

		Data	Notes	Reference ID
Origin: Mexico				
API Gravity		38.9		OGJ 00
Sulphur (weight %)		0.90		OGJ 00
Reid Vapour Pressure (kPa)		46		OGJ 00
Pour Point (°C)		-45		OGJ 00
Kinematic Viscosity (mm²/s or cSt)				
	<u>Temperature (°C)</u>			
	25	4		OGJ 00
Hydrocarbon Groups (weight %)				
	Asphaltenes	1		OGJ 00
Yield on Crude (volume %)				
	<u>Boiling Range (°C)</u>			
	C1-C4	2		OGJ 00
	Naphtha (C5-177)	29		OGJ 00
	Kerosene (177-274)	19		OGJ 00
	Light gas oil (274-344)	15		OGJ 00
	Heavy gas oil (344-538)	25		OGJ 00
	Residue (>538)	10		OGJ 00
Metals (ppm)				
	Nickel	3		OGJ 00
	Vanadium	8		OGJ 00

Oman Export

		Data	Notes	Reference ID
Origin: Oman				
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".				
API Gravity		36.3		OGJ 99
Sulphur (weight %)		0.79		OGJ 99
Reid Vapour Pressure (kPa)		29		OGJ 99
Pour Point (°C)		-26		OGJ 99
Saybolt Viscosity (SUS)				
	<u>Temperature (°C)</u>			
	16	65		OGJ 99
Yield on Crude (volume %)				
	<u>Boiling Range (°C)</u>			
	IBP-45	4		OGJ 99
	Straight run (45-104)	8		OGJ 99
	Naphtha (104-199)	18		OGJ 99
	Kerosene (157-260)	21		OGJ 99
	Light gas oil (232-343)	22		OGJ 99
	Heavy gas oil (343-538)	26		OGJ 99
	Flashed residue (>538)	16		OGJ 99

		Data	Notes	Reference ID
Origin: Ecuador				
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".				
API Gravity				
		25.9		ESD 97
		29.2		OGJ 99
Equation(s) for Predicting Evaporation				
%Ev = (1.45 + 0.045T)ln(t)				ESD 98
Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				
Sulphur (weight %)				
Evaporation (weight %)				
0		1.01		OGJ 99
		1.31		ESD 97
21		1.52		ESD 99
Flash Point (°C)				
Evaporation (weight %)				
0		-1		ESD 97
21		> 95		ESD 98
Reid Vapour Pressure (kPa)				
		26		OGJ 99
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.9098		ESD 97
	15	0.8981		ESD 97
	25	0.8928		ESD 98
21	0	0.9570		ESD 98
	15	0.9426		ESD 98
	25	0.9397		ESD 98
Pour Point (°C)				
Evaporation (weight %)				
		-4		OGJ 99
		0		ESD 97
21		13		ESD 98
Dynamic Viscosity (mPa s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	667		ESD 97
	15	85		ESD 97
	25	53		ESD 98
21	0	647,300	(a)	ESD 98
	15	6,124	(b)	ESD 98
	25	2,114		ESD 98

(a) shear rate = 1/s; (b) slightly non-newtonian

Oriente

		Data	Notes	Reference ID
Kinematic Viscosity (mm²/s or cSt)				
<u>Temperature (°C)</u>				
	40	13		OGJ 99
Hydrocarbon Groups (weight %)				
<u>Evaporation (weight %)</u>				
0	Saturates	48		ESD 98
	Aromatics	32		ESD 98
	Resins	9		ESD 98
	Asphaltenes	12		ESD 98
21	Saturates	41		ESD 98
	Aromatics	33		ESD 98
	Resins	11		ESD 98
	Asphaltenes	15		ESD 98
Adhesion (g/m²)				
<u>Evaporation (weight %)</u>				
0		30	<i>SD = 4</i>	ESD 98
21		215	<i>SD = 38</i>	ESD 98
Volatile Organic Compounds (ppm)				
<u>Evaporation (weight %)</u>				
0	Benzene	172		ESD 97
	Toluene	2,194		ESD 97
	Ethylbenzene	626		ESD 97
	Xylenes	2,181		ESD 97
	C3-benzenes	4,078		ESD 97
	Total BTEX	5,174		ESD 97
	Total VOCs	9,252		ESD 97
21	Benzene	0		ESD 98
	Toluene	0		ESD 98
	Ethylbenzene	1		ESD 98
	Xylenes	2		ESD 98
	C3-benzenes	10		ESD 98
	Total BTEX	2		ESD 98
	Total VOCs	12		ESD 98
Surface Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	66.8		ESD 97
	15	27.7		ESD 97
	25	27.3		ESD 00
21	0	DNF		ESD 97
	15	DNF		ESD 00
	25	29.4		ESD 00

		Data	Notes	Reference ID
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	NM		ESD 97
	15	26.6		ESD 97
	25	21.3		ESD 00
21	0	DNF		ESD 97
	15	DNF		ESD 00
	25	NM		ESD 00
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	NM		ESD 97
	15	26.8		ESD 97
	25	22.0		ESD 00
21	0	DNF		ESD 97
	15	DNF		ESD 00
	25	NM		ESD 00

Oriente

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
<u>Evaporation (weight %)</u>	<u>Boiling Point (°C)</u>			
0	40	3		ESD 97
	60	4		ESD 97
	80	7		ESD 97
	100	9		ESD 97
	120	9		ESD 97
	140	12		ESD 97
	160	14		ESD 97
	180	17		ESD 97
	200	20		ESD 97
	250	28		ESD 97
	300	37		ESD 97
	350	48		ESD 97
	400	57		ESD 97
	450	67		ESD 97
	500	75		ESD 97
	550	82		ESD 97
	600	88		ESD 97
	650	93		ESD 97
	700	97		ESD 97
21	250	6		ESD 99
	300	16		ESD 99
	350	28		ESD 99
	400	40		ESD 99
	450	51		ESD 99
	500	61		ESD 99
	550	69		ESD 99
	600	76		ESD 99
	650	82		ESD 99
	700	86		ESD 99
Yield on Crude (volume %)				
	<u>Boiling Range (°C)</u>			
	C1-C4	5		OGJ 99
	Light naphtha (IBP-93)	4		OGJ 99
	Heavy naphtha (93-204)	17		OGJ 99
	Kerosene (204-260)	6		OGJ 99
	Gas oil (260-327)	15		OGJ 99
	Vacuum gas oil (327-538)	32		OGJ 99
	Residue (>327)	52		OGJ 99

		Data	Notes	Reference ID
Metals (ppm)				
	Nickel	39		OGJ 99
	Vanadium	65		OGJ 99

Orimulsion-100

		Data	Notes	Reference ID
Origin: Venezuela				
Orimulsion is an oil-in-water emulsion containing approximately 70% bitumen (Cerro Negro) from the Orinoco region of Venezuela. It is marketed to power generating stations as an alternative to coal.				Jokuty 99
Orimulsion-100 is no longer in production. It contained a nonyl phenol ethoxylate surfactant (<1%) to stabilize the emulsion. The currently available formulation, Orimulsion-400, does not contain a nonyl phenol ethoxylate surfactant.				
The sample analyzed by ESD was received in December 1993.				
API Gravity		8.2		ESD 93
Equation(s) for Predicting Evaporation				
%Ev = (3.00 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 96
Sulphur (weight %)		2.32		ESD 94
Water Content (weight %)				
<u>Evaporation (weight %)</u>				
0		27.0		ESD 93
26		1.7		ESD 94
Flash Point (°C)				
<u>Evaporation (weight %)</u>				
0		> 95		ESD 93
26		> 95		ESD 94
Density (g/mL)				
<u>Evaporation (weight %)</u> <u>Temperature (°C)</u>				
0	0	1.0200		ESD 93
	15	1.0123		ESD 93
26	0	1.0269		ESD 94
	15	1.0190		ESD 94
Pour Point (°C)				
<u>Evaporation (weight %)</u>				
0		2		ESD 93
26		40		ESD 94

		Data	Notes	Reference ID
Dynamic Viscosity (mPa·s or cP)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	789		ESD 93
	15	623		ESD 93
	20	548		ESD 93
	30	515		ESD 93
	40	458		ESD 93
26	0	330,000,000	(a)	ESD 94
	15	6,700,000	(b)	ESD 94
<i>Shear rate = (a) 0.01/s; (b) 0.5/s</i>				
Hydrocarbon Groups (weight %)				
<u>Evaporation (weight %)</u>				
26	Saturates	17		ESD 95
	Aromatics	47		ESD 95
	Resins	16		ESD 95
	Asphaltenes	20		ESD 95
Volatile Organic Compounds (ppm)				
<u>Evaporation (weight %)</u>				
0	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
26	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
Surface Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	35.2		ESD 93
	15	34.6		ESD 93
26	0	NM		ESD 94
	15	NM		ESD 94

Orimulsion-100

		Data	Notes	Reference ID
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	NM		ESD 93
	15	NM		ESD 93
26	0	NM		ESD 94
	15	NM		ESD 94
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	NM		ESD 93
	15	NM		ESD 93
26	0	NM		ESD 94
	15	NM		ESD 94
Boiling Point Distribution (weight %)				
<u>Evaporation (weight %)</u>	<u>Boiling Point (°C)</u>			
26	250	1		ESD 94
	300	5		ESD 94
	350	11		ESD 94
	400	18		ESD 94
	450	27		ESD 94
	500	35		ESD 94
	550	44		ESD 94
	600	53		ESD 94
	650	63		ESD 94
	700	72		ESD 94

Orimulsion-400 (1997)

	Data	Notes	Reference ID
Origin: Venezuela			
Orimulsion is an oil-in-water emulsion containing approximately 70% bitumen (Cerro Negro) from the Orinoco region of Venezuela. It is marketed to power generating stations as an alternative to coal. A pre-production sample of Orimulsion-400 was provided to ESD by Bitor America Corporation for a comparative study of the physical properties, chemical composition, dispersibility, and toxicity of Orimulsion-400 and Orimulsion-100.			Jokuty 99
API Gravity	8.5		ESD 97
Equation(s) for Predicting Evaporation			
Fresh Orimulsion: %Ev = $(3.00 + 0.045T)\ln(t)$ Residual bitumen (29% evaporated): %Ev = $(3.6)\ln(t)$ Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)			ESD 97
Sulphur (weight %)			
<u>Evaporation (weight %)</u>			
0	2.02		ESD 97
29	3.47		ESD 97
Water Content			
<u>Evaporation (weight %)</u>			
0	29.8		ESD 97
29	0.1		ESD 97
Flash Point (°C)			
<u>Evaporation (weight %)</u>			
0	> 95		ESD 97
29	> 95		ESD 97
Density (g/mL)			
<u>Evaporation (weight %)</u>		<u>Temperature (°C)</u>	
0	0	1.0162	ESD 97
	15	1.0095	ESD 97
29	0	1.0220	ESD 97
	15	1.0202	ESD 97
Pour Point (°C)			
<u>Evaporation (weight %)</u>			
0	0		ESD 97
29	33		ESD 97

Orimulsion-400 (1997)

		Data	Notes	Reference ID
Dynamic Viscosity (mPa s or cP)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	1,065	(a)	ESD 97
		2,754	(b)	ESD 97
		5,501	(c)	ESD 97
	15	450	(a)	ESD 97
	20	457	(d)	ESD 97
29	0	NM		ESD 97
	15	1,751,000	(e)	ESD 97
<i>Shear rate = (a) 100/s; (b) 10/s; (c) 1/s; (d) 200/s; (e) 0.15/s</i>				
Hydrocarbon Groups (weight %)				
<u>Evaporation (weight %)</u>				
29	Saturates	14		ESD 97
	Aromatics	47		ESD 97
	Resins	22		ESD 97
	Asphaltenes	17		ESD 97
	Waxes	1		ESD 98
Adhesion (g/m²)				
<u>Evaporation (weight %)</u>				
0		99	<i>SD = 17</i>	ESD 97
29		2,736	<i>SD = 309</i>	ESD 97
Volatile Organic Compounds (ppm)				
	Benzene	0		ESD 97
	Toluene	4		ESD 97
	Ethylbenzene	19		ESD 97
	Xylenes	13		ESD 97
	C3-benzenes	70		ESD 97
	Total BTEX	37		ESD 97
	Total VOCs	107		ESD 97
Surface Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	DNF		ESD 97
	15	35.4		ESD 97
29	0	DNF		ESD 97
	15	DNF		ESD 97
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	NM		ESD 97
	15	NM		ESD 97
29	0	NM		ESD 97
	15	NM		ESD 97

		Data	Notes	Reference ID
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	NM		ESD 97
	15	NM		ESD 97
29	0	NM		ESD 97
	15	NM		ESD 97

Orimulsion-400 (1999)

		Data	Notes	Reference ID
Orimulsion is an oil-in-water emulsion containing approximately 70% bitumen (Cerro Negro) from the Orinoco region of Venezuela. It is marketed to power generating stations as an alternative to coal.				Jokuty 99
This sample of Orimulsion-400 was provided to ESD by Bitor America Corporation, as part of a comparative study of the physical properties, chemical composition, dispersibility, and toxicity of Orimulsion-400 and Orimulsion-100. The sample obtained from a shipment to New Brunswick Power's Dalhousie generating station, represents the currently available commercial formulation of Orimulsion..				
API Gravity		8.7		ESD 99
Water Content (weight %)		27.5		ESD 99
Flash Point (°C)		> 100		ESD 99
Density (g/mL)				
	<u>Temperature (°C)</u>			
	0	1.0158		ESD 99
	15	1.0084		ESD 99
Pour Point (°C)		1		ESD 99
Dynamic Viscosity (mPa s or cP)				
	<u>Temperature (°C)</u>			
	0	636	(a)	ESD 99
		2,355	(b)	ESD 99
		4,894	(c)	ESD 99
	15	380	(a)	ESD 99
	20	414	(a)	ESD 99
	30	371	(a)	ESD 99
		501	(d)	ESD 99

Shear rate = (a) 100/s; (b) 10/s; (c) 1/s; (d) 30/s

	Data	Notes	Reference ID
Origin: North Sea, Norway			
Sample analyzed by ESD was obtained from ESSO Petroleum, Dartmouth refinery.			
Data from OGJ 99 were originally published in 1989 as part of a series entitled "Guide to Export Crudes for the '80s".			
Data from Statoil 97 are for a sample of Oseberg Blend taken February 20, 1997, comprised of 69% Oseberg,16.5%Brage, 9% Veslefrikk, 4.5% Frostpipe, and 1% Troll condensate. The assay was prepared by Saybolt Nederland BV in March 1997.			
API Gravity			
	33.7		OGJ 99
	34.4		ESD 91
	36.4		Statoil 97b
Equation(s) for Predicting Evaporation			
%Ev = 2.68 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)			ESD 96
Sulphur (weight %)			
<u>Evaporation (volume %)</u>			
0	0.31		OGJ 99
	0.28		ESD 93
	0.25		Statoil 97b
14	0.34		ESD 93
28	0.39		ESD 93
Water Content (volume %)			
	0.1		OGJ 99
	0.2		Statoil 97b
Flash Point (°C)			
<u>Evaporation (volume %)</u>			
0	-24		ESD 91
14	51		ESD 91
15	51		Daling 91
28	> 90		ESD 91
	94		Daling 91
37	126		Daling 91
Reid Vapour Pressure (kPa)			
	26		ESD 91

Oseberg

		Data	Notes	Reference ID
Density (g/mL)				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	0.8633		ESD 91
	15	0.8522		ESD 91
		0.8425		Statoil 97b
14	0	0.8951		ESD 91
	15	0.8839		ESD 91
28	0	0.9069		ESD 91
	15	0.8961		ESD 91
Pour Point (°C)				
<u>Evaporation (volume %)</u>				
0		-6		OGJ 99
		-6		Daling 91
		-9		ESD 91
		min -36		Statoil 97b
		max 0		Statoil 97b
14		0		ESD 91
15		9		Daling 91
28		3		ESD 91
		12		Daling 91
37		21		Daling 91
Dynamic Viscosity (mPa·s or cP)				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	22		ESD 91
	13	15		Daling 91
	15	10		ESD 91
14	0	104		ESD 91
	15	29		ESD 91
15	13	33		Daling 91
28	0	535		ESD 91
	13	67		Daling 91
	15	70		ESD 91
37	13	254		Daling 91
Kinematic Viscosity (mm²/s or cSt)				
	<u>Temperature (°C)</u>			
	20	9		OGJ 99
		7		Statoil 97b

		Data	Notes	Reference ID
Chemical Dispersibility (volume %)				
	Corexit 9500	15		ESD 94
	Corexit 9527	30		ESD 93
	Dasic LTS	10		ESD 91
	Enersperse 700	20		ESD 91
	Relatively high chemical dispersibility.			Daling 91
Hydrocarbon Groups (weight %)				
<u>Evaporation (volume %)</u>				
0	Saturates	65		ESD 94
	Aromatics	25		ESD 94
	Resins	8		ESD 94
	Asphaltenes	2		ESD 94
	Waxes	5		ESD 98
14	Saturates	58		ESD 96
	Aromatics	30		ESD 96
	Resins	10		ESD 96
	Asphaltenes	2		ESD 96
	Waxes	4		ESD 98
28	Saturates	55		ESD 96
	Aromatics	32		ESD 96
	Resins	13		ESD 96
	Asphaltenes	1		ESD 96
	Waxes	5		ESD 98
37	Saturates	36		Daling 91
	Aromatics	52		Daling 91
	Resins	10		Daling 91
	Asphaltenes	2		Daling 91
	Waxes	2		Daling 91
Adhesion (g/m²)				
<u>Evaporation (volume %)</u>				
0		20	<i>SD = 2</i>	ESD 96
14		32	<i>SD = 2</i>	ESD 96
28		33	<i>SD = 4</i>	ESD 96

Oseberg

		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
<u>Evaporation (volume %)</u>				
0	Benzene	1,670		ESD 94
	Toluene	3,990		ESD 94
	Ethylbenzene	910		ESD 94
	Xylenes	5,450		ESD 94
	C3-benzenes	6,110		ESD 94
	Total BTEX	12,020		ESD 94
	Total VOCs	18,130		ESD 94
14	Benzene	140		ESD 94
	Toluene	930		ESD 94
	Ethylbenzene	510		ESD 94
	Xylenes	2,930		ESD 94
	C3-benzenes	4,330		ESD 94
	Total BTEX	4,510		ESD 94
	Total VOCs	8,840		ESD 94
28	Benzene	0		ESD 94
	Toluene	140		ESD 94
	Ethylbenzene	50		ESD 94
	Xylenes	190		ESD 94
	C3-benzenes	1,330		ESD 94
	Total BTEX	380		ESD 94
	Total VOCs	1,710		ESD 94
Surface Tension (mN/m or dynes/cm)				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	27.6		ESD 91
	15	26.2		ESD 91
14	0	27.6		ESD 91
	15	27.8		ESD 91
28	0	NM		ESD 91
	15	29.1		ESD 91

		Data	Notes	Reference ID
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	22.0		ESD 91
	13	21.0		Daling 91
	15	20.2		ESD 91
14	0	22.7		ESD 91
	15	21.2		ESD 91
15	13	25.0		Daling 91
28	0	NM		ESD 91
	13	26.0		Daling 91
	15	19.9		ESD 91
37	13	28.0		Daling 91
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (volume %)</u>	<u>Temperature (°C)</u>			
0	0	22.7		ESD 91
	15	22.6		ESD 91
14	0	24.8		ESD 91
	15	22.7		ESD 91
28	0	NM		ESD 91
	15	22.5		ESD 91

Oseberg

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
<u>Evaporation (volume %)</u>	<u>Boiling Point (°C)</u>			
0	40	6		ESD 96
	60	8		ESD 96
	80	9		ESD 96
	100	10		ESD 96
	105	12		Statoil 97b
	120	11		ESD 96
		14		Statoil 97b
	140	13		ESD 96
	145	19		Statoil 97b
	160	16		ESD 96
		22		ESD 00
	180	20		ESD 96
		25		Statoil 97b
	200	23		ESD 96
	205	29		Statoil 97b
	250	33		ESD 96
		39		Statoil 97b
	295	47		Statoil 97b
	300	44		ESD 96
	350	55		ESD 96
		58		Statoil 97b
	400	64		ESD 96
	420	68		Statoil 97b
	450	74		ESD 96
	500	81		ESD 96
	525	85		Statoil 97b
	550	87		ESD 96
	565	89		Statoil 97b
	600	92		ESD 96
	650	96		ESD 96
	700	98		ESD 96
14	80	1		ESD 96
	100	1		ESD 96
	120	1		ESD 96
	140	3		ESD 96
	160	5		ESD 96
	180	9		ESD 96
	200	12		ESD 96
	250	23		ESD 96
	300	36		ESD 96
	350	48		ESD 96

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
<u>Evaporation (volume %)</u>	<u>Boiling Point (°C)</u>			
14	400	59		ESD 96
	450	70		ESD 96
	500	79		ESD 96
	550	86		ESD 96
	600	91		ESD 96
	650	95		ESD 96
	700	98		ESD 96
28	180	2		ESD 96
	200	5		ESD 96
	250	16		ESD 96
	300	30		ESD 96
	350	44		ESD 96
	400	55		ESD 96
	450	67		ESD 96
	500	77		ESD 96
	550	84		ESD 96
	600	90		ESD 96
	650	95		ESD 96
	700	98		ESD 96
Yield on Crude (weight %)				
	<u>Boiling Range (°C)</u>			
	Gasoline (C5-90)	7		OGJ 99
		6		Statoil 97b
	Light naphtha (90-160)	13		OGJ 99
		13		Statoil 97b
	Heavy naphtha (160-180)	4		OGJ 99
		4		Statoil 97b
	Gas oil (180-240)	11		OGJ 99
		11		Statoil 97b
	Gas oil (240-320)	18		OGJ 99
		16		Statoil 97b
	Gas oil (320-375)	10		OGJ 99
		9		Statoil 97b
	Heavy gas oil (375-420)	6		OGJ 99
		6		Statoil 97b
	Heavy gas oil (420-525)	16		OGJ 99
		17		Statoil 97b
	Residue (>525)	14		OGJ 99
		15		Statoil 97b

Oseberg

		Data	Notes	Reference ID
Metals (ppm)				
<u>Evaporation (volume %)</u>				
0	Aluminum	< 5		Cao 92
	Barium	< 0.3		Cao 92
	Cadmium	< 0.5		Cao 92
	Calcium	58		Cao 92
	Chromium	< 2		Cao 92
	Cobalt	< 1		Cao 92
	Copper	< 0.6		Cao 92
	Iron	4		Cao 92
	Lead	< 3		Cao 92
	Magnesium	1		Cao 92
	Manganese	< 0.3		Cao 92
	Mercury	< 15		Cao 92
	Molybdenum	< 0.6		Cao 92
	Nickel	4		Cao 92
		< 2		OGJ 99
		2		Statoil 97b
	Selenium	< 15		Cao 92
	Sodium	< 2		OGJ 99
		3		Statoil 97b
	Strontium	< 0.2		Cao 92
	Tin	< 15		Cao 92
	Titanium	< 0.6		Cao 92
	Vanadium	3		Cao 92
		4		OGJ 99
		< 1		Statoil 97b
	Zinc	< 0.6		Cao 92
14	Barium	< 0.3		Cao 92
	Chromium	< 2		Cao 92
	Copper	< 0.6		Cao 92
	Iron	5		Cao 92
	Lead	< 3		Cao 92
	Magnesium	< 1		Cao 92
	Molybdenum	< 0.6		Cao 92
	Nickel	4		Cao 92
	Titanium	< 0.6		Cao 92
	Vanadium	3		Cao 92
28	Zinc	1		Cao 92
	Barium	< 0.3		Cao 92
	Chromium	< 2		Cao 92
	Copper	< 0.6		Cao 92
	Iron	3		Cao 92

		Data	Notes	Reference ID
Metals (ppm)				
<u>Evaporation (volume %)</u>				
28	Lead	< 3		Cao 92
	Magnesium	3		Cao 92
	Molybdenum	< 0.6		Cao 92
	Nickel	5		Cao 92
	Titanium	< 0.6		Cao 92
	Vanadium	3		Cao 92
	Zinc	< 0.6		Cao 92
Aqueous Solubility (mg/L)				
<u>Evaporation (volume %)</u>				
0	Room temperature	38	(a)	ESD 91
15		7	(a)	ESD 91
<i>(a) fresh water</i>				
Acute Toxicity of Water Soluble Fraction (mg/L)				
<u>Test Organism</u>				
48h LC50	Daphnia magna	13	(a)	Harris 94
<i>(a) results based on GC purge-and-trap analysis</i>				