

CRUDE OIL SPECIFICATIONS

<i>Crude Oil Type</i>	<i>Results</i>
IRANIAN LIGHT	
R.V.P (PS)	7.0
Specific Gravity At 16.6/16.8C	0.5545
A.P.I. Gravity at 15 BC	31-33
Water % Vol	0.02
Water and Sediment	NIL
Hydrogen Sulphide PPM	NIL
Salt NACL PPM	5.0
Sulphur P% WT	1.5
Asphalt Tense % WT	1.2
Pour Point C	1.2
Wax % WT	27
Concealing Point of Wax C	
Ash P% WT	
KIN VIS AT 80F	0.8
KIN VIS AT 100F	6.94
KIN VIS AT 120F	N.A.
KIN VIS AT 140F	N.A.
Flash Point C	<20
Nitrogen Content (%WT)	0.04
Cross Heating	108.10
Characterization Factor (KUOP)	12.0
Carbon Residue (Corazon WT %)	3.88

SAUDI LIGHT CRUDE OIL SPECIFICATION	
API GRAVITY	33.34
SEDIMENT CONTENT	0.1
ASTM STABILISED GRAVITY	34.5
WAX - WT PERCENT	2.9

VANADIUM ppm V200	11.0
GROSS HEATING VALUE	19.23
REID VAPOUR PRESSURE	2.0
SALT CONTENT, PPM NaCl	3.8
SULPHUR, WT PERCENT	1.5 MAX
ASH, PPM	100.0
COMP. CARBON RESIDUE, WT PERCENT	3.1
VISCOSITY, CP	55.0
POUR POINT	35.0

NIGERIAN BONNY LIGHT OIL

Specific Gravity @ 60F/15.55C	0.8397-0.8498
API Specific Gravity @ 60F/15.55C	35.0-37.0
Density at 60F/15.55C-Cg-CM-MAC	0.85Max
Pour Point	<40F/4.44C
Sulfur Content, %Wt	0.14Max
Colour	Dark Brown
Salinity TB at 0.10%/BS&W	47Max
Acid Number	0.39Max
Reid Vapour Pressure	6.52psig Max
Water & Sediment Content, Pct (%)	1.00%Max
Iron Wt, ppm	1.00Max
Nickel Wt, ppm	4.00Max
Vanadium Wt, ppm	2.00Max

RUSSIAN EXPORT BLEND CRUDE OIL (REBCO)

<i>Specifications Corresponding to GOST TU 39-1623-93:</i>	
Density API at 30 degrees C	0,870
API Gravity	32.00
Viscosity at 80 C, Max	16.0
Flash Point (in locked cubicle) Max	35 C
Pressure of saturated pours under 38°C kilopascal/mm mercury column	7/50
Paraffin (contents in %) 6,0 %	

Temperature of melting C --49	
Contents,	%
* Sulphur	1,8
* Nitrogen	0,25
* Chamois -acid resins	0,9
* Asphatents	0,9
Salt	100 mg / L
Coking %	2,06
Ash %	0,004
Distillation Vol. recovered	%
0 - 200°C	21.00
300°C	41.00
350°C	50.00
Water and Sediments, Max	1,2

HEAVY CRUDE'S NAPO BLEND CRUDE OIL

Upgraded to higher API and lower sulfur, any upgrading components to be strictly another crude oil and/or straight run oil products - guaranteed no slops, sludge or cracked oil products used to upgrade.

MIN/MAX GUARANTEED SPECS FOLL:

Test	Unit	Method	Guaranteed
API gravity at 60degF		astm d5002	19 min
sulfur content	wt%	astm d4294	2.5 max (1.9 typ)
kin visc at 50degC	cst	astm d445	180 max
ash	wt%	astm d482	0.1 max
ashphaltenes	ppm	astm d6560	10 max
acid number	mgKOH/g	astm d664	0.2 max
flash point	degC	astm d93	30 min
pour point	degC	astm d97	- 24 max
iron	ppm	astm 5708	10 max
sodium	ppm	astm d5863	25 max
water & sediment	vol%	astm d473	1 max
h2s	ppm	uop 163	5 max

ANACO WAX			
Characteristic	Units	Typical Value	
API Gravity	°API	43.3	
Sulphur	WT %	0.15	
Kinematic Viscosity at 100 °F	CST	1.98	
Vanadium	ppm	1.04	
Neutralization Number	Mg KOH/gr	.11	
Pour Point	°C	70	

MESA			
Characteristic	Units	Typical Value	
API Gravity	°API	30.5	
Sulphur	WT %	0.85	
Kinematic Viscosity at 100 °F	CST	7.29	
Vanadium	ppm	38	
Neutralization Number	Mg KOH/gr	.03	
Pour Point	°C	-46	

MESA 28			
Characteristic	Units	Typical Value	
API Gravity	°API	28	
Sulphur	WT %	1.18	
Kinematic Viscosity at 100 °F	CST	13.3	
Vanadium	ppm	69	
Neutralization Number	Mg KOH/gr	.014	
Pour Point	°C	-29	

LEONA			
Characteristic	Units	Typical Value	
API Gravity	°API	25.3	
Sulphur	WT %	1.52	
Kinematic Viscosity at 100 °F	CST	22.24	

Vanadium	ppm	132	
Neutralization Number	Mg KOH/gr	.1	
Pour Point	°C	-35	

MEREY			
Characteristic	Units	Typical Value	
API Gravity	°API	16	
Sulphur	WT %	2.45	
Kinematic Viscosity at 100 °F	CST	513	
Vanadium	ppm	262	.
Neutralization Number	Mg KOH/gr	.69	
Pour Point	°C	-20	

TIA JUANA LIGHT			
Characteristic	Units	Typical Value	
API Gravity	°API	31.9	
Sulphur	WT %	1.18	
Kinematic Viscosity at 100 °F	CST	8.8	
Vanadium	ppm	96	
Neutralization Number	Mg KOH/gr	.22	
Pour Point	°C	-29	

FURRIAL			
Characteristic	Units	Typical Value	
API Gravity	°API	28.5	
Sulphur	WT %	1.1	
Kinematic Viscosity at 100 °F	CST	11.9	
Vanadium	ppm	68	
Neutralization Number	Mg KOH/gr	.1	
Pour Point	°C	-32	

BCF-24			
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Characteristic	Units	Typical Value	
API Gravity	°API	23.7	
Sulphur	WT %	1.88	
Kinematic Viscosity at 100 °F	CST	47.5	
Vanadium	ppm	225	
Neutralization Number	Mg KOH/gr	.77	
Pour Point	°C	-32	

BCF-17			
Characteristic	Units	Typical Value	
API Gravity	°API	13.5	
Sulphur	WT %	2.3	
Kinematic Viscosity at 100 °F	CST	1709	
Vanadium	ppm	352	
Neutralization Number	Mg KOH/gr	2.63	
Pour Point	°C	-18	

PILON			
Characteristic	Units	Typical Value	
API Gravity	°API	16.2	
Sulphur	WT %	2.47	
Kinematic Viscosity at 100 °F	CST	509	
Vanadium	ppm	184	
Neutralization Number	Mg KOH/gr	1.6	
Pour Point	°C	0	

MORICHAL			
Characteristic	Units	Typical Value	
API Gravity	°API	12.2	
Sulphur	WT %	2.78	
Kinematic Viscosity at 100 °F	CST	145	
Vanadium	ppm	274	
Neutralization Number	Mg KOH/gr	2.83	

Pour Point	°C	45	
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LAGOMEDIO			
Characteristic	Units	Typical Value	
API Gravity	°API	31.6	
Sulphur	WT %	1.26	
Kinematic Viscosity at 100 °F	CST	13.4	
Vanadium	ppm	119	
Neutralization Number	Mg KOH/gr	.07	
Pour Point	°C	-24	

LAGOTRECO			
Characteristic	Units	Typical Value	
API Gravity	°API	30.4	
Sulphur	WT %	1.28	
Kinematic Viscosity at 100 °F	CST	10.69	
Vanadium	ppm	129	
Neutralization Number	Mg KOH/gr	.33	
Pour Point	°C	-26	

MENEMOTA			
Characteristic	Units	Typical Value	
API Gravity	°API	20.7	
Sulphur	WT %	2.07	
Kinematic Viscosity at 100 °F	CST	69.1	
Vanadium	ppm	381	
Neutralization Number	Mg KOH/gr	.69	
Pour Point	°C	<-30	

BACHAQUERO-13			
Characteristic	Units	Typical Value	
API Gravity	°API	12.2	

Sulphur	WT %	2.8	
Kinematic Viscosity at 100 °F	CST	48.6	
Vanadium	ppm	442	
Neutralization Number	Mg KOH/gr	3.13	
Pour Point	°C	-18	

TIA JUANA HEAVY

Characteristic	Units	Typical Value	
API Gravity	°API	12.3	
Sulphur	WT %	2.82	
Kinematic Viscosity at 100 °F	CST	88.6	
Vanadium	ppm	386	
Neutralization Number	Mg KOH/gr	3.9	
Pour Point	°C	-16	

LAGUNA

Characteristic	Units	Typical Value	
API Gravity	°API	10.9	
Sulphur	WT %	2.66	
Kinematic Viscosity at 100 °F	CST	6809	
Vanadium	ppm	395	
Neutralization Number	Mg KOH/gr	2.82	
Pour Point	°C	6	

BOSCAN

Characteristic	Units	Typical Value	
API Gravity	°API	10.1	
Sulphur	WT %	5.4	
Kinematic Viscosity at 100 °F	CST	11233	
Vanadium	ppm	11222	
Neutralization Number	Mg KOH/gr	.91	
Pour Point	°C	7	