MEDANITO - SUMMARY OF MAJOR CUTS

	Whole Crude	Light Naphtha	Medium Naphtha	Heavy Naphtha	Kero	Atm Gas Oil	Light VGO	Heavy VGO	Vacuum Resid	Atm Resid
TBP Temp At Start, °C	Start	10	80	150	200	260	340	450	570	340
TBP Temp At End, °C	End	80	150	200	260	340	450	570	End	End
TBP Temp At Start, °F	Start	55	175	300	400	500	650	850	1050	650
TBP Temp At End, °F	End	175	300	400	500	650	850	1050	End	End
Yield at Start, vol%		1.0	6.4	19.2	30.9	42.0	57.5	75.0	86.0	57.5
Yield at End, vol%		6.4	19.2	30.9	42.0	57.5	75.0	86.0	100.0	100.0
Yield of Cut (wt% of Crude)		4.1	11.4	10.9	10.7	15.6	18.4	11.9	16.3	46.6
Yield of Cut (vol% of Crude)		5.3	12.8	11.7	11.1	15.5	17.5	11.0	14.0	42.5
Gravity, °API	35.2	83.3	56.1	48.4	40.9	34.7	27.0	22.8	11.4	20.5
Specific Gravity	0.8486	0.6588	0.7542	0.7866	0.8206	0.8516	0.8926	0.9168	0.9903	0.9310
Sulfur, wt%	0.41	0.00	0.00	0.02	0.05	0.18	0.44	0.65	1.35	0.81
Mercaptan Sulfur, ppm		3	45	110	11	5	4			
Nitrogen, ppm	864		0	0	2	41	555	1216	3740	1840
Hydrogen, wt%	13.2	16.3	14.4	14.6	14.1	13.5	12.6	11.9	10.9	11.8
Viscosity @ 40 °C (104 °F), cSt	5.76			1.08	1.77	4.76	27.5	239	4.00E+06	328
Viscosity @ 50 °C (122 °F), cSt	4.85			0.956	1.52	3.71	18.0	125	4.68E+05	183
Viscosity @ 100 °C (212 °F), cSt	2.52			0.600	0.866	1.50	4.24	15.2	1450	26.0
Viscosity @ 135 °C (275 °F), cSt	1.83			0.476	0.657	0.987	2.26	6.38	205	11.3
Freeze Point, °C				-57.000	-31.000	1.00	35.0			
Freeze Point, °F				-71	-23	33	95			
Pour Point, °C	-1			-62	-36	-4	31	51	58	31
Pour Point, °F	30			-80	-32	25	88	123	136	88
Smoke Point, mm (ASTM)			22	19	17	15	13			
Aniline Point, °C				57	66	76	88	97		
Aniline Point, °F				135	150	168	190	207		
Total Acid Number, mg KOH/g	0.11			0.0	0.0	0.0	0.1	0.1		
Cetane Index, ASTM D976				38	47	51				
Diesel Index				65	61	58	51	47		
Characterization Factor (K Factor)	12.2	12.8	11.8	11.8	11.8	11.9	11.9	12.2	12.0	12.0
Research Octane Number, Clear		64.9	55.3	27.9						
Motor Octane Number, Clear		63.6	53.5							
Paraffins, vol%		89.3	51.3	59.0	48.5	40.1				
Naphthenes, vol%		10.7	37.7	31.5	34.8	39.9				
Aromatics, vol%		0.0	11.0	9.5	16.7	19.9				
Thiophenes, vol%										
Molecular Weight	228	103	115	145	176	225	315	468	810	431
Gross Heating Value, MM BTU/bbl	5.85	4.82	5.34	5.52	5.70	5.86	6.05	6.17	6.45	6.22
Gross Heating Value, kcal/kg	10940	11640	11230	11140	11030	10920	10770	10670	10350	10590
Gross Heating Value, MJ/kg	45.8	48.7	47.0	46.6	46.2	45.7	45.1	44.7	43.3	44.3
Heptane Asphaltenes, wt%	0.5								3.3	1.2
Micro Carbon Residue, wt%	3.2								19.4	6.8
Ramsbottom Carbon, wt%	3.0								18.3	6.4
Vanadium, ppm	8								47	16
Nickel, ppm	3								20	7
Iron, ppm										

Date Created
6/9/2003

Date Assayed
1994

MEDANITO - DISTILLATION SUMMARY

		Whole Crude	Light Naphtha	Medium Naphtha	Heavy Naphtha	Kero	Atm Gas Oil	Light VGO	Heavy VGO	Vacuum Resid	Atm Resid
TBP Temp At Start, °C			10	80	150	200	260	340	450	570	340
TBP Temp At End, °C			80	150	200	260	340	450	570	End	End
TBP Temp At Start, °F			55	175	300	400	500	650	850	1050	650
TBP Temp At End, °F			175	300	400	500	650	850	1050	End	End
Yield at Start, vol%			1.0	6.4	19.2	30.9	42.0	57.5	75.0	86.0	57.5
Yield at End, vol%			6.4	19.2	30.9	42.0	57.5	75.0	86.0	100.0	100.0
Yield of Cut (wt% of Crude)			4.1	11.4	10.9	10.7	15.6	18.4	11.9	16.3	46.6
Yield of Cut (vol% of Crude)			5.3	12.8	11.7	11.1	15.5	17.5	11.0	14.0	42.5
TBP Distillation, vol%	°C Start		10	80	140	200	260	340	450	570	340
	°C 5%		24	81	150	207	264	349	458	577	358
	°C 10%		29	90	153	210	268	354	463	585	369
	°C 30%		38	99	166	221	283	376	481	624	421
	°C 50%		60	116	177	232	300	394	500	662	484
	°C 70%		66	128	188	243	317	418	523	701	583
	°C 90%		71	138	199	254	334	442	550	741	701
	°C 95%		72	142	202	257	339	449	557	764	771
	°C End		80	150	210	260	340	450	570	End	End
TBP Distillation, vol%	°F Start		50	175	290	400	500	650	850	1050	650
	°F 5%		76	177	302	405	507	660	857	1070	676
	°F 10%		84	194	308	410	514	670	865	1085	697
	°F 30%		100	211	330	429	542	708	897	1155	790
	°F 50%		140	240	350	450	572	742	932	1224	904
	°F 70%		150	262	370	470	603	784	973	1294	1081
	°F 90%		159	281	390	490	634	828	1022	1365	1293
	°F 95%		161	287	395	495	642	840	1035	1408	1420
	°F End		175	300	410	500	650	850	1050	End	End

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