cementing strategy letter submitted
- Independent third party verification of the BOP stack are provisional…when will we receive non provisional verification? Not Fixed Part of APD Approval Letter
- No USCG Certificate of Inspection or Letter of Compliance present. Fixed
- The welding plan letter dated June 9th still states that only periodic monitoring will occur if outside the safe welding area. Per 30 CFR 250.113(c)(2)(iv), this is unacceptable. Fixed
- Are there 18 or 20 bottles for the Deadman? This needs to be made clear within the APD. Fixed

Shell Exploration & Production

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

June 11, 2012

Re: Shell Gulf of Mexico Inc. – Revised and new Information in support of Applications for Permit to Drill for Burger A, F, J, R, S and V wells – Alaska Outer Continental Shelf, Chukchi Sea

Dear Mr. Fesmire:

Shell Gulf of Mexico Inc. (Shell) hereby submits revised and new information for the Applications for Permit to Drill (APD) for the following drill sites in the Chukchi Sea:

- Lease # OCS-Y 2280, Posey Block 6764, Burger A (#001)
- Lease # OCS-Y 2267, Posey Block 6714, Burger F (#001)
- Lease # OCS-Y 2321, Posey Block 6912, Burger J (#001)
- Lease # OCS-Y 2294, Posey Block 6812, Burger R (#001)
- Lease # OCS-Y 2278, Posey Block 6762, Burger S (#001)
- Lease # OCS-Y 2324, Posey Block 6915, Burger V (#001)

This information is supplied either at the request of the Bureau of Safety and Environmental Enforcement (BSEE) or is a new document in support of the APD submittal. Only revised or new documents are included in this submission. Documents that have not been revised since the last submission of information (April 17, 2012) are not included.

In addition to the APD documents, also attached are the following:

- Signed BSEE-0123 (public version) forms for each APD drill site
- A copy of an updated H_2S Contingency Plan (this plan is non-confidential; the original H_2S Contingency Plan, was submitted November 2011 with the Revised Chukchi Sea Exploration Plan)
- A compact disc with information pertaining to the downhole tools to be used on the Burger wells

Shell requests that the Burger A APD submittal be given priority of review, followed by Burger J, Burger V, Burger F, Burger S then Burger R.

Shell asserts all materials submitted with this letter, except for the public information version of forms BSEE-0123 and -0123S and the H_2S Contingency Plan, remain proprietary and are not subject to requests under the Freedom of Information Act (FOIA).

Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Thank you.

Susan Childs
Alaska Venture Support Integrator, Manager

Attachments:

Signed BSEE-0123 Forms (Public)
M/V *Noble Discoverer* and Burger Area Specific Documents (3 copies)
Burger A APD documents (3 copies)
Burger F APD documents (3 copies)
Burger J APD documents (3 copies)
Burger R APD documents (3 copies)
Burger S APD documents (3 copies)
Burger V APD documents (3 copies)
H_2S Contingency Plan

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf of Mexico Inc. Suite 1000 3601 C Street Anchorage, AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 12280 #001 (Burger A)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO.		17. LEASE NO. OCS-Y 2280	
13. AREA NAME		18. AREA NAME Posey	
14. BLOCK NO.		19. BLOCK NO. 6764 (N71 deg 18' 30.92"; W163 deg 12' 43.17")	
15. LATITUDE ([ ] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([ ] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS *(Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.)*

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL *(Type or print name)*	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE 6-11-2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	**Response**	**Remarks**
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drilling vessel in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0005.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf Of Mexico Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 2321 #001 (Burger J)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)	WELL AT SURFACE
12. LEASE NO.	17. LEASE NO. OCS-Y 2321
13. AREA NAME	18. AREA NAME Posey
14. BLOCK NO.	19. BLOCK NO. 6912 (N71 deg 10' 24.03"; W163 deg 28' 18.52")

15. LATITUDE ([ ] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([ ] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE 6-11-2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	**Response**	**Remarks**
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drillship in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0004.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf Of Mexico Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 2324 #001 (Burger V)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO.		17. LEASE NO. OCS-Y 2324	
13. AREA NAME		18. AREA NAME Posey	
14. BLOCK NO.		19. BLOCK NO. 6915 (N71 deg 120' 33.39"; W163 deg 04' 21.23")	
15. LATITUDE ([ ] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([ ] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE 6-11-2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	**Response**	**Remarks**
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drillship in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0019.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	00689	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 1805 #001 (Sivulliq N)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 10, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)	WELL AT SURFACE
12. LEASE NO.	17. LEASE NO. OCS-Y 1805
13. AREA NAME	18. AREA NAME Flaxman Island
14. BLOCK NO.	19. BLOCK NO. 6658 (N70 deg 23' 29.58"; W145 deg 58' 52.53")
15. LATITUDE ([ ] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([ ] NAD 83 / [ ] NAD 27)
	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)
	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE 6-11-2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	**Response**	**Remarks**
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drilling vessel in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~857 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 857 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0009.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drilling vessel, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	00689	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 1941 #001 (Torpedo H)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 10, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision	11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO.		17. LEASE NO. OCS-Y 1941	
13. AREA NAME		18. AREA NAME Flaxman Island	
14. BLOCK NO.		19. BLOCK NO. 6610 (N70 deg 27' 01.62"; W145 deg 49' 32.07")	
15. LATITUDE ([ ] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([ ] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE 6-11-2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [ ] With Attached Conditions [ ] Without Conditions	BY	TITLE
API WELL NO. ASSIGNED TO THIS WELL		DATE

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	**Response**	**Remarks**
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drilling vessel in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1045 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1045 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0010.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drilling vessel, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Shell Exploration & Production

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

June 11, 2012

Re: Shell Offshore Inc. - Revised and new Information in support of Applications for Permit to Drill for Sivulliq N and G and Torpedo H and J wells – Alaska Outer Continental Shelf, Beaufort Sea

Dear Mr. Fesmire:

Shell Offshore Inc. (Shell) hereby submits revised and new information for the Applications for Permit to Drill (APD) for the following drill sites in the Camden Bay area of the Beaufort Sea:

- Lease # OCS-Y 1805, Flaxman Island Block 6658, Sivulliq N (#001)
- Lease # OCS-Y 1805, Flaxman Island Block 6658, Sivulliq G (#002)
- Lease # OCS-Y 1941, Flaxman Island Block 6610, Torpedo H (#001)
- Lease # OCS-Y 1936, Flaxman Island Block 6559, Torpedo J (#001)

This information is supplied either at the request of the Bureau of Safety and Environmental Enforcement (BSEE) or is a new document in support of the APD submittal. Only revised or new documents are included in this submission. Documents that have not been revised since the last submission of information (April 17, 2012) are not included.

In addition to the APD documents, also attached are the following:

- Signed BSEE-0123 (public version) forms for each APD drill site
- A compact disc with information pertaining to the downhole tools to be used on the Torpedo and Sivulliq wells

Shell requests that the Torpedo H APD submittal be given priority of review, followed by Sivulliq N, Torpedo J and Sivulliq G.

Shell asserts all materials submitted with this letter, except for the public information version of forms BSEE-0123 and -0123S, remain proprietary and are not subject to requests under the Freedom of Information Act (FOIA). Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Thank you.

Susan Childs
Alaska Venture Support Integrator, Manager

Attachments:

Signed BSEE-0123 Forms (Public)

Kulluk, Torpedo and Sivulliq Area Specific Documents (3 copies)

Sivulliq G APD documents (3 copies)

Sivulliq N APD documents (3 copies)

Torpedo H APD documents (3 copies)

Torpedo J APD documents (3 copies)

Shell Exploration & Production

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

June 12, 2012

Re: Shell Offshore Inc. and Shell Gulf of Mexico Inc. (Shell) submission of Wellbore Containment Screening Tool (WCST) electronic files for the Chukchi Sea and Camden Bay drill sites

Dear Mr. Fesmire:

Shell hereby submits the attached compact disc containing the electronic files used for the wellbore containment screening tool (WCST) calculations. Included are WCST analyses for the Chukchi Sea drill sites (Burger A, F, J, R, S and V) and the Camden Bay drill sites (Sivulliq G and N; Torpedo H and J).

Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either Bureau of Safety and Environmental Enforcement, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely,

Susan Childs
AK Venture Support Integrator, Manager

Attachment:

WCST electronic files (cd)

original disks did not meet BSEE Record Requirement.
Disk Resubmitted ~~Feb~~ June 21, 2012

Shell Exploration & Production

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

June 13, 2012

Re: Shell Gulf of Mexico Inc. – Digital files of the revised and new information in support of Applications for Permit to Drill for Burger A, F, J, R, S and V wells – Alaska Outer Continental Shelf, Chukchi Sea

Dear Mr. Fesmire:

Shell Gulf of Mexico Inc. (Shell), at the request of the Bureau of Safety and Environmental Enforcement (BSEE), hereby submits digital copies of the revised and new information (sent in hard copy form on June 11, 2012) for the Applications for Permit to Drill (APD) for the Chukchi Sea drill sites Burger A, F, J, R, S and V.

Also included are three paper copies of the Level 1 Well Containment Screening Tool (WCST) analysis for Burger S, hole section 12.25". This analysis was missing from the hard copy submission on June 11, 2012. The complete Burger A WCST analysis is contained in the attached Burger A digital file.

Shell asserts all materials submitted with this letter, except for the public information version of form BSEE-0123S, remain proprietary and are not subject to requests under the Freedom of Information Act. Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely,

Susan Childs
AK Venture Support Integrator, Manager

Attachments:

Digital copies of Chukchi Sea APD information (7 CDs)
Copies of the Level 1 WCST for the 12.25" section for drill site Burger S

original disk did not meet BSEE Record Requirements
Disks resubmitted June 21, 2012

Shell Exploration & Production

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

June 13, 2012

Re: Shell Offshore Inc. – Digital files of the revised and new information in support of Applications for Permit to Drill for drill sites Sivulliq G and N and Torpedo H and J – Alaska Outer Continental Shelf, Beaufort Sea

Dear Mr. Fesmire:

Shell Offshore Inc. (Shell), at the request of the Bureau of Safety and Environmental Enforcement (BSEE), hereby submits digital copies of the revised and new information (sent in hard copy form on June 11, 2012) for the Applications for Permit to Drill (APD) for the Camden Bay drill sites Sivulliq G and N and Torpedo H and J.

Shell asserts all materials submitted with this letter, except for the public information version of form BSEE-0123S, remain proprietary and are not subject to requests under the Freedom of Information Act. Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely,

Susan Childs
AK Venture Support Integrator, Manager

Attachment:

Digital copies of Beaufort Sea APD information (5 CDs)

Beaufort Sea APDs

For all APDs:
In the new sets of waivers that we received in July, the reference to 30 CFR 250.488 should be 30 CFR 250.248.

Shell Exploration & Production

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

July 31, 2012

Re: Shell Gulf of Mexico Inc. – Revised information in support of Applications for Permit to Drill for Burger A, F, J, R, S and V wells – Alaska Outer Continental Shelf, Chukchi Sea

Dear Mr. Fesmire:

In response to a verbal request from the Bureau of Safety and Environmental Enforcement (BSEE) on July 28, 2012, Shell Gulf of Mexico Inc. (Shell) hereby submits the following revised information for the Applications for Permit to Drill (APD) for drill sites in the Chukchi Sea. The information includes:

- For all Burger drill sites: Waivers to Regulations document
- Burger J: Form BSEE-0123S, wellbore sketch and cementing plan
- Burger R: Form BSEE-0123S and wellbore sketch

Shell asserts all materials submitted with this letter remain proprietary and are not subject to requests under the Freedom of Information Act. Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely,

Susan Childs
AK Venture Support Integrator, Manager

Attachments:

Burger A, F, J, R, S and V APD documents (3 copies each and compact disks)

Shell Exploration & Production

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

July 31, 2012

Re: Shell Offshore Inc. - Revised information in support of Applications for Permit to Drill for Sivulliq N and G and Torpedo H and J wells – Alaska Outer Continental Shelf, Beaufort Sea

Dear Mr. Fesmire:

In response to a verbal request from the Bureau of Safety and Environmental Enforcement (BSEE) on July 28, 2012, Shell Offshore Inc. (Shell) hereby submits revised information for the Applications for Permit to Drill (APD) for drill sites in the Camden Bay area of the Beaufort Sea. This information includes:

- For all Camden Bay drill sites: Waivers to Regulations document
- Torpedo H: wellbore sketch
- Torpedo J: wellbore sketch

Shell asserts all materials submitted with this letter remain proprietary and are not subject to requests under the Freedom of Information Act. Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either BSEE, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely,

Susan Childs
AK Venture Support Integrator, Manager

Attachments:

Sivulliq G and N and Torpedo H and J APD documents (3 copies each and compact disks)

Shell Exploration & Production

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

August 9, 2012

Re: Shell Gulf of Mexico Inc. – Revised information in support of Applications for Permit to Drill (APD) for Burger A, F, J, R, S and V wells – Alaska Outer Continental Shelf, Chukchi Sea

Dear Mr. Fesmire:

Shell Gulf of Mexico Inc. (Shell) is submitting an updated Verification of BOP Compatibility (30 CFR 250.416(f)) for drill sites Burger A, F, J, R, S and V.

Shell asserts all materials submitted with this letter remain proprietary and are not subject to requests under the Freedom of Information Act. Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either Bureau of Safety and Environmental Enforcement, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely,

Susan Childs
AK Venture Support Integrator, Manager

Attachments:

Paper and digital copies of updated Chukchi Sea APD information

Shell Exploration & Production

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503
Tel. (907) 646-7112
Email Susan.Childs@Shell.com
Internet http://www.Shell.com/

Mark Fesmire, Alaska Region Director
Alaska OCS Region
U.S. Department of Interior
Bureau of Safety & Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503-5823

August 15, 2012

Re: Shell Offshore Inc. – Revised information in support of Applications for Permit to Drill (APD) for Sivulliq G and N wells – Alaska Outer Continental Shelf, Beaufort Sea

Dear Mr. Fesmire:

Shell Offshore Inc. (Shell) is submitting an updated Verification of BOP Compatibility (30 CFR 250.416(f)) for drill sites Sivulliq G and N.

Shell asserts all materials submitted with this letter remain proprietary and are not subject to requests under the Freedom of Information Act. Shell requests continuing confidentiality of the materials submitted herein, as well as any additional documentation supplied by Shell in support of this APD in response to requests for additional information by either Bureau of Safety and Environmental Enforcement, or Bureau of Ocean Energy Management.

Please coordinate any requests for additional information through me at (907) 646-7112 or at Susan.Childs@Shell.com, or Pauline Ruddy at (907) 771-7243 or at Pauline.Ruddy@Shell.com.

Sincerely,

Susan Childs
AK Venture Support Integrator, Manager

Attachments:

Paper and digital copies of updated Sivulliq G and N APD information

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	02117	Shell Gulf of Mexico Inc. Suite 1000 3601 C Street Anchorage, AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 2280 #001 (Burger A)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 4, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO. OCS-Y 2280		17. LEASE NO. OCS-Y 2280	
13. AREA NAME Posey		18. AREA NAME Posey	
14. BLOCK NO. 6764 (Lat. N71 deg 18' 30.92"; Long. W163 deg 12' 43.17")		19. BLOCK NO. 6764 (Lat. N71 deg 18' 30.92"; Long. W163 deg 12' 43.17")	
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE	32. DATE
Susan Childs	April 16, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED:
[ ] With Attached Conditions
[ ] Without Conditions

BY [signature]

TITLE Alaska BSEE Regional Director

DATE 8/30/2012

API WELL NO. ASSIGNED TO THIS WELL

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet

Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	[X] YES [ ] NO [ ] N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	[ ] YES [ ] NO [X] N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	[X] YES [ ] NO [ ] N/A	Kill weight mud will be stored on the drillship in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at -1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	[ ] YES [ ] NO [X] N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	[X] YES [ ] NO [ ] N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0005.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	[ ] YES [ ] NO [X] N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	[ ] YES [X] NO [ ] N/A	

Public Information

RECEIVED
SEP 12 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

1101-02b

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
POSEY 6764 OCS-Y 2280 001	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	6. START DATE (Proposed)	7. ESTIMATED DURATION (DAYS)	
55-352-0000200	09/09/2012	1 day	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME POSEY	14. AREA NAME POSEY
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)
Mobile Offshore Drilling Unit Noble Discoverer

20. The greater of SITP or MASP (psi): N/A	21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _X_ N/A	22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	+1.281.795.0250	John.A.Henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
Jim Miller	Sept 12/12

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☒ YES ☐ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Public Information

RECEIVED
SEP 24 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

1101-02b

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
POSEY 6764 OCS-Y 2280 001	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	**6. START DATE (Proposed)**	**7. ESTIMATED DURATION (DAYS)**	
55-352-0000200	09/09/2012	1 day	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME POSEY	14. AREA NAME POSEY
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

See following sheet for list of documents in support of this APM.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Mobile Offshore Drilling Unit Noble Discoverer

20. The greater of SITP or MASP (psi): N/A	21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _X_ N/A	22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	+1.281.795.0250	John.A.Henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
Jim Miller	2012-9-24

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Public Information

RECEIVED
OCT 10 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
FI 6658 OCS-Y 1805 001 (Sivulliq N)	00	00	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage, AK, 99503
5. API WELL NO. (12 digits)	6. START DATE (Proposed)	7. ESTIMATED DURATION (DAYS)	
55-171-0001300	10/08/2012	n/a	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 1805	13. LEASE NO. OCS-Y 1805
11. AREA NAME Flaxman Island	14. AREA NAME Flaxman Island
12. BLOCK NO. 6658	15. BLOCK NO. 6658

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☐ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☐ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☒ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

See attached Final Well Location figure.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Kulluk

20. The greater of SITP or MASP (psi):	21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _x_ N/A	22. SV Depth BML (ft):
n/a		n/a

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	n/a	Low/High: n/a	n/a	Low/High: n/a

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	Low/High: n/a	n/a	Low/High: n/a	Low/High: n/a	n/a

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
Shawn Gelsinger	1-713-594-8531	shawn.gelsinger@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
	2012-10-08

THIS SPACE FOR BSEE USE ONLY

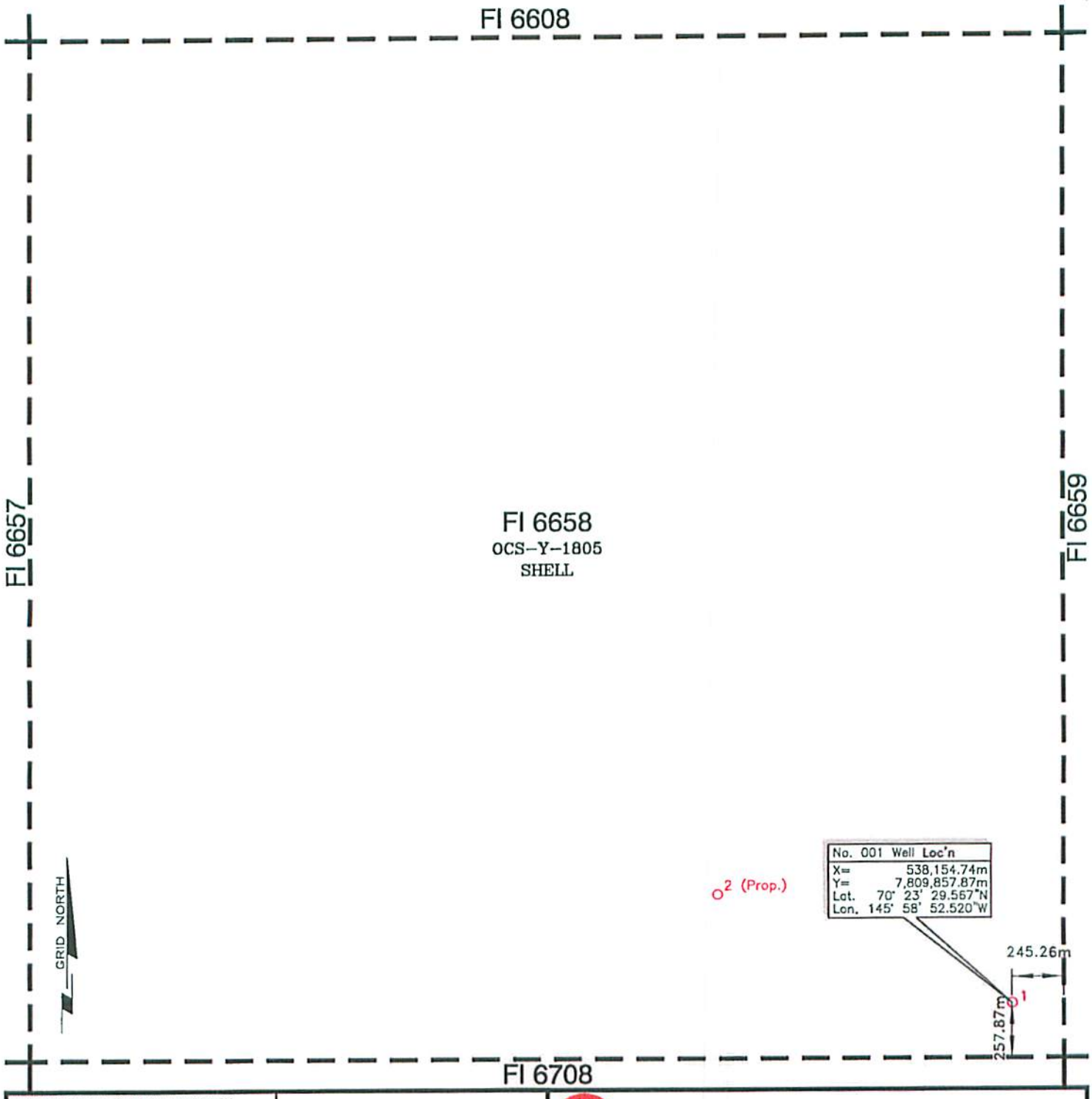
APPROVED BY:	TITLE	DATE

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.



I HEREBY CERTIFY THAT THE ABOVE FINAL WELL LOCATION IS CORRECT.

STATE OF LOUISIANA
STEPHEN R. HENRY
REG. No. 4903
REGISTERED PROFESSIONAL LAND SURVEYOR

Stephen Henry
REG. PROFESSIONAL LAND SURVEYOR NO. 4903
STATE OF LOUISIANA 10-04-12

PUBLIC INFORMATION

Printed: 10/4/12

Shell Exploration & Production Company

FINAL LOCATION
OCS-Y-1805 WELL NO. 001
BLOCK 6658
FLAXMAN ISLAND AREA
ALASKA

FUGRO CHANCE INC.
200 Dulles Dr. Lafayette, Louisiana 70506-3001 (337) 237-1300

GEODETIC DATUM: NAD83 PROJECTION: U.T.M. 6 (NORTH) GRID UNITS: METERS		SCALE 1:25,000	0 200 400 600 800 METERS
Job No.: 1201946	Date: 10/04/12	Drwn: SJL	Chart: 1 Of: 1
Dwgfile: O:\...\6658_F_1_Y1805			

1101-02b

Public Information

RECEIVED
SEP 11 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
Posey 6764 OCS-Y 2280 001(Burger A)	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK, 99503
5. API WELL NO. (12 digits)	**6. START DATE (Proposed)**	**7. ESTIMATED DURATION (DAYS)**	
55-352-0000200	9/10/2012	n/a	
8. ☐ Revision	**9. If revision, please list changes:**		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME Posey	14. AREA NAME Posey
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☐ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☐ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☒ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

n/a

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

See attached Well Final Location figure.

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Noble Discoverer

20. The greater of SITP or MASP (psi): n/a | 21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _x_ N/A | 22. SV Depth BML (ft): n/a

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	n/a	Low/High: n/a	n/a	Low/High: n/a

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	Low/High: n/a	n/a	Low/High: n/a	Low/High: n/a	n/a

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	1-281-795-0250	john.a.henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
Jim Miller	2012-9-11

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE

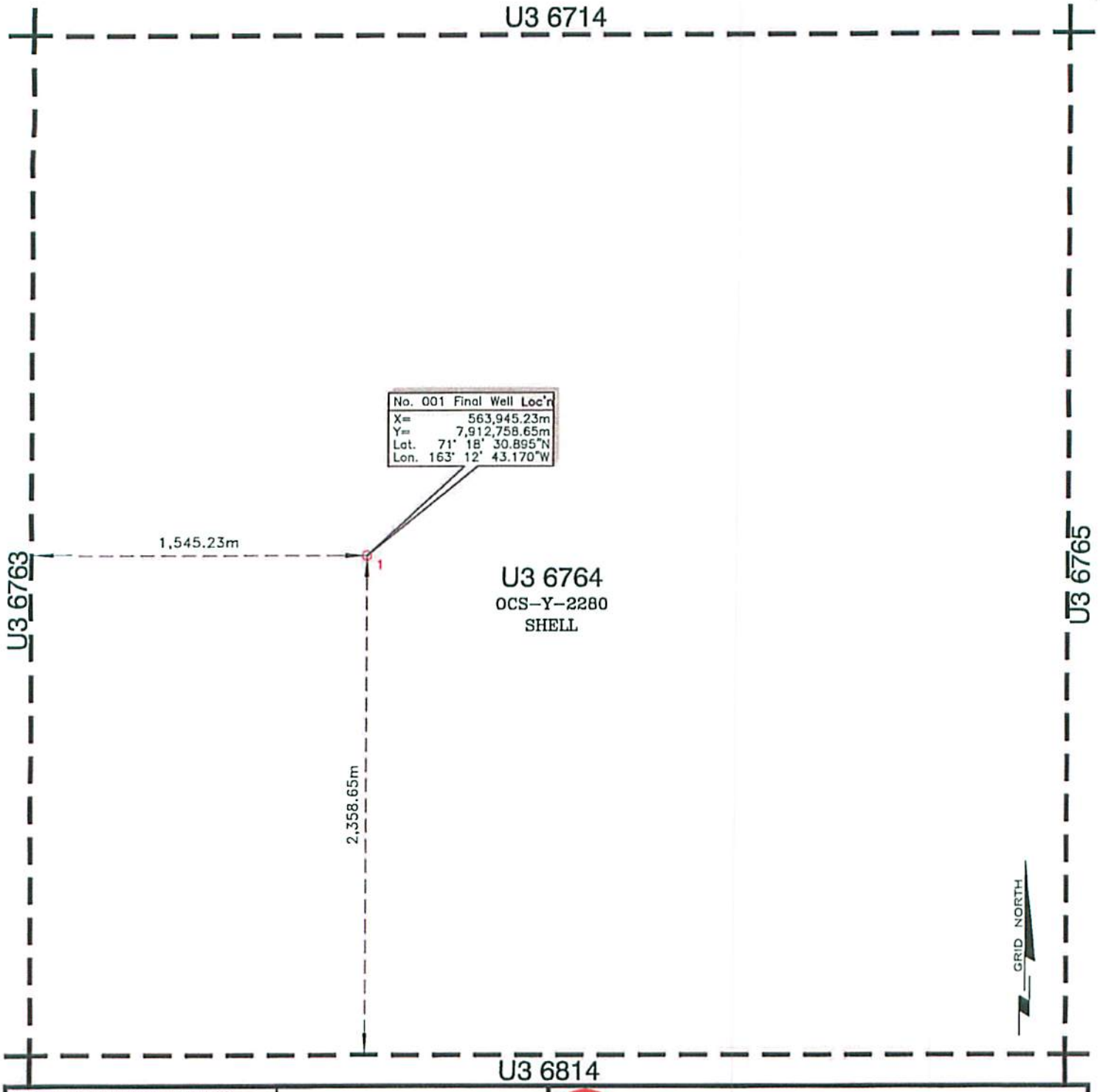
Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☒ YES ☐ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

1101-02b



I HEREBY CERTIFY THAT THE ABOVE FINAL WELL LOCATION IS CORRECT.

STATE OF LOUISIANA
STEPHEN R. HENRY
REG. No. 4903
REGISTERED PROFESSIONAL LAND SURVEYOR

Stephen Henry
REG. PROFESSIONAL LAND SURVEYOR NO. 4903
STATE OF LOUISIANA 9-10-12

PUBLIC INFORMATION

Printed: 9/10/12

Shell Exploration & Production Company

FINAL LOCATION
OCS-Y-2280 WELL NO. 001
BLOCK 6764
POSEY AREA
GULF OF MEXICO

FUGRO CHANCE INC.
200 Dulles Dr. Lafayette, Louisiana 70506-3001 (337) 237-1300

GEODETIC DATUM: NAD83 PROJECTION: U.T.M. 3 (NORTH) GRID UNITS: METERS		SCALE 1:25,000 0 200 400 600 800 METERS	
Job No.: 1201945	Date: 9/10/12	Drwn: SJL	Chart: 1 Of: 1
Dwgfile: O:\WellPermit\UTM3m\Posey\Permit\6764_F_1_Y2280			

Public Information Copy

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	00689	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 1805 #001 (Sivulliq N)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 10, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

10. [ ] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO. OCS-Y 1805		17. LEASE NO. OCS-Y 1805	
13. AREA NAME Flaxman Island		18. AREA NAME Flaxman Island	
14. BLOCK NO. 6658 (N70 deg 23' 29.58"; W145 deg 58' 52.53")		19. BLOCK NO. 6658 (N70 deg 23' 29.58"; W145 deg 58' 52.53")	
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE April 16, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED:
[X] With Attached Conditions
[ ] Without Conditions

BY [signature] TITLE Regional Dir Alaska OCS

API WELL NO. ASSIGNED TO THIS WELL

DATE SEP 20 2012

Public Information Copy

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	**Response**	**Remarks**
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	[x] YES [ ] NO [ ] N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	[ ] YES [ ] NO [x] N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	[x] YES [ ] NO [ ] N/A	Kill weight mud will be stored on the drilling vessel in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~857 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	[ ] YES [ ] NO [x] N/A	Conductor casing to be installed at a depth of approximately 857 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	[x] YES [ ] NO [ ] N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0009.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	[ ] YES [ ] NO [x] N/A	The proposed well will be drilled from a floating drilling vessel, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	[ ] YES [x] NO [ ] N/A	

1101-02b

United States Department of the Interior

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
Alaska OCS Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

SEP 20 2012

Memorandum

To: Shell Gulf of Mexico

From: Mark Fesmire, JD, PE MEF
Regional Director

Subject: Return of Proprietary Applications for Permit to Modify (APM)

BSEE Alaska is returning 3 Proprietary copies of the APD submitted on 11 September 2012, and 3 Proprietary copies of the APD submitted on 12 September 2012 for the Burger A well. We are returning at the request of Shell Gulf of Mexico that they be withdrawn.

Received by: W. A Seas
Date: 9/20/12

Also given public informations copies of APM's submitted on Sept 11 and Sept 12.
YT

Public Information

1101-02b

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

RECEIVED
SEP 24 2012
Bureau of Safety and Environmental Enforcement
Regional Director, Alaska OCS
Anchorage, Alaska

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
POSEY 6764 OCS-Y 2280 001	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	**6. START DATE (Proposed)**	**7. ESTIMATED DURATION (DAYS)**	
55-352-0000200	09/20/2012	2 day	
8. ☐ Revision	**9. If revision, please list changes:**		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME POSEY	14. AREA NAME POSEY
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

See attachment: BSEE-124 Proposed Operations 20-9-2012

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Mobile Offshore Drilling Unit Noble Discoverer

20. The greater of SITP or MASP (psi): N/A

21. Type of Safety Valve (SV): ___ SCSSV ___ SSCSV _X_ N/A

22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	+1.281.795.0250	John.A.Henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	**34. DATE**
Jim Miller	2012-9-24

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

1101-02b

Public Information

RECEIVED
SEP 21 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies,with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
Posey 6764 OCS-Y 2280 001(Burger A)	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK, 99503
5. API WELL NO. (12 digits)	**6. START DATE (Proposed)**	**7. ESTIMATED DURATION (DAYS)**	
55-352-0000200	9/21/2012	n/a	
8. ☐ Revision	**9. If revision, please list changes:**		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME Posey	14. AREA NAME Posey
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☐ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☐ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☒ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

See attached Final Well Location figure.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Noble Discoverer

20. The greater of SITP or MASP (psi): n/a	21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _x_ N/A	22. SV Depth BML (ft): n/a

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	n/a	Low/High: n/a	n/a	Low/High: n/a

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	Low/High: n/a	n/a	Low/High: n/a	Low/High: n/a	n/a

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	1-281-795-0250	john.a.henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	**34. DATE**
	2012-9-21

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE

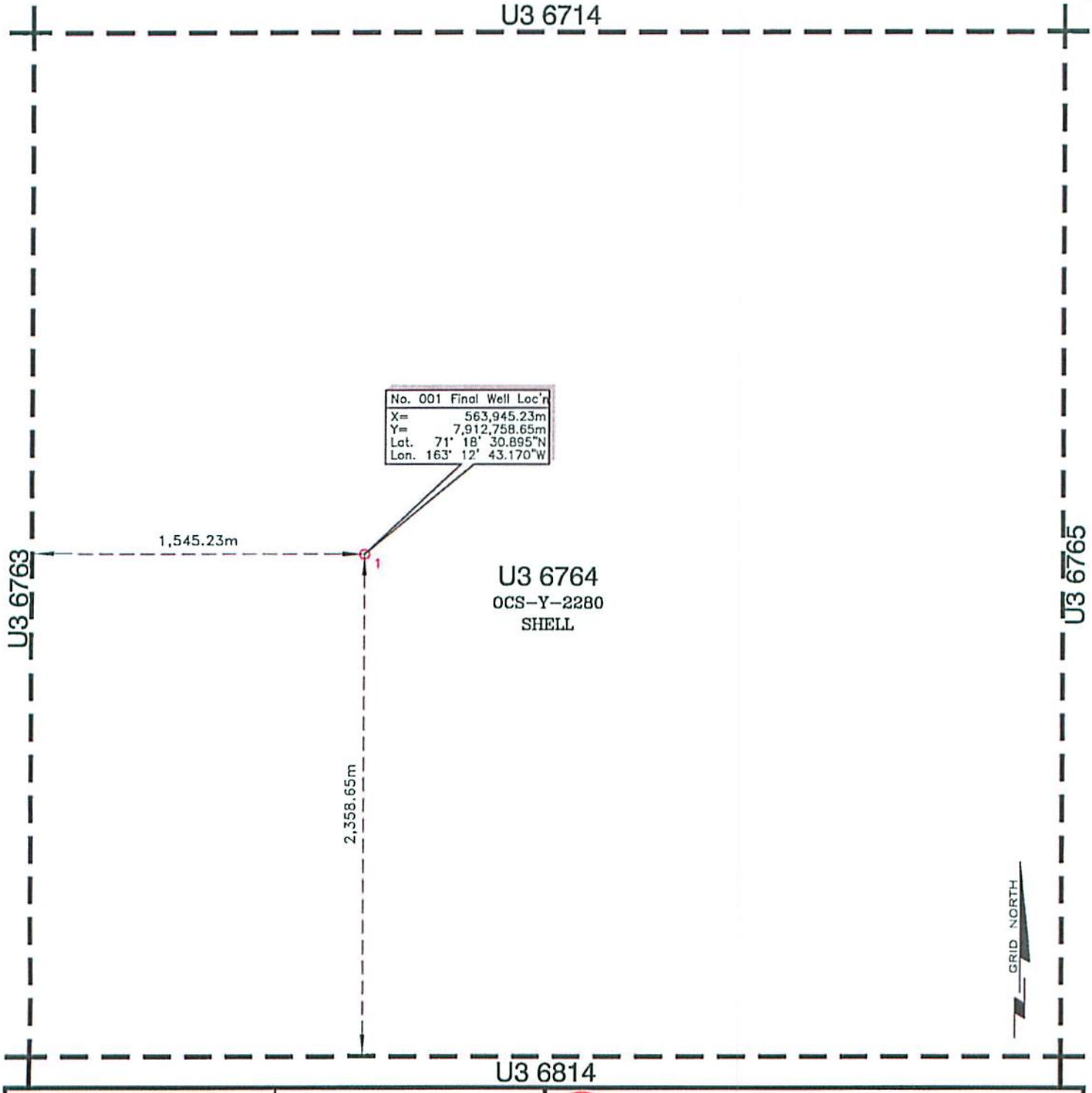
Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

1101-02b



I HEREBY CERTIFY THAT THE ABOVE FINAL WELL LOCATION IS CORRECT.

STATE OF LOUISIANA
STEPHEN R. HENRY
REG. No. 4903
REGISTERED PROFESSIONAL LAND SURVEYOR

Stephen Henry
REG. PROFESSIONAL LAND SURVEYOR NO. 4903
STATE OF LOUISIANA 9-10-12

PUBLIC INFORMATION

Printed: 9/10/12

Shell Exploration & Production Company

FINAL LOCATION
OCS-Y-2280 WELL NO. 001
BLOCK 6764
POSEY AREA
ALASKA

FUGRO CHANCE INC.
200 Dulles Dr. Lafayette, Louisiana 70506-3001 (337) 237-1300

GEODETIC DATUM: NAD83 PROJECTION: U.T.M. 3 (NORTH) GRID UNITS: METERS		SCALE 1:25,000 0 200 400 600 800 METERS	
Job No.: 1201945	Date: 9/10/12	Drwn: SJL	Chart: 1 Of: 1
Dwgfile: O:\WellPermit\UTM3m\Posey\Permit\6764_F_1_Y2280			

Public Information

RECEIVED
AUG 09 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL [X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN		2. BSEE OPERATOR NO. 02117	3. OPERATOR NAME and ADDRESS *(Submitting office)* Shell Gulf Of Mexico Inc. 3601 C Street Suite 1000 Anchorage AK 99503
4. WELL NAME (CURRENT) OCS-Y 2321 #001 (Burger J)	5. SIDETRACK NO. (CURRENT) n/a	6. BYPASS NO. (CURRENT) n/a	
7. PROPOSED START DATE July 4, 2012	8. PLAN CONTROL NO. (NEW WELL ONLY) n/a		
9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS) n/a			
10. [ ] Revision	11. If revision, please list changes:		

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO. OCS-Y 2321		17. LEASE NO. OCS-Y 2321	
13. AREA NAME Posey		18. AREA NAME Posey	
14. BLOCK NO. 6912 (N71 deg 10' 24.03"; W163 deg 28' 18.52")		19. BLOCK NO. 6912 (N71 deg 10' 24.03"; W163 deg 28' 18.52")	
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS *(Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.)*

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com
29. AUTHORIZING OFFICIAL *(Type or print name)* Susan Childs	30. TITLE Alaska Venture Support Integrator, Manager	
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE August 9, 2012	

THIS SPACE FOR BSEE USE ONLY

APPROVED: [X] With Attached Conditions [ ] Without Conditions

BY

TITLE Alaska Regional Dir.

DATE 9/22/2012

API WELL NO. ASSIGNED TO THIS WELL

Public Information

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drillship in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at -1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0004.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Public Information

RECEIVED
SEP 21 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies,with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
Posey 6764 OCS-Y 2280 001(Burger A)	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK, 99503
5. API WELL NO. (12 digits)	6. START DATE (Proposed)	7. ESTIMATED DURATION (DAYS)	
55-352-0000200	9/21/2012	n/a	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME Posey	14. AREA NAME Posey
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☐ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☐ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☒ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

See attached Final Well Location figure.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Noble Discoverer

20. The greater of SITP or MASP (psi): n/a	21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _x_ N/A	22. SV Depth BML (ft): n/a

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	n/a	Low/High: n/a	n/a	Low/High: n/a

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	Low/High: n/a	n/a	Low/High: n/a	Low/High: n/a	n/a

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	1-281-795-0250	john.a.henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
	2012-9-21

THIS SPACE FOR BSEE USE ONLY

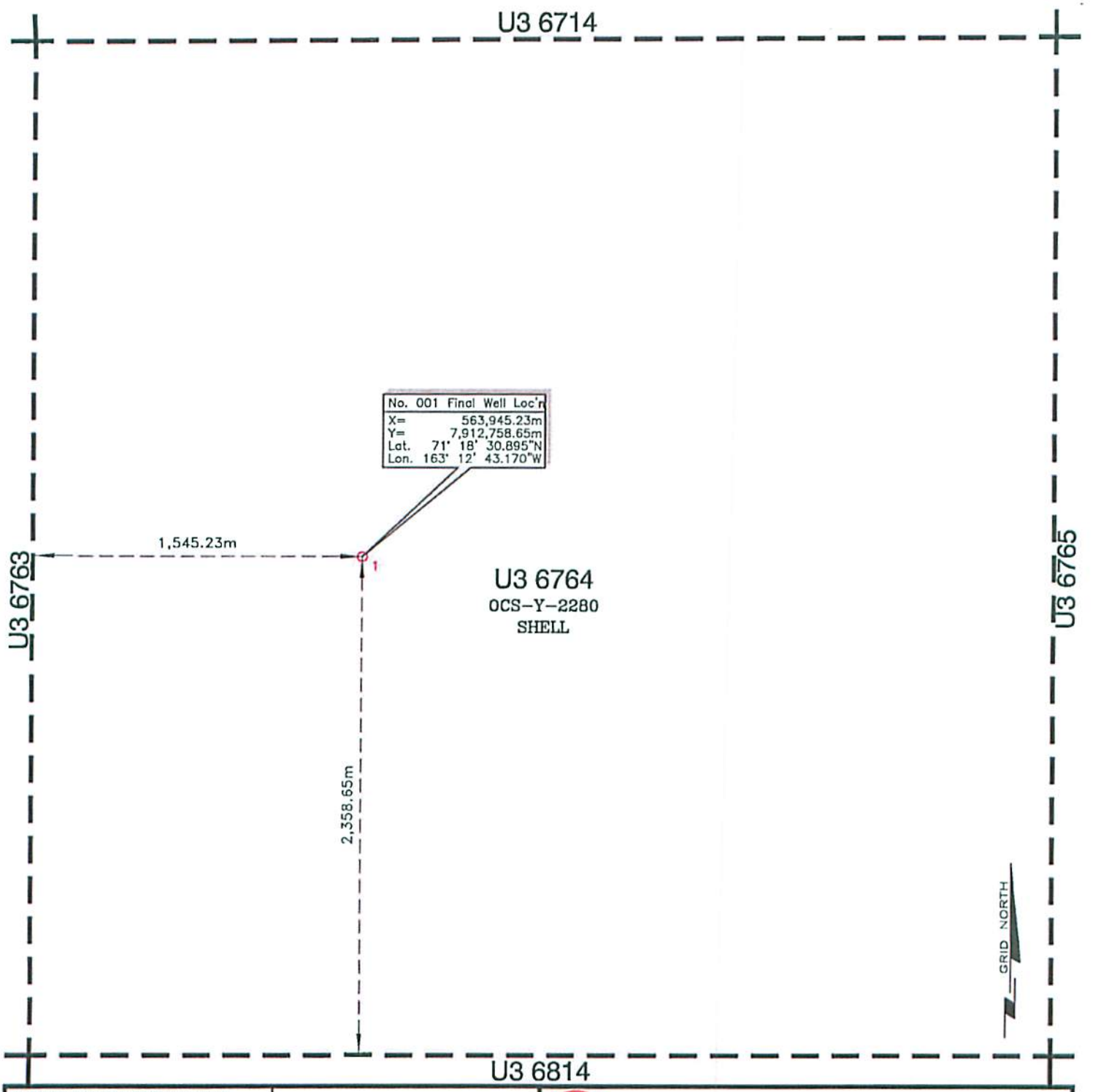
APPROVED BY:	TITLE	DATE
	Alaska Regional Dir	9/27/2012

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.



I HEREBY CERTIFY THAT THE ABOVE FINAL WELL LOCATION IS CORRECT.

STATE OF LOUISIANA
STEPHEN R. HENRY
REG. No. 4903
REGISTERED PROFESSIONAL LAND SURVEYOR

Stephen Henry
REG. PROFESSIONAL LAND SURVEYOR NO. 4903
STATE OF LOUISIANA 9-10-12

PUBLIC INFORMATION

Printed: 9/10/12

Shell Exploration & Production Company

FINAL LOCATION
OCS-Y-2280 WELL NO. 001
BLOCK 6764
POSEY AREA
ALASKA

FUGRO CHANCE INC.
200 Dulles Dr. Lafayette, Louisiana 70506-3001 (337) 237-1300

GEODETIC DATUM: NAD83 PROJECTION: U.T.M. 3 (NORTH) GRID UNITS: METERS		SCALE 1:25,000	0 200 400 600 800 METERS
Job No.: 1201945	Date: 9/10/12	Drwn: SJL	Chart: 1 Of: 1
Dwgfile: O:\WellPermit\UTM3m\Posey\Permit\6764_F_1_Y2280			

Public Information

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

RECEIVED
SEP 24 2012
Bureau of Safety and Environmental Enforcement
Regional Director, Alaska OCS
Anchorage, Alaska

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
POSEY 6764 OCS-Y 2280 001	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	6. START DATE (Proposed)	7. ESTIMATED DURATION (DAYS)	
55-352-0000200	09/20/2012	2 day	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME POSEY	14. AREA NAME POSEY
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

See attachment: BSEE-124 Proposed Operations 20-9-2012

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Mobile Offshore Drilling Unit Noble Discoverer

20. The greater of SITP or MASP (psi): N/A

21. Type of Safety Valve (SV): ___ SCSSV ___ SSCSV _X_ N/A

22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	+1.281.795.0250	John.A.Henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
Jim Miller	2012-9-24

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE
Matt Fo	Alaska Regional Dir	9/22/2012

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Public Information

RECEIVED
SEP 24 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies,with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
POSEY 6764 OCS-Y 2280 001	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	**6. START DATE (Proposed)**	**7. ESTIMATED DURATION (DAYS)**	
55-352-0000200	09/09/2012	1 day	
8. ☐ Revision	**9. If revision, please list changes:**		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME POSEY	14. AREA NAME POSEY
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

See following sheet for list of documents in support of this APM.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Mobile Offshore Drilling Unit Noble Discoverer

20. The greater of SITP or MASP (psi): N/A

21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _X_ N/A

22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	+1.281.795.0250	John.A.Henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	**34. DATE**
	2012-9-24

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE
	Alaska Regional Dir	9/27/2012

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT
Alaska OCS Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

OCT 10 2012

Shell Exploration and Production
AK Venture Support Integrator
Attn: Susan Childs, Manager
3601 C Street, Suite 1000
Anchorage, Alaska 99503

RECEIVED
OCT 10 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

Dear Ms. Childs:

The Bureau of Ocean Energy Management (BOEM) received notification from Shell on October 2, 2012, concerning plans for pre-positioning anchors at the Burger J well location. Shell proposes to set anchors approximately 1,018 meters from the well site (Ruddy email, 10/2/12). The proposed mooring pattern is a deviation from Shell's Revised 2012 OCS Lease Exploration Plan (2012 Shell EP) for the Chukchi Sea. The 2012 Shell EP denotes a mooring radius of 795 meters from well site.

BOEM has determined that its site clearance analysis covers an area extending beyond that proposed by Shell for setting anchors, and the geographic conditions within the expanded mooring pattern are substantially similar; therefore, there are no changes from what we previously analyzed that are relevant to environmental concerns. Based upon this determination, BOEM has no objection to Shell setting anchors for the Burger J well at a distance approximately 1,018 meters from the well site.

If you have questions or concerning this matter, please contact me at (907) 334-5273.

Sincerely,

David W. Johnston, Regional Supervisor
Office of Leasing and Plans

cc: Tommy Beaudreau, Bureau Ocean Energy Management
Jim Kendall, Bureau of Ocean Energy Management
James Watson, Bureau of Safety and Environmental Enforcement
Mark Fesmire, Bureau of Safety and Environmental Enforcement
Jeffrey Missal, Bureau of Safety and Environmental Enforcement

Public Information

RECEIVED
OCT 10 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
FI 6658 OCS-Y 1805 001 (Sivulliq N)	00	00	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage, AK, 99503
5. API WELL NO. (12 digits)	6. START DATE (Proposed)	7. ESTIMATED DURATION (DAYS)	
55-171-0001300	10/08/2012	n/a	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 1805	13. LEASE NO. OCS-Y 1805
11. AREA NAME Flaxman Island	14. AREA NAME Flaxman Island
12. BLOCK NO. 6658	15. BLOCK NO. 6658

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☐ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☐ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☒ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

See attached Final Well Location figure.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Kulluk

20. The greater of SITP or MASP (psi): n/a

21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _x_ N/A

22. SV Depth BML (ft): n/a

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	n/a	Low/High: n/a	n/a	Low/High: n/a

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
n/a	Low/High: n/a	n/a	Low/High: n/a	Low/High: n/a	n/a

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
Shawn Gelsinger	1-713-594-8531	shawn.gelsinger@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
	2012-10-08

THIS SPACE FOR BSEE USE ONLY

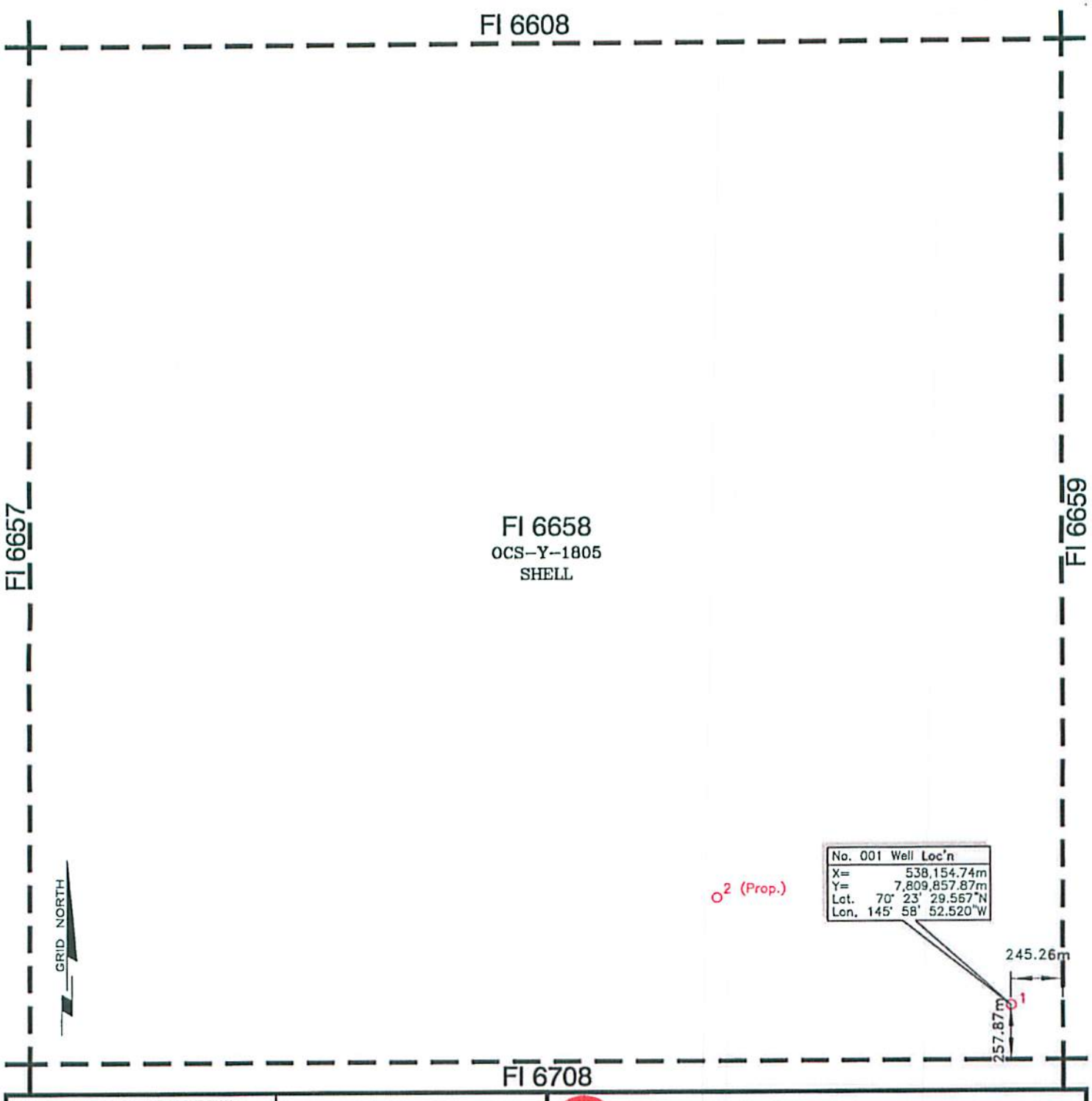
APPROVED BY:	TITLE	DATE
	Alaska OCS Regional Director	10/10/12

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.



I HEREBY CERTIFY THAT THE ABOVE FINAL WELL LOCATION IS CORRECT.

STATE OF LOUISIANA
STEPHEN R. HENRY
REG. No. 4903
REGISTERED PROFESSIONAL LAND SURVEYOR

Stephen Henry
REG. PROFESSIONAL LAND SURVEYOR NO. 4903
STATE OF LOUISIANA 10-04-12

PUBLIC INFORMATION

Printed: 10/4/12

Shell Exploration & Production Company

FINAL LOCATION
OCS-Y-1805 WELL NO. 001

BLOCK 6658
FLAXMAN ISLAND AREA
ALASKA

FUGRO CHANCE INC.
200 Dulles Dr. Lafayette, Louisiana 70506-3001 (337) 237-1300

GEODETIC DATUM: NAD83
PROJECTION: U.T.M. 6 (NORTH)
GRID UNITS: METERS

SCALE 1:25,000
0 200 400 600 800
METERS

Job No.: 1201946 | Date: 10/04/12 | Drwn: SJL | Chart: 01: 1 1

Dwgfile: O:\...\6658_F_1_Y1805

Public Information

RECEIVED
OCT 12 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
POSEY 6764 OCS-Y 2280 001	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	**6. START DATE (Proposed)**	**7. ESTIMATED DURATION (DAYS)**	
55-352-0000200	10/15/2012	2 day	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME POSEY	14. AREA NAME POSEY
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☒ **Other Operations**
  - ☒ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

TA the Burger A well between the 2012 and 2013 open water seasons. See attached 30CFR 250.1721.pdf for necessary references.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Mobile Offshore Drilling Unit Noble Discoverer

20. The greater of SITP or MASP (psi): N/A	21. Type of Safety Valve (SV): ___ SCSSV ___ SSCSV X N/A	22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	+1.281.795.0250	John.A.Henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
	October 12, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Public Information

RECEIVED
OCT 12 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
POSEY 6764 OCS-Y 2280 001	00	00	Shell Gulf of Mexico Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	**6. START DATE (Proposed)**	**7. ESTIMATED DURATION (DAYS)**	
55-352-0000200	10/15/2012	2 day	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 2280	13. LEASE NO. OCS-Y 2280
11. AREA NAME POSEY	14. AREA NAME POSEY
12. BLOCK NO. 6764	15. BLOCK NO. 6764

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☑ **Other Operations**
  - ☑ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

TA the Burger A well between the 2012 and 2013 open water seasons. See attached 30CFR 250.1721.pdf for necessary references.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Mobile Offshore Drilling Unit Noble Discoverer

20. The greater of SITP or MASP (psi): N/A	21. Type of Safety Valve (SV): ___ SCSSV ___ SSCSV X N/A	22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
John A. Henley	+1.281.795.0250	John.A.Henley@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
	October 12, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE
	AKOCS Reg. Dir.	10/13/12

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	Current status is H2S unknown. Shell has an H2S contingency plan in place in the event that H2S is present during drilling.
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Public Information

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information"

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

RECEIVED AUG 09 2012 Regional Director, Alaska OCS Bureau of Safety and Environmental Enforcement Anchorage, Alaska

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL [x] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN		2. BSEE OPERATOR NO. 02117	3. OPERATOR NAME and ADDRESS *(Submitting office)* Shell Gulf Of Mexico Inc. 3601 C Street Suite 1000 Anchorage AK 99503
4. WELL NAME (CURRENT) OCS-Y 2324 #001 (Burger V)	5. SIDETRACK NO. (CURRENT) n/a	6. BYPASS NO. (CURRENT) n/a	
7. PROPOSED START DATE July 4, 2012	8. PLAN CONTROL NO. (NEW WELL ONLY) n/a		
9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS) n/a			
10. [ ] Revision	11. If revision, please list changes:		

WELL AT TOTAL DEPTH (PROPOSED)		WELL AT SURFACE	
12. LEASE NO. OCS-Y 2324		17. LEASE NO. OCS-Y 2324	
13. AREA NAME Posey		18. AREA NAME Posey	
14. BLOCK NO. 6915 (N71 deg 10' 33.39"; W163 deg 04' 21.23")		19. BLOCK NO. 6915 (N71 deg 10' 33.39"; W163 deg 04' 21.23")	
15. LATITUDE ([x] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([x] NAD 83 / [ ] NAD 27)	20. LATITUDE ([x] NAD 83 / [ ] NAD 27)	21. LONGITUDE ([x] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS *(Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.)*

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME Jim Miller	27. CONTACT TELEPHONE NO. 907 646 7122	28. CONTACT E-MAIL ADDRESS jim.miller@shell.com
29. AUTHORIZING OFFICIAL *(Type or print name)* Susan Childs	30. TITLE Alaska Venture Support Integrator, Manager	
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE August 9, 2012	

THIS SPACE FOR BSEE USE ONLY

APPROVED: [x] With Attached Conditions [ ] Without Conditions	BY [signature]	TITLE Regional Director BSEE Alaska
API WELL NO. ASSIGNED TO THIS WELL 55-352-00007-00		DATE 10/18/2012

Public Information

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drillship in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at ~1244 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1244 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0019.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drillship, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Public Information

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1010-0141
OMB Approval Expires 10/31/2014

Application for Permit to Drill (APD)

1. PROPOSAL TO DRILL	2. BSEE OPERATOR NO.	3. OPERATOR NAME and ADDRESS (Submitting office)
[X] NEW WELL [ ] SIDETRACK [ ] BYPASS [ ] DEEPEN	00689	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage AK 99503

4. WELL NAME (CURRENT)	5. SIDETRACK NO. (CURRENT)	6. BYPASS NO. (CURRENT)
OCS-Y 1941 #001 (Torpedo H)	n/a	n/a

7. PROPOSED START DATE	8. PLAN CONTROL NO. (NEW WELL ONLY)
July 10, 2012	n/a

9. API WELL NO. (CURRENT SIDETRACK / BYPASS) (12 DIGITS)
n/a

RECEIVED
OCT 15 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

10. [X] Revision 11. If revision, please list changes:

WELL AT TOTAL DEPTH (PROPOSED)	WELL AT SURFACE
12. LEASE NO. OCS-Y 1941	17. LEASE NO. OCS-Y 1941
13. AREA NAME Flaxman Island	18. AREA NAME Flaxman Island
14. BLOCK NO. 6610 (N70 deg 27' 01.62"; W145 deg 49' 32.07")	19. BLOCK NO. 6610 (N70 deg 27' 01.62"; W145 deg 49' 32.07")
15. LATITUDE ([X] NAD 83 / [ ] NAD 27)	16. LONGITUDE ([X] NAD 83 / [ ] NAD 27)
	20. LATITUDE ([X] NAD 83 / [ ] NAD 27)
	21. LONGITUDE ([X] NAD 83 / [ ] NAD 27)

LIST OF SIGNIFICANT MARKERS ANTICIPATED

22. NAME	23. TOP (MD)	24. TOP (TVD)	22. NAME	23. TOP (MD)	24. TOP (TVD)

25. LIST ALL ATTACHMENTS (*Attach complete well prognosis + attachments required by 30 CFR 250.414 or 30 CFR 250.1617(c) and (d) as appropriate.*)

See the APD Table of Contents for all the documents associated with this APD submission.

26. CONTACT NAME	27. CONTACT TELEPHONE NO.	28. CONTACT E-MAIL ADDRESS
Jim Miller	907 646 7122	jim.miller@shell.com

29. AUTHORIZING OFFICIAL (Type or print name)	30. TITLE
Susan Childs	Alaska Venture Support Integrator, Manager
31. AUTHORIZING SIGNATURE Susan Childs	32. DATE October 15, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED: [X] With Attached Conditions [ ] Without Conditions

BY

TITLE Regional Director BSEE Alaska

API WELL NO. ASSIGNED TO THIS WELL 55-171-00017-00

DATE 10/18/2012

Public Information

Application for Permit to Drill (APD) Information Sheet

33) Question Information Sheet		
Questions	Response	Remarks
A) Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2 ppg or more?	☒ YES ☐ NO ☐ N/A	
B) If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	☐ YES ☐ NO ☒ N/A	Water based drilling fluids will be used.
C) If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it is not flowing?	☒ YES ☐ NO ☐ N/A	Kill weight mud will be stored on the drilling vessel in sufficient quantities to kill any flows. Riser and BOP to be installed after setting conductor at -1045 feet below the mudline. All deeper portions of the well will be drilled with the riser installed. ROV monitoring will be in place.
D) If requesting a waiver of the conductor casing, have you submitted a log to BSEE District Office that is with in 500 feet of the proposed bottom hole location for the proposed surface casing point?	☐ YES ☐ NO ☒ N/A	Conductor casing to be installed at a depth of approximately 1045 feet below the mudline.
E) Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in remarks for this question)	☒ YES ☐ NO ☐ N/A	Discharges from the proposed operation will be covered under the EPA NPDES Arctic General Permit, authorization number AKG-28-0010.
F) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	The proposed well will be drilled from a floating drilling vessel, not from a platform.
G) Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge scenario in the approved oil spill response plan?	☐ YES ☒ NO ☐ N/A	

Public Information

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies,with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

RECEIVED
OCT 30 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
FI 6658 OCS-Y 1805 001	00	00	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	6. START DATE (Proposed)	7. ESTIMATED DURATION (DAYS)	
55-171-0001300	10/27/2012	2 day	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 1805	13. LEASE NO. OCS-Y 1805
11. AREA NAME Flaxman Island	14. AREA NAME Flaxman Island
12. BLOCK NO. 6658	15. BLOCK NO. 6658

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

TA the Sivulliq N well between the 2012 and 2013 open water seasons. See attached documents for necessary references.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Shell Kulluk

20. The greater of SITP or MASP (psi): N/A	21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV _X_ N/A	22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
Shawn Gelsinger	1-713-594-8531	shawn.gelsinger@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
	October 30, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Public Information

U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement (BSEE)

Submit original plus THREE copies, with ONE copy marked "Public Information."

OMB Control No. 1014-0018
OMB Approval Expires 10/31/2014

RECEIVED
OCT 30 2012
Regional Director, Alaska OCS
Bureau of Safety and Environmental Enforcement
Anchorage, Alaska

Application for Permit to Modify (APM)

1. WELL NAME (CURRENT)	2. SIDETRACK NO. (CURRENT)	3. BYPASS NO. (CURRENT)	4. OPERATOR NAME and ADDRESS *(Submitting office)*
FI 6658 OCS-Y 1805 001	00	00	Shell Offshore Inc. 3601 C Street Suite 1000 Anchorage, AK 99503
5. API WELL NO. (12 digits)	**6. START DATE (Proposed)**	**7. ESTIMATED DURATION (DAYS)**	
55-171-0001300	10/27/2012	2 day	
8. ☐ Revision	9. If revision, please list changes:		

WELL AT TOTAL DEPTH	WELL AT SURFACE
10. LEASE NO. OCS-Y 1805	13. LEASE NO. OCS-Y 1805
11. AREA NAME Flaxman Island	14. AREA NAME Flaxman Island
12. BLOCK NO. 6658	15. BLOCK NO. 6658

Proposed or Completed Work

16. PROPOSED OR COMPLETED WORK (Describe in Section 17)

PLEASE SELECT ONLY ONE PRIMARY TYPE IN BOLD AND AS MANY SECONDARY TYPES AS NECESSARY.

- ☐ **Enhance Production**
  - ☐ Acidize
  - ☐ Artifical Lift
  - ☐ Wash/Desand Well
  - ☐ Jet Well
- ☐ **Utility**
  - ☐ Initial Injection Well
  - ☐ Additional Fluids for Injection
- ☐ **Other Operations**
  - ☐ Describe Operation(s)
- ☐ **Workover:**
  - ☐ Change Tubing
  - ☐ Casing Pressure Repair
- ☒ **Abandonment of Well Bore:**
  - ☐ Permanent Abandonment
  - ☒ Temporary Abandonment
  - ☐ Plugback to Sidetrack/Bypass
  - ☐ Site Clearance
- ☐ **Completion:**
  - ☐ Initial Completion
  - ☐ Reperforation
  - ☐ Change Zone
  - ☐ Modify Perforations
- ☐ **Information:**
  - ☐ Surface Location Plat
  - ☐ Change Well Name

17. BRIEFLY DESCRIBE PROPOSED OPERATIONS (Attach prognosis):

TA the Sivulliq N well between the 2012 and 2013 open water seasons. See attached documents for necessary references.

18. LIST ALL ATTACHMENTS (*Attach complete well prognosis and attachments required by 30 CFR 250.513(a) through (d); 250.613(a) through (d); 250.1712(a) through (g); 250.1721(a) through (h); 250.1722(a) through (d); or 250.1743(a).*

19. Rig Name or Primary Unit (e.g., Wireline Unit, Coil Tubing, Snubbing Unit, etc.)

Shell Kulluk

20. The greater of SITP or MASP (psi): N/A	21. Type of Safety Valve (SV): ___ SCSSV ___SSCSV X N/A	22. SV Depth BML (ft): N/A

23. Rig BOP (Rams)			24. Rig BOP (Annular)	
Size: (inches)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	N/A	Low/High: N/A	N/A	Low/High: N/A

25. Coiled Tubing BOP:		26. Snubbing Unit BOP:		27. Wireline Lubricator:	
Working Pressure (psi)	BOP Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)	Working Pressure (psi)	Test Pressure (psi)
N/A	Low/High: N/A	N/A	Low/High: N/A	Low/High: N/A	N/A

28. CONTACT NAME:	29. CONTACT TELEPHONE NO.:	30. CONTACT E-MAIL ADDRESS:
Shawn Gelsinger	1-713-594-8531	shawn.gelsinger@shell.com

31. AUTHORIZING OFFICIAL *(Type or print name)*	32. TITLE
Jim Miller	Drilling Superintendent
33. AUTHORIZING SIGNATURE	34. DATE
Jim Miller	October 30, 2012

THIS SPACE FOR BSEE USE ONLY

APPROVED BY:	TITLE	DATE
[signature]	Alaska Regional Director	10/31/12

Public Information

Application for Permit to Modify (APM) Information Sheet

35) Question Information		
Questions	Response	Remarks
a) Is H_2S present in the well? If yes, then comment on the inclusion of a Contingency Plan for this operation.	☐ YES ☒ NO ☐ N/A	
b) Is this proposed operation the only lease holding activity for the subject lease? If yes, then comment.	☐ YES ☒ NO ☐ N/A	
c) Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to well on the platform? If not, please explain.	☐ YES ☐ NO ☒ N/A	
d) If sands are to be commingled for this completion, has aproval been obtained?	☐ YES ☐ NO ☒ N/A	
e) Will the completed interval be within 500 feet of a block line? If yes, then comment.	☐ YES ☐ NO ☒ N/A	
f) For permanent abandonment, will casings be cut 15 feet below the mudline? If no, then comment.	☐ YES ☐ NO ☒ N/A	

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT The PRA (44 U.S.C. 3501 et. seq.) requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. BSEE uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for Form BSEE-0124 is estimated to average 17 hours per response. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Safety and Environmental Enforcement, 381 Elden Street, Herndon, VA 20170.

Beaufort Sea APDs

For all APDs:
In the new sets of waivers that we received in July, the reference to 30 CFR 250.488 should be 30 CFR 250.248.

Burger A comments

-250.413: [redacted]

-250.415: The pages with the burst and collapse safety factors are titled “Tension Safety Factors”. Request correction or clarification

-250.442: On the deadman sizing requirements, the volume calculated indicates that 20 accumulator bottles are required. However, only 18 dedicated bottles are listed on the available fluid list. Request correction or clarification

-250.444: On the choke statement, it refers to the “Burger J location”. Should this be Burger A? Request correction or clarification

-250.456: [redacted]

Chukchi Sea APDs

For all APDs:
In the new sets of waivers that we received in July, the reference to 30 CFR 250.488 should be 30 CFR 250.248.

Burger R:
(b) (5), (b) (4), (b) (9)

Burger J:
(b) (5), (b) (4), (b) (9)

From:	Crumrine, Kathleen
To:	Tankersley, Yolanda J
Subject:	FW: Final Saftey Rule Questions
Date:	Monday, September 17, 2012 12:59:00 PM

Can you do this?

From: Fesmire, Mark E
Sent: Monday, September 17, 2012 10:56 AM
To: Crumrine, Kathleen
Subject: RE: Final Saftey Rule Questions

It is ok with me. Send out a meeting request.

Mark

From: Crumrine, Kathleen
Sent: Monday, September 17, 2012 10:07 AM
To: Fesmire, Mark E; Shank, Michael L; Howell, Randy; Walker, Jeffrey
Subject: FW: Final Saftey Rule Questions
Importance: High

Can we have a meeting at 2:00 this afternoon in the conference room in the new space to discuss these questions from shell?

From: Sandy.Sears@shell.com [mailto:Sandy.Sears@shell.com]
Sent: Monday, September 17, 2012 9:43 AM
To: Crumrine, Kathleen
Subject: FW: Final Saftey Rule Questions
Importance: High

Kathleen – got a note from Kyle that he will up North for a few weeks. Could you weigh in on the following questions from the Shell drilling team?

Thanks,
Sandy
771-7203

From: Sears, Sandy SEPCO-UAX/A/SD
Sent: Monday, September 17, 2012 9:40 AM
To: Kyle Monkelien
Cc: Henley, John A SEPCO-UAO/W/D; Ruddy, Pauline M SEPCO-UAX/A/SD; Horner, Greg J SEPCO-UAX/A/SD; Riley, Chris J SEPCO-UAO/W/D
Subject: Final Saftey Rule Questions
Importance: High

Kyle,
I have a few questions posed by John Henley and the drilling team. Would appreciate if you can

offer some comments and advice.

Thanks,
Sandy

In the event the well is suspended between seasons (TA) after the 20" casing is set / cemented.

1) Does the BSEE consider the 20" casing string as "the last casing string in the well" as referenced in the FSR?

In the BSEE on-line documentation of the FSR there are many comments / references to 30CFR 250.420(b)(3).

The feedback provided by the BSEE reads: "the operator must install two independent barriers to prevent flow in the event of a failure in the cement, and clarified that a dual float valve is not considered a barrier", ref page 20 on the following link.

2) In order to suspend the well two independent barriers to prevent flow are required, starting at the bottom. A Bridge Plug near the shoe track would replace the 'current industry thinking' about the barrier at the bottom of the well and then a surface plug (ref 250.1721(d).

250.1715(b)(1), reads that the first plug below the surface plug must be tested. For the case in 2) above, Shell would tag the bridge plug with 15k down to verify it its set.

3) Shell wants to verify that the BSEE is not expecting to see a positive pressure test of that barrier set near the shoe track when the BOP's are not installed on the well.

Best regards,
John A. Henley
Sr. Drilling Engineer
Shell Exploration & Production Company
One Shell Square, P. O. Box 61933, New Orleans, LA 70161-1933, United States of America
Tel: +1.504.728.4478
Mob: +1.281.795.0250
Email: john.a.henley@shell.com

Torpedo H comments

-418h, 420a6 – wrong well name is referenced on 2nd page. (Sivulliq N vs. Torpedo H)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF THE
REGIONAL
ADMINISTRATOR

JUL 27 2012

Mr. Mark Fesmire
Director of Alaska Region
Bureau of Safety and Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5820

Dear Mr. Fesmire:

The U.S. Environmental Protection Agency, Region 10, is contacting the Bureau of Safety and Environmental Enforcement to finalize the EPA's request for assistance in conducting inspections and collecting data on exploration facilities located on the Alaska outer continental shelf during the 2012 drilling season.

Our respective agency inspectors have been working cooperatively to develop procedures to assist BSEE inspectors in conducting inspections and collecting data related to exploration facilities covered by the National Pollutant Discharge Elimination System General Permit for Oil and Gas Exploration Facilities on the Outer Continental Shelf and Contiguous State Waters, NPDES Permit No. AKG-28-0000, and EPA-issued air quality permits. These procedures are based, in part, on the 1993 memorandum of agreement between the EPA and the Minerals Management Service that was intended to improve cooperation and coordination in oil and gas lease activities on the outer continental shelf.

Our proposed joint efforts will assist the EPA's ongoing OCS compliance and enforcement program and increase regulatory accountability of exploration facilities that are drilling in the OCS during the 2012 drilling season. The respective agency inspectors are in the process of developing the procedures for these joint efforts and in working through logistical and procedural issues that may arise during the drilling season.

Accordingly, I want to take this opportunity to recognize BSEE's ongoing assistance and to request your confirmation of our joint efforts for this drilling season. Please contact me or have your staff contact Mr. Rick Cool in our Office of Compliance and Enforcement at 206-553-6223 if you have any questions about this letter.

Sincerely,

Dennis J. McLerran
Regional Administrator

Memo

To: File

From: Mr. Mark E. Fesmire, P.E.
Regional Director – Alaska OCS Region
Bureau of Safety and Environmental Enforcement

Mr. David M. Moore
Chief – Oil Spill Response Division
Bureau of Safety and Environmental Enforcement

Date: 20 August 2012

Re: Proposal by Shell to Drill Pilot Holes and Mud Line Cellars

The approved Shell OSRPs for the Chukchi and Beaufort Seas do not specify the proximity of the subsea containment and surface separation equipment (containment system), installed on the vessel *Arctic Challenger*, during activities that precede penetration into potential hydrocarbon-bearing zones. This memo concerns the technical risks associated with the construction of mudline cellars (MLCs) at the drill sites in the Chukchi and Beaufort Seas after the *Arctic Challenger* has been inspected and permits have been approved, but while the *Arctic Challenger* is still in transit.

It is our opinion that there would be little or no increase in the discharge risk associated with drilling activities to construct MLCs that would not penetrate liquid hydrocarbon-bearing zones if that work were to proceed without the *Arctic Challenger* on location. We reach that conclusion due to the multiple levels of safety practices and devices that are in place to prevent or address a loss of well control, coupled with the fact that the depth of the proposed drilling would not penetrate liquid hydrocarbon bearing zones.

The purpose of the subject containment system on the Arctic Challenger is to contain and recover liquid hydrocarbons escaping into the environment and, if engaged during a loss of well control, to contain and recover the maximum volume of oil released. It must be emphasized that, in the unlikely event of a loss of well control, this is the last element in a multi-redundant system intended to prevent environmental contamination. It is also important to note that this is an independent system that would not be used in the event of a loss of well control unless all other prevention and containment methods failed.

The first element in the multi-redundant system to prevent a loss of well control is the casing screening tool which is used to evaluate the casing design of each well and is completed before any drilling takes place. The screening tool requires that the casing string be designed to withstand all pressures that could conceivably occur during any operations in the well bore, including total emergency shut in. This is an improved design standard and this requirement was not in place prior to the Macondo well blowout in the Gulf of Mexico.

The next part of the multi-redundant system is the improvement in blowout preventers that will be used. Shell blowout preventers have been modified by the inclusion of an additional blind shear ram to facilitate the complete closure of the well in the event it becomes necessary. This ability is facilitated by the improved casing design. These critical pieces of well control equipment would be installed before drilling into any formations that would be under pressure and potentially contain hydrocarbons.

The presence of the capping stack and Shell's ability to deploy this piece of equipment to the sea floor adds the next redundancy to the system. The capping stack, which will be on an ice management vessel and available for immediate deployment from a location near the drilling operations, is designed to be used in one of two modes. The stack can be connected to the blowout preventer, well head, or casing to achieve a pressure tight seal which would result in a complete shut in of the well (again in concert with the casing design). In the event that conditions would not allow a complete shut in or there was a need to relieve pressure on the well head, the second mode of operation for the capping stack is that it can be connected to the surface portion of the containment system where the fluids will be routed to the surface, treated and disposed of or offloaded to a storage vessel. This is the first time in the redundancy tree that the containment system would be needed.

Finally, there is the containment system itself. Here, the subsurface portion of the system would be lowered to the well head or source of the leak and used to create a pressure sink in the sea which would facilitate the collection of liquid hydrocarbons, subsurface separation from much of the sea water, and transportation of the fluid to the surface portion of the containment system, where oily water is again processed and disposed of or offloaded to the storage vessel.

Shell's most recent proposed Chukchi Sea drilling procedure calls for a small pilot hole to be drilled to a depth of approximately 200 feet below the mud line. This drilling is to be performed at locations specifically chosen from the geophysical responses to the shallow hazards surveys. The drilling activities have essentially no probability of encountering oil and a very low probability of encountering natural gas, either in a small pocket or as methane hydrates at this depth. If gas is encountered, it will have no liquid component at this pressure.

In the unlikely event natural gas is encountered, conventional well control techniques will have a high likelihood of successfully controlling the event, and in fact would be the preferred method of controlling the well due to the fact that there would be no casing or cement in the hole during this part of the operation.

Given the product of this series of probabilities, there is an extremely low expectation of hydrocarbons to the surface, and virtually no expectation of oil to the surface, during the drilling of the pilot hole and MLC.

As noted above, one of the primary purposes of the containment system on the *Arctic Challenger* is to provide redundancy for the containment and recovery of liquid hydrocarbons. It is not designed to gather gas that is not in solution or entrained in oil, and would be of very little benefit in controlling a free gas phase flowing to the surface.

For these reasons, we believe that drilling pilot holes and construction of MLCs prior to the arrival of the *Arctic Challenger* to the Arctic Ocean does not increase the risk of oil contamination associated with the project.

The review and approval of the OSRPs did not assume that the containment system would be located in proximity to the *Discoverer* or the *Kulluk* during drilling that would not penetrate liquid hydrocarbon-bearing zones. The OSRPs specify that the spill response assets will be located nearby during drilling operations into hydrocarbon-bearing zones.[1] The OSRPs refer to the respective Exploration Plans regarding the location of the containment system.[2] The Chukchi Exploration Plan states that the containment system will be stationed "where it can be mobilized to the drill site when needed."[3] The Beaufort Exploration plan does not specify a location for the containment system during drilling activities because it is not considered as a primary component of spill response.[4] Based on the totality of engineering and geological factors set out above, our best professional judgment, and the lack of clarity in the Exploration Plans regarding the location or availability of the containment system, it is our determination that the containment system is not required to be located in the Arctic during drilling activities that will not penetrate potential liquid hydrocarbon-bearing zones.

---

[1] See e.g., Chukchi OSRP p. 1-2; Beaufort OSRP, p. 1-1.

[2] "The . . . sub-surface containment system and the barge containing the processing equipment will be . . . located as described in the revised . . . Exploration Plan." Chukchi OSRP, p. N-14; Beaufort OSRP, p. N-11.

[3] Chukchi EP, p. 13-4; Beaufort EP, p. 9-4 states the

[4] See e.g., Beaufort EP, p. 8-1 ("Location of Primary Oil Spill Equipment Base and Staging Area").

Memo to File

From: Mr. Mark E. Fesmire, P.E.
Regional Director – Alaska OCS Region
Bureau of Safety and Environmental Enforcement

Mr. David M. Moore
Chief – Oil Spill Response Division
Bureau of Safety and Environmental Enforcement

Date: 18 September 2012

Re: Request by Shell to Drill Pilot Holes and Mud Line Cellars for All Proposed Wells in the Beaufort and Chukchi Seas

Ref: Memos dated 20 and 29 August 2012 from Mr. Mark Fesmire and Mr. David M. Moore - Proposal by Shell to Drill Pilot Holes and Mud Line Cellars:

This memo addresses the latest request from Shell to conduct limited drilling on all proposed drilling locations in the Chukchi Sea (Burger Prospect) and the Beaufort Sea (Suvillik and Torpedo Prospects) similar to that approved by BSEE for the Burger A well. Drilling for each well would be limited to construction of a mud line cellar (MLC), drilling the pilot hole, and drilling to the depth necessary to allow running and cementing of the 20" casing string as described in applications for permit to drill. During these activities, the Arctic Challenger, which is the firm's oil containment system, would not be on location. All other oil spill response assets would be available as described in the applicable oil spill response plan.

As stated in our earlier opinion related to the Burger A well, there would be little or no increase in the oil discharge risk associated with drilling activities to construct MLCs and pilot holes, as such work would not result in the penetration of liquid hydrocarbon-bearing zones. Again, the drilling is to be performed at locations specifically chosen from the geophysical responses to the shallow hazards surveys. The drilling activities thus have essentially no probability of encountering oil and a very low probability of encountering natural gas, either in a small pocket or as methane hydrates at this depth. If gas is encountered, it will have no liquid component at this pressure.

Based on this information and our analysis of relevant data, it is our determination that the oil containment system is not required to be located in the Arctic during limited drilling activities that will not penetrate potential liquid hydrocarbon-bearing zones.

United States Department of the Interior
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
Alaska OCS Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

FEB 2 1 2012

Ms. Susan Childs
Alaska Venture Support Integrator Manager
Shell Offshore, Inc.
3601 C Street, Suite 1000
Anchorage, AK 99503

Dear Ms. Childs:

We have completed our initial review of the Proprietary Data submitted in support of your Application for Permit to Drill for the Burger A drill site. As the APD is as of yet incomplete, we were unable to determine whether certain issues that we found would be answered in a subsequent submittal. However, we have provided in the attached sheet, several inaccurate or incomplete items that can be addressed with your next submission, as well as questions that may indeed be answered later in the process.

Please be advised that at this time all submissions regarding this APD should be in the form of paper documents and that electronic submission of documents are not acceptable. These submissions should be directed to me at the above address. If you have any questions please contact Mr. Kyle Monkelien at 907-334-5307.

Sincerely,

(acting)

Mark E. Fesmire, P.E. J.D.
Regional Director, BSEE AKCOS Region

Attachment

Burger A

- On form BSEE-0123

o 33) F IN the remarks states that the proposed well "will be drilled from a conical drilling unit, not from a platform."

On form BSEE-0123s

- Have to put the open hole section of the well on this form for both wells
- Interval Number 3 and 4 pore pressure listed, does not match the pore pressure plot provided

- 250.414(g)

o They state they will use permafrost cement, but do not include estimated depths to permafrost.
o Also, if permafrost is present, need to address 250.415(d)

Chart entitled "Tension Safety Factors"

- In the calculations column for Burst Safety Factors for the 30" structural it states, "see MASP calcs". This calculation is not provided in the MASP worksheet.

Casing test pressure for Surface and Intermediate casings indicate that you plan to test to MASP + 500 psi. Test pressure per regulations says 70% of its minimum internal yield.

Regulations require that for BOP's: The high pressure test must equal the rated working pressure (15,000/10,000) of the equipment, or 500 psi above the (MASP) for the applicable section of hole. To test to any other pressure other than Working Pressure requires approval of the District Supervisor

Regulations require that for Annular's: The high pressure test must equal 70% of working pressure (10,000/10,000), or to a pressure approved in the APD. If you are requesting a different test pressure this should be indicated in request for departure section.

(b) (4), (b) (9)

Burger A

- On form BSEE-0123
  - Question the date Fixed
  - #33 has to be filled out on the public information copy Fixed
- On form BSEE-0123s
  - #3, 7, and 8 don't have to be filled out on the public copy Fixed
  - FG for interval 4 and 5 don't match pore pressure plot Fixed
- Fill up line departure is not necessary Not submitted as comment to Shell Fixed July 18
- Request for drilling of a bypass hole will require submittal of a new APD Acknowledged
- Will still need to provide an APM to perform abandonment procedures. Acknowledged
- No BOP control diagrams Acknowledges they still need Fixed June 11
- (b) (4), (b) (9)
- No 3rd party verification of BOP Stack Included West Engineering review…but provisional Part of APD Approval Letter
- Normal minimal water depth is listed at 300 ft, yet water depth at location is 150
- Noble Safety Policy Manual SPM-505 4.1.3 bullet 2 states that in addition to the above, the fire watch shall make periodic checks with gas monitoring equipment. 250.113 (c) (2)(iv) states must maintain a continuous surveillance with a portable gas detector during welding and burning operation if welding occurs in an area not equipped with a gas detector. Shell will revise Fixed July 18
- Don't see any standards or requirements for welders 250.110(a) Welders are certified to ABS 6G Standard
- There will be a minimum of two independent tested barriers across each flow path while drilling in any expected hydrocarbon-bearing zone at least one of which is mechanical? Be more specific? Letter from Les Skinner describing barriers
- All ROV intervention functions must be tested on the stump test. Fixed
- Seafloor tests should state what is being tested. Fixed
- No procedures submitted to test the deadman on stump test or seafloor Fixed
- H2S plan submitted with EP does not discuss the procedures for sustaining ignition and monitoring status of the flare as required by 250.490(f)(15) Submitted new H2S Plan

Burger A comments

-250.413: No LOT on 9 5/8" casing shoe indicated on the "Wellbore Sketch (Drilling Prognosis)". Request correction

-250.415: The pages with the burst and collapse safety factors are titled "Tension Safety Factors". Request correction or clarification

-250.442: On the deadman sizing requirements, the volume calculated indicates that 20 accumulator bottles are required. However, only 18 dedicated bottles are listed on the available fluid list. Request correction or clarification

-250.444: On the choke statement, it refers to the "Burger J location". Should this be Burger A? Request correction or clarification

(b) (4), (b) (9)

United States Department of the Interior
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
Alaska OCS Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

APR 04 2012

Ms. Susan Childs
Alaska Venture Support Integrator Manager
Shell Offshore, Inc.
3601 C Street, Suite 1000
Anchorage, AK 99503

Dear Ms. Childs:

On March 16, 2012, BSEE AK OCS received Shell's supplementation and further development of the Applications for Permits to Drill for the Flaxman Island OCS-Y 1941 No. 001 Torpedo H well and the Posey OCS-Y 2280 No. 001 Burger A well. The partial APD's were originally submitted to this office on January 31, 2012.

As Shell has pointed out in its applications, certain portions of those applications still remain to be completed and submitted. However, BSEE is continuing to review the submissions to the extent that is possible with the information currently available.

At your request, BSEE has expedited its initial review of the information submitted to date and attached to this letter is a preliminary list of the issues we would like Shell to address to facilitate our further review of the APD's. While this list may not be comprehensive, we believe it contains most of the issues for which we will be seeking clarification.

Please be advised that at this time all submissions regarding this APD should be in the form of paper documents and that electronic submission of documents are not acceptable. These submissions should be directed to me through our point of contact, Ms. Yolanda Tankersley, at the above address. If you have any questions please contact myself or Mr. Kyle Monkelien at 907-334-5300 and 907-334-5307 respectively.

Sincerely,

Mark E. Fesmire, P.E. J.D.
Regional Director, BSEE AKCOS Region

Attachments

OCS-Y 2280 No. 001 Burger A
Comments

- On form BSEE-0123
  - Public information copy...only need one total (not one in each application)
  - Public information copy...need to fill out box #33

- On for BSEE-0123s
  - Frac Gradients listed for Intervals 4 and 5 do not match PPFG Plot given
  - Public information copy...only need one total (not one in each application)
  - Public information copy...box 3,7, and 8 don't need to be filled in

- Request for the drilling of a bypass hole will require the submittal of a new APD

- Will still need to provide an Application for Permit to Modify (APM) to perform the abandonment procedures.

- 250.415
  - The pages with the burst and collapse safety factors are titled "Tension Safety Factors," please label correctly.

- Tab 250.416 BOP
  - Need a 3rd party verification that the BOP stack is designed for specific equipment on rig and specific well design
  - Need a 3rd party verification regarding the stack has not been damaged or compromise
  - Need a 3rd party verification that the stack will operate in the conditions that it will be used.
  - Need the BOP control system diagrams.

- Tab 250.417
  BSEE is assessing information provided to directly satisfy the requirements of 250.417(a), 250.417(b), 250.417(c)(2), 250.417(d), and 250.417(e) regarding the MODU capabilities and operational limitations associated with environmental conditions at the drill site and associated plans for responding to an emergency situation that may arise from hazardous environmental conditions. This information can be provided to varying degrees of detail in a number of documents supplemental to an APD. These include (1) pages of the MODU Operating Manual/Procedures; (2) IADC Standard Format Equipment List (operational capabilities and environmental limits); (3) Mooring Analysis; (4) Riser Analysis; (5) Class Report(s); (6) Critical Operations and Curtailment Procedures (COCP); and (7) Ice Management Plan. BSEE recognizes that quantification of the relationship between unit operations, unit capabilities/limitations, and environmental conditions (wind, waves, currents, sea ice) is extremely complex, with many variables, and subject to MODU operator expertise and professional judgment. However, in order for BSEE inspectors onboard the unit to maintain a relative knowledge of the environmental conditions that could result in an exceedance of the unit's operational capabilities, it is important that this type of information within the APD documentation be

accurate, readily accessible, and as consistent as possible. See below for some specific areas in question.

- 250.417(b) Mooring Analysis: Discoverer Motion Mooring Analysis by Delmar Systems, Inc. is not signed reviewed or approved.

- 250.417(b) Mooring Analysis: 30 CFR 250.417(b) requires information that site-specific soil and oceanographic conditions are capable of supporting the proposed drilling unit. The information provided in the Discoverer Motion Mooring Analysis by Delmar Systems, Inc., incorporates oceanographic conditions but no site-specific soil conditions are provided evidencing soil properties (i.e. shear strength, stiffness).

- 250.417(b) Mooring Analysis: The mooring line properties and major components of the proposed mooring lines listed in the Discoverer Motion Mooring Analysis by Delmar Systems, Inc. does not match the mooring system components listed in the IADC Standard Format Equipment List submitted for 250.417(c) (e.g. Stevshark vs. Stevepris anchors). Which document is accurate regarding the mooring system equipment and associated specifications?

- 250.417(b) Mooring Analysis: Figure 7-*Detailed Elevation View of all line,* on page 15 of the *Noble Discoverer Motion Mooring Analysis* by Delmar Systems, Inc. is not legible in the paper or electronic APD submittals. Please provide a legible copy of this figure.

- 250.417(e) Critical Operations and Curtailment Plan (COCP): Note: Under 30 CFR 550.220(b), the term used is "procedures" not "plan". A Critical Operations and Curtailment "Plan" has been submitted with general "procedures" provided within this plan as well as within the submitted Ice Management Plan. BSEE understands that the Unit Operating Manual (or Rig Operations Procedures) maintained onboard the vessel is to contain guidance for the safe operation of the unit for both normal and envisaged emergency conditions and provide detailed well securing procedures. The COCP states that "thresholds will be established for weather and sea conditions that will control: equipment preparation to curtail operations; decision to cease drilling; hanging off drillstring or otherwise suspending the well; disconnecting riser; moving the drillship off the drill site". BSEE inspectors onboard the unit will be interested to know these thresholds before drilling commences, as they relate to a relative knowledge of the environmental conditions that could result in an exceedance of the unit's operational capabilities. Please be aware that documented "procedures" associated with drilling and vessel operations will be reviewed and become a component of the BSEE records as these procedures are established and provided to BSEE inspectors onboard the vessel.

- 250.417(a),(c),(d) DNV Report:
  - DNV Classification Certificate Expires 2012-06-15.
  - Will an "Appendix to the Class Certificate" be issued stating assumptions for the assignment of class and restrictions regarding the use of the vessel which were established or assumed at the time of assignment of class (see DNV-OSS-101 Rules for Classification of Offshore Drilling and Support Units, Chapter1, Section 4, C-106)?

- Note: No optional class notation for cold climate operations. 2011 EP identifies the Discoverer as a ship-shaped monohull with sponsons added for ice-resistance; sponsons designed and constructed to meet requirements of DNV Additional Class Notation "ICE-05". Is Shell to seek any optional class notations for cold climate (e.g. PC-7, Winterized Basic, Cold, or Arctic)?
- Note: No optional "Drill" notation. Drilling plant not classed.
- Note: Vessel not classed as a "Mobile Offshore Unit".

  - 250.417(c) Riser analysis: As the load case driver for load case 1 (operability-drilling) is the LFJ differential angle of 1 degree, will the INTECSEA recommendation (2.8) for instrumentation to carefully monitor the LFJ differential angle be implemented?

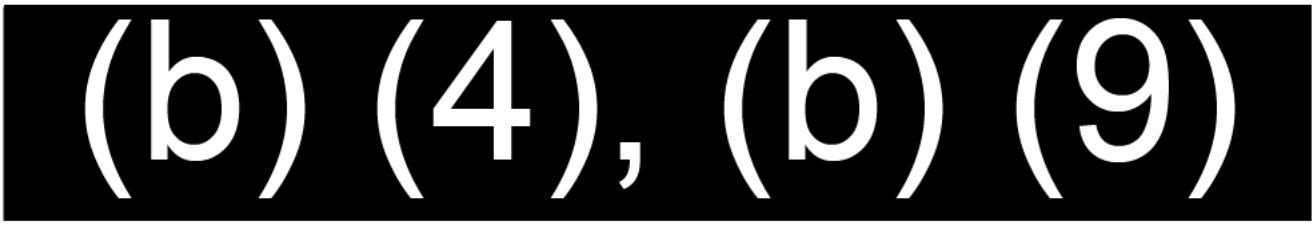
- Tab 250.418 Welding Plan
  - Noble Safety Policy Manual SPM-505 4.1.3 bullet 2 states "that in addition to the above, the fire watch shall make periodic checks with gas monitoring equipment." 250.113 (c) (2)(iv) states must maintain a *continuous* surveillance with a portable gas detector during welding and burning operation if welding occurs in an area not equipped with a gas detector. (4.4.5.3 Reiterates the periodic surveillance.)
  - Need standards or requirements for welders 250.110(a)

- Tab 250.420
  - Sentence on second page…"there will be a minimum of two independent tested barriers across each flow path while drilling in any expected hydrocarbon-bearing zone at least one of which is mechanical? Please provide specifics about what the barriers are at each point.

- Tab 250.442:
  - On the deadman sizing requirements, the volume calculated indicates that 20 accumulator bottles are required. However, only 18 dedicated bottles are listed on the available fluid list. Please confirm.

- Tab 250.444:
  - On the choke statement, it refers to the "Burger J location". We assume this should reference Burger A. Please correct.

- Tab 250.449
  - The BOP is function tested using the ROBOCOP unit controls to close one pipe ram and one blind shear ram and release the upper H-4 connector…all ROV intervention functions must be tested on the stump test.
  - Procedures state The BOP is again function tested using the ROBOCOP unit…should specifically state what is being tested.



(b) (4), (b) (9)

- We will need an updated H2S plan for operations under this APD specifically an updated emergency contact list.
    - H2S plan submitted with the Exploration Plan does not discuss the procedures for sustaining ignition and monitoring the status of the flare as required by 250.490(f)(15.

- Please be aware of the regulation at 250.459(a) that states a ventilation system capable of replacing the air once every 5 minutes or 1.0 cubic feet of air-volume flow per minute, per square foot of area, whichever is greater. Past inspections have not been able to confirm what the ventilation system in the drilling fluid-handling areas is.

OCS-Y 1941 No. 001 Torpedo H
Comments

- On form BSEE-0123
  - Public information copy...only need one total (not one in each application)
  - Public information copy...need to fill out box #33

- On for BSEE-0123s
  - Public information copy...only need one total (not one in each application)
  - Public information copy...box 3,7, and 8 don't need to be filled in

- Request for the drilling of a bypass hole will require the submittal of a new APD

- Will still need to provide an Application for Permit to Modify (APM) to perform the abandonment procedures.

- Tab 250.416 Diverter
  - Need to provide the diverter operating procedures for the Kulluk, not the Discoverer.
  - List Diverter burst strength.
  - List rated working pressure of the 16" ball valve
  - The diverter detailed drawings are unclear due to the fine detail and size. We would prefer a larger scale drawing to more accurately determine diverter pathways. (See Discoverer drawings)

- Tab 250.416 BOP
  - MASP that West engineering used for shearing was 1863 psi, yet highest calculated MASP is 3529 psi. Please evaluate at higher MASP.
  - Need a 3rd party verification that the BOP stack is designed for specific equipment on rig and specific well design
  - Need a 3rd party verification regarding the stack has not been damaged or compromised
  - Need a 3rd party verification that the stack will operate in the conditions that it will be used.
  - Need the BOP control system diagrams.
  - BOP description provided is listed for Discoverer, not Kulluk.

- Tab 250.417
  General Comment: BSEE will be assessing information provided to directly satisfy the requirements of 250.417(a), 250.417(b), 250.417(c)(2), 250.417(d), and 250.417(e) regarding the MODU capabilities and operational limitations associated with environmental conditions at the drill site and associated plans for responding to an emergency situation that may arise from hazardous environmental conditions. This information has been provided to varying degrees of detail in a number of documents supplemental to the APD. These include (1) pages of the MODU Operating Manual/Procedures; (2) IADC Standard Format Equipment List (operational capabilities and environmental limits); (3) Mooring Analysis; (4) Riser Analysis; (5) Class Report(s); (6) Critical Operations and Curtailment Procedures (COCP); and (7) Ice Management Plan. BSEE recognizes that quantification of the relationship between unit operations, unit capabilities/limitations, and environmental conditions (wind, waves, currents, sea ice) is

extremely complex, with many variables, and subject to MODU operator expertise and professional judgment. However, in order for BSEE inspectors onboard the unit to maintain a relative knowledge of the environmental conditions that could result in an exceedance of the unit's operational capabilities, it is important that this type of information within the APD documentation be accurate, readily accessible, and as consistent as possible. See below for some specific areas in question.

- 250.417(a),(c),(d) Operating Limits: Page 1 of 13 provided from Chapter 3-Vessel Operating Criteria. No information provided identifying where this page comes from?

- 250.417(a),(c),(d) Operating Limits: Information provided on Page 1 of 13 from Chapter 3-Vessel Operating Criteria does not match some of the environmental limits information provided in the IADC Standard Format Equipment List submitted for 250.417(c). Specifically (Drilling): max wind velocity (50 vs. 30 knots), max pitch and roll (2^0 vs. 7^0), max heave (12' drilling vs. 10' survival). Which document is considered accurate with regard to operating limits?

- 250.417(b) Mooring Analysis: Kulluk Motion Mooring Analysis by Delmar Systems, Inc. is not signed reviewed or approved.

- 250.417(b) Mooring Analysis: 30 CFR 250.417(b) requires information that site-specific soil and oceanographic conditions are capable of supporting the proposed drilling unit. The information provided in the Kulluk Motion Mooring Analysis by Delmar Systems, Inc., incorporates oceanographic conditions and discusses "ultimate holding capacity in site-specific lower and upper bound soils" but no site-specific soil conditions are provided evidencing soil properties (i.e. shear strength, stiffness).

- 250.417(b) Mooring Analysis: The mooring line properties and major components of the proposed mooring lines listed in the Kulluk Motion Mooring Analysis by Delmar Systems, Inc. does not match the mooring system components listed in the IADC Standard Format Equipment List submitted for 250.417(c) (e.g. Stevshark vs. Bruce anchors). Which document is accurate regarding the mooring system equipment and associated specifications?

- 250.417(b) Mooring Analysis: Figure 3-Detailed Elevation View of all line, on page 8 of the Kulluk Motion Mooring Analysis by Delmar Systems, Inc. is not legible in the paper or electronic APD submittals. Please provide a legible copy of this figure.

- 250.417(e) Critical Operations and Curtailment Plan (COCP): Note: Under 30 CFR 550.220(b), the term used is "procedures" not "plan". A Critical Operations and Curtailment "Plan" has been submitted with general "procedures" provided within this plan as well as within the submitted Ice Management Plan. BSEE understands that the Unit Operating Manual (or Rig Operations Procedures) maintained onboard the vessel is to contain guidance for the safe operation of the unit for both normal and envisaged emergency conditions and provide detailed well securing procedures. The COCP states that "thresholds will be established for weather and sea conditions that will control: equipment preparation to curtail operations; decision to cease drilling; hanging off drillstring or otherwise suspending the well; disconnecting riser; moving the drillship off

the drill site". BSEE inspectors onboard the unit will be interested to know these thresholds before drilling commences, as they relate to a relative knowledge of the environmental conditions that could result in an exceedance of the unit's operational capabilities. Please be aware that documented "procedures" associated with drilling and vessel operations will be reviewed and become a component of the BSEE records as these procedures are established and provided to BSEE inspectors onboard the vessel.

- Tab 250.418 Welding Plan
  - Noble Safety Policy Manual SPM-505 4.1.3 bullet 2 states "that in addition to the above, the fire watch shall make periodic checks with gas monitoring equipment." 250.113 (c) (2)(iv) states must maintain a *continuous* surveillance with a portable gas detector during welding and burning operation if welding occurs in an area not equipped with a gas detector. (4.4.5.3 Reiterates the periodic surveillance.)
  - Need standards or requirements for welders as required by 250.110(a) written within the plan.

- Tab 250.420
  - Referred to Sivulliq N rather than Torpedo H on back side of statement
  - Last sentence on this page..."there will be a minimum of two independent tested barriers across each flow path while drilling in any expected hydrocarbon-bearing zone at least one of which is mechanical? Please provide specifics about what the barriers are at each point.
- Tab 250.449
  - The BOP is function tested using the ROBOCOP unit controls to close one pipe ram and one blind shear ram and release the upper H-4 connector...per 250.449(j) all rov intervention functions must be tested on the stump test.
  - Procedures state The BOP is again function tested using the ROBOCOP unit...should specifically state what is being tested.
  - No procedures have been submitted to test the autoshear/deadman system either on the stump or initial sea floor test. Since the documentation is for the Discoverer we are unsure as to whether the Kulluk has an autoshear /deadman system.

- Please be aware of the regulation at 250.459(a) that states a ventilation system capable of replacing the air once every 5 minutes or 1.0 cubic feet of air-volume flow per minute, per square foot of area, whichever is greater. This will need to be verified prior to commencing drilling operations.

Sivulliq N

- Three copies of the APD need to be submitted and only one public copy. In the future, do not include the public copy as part of the APD binder; submit them along with the APD. Hopefully will fix for future submittals
- 15 and 16 don't have to be filled out on public information BSEE-123 Fixed
- 12 and 14 don't have to be filled out on BSEE-123s while 16 does Fixed
- Fill up line waiver is not necessary Not Fixed Fixed July 18
- Request not testing at casing point unless 7 day test due, but in drilling procedure it states they will be testing at casing point…need to be consistent. Fixed
- "High pressure tests of rams and annulars will be done in accordance with the test pressures shown in the APD and drilling program." problem is these two different sections have two different pressures. Fixed
- [redacted] (b) (4), (b) (9) [redacted]
- Operating procedure provided for the Discoverer. Not Fixed Fixed July 18
- Description of BOP system and components provided is for Discoverer. Not Fixed Fixed July 18
- Don't see the BOP control diagrams. Fixed
- Third party verifications are still provisional. Not Fixed Fixed August 15th
- DNV report states it will be submitted when completed. Not Fixed Fixed August 8th
- USCG report states it will be submitted when completed. Not Fixed Fixed July 18
- Noble Safety Policy Manual SPM-505 4.1.3 bullet 2 states that in addition to the above, the fire watch shall make periodic checks with gas monitoring equipment. 250.113 (c) (2)(iv) states must maintain a continuous surveillance with a portable gas detector during welding and burning operation if welding occurs in an area not equipped with a gas detector. Not Fixed Fixed July 18
- Don't see any written standards or requirements for welders 250.110(a) Fixed
- Provide test procedures for a successful test for proper installation of casing. Fixed

Sivulliq N

- Three copies of the APD need to be submitted and only one public copy. In the future, do not include the public copy as part of the APD binder; submit them along with the APD. Hopefully will fix for future submittals
- Requested departure from 250.443(e) is not necessary. Either remove from departure page or change to "info." Fixed
- The cement volumes listed for interval 2 and 3 are less than the BSEE calculated necessary cement volumes. Fixed with cementing strategy letter submitted.
- The operating procedure provided is for the Noble Discoverer…please provide and operating procedure for the diverter while drilling and for while tripping pipe. Fixed
- Description of system and components provided for the Dead-Man/Auto-Shear system manual is for the Frontier Drilling Discoverer Rig. Fixed
- [redacted] (b) (4), (b) (9) [redacted]
- Independent third party verification of the BOP stack are provisional…when will we receive non provisional verification? Not Fixed Fixed August 15th
- Missing completed DNV report Not Fixed Fixed August 8th
- No USCG Certificate of Inspection or Letter of Compliance present. Fixed
- The welding plan letter dated June 9th still states that only periodic monitoring will occur if outside the safe welding area. Per 30 CFR 250.113(c)(2)(iv), this is unacceptable. Fixed

Chukchi Sea APDs

For all APDs:

In the new sets of waivers that we received in July, the reference to 30 CFR 250.488 should be 30 CFR 250.248.

(b) (4), (b) (9) [redacted]

(b) (4), (b) (9) [redacted]

Memo

To: File

From: Mark E. Fesmire, P.E., JD
Regional Director – Alaska OCS Region
Bureau of Safety and Environmental Enforcement

Mr. David M. Moore
Chief – Oil Spill Response Division
Bureau of Safety and Environmental Enforcement

Date: 29 August 2012

Re: Proposal by Shell to Drill Pilot Holes and Mud Line Cellars

(b) (4), (b) (9)

As stated in the 20 August memo, it is our opinion that there would be little or no increase in oil discharge risks associated with drilling activities that would not penetrate liquid hydrocarbon-bearing zones, if that work were to proceed to the 1470' (RKB) depth. At this depth, there is essentially no probability of encountering liquid hydrocarbons, and the well location was specifically established pursuant to the results of in-depth shallow hazard surveys to minimize the risks of encountering gas pockets or methane hydrate deposits. Also, records are available for a well location (Burger Y-1413) less than 4 miles away that support this conclusion and interpretation of the geology at the Burger "A" location.

For these reasons, and based on the analysis documented in the 20 August 2012 memo, it is our determination that the Arctic Challenger is not required to be located in the Arctic during the proposed, limited drilling activities as noted above.

United States Department of the Interior

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT

Alaska OCS Region

3801 Centerpoint Drive, Suite 500

Anchorage, Alaska 99503-5823

Ms. Susan Childs
Shell Gulf of Mexico, Inc.
3601 C Street, Suite 1334
Anchorage, AK 99503
United States of America

AUG 30 2012

Dear Ms. Childs:

The Alaska Region of the Bureau of Safety and Environmental Enforcement (BSEE) is in receipt of Shell's Application for a Permit to Drill (APD) **Well Number 001, Burger A, on lease OCS Y-2280, Block 6764, in the Chukchi Sea (API number 55-352-0000200).** The application was partially submitted and dated January 31, 2012 and completed on July 18th 2012. More recently, in a letter to BSEE from Shell Vice President Peter Slaiby, dated August 21, 2012, you sought "conditional approval" of the APD to allow for limited drilling operations before the arrival of the Arctic containment system. In particular, you requested permission to drill and set the 30" structural and the 20" surface casings. Your application has been reviewed for compliance with the Outer Continental Shelf Lands Act, 30 CFR Part 250 and other statutes and regulations applicable to APD's. [redacted] (b) (4), (b) (9) [redacted] Upon completion of the testing and siting of the Arctic Containment System Shell will submit an Application for Permit to Modify, which, if approved, would allow Shell to continue operations outlined in the initial APD.

This approval is based on the findings below and subject to the conditions attached to this communication as Attachment A, Conditions of Approval for the Burger A, Well #001 and Attachment B Procedures for Well Data and Records Submittal. It is also conditioned on Shell's compliance during the permitted activities with all applicable BSEE regulations and requirements, U.S. Coast Guard regulations and requirements, provisions in the Exploration Plan (EP) dated May 2011, as approved by the Bureau of Ocean Energy Management (BOEM), BOEM regulations and requirements, provisions in the Oil Spill Response Plan approved by BSEE, conditions of approval for all permits or authorizations issued by Federal agencies, all lease stipulations, and Notices to Lessees.

This approval is valid unless and until there is a material change to conditions or facts as presented in Shell's application.

If any provision contained in any plan or application conflicts with any provision or condition approved in writing by BSEE, the provision or condition approved by BSEE later in time will control. In the event another agency approves deviations from plans, permits or conditions initially issued by that agency, copies of such approvals must be sent to BSEE. Except when emergency action is required, a written request for authorization must be sent to BSEE for the bureau's review and approval prior to deviating from BSEE approved plans, applications, or conditions.

BSEE finds that you have provided sufficient data, as required with relation to the applicable provisions of 30 CFR 250.417, to show that the Mobile Offshore Drilling Unit Noble Discoverer is in compliance and

is hereby approved for all exploratory drilling operations conducted in the Chukchi Sea of the Arctic Outer Continental Shelf (OCS) pursuant to this application and the EP.

BSEE also finds that you have provided sufficient data, as required with relation to the applicable provisions of 30 CFR 250.417, to show that the designated relief well drilling unit Kulluk is in compliance, and is hereby approved, for all exploratory drilling operations conducted in the Chukchi Sea of the Arctic Outer Continental Shelf (OCS) pursuant to this application and to the EP. In the event hydrogen sulfide is found during the drilling operations the Kulluk will be required to comply with 30 CFR 250.490 if used as a relief well rig.

BSEE further finds that Shell's proposed well capping and containment systems have been designed for the projected worst case discharge conditions. The intended uses of these systems are hereby approved. BSEE will require that a witnessed deployment test of the containment system in which Shell has demonstrated that it has the ability to successfully deploy the system and have it on location pursuant to the oil spill response plan prior to BSEE's consideration of Shell's request to drill below the 20 inch casing point.

BSEE hereby approves Shell's Welding and Burning Program and Hydrogen Sulfide Contingency Plans for operations conducted on the Noble Discoverer.

BSEE will provide a continuous inspection presence during drilling operations and will use Shell transportation and lodging for this purpose. As allowed in 30 CFR 250.133, Shell will request reimbursement for transportation based on the existing agreement between Shell, DOI Aviation Management Division and BSEE. Reimbursement for lodging must be submitted within 90 days of the completion of the drilling program. In addition BSEE will be conducting inspections and collecting data in regard to the EPA's National Pollutant Discharge Elimination System General Permit No. AKG-28-0000 and EPA issued air quality permits at the request of the EPA by letter dated July 27, 2012(copy enclosed).

After office hours, weekends, and holidays, all notifications relating to activities approved pursuant to this application should be made to the BSEE active duty officer at 855-277-2733 (toll free) and during business hours, all notifications should be made to the BSEE, active duty officer at (907) 334-5300.

Sincerely,

Mark Fesmire PE, JD
Regional Director, BSEE

Attachments

cc: U.S. DOI, BOEM, AKOCSR, Regional Director
U.S. DOC, NOAA, NMFS
U.S. DOI, Fish and Wildlife

Conditions of Approval for the Burger A, #001 Well

1. The following waivers have been authorized:
    a. Testing of casing strings as indicated on Form BSEE -0123S is approved.
    b. Your request for a waiver to the requirements under 30 CFR 250. 423 (c) regarding a negative pressure test is approved.
    c. Testing of the BOP components to the pressures indicated on Form BSEE -0123S is approved.
    d. Your test pressure for the annular preventer as indicated on Form BSEE -0123S is approved.
    e. Deployment of a remote BOP control panel intended to operate the BOP stack from the sea floor is approved.
    f. Your request to test the deadman/autoshear system during the stump test only is approved.
    g. Your requested method to temporarily abandon the proposed pilot hole is approved.
2. This office will conduct a predrill inspection of your drilling vessel prior to the start of operations.
3. Shell will not be able to drill below the 20 inch casing point without fulfilling the conditions stated in the letter accompanying these conditions.
4. No drilling activities may be conducted beyond each additional casing shoe unless specifically approved by the BSEE inspector on location. BSEE will evaluate the condition of the well, results of safety equipment tests, the nature and duration of the next phase of the drilling program, existing and forecasted environmental conditions, and the procedures under an approved contingency plan [30 CFR250.417(c)(2)] that addresses design and operating limitations of the drilling unit as well as the actions necessary (i.e. suspension, curtailment, or modification of drilling or rig operations) to remedy various operational or environmental situations in order to maintain safety and prevent damage to the environment; including implementing well capping and containment or relief well drilling plans.
5. Final certification of the blowout preventer system as required in 30 CFR 250.416 (f) shall be provided to this office prior to the initial use of the BOP on this well.
6. Data submission procedures and criteria for this well are listed in a attached document (Procedures for Well Data and Records Submittal)
7. Shell must submit a daily summary report on form BSEE-0133 to this office until the final status of the well is established (one copy). Daily marine mammal reports shall be attached to the form.
8. Shell must notify this office immediately in the event the well encounters shallow gas, abnormal pressure, or lost circulation.
9. Shell must provide this office with representative dry samples collected during the drilling of this well as soon as available. Shell is also requested to collect and retain a set of wet well cuttings for the Bureau of Ocean Energy Management. This request is voluntary and the samples are intended to provide for public access once the proprietary term for the samples is concluded. Further discussions related to this voluntary request can be concluded with appropriate BOEM representatives.
10. Shell must submit within thirty days of completion of the well all oceanographic and meteorological data collected during the drilling of this well.
11. Shell must submit an Application for Permit to Modify to change any approved portion of the APD prior to the commencement of the proposed operations. Verbal approval in an emergency

may be granted, however written APM's must be submitted no later than the end of the 3rd business day following the verbal approval.

12. Shell shall notify this office as well as the onsite representative 24 hours in advance of a Blowout Preventer test.
13. Shell must submit form BSEE – 0124 in advance of either temporarily or permanently abandoning this well. This form must contain all information required in 30 CFR 250, Subpart Q for abandonment of wells.

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
ALASKA OCS REGION

Procedures for Well Data and Records Submittal

This document defines the procedures on how lessees/operators submit well records required by 30 CFR 250.468 and 469, and clarifies the specific well records you should submit, the submittal dates of the various well records, and the correct locations where you should send these well records.

The BSEE collects, verifies, and stores data by the well's unique 12-digit American Petroleum Institute (API) number we assign. The BSEE Alaska Outer Continental Shelf Region (AKOCS) uses the data collected to make informed regulatory decisions based on your timely submittal of complete and accurate well records. We define "submittal date" as the original date the data are due to the appropriate office.

According to 30 CFR 250.468(a), "you must submit copies of logs or charts of electrical, radioactive, sonic, and other well-logging operations; directional and vertical well surveys; velocity profiles and surveys; and analysis of cores to BSEE." Also, in accordance with 30 CFR 250.469(b), the AKOCS will also require submittal of paleontological reports as well as washed and dried samples collected from the well.

When to Submit Well Data Records

1. Field Data

   As stated in the approval documents for these operations this office will take an active role in assess plans for the continuation of well activities. Shell will be expected to make available digital data and field prints electronically from the well site via a secure website data delivery system or equivalent to enable this review from this office. This should be done for all logging operations including pilot hole, surface, intermediate and final runs(both wireline and Logging While Drilling logs). This also includes detailed mud logging data.

2. Final Data

   Operators should submit one copy of the digital data on a CD or DVD in a read-only format to the appropriate entity as outlined in Attachment 1. Each CD or DVD should be properly labeled with the Area, Block, OCS, Well Number, Well Suffix, API, and the data type (i.e., Paleo Report, Conventional Core Report, Vertical Seismic Survey, etc.). Digital and image NMR data must be submitted on separate physical media and nomenclature for NMR data files and tool codes should clearly identify them as NMR datasets.

Well records are divided into four groups for the timely submittal of the data.

a) Well Log Data, Directional Surveys, Velocity Surveys, Analyses of Percussion Sidewall Cores, Wireline Formation Test Logs, Drill Stem Tests and Mudlogs/Reports

Submit:

Well log data,
Directional surveys,
Velocity surveys (time/depth pairs),
Percussion/rotary sidewall analysis of cores,
Wireline formation tests logs (summary log), and
Drill stem tests (initial report)

To be submitted within 30 days of the "Date Operations Completed" of the last logging run (MWD/LWD or wireline) that you report in Item 7 of the Open Hole Report (Form BSEE-0133S) for each 12-digit wellbore, sidetrack, and/or bypass. Note: "Date Operations Completed" for MWD/LWD is when the data is retrieved from the drill string.

b) Paleontological, Detailed Rotary Sidewall and Conventional Core Analyses, and Vertical Seismic Profile Reports and Information

For each wellbore in which these data were collected, submit no later than 90 days after the "TD DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

Detailed paleontological reports and information,
Detailed rotary sidewall and conventional core analyses/reports and information, and
Detailed vertical seismic profile reports

Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

c) Geochemical Analyses and PVT Analysis of Fluid Samples

For each wellbore in which these data were collected, submit geochemical analyses and/or PVT Analysis of Fluid Samples no later than 120 days after the "TD DATE" that you report in Item 10 of the Well Activity Report (Form BSEE-0133). Submit these well records when the report is completed, even if the

report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

d) End of Operations Report (Form BSEE-0125)

For each wellbore, submit an End of Operations Report (Form BSEE-0125) and all its attachments no later than 30 days after the "END DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

The BSEE AKOCS uses the Well Activity Report (Form BSEE-0133) and Open Hole Report (Form BSEE-0133S) to track well activity; therefore, it is crucial that you submit a complete and accurate report to the appropriate BSEE AKOCS District Office in a timely manner. We will treat delinquent and/or incomplete reports in the same manner as delinquent and/or incomplete well data, and such violations may result in the BSEE AKOCS exacting an appropriate remedy, such as issuing an Incident of Non-compliance (INC).

The BSEE AKOCS may request that you submit well logging data, directional surveys, velocity profiles and surveys, percussion sidewall analyses of cores, wireline formation tests, and drill stem tests before the 30- day limit when we determine that circumstances warrant such action. When we determine that circumstances so warrant, we may also request that you submit preliminary reports of analytical data, namely

Geochemical analyses/reports and information,
PVT analyses of fluid samples,
Detailed paleontological reports and information,
Detailed rotary sidewall core analysis and information, and
Detailed conventional core analysis and information before the respective 90-day or 120-day limits.

The BSEE AKOCS recognizes that you need adequate time to submit complete and accurate well records. If you request it, BSEE AKOCS may grant you a departure under 30 CFR 250.142 for a new required date for submitting the data pertaining to that wellbore.

Where to Submit Well Records

Shell will need to coordinate access to field digital well logs with the following office. This office will also handle receipt of dry samples.

Bureau of Safety and Environmental Enforcement
Alaska OCS Office
3801 Centerpoint Dr., Suite 500
Anchorage, AK 99503
Office Phone: 907-334-5300
Office Fax: 907-334-5302

Shell will provide final copies of all digital image and vector well log data and related reports to both the Alaska BSEE office and to:

A2D Technologies
d/b/a TGS Geological Products and Services
1010 Common Street, Suite 2040
Attn: BSEE Well Records (Alaska)
New Orleans, LA 70112
Office telephone: 504-524-3450
Fax: 504-524-3454

A "Well Records Submission Summary" in Attachment 1 of this NTL provides an overview of the various well records, including which entity receives which well records and the addresses and contact numbers of the appropriate BSEE AKOCS Offices, and A2D Technologies. We strongly recommend that you provide a transmittal letter when you submit any well records. This transmittal should contain the following information:

- Operator's Name
- Operator's Contact Name and Telephone Number
- Bottomhole Location: Area/Block/Lease/Well Name and Number/API Number
- Date Well Records Sent
- Detailed List of Well Records

It is your responsibility to ensure that the BSEE AKOCS and A2D Technologies receive all well data and information within the specific periods. If we notify you of delinquent data, we will initiate an appropriate remedy, such as issuing an Incident of Non-Compliance (INC). If you choose to use a third party to submit well data, it remains your responsibility to ensure that the data are timely received by the BSEE AKOCS and A2D Technologies. Realizing that you may need time beyond the specified deadlines to prepare unique data or information, we will address the submission of such on an individual basis. We will address INC's issued by the BSEE AKOCS Office for the delinquent data submittal at your yearly performance review or through other appropriate and timely measures.

Well Naming and Numbering

Show the API Number and well name assigned by the BSEE AKOCS Office on all well records you submit to us. You can find these on the approved Application for Permit to Drill (Form BSEE-0123) for the original hole, sidetracks, and/or bypasses.

Data Types and Formats

A. Well Log Data types

a. Log Curve Requirements: Submit the following curve types and log images in final form, if the data were obtained in the open-hole portion of a wellbore, sidetrack, or bypass****:

- Acoustic or Sonic
- Bulk Density
- Caliper
- Conductivity
- Density Correction
- Dipmeter (computed)
- Gamma Ray
- Resistivity/Induction
- Spontaneous Potential
- Nuclear Magnetic Resonance *
- Mudlogs***
- Neutron
- Tension
- Porosity
- Borehole Image
- Equivalent circulation density
- Rwa
- Temperature
- Formation Tester**
- Rate of Penetration
- Photoelectric
- Slide Indicator

b. Cased hole log data: Submit all curve types and log images as identified above for any cased hole logs collected in lieu of, or in addition to, open hole logs.

* For the submittal of digital NMR vector curve data,. The following are examples of curve types are to be submitted, and are not limited to you should submit:

- Quality Control Curves
- Computed Curves
- T2 Bin Distributions

Due to NMR file sizes and complexities, the BSEE now requires that digital and image NMR data are submitted on separate physical media (separate from other well log data) to its logging contractor, A2D Technologies. Also, NMR data file and tool code nomenclature should clearly identify these data as NMR-related. We encourage direct submittal of the completed log data set from the acquiring service company.

** Formation Tester is considered any logging tool that collects pressure data and/or fluid samples from the borehole. Summary Print log images, pressure gradient plots, and preliminary sample analysis must be submitted. Formation Tester summary data should also be submitted in ASCII format. All detailed reports (i.e., PVT Analysis) generated from the samples collected from the borehole must be submitted in a timely manner (see Attachment 1).

*** For mudlog specifications, see section Part I, Section G of this NTL. You will be required to submit an image file for these types of logs to A2D Technologies.

****Although API Recommended Practice (RP) 31A, Standard Form for Hardcopy Presentation of Downhole Well Log Data, is not incorporated by reference in BSEE regulation's, you may use it for guidance on providing complete and accurate well information.

Note: Do not submit digital data for Formation Tester, Borehole Image, and Computed Dipmeter to A2D Technologies.

c. Well Log Image File:

Submit image files in one of the formats listed below. For Formation Tester type logs, the summary logs will suffice. See Part I, Section H of this NTL for mudlog specifications.

i. For all vertical wells, as defined in 30 CFR 250.461, submit image files for

- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs and
- Any additional scales you obtained.

ii. For all non-vertical wells, as defined in 30 CFR 250.461, submit image files for

- True vertical depth (TVD) 1-inch, or 2-inch correlation and, 5-inch formation evaluation logs,
- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs, and
- Any additional scales you obtained.

Detailed 5- inch image logs must be composited, but individual runs do not need to be spliced.

If logging data from more than one logging vendor are collected in a borehole, you may submit either an image of the logging data from all vendors composited into a single set of logs or a set of images of the composited logs from each individual vendor.

d. Image File Formats: If the original log is in color, the submitted image file should also be in color.

i. The following image file formats are preferred:

- Computer Graphic Metafile (CGM) version 1-4
- Baker Metafile
- Schlumberger PDS (PDS files are usually for one logging run; any borehole with multiple runs should submit composited file format)
- Halliburton CGM
- Weatherford DPK

If the preferred formats listed above are not available, you may submit the image file in the Tag Image File Format (TIFF) with the following specifications:

ii. Format (TIFF) with the following specifications:

1. Black and White TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

2. Color TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling - No

Clearly label each well log image with its associated API number, bottom hole lease number, well name, well name suffix, log type, scale and depth domain (MD or TVD).

e. Digital (Vector) Well Log Data: Submit composite digital curve data (one value per curve for each depth value and with individual tool runs merged) in the Canadian Well Log Society Log ASCII Standard (LAS), Version 2.0 format; and Digital Log Interchange Standard (DLIS) or Log Interchange Standard (LIS) format . Ensure that the curve data are in a MD composite layout, including full headers for each wireline and MWD/LWD logging tool run and curve description for all curves. Ensure that all required log curves (see Part A.1 of this NTL) represented on the log image file are included in the digital curve file. If you collect logging data from more than one logging vendor in a single borehole, submit a separate set of composited log curves from each individual vendor . Do not splice digital curves from different vendors to form a set of composited log curves.

i. Full header information, should including the following:

- 12-digit API number
- well name suffix
- bottom hole lease number
- bottom hole area and block
- well name

ii. Information for each tool run, should including the following:

- borehole fluids
- depth interval
- mud
- filtrate resistivity and temperatures
- casing information
- bottomhole or maximum recorded temperature
- circulation history information
- tool schematic
- tool calibration record

Full logging tool parameters (including matrix values), position of logging tool (i.e., centered or eccentered), and logging engineer's comments; and adequate curve description and

Tool -specific and service provider-specific curve and parameter mnemonics (names and abbreviations) maintained as originally acquired.

If a log is spliced, the splice depth should be clearly noted along with which files were used.

Submit digital and image logs on CD or DVD ROM (read-only memory). Digital and image logs may be submitted on the same CD or DVD.

Directional Surveys

Submit one digital copy of the final composite directional survey. For the Digital Directional Survey format, see NTL 2009-N10.

- Submit, on CD or DVD ROM these survey results coded in ASCII.
- According to 30 CFR 250.461(d) (2), "You must correct all surveys to Universal-Transverse-Mercator-Grid-north or Lambert-Grid-north after making the magnetic-to-true-north correction."

If your use of more than one vendor prevents the consolidation of the separate surveys within a well, submit the final composite survey from each vendor .

Velocity Profiles and Surveys

Vertical Seismic Profiles: Submit the results from all borehole seismic data (in cased or uncased holes), as well as concurrently run directional surveys for both vertical and directional wells, if they are different from directional surveys referred to in Part I, Section B of this NTL . Submit, on CD or DVD ROM, digitally recorded data in a industry standard format (LAS, DLIS, ASCII, CGM, TIFF, JPG, SEGY, DOC), that include, but are not limited to:

- Normal Incidence VSP;
- Acoustic Log Calibration Report;
- Final VSP and Corridor stacks for 2D data and final stacked and migrated volume for 3D VSP data;
- Composite plot with VSP, Corridor stacks, synthetic seismogram, and well logs;
- any referenced information within the report correlative with the acquisition, such as 2-way time indexed depths and velocities, survey parameters, digital images, and computed survey data and directional; and
- If acquired, format time/depth pairs.

Velocity Surveys (Time-Depth Pairs/Checkshots): Submit, on CD or DVD ROM, one digital copy coded in ASCII format (see Attachment 2 of this NTL). The report should include or be annotated with the following:

- API number
- Well name and number
- Well name suffix
- Contractor or service provider
- Contact name (phone number or e-mail address)

Note that the digital format has been modified to expand the columns for True Vertical Depth and One-Way Travel Time from 5 to 8 to include two decimal places for each column.

We encourage direct submittal of the completed survey from the acquiring service company .

Analysis of Conventional Cores, Percussion/Rotary Sidewall Cores, Wireline Formation Tests, and Drill Stem Tests

IF...
you conduct any of the following:

- Conventional cores descriptions and analysis
- Percussion/Rotary sidewall core analysis or equivalent,
- Wireline formation tests - include any logs (summary logs are acceptable) and associated lab results, or
- Drill stem tests

THEN...

As soon as the final and/or revised conventional core, percussion/rotary sidewall core reports and/or data become available to you, send one digital copy of the entire, detailed report. Reports should include, but are not limited to the following:

- Standard analyses for porosity,
- Permeability
- Water saturation
- Core photos
- compaction analyses
- laser grain size analyses
- stressed brine porosity and permeability analyses
- rock mechanic studies
- water extraction and core gamma logs
- core photos

In addition, provide one copy of all studies you performed on the core(s) and tests for the purpose of describing and characterizing the reservoir architecture through detailed stratigraphic or depositional analyses. In certain situations, the BSEE AKOCS may require that you submit preliminary or interim reports .

Submit, on CD or DVD ROM, one copy of the description and analysis of the conventional core, the percussion/rotary sidewall core, wireline formation tests, and drill stem tests reports in the original digital format (i.e., WordPerfect, Word, Excel, Lotus 1-2-3). Any data acquired in a log format should be submitted as a log image.

Geochemical Analyses/Reports and Information

Submit one copy of the Geochemical Analyses/Reports and Information in the original digital format (i.e., WordPerfect, Word, Excel, Lotus 1-2-3, JPEG, CGM, TIFF) if you conducted any geochemical analyses/reports, including internal company or external contractor interpretation reports on

- Cuttings,
- Sidewall or conventional cores, and
- Fluid samples from the well. The term "sample" encompasses:
- Hydrocarbon gases, specifically methane through pentanes and C6+ hydrocarbons;
- Non-hydrocarbon gases (carbon dioxide, hydrogen sulfide, argon, helium, and radon); and
- Any liquid hydrocarbons (such as condensate, crude, and bitumen) encountered by the well in cuttings or shows and from any other well sampling or fluid testing.

The analyses, reports, and interpretations to be submitted include, but are not necessarily limited to , the following types of data:

- Total organic carbon
- Polynuclear aromatic hydrocarbons
- Rock-eval pyrolysis
- Stable isotope analyses of carbon & hydrogen
- Thermal chromatography-gas chromatography
- Compound-specific isotope ratio mass spectrometry
- Bulk pyrolysis & hydrous pyrolysis

- Isotope ratio mass spectrometry
- Gas chromatography
- Kerogen isolation & bitumen separation
- Pyrolysis/gas chromatography
- Organic petrography
- Complete saturated biomarker & aromatic hydrocarbon analysis by GC MS
- Vitrinite reflectance
- Elemental analysis of kerogen

In addition, submit all data and reports on geochemical characterization of produced oils, including

- All whole-oil GC, GC MS on oils,
- SARAH (or SARA),
- Isotopes on the fractions,
- Molecular and isotopic analyses of C1-C5 hydrocarbons metals data, and
- Any other geochemical data used from production samples intended for reservoir characterization studies.

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

Detailed Paleontological Reports and Information

As soon as the final and/or revised paleontological information and/or data become available to you, submit one copy in digital format of the entire, detailed paleontological report(s), chart(s), striplog(s), checklist(s), and any other paleontological records. Include the following:

The range of samples taken,

- Sample analysis identifying fossils and lithology by MD,
- Summary and interpretation (based on identification of foraminifera, nannofossils, or other microfossils) of all biostratigraphic markers, zones, tops, or local markers,
- Description of paleontological ecological zones with water depth at the time of deposition (e.g., Middle Shelf/Neritic 20-100 meters, Outer Shelf/Neritic 100-200 meters),
- Sequence analysis interpretations based on histograms of faunal abundance,
- Identification of all rock units by depth to the top of relative chronostratigraphic stages (e.g., Upper Pleistocene, Middle Miocene, or Lower Oligocene), and
-
- Pleistocene, Middle Miocene, or Lower Oligocene), and
- Biostratigraphic chart noting the relative ages of the biostratigraphic zones you used in the detailed paleontological reports.

Submit, on CD or DVD ROM, one copy of the detailed paleontological report in the original digital format (i.e., WordPerfect, Word, Excel, Lotus 1-2-3, JPEG, CGM, TIFF).

Mudlogs and Reports

Submit one image copy of the following types of Mudlogs:

- Physical Formation Log
- Pore Pressure Log
- Engineering Log
- Show Report Log

Image File Formats for Mudlogs: If the original log is in color, the submitted image file must also be in color.

The following image file formats are preferred:

- Geologix - geo draft file (.gdf)
- Geologix - output data file (.odf)

If the preferred formats listed above are not available, submit the image file in the Tag Image File

Format (TIFF) with the following specifications:

Black and White TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

Color TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling – No.

Submit one copy of the following types of Mudlogs reports, if collected:
- Show reports – composite into one file
- Mud reports – composite into one file
- End of Well reports – composite into one file
- Daily Drilling reports – composite into one file

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

End of Operations Report (Form BSEE-0125) and Attachments

Pursuant to 30 CFR 250.465(a), you must submit End of Operations Report (Form BSEE-0125) and the required attachments.

Additional Information

Pursuant to 30 CFR 250.469(d), the BSEE AKOCS may require that you submit additional well reports or records for a specific well(s).

From:	Fesmire, Mark E
To:	Crumrine, Kathleen; Monkelien, Kyle; Shank, Michael L; Walker, Jeffrey
Subject:	RE: 20" TA disucssion for Burger A w/ BSEE
Date:	Tuesday, September 18, 2012 9:32:02 AM

Kathy:

This is what we discussed and complies with the regulations. Please make sure this e-mail string is included in the record.

Mark

From: Crumrine, Kathleen
Sent: Tuesday, September 18, 2012 9:27 AM
To: Monkelien, Kyle; Fesmire, Mark E; Shank, Michael L; Walker, Jeffrey
Subject: FW: 20" TA disucssion for Burger A w/ BSEE

From: John.A.Henley@shell.com [mailto:John.A.Henley@shell.com]
Sent: Tuesday, September 18, 2012 9:16 AM
To: Howell, Randy; Crumrine, Kathleen
Cc: Monkelien, Kyle; Chris.Riley@shell.com; Jim.Miller@shell.com; Shawn.Gelsinger@shell.com; Sandy.Sears@shell.com; Pauline.Ruddy@shell.com
Subject: 20" TA disucssion for Burger A w/ BSEE

Randy & Kathleen:

(Please pass along to other who might have been left of the cc-list.)

To summarize our discussion:

- (b) (4), (b) (9)

(b) (4), (b) (9)

[redacted]

Best regards,

John A. Henley
Sr. Drilling Engineer
Shell Exploration & Production Company
One Shell Square, P. O. Box 61933, New Orleans, LA 70161-1933, United States of America
Tel: +1.504.728.4478
Mob: +1.281.795.0250
Email: john.a.henley@shell.com

(b) (4), (b) (9)

(b) (4), (b) (9)

(b) (4), (b) (9)

United States Department of the Interior

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
Alaska OCS Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

SEP 20 2012

Ms. Susan Childs
Shell Gulf of Mexico
3601 C Street, Suite 1334
Anchorage, AK 99503

Dear Ms. Childs:

The Alaska Region of the Bureau of Safety and Environmental Enforcement (BSEE) is in receipt of Shell's Application for a Permit to Drill (APD) **Well Number 001, Sivulliq N, on lease OCS Y-1805, Block 6658, in the Beaufort Sea (API number 55-171-0001300).** A partial application was submitted and dated April 17, 2012 and completed on July 28, 2012. More recently, in a letter to BSEE from Alaska Venture Support Integrator, Manager Susan Childs, dated August 31, 2012, you sought "conditional approval" of this APD to allow for limited drilling operations before the arrival of the Arctic Containment System. In particular, you requested permission to drill and set the 30" structural casing and the 20" surface casing. Your application has been reviewed for compliance with the Outer Continental Shelf Lands Act, 30 CFR Part 250, and other statutes and regulations applicable to APDs. (b) (4), (b) (9)

[redacted]

Upon completion of the testing and siting of the Arctic Containment System, Shell will submit an Application for Permit to Modify, which, if approved, would allow Shell to continue operations outlined in the initial APD.

This APD approval is subject to the findings and the conditions attached to this communication as Attachment A, Conditions of Approval for the Sivulliq N, Well #001 and Attachment B, Procedures for Well Data and Records Submittal. It is also conditioned on Shell's compliance during the permitted activities with all applicable BSEE regulations and requirements, U.S. Coast Guard regulations and requirements, provisions in the Exploration Plan (EP) dated May, 2011 and the terms of its approval by the Bureau of Ocean Energy Management (BOEM), BOEM regulations, provisions in the Oil Spill Response Plan approved by BSEE, conditions of approval for all permits or authorizations issued by other Federal agencies, lease stipulations, and Notices to Lessees.

This approval is valid unless and until there is a material change to conditions or facts as presented in Shell's application.

If any provision contained in any plan or application conflicts with any provision or condition approved in writing by BSEE, the provision or condition approved by BSEE later in time will control. In the event another agency approves deviations from plans, permits, or conditions initially issued by that agency, copies of such approvals must be sent to BSEE.

BSEE finds that you have provided sufficient data, as required with relation to the applicable provisions of 30 CFR 250.417 to show that the Mobile Offshore Drilling Unit Kulluk is in compliance and is hereby approved for all exploratory drilling operations conducted in the Beaufort Sea of the Arctic Outer Continental Shelf (OCS) pursuant to this application and the EP.

BSEE also finds that you have provided sufficient data, as required by the applicable provisions of 30 CFR 250.417 to show that the designated relief well drilling unit Noble Discoverer is in compliance and is hereby approved for drilling operations conducted in the Beaufort Sea of the Arctic OCS pursuant to this application and the EP.

BSEE further finds that Shell's proposed well capping and containment systems have been designed for the projected worst case discharge. The intended uses of these systems are hereby approved. BSEE will require that a witnessed deployment test of the containment system demonstrating that Shell has the ability to successfully deploy the system and have it on location pursuant to the oil spill response plan prior to BSEE's consideration of Shell's request to drill below the 20 inch casing point.

BSEE hereby approves Shell's Welding and Burning Program for operations conducted on the Kulluk.

BSEE will provide a continuous inspection presence during drilling operations and will use Shell transportation and lodging for this purpose. As allowed in 30 CFR 250.133, Shell will request reimbursement for transportation, meals, and lodging based on the existing agreement between Shell, DOI Aviation Management Division and BSEE. Reimbursement requests must be submitted within 90 days of the completion of the drilling program. In addition, BSEE will conduct inspections and collect data in regard to the EPA's National Pollutant Discharge Elimination System General Permit No. AKG-28-0000 and EPA-issued air quality permits at the request of the EPA by letter dated July 27, 2012 (copy enclosed).

All notifications related to activities described in the approved applications should be made to the BSEE active duty officer at 907-334-5300 during business hours and 855-277-2733 (toll free) after business hours.

Sincerely,

Mark Fesmire PE, JD
Regional Director

cc: U.S. DOI, BOEM, AKOCS, Regional Director
cc: U.S. DOC, NOAA, NMFS
cc: U.S. DOI, Fish and Wildlife Service

ATTACHMENT A
Conditions of Approval for the Sivulliq N. #001 Well

1. The following waivers have been authorized:
    a. Testing of casing strings as indicated on Form BSEE -0123S is approved.
    b. Your request for a waiver to the requirements under 30 CFR 250. 423 (c) regarding a negative pressure test is approved.
    c. Testing of the BOP components to the pressures indicated on Form BSEE -0123S is approved.
    d. Your test pressure for the annular preventer as indicated on Form BSEE -0123S is approved.
    e. Deployment of a remote BOP control panel intended to operate the BOP stack from the sea floor is approved.
    f. Your request to test the deadman/autoshear system during the stump test only is approved.
    g. Your requested method to temporarily abandon the proposed pilot hole is approved.
2. This office will conduct a predrill inspection of your drilling vessel prior to the start of operations.
3. Shell will not be able to drill below the 20 inch casing point without fulfilling the conditions stated in the letter accompanying these conditions
4. No drilling activities may be conducted beyond each casing shoe unless specifically approved by the BSEE inspector on location. BSEE will evaluate the condition of the well, results of safety equipment tests, the nature and duration of the next phase of the drilling program, existing and forecasted environmental conditions, and the procedures under an approved contingency plan [30 CFR250.417(c)(2)] that addresses design and operating limitations of the drilling unit as well as the actions necessary (i.e. suspension, curtailment, or modification of drilling or rig operations) to remedy various operational or environmental situations in order to maintain safety and prevent damage to the environment; including implementing well capping and containment or relief well drilling plans.
5. Final certification of the blowout preventer system as required in 30 CFR 250.416 (f) shall be provided to this office prior to the initial use of the BOP on this well.
6. Data submission procedures and criteria for this well are listed in Attachment B Procedures for Well Data and Records Submittal.
7. Shell must submit a daily summary report on form BSEE-0133 to this office until the final status of the well is established (one copy). Daily marine mammal reports shall be attached to the form.
8. Shell must notify this office immediately in the event the well encounters shallow gas, abnormal pressure, or lost circulation.
9. [redacted] (b) (4), (b) (9)
10. Shell must provide this office with representative dry samples collected during the drilling of this well as soon as available. Shell is also requested to collect and retain a set of wet well cuttings for the Bureau of Ocean Energy Management. This request is voluntary and the samples are

intended to be made available to the public once the proprietary term for the samples is concluded. Further discussions related to this voluntary request can be concluded with appropriate BOEM representatives.

11. Shell must submit within thirty days of completion of the well all oceanographic and meteorological data collected during the drilling of this well.
12. Shell must submit an Application for Permit to Modify to change an approved portion of the APD prior to the commencement of the proposed operations. Verbal approval in an emergency may be granted, but written APMs must be submitted no later than the end of the 3rd business day following the oral approval.
13. Shell shall notify this office as well as the onsite representative 24 hours in advance of a Blowout Preventer test.
14. Shell must submit form BSEE – 0124 in advance of either temporarily or permanently abandoning this well. This form must contain all information required in subpart Q for abandonment of wells.

Attachment B

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
ALASKA OCS REGION

Procedures for Well Data and Records Submittal

This document defines the procedures on how lessees/operators submit well records required by 30 CFR 250.468 and 469, and clarifies the specific well records you should submit, the submittal dates of the various well records, and the correct locations where you should send these well records.

The BSEE collects, verifies, and stores data by the well's unique 12-digit American Petroleum Institute (API) number we assign. The BSEE Alaska Outer Continental Shelf Region (AKOCS) uses the data collected to make informed regulatory decisions based on your timely submittal of complete and accurate well records. We define "submittal date" as the original date the data are due to the appropriate office.

According to 30 CFR 250.468(a), "you must submit copies of logs or charts of electrical, radioactive, sonic, and other well-logging operations; directional and vertical well surveys; velocity profiles and surveys; and analysis of cores to BSEE." Also, in accordance with 30 CFR 250.469(b), the AKOCS will also require submittal of paleontological reports as well as washed and dried samples collected from the well.

When to Submit Well Data Records

1. Field Data

   As stated in the approval documents for these operations this office will take an active role in assess plans for the continuation of well activities. Shell will be expected to make available digital data and field prints electronically from the wellsite via a secure website data delivery system or equivalent to enable this review. This should be done for all logging operations including pilot, surface, intermediate and final runs.

2. Final Data

   Operators should submit one copy of the digital data on a CD or DVD in a read-only format to the appropriate entity as outlined in Attachment 1. Each CD or DVD should be properly labeled with the Area, Block, OCS, Well Number, Well Suffix, API, and the data type (i.e., Paleo Report, Conventional Core Report, Vertical Seismic Survey, etc.). Digital and image NMR data must be submitted on separate physical media and nomenclature for NMR data files and tool codes should clearly identify them as NMR datasets.

   Well records are divided into four groups for the timely submittal of the data.

a) Well Log Data, Directional Surveys, Velocity Surveys, Analyses of Percussion Sidewall Cores, Wireline Formation Test Logs, Drill Stem Tests and Mudlogs/Reports

Submit:

Well log data,
Directional surveys,
Velocity surveys (time/depth pairs),
Percussion/rotary sidewall analysis of cores,
Wireline formation tests logs (summary log), and
Drill stem tests (initial report)

To be submitted within 30 days of the "Date Operations Completed" of the last logging run (MWD/LWD or wireline) that you report in Item 7 of the Open Hole Report (Form BSEE-0133S) for each 12-digit wellbore, sidetrack, and/or bypass. Note: "Date Operations Completed" for MWD/LWD is when the data is retrieved from the drill string.

b) Paleontological, Detailed Rotary Sidewall and Conventional Core Analyses, and Vertical Seismic Profile Reports and Information

For each wellbore in which these data were collected, submit no later than 90 days after the "TD DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

Detailed paleontological reports and information,
Detailed rotary sidewall and conventional core analyses/reports and information, and
Detailed vertical seismic profile reports

Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

c) Geochemical Analyses and PVT Analysis of Fluid Samples

For each wellbore in which these data were collected, submit geochemical analyses and/or PVT Analysis of Fluid Samples no later than 120 days after the "TD DATE" that you report in Item 10 of the Well Activity Report (Form BSEE-0133). Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

d) End of Operations Report (Form BSEE-0125)

For each wellbore, submit an End of Operations Report (Form BSEE-0125) and all its attachments no later than 30 days after the "END DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

The BSEE AKOCS uses the Well Activity Report (Form BSEE-0133) and Open Hole Report (Form BSEE-0133S) to track well activity; therefore, it is crucial that you submit a complete and accurate report to the appropriate BSEE AKOCS District Office in a timely manner. We will treat delinquent and/or incomplete reports in the same manner as delinquent and/or incomplete well data, and such violations may result in the BSEE AKOCS exacting an appropriate remedy, such as issuing an Incident of Non-compliance (INC).

The BSEE AKOCS may request that you submit well logging data, directional surveys, velocity profiles and surveys, percussion sidewall analyses of cores, wireline formation tests, and drill stem tests before the 30- day limit when we determine that circumstances warrant such action. When we determine that circumstances so warrant, we may also request that you submit preliminary reports of analytical data, namely

Geochemical analyses/reports and information,
PVT analyses of fluid samples,
Detailed paleontological reports and information,
Detailed rotary sidewall core analysis and information, and
Detailed conventional core analysis and information before the respective 90-day or 120-day limits.

The BSEE AKOCS recognizes that you need adequate time to submit complete and accurate well records. If you request it, BSEE AKOCS may grant you a departure under 30 CFR 250.142 for a new required date for submitting the data pertaining to that wellbore.

Where to Submit Well Records

Shell will need to coordinate access to field digital well logs with the following office. This office will also handle receipt of samples.

Bureau of Safety and Environmental Enforcement
Alaska OCS Office
3801 Centerpoint Dr., Suite 500
Anchorage, AK 99503
Office Phone: 907-334-5300
Office Fax: 907-334-5302

Shell should provide final copies of all digital image and vector well log data and related reports to
A2D Technologies
d/b/a TGS Geological Products and Services
1010 Common Street, Suite 2040
Attn: BSEE Well Records (Alaska)

New Orleans, LA 70112
Office telephone: 504-524-3450
Fax: 504-524-3454

A "Well Records Submission Summary" in this document provides an overview of the various well records, including which entity receives which well records and the addresses and contact numbers of the appropriate BSEE AKOCS Offices, and A2D Technologies. We strongly recommend that you provide a transmittal letter when you submit any well records. This transmittal should contain the following information:

- Operator's Name
- Operator's Contact Name and Telephone Number
- Bottomhole Location: Area/Block/Lease/Well Name and Number/API Number
- Date Well Records Sent
- Detailed List of Well Records

It is your responsibility to ensure that the BSEE AKOCS and A2D Technologies receive all well data and information within the specific periods. If we notify you of delinquent data, we will initiate an appropriate remedy, such as issuing an Incident of Non-Compliance (INC). If you choose to use a third party to submit well data, it remains your responsibility to ensure that the data are timely received by the BSEE AKOCS and A2D Technologies. Realizing that you may need time beyond the specified deadlines to prepare unique data or information, we will address the submission of such on an individual basis. We will address INC's issued by the BSEE AKOCS Office for the delinquent data submittal at your yearly performance review or through other appropriate and timely measures.

Well Naming and Numbering

Show the API Number and well name assigned by the BSEE AKOCS Office on all well records you submit to us. You can find these on the approved Application for Permit to Drill (Form BSEE-0123) for the original hole, sidetracks, and/or bypasses.

Data Types and Formats

A. Well Log Data types

a. Log Curve Requirements: Submit the following curve types and log images in final form, if the data were obtained in the open-hole portion of a wellbore, sidetrack, or bypass****:

- Acoustic or Sonic
- Bulk Density
- Caliper
- Conductivity
- Density Correction
- Dipmeter (computed)
- Gamma Ray
- Resistivity/Induction
- Spontaneous Potential
- Nuclear Magnetic Resonance *
- Mudlogs***
- Neutron
- Tension
- Porosity
- Borehole Image
- Equivalent circulation density
- Rwa
- Temperature
- Formation Tester**
- Rate of Penetration
- Photoelectric
- Slide Indicator

b. Cased hole log data: Submit all curve types and log images as identified above for any cased hole logs collected in lieu of, or in addition to, open hole logs.

* For the submittal of digital NMR vector curve data,. The following are examples of curve types are to be submitted, and are not limited to you should submit:

- Quality Control Curves
- Computed Curves
- T2 Bin Distributions

Due to NMR file sizes and complexities, the BSEE now requires that digital and image NMR data are submitted on separate physical media (separate from other well log data) to its logging contractor, A2D Technologies. Also, NMR data file and tool code nomenclature should clearly identify these data as NMR-related. We encourage direct submittal of the completed log data set from the acquiring service company.

** Formation Tester is considered any logging tool that collects pressure data and/or fluid samples from the borehole. Summary Print log images, pressure gradient plots, and preliminary sample analysis must be submitted. Formation Tester summary data should also be submitted in ASCII format. All detailed reports (i.e., PVT Analysis) generated from the samples collected from the borehole must be submitted in a timely manner (see Attachment 1).

*** You will be required to submit an image file for these types of logs to A2D Technologies.

****Although API Recommended Practice (RP) 31A, Standard Form for Hardcopy Presentation of Downhole Well Log Data, is not incorporated by reference in BSEE regulations, you may use it for guidance on providing complete and accurate well information.

Note: Do not submit digital data for Formation Tester, Borehole Image, and Computed Dipmeter to A2D Technologies.

c. Well Log Image File:

Submit image files in one of the formats listed below. For Formation Tester type logs, the summary logs will suffice.

i. For all vertical wells, as defined in 30 CFR 250.461, submit image files for

- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs and
- Any additional scales you obtained.

ii. For all non-vertical wells, as defined in 30 CFR 250.461, submit image files for

- True vertical depth (TVD) 1-inch, or 2-inch correlation and, 5-inch formation evaluation logs,
- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs, and
- Any additional scales you obtained.

Detailed 5- inch image logs must be composited, but individual runs do not need to be spliced.

If logging data from more than one logging vendor are collected in a borehole, you may submit either an image of the logging data from all vendors composited into a single set of logs or a set of images of the composited logs from each individual vendor.

d. Image File Formats: If the original log is in color, the submitted image file should also be in color.

i. The following image file formats are preferred:

- Computer Graphic Metafile (CGM) version 1-4
- Baker Metafile
- Schlumberger PDS (PDS files are usually for one logging run; any borehole with multiple runs should submit composited file format)
- Halliburton CGM
- Weatherford DPK

If the preferred formats listed above are not available, you may submit the image file in the Tag Image File Format (TIFF) with the following specifications:

ii. Format (TIFF) with the following specifications:

1. Black and White TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

2. Color TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling - No

Clearly label each well log image with its associated API number, bottom hole lease number, well name, well name suffix, log type, scale and depth domain (MD or TVD).

e. Digital (Vector) Well Log Data: Submit composite digital curve data (one value per curve for each depth value and with individual tool runs merged) in the Canadian Well Log Society Log ASCII Standard (LAS), Version 2.0 format; and Digital Log Interchange Standard (DLIS) or Log Interchange Standard (LIS) format. Ensure that the curve data are in a MD composite layout, including full headers for each wireline and MWD/LWD logging tool run and curve description for all curves. Ensure that all required log curves represented on the log image file are included in the digital curve file. If you collect logging data from more than one logging vendor in a single borehole, submit a separate set of composited log curves from each individual vendor. Do not splice digital curves from different vendors to form a set of composited log curves.

i. Full header information, should including the following:

- 12-digit API number
- well name suffix
- bottom hole lease number
- bottom hole area and block
- well name

ii. Information for each tool run, should including the following:

- borehole fluids
- depth interval
- mud
- filtrate resistivity and temperatures
- casing information
- bottomhole or maximum recorded temperature
- circulation history information
- tool schematic
- tool calibration record

Full logging tool parameters (including matrix values), position of logging tool (i.e., centered or eccentered), and logging engineer's comments; and adequate curve description and

Tool -specific and service provider-specific curve and parameter mnemonics (names and abbreviations) maintained as originally acquired.

If a log is spliced, the splice depth should be clearly noted along with which files were used.

Submit digital and image logs on CD or DVD ROM (read-only memory). Digital and image logs may be submitted on the same CD or DVD.

Directional Surveys

Submit one digital copy of the final composite directional survey. For the Digital Directional Survey format, see NTL 2009-N10.

- Submit, on CD or DVD ROM these survey results coded in ASCII.
- According to 30 CFR 250.461(d) (2), "You must correct all surveys to Universal-Transverse-Mercator-Grid-north or Lambert-Grid-north after making the magnetic-to-true-north correction."

If your use of more than one vendor prevents the consolidation of the separate surveys within a well, submit the final composite survey from each vendor.

Velocity Profiles and Surveys

Vertical Seismic Profiles: Submit the results from all borehole seismic data (in cased or uncased holes), as well as concurrently run directional surveys for both vertical and directional wells. Submit, on CD or

DVD ROM, digitally recorded data in a industry standard format (LAS, DLIS, ASCII, CGM, TIFF, JPG, SEGY, DOC), that include, but are not limited to:

- Normal Incidence VSP;
- Acoustic Log Calibration Report;
- Final VSP and Corridor stacks for 2D data and final stacked and migrated volume for 3D VSP data;
- Composite plot with VSP, Corridor stacks, synthetic seismogram, and well logs;
- any referenced information within the report correlative with the acquisition, such as 2-way time indexed depths and velocities, survey parameters, digital images, and computed survey data and directional; and
- If acquired, format time/depth pairs.

Velocity Surveys (Time-Depth Pairs/Checkshots): Submit, on CD or DVD ROM, one digital copy coded in ASCII format. The report should include or be annotated with the following:

- API number
- Well name and number
- Well name suffix
- Contractor or service provider
- Contact name (phone number or e-mail address)

Note that the digital format has been modified to expand the columns for True Vertical Depth and One-Way Travel Time from 5 to 8 to include two decimal places for each column.

We encourage direct submittal of the completed survey from the acquiring service company .

Analysis of Conventional Cores, Percussion/Rotary Sidewall Cores, Wireline Formation Tests, and Drill Stem Tests

IF...
you conduct any of the following:

- Conventional cores descriptions and analysis
- Percussion/Rotary sidewall core analysis or equivalent,
- Wireline formation tests - include any logs (summary logs are acceptable) and associated lab results, or
- Drill stem tests

THEN...

As soon as the final and/or revised conventional core, percussion/rotary sidewall core reports and/or data become available to you, send one digital copy of the entire, detailed report. Reports should include, but are not limited to the following:

- Standard analyses for porosity,
- Permeability
- Water saturation

- Core photos
- compaction analyses
- laser grain size analyses
- stressed brine porosity and permeability analyses
- rock mechanic studies
- water extraction and core gamma logs
- core photos

In addition, provide one copy of all studies you performed on the core(s) and tests for the purpose of describing and characterizing the reservoir architecture through detailed stratigraphic or depositional analyses. In certain situations, the BSEE AKOCS may require that you submit preliminary or interim reports .

Submit, on CD or DVD ROM, one copy of the description and analysis of the conventional core, the percussion/rotary sidewall core, wireline formation tests, and drill stem tests reports in the original digital format. Any data acquired in a log format should be submitted as a log image.

Geochemical Analyses/Reports and Information

Submit one copy of the Geochemical Analyses/Reports and Information in the original digital format (i.e., WordPerfect, Word, Excel, Lotus 1-2-3, JPEG, CGM, TIFF) if you conducted any geochemical analyses/reports, including internal company or external contractor interpretation reports on

- Cuttings,
- Sidewall or conventional cores, and
- Fluid samples from the well. The term "sample" encompasses:
- Hydrocarbon gases, specifically methane through pentanes and C6+ hydrocarbons;
- Non-hydrocarbon gases (carbon dioxide, hydrogen sulfide, argon, helium, and radon); and
- Any liquid hydrocarbons (such as condensate, crude, and bitumen) encountered by the well in cuttings or shows and from any other well sampling or fluid testing.

The analyses, reports, and interpretations to be submitted include, but are not necessarily limited to , the following types of data:

- Total organic carbon
- Polynuclear aromatic hydrocarbons
- Rock-eval pyrolysis
- Stable isotope analyses of carbon & hydrogen
- Thermal chromatography-gas chromatography
- Compound-specific isotope ratio mass spectrometry
- Bulk pyrolysis & hydrous pyrolysis
- Isotope ratio mass spectrometry
- Gas chromatography
- Kerogen isolation & bitumen separation
- Pyrolysis/gas chromatography
- Organic petrography

- Complete saturated biomarker & aromatic hydrocarbon analysis by GC MS
- Vitrinite reflectance
- Elemental analysis of kerogen

In addition, submit all data and reports on geochemical characterization of produced oils, including

- All whole-oil GC, GC MS on oils,
- SARAH (or SARA),
- Isotopes on the fractions,
- Molecular and isotopic analyses of C1-C5 hydrocarbons metals data, and
- Any other geochemical data used from production samples intended for reservoir characterization studies.

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

Detailed Paleontological Reports and Information

As soon as the final and/or revised paleontological information and/or data become available to you, submit one copy in digital format of the entire, detailed paleontological report(s), chart(s), striplog(s), checklist(s), and any other paleontological records. Include the following:

- The range of samples taken,
- Sample analysis identifying fossils and lithology by MD,
- Summary and interpretation (based on identification of foraminifera, nannofossils, or other microfossils) of all biostratigraphic markers, zones, tops, or local markers,
- Description of paleontological ecological zones with water depth at the time of deposition (e.g., Middle Shelf/Neritic 20-100 meters, Outer Shelf/Neritic 100-200 meters),
- Sequence analysis interpretations based on histograms of faunal abundance,
- Identification of all rock units by depth to the top of relative chronostratigraphic stages (e.g., Upper Pleistocene, Middle Miocene, or Lower Oligocene), and
- Pleistocene, Middle Miocene, or Lower Oligocene), and
- Biostratigraphic chart noting the relative ages of the biostratigraphic zones you used in the detailed paleontological reports.

Submit, on CD or DVD ROM, one copy of the detailed paleontological report in the original digital format

Mudlogs and Reports

Submit one image copy of the following types of Mudlogs:

- Physical Formation Log
- Pore Pressure Log
- Engineering Log
- Show Report Log

Image File Formats for Mudlogs: If the original log is in color, the submitted image file must also be in color.

The following image file formats are preferred:

- Geologix - geo draft file (.gdf)
- Geologix - output data file (.odf)

If the preferred formats listed above are not available, submit the image file in the Tag Image File

Format (TIFF) with the following specifications:

Black and White TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

Color TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling – No.

Submit one copy of the following types of Mudlogs reports, if collected:
- Show reports – composite into one file
- Mud reports – composite into one file
- End of Well reports – composite into one file
- Daily Drilling reports – composite into one file

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

End of Operations Report (Form BSEE-0125) and Attachments

Pursuant to 30 CFR 250.465(a), you must submit End of Operations Report (Form BSEE-0125) and the required attachments.

Additional Information

Pursuant to 30 CFR 250.469(d), the BSEE AKOCS may require that you submit additional well reports or records for a specific well(s).

United States Department of the Interior
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
Alaska OCS Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

SEP 27 2012

Ms. Susan Childs
Shell Gulf of Mexico, Inc.
3601 C Street, Suite 1334
Anchorage, AK 99503
United States of America

Dear Ms. Childs:

The Alaska Region of the Bureau of Safety and Environmental Enforcement (BSEE) is in receipt of Shell's Application for a Permit to Drill (APD) **Well Number 001, Burger J, on lease OCS Y-2321, Posey Block 6912, in the Chukchi Sea (API number 55-352-00004-00).** An initial application was submitted April 2012 and completed August 2012. More recently, in a letter to BSEE from Shell Vice President Peter Slaiby, dated August 21, 2012, you sought "conditional approval" of the APD to allow for limited drilling operations before the arrival of the Arctic Containment System. In particular, you requested permission to drill and set the 30" structural and the 20" surface casings. Your application has been reviewed for compliance with the Outer Continental Shelf (OCS) Lands Act, 30 CFR Part 250 and other statutes and regulations applicable to APDs. [redacted] (b) (4), (b) (9) [redacted] Upon completion of the testing and siting of the Arctic Containment System Shell will submit an Application for Permit to Modify, which, if approved, would allow Shell to continue operations outlined in the initial APD.

This approval is based on the findings below and subject to the conditions attached to this communication as Attachment A, Conditions of Approval for the Burger J, Well #001 and Attachment B Procedures for Well Data and Records Submittal. It is also conditioned on Shell's compliance during the permitted activities with all applicable BSEE regulations and requirements, U.S. Coast Guard regulations and requirements, provisions in the Exploration Plan (EP) as approved by the Bureau of Ocean Energy Management (BOEM) December 2011, BOEM regulations and requirements, provisions in the Oil Spill Response Plan approved by BSEE, conditions of approval for all permits or authorizations issued by Federal agencies, all lease stipulations, and Notices to Lessees.

This approval is valid unless and until there is a material change to conditions or facts as presented in Shell's application.

If any provision contained in any plan or application conflicts with any provision or condition approved in writing by BSEE, the provision or condition approved by BSEE later in time will control. In the event another agency approves deviations from plans, permits or conditions initially issued by that agency, copies of such approvals must be sent to BSEE.

In a letter dated August 30, 2012 BSEE approved both the Noble Discoverer and the Kulluk for operations in the Arctic OCS. Also as stated in that letter, in the event hydrogen sulfide Is found during the drilling operations the Kulluk will be required to comply with 30 CFR 250.490 if used as a relief well rig.

BSEE further finds that Shell's proposed well capping and containment systems have been designed for the projected worst case discharge conditions. The intended uses of these systems are hereby approved. BSEE will require that a witnessed deployment test of the containment system in which Shell has demonstrated that it has the ability to successfully deploy the system and have it on location pursuant to the oil spill response plan prior to BSEE's consideration of Shell's request to drill below the 20 inch casing point.

In a letter dated August 30, 2012 BSEE approved Shell's Welding and Burning Program and Hydrogen Sulfide Contingency Plans for operations conducted on the Noble Discoverer.

BSEE will provide a continuous inspection presence during drilling operations and will use Shell transportation and lodging for this purpose. As allowed in 30 CFR 250.133, Shell will request reimbursement for transportation based on the existing agreement between Shell, DOI Aviation Management Division and BSEE. Reimbursement for meals and lodging must be submitted within 90 days of the completion of the drilling program. In addition BSEE will be conducting inspections and collecting data in regard to the EPA's National Pollutant Discharge Elimination System General Permit No. AKG-28-0000 and EPA issued air quality permits at the request of the EPA letter dated July 27, 2012(copy enclosed).

All notifications related to activities described in the approved applications should be made to the BSEE active duty officer at 907-334-5300 during business hours and 855-277-2733 (toll free) after business hours.

Sincerely,

Mark Fesmire PE, JD
Regional Director, BSEE

Attachments:
Attachment A, Conditions of Approval for the Burger J, Well #001
Attachment B, Procedures for Well Data and Records Submittal
Attachment, EPA letter dated July 27, 2012
Attachment, Copy 3 of 3 Burger J APD Binder (1)

Cc: U.S. DOI, BOEM, AKOCS, Regional Director (Letter & Attachment A)
Cc: U.S. DOC, NOAA, NMFS (Letter & Attachment A)
Cc: U.S. DOI, Fish and Wildlife Service(Letter & Attachment A)

ATTACHMENT A
Conditions of Approval for the Burger J, #001 Well

1. The following waivers have been authorized:
    a. Testing of casing strings as indicated on Form BSEE -0123S is approved.
    b. Your request for a waiver to the requirements under 30 CFR 250. 423 (c) regarding a negative pressure test is approved.
    c. Testing of the BOP components to the pressures indicated on Form BSEE -0123S is approved.
    d. Your test pressure for the annular preventer as indicated on Form BSEE -0123S is approved.
    e. Deployment of a remote BOP control panel intended to operate the BOP stack from the sea floor is approved.
    f. Your request to test the deadman/autoshear system during the stump test only is approved.
    g. Your requested method to temporarily abandon the proposed pilot hole is approved.
    h. Your request to eliminate the addition of a flare, to the Discoverer, for possible use during an H2S event is granted.
2. This office will conduct a predrill inspection of your drilling vessel prior to the start of operations.
3. Shell will not be able to drill below the 20 inch casing point without fulfilling the conditions stated in the letter accompanying these conditions.
4. No drilling activities may be conducted beyond each additional casing shoe unless specifically approved by the BSEE inspector on location. BSEE will evaluate the condition of the well, results of safety equipment tests, the nature and duration of the next phase of the drilling program, existing and forecasted environmental conditions, and the procedures under an approved contingency plan [30 CFR250.417(c)(2)] that addresses design and operating limitations of the drilling unit as well as the actions necessary (i.e. suspension, curtailment, or modification of drilling or rig operations) to remedy various operational or environmental situations in order to maintain safety and prevent damage to the environment; including implementing well capping and containment or relief well drilling plans.
5. Final certification of the blowout preventer system as required in 30 CFR 250.416 (f) shall be provided to this office prior to the initial use of the BOP on this well.
6. Data submission procedures and criteria for this well are listed in an attached document (Procedures for Well Data and Records Submittal)
7. Shell must submit a daily summary report on form BSEE-0133 to this office until the final status of the well is established (one copy). Daily marine mammal reports shall be attached to the form.
8. Shell must notify this office immediately in the event the well encounters shallow gas, abnormal pressure, or lost circulation.
9. Shell must provide this office with representative dry samples collected during the drilling of this well as soon as available. Shell is also requested to collect and retain a set of wet well cuttings for the Bureau of Ocean Energy Management. This request is voluntary and the samples are intended to provide for public access once the proprietary

term for the samples is concluded. Further discussions related to this voluntary request can be concluded with appropriate BOEM representatives.

10. Shell must submit within thirty days of completion of the well all oceanographic and meteorological data collected during the drilling of this well.
11. Shell must submit an Application for Permit to Modify to change any approved portion of the APD prior to the commencement of the proposed operations. Verbal approval in an emergency may be granted, however written APM's must be submitted no later than the end of the 3rd business day following the verbal approval.
12. Shell shall notify this office as well as the onsite representative 24 hours in advance of a Blowout Preventer test.
13. Shell must submit form BSEE – 0124 in advance of either temporarily or permanently abandoning this well. This form must contain all information required in 30 CFR 250, Subpart Q for abandonment of wells.

Attachment B

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT ALASKA OCS REGION

Procedures for Well Data and Records Submittal

This document defines the procedures on how lessees/operators submit well records required by 30 CFR 250.468 and 469, and clarifies the specific well records you should submit, the submittal dates of the various well records, and the correct locations where you should send these well records.

The BSEE collects, verifies, and stores data by the well's unique 12-digit American Petroleum Institute (API) number we assign. The BSEE Alaska Outer Continental Shelf Region (AKOCS) uses the data collected to make informed regulatory decisions based on your timely submittal of complete and accurate well records. We define "submittal date" as the original date the data are due to the appropriate office.

According to 30 CFR 250.468(a), "you must submit copies of logs or charts of electrical, radioactive, sonic, and other well-logging operations; directional and vertical well surveys; velocity profiles and surveys; and analysis of cores to BSEE." Also, in accordance with 30 CFR 250.469(b), the AKOCS will also require submittal of paleontological reports as well as washed and dried samples collected from the well.

When to Submit Well Data Records

1. Field Data

   As stated in the approval documents for these operations this office will take an active role in assess plans for the continuation of well activities. Shell will be expected to make available digital data and field prints electronically from the well site via a secure website data delivery system or equivalent to enable this review from this office. This should be done for all logging operations including pilot hole, surface, intermediate and final runs (both wireline and Measurement While Drilling logs). This also includes detailed mud logging data.

2. Final Data

   Operators should submit one copy of the digital data on a CD or DVD in a read-only format to the appropriate entity as outlined in Attachment 1. Each CD or DVD should be properly labeled with the Area, Block, OCS, Well Number, Well Suffix, API, and the data type (i.e., Paleo Report, Conventional Core Report,

Vertical Seismic Survey, etc.). Digital and image NMR data must be submitted on separate physical media and nomenclature for NMR data files and tool codes should clearly identify them as NMR datasets.

Well records are divided into four groups for the timely submittal of the data.

a) Well Log Data, Directional Surveys, Velocity Surveys, Analyses of Percussion Sidewall Cores, Wireline Formation Test Logs, Drill Stem Tests and Mudlogs/Reports

Submit:

Well log data,
Directional surveys,
Velocity surveys (time/depth pairs),
Percussion/rotary sidewall analysis of cores,
Wireline formation tests logs (summary log), and
Drill stem tests (initial report)

To be submitted within 30 days of the "Date Operations Completed" of the last logging run (MWD/LWD or wireline) that you report in Item 7 of the Open Hole Report (Form BSEE-0133S) for each 12-digit wellbore, sidetrack, and/or bypass. Note: "Date Operations Completed" for MWD/LWD is when the data is retrieved from the drill string.

b) Paleontological, Detailed Rotary Sidewall and Conventional Core Analyses, and Vertical Seismic Profile Reports and Information

For each wellbore in which these data were collected, submit no later than 90 days after the "TD DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

Detailed paleontological reports and information,
Detailed rotary sidewall and conventional core analyses/reports and information, and
Detailed vertical seismic profile reports

Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

c) Geochemical Analyses and PVT Analysis of Fluid Samples

For each wellbore in which these data were collected, submit geochemical analyses and/or PVT Analysis of Fluid Samples no later than 120 days

after the "TD DATE" that you report in Item 10 of the Well Activity Report (Form BSEE-0133). Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

d) End of Operations Report (Form BSEE-0125)

For each wellbore, submit an End of Operations Report (Form BSEE-0125) and all its attachments no later than 30 days after the "END DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

The BSEE AKOCS uses the Well Activity Report (Form BSEE-0133) and Open Hole Report (Form BSEE-0133S) to track well activity; therefore, it is crucial that you submit a complete and accurate report to the appropriate BSEE AKOCS District Office in a timely manner. We will treat delinquent and/or incomplete reports in the same manner as delinquent and/or incomplete well data, and such violations may result in the BSEE AKOCS exacting an appropriate remedy, such as issuing an Incident of Non-compliance (INC).

The BSEE AKOCS may request that you submit well logging data, directional surveys, velocity profiles and surveys, percussion sidewall analyses of cores, wireline formation tests, and drill stem tests before the 30- day limit when we determine that circumstances warrant such action. When we determine that circumstances so warrant, we may also request that you submit preliminary reports of analytical data, namely

Geochemical analyses/reports and information,
PVT analyses of fluid samples,
Detailed paleontological reports and information,
Detailed rotary sidewall core analysis and information, and
Detailed conventional core analysis and information before the respective 90-day or 120-day limits.

The BSEE AKOCS recognizes that you need adequate time to submit complete and accurate well records. If you request it, BSEE AKOCS may grant you a departure under 30 CFR 250.142 for a new required date for submitting the data pertaining to that wellbore.

Where to Submit Well Records

Shell will need to coordinate access to field digital well logs with the following office. This office will also handle receipt of dry samples.

Bureau of Safety and Environmental Enforcement
Alaska OCS Office
3801 Centerpoint Dr., Suite 500
Anchorage, AK 99503
Office Phone: 907-334-5300
Office Fax: 907-334-5302

Shell will provide final copies of all digital image and vector well log data and related reports to both the Alaska BSEE office and to:

A2D Technologies
d/b/a TGS Geological Products and Services
1010 Common Street, Suite 2040
Attn: BSEE Well Records (Alaska)
New Orleans, LA 70112
Office telephone: 504-524-3450
Fax: 504-524-3454

A "Well Records Submission Summary" in Attachment B of this document provides an overview of the various well records, including which entity receives which well records and the addresses and contact numbers of the appropriate BSEE AKOCS Offices, and A2D Technologies. We strongly recommend that you provide a transmittal letter when you submit any well records. This transmittal should contain the following information:

- Operator's Name
- Operator's Contact Name and Telephone Number
- Bottomhole Location: Area/Block/Lease/Well Name and Number/API Number
- Date Well Records Sent
- Detailed List of Well Records

It is your responsibility to ensure that the BSEE AKOCS and A2D Technologies receive all well data and information within the specific periods. If we notify you of delinquent data, we will initiate an appropriate remedy, such as issuing an Incident of Non-Compliance (INC). If you choose to use a third party to submit well data, it remains your responsibility to ensure that the data are timely received by the BSEE AKOCS and A2D Technologies. Realizing that you may need time beyond the specified deadlines to prepare unique data or information, we will address the submission of such on an individual basis. We will address INC's issued by the BSEE AKOCS Office for the delinquent data submittal at your yearly performance review or through other appropriate and timely measures.

Well Naming and Numbering

Show the API Number and well name assigned by the BSEE AKOCS Office on all well records you submit to us. You can find these on the approved Application for Permit to Drill (Form BSEE-0123) for the original hole, sidetracks, and/or bypasses.

Data Types and Formats

A. Well Log Data types

a. Log Curve Requirements: Submit the following curve types and log images in final form, if the data were obtained in the open-hole portion of a wellbore, sidetrack, or bypass****:

- Acoustic or Sonic
- Bulk Density
- Caliper
- Conductivity
- Density Correction
- Dipmeter (computed)
- Gamma Ray Resistivity/Induction
- Spontaneous Potential
- Nuclear Magnetic Resonance *
- Mudlogs***
- Neutron
- Tension
- Porosity
- Borehole Image
- Equivalent circulation density
- Rwa
- Temperature
- Formation Tester**
- Rate of Penetration
- Photoelectric
- Slide Indicator

b. Cased hole log data: Submit all curve types and log images as identified above for any cased hole logs collected in lieu of, or in addition to, open hole logs.

* For the submittal of digital NMR vector curve data, The following are examples of curve types are to be submitted, and are not limited to you should submit:

- Quality Control Curves
- Computed Curves
- T2 Bin Distributions

Due to NMR file sizes and complexities, the BSEE now requires that digital and image NMR data are submitted on separate physical media (separate from other well log data) to its logging contractor, A2D Technologies. Also, NMR data file and tool code nomenclature should clearly identify these data as NMR-related. We encourage direct submittal of the completed log data set from the acquiring service company.

** Formation Tester is considered any logging tool that collects pressure data and/or fluid samples from the borehole. Summary Print log images, pressure gradient plots, and preliminary sample analysis must be submitted. Formation Tester summary data should also be submitted in ASCII format. All detailed reports (i.e., PVT Analysis) generated from the samples collected from the borehole must be submitted in a timely manner (see Attachment 1).

*** You will be required to submit an image file for these types of logs to A2D Technologies.

****Although API Recommended Practice (RP) 31A, Standard Form for Hardcopy Presentation of Downhole Well Log Data, is not incorporated by reference in BSEE regulations, you may use it for guidance on providing complete and accurate well information.

Note: Do not submit digital data for Formation Tester, Borehole Image, and Computed Dipmeter to A2D Technologies.

c. Well Log Image File:

Submit image files in one of the formats listed below. For Formation Tester type logs, the summary logs will suffice

i. For all vertical wells, as defined in 30 CFR 250.461, submit image files for

- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs and
- Any additional scales you obtained.

ii. For all non-vertical wells, as defined in 30 CFR 250.461, submit image files for

- True vertical depth (TVD) 1-inch, or 2-inch correlation and, 5-inch formation evaluation logs,
- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs, and
- Any additional scales you obtained.

Detailed 5- inch image logs must be composited, but individual runs do not need to be spliced.

If logging data from more than one logging vendor are collected in a borehole, you may submit either an image of the logging data from all vendors composited into a single set of logs or a set of images of the composited logs from each individual vendor.

d. Image File Formats: If the original log is in color, the submitted image file should also be in color.

i. The following image file formats are preferred:

- Computer Graphic Metafile (CGM) version 1-4
- Baker Metafile
- Schlumberger PDS (PDS files are usually for one logging run; any borehole with multiple runs should submit composited file format)
- Halliburton CGM
- Weatherford DPK

If the preferred formats listed above are not available, you may submit the image file in the Tag Image File Format (TIFF) with the following specifications:

ii. Format (TIFF) with the following specifications:

1. Black and White TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

2. Color TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling - No

Clearly label each well log image with its associated API number, bottom hole lease number, well name, well name suffix, log type, scale and depth domain (MD or TVD).

e. Digital (Vector) Well Log Data: Submit composite digital curve data (one value per curve for each depth value and with individual tool runs merged) in the Canadian Well Log Society Log ASCII Standard (LAS), Version 2.0 formats; and Digital Log Interchange Standard (DLIS) or Log Interchange Standard (LIS) format. Ensure that the curve data are in a MD composite layout, including full headers for each wireline and MWD/LWD logging tool run and curve description for all curves. Ensure that all required log curves represented on the log image file are included in the digital curve file. If you collect logging data from more

than one logging vendor in a single borehole, submit a separate set of composited log curves from each individual vendor. Do not splice digital curves from different vendors to form a set of composited log curves.

i. Full header information, should including the following:

- 12-digit API number
- well name suffix
- bottom hole lease number
- bottom hole area and block
- well name

ii. Information for each tool run, should including the following:

- borehole fluids
- depth interval
- mud
- filtrate resistivity and temperatures
- casing information
- bottomhole or maximum recorded temperature
- circulation history information
- tool schematic
- tool calibration record

Full logging tool parameters (including matrix values), position of logging tool (i.e., centered or eccentered), and logging engineer's comments; and adequate curve description and

Tool -specific and service provider-specific curve and parameter mnemonics (names and abbreviations) maintained as originally acquired.

If a log is spliced, the splice depth should be clearly noted along with which files were used.

Submit digital and image logs on CD or DVD ROM (read-only memory). Digital and image logs may be submitted on the same CD or DVD.

Directional Surveys

Submit one digital copy of the final composite directional survey. For the Digital Directional Survey format, see NTL 2009-N10.

- Submit, on CD or DVD ROM these survey results coded in ASCII.
- According to 30 CFR 250.461(d) (2), "You must correct all surveys to Universal-Transverse- Mercator-Grid-north or Lambert-Grid-north after making the magnetic-to-true-north correction."

If your use of more than one vendor prevents the consolidation of the separate surveys within a well, submit the final composite survey from each vendor.

Velocity Profiles and Surveys

Vertical Seismic Profiles: Submit the results from all borehole seismic data (in cased or uncased holes), as well as concurrently run directional surveys for both vertical and directional wells. Submit, on CD or DVD ROM, digitally recorded data in an industry standard format (LAS, DLIS, ASCII, CGM, TIFF, JPG, SEGY, DOC), that include, but are not limited to:

- Normal Incidence VSP;
- Acoustic Log Calibration Report;
- Final VSP and Corridor stacks for 2D data and final stacked and migrated volume for 3D VSP data;
- Composite plot with VSP, Corridor stacks, synthetic seismogram, and well logs;
- any referenced information within the report correlative with the acquisition, such as 2-way time indexed depths and velocities, survey parameters, digital images, and computed survey data and directional; and
- If acquired, format time/depth pairs.

Velocity Surveys (Time-Depth Pairs/Checkshots): Submit, on CD or DVD ROM, one digital copy coded in ASCII format. The report should include or be annotated with the following:

- API number
- Well name and number
- Well name suffix
- Contractor or service provider
- Contact name (phone number or e-mail address)

Note that the digital format has been modified to expand the columns for True Vertical Depth and One- Way Travel Time from 5 to 8 to include two decimal places for each column.

We encourage direct submittal of the completed survey from the acquiring service company.

Analysis of Conventional Cores, Percussion/Rotary Sidewall Cores, Wireline Formation Tests, and Drill Stem Tests

IF...
you conduct any of the following:

- Conventional cores descriptions and analysis
- Percussion/Rotary sidewall core analysis or equivalent,
- Wireline formation tests - include any logs (summary logs are acceptable) and associated lab results, or
- Drill stem tests

THEN...

As soon as the final and/or revised conventional core, percussion/rotary sidewall core reports and/or data become available to you, send one digital copy of the entire, detailed report. Reports should include, but are not limited to the following:

- Standard analyses for porosity,
- Permeability
- Water saturation
- Core photos
- compaction analyses
- laser grain size analyses
- stressed brine porosity and permeability analyses
- rock mechanic studies
- water extraction and core gamma logs
- core photos

In addition, provide one copy of all studies you performed on the core(s) and tests for the purpose of describing and characterizing the reservoir architecture through detailed stratigraphic or depositional analyses. In certain situations, the BSEE AKOCS may require that you submit preliminary or interim reports.

Submit, on CD or DVD ROM, one copy of the description and analysis of the conventional core, the percussion/rotary sidewall core, wireline formation tests, and drill stem tests reports in the original digital format. Any data acquired in a log format should be submitted as a log image.

Geochemical Analyses/Reports and Information

Submit one copy of the Geochemical Analyses/Reports and Information in the original digital format. If you conducted any geochemical analyses/reports, including internal company or external contractor interpretation reports on

- Cuttings,
- Sidewall or conventional cores, and
- Fluid samples from the well. The term "sample" encompasses:
- Hydrocarbon gases, specifically methane through pentanes and C6+ hydrocarbons;
- Non-hydrocarbon gases (carbon dioxide, hydrogen sulfide, argon, helium, and radon); and
- Any liquid hydrocarbons (such as condensate, crude, and bitumen) encountered by the well in cuttings or shows and from any other well sampling or fluid testing.

The analyses, reports, and interpretations to be submitted include, but are not necessarily limited to, the following types of data:

- Total organic carbon
- Polynuclear aromatic hydrocarbons
- Rock-eval pyrolysis

- Stable isotope analyses of carbon & hydrogen
- Thermal chromatography-gas chromatography
- Compound-specific isotope ratio mass spectrometry
- Bulk pyrolysis & hydrous pyrolysis
- Isotope ratio mass spectrometry
- Gas chromatography
- Kerogen isolation & bitumen separation
- Pyrolysis/gas chromatography
- Organic petrography
- Complete saturated biomarker & aromatic hydrocarbon analysis by GC MS
- Vitrinite reflectance
- Elemental analysis of kerogen

In addition, submit all data and reports on geochemical characterization of produced oils, including

- All whole-oil GC, GC MS on oils,
- SARAH (or SARA),
- Isotopes on the fractions,
- Molecular and isotopic analyses of C1-C5 hydrocarbons metals data, and
- Any other geochemical data used from production samples intended for reservoir characterization studies.

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

Detailed Paleontological Reports and Information

As soon as the final and/or revised paleontological information and/or data become available to you, submit one copy in digital format of the entire, detailed paleontological report(s), chart(s), striplog(s), checklist(s), and any other paleontological records. Include the following:

The range of samples taken,

- Sample analysis identifying fossils and lithology by MD,
- Summary and interpretation (based on identification of foraminifera, nannofossils, or other microfossils) of all biostratigraphic markers, zones, tops, or local markers,
- Description of paleontological ecological zones with water depth at the time of deposition (e.g., Middle Shelf/Neritic 20-100 meters, Outer Shelf/Neritic 100-200 meters),
- Sequence analysis interpretations based on histograms of faunal abundance,
- Identification of all rock units by depth to the top of relative chronostratigraphic stages (e.g., Upper Pleistocene, Middle Miocene, or Lower Oligocene), and
- Pleistocene, Middle Miocene, or Lower Oligocene), and
- Biostratigraphic chart noting the relative ages of the biostratigraphic zones you used in the detailed paleontological reports.

Submit, on CD or DVD ROM, one copy of the detailed paleontological report in the original digital format.

Mudlogs and Reports

Submit one image copy of the following types of Mudlogs:

- Physical Formation Log
- Pore Pressure Log
- Engineering Log
- Show Report Log

Image File Formats for Mudlogs: If the original log is in color, the submitted image file must also be in color.

The following image file formats are preferred:

- Geologix - geo draft file (.gdf)
- Geologix - output data file (.odf)

If the preferred formats listed above are not available, submit the image file in the Tag Image File

Format (TIFF) with the following specifications:

Black and White TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

Color TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling – No.

Submit one copy of the following types of Mudlogs reports, if collected:
- Show reports – composite into one file
- Mud reports – composite into one file
- End of Well reports – composite into one file
- Daily Drilling reports – composite into one file

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

End of Operations Report (Form BSEE-0125) and Attachments

Pursuant to 30 CFR 250.465(a), you must submit End of Operations Report (Form BSEE-0125) and the required attachments.

Additional Information

Pursuant to 30 CFR 250.469(d), the BSEE AKOCS may require that you submit additional well reports or records for a specific well(s).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF THE
REGIONAL
ADMINISTRATOR

JUL 27 2012

Mr. Mark Fesmire
Director of Alaska Region
Bureau of Safety and Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5820

Dear Mr. Fesmire:

The U.S. Environmental Protection Agency, Region 10, is contacting the Bureau of Safety and Environmental Enforcement to finalize the EPA's request for assistance in conducting inspections and collecting data on exploration facilities located on the Alaska outer continental shelf during the 2012 drilling season.

Our respective agency inspectors have been working cooperatively to develop procedures to assist BSEE inspectors in conducting inspections and collecting data related to exploration facilities covered by the National Pollutant Discharge Elimination System General Permit for Oil and Gas Exploration Facilities on the Outer Continental Shelf and Contiguous State Waters, NPDES Permit No. AKG-28-0000, and EPA-issued air quality permits. These procedures are based, in part, on the 1993 memorandum of agreement between the EPA and the Minerals Management Service that was intended to improve cooperation and coordination in oil and gas lease activities on the outer continental shelf.

Our proposed joint efforts will assist the EPA's ongoing OCS compliance and enforcement program and increase regulatory accountability of exploration facilities that are drilling in the OCS during the 2012 drilling season. The respective agency inspectors are in the process of developing the procedures for these joint efforts and in working through logistical and procedural issues that may arise during the drilling season.

Accordingly, I want to take this opportunity to recognize BSEE's ongoing assistance and to request your confirmation of our joint efforts for this drilling season. Please contact me or have your staff contact Mr. Rick Cool in our Office of Compliance and Enforcement at 206-553-6223 if you have any questions about this letter.

Sincerely,

Dennis J. McLerran
Regional Administrator

From:	John.A.Henley@shell.com
To:	Monkelien, Kyle
Cc:	Pauline.Ruddy@shell.com; Jim.Miller@shell.com; Chris.Riley@shell.com; donald.brown@shell.com; Fesmire, Mark E
Subject:	Confidential - (b) (4), (b) (9)
Date:	Tuesday, October 09, 2012 4:43:16 PM

Kyle:

Per our phone conversation, see the contingency summary below.

We'll proceed with these protocols unless we hear from something from you / your office.

(b) (4), (b) (9)

Best regards,
John A. Henley
Sr. Drilling Engineer
Shell Exploration & Production Company
One Shell Square, P. O. Box 61933, New Orleans, LA 70161-1933, United States of America
Tel: +1.504.728.4478
Mob: +1.281.795.0250
Email: john.a.henley@shell.com

United States Department of the Interior

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
Alaska OCS Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

OCT 18 2012

Ms. Susan Childs
Shell Gulf of Mexico, Inc.
3601 C Street, Suite 1334
Anchorage, AK 99503
United States of America

Dear Ms. Childs:

The Alaska Region of the Bureau of Safety and Environmental Enforcement (BSEE) is in receipt of Shell's Application for a Permit to Drill (APD) **Well Number 001, Burger V, on lease OCS Y-2324, Posey Block 6915, in the Chukchi Sea (API number 55-352-00007-00).** An initial application was submitted April 2012 and completed September 2012. In a letter to BSEE from Shell Vice President Peter Slaiby, dated August 21, 2012, you sought "conditional approval" of the APD to allow for limited drilling operations before the arrival of the Arctic Containment System. In particular, you requested permission to drill and set the 30" structural and the 20" surface casings. Your application has been reviewed for compliance with the Outer Continental Shelf (OCS) Lands Act, 30 CFR Part 250 and other statutes and regulations applicable to APDs. [redacted] (b) (4), (b) (9) [redacted] Upon completion of the testing and siting of the Arctic Containment System Shell will submit an Application for Permit to Modify, which, if approved, would allow Shell to continue operations outlined in the initial APD.

This approval is based on the findings below and subject to the conditions attached to this communication as Attachment A, Conditions of Approval for the Burger V, Well #001 and Attachment B Procedures for Well Data and Records Submittal. It is also conditioned on Shell's compliance during the permitted activities with all applicable BSEE regulations and requirements, U.S. Coast Guard regulations and requirements, provisions in the Exploration Plan (EP) as approved by the Bureau of Ocean Energy Management (BOEM) December 2011, BOEM regulations and requirements, provisions in the Oil Spill Response Plan approved by BSEE, conditions of approval for all permits or authorizations issued by Federal agencies, all lease stipulations, and Notices to Lessees.

This approval is valid unless and until there is a material change to conditions or facts as presented in Shell's application.

If any provision contained in any plan or application conflicts with any provision or condition approved in writing by BSEE, the provision or condition approved by BSEE later in time will control. In the event another agency approves deviations from plans, permits or conditions initially issued by that agency, copies of such approvals must be sent to BSEE.

In a letter dated August 30, 2012 BSEE approved both the Noble Discoverer and the Kulluk for operations in the Arctic OCS. Also as stated in that letter, in the event hydrogen sulfide Is found during the drilling operations the Kulluk will be required to comply with 30 CFR 250.490 if used as a relief well rig.

BSEE further finds that Shell's proposed well capping and containment systems have been designed for the projected worst case discharge conditions. The intended uses of these systems are hereby approved. BSEE will require that a witnessed deployment test of the containment system in which Shell has demonstrated that it has the ability to successfully deploy the system and have it on location pursuant to the oil spill response plan prior to BSEE's consideration of Shell's request to drill below the 20 inch casing point.

In a letter dated August 30, 2012 BSEE approved Shell's Welding and Burning Program and Hydrogen Sulfide Contingency Plans for operations conducted on the Noble Discoverer.

BSEE will provide a continuous inspection presence during drilling operations and will use Shell transportation and lodging for this purpose. As allowed in 30 CFR 250.133, Shell will request reimbursement for transportation based on the existing agreement between Shell, DOI Aviation Management Division and BSEE. Reimbursement for meals and lodging must be submitted within 90 days of the completion of the drilling program. In addition BSEE will be conducting inspections and collecting data in regard to the EPA's National Pollutant Discharge Elimination System General Permit No. AKG-28-0000 and EPA issued air quality permits at the request of the EPA by letter dated July 27, 2012(copy enclosed).

All notifications related to activities described in the approved applications should be made to the BSEE active duty officer at 907-334-5300 during business hours and 855-277-2733 (toll free) after business hours.

Sincerely,

Mark Fesmire PE, JD
Regional Director, BSEE

Cc: U.S. DOI, BOEM, AKOCS, Regional Director
Cc: U.S. DOC, NOAA, NMFS
Cc: U.S. DOI, Fish and Wildlife Service

ATTACHMENT A
Conditions of Approval for the Burger V, #001 Well

1. The following waivers have been authorized:
    a. Testing of casing strings as indicated on Form BSEE -0123S is approved.
    b. Your request for a waiver to the requirements under 30 CFR 250. 423 (c) regarding a negative pressure test is approved.
    c. Testing of the BOP components to the pressures indicated on Form BSEE -0123S is approved.
    d. Your test pressure for the annular preventer as indicated on Form BSEE -0123S is approved.
    e. Deployment of a remote BOP control panel intended to operate the BOP stack from the sea floor is approved.
    f. Your request to test the deadman/autoshear system during the stump test only is approved.
    g. Your requested method to temporarily abandon the proposed pilot hole is approved.
    h. Your request to eliminate the addition of a flare, to the Discoverer, for possible use during an H2S event is granted.
2. This office will conduct a predrill inspection of your drilling vessel prior to the start of operations.
3. Shell will not be able to drill below the 20 inch casing point without fulfilling the conditions stated in the letter accompanying these conditions.
4. No drilling activities may be conducted beyond each additional casing shoe unless specifically approved by the BSEE inspector on location. BSEE will evaluate the condition of the well, results of safety equipment tests, the nature and duration of the next phase of the drilling program, existing and forecasted environmental conditions, and the procedures under an approved contingency plan [30 CFR250.417(c)(2)] that addresses design and operating limitations of the drilling unit as well as the actions necessary (i.e. suspension, curtailment, or modification of drilling or rig operations) to remedy various operational or environmental situations in order to maintain safety and prevent damage to the environment; including implementing well capping and containment or relief well drilling plans.
5. Final certification of the blowout preventer system as required in 30 CFR 250.416 (f) shall be provided to this office prior to the initial use of the BOP on this well.
6. Data submission procedures and criteria for this well are listed in an attached document (Procedures for Well Data and Records Submittal)
7. Shell must submit a daily summary report on form BSEE-0133 to this office until the final status of the well is established (one copy). Daily marine mammal reports shall be attached to the form.
8. Shell must notify this office immediately in the event the well encounters shallow gas, abnormal pressure, or lost circulation.
9. Shell must provide this office with representative dry samples collected during the drilling of this well as soon as available. Shell is also requested to collect and retain a set of wet well cuttings for the Bureau of Ocean Energy Management. This request is voluntary and the samples are intended to provide for public access once the proprietary

term for the samples is concluded. Further discussions related to this voluntary request can be concluded with appropriate BOEM representatives.

10. Shell must submit within thirty days of completion of the well all oceanographic and meteorological data collected during the drilling of this well.
11. Shell must submit an Application for Permit to Modify to change any approved portion of the APD prior to the commencement of the proposed operations. Verbal approval in an emergency may be granted, however written APM's must be submitted no later than the end of the 3rd business day following the verbal approval.
12. Shell shall notify this office as well as the onsite representative 24 hours in advance of a Blowout Preventer test.
13. Shell must submit form BSEE – 0124 in advance of either temporarily or permanently abandoning this well. This form must contain all information required in 30 CFR 250, Subpart Q for abandonment of wells.

Attachment B

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
ALASKA OCS REGION

Procedures for Well Data and Records Submittal

This document defines the procedures on how lessees/operators submit well records required by 30 CFR 250.468 and 469, and clarifies the specific well records you should submit, the submittal dates of the various well records, and the correct locations where you should send these well records.

The BSEE collects, verifies, and stores data by the well's unique 12-digit American Petroleum Institute (API) number we assign. The BSEE Alaska Outer Continental Shelf Region (AKOCS) uses the data collected to make informed regulatory decisions based on your timely submittal of complete and accurate well records. We define "submittal date" as the original date the data are due to the appropriate office.

According to 30 CFR 250.468(a), "you must submit copies of logs or charts of electrical, radioactive, sonic, and other well-logging operations; directional and vertical well surveys; velocity profiles and surveys; and analysis of cores to BSEE." Also, in accordance with 30 CFR 250.469(b), the AKOCS will also require submittal of paleontological reports as well as washed and dried samples collected from the well.

When to Submit Well Data Records

1. Field Data

   As stated in the approval documents for these operations this office will take an active role in assess plans for the continuation of well activities. Shell will be expected to make available digital data and field prints electronically from the well site via a secure website data delivery system or equivalent to enable this review from this office. This should be done for all logging operations including pilot hole, surface, intermediate and final runs (both wireline and Measurement While Drilling logs). This also includes detailed mud logging data.

2. Final Data

   Operators should submit one copy of the digital data on a CD or DVD in a read-only format to the appropriate entity as outlined in Attachment 1. Each CD or DVD should be properly labeled with the Area, Block, OCS, Well Number, Well Suffix, API, and the data type (i.e., Paleo Report, Conventional Core Report,

Vertical Seismic Survey, etc.). Digital and image NMR data must be submitted on separate physical media and nomenclature for NMR data files and tool codes should clearly identify them as NMR datasets.

Well records are divided into four groups for the timely submittal of the data.

a) Well Log Data, Directional Surveys, Velocity Surveys, Analyses of Percussion Sidewall Cores, Wireline Formation Test Logs, Drill Stem Tests and Mudlogs/Reports

Submit:

Well log data,
Directional surveys,
Velocity surveys (time/depth pairs),
Percussion/rotary sidewall analysis of cores,
Wireline formation tests logs (summary log), and
Drill stem tests (initial report)

To be submitted within 30 days of the "Date Operations Completed" of the last logging run (MWD/LWD or wireline) that you report in Item 7 of the Open Hole Report (Form BSEE-0133S) for each 12-digit wellbore, sidetrack, and/or bypass. Note: "Date Operations Completed" for MWD/LWD is when the data is retrieved from the drill string.

b) Paleontological, Detailed Rotary Sidewall and Conventional Core Analyses, and Vertical Seismic Profile Reports and Information

For each wellbore in which these data were collected, submit no later than 90 days after the "TD DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

Detailed paleontological reports and information,
Detailed rotary sidewall and conventional core analyses/reports and information, and
Detailed vertical seismic profile reports

Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

c) Geochemical Analyses and PVT Analysis of Fluid Samples

For each wellbore in which these data were collected, submit geochemical analyses and/or PVT Analysis of Fluid Samples no later than 120 days

after the "TD DATE" that you report in Item 10 of the Well Activity Report (Form BSEE-0133). Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

d) End of Operations Report (Form BSEE-0125)

For each wellbore, submit an End of Operations Report (Form BSEE-0125) and all its attachments no later than 30 days after the "END DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

The BSEE AKOCS uses the Well Activity Report (Form BSEE-0133) and Open Hole Report (Form BSEE-0133S) to track well activity; therefore, it is crucial that you submit a complete and accurate report to the appropriate BSEE AKOCS District Office in a timely manner. We will treat delinquent and/or incomplete reports in the same manner as delinquent and/or incomplete well data, and such violations may result in the BSEE AKOCS exacting an appropriate remedy, such as issuing an Incident of Non-compliance (INC).

The BSEE AKOCS may request that you submit well logging data, directional surveys, velocity profiles and surveys, percussion sidewall analyses of cores, wireline formation tests, and drill stem tests before the 30- day limit when we determine that circumstances warrant such action. When we determine that circumstances so warrant, we may also request that you submit preliminary reports of analytical data, namely

Geochemical analyses/reports and information,
PVT analyses of fluid samples,
Detailed paleontological reports and information,
Detailed rotary sidewall core analysis and information, and
Detailed conventional core analysis and information before the respective 90-day or 120-day limits.

The BSEE AKOCS recognizes that you need adequate time to submit complete and accurate well records. If you request it, BSEE AKOCS may grant you a departure under 30 CFR 250.142 for a new required date for submitting the data pertaining to that wellbore.

Where to Submit Well Records

Shell will need to coordinate access to field digital well logs with the following office. This office will also handle receipt of dry samples.

Bureau of Safety and Environmental Enforcement
Alaska OCS Office
3801 Centerpoint Dr., Suite 500
Anchorage, AK 99503
Office Phone: 907-334-5300
Office Fax: 907-334-5302

Shell will provide final copies of all digital image and vector well log data and related reports to both the Alaska BSEE office and to:

A2D Technologies
d/b/a TGS Geological Products and Services
1010 Common Street, Suite 2040
Attn: BSEE Well Records (Alaska)
New Orleans, LA 70112
Office telephone: 504-524-3450
Fax: 504-524-3454

A "Well Records Submission Summary" in Attachment B of this document provides an overview of the various well records, including which entity receives which well records and the addresses and contact numbers of the appropriate BSEE AKOCS Offices, and A2D Technologies. We strongly recommend that you provide a transmittal letter when you submit any well records. This transmittal should contain the following information:

- Operator's Name
- Operator's Contact Name and Telephone Number
- Bottomhole Location: Area/Block/Lease/Well Name and Number/API Number
- Date Well Records Sent
- Detailed List of Well Records

It is your responsibility to ensure that the BSEE AKOCS and A2D Technologies receive all well data and information within the specific periods. If we notify you of delinquent data, we will initiate an appropriate remedy, such as issuing an Incident of Non-Compliance (INC). If you choose to use a third party to submit well data, it remains your responsibility to ensure that the data are timely received by the BSEE AKOCS and A2D Technologies. Realizing that you may need time beyond the specified deadlines to prepare unique data or information, we will address the submission of such on an individual basis. We will address INC's issued by the BSEE AKOCS Office for the delinquent data submittal at your yearly performance review or through other appropriate and timely measures.

Well Naming and Numbering

Show the API Number and well name assigned by the BSEE AKOCS Office on all well records you submit to us. You can find these on the approved Application for Permit to Drill (Form BSEE-0123) for the original hole, sidetracks, and/or bypasses.

Data Types and Formats

A. Well Log Data types

a. Log Curve Requirements: Submit the following curve types and log images in final form, if the data were obtained in the open-hole portion of a wellbore, sidetrack, or bypass****:

- Acoustic or Sonic
- Bulk Density
- Caliper
- Conductivity
- Density Correction
- Dipmeter (computed)
- Gamma Ray Resistivity/Induction
- Spontaneous Potential
- Nuclear Magnetic Resonance *
- Mudlogs***
- Neutron
- Tension
- Porosity
- Borehole Image
- Equivalent circulation density
- Rwa
- Temperature
- Formation Tester**
- Rate of Penetration
- Photoelectric
- Slide Indicator

b. Cased hole log data: Submit all curve types and log images as identified above for any cased hole logs collected in lieu of, or in addition to, open hole logs.

* For the submittal of digital NMR vector curve data, The following are examples of curve types are to be submitted, and are not limited to you should submit:

- Quality Control Curves
- Computed Curves
- T2 Bin Distributions

Due to NMR file sizes and complexities, the BSEE now requires that digital and image NMR data are submitted on separate physical media (separate from other well log data) to its logging contractor, A2D Technologies. Also, NMR data file and tool code nomenclature should clearly identify these data as NMR-related. We encourage direct submittal of the completed log data set from the acquiring service company.

** Formation Tester is considered any logging tool that collects pressure data and/or fluid samples from the borehole. Summary Print log images, pressure gradient plots, and preliminary sample analysis must be submitted. Formation Tester summary data should also be submitted in ASCII format. All detailed reports (i.e., PVT Analysis) generated from the samples collected from the borehole must be submitted in a timely manner (see Attachment 1).

*** You will be required to submit an image file for these types of logs to A2D Technologies.

****Although API Recommended Practice (RP) 31A, Standard Form for Hardcopy Presentation of Downhole Well Log Data, is not incorporated by reference in BSEE regulations, you may use it for guidance on providing complete and accurate well information.

Note: Do not submit digital data for Formation Tester, Borehole Image, and Computed Dipmeter to A2D Technologies.

c. Well Log Image File:

Submit image files in one of the formats listed below. For Formation Tester type logs, the summary logs will suffice

i. For all vertical wells, as defined in 30 CFR 250.461, submit image files for

- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs and
- Any additional scales you obtained.

ii. For all non-vertical wells, as defined in 30 CFR 250.461, submit image files for

- True vertical depth (TVD) 1-inch, or 2-inch correlation and, 5-inch formation evaluation logs,
- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs, and
- Any additional scales you obtained.

Detailed 5- inch image logs must be composited, but individual runs do not need to be spliced.

If logging data from more than one logging vendor are collected in a borehole, you may submit either an image of the logging data from all vendors composited into a single set of logs or a set of images of the composited logs from each individual vendor.

d. Image File Formats: If the original log is in color, the submitted image file should also be in color.

i. The following image file formats are preferred:

- Computer Graphic Metafile (CGM) version 1-4
- Baker Metafile
- Schlumberger PDS (PDS files are usually for one logging run; any borehole with multiple runs should submit composited file format)
- Halliburton CGM
- Weatherford DPK

If the preferred formats listed above are not available, you may submit the image file in the Tag Image File Format (TIFF) with the following specifications:

ii. Format (TIFF) with the following specifications:

1. Black and White TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

2. Color TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling - No

Clearly label each well log image with its associated API number, bottom hole lease number, well name, well name suffix, log type, scale and depth domain (MD or TVD).

e. Digital (Vector) Well Log Data: Submit composite digital curve data (one value per curve for each depth value and with individual tool runs merged) in the Canadian Well Log Society Log ASCII Standard (LAS), Version 2.0 formats; and Digital Log Interchange Standard (DLIS) or Log Interchange Standard (LIS) format. Ensure that the curve data are in a MD composite layout, including full headers for each wireline and MWD/LWD logging tool run and curve description for all curves. Ensure that all required log curves represented on the log image file are included in the digital curve file. If you collect logging data from more

than one logging vendor in a single borehole, submit a separate set of composited log curves from each individual vendor. Do not splice digital curves from different vendors to form a set of composited log curves.

i. Full header information, should including the following:

- 12-digit API number
- well name suffix
- bottom hole lease number
- bottom hole area and block
- well name

ii. Information for each tool run, should including the following:

- borehole fluids
- depth interval
- mud
- filtrate resistivity and temperatures
- casing information
- bottomhole or maximum recorded temperature
- circulation history information
- tool schematic
- tool calibration record

Full logging tool parameters (including matrix values), position of logging tool (i.e., centered or eccentered), and logging engineer's comments; and adequate curve description and

Tool -specific and service provider-specific curve and parameter mnemonics (names and abbreviations) maintained as originally acquired.

If a log is spliced, the splice depth should be clearly noted along with which files were used.

Submit digital and image logs on CD or DVD ROM (read-only memory). Digital and image logs may be submitted on the same CD or DVD.

Directional Surveys

Submit one digital copy of the final composite directional survey. For the Digital Directional Survey format, see NTL 2009-N10.

- Submit, on CD or DVD ROM these survey results coded in ASCII.
- According to 30 CFR 250.461(d) (2), "You must correct all surveys to Universal-Transverse- Mercator-Grid-north or Lambert-Grid-north after making the magnetic-to-true-north correction."

If your use of more than one vendor prevents the consolidation of the separate surveys within a well, submit the final composite survey from each vendor.

Velocity Profiles and Surveys

Vertical Seismic Profiles: Submit the results from all borehole seismic data (in cased or uncased holes), as well as concurrently run directional surveys for both vertical and directional wells. Submit, on CD or DVD ROM, digitally recorded data in an industry standard format (LAS, DLIS, ASCII, CGM, TIFF, JPG, SEGY, DOC), that include, but are not limited to:

- Normal Incidence VSP;
- Acoustic Log Calibration Report;
- Final VSP and Corridor stacks for 2D data and final stacked and migrated volume for 3D VSP data;
- Composite plot with VSP, Corridor stacks, synthetic seismogram, and well logs;
- any referenced information within the report correlative with the acquisition, such as 2-way time indexed depths and velocities, survey parameters, digital images, and computed survey data and directional; and
- If acquired, format time/depth pairs.

Velocity Surveys (Time-Depth Pairs/Checkshots): Submit, on CD or DVD ROM, one digital copy coded in ASCII format. The report should include or be annotated with the following:

- API number
- Well name and number
- Well name suffix
- Contractor or service provider
- Contact name (phone number or e-mail address)

Note that the digital format has been modified to expand the columns for True Vertical Depth and One- Way Travel Time from 5 to 8 to include two decimal places for each column.

We encourage direct submittal of the completed survey from the acquiring service company.

Analysis of Conventional Cores, Percussion/Rotary Sidewall Cores, Wireline Formation Tests, and Drill Stem Tests

IF...
you conduct any of the following:

- Conventional cores descriptions and analysis
- Percussion/Rotary sidewall core analysis or equivalent,
- Wireline formation tests - include any logs (summary logs are acceptable) and associated lab results, or
- Drill stem tests

THEN...

As soon as the final and/or revised conventional core, percussion/rotary sidewall core reports and/or data become available to you, send one digital copy of the entire, detailed report. Reports should include, but are not limited to the following:

- Standard analyses for porosity,
- Permeability
- Water saturation
- Core photos
- compaction analyses
- laser grain size analyses
- stressed brine porosity and permeability analyses
- rock mechanic studies
- water extraction and core gamma logs
- core photos

In addition, provide one copy of all studies you performed on the core(s) and tests for the purpose of describing and characterizing the reservoir architecture through detailed stratigraphic or depositional analyses. In certain situations, the BSEE AKOCS may require that you submit preliminary or interim reports.

Submit, on CD or DVD ROM, one copy of the description and analysis of the conventional core, the percussion/rotary sidewall core, wireline formation tests, and drill stem tests reports in the original digital format. Any data acquired in a log format should be submitted as a log image.

Geochemical Analyses/Reports and Information

Submit one copy of the Geochemical Analyses/Reports and Information in the original digital format. If you conducted any geochemical analyses/reports, including internal company or external contractor interpretation reports on

- Cuttings,
- Sidewall or conventional cores, and
- Fluid samples from the well. The term "sample" encompasses:
- Hydrocarbon gases, specifically methane through pentanes and C6+ hydrocarbons;
- Non-hydrocarbon gases (carbon dioxide, hydrogen sulfide, argon, helium, and radon); and
- Any liquid hydrocarbons (such as condensate, crude, and bitumen) encountered by the well in cuttings or shows and from any other well sampling or fluid testing.

The analyses, reports, and interpretations to be submitted include, but are not necessarily limited to, the following types of data:

- Total organic carbon
- Polynuclear aromatic hydrocarbons
- Rock-eval pyrolysis

- Stable isotope analyses of carbon & hydrogen
- Thermal chromatography-gas chromatography
- Compound-specific isotope ratio mass spectrometry
- Bulk pyrolysis & hydrous pyrolysis
- Isotope ratio mass spectrometry
- Gas chromatography
- Kerogen isolation & bitumen separation
- Pyrolysis/gas chromatography
- Organic petrography
- Complete saturated biomarker & aromatic hydrocarbon analysis by GC MS
- Vitrinite reflectance
- Elemental analysis of kerogen

In addition, submit all data and reports on geochemical characterization of produced oils, including

- All whole-oil GC, GC MS on oils,
- SARAH (or SARA),
- Isotopes on the fractions,
- Molecular and isotopic analyses of C1-C5 hydrocarbons metals data, and
- Any other geochemical data used from production samples intended for reservoir characterization studies.

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

Detailed Paleontological Reports and Information

As soon as the final and/or revised paleontological information and/or data become available to you, submit one copy in digital format of the entire, detailed paleontological report(s), chart(s), striplog(s), checklist(s), and any other paleontological records. Include the following:

The range of samples taken,
- Sample analysis identifying fossils and lithology by MD,
- Summary and interpretation (based on identification of foraminifera, nannofossils, or other microfossils) of all biostratigraphic markers, zones, tops, or local markers,
- Description of paleontological ecological zones with water depth at the time of deposition (e.g., Middle Shelf/Neritic 20-100 meters, Outer Shelf/Neritic 100-200 meters),
- Sequence analysis interpretations based on histograms of faunal abundance,
- Identification of all rock units by depth to the top of relative chronostratigraphic stages (e.g., Upper Pleistocene, Middle Miocene, or Lower Oligocene), and
- Pleistocene, Middle Miocene, or Lower Oligocene), and
- Biostratigraphic chart noting the relative ages of the biostratigraphic zones you used in the detailed paleontological reports.

Submit, on CD or DVD ROM, one copy of the detailed paleontological report in the original digital format.

Mudlogs and Reports

Submit one image copy of the following types of Mudlogs:

- Physical Formation Log
- Pore Pressure Log
- Engineering Log
- Show Report Log

Image File Formats for Mudlogs: If the original log is in color, the submitted image file must also be in color.

The following image file formats are preferred:

- Geologix - geo draft file (.gdf)
- Geologix - output data file (.odf)

If the preferred formats listed above are not available, submit the image file in the Tag Image File

Format (TIFF) with the following specifications:

Black and White TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

Color TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling – No.

Submit one copy of the following types of Mudlogs reports, if collected:
- Show reports – composite into one file
- Mud reports – composite into one file
- End of Well reports – composite into one file
- Daily Drilling reports – composite into one file

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

End of Operations Report (Form BSEE-0125) and Attachments

Pursuant to 30 CFR 250.465(a), you must submit End of Operations Report (Form BSEE-0125) and the required attachments.

Additional Information

Pursuant to 30 CFR 250.469(d), the BSEE AKOCS may require that you submit additional well reports or records for a specific well(s).

United States Department of the Interior
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
Alaska OCS Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

OCT 18 2012

Ms. Susan Childs
Shell Offshore Inc.
3601 C Street, Suite 1334
Anchorage, AK 99503
United States of America

Dear Ms. Childs:

The Alaska Region of the Bureau of Safety and Environmental Enforcement (BSEE) is in receipt of Shell's Application for a Permit to Drill (APD) **Well Number 001, Torpedo H, on lease OCS Y-1941, Flaxman Island Block 6912, in the Beaufort Sea (API number 55-171-00017-00).** An initial application was submitted January 2012, completed October 2012. In a letter to BSEE from Alaska Venture Support Integrator, Manager Susan Childs, dated August 31, 2012, you sought "conditional approval" of the APD to allow for limited drilling operations before the arrival of the Arctic Containment System. In particular, you requested permission to drill and set the 30" structural and the 20" surface casings. Your application has been reviewed for compliance with the Outer Continental Shelf (OCS) Lands Act, 30 CFR Part 250 and other statutes and regulations applicable to APDs. [redacted] (b) (4), (b) (9) [redacted] Upon completion of the testing and siting of the Arctic Containment System Shell will submit an Application for Permit to Modify, which, if approved, would allow Shell to continue operations outlined in the initial APD.

This approval is based on the findings below and subject to the conditions attached to this communication as Attachment A, Conditions of Approval for the Torpedo H, Well #001 and Attachment B Procedures for Well Data and Records Submittal. It is also conditioned on Shell's compliance during the permitted activities with all applicable BSEE regulations and requirements, U.S. Coast Guard regulations and requirements, provisions in the Exploration Plan (EP) as approved by the Bureau of Ocean Energy Management (BOEM) August 2011, BOEM regulations and requirements, provisions in the Oil Spill Response Plan approved by BSEE, conditions of approval for all permits or authorizations issued by Federal agencies, all lease stipulations, and Notices to Lessees.

This approval is valid unless and until there is a material change to conditions or facts as presented in Shell's application.

If any provision contained in any plan or application conflicts with any provision or condition approved in writing by BSEE, the provision or condition approved by BSEE later in time will

control. In the event another agency approves deviations from plans, permits or conditions initially issued by that agency, copies of such approvals must be sent to BSEE.

In a letter dated September 20, 2012 BSEE approved both the Kulluk and Noble Discoverer for operations in the Beaufort Sea of the Arctic OCS.

BSEE further finds that Shell's proposed well capping and containment systems have been designed for the projected worst case discharge conditions. The intended uses of these systems are hereby approved. BSEE will require that a witnessed deployment test of the containment system in which Shell has demonstrated that it has the ability to successfully deploy the system and have it on location pursuant to the oil spill response plan prior to BSEE's consideration of Shell's request to drill below the 20 inch casing point.

In a letter dated September 20, 2012 BSEE approved Shell's Welding and Burning Program for operations conducted on the Kulluk.

BSEE will provide a continuous inspection presence during drilling operations and will use Shell transportation and lodging for this purpose. As allowed in 30 CFR 250.133, Shell will request reimbursement for transportation based on the existing agreement between Shell, DOI Aviation Management Division and BSEE. Reimbursement for meals and lodging must be submitted within 90 days of the completion of the drilling program. In addition BSEE will be conducting inspections and collecting data in regard to the EPA's National Pollutant Discharge Elimination System General Permit No. AKG-28-0000 and EPA issued air quality permits at the request of the EPA by letter dated July 27, 2012(copy enclosed).

All notifications related to activities described in the approved applications should be made to the BSEE active duty officer at 907-334-5300 during business hours and 855-277-2733 (toll free) after business hours.

Sincerely,

Mark Fesmire PE, JD
Regional Director, BSEE

Cc: U.S. DOI, BOEM, AKOCS, Regional Director
Cc: U.S. DOC, NOAA, NMFS
Cc: U.S. DOI, Fish and Wildlife Service

ATTACHMENT A
Conditions of Approval for the Torpedo H, #001 Well

1. The following waivers have been authorized:
    a. Testing of casing strings as indicated on Form BSEE -0123S is approved.
    b. Your request for a waiver to the requirements under 30 CFR 250. 423 (c) regarding a negative pressure test is approved.
    c. Testing of the BOP components to the pressures indicated on Form BSEE -0123S is approved.
    d. Your test pressure for the annular preventer as indicated on Form BSEE -0123S is approved.
    e. Deployment of a remote BOP control panel intended to operate the BOP stack from the sea floor is approved.
    f. Your request to test the deadman/autoshear system during the stump test only is approved.
    g. Your requested method to temporarily abandon the proposed pilot hole is approved.
2. This office will conduct a predrill inspection of your drilling vessel prior to the start of operations.
3. Shell will not be able to drill below the 20 inch casing point without fulfilling the conditions stated in the letter accompanying these conditions.
4. No drilling activities may be conducted beyond each additional casing shoe unless specifically approved by the BSEE inspector on location. BSEE will evaluate the condition of the well, results of safety equipment tests, the nature and duration of the next phase of the drilling program, existing and forecasted environmental conditions, and the procedures under an approved contingency plan [30 CFR250.417(c)(2)] that addresses design and operating limitations of the drilling unit as well as the actions necessary (i.e. suspension, curtailment, or modification of drilling or rig operations) to remedy various operational or environmental situations in order to maintain safety and prevent damage to the environment; including implementing well capping and containment or relief well drilling plans.
5. Final certification of the blowout preventer system as required in 30 CFR 250.416 (f) shall be provided to this office prior to the initial use of the BOP on this well.
6. Data submission procedures and criteria for this well are listed in an attached document (Procedures for Well Data and Records Submittal)
7. Shell must submit a daily summary report on form BSEE-0133 to this office until the final status of the well is established (one copy). Daily marine mammal reports shall be attached to the form.
8. Shell must notify this office immediately in the event the well encounters shallow gas, abnormal pressure, or lost circulation.
9. Shell must provide this office with representative dry samples collected during the drilling of this well as soon as available. Shell is also requested to collect and retain a set of wet well cuttings for the Bureau of Ocean Energy Management. This request is voluntary and the samples are intended to provide for public access once the proprietary term for the samples is concluded. Further discussions related to this voluntary request can be concluded with appropriate BOEM representatives.

10. Shell must submit within thirty days of completion of the well all oceanographic and meteorological data collected during the drilling of this well.
11. Shell must submit an Application for Permit to Modify to change any approved portion of the APD prior to the commencement of the proposed operations. Verbal approval in an emergency may be granted, however written APM's must be submitted no later than the end of the 3rd business day following the verbal approval.
12. Shell shall notify this office as well as the onsite representative 24 hours in advance of a Blowout Preventer test.
13. Shell must submit form BSEE – 0124 in advance of either temporarily or permanently abandoning this well. This form must contain all information required in 30 CFR 250, Subpart Q for abandonment of wells.

Attachment B

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
ALASKA OCS REGION

Procedures for Well Data and Records Submittal

This document defines the procedures on how lessees/operators submit well records required by 30 CFR 250.468 and 469, and clarifies the specific well records you should submit, the submittal dates of the various well records, and the correct locations where you should send these well records.

The BSEE collects, verifies, and stores data by the well's unique 12-digit American Petroleum Institute (API) number we assign. The BSEE Alaska Outer Continental Shelf Region (AKOCS) uses the data collected to make informed regulatory decisions based on your timely submittal of complete and accurate well records. We define "submittal date" as the original date the data are due to the appropriate office.

According to 30 CFR 250.468(a), "you must submit copies of logs or charts of electrical, radioactive, sonic, and other well-logging operations; directional and vertical well surveys; velocity profiles and surveys; and analysis of cores to BSEE." Also, in accordance with 30 CFR 250.469(b), the AKOCS will also require submittal of paleontological reports as well as washed and dried samples collected from the well.

When to Submit Well Data Records

1. Field Data

   As stated in the approval documents for these operations this office will take an active role in assess plans for the continuation of well activities. Shell will be expected to make available digital data and field prints electronically from the well site via a secure website data delivery system or equivalent to enable this review from this office. This should be done for all logging operations including pilot hole, surface, intermediate and final runs (both wireline and Measurement While Drilling logs). This also includes detailed mud logging data.

2. Final Data

   Operators should submit one copy of the digital data on a CD or DVD in a read-only format to the appropriate entity as outlined in Attachment 1. Each CD or DVD should be properly labeled with the Area, Block, OCS, Well Number, Well Suffix, API, and the data type (i.e., Paleo Report, Conventional Core Report, Vertical Seismic Survey, etc.). Digital and image NMR data must be submitted

on separate physical media and nomenclature for NMR data files and tool codes should clearly identify them as NMR datasets.

Well records are divided into four groups for the timely submittal of the data.

a) Well Log Data, Directional Surveys, Velocity Surveys, Analyses of Percussion Sidewall Cores, Wireline Formation Test Logs, Drill Stem Tests and Mudlogs/Reports

Submit:

Well log data,
Directional surveys,
Velocity surveys (time/depth pairs),
Percussion/rotary sidewall analysis of cores,
Wireline formation tests logs (summary log), and
Drill stem tests (initial report)

To be submitted within 30 days of the "Date Operations Completed" of the last logging run (MWD/LWD or wireline) that you report in Item 7 of the Open Hole Report (Form BSEE-0133S) for each 12-digit wellbore, sidetrack, and/or bypass. Note: "Date Operations Completed" for MWD/LWD is when the data is retrieved from the drill string.

b) Paleontological, Detailed Rotary Sidewall and Conventional Core Analyses, and Vertical Seismic Profile Reports and Information

For each wellbore in which these data were collected, submit no later than 90 days after the "TD DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

Detailed paleontological reports and information,
Detailed rotary sidewall and conventional core analyses/reports and information, and
Detailed vertical seismic profile reports

Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

c) Geochemical Analyses and PVT Analysis of Fluid Samples

For each wellbore in which these data were collected, submit geochemical analyses and/or PVT Analysis of Fluid Samples no later than 120 days after the "TD DATE" that you report in Item 10 of the Well Activity

Report (Form BSEE-0133). Submit these well records when the report is completed, even if the report is generated by you and/or third party (i.e., academic partners, non-lessee partners and/or consultants) years after the wellbore is completed.

d) End of Operations Report (Form BSEE-0125)

For each wellbore, submit an End of Operations Report (Form BSEE-0125) and all its attachments no later than 30 days after the "END DATE" you report in Item 10 of the Well Activity Report (Form BSEE-0133).

The BSEE AKOCS uses the Well Activity Report (Form BSEE-0133) and Open Hole Report (Form BSEE-0133S) to track well activity; therefore, it is crucial that you submit a complete and accurate report to the appropriate BSEE AKOCS District Office in a timely manner. We will treat delinquent and/or incomplete reports in the same manner as delinquent and/or incomplete well data, and such violations may result in the BSEE AKOCS exacting an appropriate remedy, such as issuing an Incident of Non-compliance (INC).

The BSEE AKOCS may request that you submit well logging data, directional surveys, velocity profiles and surveys, percussion sidewall analyses of cores, wireline formation tests, and drill stem tests before the 30- day limit when we determine that circumstances warrant such action. When we determine that circumstances so warrant, we may also request that you submit preliminary reports of analytical data, namely

Geochemical analyses/reports and information,
PVT analyses of fluid samples,
Detailed paleontological reports and information,
Detailed rotary sidewall core analysis and information, and
Detailed conventional core analysis and information before the respective 90-day or 120-day limits.

The BSEE AKOCS recognizes that you need adequate time to submit complete and accurate well records. If you request it, BSEE AKOCS may grant you a departure under 30 CFR 250.142 for a new required date for submitting the data pertaining to that wellbore.

Where to Submit Well Records

Shell will need to coordinate access to field digital well logs with the following office. This office will also handle receipt of dry samples.

Bureau of Safety and Environmental Enforcement
Alaska OCS Office
3801 Centerpoint Dr., Suite 500
Anchorage, AK 99503
Office Phone: 907-334-5300
Office Fax: 907-334-5302

Shell will provide final copies of all digital image and vector well log data and related reports to both the Alaska BSEE office and to:

A2D Technologies
d/b/a TGS Geological Products and Services
1010 Common Street, Suite 2040
Attn: BSEE Well Records (Alaska)
New Orleans, LA 70112
Office telephone: 504-524-3450
Fax: 504-524-3454

A "Well Records Submission Summary" in Attachment B of this document provides an overview of the various well records, including which entity receives which well records and the addresses and contact numbers of the appropriate BSEE AKOCS Offices, and A2D Technologies. We strongly recommend that you provide a transmittal letter when you submit any well records. This transmittal should contain the following information:

- Operator's Name
- Operator's Contact Name and Telephone Number
- Bottomhole Location: Area/Block/Lease/Well Name and Number/API Number
- Date Well Records Sent
- Detailed List of Well Records

It is your responsibility to ensure that the BSEE AKOCS and A2D Technologies receive all well data and information within the specific periods. If we notify you of delinquent data, we will initiate an appropriate remedy, such as issuing an Incident of Non-Compliance (INC). If you choose to use a third party to submit well data, it remains your responsibility to ensure that the data are timely received by the BSEE AKOCS and A2D Technologies. Realizing that you may need time beyond the specified deadlines to prepare unique data or information, we will address the submission of such on an individual basis. We will address INC's issued by the BSEE AKOCS Office for the delinquent data submittal at your yearly performance review or through other appropriate and timely measures.

Well Naming and Numbering

Show the API Number and well name assigned by the BSEE AKOCS Office on all well records you submit to us. You can find these on the approved Application for Permit to Drill (Form BSEE-0123) for the original hole, sidetracks, and/or bypasses.

Data Types and Formats

A. Well Log Data types

a. Log Curve Requirements: Submit the following curve types and log images in final form, if the data were obtained in the open-hole portion of a wellbore, sidetrack, or bypass****:

- Acoustic or Sonic
- Bulk Density
- Caliper
- Conductivity
- Density Correction
- Dipmeter (computed)
- Gamma Ray
- Resistivity/Induction
- Spontaneous Potential
- Nuclear Magnetic Resonance *
- Mudlogs***
- Neutron
- Tension
- Porosity
- Borehole Image
- Equivalent circulation density
- Rwa
- Temperature
- Formation Tester**
- Rate of Penetration
- Photoelectric
- Slide Indicator

b. Cased hole log data: Submit all curve types and log images as identified above for any cased hole logs collected in lieu of, or in addition to, open hole logs.

* For the submittal of digital NMR vector curve data, The following are examples of curve types are to be submitted, and are not limited to you should submit:

- Quality Control Curves
- Computed Curves
- T2 Bin Distributions

Due to NMR file sizes and complexities, the BSEE now requires that digital and image NMR data are submitted on separate physical media (separate from other well log data) to its logging contractor, A2D Technologies. Also, NMR data file and tool code nomenclature should clearly identify these data as NMR-related. We encourage direct submittal of the completed log data set from the acquiring service company.

** Formation Tester is considered any logging tool that collects pressure data and/or fluid samples from the borehole. Summary Print log images, pressure gradient plots, and preliminary sample analysis must be submitted. Formation Tester summary data should also be submitted in ASCII format. All detailed reports (i.e., PVT Analysis) generated from the samples collected from the borehole must be submitted in a timely manner (see Attachment 1).

*** You will be required to submit an image file for these types of logs to A2D Technologies.

****Although API Recommended Practice (RP) 31A, Standard Form for Hardcopy Presentation of Downhole Well Log Data, is not incorporated by reference in BSEE regulations, you may use it for guidance on providing complete and accurate well information.

Note: Do not submit digital data for Formation Tester, Borehole Image, and Computed Dipmeter to A2D Technologies.

c. Well Log Image File:

Submit image files in one of the formats listed below. For Formation Tester type logs, the summary logs will suffice

i. For all vertical wells, as defined in 30 CFR 250.461, submit image files for

- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs and
- Any additional scales you obtained.

ii. For all non-vertical wells, as defined in 30 CFR 250.461, submit image files for

- True vertical depth (TVD) 1-inch, or 2-inch correlation and, 5-inch formation evaluation logs,
- Measured depth (MD) 1-inch, or 2-inch correlation, and 5-inch formation evaluation logs, and
- Any additional scales you obtained.

Detailed 5- inch image logs must be composited, but individual runs do not need to be spliced.

If logging data from more than one logging vendor are collected in a borehole, you may submit either an image of the logging data from all vendors composited into a single set of logs or a set of images of the composited logs from each individual vendor.

d. Image File Formats: If the original log is in color, the submitted image file should also be in color.

i. The following image file formats are preferred:

- Computer Graphic Metafile (CGM) version 1-4
- Baker Metafile
- Schlumberger PDS (PDS files are usually for one logging run; any borehole with multiple runs should submit composited file format)
- Halliburton CGM
- Weatherford DPK

If the preferred formats listed above are not available, you may submit the image file in the Tag Image File Format (TIFF) with the following specifications:

ii. Format (TIFF) with the following specifications:

1. Black and White TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

2. Color TIFF Images:

- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling - No

Clearly label each well log image with its associated API number, bottom hole lease number, well name, well name suffix, log type, scale and depth domain (MD or TVD).

e. Digital (Vector) Well Log Data: Submit composite digital curve data (one value per curve for each depth value and with individual tool runs merged) in the Canadian Well Log Society Log ASCII Standard (LAS), Version 2.0 formats; and Digital Log Interchange Standard (DLIS) or Log Interchange Standard (LIS) format. Ensure that the curve data are in a MD composite layout, including full headers for each wireline and MWD/LWD logging tool run and curve description for all curves. Ensure that all required log curves represented on the log image file are included in the digital curve file. If you collect logging data from more

than one logging vendor in a single borehole, submit a separate set of composited log curves from each individual vendor. Do not splice digital curves from different vendors to form a set of composited log curves.

i. Full header information, should including the following:

- 12-digit API number
- well name suffix
- bottom hole lease number
- bottom hole area and block
- well name

ii. Information for each tool run, should including the following:

- borehole fluids
- depth interval
- mud
- filtrate resistivity and temperatures
- casing information
- bottomhole or maximum recorded temperature
- circulation history information
- tool schematic
- tool calibration record

Full logging tool parameters (including matrix values), position of logging tool (i.e., centered or eccentered), and logging engineer's comments; and adequate curve description and

Tool -specific and service provider-specific curve and parameter mnemonics (names and abbreviations) maintained as originally acquired.

If a log is spliced, the splice depth should be clearly noted along with which files were used.

Submit digital and image logs on CD or DVD ROM (read-only memory). Digital and image logs may be submitted on the same CD or DVD.

Directional Surveys

Submit one digital copy of the final composite directional survey. For the Digital Directional Survey format, see NTL 2009-N10.

- Submit, on CD or DVD ROM these survey results coded in ASCII.
- According to 30 CFR 250.461(d) (2), "You must correct all surveys to Universal-Transverse- Mercator-Grid-north or Lambert-Grid-north after making the magnetic-to-true-north correction."

If your use of more than one vendor prevents the consolidation of the separate surveys within a well, submit the final composite survey from each vendor.

Velocity Profiles and Surveys

Vertical Seismic Profiles: Submit the results from all borehole seismic data (in cased or uncased holes), as well as concurrently run directional surveys for both vertical and directional wells. Submit, on CD or DVD ROM, digitally recorded data in an industry standard format (LAS, DLIS, ASCII, CGM, TIFF, JPG, SEGY, DOC), that include, but are not limited to:

- Normal Incidence VSP;
- Acoustic Log Calibration Report;
- Final VSP and Corridor stacks for 2D data and final stacked and migrated volume for 3D VSP data;
- Composite plot with VSP, Corridor stacks, synthetic seismogram, and well logs;
- any referenced information within the report correlative with the acquisition, such as 2-way time indexed depths and velocities, survey parameters, digital images, and computed survey data and directional; and
- If acquired, format time/depth pairs.

Velocity Surveys (Time-Depth Pairs/Checkshots): Submit, on CD or DVD ROM, one digital copy coded in ASCII format. The report should include or be annotated with the following:

- API number
- Well name and number
- Well name suffix
- Contractor or service provider
- Contact name (phone number or e-mail address)

Note that the digital format has been modified to expand the columns for True Vertical Depth and One- Way Travel Time from 5 to 8 to include two decimal places for each column.

We encourage direct submittal of the completed survey from the acquiring service company.

Analysis of Conventional Cores, Percussion/Rotary Sidewall Cores, Wireline Formation Tests, and Drill Stem Tests

IF...
you conduct any of the following:

- Conventional cores descriptions and analysis
- Percussion/Rotary sidewall core analysis or equivalent,
- Wireline formation tests - include any logs (summary logs are acceptable) and associated lab results, or
- Drill stem tests

THEN...

As soon as the final and/or revised conventional core, percussion/rotary sidewall core reports and/or data become available to you, send one digital copy of the entire, detailed report. Reports should include, but are not limited to the following:

- Standard analyses for porosity,
- Permeability
- Water saturation
- Core photos
- compaction analyses
- laser grain size analyses
- stressed brine porosity and permeability analyses
- rock mechanic studies
- water extraction and core gamma logs
- core photos

In addition, provide one copy of all studies you performed on the core(s) and tests for the purpose of describing and characterizing the reservoir architecture through detailed stratigraphic or depositional analyses. In certain situations, the BSEE AKOCS may require that you submit preliminary or interim reports.

Submit, on CD or DVD ROM, one copy of the description and analysis of the conventional core, the percussion/rotary sidewall core, wireline formation tests, and drill stem tests reports in the original digital format. Any data acquired in a log format should be submitted as a log image.

Geochemical Analyses/Reports and Information

Submit one copy of the Geochemical Analyses/Reports and Information in the original digital format. If you conducted any geochemical analyses/reports, including internal company or external contractor interpretation reports on

- Cuttings,
- Sidewall or conventional cores, and
- Fluid samples from the well. The term "sample" encompasses:
- Hydrocarbon gases, specifically methane through pentanes and C6+ hydrocarbons;
- Non-hydrocarbon gases (carbon dioxide, hydrogen sulfide, argon, helium, and radon); and
- Any liquid hydrocarbons (such as condensate, crude, and bitumen) encountered by the well in cuttings or shows and from any other well sampling or fluid testing.

The analyses, reports, and interpretations to be submitted include, but are not necessarily limited to, the following types of data:

- Total organic carbon
- Polynuclear aromatic hydrocarbons
- Rock-eval pyrolysis

- Stable isotope analyses of carbon & hydrogen
- Thermal chromatography-gas chromatography
- Compound-specific isotope ratio mass spectrometry
- Bulk pyrolysis & hydrous pyrolysis
- Isotope ratio mass spectrometry
- Gas chromatography
- Kerogen isolation & bitumen separation
- Pyrolysis/gas chromatography
- Organic petrography
- Complete saturated biomarker & aromatic hydrocarbon analysis by GC MS
- Vitrinite reflectance
- Elemental analysis of kerogen

In addition, submit all data and reports on geochemical characterization of produced oils, including

- All whole-oil GC, GC MS on oils,
- SARAH (or SARA),
- Isotopes on the fractions,
- Molecular and isotopic analyses of C1-C5 hydrocarbons metals data, and
- Any other geochemical data used from production samples intended for reservoir characterization studies.

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

Detailed Paleontological Reports and Information

As soon as the final and/or revised paleontological information and/or data become available to you, submit one copy in digital format of the entire, detailed paleontological report(s), chart(s), striplog(s), checklist(s), and any other paleontological records. Include the following:

The range of samples taken,

- Sample analysis identifying fossils and lithology by MD,
- Summary and interpretation (based on identification of foraminifera, nannofossils, or other microfossils) of all biostratigraphic markers, zones, tops, or local markers,
- Description of paleontological ecological zones with water depth at the time of deposition (e.g., Middle Shelf/Neritic 20-100 meters, Outer Shelf/Neritic 100-200 meters),
- Sequence analysis interpretations based on histograms of faunal abundance,
- Identification of all rock units by depth to the top of relative chronostratigraphic stages (e.g., Upper Pleistocene, Middle Miocene, or Lower Oligocene), and
- Pleistocene, Middle Miocene, or Lower Oligocene), and
- Biostratigraphic chart noting the relative ages of the biostratigraphic zones you used in the detailed paleontological reports.

Submit, on CD or DVD ROM, one copy of the detailed paleontological report in the original digital format.

Mudlogs and Reports

Submit one image copy of the following types of Mudlogs:

- Physical Formation Log
- Pore Pressure Log
- Engineering Log
- Show Report Log

Image File Formats for Mudlogs: If the original log is in color, the submitted image file must also be in color.

The following image file formats are preferred:

- Geologix - geo draft file (.gdf)
- Geologix - output data file (.odf)

If the preferred formats listed above are not available, submit the image file in the Tag Image File

Format (TIFF) with the following specifications:

Black and White TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Compression – CCITT group IV
- Tiling – No

Color TIFF Images
- Header tags as per TIFF standard
- Resolution – 200 dpi
- Palette color – 256 colors
- File format LZW Compressed TIFF
- Tiling – No.

Submit one copy of the following types of Mudlogs reports, if collected:
- Show reports – composite into one file
- Mud reports – composite into one file
- End of Well reports – composite into one file
- Daily Drilling reports – composite into one file

Submit, on CD or DVD ROM, digitally recorded data in industry standard formats.

End of Operations Report (Form BSEE-0125) and Attachments

Pursuant to 30 CFR 250.465(a), you must submit End of Operations Report (Form BSEE-0125) and the required attachments.

Additional Information

Pursuant to 30 CFR 250.469(d), the BSEE AKOCS may require that you submit additional well reports or records for a specific well(s).