

**Wabasca Bitumen**

	<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Origin:</b> Alberta, Canada			
Method of production is cold bailing and centrifugation.			ARC 87
<b>API Gravity</b>	11 to 18.1		ARC 87
<b>Sulphur (weight %)</b>	3.93 to 5.62		ARC 87
<b>Density (g/mL)</b>			
	<u>Temperature (°C)</u>		
	Unknown	0.946 to 0.993	ARC 87
<b>Dynamic Viscosity (mPa·s or cP)</b>			
	<u>Temperature (°C)</u>		
	25	420 to 27,100	ARC 87
<b>Hydrocarbon Groups (weight %)</b>			
	Asphaltenes	10 to 15	ARC 87
<b>Metals (ppm)</b>			
	Nickel	46.8 to 87.2	ARC 87
	Vanadium	128.8 to 183.6	ARC 87
<b>Other Elements (weight %)</b>			
	Hydrogen	10.84 to 11.3	ARC 87
	Nitrogen	0.3 to 1.23	ARC 87
	Oxygen	0.74 to 1.25	ARC 87

**Wainwright-Kinsella**

	<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Origin:</b> Alberta, Canada			
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".			
<b>API Gravity</b>	23.1		OGJ 99
<b>Sulphur (weight %)</b>	1.58		OGJ 99
<b>Reid Vapour Pressure (kPa)</b>	30		OGJ 99
<b>Pour Point (°C)</b>	-39		OGJ 99
<b>Kinematic Viscosity (mm<sup>2</sup>/s or cSt)</b>			
	<u>Temperature (°C)</u>		
	40	33	OGJ 99
<b>Yield on Crude (volume %)</b>			
	<u>Boiling Range (°C)</u>		
	Naphtha (C5-190)	19	OGJ 99
	Kerosene (190-277)	12	OGJ 99
	Distillate (277-343)	11	OGJ 99
	Gas oil (343-565)	26	OGJ 99
	Residue (>565)	32	OGJ 99
<b>Metals (ppm)</b>			
	Nickel	40	OGJ 99
	Vanadium	80	OGJ 99

	Data	Notes	Reference ID
<b>Origin:</b> Indonesia			
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".			
<b>API Gravity</b>	34.1		OGJ 99
<b>Reid Vapour Pressure (kPa)</b>	26		OGJ 99
<b>Kinematic Viscosity (mm<sup>2</sup>/s or cSt)</b>			
<u>Temperature (°C)</u>			
38	5		OGJ 99
<b>Yield on Crude (volume %)</b>			
<u>Boiling Range (°C)</u>			
Gasoline (C5-95)	5		OGJ 99
Naphtha (95-185)	19		OGJ 99
Kerosene (185-260)	17		OGJ 99
Gas oil (260-350)	20		OGJ 99
Fuel oil (>350)	40		OGJ 99

**Waxy Light Heavy Blend**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Origin:</b> California, USA				
<b>API Gravity</b>		20.4		ESD 93
<b>Equation(s) for Predicting Evaporation</b>				
%Ev = $(1.52 + 0.045T)\ln(t)$ Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 97
<b>Sulphur (weight %)</b>				
<u>Evaporation (weight %)</u>				
0		1.01		ESD 97
12		1.08		ESD 97
20		1.18		ESD 97
<b>Water Content (weight %)</b>				
<u>Evaporation (weight %)</u>				
0		0.1		ESD 98
12		< 0.1		ESD 98
20		< 0.1		ESD 98
<b>Flash Point (°C)</b>				
<u>Evaporation (weight %)</u>				
0		-3		ESD 94
12		80		ESD 95
20		> 95		ESD 95
<b>Density (g/mL)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	0.9414		ESD 93
	15	0.9311		ESD 93
12	0	0.9665		ESD 95
	15	0.9582		ESD 95
20	0	0.9846		ESD 95
	15	0.9749		ESD 95
<b>Pour Point (°C)</b>				
<u>Evaporation (weight %)</u>				
0		-30		ESD 93
12		-12		ESD 95
20		0		ESD 95

**Waxy Light Heavy Blend**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Dynamic Viscosity (mPa·s or cP)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	607		ESD 93
	15	184		ESD 93
12	0	9,948		ESD 95
	15	2,002		ESD 95
20	0	165,300		ESD 95
	15	17,280		ESD 95
<b>Emulsion Formation</b>				
<u>Evaporation (weight%)</u>				
0	Visual stability	none		ESD 98
	Water content (wt %)	4		ESD 98
12	Visual stability	meso		ESD 98
	Viscosity (mPa·s)	6,200		ESD 98
	Complex modulus (mPa)	41,000		ESD 98
	Water content (wt %)	50		ESD 98
20	Visual stability	meso		ESD 98
	Viscosity (mPa·s)	44,000		ESD 98
	Complex modulus (mPa)	230,000		ESD 98
	Water content (wt %)	55		ESD 98
<b>Chemical Dispersibility (volume %)</b>				
<u>Evaporation (weight %)</u>				
0	Corexit 9500	9		ESD 98
	Corexit 9527	5		ESD 91
	Dasic LTS	0		ESD 91
	Enersperse 700	40		ESD 91
12	Corexit 9500	0		ESD 98
20		0		ESD 98

**Waxy Light Heavy Blend**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Hydrocarbon Groups (weight %)</b>				
<u>Evaporation (weight %)</u>				
0	Saturates	39		ESD 96
	Aromatics	35		ESD 96
	Resins	21		ESD 96
	Asphaltenes	5		ESD 96
	Waxes	4		ESD 94
12	Saturates	32		ESD 96
	Aromatics	38		ESD 96
	Resins	24		ESD 96
	Asphaltenes	6		ESD 96
	Waxes	1		ESD 98
20	Saturates	30		ESD 96
	Aromatics	35		ESD 96
	Resins	28		ESD 96
	Asphaltenes	6		ESD 96
	Waxes	1		ESD 98
<b>Adhesion (g/m<sup>2</sup>)</b>				
<u>Evaporation (weight %)</u>				
0		42	<i>SD = 6</i>	ESD 95
12		70	<i>SD = 8</i>	ESD 95
20		92	<i>SD = 10</i>	ESD 95

**Waxy Light Heavy Blend**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Volatile Organic Compounds (ppm)</b>				
	<u>Evaporation (weight %)</u>			
0	Benzene	350		ESD 94
	Toluene	1,500		ESD 94
	Ethylbenzene	350		ESD 94
	Xylenes	1,760		ESD 94
	C3-benzenes	2,330		ESD 94
	Total BTEX	3,960		ESD 94
	Total VOCs	6,300		ESD 94
12	Benzene	0		ESD 96
	Toluene	70		ESD 96
	Ethylbenzene	70		ESD 96
	Xylenes	540		ESD 96
	C3-benzenes	1,550		ESD 96
	Total BTEX	680		ESD 96
	Total VOCs	2,240		ESD 96
20	Benzene	0		ESD 96
	Toluene	0		ESD 96
	Ethylbenzene	0		ESD 96
	Xylenes	0		ESD 96
	C3-benzenes	0		ESD 96
	Total BTEX	0		ESD 96
	Total VOCs	0		ESD 96
<b>Surface Tension (mN/m or dynes/cm)</b>				
	<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>		
0		0	30.3	ESD 94
		15	29.0	ESD 94
12		0	32.6	ESD 95
		15	31.4	ESD 95
20		0	DNF	ESD 95
		15	33.0	ESD 95
<b>Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)</b>				
	<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>		
0		0	16.7	ESD 94
		15	17.2	ESD 94
12		0	NM	ESD 95
		15	14.2	ESD 95
20		0	DNF	ESD 95
		15	NM	ESD 95

## Waxy Light Heavy Blend

		Data	Notes	Reference ID
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	17.7		ESD 94
	15	19.1		ESD 94
12	0	NM		ESD 95
	15	18.8		ESD 95
20	0	DNF		ESD 95
	15	NM		ESD 95



**Waxy Light Heavy Blend**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Boiling Point Distribution (weight %)</b>				
<u>Evaporation (weight %)</u>	<u>Boiling Point (°C)</u>			
0	80	1		ESD 94
	100	3		ESD 94
	120	5		ESD 94
	140	7		ESD 94
	160	9		ESD 94
	180	10		ESD 94
	200	12		ESD 94
	250	19		ESD 94
	300	27		ESD 94
	350	36		ESD 94
	400	45		ESD 94
	450	55		ESD 94
	500	63		ESD 94
	550	70		ESD 94
	600	76		ESD 94
	650	82		ESD 94
	700	86		ESD 94
12	140	1		ESD 95
	160	1		ESD 95
	180	3		ESD 95
	200	5		ESD 95
	250	13		ESD 95
	300	22		ESD 95
	350	33		ESD 95
	400	43		ESD 95
	450	55		ESD 95
	500	65		ESD 95
	550	74		ESD 95
	600	81		ESD 95
20	650	87		ESD 95
	700	91		ESD 95
	250	5		ESD 95
	300	16		ESD 95
	350	28		ESD 95
	400	40		ESD 95
	450	53		ESD 95
	500	65		ESD 95
	550	75		ESD 95
	600	83		ESD 95
	650	89		ESD 95
	700	95		ESD 95

**Waxy Light Heavy Blend**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Boiling Point Distribution (weight %)</b>				
<b>Metals (ppm)</b>				
	Barium	0.6		Cao 92
	Chromium	< 2		Cao 92
	Copper	< 0.6		Cao 92
	Iron	33		Cao 92
	Lead	< 3		Cao 92
	Magnesium	5		Cao 92
	Molybdenum	< 0.6		Cao 92
	Nickel	57		Cao 92
	Titanium	< 0.6		Cao 92
	Vanadium	46		Cao 92
	Zinc	0.9		Cao 92
<b>Acute Toxicity of Water Soluble Fraction (mg/L)</b>				
	<u>Test Organism</u>			
48h LC50	Daphnia magna	5	(a)	Harris 94
<i>(a) results based on GC headspace analysis</i>				

		Data	Notes	Reference ID
<b>Origin:</b> Gulf of Mexico, USA				
High water content. Oil tested as received, unless noted otherwise.				ESD 94
<b>API Gravity</b>		11.4		ESD 94
<b>Sulphur (weight %)</b>				
<u>Evaporation (weight %)</u>				
0		0.54		ESD 94
24		0.61		ESD 94
42		0.64		ESD 94
61		0.73		ESD 94
<b>Water Content</b>				
<u>Evaporation (weight %)</u>				
0		65.4		ESD 95
24		58.6		ESD 95
42		34.9		ESD 95
61		0.1		ESD 95
<b>Flash Point (°C)</b>				
<u>Evaporation (weight %)</u>				
0		46		ESD 94
24		> 95		ESD 94
42		> 95		ESD 94
61		> 95		ESD 94
<b>Density (g/mL)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	0.9921		ESD 94
	15	0.9894		ESD 94
	25	0.9779		ESD 94
24	0	0.9603		ESD 94
	15	0.9562		ESD 94
	25	0.9485		ESD 94
42	0	0.9703		ESD 94
	15	0.9594		ESD 94
	25	0.9495		ESD 94
61	0	0.9696		ESD 94
	15	0.9598		ESD 94
	25	0.9538		ESD 94

**West Delta Block 30**

	<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Pour Point (°C)</b>			
<u>Evaporation (weight %)</u>			
0	-23	(a)	ESD 94
24	-17		ESD 94
42	-12		ESD 94
61	-8		ESD 94

(a) A frozen water layer 1 mm thick appeared at the bottom of the pour point tube.

<b>Dynamic Viscosity (mPa·s or cP)</b>			
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>		
0	0	3,930	ESD 94
	15	1,180	ESD 94
	25	393	ESD 94
24	0	6,020	ESD 94
	15	1,350	ESD 94
	25	562	ESD 94
42	0	7,300	ESD 94
	15	1,560	ESD 94
	25	640	ESD 94
61	0	32,400	ESD 94
	15	4,970	ESD 94
	25	1,780	ESD 94

**Chemical Dispersibility (volume %)**

Not measured due to high water content.

		Data	Notes	Reference ID
<b>Hydrocarbon Groups (weight %)</b>				
<u>Evaporation (weight %)</u>				
0	Saturates	43	(a)	ESD 95
	Aromatics	24	(a)	ESD 95
	Resins	11	(a)	ESD 95
	Asphaltenes	22	(a)	ESD 95
	Waxes	0		ESD 97
24	Saturates	48	(a)	ESD 95
	Aromatics	33	(a)	ESD 95
	Resins	16	(a)	ESD 95
	Asphaltenes	3	(a)	ESD 95
	Waxes	0		ESD 98
42	Saturates	46	(a)	ESD 95
	Aromatics	34	(a)	ESD 95
	Resins	15	(a)	ESD 95
	Asphaltenes	5	(a)	ESD 95
	Waxes	0		ESD 98
61	Saturates	41		ESD 95
	Aromatics	36		ESD 95
	Resins	20		ESD 95
	Asphaltenes	3		ESD 95
	Waxes	0		ESD 98
<i>(a) approximate: corrected for initial water content of oil</i>				

**Adhesion (g/m<sup>2</sup>)**Evaporation (weight %)

0	32	SD = 6	ESD 95
24	65	SD = 2	ESD 95
42	65	SD = 9	ESD 95
61	64	SD = 7	ESD 95

**West Delta Block 30**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Volatile Organic Compounds (ppm)</b>				
<u>Evaporation (weight %)</u>				
0	Benzene	40		ESD 94
	Toluene	40		ESD 94
	Ethylbenzene	40		ESD 94
	Xylenes	40		ESD 94
	C3-benzenes	40		ESD 94
	Total BTEX	160		ESD 94
	Total VOCs	200		ESD 94
24	Benzene	0		ESD 94
	Toluene	0		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	0		ESD 94
	C3-benzenes	0		ESD 94
	Total BTEX	0		ESD 94
	Total VOCs	0		ESD 94
42	Benzene	0		ESD 94
	Toluene	0		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	0		ESD 94
	C3-benzenes	0		ESD 94
	Total BTEX	0		ESD 94
	Total VOCs	0		ESD 94
61	Benzene	0		ESD 94
	Toluene	0		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	0		ESD 94
	C3-benzenes	0		ESD 94
	Total BTEX	0		ESD 94
	Total VOCs	0		ESD 94

		Data	Notes	Reference ID
<b>Surface Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	30.8		ESD 94
	15	30.7		ESD 94
	25	30.6		ESD 94
24	0	NM		ESD 94
	15	31.5		ESD 94
	25	31.2		ESD 94
42	0	NM		ESD 94
	15	31.3		ESD 94
	25	31.1		ESD 94
61	0	NM		ESD 94
	15	32.3		ESD 94
	25	31.7		ESD 94
<b>Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	NM		ESD 94
	15	17.3		ESD 94
	25	NM		ESD 94
24	0	NM		ESD 94
	15	NM		ESD 94
	25	NM		ESD 94
42	0	NM		ESD 94
	15	NM		ESD 94
	25	NM		ESD 94
61	0	NM		ESD 94
	15	NM		ESD 94
	25	NM		ESD 94
<b>Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	NM		ESD 94
	15	22.1		ESD 94
	25	NM		ESD 94
24	0	NM		ESD 94
	15	NM		ESD 94
	25	NM		ESD 94
42	0	NM		ESD 94
	15	NM		ESD 94
	25	NM		ESD 94
61	0	NM		ESD 94
	15	NM		ESD 94
	25	NM		ESD 94

**West Delta Block 30**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Boiling Point Distribution (weight %)</b>				
Fresh and 42% evaporated samples were dried with sodium sulphate prior to analysis.				
<u>Evaporation (weight %)</u>	<u>Boiling Point (°C)</u>			
0	120	1		ESD 94
	140	1		ESD 94
	160	2		ESD 94
	180	4		ESD 94
	200	5		ESD 94
	250	13		ESD 94
	300	24		ESD 94
	350	36		ESD 94
	400	48		ESD 94
	450	59		ESD 94
	500	69		ESD 94
	550	77		ESD 94
	600	83		ESD 94
	650	89		ESD 94
	700	93		ESD 94
42	250	5		ESD 95
	300	15		ESD 95
	350	26		ESD 95
	400	37		ESD 95
	450	48		ESD 95
	500	57		ESD 95
	550	65		ESD 95
	600	72		ESD 95
	650	77		ESD 95
	700	82		ESD 95
61	250	1		ESD 95
	300	9		ESD 95
	350	22		ESD 95
	400	34		ESD 95
	450	47		ESD 95
	500	57		ESD 95
	550	66		ESD 95
	600	73		ESD 95
	650	79		ESD 95
	700	84		ESD 95



		Data	Notes	Reference ID
<b>Origin:</b> Gulf of Mexico, USA				
<b>API Gravity</b>		50.2		ESD 94
<b>Equation(s) for Predicting Evaporation</b>				
%Ev = (6.57 + 0.045T)ln(t)				ESD 96
Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				
<b>Sulphur (weight %)</b>				
<u>Evaporation (weight %)</u>				
0		0.07		ESD 94
23		0.06		ESD 94
48		0.06		ESD 94
74		0.12		ESD 94
<b>Water Content (weight %)</b>				
<u>Evaporation (weight %)</u>				
0		0.1		ESD 94
23		< 0.1		ESD 98
48		< 0.1		ESD 98
74		< 0.1		ESD 98
<b>Flash Point (°C)</b>				
<u>Evaporation (weight %)</u>				
0		< -30		ESD 94
23		30		ESD 94
48		72		ESD 94
74		> 95		ESD 94
<b>Density (g/mL)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	0.7899		ESD 94
	15	0.7783		ESD 94
	25	0.7707		ESD 94
23	0	0.8130		ESD 94
	15	0.8020		ESD 94
	25	0.7944		ESD 94
48	0	0.8296		ESD 94
	15	0.8191		ESD 94
	25	0.8118		ESD 94
74	0	0.8491		ESD 94
	15	0.8388		ESD 94
	25	0.8320		ESD 94

**West Delta Block 97**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Pour Point (°C)</b>				
<u>Evaporation (weight %)</u>				
0		-27		ESD 94
23		-18		ESD 94
48		-15		ESD 94
74		-5		ESD 94
<b>Dynamic Viscosity (mPa·s or cP)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	1		ESD 94
	15	1		ESD 94
	25	1		ESD 94
23	0	2		ESD 94
	15	1		ESD 94
	25	1		ESD 94
48	0	4		ESD 94
	15	3		ESD 94
	25	2		ESD 94
74	0	14		ESD 94
	15	7		ESD 94
	25	5		ESD 94
<b>Chemical Dispersibility (volume %)</b>				
	Corexit 9500	48		ESD 00
	Corexit 9527	51	(a)	ESD 94
	Dasic LTS	16	(a)	ESD 94

(a) GC quantitation

		Data	Notes	Reference ID
<b>Hydrocarbon Groups (weight %)</b>				
<u>Evaporation (weight %)</u>				
0	Saturates	92		ESD 95
	Aromatics	7		ESD 95
	Resins	1		ESD 95
	Asphaltenes	0		ESD 95
	Waxes	4		ESD 97
23	Saturates	87		ESD 96
	Aromatics	12		ESD 96
	Resins	1		ESD 96
	Asphaltenes	0		ESD 96
	Waxes	3		ESD 98
48	Saturates	87		ESD 95
	Aromatics	11		ESD 95
	Resins	3		ESD 95
	Asphaltenes	0		ESD 95
	Waxes	5		ESD 98
74	Saturates	85		ESD 95
	Aromatics	14		ESD 95
	Resins	2		ESD 95
	Asphaltenes	0		ESD 95
	Waxes	7		ESD 98
<b>Adhesion (g/m<sup>2</sup>)</b>				
<u>Evaporation (weight %)</u>				
0		1	<i>SD = 1</i>	ESD 95
23		4	<i>SD = 3</i>	ESD 95
48		5	<i>SD = 6</i>	ESD 95
74		9	<i>SD = 2</i>	ESD 95

**West Delta Block 97**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Volatile Organic Compounds (ppm)</b>				
<u>Evaporation (weight %)</u>				
0	Benzene	2,900		ESD 94
	Toluene	9,300		ESD 94
	Ethylbenzene	1,210		ESD 94
	Xylenes	9,630		ESD 94
	C3-benzenes	8,930		ESD 94
	Total BTEX	23,040		ESD 94
	Total VOCs	31,960		ESD 94
23	Benzene	190		ESD 94
	Toluene	4,270		ESD 94
	Ethylbenzene	1,500		ESD 94
	Xylenes	12,070		ESD 94
	C3-benzenes	14,320		ESD 94
	Total BTEX	18,030		ESD 94
	Total VOCs	32,350		ESD 94
48	Benzene	0		ESD 94
	Toluene	0		ESD 94
	Ethylbenzene	50		ESD 94
	Xylenes	650		ESD 94
	C3-benzenes	4,810		ESD 94
	Total BTEX	700		ESD 94
	Total VOCs	5,510		ESD 94
74	Benzene	0		ESD 94
	Toluene	0		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	0		ESD 94
	C3-benzenes	0		ESD 94
	Total BTEX	0		ESD 94
	Total VOCs	0		ESD 94

		Data	Notes	Reference ID
<b>Surface Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	24.5		ESD 94
	15	24.0		ESD 94
	25	23.3		ESD 94
23	0	26.3		ESD 94
	15	25.7		ESD 94
	25	25.1		ESD 94
48	0	27.6		ESD 94
	15	26.6		ESD 94
	25	26.5		ESD 94
74	0	29.0		ESD 94
	15	28.0		ESD 94
	25	27.9		ESD 94
<b>Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	26.2		ESD 94
	15	26.9		ESD 94
	25	26.4		ESD 94
23	0	27.4		ESD 94
	15	28.2		ESD 94
	25	27.2		ESD 94
48	0	24.7		ESD 94
	15	27.3		ESD 94
	25	24.9		ESD 94
74	0	18.0		ESD 94
	15	22.0		ESD 94
	25	18.7		ESD 94
<b>Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	27.6		ESD 94
	15	29.1		ESD 94
	25	27.0		ESD 94
23	0	29.0		ESD 94
	15	28.8		ESD 94
	25	31.6		ESD 94
48	0	26.0		ESD 94
	15	28.9		ESD 94
	25	27.8		ESD 94
74	0	25.5		ESD 94
	15	25.3		ESD 94
	25	23.7		ESD 94

**West Delta Block 97**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Boiling Point Distribution (weight %)</b>				
<u>Evaporation (weight %)</u>	<u>Boiling Point (°C)</u>			
0	40	3		ESD 94
	60	5		ESD 94
	80	15		ESD 94
	100	23		ESD 94
	120	33		ESD 94
	140	34		ESD 94
	160	39		ESD 94
	180	47		ESD 94
	200	55		ESD 94
	250	72		ESD 94
	300	86		ESD 94
	350	95		ESD 94
	400	99		ESD 94
23	100	2		ESD 95
	120	6		ESD 95
	140	13		ESD 95
	160	23		ESD 95
	180	33		ESD 95
	200	43		ESD 95
	250	64		ESD 95
	300	82		ESD 95
	350	93		ESD 95
	400	98		ESD 95
48	160	2		ESD 95
	180	9		ESD 95
	200	19		ESD 95
	250	48		ESD 95
	300	74		ESD 95
	350	90		ESD 95
	400	97		ESD 95
74	250	10		ESD 95
	300	49		ESD 95
	350	81		ESD 95
	400	94		ESD 95
	450	99		ESD 95

	Data	Notes	Reference ID
<b>Origin:</b> Alaska, USA			
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".			
<b>API Gravity</b>	22.4		OGJ 99
<b>Sulphur (weight %)</b>	1.82		OGJ 99
<b>Reid Vapour Pressure (kPa)</b>	19		OGJ 99
<b>Pour Point (°C)</b>	-46		OGJ 99
<b>Kinematic Viscosity (mm<sup>2</sup>/s or cSt)</b>			
	<u>Temperature (°C)</u>		
	16	96	OGJ 99
<b>Yield on Crude (volume %)</b>			
	<u>Boiling Range (°C)</u>		
	C1-C4	1	OGJ 99
	Light gasoline (C5-66)	2	OGJ 99
	Naphtha (66-193)	14	OGJ 99
	Distillate (193-343)	28	OGJ 99
	Gas oil (343-449)	17	OGJ 99
	Residue (>343)	56	OGJ 99
<b>Metals (ppm)</b>			
	Nickel	22	OGJ 99
	Vanadium	61	OGJ 99

## West Texas Intermediate

	Data	Notes	Reference ID
<b>Origin:</b> Texas, USA			
The price of this crude, known as WTI, is used as a benchmark for pricing other U.S. crude oils.			
Data from OGJ 99 were originally published in 1994.			
<b>API Gravity</b>			
	36.4		ESD 92
	40.8		OGJ 99
<b>Equation(s) for Predicting Evaporation</b>			
%Ev = (2.77 + 0.045T)ln(t)			
Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)			
<b>Sulphur (weight %)</b>			
<u>Evaporation (volume %)</u>			
0	0.48		ESD 93
	0.34		OGJ 99
14	0.49		ESD 93
29	0.57		ESD 93
<b>Flash Point (°C)</b>			
<u>Evaporation (volume %)</u>			
0	-17		ESD 92
14	32		ESD 92
29	87		ESD 92
<b>Density (g/mL)</b>			
<u>Evaporation (volume %)</u>		<u>Temperature (°C)</u>	
0	0	0.8538	ESD 92
	15	0.8420	ESD 92
		0.8212	OGJ 99
14	0	0.8786	ESD 92
	15	0.8674	ESD 92
29	0	0.8994	ESD 92
	15	0.8875	ESD 92
<b>Pour Point (°C)</b>			
<u>Evaporation (volume %)</u>			
0	-23		ESD 92
	-29		OGJ 99
14	-15		ESD 92
29	3		ESD 92



## West Texas Intermediate

		Data	Notes	Reference ID
<b>Dynamic Viscosity (mPa·s or cP)</b>				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	15		ESD 92
	15	7		ESD 92
14	0	42		ESD 92
	15	16		ESD 92
29	0	140		ESD 92
	15	49		ESD 92
<b>Kinematic Viscosity (mm<sup>2</sup>/s or cSt)</b>				
	<u>Temperature (°C)</u>			
	16	5		OGJ 99
<b>Chemical Dispersibility (volume %)</b>				
	Corexit 9500	15		ESD 94
	Corexit 9527	30		ESD 91
	Dasic LTS	10		ESD 91
	Enersperse 700	40		ESD 91
<b>Hydrocarbon Groups (weight %)</b>				
<u>Evaporation (volume %)</u>				
0	Saturates	66		ESD 97
	Aromatics	26		ESD 97
	Resins	6		ESD 97
	Asphaltenes	1		ESD 97
	Waxes	4		ESD 98
14	Saturates	64		ESD 97
	Aromatics	27		ESD 97
	Resins	7		ESD 97
	Asphaltenes	1		ESD 97
	Waxes	4		ESD 98
28	Saturates	60		ESD 97
	Aromatics	30		ESD 97
	Resins	8		ESD 97
	Asphaltenes	1		ESD 97
	Waxes	5		ESD 98
<b>Adhesion (g/m<sup>2</sup>)</b>				
<u>Evaporation (volume %)</u>				
0		15	SD = 2	ESD 96
14		21	SD = 2	ESD 96
28		24	SD = 3	ESD 96

## West Texas Intermediate

		Data	Notes	Reference ID
<b>Volatile Organic Compounds (ppm)</b>				
<u>Evaporation (volume %)</u>				
0	Benzene	1,380		ESD 94
	Toluene	2,860		ESD 94
	Ethylbenzene	1,120		ESD 94
	Xylenes	4,290		ESD 94
	C3-benzenes	5,920		ESD 94
	Total BTEX	9,640		ESD 94
	Total VOCs	15,560		ESD 94
14	Benzene	310		ESD 94
	Toluene	2,150		ESD 94
	Ethylbenzene	990		ESD 94
	Xylenes	3,900		ESD 94
	C3-benzenes	5,380		ESD 94
	Total BTEX	7,350		ESD 94
	Total VOCs	12,740		ESD 94
28	Benzene	0		ESD 94
	Toluene	40		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	200		ESD 94
	C3-benzenes	2,150		ESD 94
	Total BTEX	240		ESD 94
	Total VOCs	2,390		ESD 94
<b>Surface Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	27.2		ESD 92
	15	26.6		ESD 92
14	0	28.5		ESD 92
	15	27.6		ESD 92
29	0	26.9		ESD 92
	15	29.5		ESD 92
<b>Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	17.9		ESD 92
	15	18.9		ESD 92
14	0	18.2		ESD 92
	15	18.7		ESD 92
29	0	23.0		ESD 92
	15	18.1		ESD 92

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	20.1		ESD 92
	15	19.1		ESD 92
14	0	20.6		ESD 92
	15	21.0		ESD 92
29	0	25.4		ESD 92
	15	20.6		ESD 92

## West Texas Intermediate

		Data	Notes	Reference ID
<b>Boiling Point Distribution (weight %)</b>				
<u>Evaporation (volume %)</u>	<u>Boiling Point (°C)</u>			
0	40	3		ESD 94
	60	4		ESD 94
	80	6		ESD 94
	100	9		ESD 94
	120	13		ESD 94
	140	17		ESD 94
	160	20		ESD 94
	180	24		ESD 94
	200	28		ESD 94
	250	38		ESD 94
	300	49		ESD 94
	350	60		ESD 94
	400	69		ESD 94
	450	77		ESD 94
	500	84		ESD 94
	550	90		ESD 94
	600	94		ESD 94
	650	97		ESD 94
	700	99		ESD 94
14	40	1		ESD 96
	60	2		ESD 96
	80	3		ESD 96
	100	4		ESD 96
	120	5		ESD 96
	140	7		ESD 96
	160	11		ESD 96
	180	15		ESD 96
	200	19		ESD 96
	250	30		ESD 96
	300	42		ESD 96
	350	54		ESD 96
	400	65		ESD 96
	450	74		ESD 96
	500	82		ESD 96
	550	88		ESD 96
	600	93		ESD 96
	650	97		ESD 96
	700	99		ESD 96
29	160	1		ESD 96
	180	3		ESD 96
	200	6		ESD 96

**West Texas Intermediate**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Boiling Point Distribution (weight %)</b>				
<u>Evaporation (volume %)</u>	<u>Boiling Point (°C)</u>			
29	250	19		ESD 96
	300	33		ESD 96
	350	47		ESD 96
	400	59		ESD 96
	450	70		ESD 96
	500	79		ESD 96
	550	86		ESD 96
	600	92		ESD 96
	650	96		ESD 96
	700	98		ESD 96
<b>Yield on Crude</b>				
	<u>Boiling Range (°C)</u>			
Weight %	Light ends (C1-C5)	4		OGJ 99
Volume %	20-175	32		OGJ 99
	175-295	24		OGJ 99
	295-343	8		OGJ 99
	343-565	24		OGJ 99
	565-816	9		OGJ 99
<b>Metals (ppm)</b>				
	Aluminum	< 5		Cao 92
	Barium	3		Cao 92
	Cadmium	< 0.5		Cao 92
	Calcium	100		Cao 92
	Chromium	< 2		Cao 92
	Cobalt	< 1		Cao 92
	Copper	< 0.6		Cao 92
	Iron	23		Cao 92
	Lead	< 3		Cao 92
	Magnesium	25		Cao 92
	Manganese	0.4		Cao 92
	Mercury	< 15		Cao 92
	Molybdenum	< 0.6		Cao 92
	Nickel	19		Cao 92
	Selenium	< 15		Cao 92
	Strontium	< 0.4		Cao 92
	Tin	< 15		Cao 92
	Titanium	0.8		Cao 92
	Vanadium	3		Cao 92
	Zinc	1		Cao 92

**West Texas Intermediate**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Other Elements (weight %)</b>				
	Nitrogen	0.08		OGJ 99
<b>Aqueous Solubility (mg/L)</b>				
	Room temperature	28	(a)	ESD 92
(a) fresh water				
<b>Acute Toxicity of Water Soluble Fraction (mg/L)</b>				
	<u>Test Organism</u>			
48h LC50	Daphnia magna	13	(a)	Harris 94
(a) results based on GC headspace analysis				

		Data	Notes	Reference ID
<b>Origin:</b> Texas, USA				
<b>API Gravity</b>		30.2		ESD 92
<b>Equation(s) for Predicting Evaporation</b>				
%Ev = $(2.57 + 0.045T)\ln(t)$				ESD 97
Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				
<b>Sulphur (weight %)</b>				
<u>Evaporation (volume %)</u>				
0		1.50		ESD 93
15		2.37		ESD 93
30		2.78		ESD 93
<b>Flash Point (°C)</b>				
<u>Evaporation (volume %)</u>				
0		-14		ESD 92
15		36		ESD 92
30		> 90		ESD 92
<b>Density (g/mL)</b>				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	0.8862		ESD 92
	15	0.8743		ESD 92
15	0	0.9144		ESD 92
	15	0.9019		ESD 92
30	0	0.9400		ESD 92
	15	0.9280		ESD 92
<b>Pour Point (°C)</b>				
<u>Evaporation (volume %)</u>				
0		-27		ESD 92
15		-1		ESD 92
30		12		ESD 92
<b>Dynamic Viscosity (mPa·s or cP)</b>				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	113	(a)	ESD 92
		616	(b)	ESD 92
	15	13		ESD 92
15	0	878	(a)	ESD 92
		5,004	(b)	ESD 92
	15	39		ESD 92
30	0	7,271	(a)	ESD 92
		26,810	(b)	ESD 92
	15	262		ESD 92

Shear rate = (a) 10/s; (b) 1/s

**West Texas Sour**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Chemical Dispersibility (volume %)</b>				
	Corexit 9500	25		ESD 94
	Corexit 9527	35		ESD 92
	Dasic LTS	10		ESD 92
	Enersperse 700	25		ESD 92
<b>Hydrocarbon Groups (weight %)</b>				
<u>Evaporation (volume %)</u>				
0	Saturates	51		ESD 97
	Aromatics	36		ESD 97
	Resins	9		ESD 97
	Asphaltenes	5		ESD 97
	Waxes	5		ESD 98
15	Saturates	46		ESD 97
	Aromatics	39		ESD 97
	Resins	10		ESD 97
	Asphaltenes	5		ESD 97
	Waxes	5		ESD 98
30	Saturates	41		ESD 97
	Aromatics	41		ESD 97
	Resins	13		ESD 97
	Asphaltenes	5		ESD 97
	Waxes	5		ESD 98
<b>Adhesion (g/m<sup>2</sup>)</b>				
<u>Evaporation (volume %)</u>				
0		21	<i>SD = 4</i>	ESD 96
15		24	<i>SD = 3</i>	ESD 96
30		25	<i>SD = 4</i>	ESD 96



		Data	Notes	Reference ID
<b>Volatile Organic Compounds (ppm)</b>				
<u>Evaporation (volume %)</u>				
0	Benzene	3,510		ESD 94
	Toluene	6,980		ESD 94
	Ethylbenzene	5,610		ESD 94
	Xylenes	4,440		ESD 94
	C3-benzenes	7,410		ESD 94
	Total BTEX	20,540		ESD 94
	Total VOCs	27,950		ESD 94
15	Benzene	340		ESD 94
	Toluene	2,800		ESD 94
	Ethylbenzene	5,600		ESD 94
	Xylenes	4,490		ESD 94
	C3-benzenes	7,920		ESD 94
	Total BTEX	13,240		ESD 94
	Total VOCs	21,160		ESD 94
30	Benzene	0		ESD 94
	Toluene	100		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	100		ESD 94
	C3-benzenes	870		ESD 94
	Total BTEX	200		ESD 94
	Total VOCs	1,070		ESD 94
<b>Surface Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (volume %)</u>		<u>Temperature (°C)</u>		
0		0	31.9	ESD 92
		15	27.0	ESD 92
15		0	30.4	ESD 92
		15	27.4	ESD 92
30		0	NM	ESD 92
		15	31.8	ESD 92
<b>Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (volume %)</u>		<u>Temperature (°C)</u>		
0		0	17.3	ESD 92
		15	17.8	ESD 92
15		0	26.4	ESD 92
		15	22.4	ESD 92
30		0	NM	ESD 92
		15	28.3	ESD 92

**West Texas Sour**

		<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	27.0		ESD 92
	15	22.0		ESD 92
15	0	27.3		ESD 92
	15	23.9		ESD 92
30	0	NM		ESD 92
	15	31.8		ESD 92

		Data	Notes	Reference ID
<b>Boiling Point Distribution (weight %)</b>				
<u>Evaporation (Volume %)</u>	<u>Boiling Point (°C)</u>			
0	40	2		ESD 94
	60	2		ESD 94
	80	5		ESD 94
	100	8		ESD 94
	120	12		ESD 94
	140	16		ESD 94
	160	19		ESD 94
	180	23		ESD 94
	200	26		ESD 94
	250	36		ESD 94
	300	45		ESD 94
	350	55		ESD 94
	400	64		ESD 94
	450	72		ESD 94
	500	80		ESD 94
	550	86		ESD 94
	600	91		ESD 94
	650	96		ESD 94
	700	99		ESD 94
15	60	1		ESD 96
	80	2		ESD 96
	100	3		ESD 96
	120	4		ESD 96
	140	6		ESD 96
	160	10		ESD 96
	180	13		ESD 96
	200	17		ESD 96
	250	27		ESD 96
	300	37		ESD 96
	350	48		ESD 96
	400	58		ESD 96
	450	68		ESD 96
	500	77		ESD 96
	550	84		ESD 96
30	600	90		ESD 96
	650	94		ESD 96
	700	98		ESD 96
	180	1		ESD 96
	200	3		ESD 96
	250	14		ESD 96
	300	26		ESD 96

## West Texas Sour

		Data	Notes	Reference ID
<b>Boiling Point Distribution (weight %)</b>				
<u>Evaporation (Volume %)</u>	<u>Boiling Point (°C)</u>			
30	350	39		ESD 96
	400	51		ESD 96
	450	63		ESD 96
	500	73		ESD 96
	550	81		ESD 96
	600	88		ESD 96
	650	93		ESD 96
	700	98		ESD 96

		Data	Notes	Reference ID
<b>Metals (ppm)</b>				
<u>Evaporation (volume %)</u>				
0	Aluminum	< 5		Cao 92
	Barium	< 0.3		Cao 92
	Cadmium	< 0.5		Cao 92
	Calcium	40		Cao 92
	Chromium	< 2		Cao 92
	Cobalt	< 1		Cao 92
	Copper	< 0.6		Cao 92
	Iron	18		Cao 92
	Lead	< 3		Cao 92
	Magnesium	1		Cao 92
	Manganese	< 0.3		Cao 92
	Mercury	< 15		Cao 92
	Molybdenum	1		Cao 92
	Nickel	4		Cao 92
	Selenium	< 15		Cao 92
	Strontium	< 0.2		Cao 92
	Tin	< 15		Cao 92
	Titanium	< 0.6		Cao 92
	Vanadium	18		Cao 92
	Zinc	0.5		Cao 92
30	Barium	< 0.3		Cao 92
	Chromium	< 2		Cao 92
	Copper	< 0.6		Cao 92
	Iron	28		Cao 92
	Lead	< 3		Cao 92
	Magnesium	2		Cao 92
	Molybdenum	1		Cao 92
	Nickel	6		Cao 92
	Titanium	< 0.6		Cao 92
	Vanadium	24		Cao 92
	Zinc	0.7		Cao 92
<b>Aqueous Solubility (mg/L)</b>				
	Room temperature	52	(a)	ESD 92
<i>(a) fresh water</i>				
<b>Acute Toxicity of Water Soluble Fraction (mg/L)</b>				
	<u>Test Organism</u>			
48h LC50	Daphnia magna	29	(a)	Harris 94
<i>(a) results based on GC headspace analysis</i>				

**Weyburn-Midale**

	<b>Data</b>	<b>Notes</b>	<b>Reference ID</b>
<b>Origin:</b> Saskatchewan, Canada			
<b>Fire Point (°C)</b>	< 14		Twardus 80
<b>Pour Point (°C)</b>	-28		Twardus 80
<b>Dynamic Viscosity (mPa·s or cP)</b>			
<u>Temperature (°C)</u>			
0	88		Twardus 80
10	29		Twardus 80
20	18		Twardus 80
<b>Surface Tension (mN/m or dynes/cm)</b>			
Room temperature	24.1		Twardus 80
<b>Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)</b>			
Room temperature	29.7		Twardus 80
<b>Distillation (°C)</b>			
<u>Total Distillate (volume %)</u>			
0	45		Twardus 80
10	90		Twardus 80
20	130		Twardus 80
30	190		Twardus 80
40	230		Twardus 80
50	265		Twardus 80
60	275		Twardus 80
70	335		Twardus 80
80	385		Twardus 80

		Data	Notes	Reference ID
<b>Origin:</b> Newfoundland				
<b>Flash Point (°C)</b>				
<u>Evaporation (weight %)</u>				
0		-10		ESD 00
9		48		ESD 00
15		80		ESD 00
24		> 100		ESD 00
<b>Density (g/mL)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	0.8874		ESD 00
	15	0.8738		ESD 00
	25	0.8663		ESD 00
9	0	0.9059		ESD 00
	15	0.8926		ESD 00
	25	0.8846		ESD 00
15	0	0.9150		ESD 00
	15	0.9026		ESD 00
	25	0.8942		ESD 00
24	0	0.9261		ESD 00
	15	0.9143		ESD 00
	25	0.9067		ESD 00
<b>Pour Point (°C)</b>				
<u>Evaporation (weight %)</u>				
0		13		ESD 00
9		23		ESD 00
15		24		ESD 00
24		30		ESD 00

## White Rose

		Data	Notes	Reference ID
<b>Dynamic Viscosity (mPa·s or cP)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	161	(a)	ESD 00
		663	(b)	ESD 00
		6,441	(c)	ESD 00
	15	30		ESD 00
		17		ESD 00
	25			
9	0	615	(a)	ESD 00
		2,030	(b)	ESD 00
		34,510	(c)	ESD 00
	15	87		ESD 00
		39		ESD 00
	25			
15	0	1,120	(a)	ESD 00
		2,589	(b)	ESD 00
		38,370	(c)	ESD 00
	15	253		ESD 00
		159		ESD 00
	25			
24	0	4,608	(a)	ESD 00
		29,500	(b)	ESD 00
		266,500	(c)	ESD 00
	15	992	(a)	ESD 00
		3,659	(b)	ESD 00
	25	35,440	(c)	ESD 00
	25	320		ESD 00
<b>Chemical Dispersibility (volume %)</b>				
<u>Evaporation (weight %)</u>				
0	Corexit 9500	21		ESD 00
8		20		ESD 00
14		16		ESD 00
23		16		ESD 00
<b>Adhesion (g/m<sup>2</sup>)</b>				
<u>Evaporation (weight %)</u>				
0		23	SD = 2	ESD 00
9		26	SD = 1	ESD 00
15		46	SD = 3	ESD 00
24		63	SD = 5	ESD 00



		Data	Notes	Reference ID
<b>Surface Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	DNF		ESD 00
	15	27.7		ESD 00
	25	27.2		ESD 00
9	0	DNF		ESD 00
	15	29.2		ESD 00
	25	28.9		ESD 00
15	0	DNF		ESD 00
	15	29.9		ESD 00
	25	29.3		ESD 00
24	0	DNF		ESD 00
	15	59.3		ESD 00
	25	29.9		ESD 00
<b>Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	DNF		ESD 00
	15	28.2		ESD 00
	25	26.5		ESD 00
9	0	DNF		ESD 00
	15	18.4		ESD 00
	25	24.2		ESD 00
15	0	DNF		ESD 00
	15	NM		ESD 00
	25	NM		ESD 00
24	0	DNF		ESD 00
	15	NM		ESD 00
	25	NM		ESD 00
<b>Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)</b>				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	DNF		ESD 00
	15	29.1		ESD 00
	25	27.5		ESD 00
9	0	DNF		ESD 00
	15	19.4		ESD 00
	25	26.5		ESD 00
15	0	DNF		ESD 00
	15	NM		ESD 00
	25	NM		ESD 00
24	0	DNF		ESD 00
	15	NM		ESD 00
	25	NM		ESD 00