



Country	Assay Year	Load Point	API	Sulphur WT%	N ppm	TAN mgKOH/g	Pour Point °C	Visc. @ 40°C cST	V ppm	Ni ppm	RVP kPa
Guatemala	2018	Santo Tomas	18.6	6.410	2,500	0.37	-21	90.63	210	25	30.3

Property	Unit	NAP1	NAP2	KERO	LDIST	HDIST	LVGO	HVGO	VRES		
IBP - EBP	°C	15 - 85	85 - 175	175 - 250	250 - 300	300 - 360	360 - 450	450 - 565	565 - EBP		
Cut Yield	LV%	6.56	11.28	8.61	5.03	7.17	12.44	15.04	32.56		
Cut Yield	WT%	4.67	8.91	7.37	4.60	6.83	12.43	15.75	38.60		
Density @ 15°C	kg/l	0.669	0.742	0.804	0.860	0.894	0.939	0.984	1.113		
K-Factor	--	12.5	12.0	11.9	11.5	11.4	11.3	11.3	11.0		
Sulphur	WT%	0.177	0.628	1.405	3.733	4.726	5.474	6.521	9.794		
Mercaptan Sulphur	ppm	1089.4	2124.4	502.4	81.2	0.0	0.0	0.0	0.0		
Nitrogen	ppm	0	1	18	27	271	652	1,401	--		
Basic Nitrogen	ppm	0	4	46	108	181	285	437	712		
TAN	mgKOH/g	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.24		
Viscosity @ 20°C	cSt	1.732									
Viscosity @ 40°C	cSt	1.411			2.683	5.712	18.07	174.1			
RON (Clear)	--	55.2	31.0	6.8							
MON (Clear)	--	59.7	30.9	5.4							
Paraffins (Total)	LV%	98.4	77.2	44.0							
iso-Paraffins	LV%	--	--	--							
n-Paraffins	LV%	--	--	--							
Naphthenes	LV%	1.2	16.3	38.5							
Aromatics	LV%	0.4	6.5	17.5							
N + 2A	LV%	2.1	29.4	73.6							
Pour Point	°C	-47			-21	-5	25	50	123		
Cloud Point	°C	-43			-20	-4	26	51			
Freeze Point	°C	-44			-18	-1	28	53	123		
Smoke Point	mm	36.0			20.4	12.9					
Cetane Index	--	47.9			45.0	46.9					
Naphthalenes	WT%	1.0			4.8						
Aniline Point	°C	28	35	43	43	46	51	63			
Hydrogen	WT%	16.0	14.8	13.8	13.0	12.4	11.8	11.2	9.2		
Wax	WT%	9.62			10.67	6.42	0.49				
Asphaltenes	WT%							31			
MCRT	WT%							0.11	1.89	39.03	
Vanadium	ppm							0.00			615
Nickel	ppm							0.00			72
Iron	ppm							0.00			34

XAN COBAN

Xan Coban is a heavy sour crude oil available for loading at Santo Tomas de Castilla. Xan Coban is a blend resulting from the production of the Xan oil field operated by Perenco and some other crude oil produced in the Coban region. The production is being piped 474km to the shore to the terminal.

COMMERCIAL

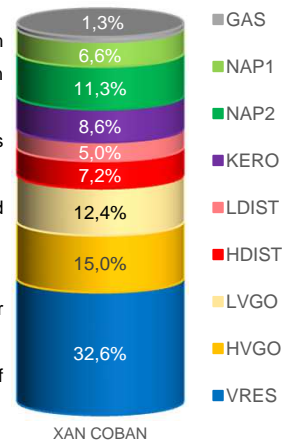
Volumes Around 2.2 million barrels per year
 Marketing Currently marketed by Perenco via TERM tenders at rate of 8 cargoes of 280k bbl per year

LIFTINGS

Country GUATEMALA
 Terminal Pier 6 Santo Tomas de Castilla operated by Perenco
 Location Onshore 500 miles west south of Cayman Islands
 Loading Restriction Loading Jetty accepts vessels up to Panamax/LR1 (1st port only)
 Loading Rate About 10,000 bbl/hour
 Cargo Size 280,000 bbl
 Note Draft is restricted to 10.5 m

CRUDE OIL CHARACTERISTICS

General Xan Coban is an extra heavy naphthenic crude with very high sulphur content but relatively low in acidity for this heavy grade
 Naphtha 18 vol% naphtha, high in paraffins content makes it excellent feedstock for olefins production
 Kerosene 9 vol% kerosene cut with proper smoke point and low enough aromatics content for jet fuel
 Gasoil 12 vol% gasoil, no acidity
 VGO 27 vol% VGO, suitable for hydrocracking and or catalytic cracking
 Residue 33 vol% residue, very suitable for production of bitumen and/or delayed coking



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