

Kuito Crude Oil Assay

WHOLE CRUDE	
Gravity, °API	19.7
Specific Gravity	0.94
Sulfur, wt %	0.68
Nitrogen, ppm	4420
Pour Point °F	34.3
Pour Point °C	1.3
Acid Number, mg KOH/g	2.41
Back-Blended Acid, mg KOH/g	1.98
Viscosity @ 40 °C (104 °F), cSt	79.3
Viscosity @ 50 °C (122 °F), cSt	49.2
Asphaltenes, C7, %	1.87
Nickel, ppm	43.8
Vanadium, ppm	38.7
Characterization Factor, K	11.62

TBP YIELDS, VOL %	
Butanes and Lighter	0.26
Light Gasoline (55-175 °F)	0.37
Light Naphtha (175-300 °F)	4.99
Heavy Naphtha (300-400 °F)	5.15
Kerosene (400-500 °F)	8.37
Atm. Gas Oil (500-650 °F)	15.60
Lt Vacuum Gas Oil (650-800 °F)	17.29
Hvy Vacuum Gas Oil (800-1050 °F)	22.27
Vacuum Residuuum (1050 °F+)	25.70

LIGHT GASOLINE (55-175 °F)	
Gravity, °API	70.7
Specific Gravity	0.6997
Mercaptan Sulfur, ppm	0.295
Octane Number, Research, Clear	80.9

LIGHT NAPHTHA (175-300 °F)	
Gravity, °API	50.8
Specific Gravity	0.78
Mercaptan Sulfur, ppm	0.46
Naphthenes, vol %	72.67
Aromatics, vol %	7.62
Octane Number, Research, Clear	61.4

HEAVY NAPHTHA (300-400 °F)	
Gravity, °API	40.6
Specific Gravity	0.82
Sulfur, wt %	0.09
Mercaptan Sulfur, ppm	0.37
Naphthenes, vol %	63.72
Aromatics, vol %	13.44
Smoke Point, mm (ASTM)	14.9

KEROSENE (400-500 °F)	
Gravity, °API	33.5
Specific Gravity	0.86
Sulfur, wt %	0.124
Mercaptan Sulfur, ppm	0.38
Naphthenes, vol %	67.2
Aromatics, vol %	20.95
Freezing Point, °F	-78.2
Freezing Point, °C	-61.2
Smoke Point, mm (ASTM)	11.6
Acid Number, mg KOH/g	0.19
Viscosity @ 50 °C (122 °F), cSt	1.82

ATM. GAS OIL (500-650 °F)	
Gravity, °API	27.6
Specific Gravity	0.89
Sulfur, wt %	0.30
Nitrogen, ppm	134
Acid Number, mg KOH/g	1.15
Pour Point °F	-19.9
Pour Point °C	-28.8
Viscosity @ 50 °C (122 °F), cSt	4.22
Cetane Index	41.8
Characterization Factor, K	11.38

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ATM. RESIDUUM (650 °F+)	
Yield, vol%	65.27
Gravity, °API	12.7
Specific Gravity	0.98
Sulfur, wt %	0.90
Nitrogen, ppm	6430
MCR, wt%	9.56
Asphaltenes, C7, %	2.74
Nickel, ppm	64
Vanadium, ppm	56.6
Pour Point °F	89.6
Pour Point °C	32
Viscosity @ 50 °C (122 °F), cSt	2460
Viscosity @ 100 °C (212 °F), cSt	100
Characterization Factor, K	11.62

LT VAC. GAS OIL (650-800 °F)	
Gravity, °API	20.3
Specific Gravity	0.93
Sulfur, wt %	0.65
Nitrogen, ppm	1500
Naphthenes, vol %	28.05
Paraffins, vol%	23.37
Pour Point °F	33
Pour Point °C	0.5
Acid Number, mg KOH/g	1.8
Aniline Point, °F	66.4
Aniline Point, °C	19.1
Hydrogen, wt%	12.09
Viscosity @ 50 °C (122 °F), cSt	28.2
Viscosity @ 100 °C (212 °F), cSt	5.82
Characterization Factor, K	11.35

HVY VAC. GAS OIL (800-1050 °F)	
Gravity, °API	15.9
Specific Gravity	0.96
Sulfur, wt %	0.77
Nitrogen, ppm	4460
Pour Point °F	82.7
Pour Point °C	28.2
Acid Number, mg KOH/g	2.71
Aniline Point, °F	71.3
Aniline Point, °C	21.8
Hydrogen, wt%	11.66
Viscosity @ 50 °C (122 °F), cSt	381
Viscosity @ 100 °C (212 °F), cSt	26
Characterization Factor, K	11.6

VACUUM RESIDUUM (1050 °F+)	
Yield, vol%	25.70
Gravity, °API	5.5
Specific Gravity	1.03
Sulfur, wt %	1.17
Nitrogen, ppm	11000
Hydrogen, wt%	10.95
MCR, wt%	21.9
Asphaltenes, C7, %	6.6
Nickel, ppm	154
Vanadium, ppm	136
Pour Point °F	204.8
Pour Point °C	96
Viscosity @ 50 °C (122 °F), cSt	99600000
Viscosity @ 100 °C (212 °F), cSt	33600
Viscosity @ 135 °C (275 °F), cSt	1490
Cutter, vol% in Fuel Oil	42.4
Fuel Oil Yield, vol%	44.6
Characterization Factor, K	11.7