

Reference: CLKBL23B
Crude: Cold Lake Blend



Crude Summary Report

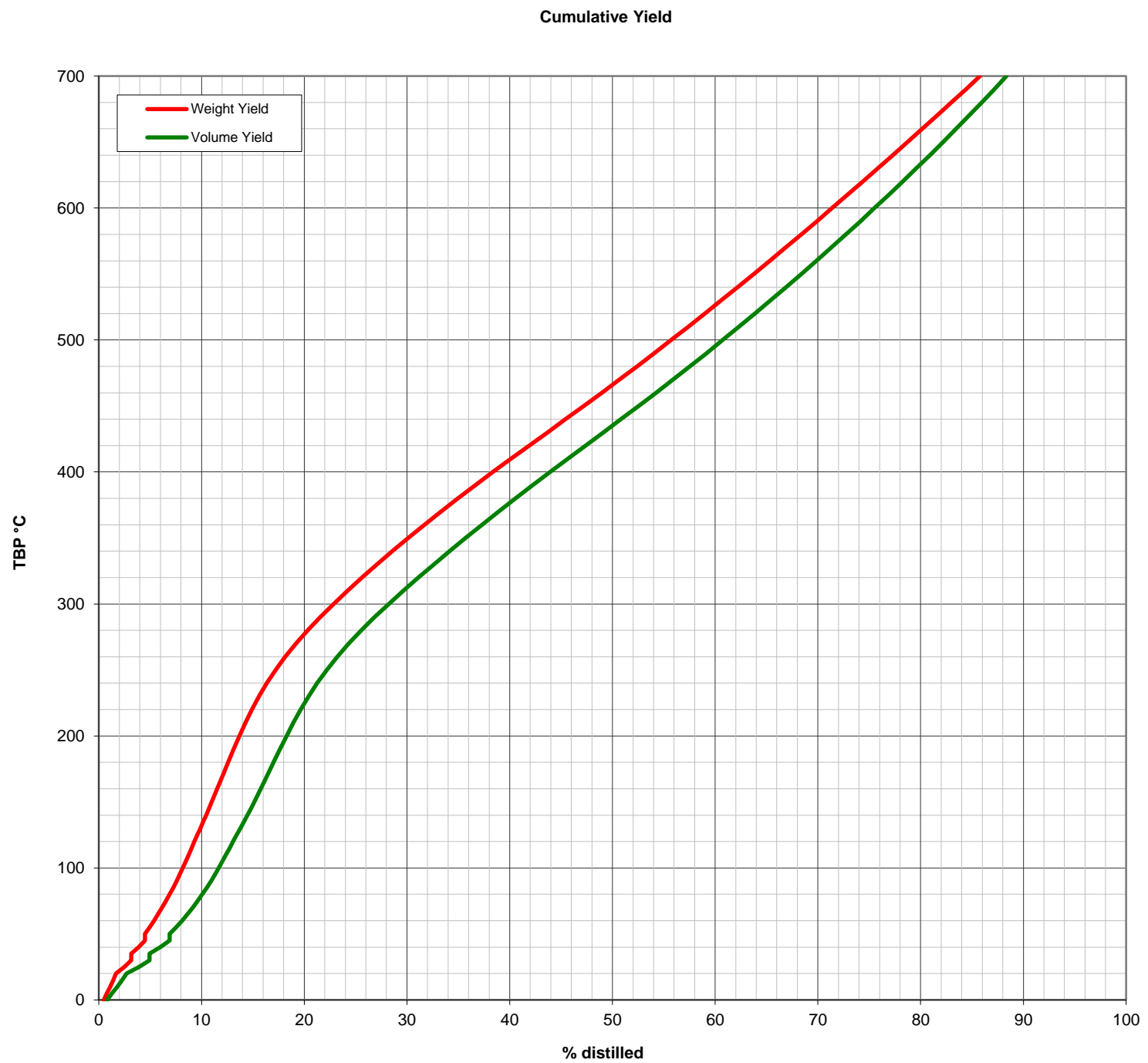
General Information		Molecules (%wt on crude)				Whole Crude Properties			
Reference:	CLKBL23B	methane + ethane	0.00	Density @ 15°C (g/cc)	0.9367				
Name:	Cold Lake Blend	propane	0.01	API Gravity	19.5				
Origin:	Alberta	isobutane	0.41	Total Sulfur (% wt)	3.87				
Assay Date:	10/26/2023	n-butane	1.05	Pour Point (°C)	-20				
Comments:	Summer	isopentane	1.41	Viscosity @ 20°C (cSt)	1019.3				
		n-pentane	1.84	Viscosity @ 40°C (cSt)	173.8				
		cyclopentane	0.12	Nickel (ppm)	55.8				
		C6 paraffins	2.42	Vanadium (ppm)	145.2				
		C6 naphthenes	0.75	Total Nitrogen (ppm)	3062				
		benzene	0.14	Total Acid Number (mgKOH/g)	1.12				
		C7 paraffins	1.14	Mercaptan Sulfur (ppm)	69.3				
		C7 naphthenes	0.88	Hydrogen Sulfide (ppm)	0.0				
		toluene	0.30	Reid Vapor Pressure (kPa)	51.9				

Cut Data	IBP	Atmospheric Cuts										Vacuum Cuts						
		C5	65	100	150	200	250	300	350	370	370	450	500	550				
Start (°C)																		
End (°C)	FBP	65	100	150	200	250	300	350	370	FBP	450	500	550	FBP				
Yield (% wt)		4.4	2.4	2.8	2.7	3.5	5.6	7.3	3.2	66.7	13.9	8.5	8.0	36.2				
Yield (% vol)		6.4	3.0	3.5	3.1	3.9	6.0	7.5	3.2	61.1	13.6	8.2	7.6	31.6				
Cumulative Yield (% wt)		1.4	5.8	8.2	11.0	13.7	17.2	22.9	30.1	33.3	33.3	47.2	55.7	63.8				
Volume Average B.P. (°C)	423	37.8	81	125	175	227	276	325	360	568	410	475	525	671				
Density @ 15°C (g/cc)	0.9367	0.6307	0.7397	0.7616	0.8001	0.8406	0.8774	0.9052	0.9326	1.0210	0.9533	0.9724	0.9832	1.0720				
API Gravity	19.5	92.8	59.7	54.2	45.3	36.8	29.7	24.7	20.1	7.0	16.9	13.9	12.3	0.4				
UOPK	11.50			11.74	11.63	11.48	11.35	11.32	11.19	11.24	11.23	11.35	11.47	11.13				
Molecular Weight (g/mol)				109	137	169	203	243	271	578	321	411	519	1008				
Total Sulfur (% wt)	3.9	0.024	0.026	0.081	0.344	0.79	1.39	2.18	2.78	5.26	3.14	3.47	4.13	6.74				
Mercaptan Sulfur (ppm)	69.3		112.9	19.7	1.0	17.9	26.6											
Total Nitrogen (ppm)	3062					17	42	127	309	4558	1038	2071	2638	6918				
Basic Nitrogen (ppm)	809					4	23	70	151	1197	311	516	800	1784				
Total Acid Number (mgKOH/g)	1.12	0.00	0.01	0.02	0.04	0.11	0.38	0.99	1.53	1.46	2.08	2.28	2.03	0.90				
Viscosity @ 20°C (cSt)	1019				1.51													
Viscosity @ 40°C (cSt)	174				1.12	1.87	3.65	8.90	20.2									
Viscosity @ 50°C (cSt)	88.1					1.58	2.92	6.54	13.6	65885	50.6	323	1725					
Viscosity @ 60°C (cSt)										20568	31.4	166	764					
Viscosity @ 100°C (cSt)										717	7.99	25.3	74.3	1040038				
Viscosity @ 130°C (cSt)														45231				
Viscosity @ 150°C (cSt)														9216				
RON (Clear)		75.7	40.1	65.3	30.5													
MON (Clear)		73.0	56.0	62.4	30.2													
Paraffins (% wt)	15.1	97.3	64.3	34.0	41.1													
Naphthenes (%wt)	21.6	2.6	31.6	44.9	47.3													
Aromatics (% wt)	62.7	0.0	4.2	21.2	11.4													
Pour Point (°C)	-20						-66	-47	-24	-10	46	1	8	12	75			
Cloud Point (°C)							-65	-45	-21									
Freeze Point (°C)							-67	-59	-40									
Smoke Point (mm)						25	20	14										
Cetane Index (D4737A)						34	37	38	41	40								
Naphthalenes (% vol)						0.1	0.8	4.7	7.6									
Aniline Point (°C)				52.9	54.6	58.3	58.1	54.9	54.4		58.6	64.7	68.9					
Hydrogen (% wt)	12.1	16.6	15.3	13.8	14.2	13.3	12.9	12.2	11.6		11.6	11.6	11.5					
Total Wax (% wt)	0.8									0.2	0.6	0.3	0.1	0.0				
C7 Asphaltenes (% wt)	9.9									14.8	0.0	0.0	27.2					
Micro Carbon Residue (% wt)	10.7									16.0	0.4	2.9	28.7					
Vanadium (ppm)	145.2									217.7	0.0	0.0	400.6					
Nickel (ppm)	55.8									83.6	0.0	0.0	153.8					
Iron (ppm)	8.8									13.3	0.0	0.0	24.4					
Sodium (ppm)	4.8																	
Mercury (ppb)	9.8																	
Arsenic (ppb)	134																	

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Yield Distribution



Cumulative Volume % Distilled at 10 Degree C (TBP) Intervals

	0	10	20	30	40	50	60	70	80	90
0				4.9	6.0	6.9	8.1	9.1	10.1	10.9
100	11.7	12.4	13.1	13.8	14.5	15.1	15.8	16.4	17.0	17.6
200	18.3	18.9	19.6	20.4	21.3	22.2	23.2	24.3	25.5	26.8
300	28.2	29.6	31.1	32.6	34.1	35.7	37.3	38.9	40.6	42.2
400	43.9	45.7	47.4	49.1	50.8	52.5	54.2	55.9	57.5	59.2
500	60.7	62.3	63.9	65.4	66.9	68.4	69.8	71.3	72.7	74.1