

System Information		
Grid Report File Name	CASTI190.HGR	
Project Name		
CRU File Source	Chevron Library	
CAL II Version	PC 9.50	
Run Date	11/26/10	
General Information		
Crude Name	Castilla Mixed Exp (CVX) '06	
CrudeID	CASTI190	
Country of Origin	Colombia	
State of Origin	casanare	
Geographical Region	South America	
User Defined Region	High/Sweet	
Sulfur Type	High	
Crude Type	Heavy	
Chemical Class	Naphthenic	
Sample Year	2006	
Date of Assay	6-Oct	
Lab Data Quality	Good	
Smoothed Data Confidence	Excellent	
Assay Library	CVX	
Laboratory	CVX	
Whole Crude Properties		
	Entered	Calculated
API Gravity	18,5	19,3
Specific Gravity @60/60 deg	0,9433	0,9386
Crude Expansion (%)		0,50
Sulfur	2,00	1,92
Nitrogen	4080,0	4075,0
Hydrogen	11,80	11,75
Light Ends Properties		
	LV%	Wt%
Ethane (C2)	0,00	0,00
Propane (C3)	0,05	0,03
Isobutane (IC4)	0,12	0,07
Normal Butane (NC4)	0,35	0,22
Isopentane (IC5)	0,88	0,58
Normal Pentane (NC5)	0,92	0,61
Cyclopentane (CP)	0,10	0,08
Total	2,41	1,59

Comments	
2006 SAMPLE OF CASTILLA--Pipeline sample during discharge. this is a mix of 13 api Castilla field plus other production to improve the value of the exp bld. CVX EVALUATION ASSAY. Crude has 4327 ppm N, 1.7 wt% S, -28C/-18F Pour, 80 ppm Ni, 350 ppm V, 15.1 ppb Ca, 12.7 ppm Fe, 20.7 ppm P, 388 ppb Pb, 132 ppb Se, no detectable As, Hg, or K; 0.058 Mg KOH/G Acid, 14 Wt% n-Paraffins/Wax(GC), 11 ppm Mercaptan S/RSH, no detectable H ₂ S; 16% Wax by 13C NMR method, 13.7 Wt% MCRT, 64C Wax Appearance Test (WAT) on whole crude. Compatibility Parameters of Vol% CT, Po, ra.	
Discovered in 1969, Castilla is located in Cubarral Block in the Central Llanos Basin of Colombia.	
Ecopetrol owned.	
FLASH POINT <25	
SILVER below detection limit	
ARSENIC below detection limit	
BERYLLIUM below detection limit	
CADMIUM below detection limit	
CAESIUM below detection limit	
POTASSIUM below detection limit	
SODIUM below detection limit	
PALLADIUM below detection limit	
RUBIDIUM below detection limit	
RHENIUM below detection limit	
RUTHENIUM below detection limit	
ANTIMONY below detection limit	
TIN below detection limit	
THALLIUM below detection limit	
*** The GC Analysis Covers 15.6 LV% of crude up to a TBP of 134.2 deg. C.	
Generated from Haverly Systems Crude Assay Management System (H/CAMS)	
www.haverly.com	

Distillate & Resid Cuts

CAST1190 (Castilla Mixed Exp (CVX) '06	Units	WC-Ent	WC-Calc	CUT1	CUT2	CUT3	CUT4
Initial Cut Point	deg C	n/a	n/a	0,	85,	165,	230,
End Cut Point	deg C	n/a	n/a	85,	165,	230,	350,
Vol. Yield	LV%	100,00	100,00	6,06	14,01	5,61	14,74
Cum. Vol. Yield at End of Cut	LV%	100,00	100,00	6,43	20,44	26,05	40,78
Wt. Yield	WT%	100,00	100,00	4,36	11,37	4,91	14,07
Cum. Wt. Yield at End of Cut	WT%	100,00	100,00	4,58	15,96	20,86	34,93
Unnormalized Volume Yield	LV%		100,50	6,10	14,08	5,64	14,81
API Gravity	API	18,50	19,26	78,05	54,20	40,83	26,44
Specific Gravity @60/60 deg F		0,9433	0,9386	0,6753	0,7620	0,8211	0,8959
Specific Gravity @20/4 deg C		0,9395	0,9348	0,6704	0,7573	0,8170	0,8919
Density @15deg C	kg/l	0,9428	0,9380	0,6751	0,7617	0,8207	0,8954
Density @20deg C	kg/l	0,9395	0,9348	0,6704	0,7573	0,8170	0,8919
K-Factor (Watson)			11,66	12,40	11,70	11,47	11,19
K-Factor (UOP)		11,50	11,40	12,49	11,71	11,50	11,27
K-Factor (Vis K)		11,90	11,82				
Molecular Weight			290	82	121	158	227
C/H Ratio (mass)				5,3	6,0	6,4	7,0
Sulfur	WT%	2,000	1,919	0,001	0,009	0,083	0,766
Mercaptan Sulfur	ppm	11		1	3	3	6
Nitrogen	ppm	4080,0	4075,0		0,3	1,0	69,2
Basic Nitrogen	ppm	919,0	1557,0		0,3	0,9	45,4
Hydrogen	WT%	11,8	11,8	15,9	14,2	13,6	12,4
VL% TBP - Initial Boiling Pt	deg C			0,0	85,0	165,0	230,0
VL% TBP - 5%	deg C			8,0	88,4	167,5	238,3
VL% TBP - 10%	deg C			16,1	93,6	170,0	246,2
VL% TBP - 20%	deg C			29,3	101,5	175,5	260,9
VL% TBP - 30%	deg C			34,8	109,4	181,4	274,4
VL% TBP - 50%	deg C			60,7	121,6	194,9	298,6
VL% TBP - 70%	deg C			68,5	137,6	209,2	320,3
VL% TBP - 80%	deg C			80,2	145,4	216,4	330,5
VL% TBP - 90%	deg C			82,0	153,3	223,4	340,4
VL% TBP - 95%	deg C			83,5	159,0	226,7	345,2
VL% TBP - End Boiling Pt	deg C			85,0	165,0	230,0	350,0
ASTM Distillation Method				D86	D86	D86	D1160
ASTM Initial Boiling Point	deg C			31,0	105,9	179,2	246,4
ASTM 5% Point	deg C			33,8	106,6	179,5	250,0
ASTM 10% Point	deg C			36,4	107,8	180,0	254,7
ASTM 20% Point	deg C			43,1	111,8	182,5	266,6
ASTM 30% Point	deg C			44,6	114,3	184,1	278,5
ASTM 50% Point	deg C			61,4	120,8	191,6	298,6
ASTM 70% Point	deg C			65,9	131,6	201,0	320,3
ASTM 80% Point	deg C			73,1	135,9	204,8	330,4
ASTM 85% Point	deg C			73,9	139,6	208,0	335,4
ASTM 90% Point	deg C			74,6	142,3	210,3	340,4
ASTM 95% Point	deg C			77,3	147,2	214,0	345,2
ASTM End Boiling Pt	deg C			80,2	154,9	219,2	350,0
Weighted Avg. Boiling Pt	deg C			57,9	124,2	194,0	291,6
Molar Avg. Boiling Pt	deg C			51,8	119,5	190,3	285,1
Cubic Avg. Boiling Pt	deg C			55,1	122,3	192,6	289,4
Mean Avg. Boiling Pt	deg C			53,5	120,9	191,4	287,2
Volumetric Avg. Boiling Pt	deg C			56,6	123,4	193,4	290,6
E70 (%Evap. @ 70deg C)	LV%			80,0	0,0	0,0	0,0
E82 (%Evap. @ 82deg C)	LV%			100,0	0,0	0,0	0,0
E100 (%Evap. @100deg C)	LV%			100,0	0,0	0,0	0,0

Distillate & Resid Cuts

E135 (%Evap. @135deg C)	LV%			100,0	76,3	0,0	0,0
E180 (%Evap. @180deg C)	LV%			100,0	100,0	9,8	0,0
E280 (%Evap. @280deg C)	LV%			100,0	100,0	100,0	36,4
E300 (%Evap. @300deg C)	LV%			100,0	100,0	100,0	62,1
E340 (%Evap. @340deg C)	LV%			100,0	100,0	100,0	100,0
E345 (%Evap. @345deg C)	LV%			100,0	100,0	100,0	100,0
E350 (%Evap. @350deg C)	LV%			100,0	100,0	100,0	100,0
E360 (%Evap. @360deg C)	LV%			100,0	100,0	100,0	100,0
E370 (%Evap. @370deg C)	LV%			100,0	100,0	100,0	100,0
RON (clear)				69,6	54,2		
MON (clear)				67,8	51,2		
Reid Vapor Pressure	kPa	19,99	10,69	74,00	8,16	0,34	0,14
Driveability Index				740,1	1375,7	2075,2	
Luminometer Number					70,22	48,64	22,39
Thiophenes	LV%					0,2	1,4
Naphthalenes	WT%					1,2	
Paraffins (Total)	LV%			79,8	45,5	22,9	11,8
Paraffins (Iso)	LV%			45,38			
Paraffins (Normal)	LV%	14,40		34,42			
Naphthenes	LV%			18,9	39,7	60,5	63,5
Aromatics	LV%			1,3	14,8	16,6	24,8
Asphaltenes	WT%	12,0	12,0				
N + 2A	LV%			21,55	69,30	93,67	113,01
Wax	WT%	2,40					
Benzene Precursor Index				10,9	1,3		
Gross Heating Value	GJ/m3			32,56	35,70	37,72	39,93
Net Heating Value	GJ/m3			30,29	33,41	35,36	37,57
Flash Point (HSI/API)	deg C				3	54	105
Flash Point (Chevron)	deg C					57	116
Freeze Point	deg C					-76	-21
Cloud Point	deg C					-77	-23
Pour Point	deg C	-28				-78	-27
Softening Point	deg C						
Penetration	dmm						
Smoke Point	mm			54,33	30,56	21,80	11,93
Aniline Point	deg C			65	52	53	54
Neut or TAN No.	mgKOH/g	0,06		0,00	0,01	0,02	0,10
Cetane Index (D976)						32,3	38,4
Cetane Index (D4737-A)				44,9	27,2	33,8	37,0
Cetane Index (D4737-B)				51,8	39,3	38,9	38,1
Diesel Index				116,2	67,9	52,0	34,3
Refractive Index @20deg C				1,3737	1,4270	1,4623	1,5072
Refractive Index @55deg C				1,3570	1,4110	1,4470	1,4931
Refractive Index @67deg C				1,3512	1,4055	1,4418	1,4882
Refractive Index @70deg C				1,3498	1,4042	1,4405	1,4870
Refractive Index @80deg C				1,3450	1,3996	1,4361	1,4830
Viscosity @ 60deg F (15.5deg C)	cSt		478,0			1,8	11,6
Viscosity @ 68deg F (20deg C)	cSt		378,5			1,7	9,8
Viscosity @ 77deg F (25deg C)	cSt		295,2			1,5	8,2
Viscosity @100deg F (38deg C)	cSt		166,5			1,3	5,5
Viscosity @104deg F (40deg C)	cSt	151,9	151,9			1,2	5,2
Viscosity @122deg F (50deg C)	cSt	103,3	103,3			1,1	4,0
Viscosity @130deg F (54deg C)	cSt		92,6			1,0	3,6
Viscosity @140deg F (60deg C)	cSt					1,0	3,2
Viscosity @158deg F (70deg C)	cSt					0,9	2,6

Distillate & Resid Cuts

Viscosity @176deg F (80deg C)	cSt		45,0			0,8	2,2
Viscosity @180deg F (82deg C)	cSt					0,8	2,1
Viscosity @200deg F (93deg C)	cSt					0,7	1,8
Viscosity @210deg F (98deg C)	cSt					0,6	1,6
Viscosity @212deg F (100deg C)	cSt	28,4	28,4			0,6	1,6
Viscosity @250deg F (121deg C)	cSt					1	1
Viscosity @275deg F (135deg C)	cSt					0,5	1,0
Viscosity @300deg F (149deg C)	cSt					0,4	0,9
Viscosity @325deg F (163deg C)	cSt					0,4	0,8
Viscosity @375deg F (190deg C)	cSt					0,3	0,6
Viscosity @425deg F (218deg C)	cSt					0,3	0,5
Viscosity Index (D2270)							
Viscosity Slope (Chevron)						0,35	0,45
Viscosity Slope (ASTM)						-3,92	-4,30
Ramsbottom Carbon	WT%	12,66	12,64				
Conradson Carbon	WT%		13,51				
MCRT Carbon	WT%	13,6	13,5				
Sulfur in Ramsbottom Carbon	WT%						
Mercury	ppb	20,0					
Iron	ppm	12,7	12,8				
Vanadium	ppm	356,100	355,512				
Nickel	ppm	81,110	80,975				
Copper	ppm	0,6					
Zinc	ppm	5,7					
Aromatic Carbon Content	WT%			11	16	21	29
Water	LV%	1700,0					
Salt Content	mg/l	0,0000					
Lead	ppb	388,00					
Calcium	ppm	15					
Magnesium	ppm	2					
Selenium	ppb	132					
Filterable Solids	mg/l	0,00					

Distillate & Resid Cuts

CUT5	CUT6	CUT7
350, 530,	530+ n/a	350+ n/a
25,50	33,71	59,22
66,29	100,00	100,00
26,19	38,88	65,07
61,12	100,00	100,00
25,63	33,88	59,52
15,33	-0,79	5,70
0,9637	1,0825	1,0314
0,9597	1,0785	1,0274
0,9631	1,0818	1,0307
0,9597	1,0785	1,0274
11,15	11,47	11,50
11,23	11,16	11,13
	11,47	11,50
366	971	588
7,6	8,3	8,0
1,823	3,417	2,776
4		
1813,6	9233,4	6247,4
772,4	2862,3	2159,3
11,4	10,3	10,7
350,0	530,0	350,0
358,2	545,2	369,0
366,4	561,0	387,7
382,5	594,3	425,9
398,6	629,6	467,3
431,9	708,0	568,1
467,9	804,0	696,7
487,4	866,2	776,7
508,0	950,2	884,0
518,9	1012,3	963,1
530,0	1204,4	1204,4
D1160	D1160	D1160
367,1	550,4	370,0
370,3	556,0	377,7
375,5	566,7	390,4
389,2	597,5	425,7
403,2	632,0	467,8
431,9	708,0	568,1
467,9	804,0	696,7
487,6	865,7	776,9
497,7	905,2	827,3
508,0	950,2	884,0
518,8	1046,1	1004,9
530,0	1204,4	1204,4
424,3	724,5	624,3
413,2	641,1	433,6
421,0	703,6	572,5
417,0	673,9	508,6
422,8	717,2	606,8
0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,0

Distillate & Resid Cuts

0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,0
0,0	0,0	0,8
4,0		
5,8		
50,4		
43,8		
	30,9	18,5
137,94		
6,32		
41,67	44,31	43,33
39,33	41,96	40,98
150	172	154
31		
30		
25	131	61
	94	35
	1,4	3604,0
63		
0,21		
22,2		
1,5461	1,6136	1,5846
1,5335	1,5941	1,5718
1,5292	1,5874	1,5674
1,5281	1,5858	1,5663
1,5245	1,5802	1,5627
2307,9	4,2E+19	4,9E+07
1425,1	3,5E+18	2,1E+07
865,3	2,6E+17	8,3E+06
289,2	8,0E+14	1,1E+06
244,6	3,3E+14	7,8E+05
123,4	8,2E+12	2,0E+05
94,1	1,9E+12	1,2E+05
68,8	3,4E+11	6,4E+04
41,6	2,2E+10	2,3E+04

Distillate & Resid Cuts

26,9	1,9E+09	9262,5
24,6	1,2E+09	7686,6
16,4	1,2E+08	3247,5
13,7	4,5E+07	2197,9
13,2	3,7E+07	2038,8
7	1E+06	577
5,4	2,6E+05	291,0
4,1	6,2E+04	160,6
3,2	1,8E+04	95,9
2,2	2392,0	41,0
1,6	527,1	21,1
-5	90	98
0,60	0,46	0,52
-4,21	-3,72	-3,29
	32,53	19,43
	34,37	20,76
	34,4	20,8
	4,1	4,1
	32,9	19,7
	913,350	546,502
	207,903	124,480
35	47	42

GC Cuts (Vol%)

CAST1190 (Castilla Mixed Exp (CVX) '06)		Units	WC-Ent	CUT1	CUT2
Boiling Point		deg C	n/a	0-85	85-165
		deg F	n/a	32-185	185-329
Yield		Vol%		6,06g	14,01=
Carbon#	GC Components				
C2	Ethane	Vol%	0,000		
C3	Propane	Vol%	0,053	0,003	
C4	N-Butane	Vol%	0,353	2,806	0,000
	I-Butane	Vol%	0,120	0,328	0,000
C5	N-Pentane	Vol%	0,915	14,970	0,008
	I-Pentane	Vol%	0,877	14,154	0,002
	Cyclopentane	Vol%	0,096	1,573	0,005
C6	N-Hexane	Vol%	0,970	14,460	0,661
	C6 Isomers (Total)	Vol%	1,397	22,230	0,349
	2-Methylpentane	Vol%	0,748	11,931	0,170
	3-Methylpentane	Vol%	0,446	7,006	0,151
	2,2-Dimethylbutane	Vol%	0,051	0,833	0,003
	2,3-Dimethylbutane	Vol%	0,153	2,459	0,026
	C6 Naphthenes (Total)	Vol%	1,054	13,143	1,832
	Methylcyclopentane	Vol%	0,549	7,782	0,546
	Cyclohexane	Vol%	0,505	5,361	1,285
	Benzene	Vol%	0,103	1,130	0,249
C7	N-Heptane	Vol%	0,957	2,129	5,906
	C7 Isomers (Total)	Vol%	1,534	8,359	7,332
	2-Methylhexane	Vol%	0,433	2,374	2,066
	3-Methylhexane	Vol%	0,466	2,150	2,393
	2,2-Dimethylpentane	Vol%	0,039	0,449	0,087
	2,3-Dimethylpentane	Vol%	0,161	0,905	0,758
	2,4-Dimethylpentane	Vol%	0,088	0,949	0,221
	3,3-Dimethylpentane	Vol%	0,024	0,183	0,092
	2,3,3-Trimethylbutane	Vol%	0,014	0,151	0,037
	3-Ethylpentane	Vol%	0,308	1,198	1,678
	C7 Cyclopentanes (Total)	Vol%	0,386	1,622	2,052
	1-1-Dimethylcyclopentane	Vol%	0,074	0,490	0,314
	1,Cis-2-Dimethylcyclopentane	Vol%			
	1,Cis-3-Dimethylcyclopentane	Vol%	0,173	0,806	0,883
	1,Trans-2-Dimethylcyclopentane	Vol%	0,006	0,025	0,028
	1,Trans-3-Dimethylcyclopentane	Vol%	0,036	0,184	0,177
	Ethylcyclopentane	Vol%	0,098	0,118	0,650
	Methylcyclohexane	Vol%	1,461	2,397	9,392
	Methylbenzene (Toluene)	Vol%	0,451	0,210	3,130
C8	N-Octane	Vol%	0,835	0,050	5,936
	I-Octane	Vol%	1,893	0,309	13,381
	C8 Naphthenes (Total)	Vol%	1,339	0,119	9,503
	Methyl-Ethylcyclopentane	Vol%	0,661	0,108	4,670
	Dimethylcyclohexane	Vol%	0,678	0,011	4,833
	C8 Aromatics (Total)	Vol%	0,841	0,008	6,003
	1,4-Dimethylbenzene (P-Xylene)	Vol%	0,146	0,002	1,038
	1,3-Dimethylbenzene (M-Xylene)	Vol%	0,434	0,004	3,099
	1,2-Dimethylbenzene (O-Xylene)	Vol%	0,164	0,001	1,171
	Ethylbenzene	Vol%	0,097	0,001	0,694
C9	N-Nonane	Vol%			
	I-Nonane	Vol%			
	Isobutylcyclopentane	Vol%			
	Isopropylcyclohexane	Vol%			
	C9 Aromatics (Total)	Vol%			
C10	N-Decane	Vol%			
	I-Decane	Vol%			
	Ethylpropylcyclopentane	Vol%			
	Isobutylcyclohexane	Vol%			
	C10 Aromatics (Total)	Vol%			
C11	N-Undecane	Vol%			
	I-Undecane	Vol%			
	C11 Cyclopentanes (Total)	Vol%			
	C11 Cyclohexanes (Total)	Vol%			
	C11 Aromatics (Total)	Vol%			

GC Cuts (Vol%)

C12	N-Dodecane	Vol%			
	I-Dodecane	Vol%			
	C12 Cyclopentanes (Total)	Vol%			
	C12 Cyclohexanes (Total)	Vol%			
	C12 Aromatics (Total)	Vol%			
Class Summary (Vol%)					
N-Paraffins	Vol%	4,081	34,418	12,510	
Iso-Paraffins	Vol%	5,822	45,379	21,064	
Naphthenes	Vol%	4,336	18,855	22,784	
Aromatics	Vol%	1,396	1,348	9,382	
Total Identified GC Components	Vol%	15,636	100,000	65,740	
Unidentified GC Components	Vol%	84,364		34,260	

CAST1190 (Castilla Mixed Exp (CVX) '06)		Units	WC-Ent	CUT1	CUT2
Boiling Point		deg C	n/a	0-85	85-165
		deg F	n/a	32-185	185-329
Yield		WT%		4,36c	11,37c
Carbon#	GC Components				
C2	Ethane	WT%	0,000		
C3	Propane	WT%	0,028	0,002	
C4	N-Butane	WT%	0,218	2,429	0,000
	I-Butane	WT%	0,072	0,274	
C5	N-Pentane	WT%	0,612	13,993	0,006
	I-Pentane	WT%	0,581	13,094	0,002
	Cyclopentane	WT%	0,077	1,748	0,005
C6	N-Hexane	WT%	0,682	14,216	0,576
	C6 Isomers (Total)	WT%	0,981	21,796	0,304
	2-Methylpentane	WT%	0,521	11,622	0,147
	3-Methylpentane	WT%	0,316	6,940	0,132
	2,2-Dimethylbutane	WT%	0,035	0,807	0,002
	2,3-Dimethylbutane	WT%	0,108	2,427	0,022
	C6 Naphthenes (Total)	WT%	0,858	14,902	1,862
	Methylcyclopentane	WT%	0,438	8,683	0,540
	Cyclohexane	WT%	0,420	6,219	1,321
	Benzene	WT%	0,097	1,481	0,289
C7	N-Heptane	WT%	0,698	2,170	5,333
	C7 Isomers (Total)	WT%	1,124	8,533	6,658
	2-Methylhexane	WT%	0,314	2,401	1,852
	3-Methylhexane	WT%	0,341	2,202	2,171
	2,2-Dimethylpentane	WT%	0,028	0,451	0,078
	2,3-Dimethylpentane	WT%	0,119	0,938	0,696
	2,4-Dimethylpentane	WT%	0,064	0,952	0,196
	3,3-Dimethylpentane	WT%	0,018	0,189	0,084
	2,3,3-Trimethylbutane	WT%	0,011	0,155	0,034
	3-Ethylpentane	WT%	0,229	1,246	1,547
	C7 Cyclopentanes (Total)	WT%	0,310	1,816	2,045
	1-1-Dimethylcyclopentane	WT%	0,059	0,551	0,312
	1,Cis-2-Dimethylcyclopentane	WT%			
	1,Cis-3-Dimethylcyclopentane	WT%	0,138	0,899	0,873
	1,Trans-2-Dimethylcyclopentane	WT%	0,004	0,028	0,028
	1,Trans-3-Dimethylcyclopentane	WT%	0,029	0,204	0,174
	Ethylcyclopentane	WT%	0,080	0,134	0,658
	Methylcyclohexane	WT%	1,199	2,747	9,539
	Methylbenzene (Toluene)	WT%	0,417	0,271	3,581
C8	N-Octane	WT%	0,625	0,052	5,505
	I-Octane	WT%	1,425	0,325	12,468
	C8 Naphthenes (Total)	WT%	1,135	0,141	9,977
	Methyl-Ethylcyclopentane	WT%	0,560	0,128	4,903
	Dimethylcyclohexane	WT%	0,575	0,013	5,074
	C8 Aromatics (Total)	WT%	0,777	0,010	6,867
	1,4-Dimethylbenzene (P-Xylene)	WT%	0,134	0,002	1,180
	1,3-Dimethylbenzene (M-Xylene)	WT%	0,400	0,005	3,533
	1,2-Dimethylbenzene (O-Xylene)	WT%	0,154	0,001	1,360
	Ethylbenzene	WT%	0,090	0,002	0,794
C9	N-Nonane	WT%			
	I-Nonane	WT%			
	Isobutylcyclopentane	WT%			
	Isopropylcyclohexane	WT%			
	C9 Aromatics (Total)	WT%			
C10	N-Decane	WT%			
	I-Decane	WT%			
	Ethylpropylcyclopentane	WT%			
	Isobutylcyclohexane	WT%			
	C10 Aromatics (Total)	WT%			
C11	N-Undecane	WT%			
	I-Undecane	WT%			
	C11 Cyclopentanes (Total)	WT%			
	C11 Cyclohexanes (Total)	WT%			
	C11 Aromatics (Total)	WT%			

GC Cuts (Wt%)

C12	N-Dodecane	WT%			
	I-Dodecane	WT%			
	C12 Cyclopentanes (Total)	WT%			
	C12 Cyclohexanes (Total)	WT%			
	C12 Aromatics (Total)	WT%			
Class Summary (WT%)					
N-Paraffins		WT%	2,865	32,862	11,420
Iso-Paraffins		WT%	4,183	44,022	19,431
Naphthenes		WT%	3,578	21,354	23,428
Aromatics		WT%	1,292	1,762	10,737
Total Identified GC Components		WT%	11,917	100,000	65,016
Unidentified GC Components		WT%	88,083		34,984