

## LIGHT CRUDE OIL

TABLE 1: LIGHT CRUDE OIL. GENERAL QUALITY DATA

CHARACTERISTICS	UNITS	RESULT	TEST METHOD
Specific Gravity @ 15.56 /15.56 °C	---	0.8568	ASTM D5002
API Gravity	°API	33.6	ASTM D5002
Sulfur Content (Total)	wt.%	1.46	ASTM D4294
H2S Content	ppm	86	IP 570
Mercaptan Content	ppm	60	UOP 163
Nitrogen Content (Total)	wt.%	0.13	ASTM D 5762
Water & Sediment	vol.%	< 0.05	ASTM D4007
Water Content	vol.%	< 0.025	ASTM D4006
Salt Content	PTB	7	ASTM D3230
Kinematic Viscosity @ 10 °C	mm <sup>2</sup> /s	19.50	ASTM D445
Kinematic Viscosity @ 20 °C	mm <sup>2</sup> /s	10.88	
Kinematic Viscosity @ 40 °C	mm <sup>2</sup> /s	6.319	
Pour Point (Upper)	°C	-12	ASTM D5853
Reid Vapor Pressure	psi	8.95	ASTM D323
Asphaltene Content	wt.%	1.6	IP 143
Wax Content	wt.%	4.8	BP 237
Drop Melting Point of Wax	°C	57	IP 133
Conradson Carbon Residue	wt.%	4.50	ASTM D189
Total Acid Number	mg KOH/g	0.12	UOP 565
Nickel Content	mg/kg	11	ASTM D5863
Vanadium Content	mg/kg	40	
Iron Content	mg/kg	<1	
Lead Content	mg/kg	<1	
Sodium Content	mg/kg	8	
Zinc Content	mg/kg	<1	
Copper Content	mg/kg	<1	

**TABLE 2: TRUE BOILING POINT DISTILLATION ANALYSIS (ASTM D2892 & ASTM D5236)**

No.	Boiling Range, °C	Yield, wt.%	Cumulative Yield, wt.%	Sp.Gr. @ 15.56/15.56 °C	Yield, vol.%	Cumulative Yield, vol.%
1	IBP-15	1.56	1.56	0.5759	2.32	2.32
2	15-65	3.64	5.20	0.6472	4.82	7.14
3	65-100	4.12	9.32	0.7145	4.94	12.08
4	100-125	3.35	12.67	0.7430	3.86	15.94
5	125-150	4.07	16.74	0.7642	4.56	20.50
6	150-175	3.82	20.56	0.7796	4.20	24.70
7	175-200	4.03	24.59	0.7918	4.36	29.06
8	200-225	4.86	29.45	0.8093	5.15	34.21
9	225-250	4.49	33.94	0.8284	4.64	38.85
10	250-275	4.44	38.38	0.8438	4.51	43.36
11	275-300	4.56	42.94	0.8538	4.58	47.94
12	300-325	4.25	47.19	0.8747	4.16	52.10
13	325-350	4.40	51.59	0.8846	4.26	56.36
14	350-385	6.00	57.59	0.8927	5.76	62.12
15	385-425	6.25	63.84	0.9220	5.81	67.93
16	425-450	3.65	67.49	0.9290	3.37	71.30
17	450-475	3.40	70.89	0.9401	3.10	74.40
18	475-500	3.25	74.14	0.9508	2.93	77.33
19	500-530	3.75	77.89	0.9624	3.34	80.67
20	530-565	3.90	81.79	0.9729	3.43	84.10
21	565+	18.21	100.00	0.9813	15.90	100.00

## HEAVY CRUDE OIL

TABLE 1: HEAVY CRUDE OIL. GENERAL QUALITY DATA

CHARACTERISTICS	UNITS	RESULT	TEST METHOD
Specific Gravity @ 15.56 /15.56 °C	---	0.8785	ASTM D5002
API Gravity	°API	29.6	ASTM D5002
Sulfur Content (Total)	wt.%	2.24	ASTM D4294
H2S Content	ppm	153	IP 570
Mercaptan Content	ppm	90	UOP 163
Nitrogen Content (Total)	wt.%	0.20	ASTM D 5762
Water & Sediment	vol.%	< 0.05	ASTM D4007
Water Content	vol.%	< 0.025	ASTM D4006
Salt Content	PTB	13	ASTM D3230
Kinematic Viscosity @ 10 °C	mm <sup>2</sup> /s	30.53	ASTM D445
Kinematic Viscosity @ 20 °C	mm <sup>2</sup> /s	19.42	
Kinematic Viscosity @ 40 °C	mm <sup>2</sup> /s	10.070	
Pour Point (Upper)	°C	-18	ASTM D5853
Reid Vapor Pressure	psi	7.70	ASTM D323
Asphaltene Content	wt.%	3.6	IP 143
Wax Content	wt.%	5.4	BP 237
Drop Melting Point of Wax	°C	55	IP 133
Conradson Carbon Residue	wt.%	6.93	ASTM D189
Total Acid Number	mg KOH/g	0.15	UOP 565
Nickel Content	mg/kg	18	ASTM D5863
Vanadium Content	mg/kg	61	
Iron Content	mg/kg	1	
Lead Content	mg/kg	<1	
Sodium Content	mg/kg	20	
Zinc Content	mg/kg	<1	
Copper Content	mg/kg	<1	

**TABLE 2: TRUE BOILING POINT DISTILLATION ANALYSIS (ASTM D2892 & ASTM D5236)**

No.	Boiling Range, °C	Yield, wt.%	Cumulative Yield, wt.%	Sp.Gr. @ 15.56/15.56 °C	Yield, vol.%	Cumulative Yield, vol.%
1	IBP-15	1.30	1.30	0.5493	2.08	2.08
2	15-65	3.41	4.71	0.6504	4.61	6.69
3	65-100	4.03	8.74	0.7121	4.97	11.66
4	100-125	3.17	11.91	0.7412	3.76	15.42
5	125-150	3.73	15.64	0.7617	4.30	19.72
6	150-175	3.75	19.39	0.7801	4.22	23.94
7	175-200	3.26	22.65	0.7920	3.62	27.56
8	200-225	4.19	26.84	0.8081	4.56	32.12
9	225-250	3.54	30.38	0.8307	3.74	35.86
10	250-275	4.15	34.53	0.8443	4.32	40.18
11	275-300	3.56	38.09	0.8543	3.66	43.84
12	300-325	4.01	42.10	0.8749	4.03	47.87
13	325-350	3.95	46.05	0.8848	3.92	51.79
14	350-385	5.34	51.39	0.8939	5.25	57.04
15	385-425	5.71	57.10	0.9225	5.44	62.48
16	425-450	3.90	61.00	0.9305	3.68	66.16
17	450-475	3.61	64.61	0.9469	3.35	69.51
18	475-500	3.61	68.22	0.9624	3.30	72.81
19	500-530	3.38	71.60	0.9741	3.05	75.86
20	530-565	3.90	75.50	0.9819	3.49	79.35
21	565+	24.50	100.00	1.0423	20.65	100.00