

Reference: UPZK223X
Crude: Upper Zakum



Crude Summary Report

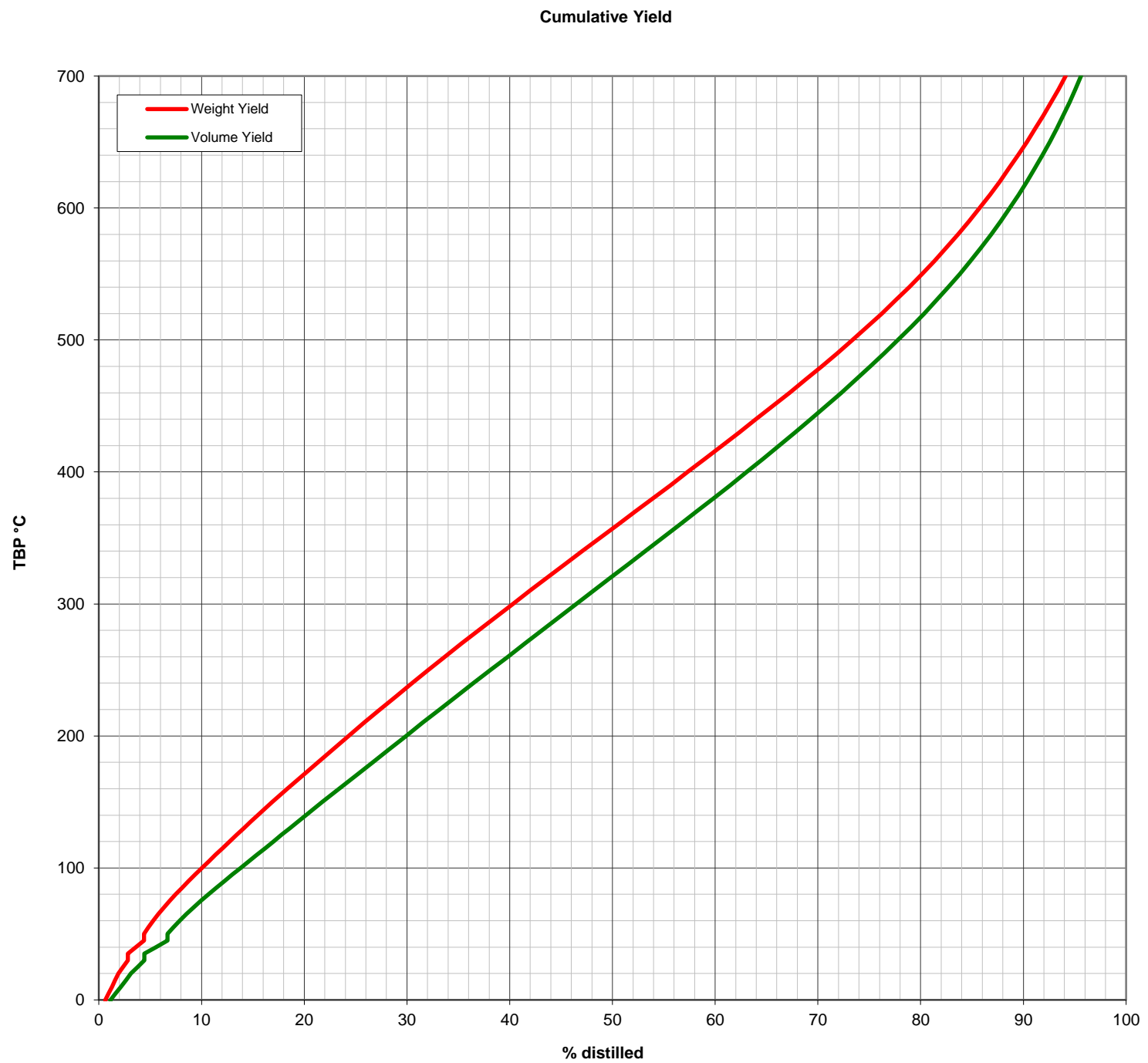
General Information		Molecules (%wt on crude)				Whole Crude Properties			
Reference:	UPZK223X	methane + ethane	0.02	Density @ 15°C (g/cc)	0.8588				
Name:	Upper Zakum	propane	0.31	API Gravity	33.2				
Origin:	Abu Dhabi (UAE)	isobutane	0.26	Total Sulfur (% wt)	2.09				
Assay Date:	4/12/2024	n-butane	1.19	Pour Point (°C)	-15				
Comments:		isopentane	0.85	Viscosity @ 20°C (cSt)	10.8				
		n-pentane	1.41	Viscosity @ 40°C (cSt)	6.1				
		cyclopentane	0.10	Nickel (ppm)	10.6				
		C6 paraffins	2.52	Vanadium (ppm)	13.0				
		C6 naphthenes	0.52	Total Nitrogen (ppm)	906				
		benzene	0.09	Total Acid Number (mgKOH/g)	0.08				
		C7 paraffins	2.32	Mercaptan Sulfur (ppm)	28.0				
		C7 naphthenes	0.70	Hydrogen Sulfide (ppm)	0.0				
		toluene	0.36	Reid Vapor Pressure (kPa)	59.8				

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)		4.2	4.2	6.8	7.4	7.8	8.2	8.5	3.5	47.8	13.4	7.8	6.8	19.9				
Yield (% vol)		5.9	5.3	8.0	8.1	8.2	8.3	8.4	3.3	41.8	12.6	7.0	6.0	16.2				
Cumulative Yield (% wt)		1.6	5.8	10.1	16.9	24.3	32.1	40.3	48.8	52.2	52.2	65.6	73.4	80.1				
Volume Average B.P. (°C)	333	40.3	83	125	175	225	275	325	360	531	409	474	524	652				
Density @ 15°C (g/cc)	0.8588	0.6115	0.6896	0.7359	0.7814	0.8078	0.8441	0.8655	0.8917	0.9786	0.9092	0.9482	0.9671	1.0501				
API Gravity	33.2	99.9	73.7	60.7	49.5	43.6	36.1	31.9	27.1	13.0	24.1	17.7	14.7	3.2				
UOPK	11.98			12.16	11.91	11.93	11.79	11.84	11.71	11.55	11.77	11.64	11.66	11.28				
Molecular Weight (g/mol)				111	139	172	209	254	285	524	341	426	532	948				
Total Sulfur (% wt)	2.1	0.000	0.001	0.005	0.048	0.219	1.00	1.95	2.33	3.65	2.73	3.17	3.51	4.50				
Mercaptan Sulfur (ppm)	28.0	2.6	7.2	9.8	10.1	12.4	11.1											
Total Nitrogen (ppm)	906						1	18	87	1864	491	942	1210	3370				
Basic Nitrogen (ppm)	261						3	12	47	530	169	297	379	914				
Total Acid Number (mgKOH/g)	0.08	0.00	0.00	0.01	0.02	0.03	0.06	0.09	0.12	0.13	0.14	0.15	0.15	0.11				
Viscosity @ 20°C (cSt)	10.8				1.25													
Viscosity @ 40°C (cSt)	6.13				0.97	1.49	2.61	5.29	9.59									
Viscosity @ 50°C (cSt)	4.85					1.31	2.19	4.19	7.22	649	17.8	74.2	252					
Viscosity @ 60°C (cSt)										331	12.8	46.7	142					
Viscosity @ 100°C (cSt)										47.0	4.78	12.0	26.4	4883				
Viscosity @ 130°C (cSt)														671				
Viscosity @ 150°C (cSt)														247				
RON (Clear)		74.6	26.5	49.2	35.6													
MON (Clear)		72.0	40.7	51.0	34.6													
Paraffins (% wt)	33.9	97.2	80.9	57.8	60.0													
Naphthenes (%wt)	20.5	2.8	17.2	25.3	18.1													
Aromatics (% wt)	45.6	0.0	1.9	16.9	21.8													
Pour Point (°C)	-15						-41	-21	0	12	22	24	34	40	51			
Cloud Point (°C)								-39	-19	2								
Freeze Point (°C)							-52	-35	-15									
Smoke Point (mm)							26	22	18									
Cetane Index (D4737A)							42	51	52	58	56							
Naphthalenes (% vol)							0.0	1.9	8.2	12.0								
Aniline Point (°C)				50.7	55.2	62.9	69.1	72.2	73.1		75.3	78.2	79.9					
Hydrogen (% wt)	13.0	16.6	15.7	14.3	14.2	13.8	13.4	13.0	12.6		12.4	11.9	11.7					
Total Wax (% wt)	10.1									4.8	12.6	4.4	2.1	0.5				
C7 Asphaltene (% wt)	2.1									4.4		0.0	0.0	10.7				
Micro Carbon Residue (% wt)	4.8									10.0		0.4	2.6	22.9				
Vanadium (ppm)	13.0									27.3		0.0	0.0	65.7				
Nickel (ppm)	10.6									22.2		0.0	0.0	53.4				
Iron (ppm)	0.5									1.0		0.0	0.0	2.5				
Sodium (ppm)	5.0																	
Mercury (ppb)	1.0																	
Arsenic (ppb)	5																	

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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				4.4	5.6	6.7	7.9	9.2	10.7	12.2
100	13.8	15.4	17.0	18.6	20.2	21.8	23.4	25.0	26.7	28.3
200	29.9	31.5	33.2	34.8	36.5	38.1	39.8	41.5	43.1	44.8
300	46.5	48.2	49.8	51.5	53.2	54.9	56.5	58.2	59.8	61.5
400	63.1	64.7	66.2	67.8	69.3	70.8	72.3	73.7	75.1	76.5
500	77.8	79.1	80.3	81.5	82.7	83.8	84.9	85.9	86.9	87.8