TOTAL	Crude	**CABINDA**	TBP
	Country	Angola	DISTILLATION

Density at 15°C, kg/m3	864.0	Assay Date	08-Dec-11	°C	wt%	vol%	°C	wt%	vol%
°API	32.2			080	4.84	6.63	460	64.28	68.01
Bbl/mt	7.293			090	5.61	7.55	480	67.35	70.91
Acidity, mg KOH/g	0.10			100	6.51	8.63	500	70.21	73.60
Sulphur, wt%	0.154			120	8.82	11.31	520	72.87	76.08
Hydrogen Sulphide, mg/kg	1			140	11.80	14.70	540	75.34	78.37
Mercaptan Sulphur, mg/kg	2			160	15.05	18.33	560	77.65	80.50
Viscosity, cSt at 10 °C	38.9			180	17.89	21.44	580	79.80	82.48
50 °C	9.5			200	20.33	24.06			
Pour Point, °C	5			220	22.81	26.69			
Total Nitrogen, wt%	0.202			240	25.50	29.52			
Wax, wt%	-		wt% vol%	260	28.42	32.55			
Wax Appearance Temperature, °C	-			280	31.58	35.81			
RVP at 37.8 °C, kPa	-	Ethane	0.02 0.05	300	34.97	39.28			
Water, vol%	-	Propane	0.31 0.52	320	38.57	42.92			
NaCl, mg/kg	-	Iso-Butane	0.21 0.33	340	42.34	46.69			
Nickel, mg/kg	12.1	n-Butane	0.69 1.01	360	46.19	50.52			
Vanadium, mg/kg	1.9			380	50.06	54.32			
Iron, mg/kg	4.7			400	53.86	58.01			
Mercury, µg/kg	-			420	57.52	61.55			
				440	61.00	64.89			

PROPERTIES OF TBP CUTS

LIGHT NAPHTHA	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	RSH mg/kg	RON clear	MON clear			Napht. vol%	Aro. vol%	RVP kPa			
	15-65	2.69	3.58	647	0.0088	2	74.4	73.3			6.4	0.0	-			
	15-80	3.62	4.72	659	0.0102	3	73.1	71.9			11.7	0.1	-			
HEAVY NAPHTHA	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	RSH mg/kg					Napht. vol%	Aro. vol%				
	80-150	8.60	9.91	747	0.0196	6					39.8	9.7				
	80-175	12.40	14.10	757	0.0198	5					41.4	10.1				
	100-150	6.93	7.91	754	0.0202	5					40.9	11.2				
KEROSENE	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	RSH mg/kg	Smoke Pt mm	Acidity mgKOH/g	Cetane Index	Freez. Pt °C		Aro. vol%	Visc cSt 50°C			Flash Point
	150-230	10.69	11.54	797	0.024	2	29	0.12	40.5	-48		12.0	1.0			-
	175-230	6.89	7.36	806	0.026	1	28	0.14	42.5	-41		12.5	1.2			-
	150-250	13.49	14.47	803	0.028	2	28	0.14	42.8	-43		12.9	1.1			-
GASOIL	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%		Anilin Point °C		Cetane Index	Cloud Pt C	CFPP C	Pour Pt C	Visc cSt 50°C	Visc cSt 100°C	UOPK	Flash Point
	175-400	36.62	37.29	845	0.090		77		53.7	2	-1	-4	3.3	1.5	11.9	-
	230-400	29.73	29.94	855	0.104		80		57.2	4	4	3	4.4	1.8	11.9	-
	230-375	24.97	25.29	850	0.095		78		57.1	-1	-2	-2	3.7	1.6	11.9	-
VACUUM DISTILLATE	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	Conrad. wt%	Anilin Point °C	Ni mg/kg	Va mg/kg	Total N wt%	Bas N mg/kg	Pour Pt C	Visc cSt 100°C	Visc cSt 150°C	UOPK	Asp C7 wt %
	375-550	27.42	26.08	905	0.19	0.2	98	0	0	0.152	440	40	9.2	3.4	12.1	0.0
	375-565	29.10	27.64	906	0.20	0.3	98	0	0	0.162	466	41	9.8	3.6	12.1	0.0
	375-580	30.70	29.10	908	0.20	0.4	99	1	0	0.172	492	42	10.5	3.8	12.1	0.1
	400-580	25.94	24.46	913	0.21	0.5	100	1	0	0.189	547	44	13.0	4.4	12.1	0.1
RESIDUE	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	Conrad. wt%	Acidity mgKOH/g	Ni mg/kg	Va mg/kg	Total N wt%		Pour Pt C	Visc cSt 100°C	Visc cSt 150°C	Pene mm/10	Asp C7 wt%
	> 375	50.91	46.63	940	0.25	6.6	0.1	24	4	0.387		35	47	11	4750	1.0
	> 550	23.49	20.55	984	0.31	13.9	0.1	52	8	0.662		49	1220.0	110	161	2.2
	> 565	21.80	18.99	988	0.31	14.9	0.1	55	9	0.688		51	1770.0	142	132	2.3
	> 580	20.20	17.53	992	0.32	15.9	0.1	59	9	0.715		53	2640.0	187	110	2.5

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