Escravos Crude Oil Assay

WHOLE CRUDE	
Gravity, °API	33.7
Specific Gravity	0.86
Sulfur, wt %	0.16
Nitrogen, ppm	1190
Pour Point °F	26.6
Pour Point °C	-3
Acid Number, mg KOH/g	0.52
Back-Blended Acid, mg KOH/g	0.48
Viscosity @ 40 °C (104 °F), cSt	4.19
Viscosity @ 50 °C (122 °F), cSt	3.32
Asphaltenes, C7, %	0.03
Nickel, ppm	4.55
Vanadium, ppm	0.51
Characterization Factor, K	11.74

TBP YIELDS, VOL %	
Butanes and Lighter	1.00
Light Gasoline (55-175 °F)	4.36
Light Naphtha (175-300 °F)	15.05
Heavy Naphtha (300-400 °F)	11.02
Kerosene (400-500 °F)	13.52
Atm. Gas Oil (500-650 °F)	20.18
Lt Vacuum Gas Oil (650-800 °F)	14.87
Hvy Vacuum Gas Oil (800-1050 °F)	13.36
Vacuum Residuum (1050 °F+)	6.64

LIGHT GASOLINE (55-175 °F)	
Gravity, °API	80
Specific Gravity	0.67
Mercaptan Sulfur, ppm	0.05
Octane Number, Research, Clear	75.4

LIGHT NAPHTHA (175-300 °F)	
Gravity, °API	55.8
Specific Gravity	0.76
Mercaptan Sulfur, ppm	0.19
Naphthenes, vol %	42.87
Aromatics, vol %	16.74
Octane Number, Research, Clear	66.4

HEAVY NAPHTHA (300-400 °F)	
Gravity, °API	47.2
Specific Gravity	0.79
Sulfur, wt %	0.02
Mercaptan Sulfur, ppm	0.36
Naphthenes, vol %	56.38
Aromatics, vol %	16.65
Smoke Point, mm (ASTM)	25.6

KEROSENE (400-500 °F)	
Gravity, °API	35.4
Specific Gravity	0.85
Sulfur, wt %	0.06
Mercaptan Sulfur, ppm	0.94
Naphthenes, vol %	56.7
Aromatics, vol %	22.2
Freezing Point, °F	-49
Freezing Point, °C	-45
Smoke Point, mm (ASTM)	18.7
Acid Number, mg KOH/g	0.08
Viscosity @ 50 °C (122 °F), cSt	1.63

ATM. GAS OIL (500-650 °F)	
Gravity, °API	30.8
Specific Gravity	0.87
Sulfur, wt %	0.13
Nitrogen, ppm	89.9
Acid Number, mg KOH/g	0.25
Pour Point °F	10.8
Pour Point °C	-11.8
Viscosity @ 50 °C (122 °F), cSt	3.6
Cetane Index	48
Characterization Factor, K	11.59

Escravos Crude Oil Assay

ATM. RESIDUUM (650 °F+)	
Yield, vol%	34.88
Gravity, °API	19.6
Specific Gravity	0.94
Sulfur, wt %	0.31
Nitrogen, ppm	3050
MCR, wt%	3.7
Asphaltenes, C7, %	0.07
Nickel, ppm	11.9
Vanadium, ppm	1.34
Pour Point °F	92.5
Pour Point °C	33.6
Viscosity @ 50 °C (122 °F), cSt	114
Viscosity @ 100 °C (212 °F), cSt	15.8
Characterization Factor, K	11.79

LT VAC. GAS OIL (650-800 °F)	
Gravity, °API	23.9
Specific Gravity	0.91
Sulfur, wt %	0.23
Nitrogen, ppm	704
Naphthenes, vol %	41.56
Paraffins, vol%	15.6
Pour Point °F	69.9
Pour Point °C	21.1
Acid Number, mg KOH/g	0.72
Aniline Point, °F	172.2
Aniline Point, °C	77.9
Hydrogen, wt%	12.56
Viscosity @ 50 °C (122 °F), cSt	16.7
Viscosity @ 100 °C (212 °F), cSt	4.32
Characterization Factor, K	11.62

HVY VAC. GAS OIL (800-1050 °F)	
Gravity, °API	19.6
Specific Gravity	0.94
Sulfur, wt %	0.31
Nitrogen, ppm	2550
Pour Point °F	118
Pour Point °C	47.8
Acid Number, mg KOH/g	1.41
Aniline Point, °F	188.6
Aniline Point, °C	87
Hydrogen, wt%	12.19
Viscosity @ 50 °C (122 °F), cSt	170
Viscosity @ 100 °C (212 °F), cSt	18.8
Characterization Factor, K	11.82

VACUUM RESIDUUM (1050 °F+)	
Yield, vol%	6.64
Gravity, °API	11.1
Specific Gravity	0.99
Sulfur, wt %	0.47
Nitrogen, ppm	8800
Hydrogen, wt%	11.12
MCR, wt%	16.7
Asphaltenes, C7, %	0.35
Nickel, ppm	56.8
Vanadium, ppm	6.57
Pour Point °F	113.9
Pour Point °C	45.5
Viscosity @ 50 °C (122 °F), cSt	132000
Viscosity @ 100 °C (212 °F), cSt	1260
Viscosity @ 135 °C (275 °F), cSt	184
Cutter, vol% in Fuel Oil	31.8
Fuel Oil Yield, vol%	9.75
Characterization Factor, K	11.9