

CRUDE OILS

Heat required												
No Heat required												
H ₂ S												
NO COW												
CRUDE NAME	Assay Date	API	Density Kg/l	Pour Point C	Wax Point C	Total Wax % wt	Viscosity cSt	Min Temp. Single Hull Cargo Slop	Min Temp. Double Hull Cargo Slop	Double Hulled Tanker Winter Summer COW COW		H2S Vapour ppm
Abu Al Bu Khoosh	02/92	33,6	0,8565	-21	32	5,5	9.95/20C	No Heat	No Heat	B2	B2	
Airlie Blend	12/96	43,7	0,8070	-15	8	4,5	2.48/20C	No Heat	No Heat	B1	B1	
Aksai Condensate	11/00	44,3	0,8045	-9	21	5,0	2.72/20C	No Heat	No Heat	B2	B1	0 - 100
Aktubinsk	01/01	41,8	0,8160	-48	18	6,0	4.40/20C	No Heat	No Heat	B2	B1	
Alaskan North Slope	09/02	31,9	0,8655	-18	15	4,5	11.0/20C	No Heat	No Heat	B2	B1	
Alba	06/02	19,7	0,9355	-42	2	2,0	195/30C	-	30 30	B1	B1	<90
Algerian Condensate	06/85	64,3	0,7220	-60	-40	0,2	0.81/20C	No Heat	No Heat			
Al Jurf	02/05	29,9	0,8760	-9	25	9,5	11.6/30C	No Heat	No Heat	B2	B2	> 4000
Al Rayyan	09/97	24,5	0,9065	-18	25	8,0	63.9/20C	No Heat	No Heat	B3	B2	40000
Al Shaheen	12/96	29,0	0,8810	-18	19	6,0	21.5/20C	No Heat	No Heat	B2	B1	>300
Amenam	02/05	37,8	0,8355	-6	38	10,0	3.31/30C	No Heat 35	No Heat 35	B7	B7	0
Amna	01/04	37,4	0,8375	18	34	17,0	8.41/40C	35 45	35 45	B7	B7	100 - >2000
Anasuria	12/00	39,7	0,8260	-30	17	7,0	4.74/20C	-	No Heat	B2	B2	
Anoa	09/91	45,0	0,8010	15	36	16,0	4.01/30C	35 45	30 40	B8	B8	0
Antan	06/01	26,5	0,8950	-39	12	2,5	25.7/20C	No Heat	No Heat	B1	B1	<1
Arab Extra Light	02/03	38,8	0,8305	-33	4	5,0	4.81/20C	No Heat	No Heat	B1	B1	100 - >2500
Arab Heavy	03/04	27,7	0,8885	-54	15	4,5	40.3/20C	No Heat	No Heat	B2	B2	100 - >2000
Arab Light	03/05	32,8	0,8605	-57	10	6,0	11.2/20C	No Heat	No Heat	B2	B1	150 - >2000
Arab Medium	03/04	30,8	0,8715	-57	12	5,0	16.7/20C	No Heat	No Heat	B2	B1	50 - >2000
Ardjuna	12/02	38,0	0,8345	24	37	17,0	2.65/40C	40 50	35 45	B7	B7	60-120
Ardmore	05/04	37,7	0,8360	0	26	9,0	9.94/20C	No Heat	No Heat	B2	B2	0

Asgaard	11/01	42,2	0,8135	-9	19	7,0	2.42/30C	-	No Heat	B2	B2	0
Asgaard Condensate	10/03	51,2	0,7740	-45	9	3,5	1.27/20C	No Heat	No Heat			
Ashtart	12/96	29,8	0,8765	-6	22	10,5	16.4/20C	35 45	30 40	B8	B7	
Attaka	09/97	43,5	0,8080	0	14	5,5	1.91/20C	No Heat	No Heat	B1	B1	0
Azeri	07/03	34,6	0,8515	-9	29	8,5	9.07/30C	25 25	No Heat	B2	B2	10
Bach Ho	09/99	40,2	0,8235	36	48	28,5	4.92/50C	50 50	50 50	B5	B5	0
Badak	03/98	41,3	0,8183	-12	24	10,5	2.02/20C	No Heat	No Heat	B2	B2	0
Badin	06/95	44,6	0,8030	20	27	18,0	3.20/20C	35 45	30 40	B8	B7	0
Balder	10/00	23,1	0,9145	-24	24	4,0	83.3/20C	-	No Heat	B2	B1	
Banff	08/02	37,9	0,8350	-6	22	6,5	7.45/20C	-	No Heat	B2	B2	10
Barents Sea	12/96	46,7	0,7935	-24	15	4,5	2.48/20C	No Heat	No Heat	B1	B1	25
Barrow Island	09/90	36,7	0,8410	<-60	-12	0,5	2.96/20C	No Heat	No Heat	B1	B1	0
Bashkiri MCO		31,4	0,8681	-36		5,0		No Heat	No Heat	B2	B1	<5
Bashkiri HCO	12/03	27,0	0,8920	-27	20	8,0	30.8/20C	No Heat	No Heat	A2	A2	<5
Basra Light	03/02	30,8	0,8715	-60	11	5,0	11.7/30C	No Heat	No Heat	B2	B1	> 1000
Bay Marchand	10/00	34,9	0,8500	-27	4	3,0	9.42/20C	No Heat	No Heat	B1	B1	
Beatrice	08/02	37,8	0,8355	24	34	20,5	7.45/40C	-	35 45	B8	B7	140 - 300
Bekapai	11/82	39,7	0,8260	-21	21	10,0	2.87/20C	No Heat	No Heat	B2	B2	0
Belanak		43,3	0,8092	26	47	26,5	5.01/50C	40 50	40 50	B7	B7	
Belayim Blend	05/05	25,1	0,9030	-9	31	9,0	95.5/20C	25 35	20 30	B8	B7	
Belida	03/94	45,7	0,7980	15	31	13,0	2.89/30C	35 45	30 40	B8	B7	0
Benchamas	09/02	42,4	0,8130	33	41	31,0	2.82/60C	50 50	45 45	B5	B5	0
Beryl	05/01	39,2	0,8285	6	25	7,5	5.31/20C	-	No Heat	B2	B1	
Bima	03/92	19,8	0,9345	6	37	13,0	224/50C	50 50	50 50	B2	B2	
Bintulu	09/95	36,0	0,8445	-21	24	9,0	3.27/20C	No Heat	No Heat	B2	B2	0
Bintulu Condensate	12/86	59,6	0,7400	-50	-50	0,0	0.68/20C	No Heat	No Heat			0
Blenheim	06/95	38,3	0,8330	-18	23	5,5	5.01/20C	No Heat	No Heat	B2	B1	
Blina	03/89	35,5	0,8470	6	26	6,0	11.4/20C	25 25	25 25	B2	B2	
Bombay High	11/82	39,3	0,8280	6	37	15,0	2.85/20C	35 35	35 35	B3	B3	

Bonny (Nigerian) Light	07/04	32,7	0,8615	-12	25	6,0	5.47/30C	No Heat	No Heat	B2	B2	15 - 60
Bonny (Nigerian) Med	06/94	27,6	0,8890	-42	15	3,5	12.9/20C	No Heat	No Heat	B1	B1	
Bontang	06/95	50,8	0,7755	-24	17	6,0	1.10/20C	No Heat	No Heat	B1	B1	
Bouri	03/93	25,5	0,9005	-12	16	9,5	42.1/20C	No Heat	No Heat	B3	B3	
Brass River	04/03	39,8	0,8255	-15	26	8,0	3.20/20C	No Heat	No Heat	B2	B2	0 - 50
Brega	12/93	42,1	0,8145	0	25	8,5	5.70/20C	25 25	No Heat	B2	B1	100 - >200
Brent Blend	09/03	37,9	0,8350	-3	22	6,5	4.47/30C	25 25	No Heat	B2	B1	30 - 130
Bu Attifel	04/78	41,0	0,8200	39	42	N/A	6.50/50C	55 55	50 50	B5	B5	
Buffalo	10/00	52,7	0,7675	-60	6	5,5	1.37/20C	No Heat	No Heat	B2	B1	0
Bunga Kekwa	03/98	36,9	0,8400	36	39	35,0	5.18/50C	50 60	45 55	B7	B7	<10
Buzachinskaja	02/05	23,5	0,9125	-24	17	5,5	94.1/30C	No Heat	No Heat	B2	B2	
Cabinda Export	03/95	32,7	0,8615	18	29	12,5	18.1/30C	35 35	30 30	B5	B5	80 - 175
Camar	09/91	36,0	0,8445	-33	30	10,5	4.70/20C	No Heat	No Heat	B3	B2	<5
Canadon Seco	08/02	24,9	0,9040	-12	35	9,5	128/40C	35 35	35 35	B4	B2	
Cano Limon	03/93	29,0	0,8810	-12	22	7,0	29.0/20C	No Heat	No Heat	B2	B2	
Captain	12/03	19,8	0,9350	-39	-6	0,5	251/30C	-	30 30	B1	B1	15
Castilla	10/00	12,8	0,9800	-9	72	6,5	1619/40C	60 60	60 60	B5	B5	
Ceiba	12/02	31,2	0,8690	-18	16	5,0	13.9/30C	No Heat	No Heat	B2	B1	2
Cerro Negro	03/04	15,4	0,9630	-39	35	0,3	177/40C	40 40	35 35	B1	B1	>200
Challis	12/90	39,9	0,8250	-9	6	5,0	3.04/20C	No Heat	No Heat	B1	B1	20
Champion	05/04	28,5	0,8840	-12	17	3,0	7.52/20C	No Heat	No Heat	B1	B1	10 - 165
Cheleken	07/02	34,5	0,8520	9	32	10,5	2.23/20C	25 35	25 25	B4	B2	0 - 50
Cinta	03/84	31,1	0,8700	39	47	27,0	50.7/40C	55 55	50 50	B5	B5	
Clair		23,3	0,9135	-33	22	4,5	53.7/30C	-	No Heat	B1	B1	0
Coban	02/02	16,5	0,9555	-18	45	7,0	279/30C	45 45	40 40	B2	B2	>2000
Coco	09/95	31,4	0,8680	25	27	15,0	22.3/30C	40 50	35 35	B3	B3	20 - 50
Cold Lake	06/97	23,0	0,9155	-54	37	2,5	128/20C	No Heat	No Heat	B2	B2	
Cooper Basin	12/90	51,4	0,7730	-3	21	15,0	2.71/20C	20 20	No Heat	B2	B1	
Cossack	07/01	47,7	0,7890	-12	17	6,0	1.91/20C	No Heat	No Heat	B2	B1	<5

CPC Blend	8/03	44,8	0,8021	-14	18	5,5	3.03/20C	No Heat 35	No Heat 35	B7	B7	15
Crawford	12/89	33,5	0,8570	-6	26	5,5	10.6/20C	No Heat	No Heat	B1	B1	
Cupiagua	07/99	43,1	0,8100	15	33	13,5	2.43/30C	30 40	25 35	B7	B7	
Curlew	08/01	49,3	0,7820	-27	19	6,0	1.56/20C	-	No Heat	B2	B1	0
Cusiana	03/05	43,2	0,8095	6	29	11,0	2.21/30C	25 35	No Heat	B2	B2	0
Dai Hung	04/96	29,1	0,8805	24	34	14,0	12.3/40C	40 50	35 45	B7	B7	
Daqing	09/91	32,2	0,8640	36	41	27,5	23.6/50C	55 55	50 50	B5	B5	
Dauntless	09/97	32,6	0,8620	-9	14	8,5	16.3/20C	-	No Heat	B2	B2	
Debno	10/04	43,1	0,8100	-12	19	10,0	5.43/20C	No Heat	No Heat	B2	B2	<10
Diana Hoover	12/01	30,9	0,8710	-60	-2	1,5	17.7/20C	No Heat	No Heat	B1	B1	
Didon	06/02	35,4	0,8475	3	23	10,0	5.84/30C	25 35	20 30	B8	B7	
Djeno	12/88	28,4	0,8842	0	25	8,5	44.3/30C	30 30	25 25	B3	B2	>250
Donan	06/92	39,0	0,8295	-6	25	7,5	5.03/20C	-	No Heat	B3	B2	
Dortyol (Turkish)	08/98	32,7	0,8615	-15	15	5,5	13.7/20C	No Heat	No Heat	B2	B1	200
Draugen	06/94	40,5	0,8220	-42	18	4,5	3.97/20C	-	No Heat	B1	B1	0 - 40
Dubai Export	10/01	30,4	0,8735	-30	13	6,0	13.7/20C	No Heat	No Heat	B1	B1	170 - >800
Duc (Saybolt assay)	07/96	33,9	0,8550	-45	23	3,6	8.51/20C	No Heat	No Heat	B1	B1	0 - 20
Dulang	12/02	37,6	0,8365	33	39	30,0	3.81/50C	50 50	45 45	B5	B5	0
Duri	10/04	20,2	0,9325	15	25	20,0	199.5/50C	50 60	50 60	B7	B7	2
Durward	09/97	36,0	0,8445	-15	23	8,0	8.86/20C	-	No Heat	B2	B2	
EA	04/03	33,8	0,8550	9	21	3,5	3.34/20C	25 25	No Heat	B2	B1	0
Ebome	03/05	33,3	0,8580	-63	15	3,5	5.78/20C	No Heat	No Heat	B1	B1	<10
Ekofisk	06/03	37,7	0,8360	0	25	7,0	7.35/20C	No Heat	No Heat	B2	B1	<10
Elang	10/01	56,9	0,7505	-63	8	6,0	1.12/20C	No Heat	No Heat	B1	B1	
El Shahara	02/05	42,5	0,8125	-51	-8	3,0	3.05/20C	No Heat	No Heat	B1	B1	0 - 50
El Wafa	02/05	49,6	0,7812	-30	17	4,6	2.05/21C	No Heat	No Heat	B1	B1	<20
Eocene	10/00	19,0	0,9400	-45	14	4,0	336/20C	30 30	30 30	B1	B1	100 - 300
Escalante	06/01	23,4	0,9125	-6	24	11,0	270/40C	50 60	50 50	B2	B2	50 - 180
Escravos	09/03	33,4	0,8575	-3	26	8,5	5.82/30C	No Heat	No Heat	B3	B2	9

Espoir	11/02	32,7	0,8610	-3	23	5,0	11.8/20C	No Heat	No Heat	B2	B1	0
Es Sider	06/94	36,6	0,8415	9	29	9,0	10.5/20C	25 25	No Heat	B2	B2	50 - >2000
Etame Marin	04/03	35,1	0,8490	27	48	24,0	20.3/40C	50 50	45 45	B2	B2	5
Ezzaouia	05/04	42,2	0,8140	24	40	24,0	3.34/50C	45 45	40 40	B6	B6	0 - 200
Fife	09/02	37,0	0,8395	-3	22	7,0	7.36/20C	-	No Heat	B2	B1	20
Flotta Mix	07/99	36,9	0,8400	-9	27	7,0	7.07/20C	No Heat	No Heat	B2	B2	10 - 100
Foinaven	02/05	26,8	0,8935	-15	21	8,5	33.3/30C	No Heat	No Heat	B2	B2	<30
Forcados	12/97	29,7	0,8775	-6	18	6,0	10.8/20C	No Heat	No Heat	B1	B1	10 - >200
Foroozan	03/95	31,4	0,8680	-42	10	5,0	15.0/20C	No Heat	No Heat	B1	B1	>600
Forties Blend	01/04	44,7	0,8025	-15	25	7,5	2.26/30C	No Heat	No Heat	B2	B1	<50
Fulmar	03/94	41,5	0,8175	0	23	7,5	4.47/20C	-	No Heat	B2	B2	
Galeota Mix	02/05	39,2	0,8285	6	23	7,0	2.61/30C	25 25	No Heat	B2	B2	>100
Geragai	02/02	48,2	0,7870	-42	20	7,5	1.82/20C	No Heat	No Heat	B1	B1	0
Gippsland Blend	08/04	49,3	0,7820	-24	22	13,0	1.49/30C	20 30	15 25	B7	B7	
Girassol	03/02	31,1	0,8700	-24	16	6,0	19.9/20C	No Heat	No Heat	B2	B2	<2
Glitne	11/01	32,2	0,8640	3	25	7,0	12.8/30C	-	No Heat	B2	B2	<10
Gorm Blend	06/98	36,0	0,8445	-39	15	3,5	6.49/20C	No Heat	No Heat	B1	B1	
Grane	11/03	18,6	0,9425	-36	11	1,1	181/30C	30 30	30 30	B1	B1	<5
Griffin	09/01	54,0	0,7625	-30	-1	2,5	1.30/20C	No Heat	No Heat	B1	B1	0
Gryphon	04/03	23,0	0,9155	-54	-12	1,0	58.1/30C	No Heat	No Heat	B1	B1	<10
Gulf of Suez Mix	02/05	32,1	0,8645	-9	28	9,0	10.3/30C	25 35	25 35	B8	B8	50 - 220
Gullfaks A	02/01	36,6	0,8415	-21	19	5,0	6.97/20C	No Heat	No Heat	B2	B1	<30
Gullfaks "C"	05/02	36,5	0,8420	-18	21	6,0	5.03/30C	No Heat	No Heat	B1	B1	<40
Hamaca	06/05	24,3	0,9075	-57	8	1,5	69.8/20C	No Heat	No Heat	B1	B1	10
Handil Mix	08/02	43,9	0,8063	-26	19	4,5	1.86/20C	No Heat	No Heat	B2	B2	0
Hanze	03/03	39,2	0,8285	-42	3	2,0	4.67/20C	-	No Heat	B1	B1	5
Harding	07/02	20,7	0,9292	-45	1	1,0	124/30C	-	30 30	B1	B1	2,5
Heidrun	08/03	27,0	0,8920	-60	1	2,5	24.3/20C	-	No Heat	B1	B1	<10
Hibernia	02/01	35,3	0,8480	3	29	8,5	5.19/40C	25 25	No Heat	B3	B2	

Hudson	09/93	33,6	0,8565	6	30	6,0	10.9/20C	25 35	No Heat	B3	B2	
Hungo	05/05	27,8	0,8875	-45	9	4,5	32.5/20C	No Heat	No Heat	B1	B1	0
Ikan Pari	06/90	47,3	0,7910	15	33	18,0	3.01/20C	30 40	25 35	B8	B7	
Ima	04/01	45,2	0,8005	15	27	14,5	1.72/40C	30 40	25 35	B8	B7	0
Intan	12/90	30,0	0,8685	48	54	40,5	38.5/50C	60 60	60 60	B5	B5	
Iranian Heavy	12/96	31,0	0,8705	-24	21	6,5	16.8/20C	No Heat	No Heat	B3	B2	50 - >3100
Iranian Light	05/02	33,6	0,8565	-18	21	6,5	11.3/20C	No Heat	No Heat	B2	B2	150 - >1000
Isis	08/02	35,0	0,8495	6	26	11,0	5.42/40C	20 30	No Heat 30	B7	B7	<20
Isla	06/89	14,5	0,9685	-12	50	1,5	211/55C	60 60	55 55	B1	B1	
Isthmus	03/02	32,7	0,8610	-39	7	5,0	12.8/20C	No Heat	No Heat	B1	B1	3000 - 4000
Jabiru	06/92	42,4	0,8130	15	21	12,0	3.67/20C	30 40	25 25	B3	B2	<10
Kaji-Semoga	10/01	38,1	0,8340	18	35	16,0	3.33/40C	35 45	35 45	B7	B7	0
Kaliningrad	04/04	39,5	0,8270	-6	16	7,5	7.54/20C	No Heat	No Heat	B1	B2	3
Karachaganak Cond.	02/05	47,4	0,7905	-24	18	4,5	1.96/20C	No Heat	No Heat	B1	B1	250 - >1000
Kerapu	12/03	49,3	0,7820	21	37	20,0	1.90/40C	40 50	35 45	B3	B3	0
Khafji	07/99	28,0	0,8870	-21	15	6,0	46.4/20C	No Heat	No Heat	B2	B1	10 - >200
Khangiran Cond.	03/05	45,9	0,7970	-39	-7	2,5	1.94/20C	No Heat	No Heat			
Kiame	12/98	29,3	0,8795	3	29	9,0	25.7/20C	25 25	No Heat	B3	B2	
Kidurong	02/05	35,6	0,8465	-54	12	3,0	1.99/20C	No Heat	No Heat	B1	B1	0
Kirkuk	09/99	33,7	0,8560	-15	27	7,0	10.8/20C	No Heat	No Heat	B2	B2	200 - >2000
Kizomba												2
Kole Marine Blend	04/03	31,6	0,8670	-21	26	6,0	13.4/20C	25 25	No Heat	B2	B2	5
Kuito	01/03	19,9	0,9340	-42	19	3,5	130/30C	30 30	30 30	B2	B1	118
Kumkol	09/04	39,5	0,8270	15	30	18,5	5.18/40C	30 40	25 35	B7	B7	0 - 50
Kutubu	09/95	44,1	0,8051	3	18	9,5	2.12/20C	20 20	No Heat	B2	B2	2
Kuwait Export	02/05	30,5	0,8730	-57	6	5,0	18.0/20C	No Heat	No Heat	B2	B1	180 - >600
Kyle	08/01	37,4	0,8375	-6	25	7,0	4.34/40C	-	No Heat	B2	B2	<10
Kyzyl Orda	01/01	38,2	0,8335	21	29	15,0	6.77/30C	35 45	30 40	B8	B7	
Labuan	06/95	31,6	0,8670	15	24	10,0	4.70/20C	30 40	25 35	B8	B7	<30

Laguna	08/00	10,9	0,9931	21	42	1,2	1425/60C	60 60	60 60	B5	B5	12
Lalang	12/92	38,1	0,8340	30	40	30,0	7.58/40C	45 45	45 45	B5	B5	0
Laminaria	04/99	58,0	0,7463	-54	-1	1,0	1.05/20C	No Heat	No Heat	B1	B1	50 - 120
Lavan Blend	02/05	34,6	0,8515	-12	20	6,5	5.91/30C	No Heat	No Heat	B2	B1	
Leadon	08/02	17,8	0,9475	-30	5	1,0	170/40C	-	40 40	B1	B1	
Legendre	10/01	43,0	0,8105	12	18	9,5	2.51/20C	27 27	No Heat	B2	B2	<5
Leona	03/93	23,2	0,9140	-36	22	3,5	39.1/40C	No Heat	No Heat	B2	B1	
Liu Hua	09/96	22,8	0,9165	6	14	12,0	78.2/40C	25 35	20 30	B8	B7	
Liverpool Bay	09/99	44,7	0,8025	0	30	10,0	4.87/20C	-	No Heat	B2	B2	15 - 150
Lokele	12/03	20,5	0,9305	-48	20	0,5	128/20C	No Heat	No Heat	B1	B1	<75
Lucina	06/00	35,8	0,8456	18	30	7,5	6.94/40C	35 45	30 40	B7	B7	<10
Lufeng	12/98	32,8	0,8610	42	62	38,0	16.5/50C	60 60	60 60	B5	B5	
Lyell	12/88	36,2	0,8435	-12	23	7,0	7.65/20C	No Heat	No Heat	B2	B1	
M'Bya	06/89	34,4	0,8525	18	28	11,5	12.1/30C	30 40	30 40	B8	B7	
Makat	10/00	34,3	0,8530	-21	4	5,0	12.2/30C	No Heat	No Heat	B1	B1	0 - 50
Mandji	05/01	29,3	0,8795	-6	30	9,0	24.9/30C	20 30	20 30	B8	B7	<3
Maralago	06/98	20,9	0,9280	-18	29	7,0	189/30C	35 45	30 40	B7	B7	
Margham Condensate	02/03	57,4	0,7485	-60	-25	0,5	0.80/20C	No Heat	No Heat			0
Marib Light	09/96	49,7	0,7805	-39	21	5,0	1.61/20C	No Heat	No Heat	B1	B1	0 - 50
Marlim	07/04	19,9	0,9340	-42	28	2,5	190/30C	35 35	30 30	B1	B1	50 - 280
Mars	04/02	30,5	0,8730	-39	10	3,0	29.9/20C	No Heat	No Heat	B1	B1	
Masa	10/99	43,2	0,8095	-24	19	6,0	3.72/20C	No Heat	No Heat	B1	B1	10 - 60
Masila	12/02	31,4	0,8680	-9	25	7,0	11.6/30C	No Heat	No Heat	B2	B1	135 - 680
Maui	03/97	43,1	0,8100	21	31	21,0	3.78/30C	35 45	30 40	B7	B7	
Maya	06/01	21,1	0,9265	-21	40	4,0	161/30C	25 35	No Heat	B5	B5	12000-18000
Mazari	06/89	42,9	0,8110	18	30	15,0	2.72/30C	35 45	30 40	B8	B7	0
McKee	03/01	44,2	0,8050	18	25	19,5	4.37/20C	35 45	30 40	B8	B7	
Merey	03/87	16,0	0,9590	-18	39	1,5	191/50C	50 50	50 50	B1	B1	
Mesa 28	03/91	27,3	0,8905	-24	20	5,0	29.6/20C	No Heat	No Heat	B2	B2	

Mesa 30	01/04	30,5	0,8730	-51	7	6,0	16.1/20C	No Heat	No Heat	B2	B1	
Messla	02/05	38,4	0,8325	15	32	15,5	5.63/40C	30 30	25 35	B7	B7	
Minas	03/99	34,5	0,8521	36	42	32,0	22.5/40C	50 50	45 45	B5	B5	
Miri Light	12/96	32,4	0,8630	0	23	4,5	5.01/20C	No Heat	No Heat	B2	B1	0
Miskar Cond. Tunisia	02/05	55,8	0,7550	-42	-16	3,0	0.94/20C	No Heat	No Heat			400
Moudi	05/01	36,5	0,8420	-63	1	1,5	5.18/20C	No Heat	No Heat	B1	B1	
Mudi	05/99	36,5	0,8420	27	40	29,5	6.49/40C	45 45	40 40	B5	B5	<10 - 115
Murban	12/95	39,3	0,8280	-6	23	8,0	5.47/20C	No Heat	No Heat	B2	B2	20 - 900
Napa	01/99	18,8	0,9410	-27	21	15,3	230/45C	45 45	45 45	B5	B5	
N'Kossa	09/98	48,3	0,7865	-12	21	7,0	2.76/20C	No Heat	No Heat	B2	B2	70
Nanhai	06/96	38,8	0,8305	33	42	25,5	6.36/40C	50 60	45 55	B7	B7	
Napo	07/03	18,8	0,9380	-24	48	15,0	285/40C	50 50	45 45	B2	B2	0
Nemba	11/03	40,3	0,8230	-3	25	8,0	4.59/20C	No Heat	No Heat	B4	B2	7
Nile Blend	09/99	34,9	0,8500	36	49	30,5	16.1/50C	50 60	50 60	B7	B7	0 - 50
Njord	08/02	43,7	0,8070	-21	21	6,5	3.36/20C	-	No Heat	B2	B1	0
Norne	10/04	32,9	0,8600	18	29	11,5	5.77/40C	35 35	28 35	B8	B7	0 - 8
Novosergiyevskaya	10/03	41,7	0,8165	-21	12	6,0	3.95/20C	No Heat	No Heat	B1	B1	
NWS Condensate	03/97	59,6	0,7400	-60	-26	0,5	0.82/20C	No Heat	No Heat			0
Ob Bay (Sandibinskaya)	03/04	31,9	0,8655	-24	18	4,5	8.61/20C	No Heat	No Heat	B2	B2	<20
Ob Bay(Srednekhmskaya)	02/05	41,0	0,8200	-18	19	5,5	3.19/20C	No Heat	No Heat	B1	B1	<20
Obe	02/05	37,7	0,8358	9	32	8,5	3.85/50C	25 35	No Heat	B3	B2	0
Odudu	11/00	32,9	0,8600	3	26	6,0	7.51/20C	No Heat	No Heat	B2	B2	100
Oguendjo	06/04	27,3	0,8905	3	24	6,5	39.0/30C	No Heat	No Heat	B2	B2	<5
Okarem	06/03	35,1	0,8490	24	40	13,5	7.65/40C	40 40	35 35	B4	B4	<10
Oman Export	09/94	33,8	0,8555	-30	-3	4,0	16.0/20C	No Heat	No Heat	B1	B1	180 - 1200
Onako Light	10/01	46,8	0,7930	-15	24	7,5	2.07/30C	No Heat	No Heat	B2	B1	<10
Onako Medium	12/98	38,5	0,8318	-24	21	7,5	5.76/20C	No Heat	No Heat	B2	B1	
Oriente	12/93	28,1	0,8860	-12	26	6,0	34.7/20C	No Heat	No Heat	B2	B2	
Oseberg	02/05	37,4	0,8375	-18	20	5,0	5.53/20C	No Heat	No Heat	B1	B1	<30

Oseil												>5000
Oso Condensate	09/93	46,0	0,7965	-9	23	10,5	1.85/20C	No Heat	No Heat	B2	B1	0
Ostrica	10/00	34,4	0,8525	-36	4	2,5	8.47/20C	No Heat	No Heat	B1	B1	
Palanca	12/96	37,2	0,8385	6	29	9,0	6.78/20C	25 35	20 30	B7	B7	250
Pennington	09/97	34,8	0,8505	3	19	6,0	5.29/20C	No Heat	No Heat	B2	B2	<10
Petrozuata Heavy	05/04	19,1	0,9390	-54	6	1,0	84.0/20C	No Heat	No Heat	B1	B1	
Pierce	11/00	38,1	0,8340	-6	25	7,0	6.86/20C	-	No Heat	B2	B2	0
Prinos Blend	12/97	27,9	0,8870	-9	34	13,0	17.2/30C	35 45	30 40	B8	B8	
Prinos North	03/97	20,8	0,9285	-21	29	8,5	49.4/20C	35 45	30 30	B3	B2	
Purpe Condensate	05/05	66,1	0,7155	-54	-45	0,5	0.67/20C	No Heat	No Heat			
PZ Heavy Syncrude		19,8	0,9347	-48			74.0/20C					> 100
Qarun	00/96	41,5	0,8176	16	39	16,0	3.24/50C	30 40	30 40	B7	B7	0
Qatar Land		41,7	0,8168					No Heat	No Heat	B1	B1	>2000
Qatar Marine	03/99	32,2	0,8640	-24	7	6,5	11.7/20C	No Heat	No Heat	B1	B1	
Qua Iboe	08/03	36,5	0,8420	9	27	7,5	3.90/30C	25 35	No Heat	B3	B2	0 - 50
Rabi Blend	12/94	33,0	0,8595	30	41	18,0	32.2/30C	45 55	40 50	B4	B4	10
Rabi Light	06/89	34,3	0,8530	33	43	18,5	14.1/40C	50 60	45 55	B8	B8	
Rang Dong	12/98	39,9	0,8250	33	36	26,5	6.65/40C	50 60	45 55	B8	B8	0
Ras Budran	09/86	24,3	0,9075	-9	31	6,0	220/20C	25 35	25 35	B7	B7	
Ras Gharib	02/02	22,0	0,9215	3	35	11,0	102/30C	35 35	30 30	B3	B3	>1000
Ratawi	09/00	24,0	0,9095	-21	13	7,0	93.1/20C	No Heat	No Heat	B2	B2	160
Rhemoura	12/96	31,2	0,8690	3	30	9,5	17.4/20C	35 35	30 30	B3	B2	>100
Romashkino	06/95	31,1	0,8695	-15	19	4,5	16.2/20C	No Heat	No Heat	B1	B1	
Ross	03/00	38,8	0,8305	3	27	8,5	N/A	-	No Heat	B3	B2	20
Ruby	09/99	35,7	0,8460	30	37	22,0	8.40/40C	45 55	40 50	B7	B7	
Russian Condensate	02/01	44,5	0,8035	-45	10	3,5	1.61/20C	No Heat	No Heat			20 - >1000
REBCO (Baltic)	08/04	30,9	0,8710	-15	25	7,0	20.8/20C	No Heat	No Heat	B2	B2	25 - >1250
REBCO (Black Sea)	02/05	31,2	0,8690	-3	22	7,5	12.5/30C	No Heat	No Heat	B2	B2	0 - >4000
Saharan Blend	05/01	45,7	0,7980	-42	9	3,0	2.09/30C	No Heat	No Heat	B1	B1	<100

Saladin	03/93	48,4	0,7860	-18	1	2,5	1.71/20C	No Heat	No Heat	B1	B1	
Samgori	12/97	37,6	0,8365	9	28	8,5	5.64/20C	30 30	25 25	B3	B2	
San Sebastian	03/00	69,1	0,7050	-60			0.67/20C	No Heat	No Heat	B1	B1	
Santa Barbara	06/97	33,7	0,8560	-21	26	6,0	5.62/30C	25 35	No Heat	B3	B2	
Saratov	10/03	41,6	0,8170	-3	25	11,0	4.92/20C	No Heat	No Heat	B4	B2	>100
Sarir	12/02	37,1	0,8390	24	37	19,0	6.63/50C	40 50	35 45	B7	B7	310
Schiehallion	04/03	25,5	0,9005	-6	21	7,0	32.4/30C	-	25 25	B7	B7	70
Sembilang	03/95	36,0	0,8445	42	44	35,5	13.5/50C	60 60	55 55	B5	B5	
Senipah Condensate	11/01	52,4	0,7690	-63	-14	1,0	0.91/20C	No Heat	No Heat			0
Seria Light	09/92	40,2	0,8235	9	19	6,0	2.70/20C	25 25	20 20	B2	B2	20 - 100
Sharjah Condensate		64,9	0,7205					No Heat	No Heat			10
Shengli	12/85	25,3	0,9020	30	36	13,5	116/40C	45 45	40 40	B5	B5	<10
Siberian Light	10/04	35,6	0,8465	-18	17	5,5	7.64/20C	No Heat	No Heat	B2	B2	0 - 200
Siri	06/04	38,0	0,8345	3	25	8,0	5.22/30C	-	No Heat	B2	B2	10
Sirri	03/00	32,1	0,8645	-12	18	6,0	11.2/20C	No Heat	No Heat	B2	B2	
Sirtica Blend	03/94	40,3	0,8230	3	26	7,5	5.09/20C	20 30	No Heat	B2	B2	100 - >200
Skua	09/93	41,5	0,8175	9	20	11,0	3.42/20C	25 25	20 20	B3	B2	
Soroosh	01/03	20,0	0,9335	-27	41	7,5	157/40C	No Heat	No Heat	B3	B2	20
South Arne	03/04	37,0	0,8395	0	28	8,0	5.69/30C	-	No Heat	B4	B2	10
South Pars	05/05	58,2	0,7455	-54	-19	1,0	0.92/20C	No Heat	No Heat			>500
Soyo	12/96	38,6	0,8315	15	33	13,0	4.53/40C	35 45	30 40	B8	B7	500 - 10000
Stag	07/99	18,4	0,9435	-30	-1	0,5	124/20C	No Heat	No Heat	B1	B1	0
Statfjord High Sulphur	09/97	37,8	0,8355	3	30	6,5	4.54/30C	-	No Heat	B2	B1	0 - 8
Statfjord Low Sulphur	09/97	39,0	0,8295	3	27	7,0	4.19/30C	-	No Heat	B2	B1	0 - 8
Su Tu Den		37,0	0,8395	36	45	17,1		50 60	45 55	B7	B7	
Syrian Hvy (Souedia)	10/03	24,5	0,9065	-42	21	4,0	24.2/40C	No Heat	No Heat	B2	B1	200 - >3500
Syrian Light	03/02	37,8	0,8355	3	25	9,0	4.12/40C	40 50	35 45	B7	B7	0 - >2000
Talakanskaya	01/03	35,3	0,8480	-51	-3	2,5	15.3/20C	No Heat	No Heat	B1	B1	
Talisman	12/89	41,1	0,8195	9	24	9,5	3.75/20C	25 25	25 25	B3	B2	

Tantawan	09/99	47,6	0,7895	-12	37	14,0	4.53/20C	35 35	35 35	B4	B4	
Tapis Blend	12/97	45,3	0,8000	12	29	17,5	2.70/30C	30 30	25 25	B5	B5	0 - 20
Tchatamba	04/01	44,3	0,8045	-6	26	7,5	2.50/30C	No Heat	No Heat	B2	B2	
Tembungo	03/87	36,6	0,8415	9	21	5,5	3.45/20C	25 25	20 20	B2	B2	
Tempa Rossa	12/01	21,6	0,9235	-36	36	4,5	44.9/30C	No Heat	No Heat	B2	B2	8
Tengiz	09/97	46,6	0,7940	-21	20	6,5	2.21/20C	No Heat	No Heat	B2	B2	0 - >220
Terengganu	06/95	47,4	0,7905	12	27	15,5	2.61/20C	30 30	25 25	B3	B2	
Terra Nova	12/02	31,8	0,8660	3	31	9,0	19.8/20C	25 25	25 25	B2	B2	
Thevenard	02/02	39,2	0,8285	-63	-3	1,5	3.00/20C	No Heat	No Heat	B1	B1	0
Tierra de Fuego	03/00	43,2	0,8095	-9	24	6,5	3.91/20C	No Heat	No Heat	B2	B1	
Topacio	02/05	27,0	0,8925	-54	12	1,5	15.4/30C	No Heat	No Heat	B1	B1	<100
Triton	10/00	39,3	0,8280	-6	27	8,5	4.60/30C	-	No Heat	B3	B2	<10
Troll	02/05	28,4	0,8845	-18	18	4,5	18.5/20C	No Heat	No Heat	B1	B1	<10
Turkish Indigenous	11/98	32,7	0,7340	-15	15	5,5	13.7/20C	No Heat	No Heat	B2	B1	
Udang	06/94	37,6	0,8355	39	41	34,0	6.55/60C	55 55	50 50	B5	B5	
Ukpokiti	04/01	41,7	0,8165	12	27	11,5	2.74/30C	27 37	22 32	B8	B7	0
Umm Shaif	01/01	37,2	0,8385	-18	18	6,0	5.96/20C	No Heat	No Heat	B2	B1	100 - >2000
Urals Heavy	06/93	28,4	0,8845	-18	23	4,0	26.7/20C	No Heat	No Heat	B2	B1	
Usinsk	05/05	32,0	0,8650	12	31	11,5	9.75/40C	30 30	30 30	B4	B2	20
Val d'Agri	02/05	38,7	0,8310	-36	14	5,0	3.76/20C	No Heat	No Heat	B1	B1	50 - >1000
Varandey	02/05	26,6	0,8945	-45	10	2,5	26.5/20C	No Heat	No Heat	B1	B1	>1000
Varanus	08/02	47,3	0,7910	-24	8	4,5	1.79/20C	No Heat	No Heat	B1	B1	<5
Varg	05/05	37,6	0,8365	9	30	10,5	4.28/30C	-	20 20	B3	B2	0
Vasconia	01/03	24,9	0,9045	-6	30	7,0	38.9/30C	No Heat	No Heat	B2	B2	0
Walio	03/99	36,3	0,8430	-9	29	10,0	7.37/20C	No Heat	No Heat	B2	B2	0
Wandoo	12/97	19,3	0,9380	-42	-7	1,5	171/20C	30 30	25 25	B1	B1	
West Desert	02/05	41,0	0,8200	0	31	12,0	3.06/30C	No Heat 30	No Heat	B3	B2	<70
West Seno	11/03	34,8	0,8504	-6	41	7,6	7.26/20C	No Heat 40	No Heat 40	B7	B7	
West Texas Inter.	09/98	39,3	0,8280	-18	20	5,0	4.90/20C	No Heat	No Heat	B1	B1	

Widuri	06/92	32,6	0,8620	42	61	45,0	40.4/50C	60 60	60 60	B5	B5	0
Woollybutt	02/05	49,2	0,7825	-33	0	3,5	1.64/20C	No Heat	No Heat	B1	B1	0
Wytch Farm	10/01	41,2	0,8190	-15	24	6,0	4.54/30C	-	No Heat	B2	B1	<10
Xikomba		34,8	0,8504	9	26		10.0/25C	25 25	25 25	B4	B4	0
Xi Xiang	03/98	32,2	0,8640	36	43	29,0	22.5/40C	50 60	50 60	B8	B7	
Yoho		39,6	0,8275	12	19		2.26/40C	27 27	22 22	B2	B2	0
Yombo	01/00	17,7	0,9480	-9	28	7,5	460/50C	60 60	60 60	B5	B5	
Zaafarana	09/95	23,1	0,9150	6	34	9,0	41.0/40C	30 40	25 35	B8	B7	
Zafiro	03/97	29,6	0,8780	-9	22	4,0	14.7/20C	No Heat	No Heat	B1	B1	
Zafiro Blend	04/03	31,9	0,8655	-42	18	4,0	9.08/20C	No Heat	No Heat	B1	B1	<80
Zagorskoye	12/03	39,6	0,8265	-18	19	6,0	4.37/20C	No Heat	No Heat	B2	B1	30
Zaire Export	09/95	31,4	0,8680	21	27	15,0	22.3/30C	35 45	35 35	B3	B3	20 - 50
Zakinskaya	02/05	45,0	0,8010	-18	16	7,0	2.90/20c	No Heat	No Heat	B2	B1	<10
Zakum Lower	05/01	39,8	0,8255	-18	17	6,5	4.40/20C	No Heat	No Heat	B2	B1	>400
Zakum Upper	12/96	33,2	0,8585	-27	9	6,0	10.7/20C	No Heat	No Heat	B1	B1	
Zarzaitine	08/03	43,1	0,8100	-18	22	2,0	4.22/20C	No Heat	No Heat	B1	B1	0 - >200
Zeit Bay	12/87	34,1	0,8540	3	23	5,0	10.6/20C	No Heat	No Heat	B2	B1	
Zuata Medium	06/03	28,5	0,8840	-60	-4	0,5	15.7/20C	No Heat	No Heat	B1	B1	25
Zuata Sweet	11/03	30,3	0,8740	-51	-7	1,0	10.3/20C	No Heat	No Heat	B1	B1	0
Zuetina	03/96	39,0	0,8295	3	30	12,0	8.81/20C	No Heat	No Heat	B3	B2	50 - >2000

COW CODES**1 Conventional Tankers and Single Hulled Segregated Ballast Tankers**

- A1 Minimum Marpol. Maximum possible safe trim for stripping tanks and lines. Strip all tanks at least three times
- A2 Minimum Marpol plus a bottom wash of remaining tanks.
- A3 Full wash
- A4 Minimum Marpol plus a full wash of remaining wing tanks and a bottom wash of remaining centre tanks.
- A5 No COW, except with cutter stock such as heated gas oil. Otherwise treat as fuel oil, with maximum possible safe trim for stripping.
- A6 Cargoes are small, generally carried in Product Tankers, and treated in the same way as Fuel Oil
- A7 Minimum Marpol plus a bottom wash of remaining cargo tanks, using the contents of the slop tanks which should be at least 10degC higher than the cargo carried in the cargo tanks.
- A8 Full wash, using the contents of the slop tanks which should be at least 10degC higher than the cargo carried in the cargo tanks.

2 Double Hulled Segregated Ballast Tankers

- B1 Minimum Marpol. Maximum possible safe trim for stripping tanks and lines. Strip all tanks at least three times.
- B2 Minimum Marpol plus a bottom wash of remaining tanks
- B3 Full wash
- B4 Full wash required for wings tanks and bottom wash for centre tanks
- B5 No COW, except with cutter stock such as heated gas oil. Otherwise treat as fuel oil with maximum safe trim for stripping.
- B6 Cargoes are small, generally carried on product carriers, and treated in the same way as Fuel Oil
- B7 Bottom wash required, using the contents of the slop tanks the contents of which should be at least 10degC higher than the cargo carried in the cargo tanks.
- B8 Full wash, using the contents of the slop tanks which should be at least 10degC higher than the cargo carried in the cargo tanks