

Doba Blend Crude Oil Assay

WHOLE CRUDE	
Gravity, °API	21.1
Specific Gravity	0.93
Sulfur, wt %	0.10
Nitrogen, ppm	1890
Pour Point °F	29.2
Pour Point °C	-1.5
Acid Number, mg KOH/g	5.18
Back-Blended Acid, mg KOH/g	4.75
Viscosity @ 40 °C (104 °F), cSt	279
Viscosity @ 50 °C (122 °F), cSt	151
Asphaltenes, C7, %	0.06
Nickel, ppm	9.38
Vanadium, ppm	0.48
Characterization Factor, K	12.07

TBP YIELDS, VOL %	
Butanes and Lighter	0.005
Light Gasoline (55-175 °F)	0.06
Light Naphtha (175-300 °F)	0.70
Heavy Naphtha (300-400 °F)	2.41
Kerosene (400-500 °F)	4.80
Atm. Gas Oil (500-650 °F)	11.58
Lt Vacuum Gas Oil (650-800 °F)	14.87
Hvy Vacuum Gas Oil (800-1050 °F)	28.96
Vacuum Residuum (1050 °F+)	36.62

LIGHT GASOLINE (55-175 °F)	
Gravity, °API	75.1
Specific Gravity	0.685
Mercaptan Sulfur, ppm	1.41
Octane Number, Research, Clear	78

LIGHT NAPHTHA (175-300 °F)	
Gravity, °API	49.1
Specific Gravity	0.78
Mercaptan Sulfur, ppm	5.06
Naphthenes, vol %	51.52
Aromatics, vol %	11.35
Octane Number, Research, Clear	61.9

HEAVY NAPHTHA (300-400 °F)	
Gravity, °API	36.3
Specific Gravity	0.84
Sulfur, wt %	0.01
Mercaptan Sulfur, ppm	6.96
Naphthenes, vol %	72.09
Aromatics, vol %	11.17
Smoke Point, mm (ASTM)	19.6

KEROSENE (400-500 °F)	
Gravity, °API	30.7
Specific Gravity	0.87
Sulfur, wt %	0.01
Mercaptan Sulfur, ppm	5.42
Naphthenes, vol %	73.76
Aromatics, vol %	19.9
Freezing Point, °F	-120.2
Freezing Point, °C	-84.6
Smoke Point, mm (ASTM)	15
Acid Number, mg KOH/g	0.09
Viscosity @ 50 °C (122 °F), cSt	2.01

ATM. GAS OIL (500-650 °F)	
Gravity, °API	25.5
Specific Gravity	0.90
Sulfur, wt %	0.06
Nitrogen, ppm	38.5
Acid Number, mg KOH/g	1.29
Pour Point °F	-76.6
Pour Point °C	-60.4
Viscosity @ 50 °C (122 °F), cSt	4.94
Cetane Index	37.9
Characterization Factor, K	11.25

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ATM. RESIDUUM (650 °F+)	
Yield, vol%	80.45
Gravity, °API	19.3
Specific Gravity	0.94
Sulfur, wt %	0.11
Nitrogen, ppm	2320
MCR, wt%	7.28
Asphaltenes, C7, %	0.08
Nickel, ppm	11.5
Vanadium, ppm	0.59
Pour Point °F	40
Pour Point °C	4.4
Viscosity @ 50 °C (122 °F), cSt	528
Viscosity @ 100 °C (212 °F), cSt	48.1
Characterization Factor, K	12.21

LT VAC. GAS OIL (650-800 °F)	
Gravity, °API	21.8
Specific Gravity	0.92
Sulfur, wt %	0.11
Nitrogen, ppm	346
Naphthenes, vol %	52.55
Paraffins, vol%	13.38
Pour Point °F	-17.9
Pour Point °C	-27.7
Acid Number, mg KOH/g	4.77
Aniline Point, °F	162.9
Aniline Point, °C	72.7
Hydrogen, wt%	12.69
Viscosity @ 50 °C (122 °F), cSt	22.4
Viscosity @ 100 °C (212 °F), cSt	4.84
Characterization Factor, K	11.48

HVY VAC. GAS OIL (800-1050 °F)	
Gravity, °API	21.4
Specific Gravity	0.93
Sulfur, wt %	0.10
Nitrogen, ppm	1280
Pour Point °F	30.7
Pour Point °C	-0.7
Acid Number, mg KOH/g	7.51
Aniline Point, °F	196.8
Aniline Point, °C	91.6
Hydrogen, wt%	12.47
Viscosity @ 50 °C (122 °F), cSt	152
Viscosity @ 100 °C (212 °F), cSt	17.6
Characterization Factor, K	12.04

VACUUM RESIDUUM (1050 °F+)	
Yield, vol%	36.62
Gravity, °API	16.8
Specific Gravity	0.95
Sulfur, wt %	0.121
Nitrogen, ppm	3880
Hydrogen, wt%	11.81
MCR, wt%	15
Asphaltenes, C7, %	0.17
Nickel, ppm	24.7
Vanadium, ppm	1.27
Pour Point °F	80.7
Pour Point °C	27.1
Viscosity @ 50 °C (122 °F), cSt	17800
Viscosity @ 100 °C (212 °F), cSt	613
Viscosity @ 135 °C (275 °F), cSt	138
Cutter, vol% in Fuel Oil	25.6
Fuel Oil Yield, vol%	49.2
Characterization Factor, K	12.3