



LABORATORY REPORT NO. MUM/000524/24
CRUDE OIL - DETAILED ASSAY ALL CUTS OVERVIEW

M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24)

Tests	Methods	Units	Whole Crude	Light Ends	Fractions					
		°C		Below 15	C5 140	140 250	250 370	370+	370 550	550+
Initial BP		°C								
Final BP		°C								
Yield	ASTM D 2892 & D5236	% Wt.		0.82	12.72	14.42	22.66	49.98	35.60	13.78
		% Vol.		1.19	14.62	15.26	22.82	46.11	34.32	11.79
Density @ 15° C	ASTM D5002/D4052	kg/L	0.8505	0.5645	0.7350	0.8028	0.8451	0.9105	0.8825	0.9919
Specific Gravity @ 60/60° F	Conversion		0.8509		0.7352	0.8032	0.8455	0.9110	0.8830	0.9925
API Gravity @ 60° F	Calculated	° API	34.8		61.0	44.7	35.9	23.8	28.8	11.1
Composition (Up to C9)	GC	% Wt.		See Page 8						
Aromatics										
Mono	IP 391	% mass				9.80	12.60			
Di		% mass				1.00	5.00			
Tri		% mass				<0.10	0.20			
Poly		% mass				1.00	5.20			
Asphaltene	IP 143	% Wt.	<0.50					-0.50		0.71
Basic Nitrogen	UOP 269	ppm wt				<1	24	690		1900
Benzene	ASTM D5580	% Wt			0.297					
Carbon Residue- Micro	ASTM D4530	% Wt	1.68				<0.10	3.4	<0.10	12.3
Organic Chloride	ASTM D4929 Proc B	ppm wt	<1		<1					
Composition - Light HC	IP 601	%wt & %Vol	See Page 14							
Paraffins	ASTM D6730	Vol %			46.691					
Olefins		Vol %			<0.010					
Naphthene		Vol %				48.414				
Aromatics		Vol %				4.763				
Flash Point (PMCC)	ASTM D93/D 170	°C	<5			51.8	120			
Freezing Point	ASTM D2386	°C				-52				
Hydrogen Sulphide (Liquid Phase)	UOP163	ppm wt			<1					
Kinematic Viscosity @ 20°C	ASTM D445	#								
Kinematic Viscosity @ 40°C		cSt	9.514				4.683			
Kinematic Viscosity @ 50°C		cSt	5.736				3.759			
Kinematic Viscosity @ 70°C		cSt						28.86	12.5	#
Kinematic Viscosity @ 100°C		cSt						11.76	6.6	209.10
Kinematic Viscosity @ 135°C		cSt								58.02
Mercaptan Sulphur	UOP163	ppm wt			<3					
Metals										
Copper	ICPOES	ppm wt	<1					<1	<1	<1
Iron	ICPOES	ppm wt	8					17	48	55
Nickel	ICPOES	ppm wt	3					6	460	21
Zinc	ICPOES	ppm wt	<1					<1	0	<1
Vanadium	ICPOES	ppm wt	<1					<1	0	2
Motor Octane Number	ASTM D2700	Rating			67					
Pour Point	ASTM D97	°C	21				3	+48	48	81
Cold Filter Plugging Point	IP 309	°C				<-30				
Cloud Point	ASTM D2500	°C					4			
Aniline Point	ASTM D611	°C				61.00	80.5			
Aniline Point & API Product	Calculation					6347				
Saybolt	ASTM D156					+30				
Doctor Test	IP 30				Negative					
Copper Strip Corrosion	ASTM D130				1a	1a				
Cetane Index	ASTM D976	Rating				38.7	54.3			
Diesel Index	IP 21	-				63.5	63.6			
Reid Vapour Pressure @37.8°C	ASTM D5191/D323	psi	4.60		4.40					
Research Octane Number	ASTM D2699	Rating			69					
Salt Content	ASTM D3230	lb/1000bbbls	136							
Smoke Point	ASTM D1322	mm				26				
Total Acid Number	ASTM D664	mg KOH/g	0.30				0.15			
Total Nitrogen	ASTM D4629/D5762	ppm wt	708			2.50	59	1380	460	
Total Sulphur	ASTM D4294/D5453	% Wt	0.0608		0.0021	0.0170	0.0493	0.0935	0.0695	0.155
Water Content	ASTM D4006/D6304	% Vol	0.55							
Water Content	ASTM D6304	ppm					95			
Water & Sediments	ASTM D4007	% Vol	0.55							
Mercury	UOP 938	ppb	<1							
Sediment by Extraction	ASTM D473	% Wt					<0.01			
Wax Appearance Temperature	DSC	°C	37							
Wax Disappearance Temperature	DSC	°C	46							
Wax Content	UOP 46*	% Wt	22.5				9.5	40.5	41.5	
Distillation	ASTM D86 / D1160	°C			See Below	See Below	See Below	See Below	See Below	
Initial Boiling Point		°C			39.8	152.1	258.8	343.9	384.1	
5% recovered		°C			69.6	166.5	273.4	401.6	396.6	
10% recovered		°C			74.3	168.4	275.9	410.3	400.4	
20% recovered		°C			80.3	172.2	280.2	418.0	411.8	
30% recovered		°C			85.8	176.2	284.3	428.6	422.7	
40% recovered		°C			90.9	180.8	289.9	442.2	432.4	
50% recovered		°C			95.5	186.2	296.3	453.6	441.8	
60% recovered		°C			99.9	192.7	303.8	469.0	450.8	
70% recovered		°C			104.5	200.6	312.3	496.8	458.8	
80% recovered		°C			110.2	210.1	322.3	547.4	472.3	
90% recovered		°C			118.1	221.5	335.6		494.2	
95% recovered		°C			124.5	230.9	343.6		515.8	
Final Boiling Point		°C			136.8	239.8	355.8			
AET @ 400 °C Kettle Temp:		°C						547.4	538.1	
Recovery		Vol %			98.6	98.4	97.8	80.4	98.6	
Residue		Vol %			0.60	0.80	1.40			
Loss		Vol %			0.30	0.80	0.80			

Note : (#) Not possible due to the nature of sample (*)Withdrawn method



LABORATORY REPORT NO. MUM/000524/24

WHOLE CRUDE PROPERTIES

Sample Descriptions / Label :

M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24)

Tests	Methods	Units	Results
Density @ 15° C	ASTM D5002	kg/L	0.8505
Specific Gravity @ 60/60° F	Conversion		0.8509
API Gravity @ 60° F	Calculated	° API	34.8
Asphaltene	IP 143	% Wt	<0.50
Carbon Residue- Micro	ASTM D4530	% Wt	1.68
Composition (Upto C9)	IP 601	% Wt & %Vol.	See Page 14
Organic Chloride	ASTM D4929 Proc B	ppm wt	<1
Flash Point	IP 170	° C	<-5
Kinematic Viscosity @ 20° C			#
Kinematic Viscosity @ 40° C	ASTM D445	cSt	9.514
Kinematic Viscosity @ 50° C			5.736
Metals			
Copper	ICPOES		<1
Iron	ICPOES	ppm wt	8
Nickel	ICPOES	ppm wt	3
Zinc	ICPOES	ppm wt	<1
Vanadium	ICPOES	ppm wt	<1
Pour Point	ASTM D97	° C	21
Reid Vapour Pressure @ 100° F	ASTM D323	psi	4.6
Salt Content	ASTM D3230	PTB	136
Total Acid Number	ASTM D664	mg KOH/g	0.30
Total Nitrogen	ASTM D5762	ppm wt	708
Total Sulphur	ASTM D4294	% Wt	0.0608
Water Content	ASTM D4006	% Vol	0.55
Water & Sediments	ASTM D4007	% Vol	0.55
Wax Appearance Temperature	DSC	°C	37.00
Wax Disappearance Temperature	DSC	°C	46.00
Wax Content	UOP 46*	% Wt	22.5

Note : (#) Not possible due to the nature of the sample (*) Withdrawn method



LABORATORY REPORT NO. MUM/000524/24

TRUE BOILING POINT DISTILLATION DATA

(ASTM D 2892 & ASTM D 5236)

Sample Descriptions / Label :

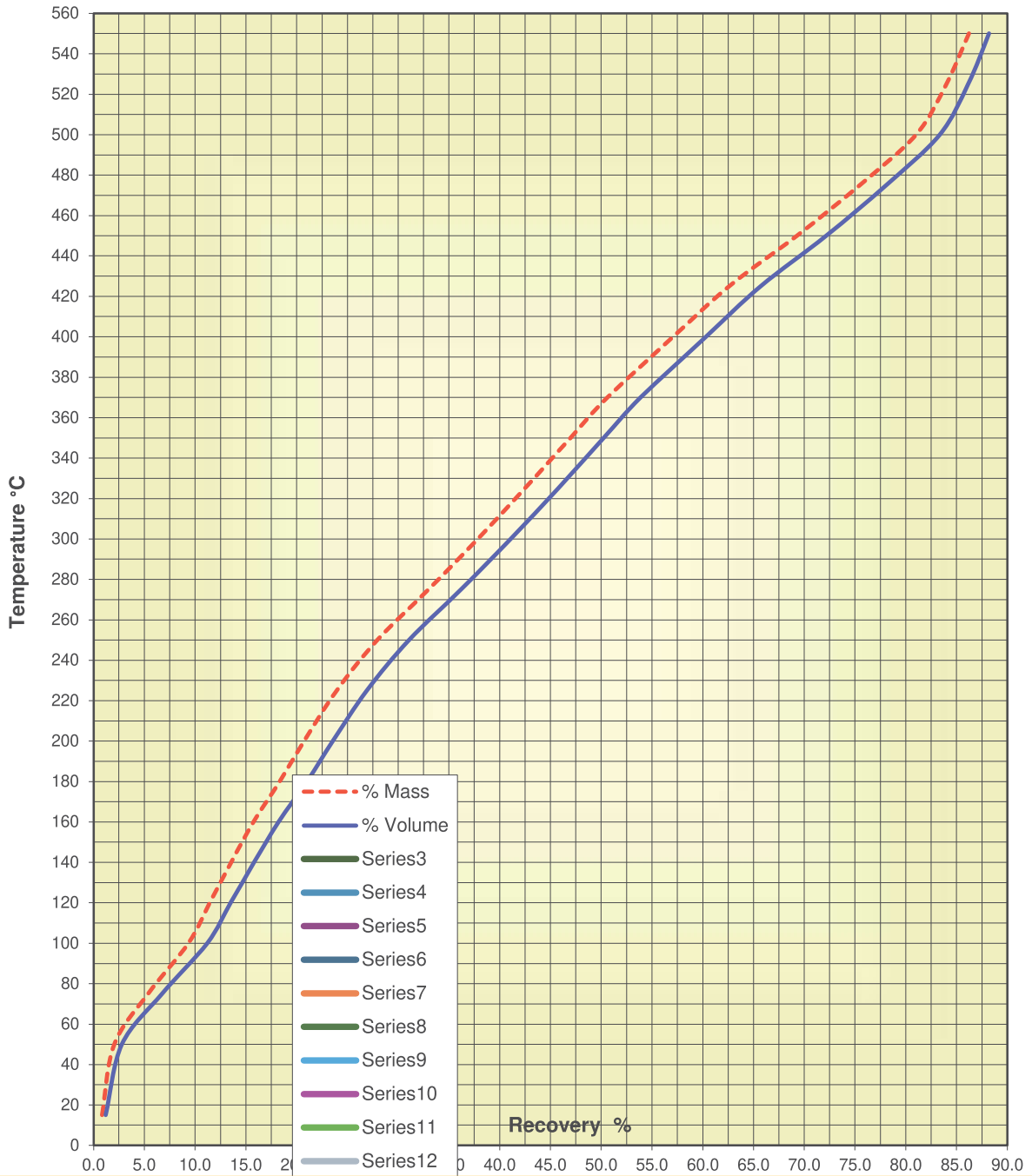
M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24)

Sl. No.	Method	Vapour Temperature °C	% Mass	Cumulative % Mass	% Volume	Cumulative % Volume
1	ASTM D2892	Gas	0.82	0.82	1.19	1.19
2		15 - 50	1.22	2.04	1.60	2.79
3		50 - 75	3.31	5.35	3.93	6.72
4		75 - 100	3.98	9.33	4.46	11.18
5		100 - 120	2.11	11.44	2.33	13.51
6		120 - 140	2.10	13.54	2.30	15.81
7		140 - 160	2.20	15.74	2.40	18.21
8		160 - 180	2.59	18.33	2.80	21.01
9		180 - 200	2.40	20.73	2.55	23.56
10		200 - 225	3.20	23.93	3.35	26.91
11		225 - 250	4.03	27.96	4.16	31.07
12		250 - 275	5.04	33.00	5.13	36.20
13		275 - 300	4.83	37.83	4.88	41.08
14	ASTM D5236	300 - 325	4.64	42.47	4.67	45.75
15		325 - 350	4.48	46.95	4.49	50.24
16		350 - 370	3.67	50.62	3.65	53.89
17		370 - 400	6.46	57.08	6.42	60.31
18		400 - 425	5.50	62.58	5.38	65.69
19		425 - 450	6.69	69.27	6.47	72.16
20		450 - 475	6.18	75.45	5.90	78.06
21		475 - 500	5.57	81.02	5.29	83.35
22		500 - 525	2.98	84.00	2.80	86.15
23		525 - 550	2.22	86.22	2.06	88.21
24		550 + Residue	13.78	100.00	11.79	100.00



TRUE BOILING POINT DISTILLATION CURVE
(ASTM D 2892 & ASTM D 5236)

M-field Crude of KG-DWN 98/2(FPSO Run down Dated Dated 02-01-24





LABORATORY REPORT NO. MUM/000524/24

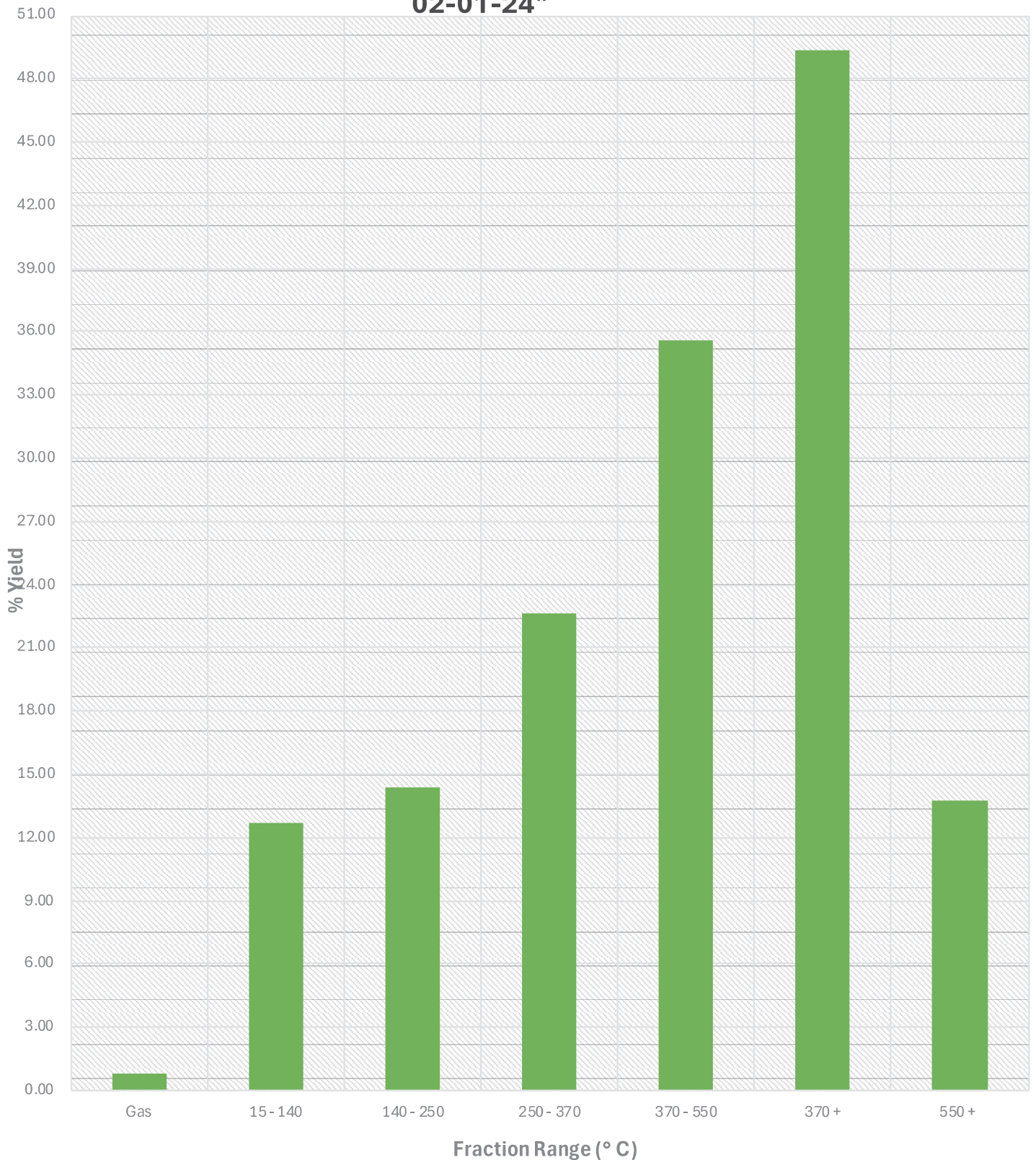
SUMMARY OF PRODUCT / RESIDUE CUT POINTS AND YIELDS

Sample Descriptions: M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24)

Products	Cut Points	Yield	
	(° C)	% Mass	Volume %
Gas	Below 15	0.82	1.19
Naphtha	15 - 140	12.72	14.62
Kerosene	140 - 250	14.42	15.26
Gas Oil	250 - 370	22.66	22.82
Vacuum Gas Oil	370 - 550	35.60	34.32
Residues	370 +	49.38	46.11
	550 +	13.78	11.79

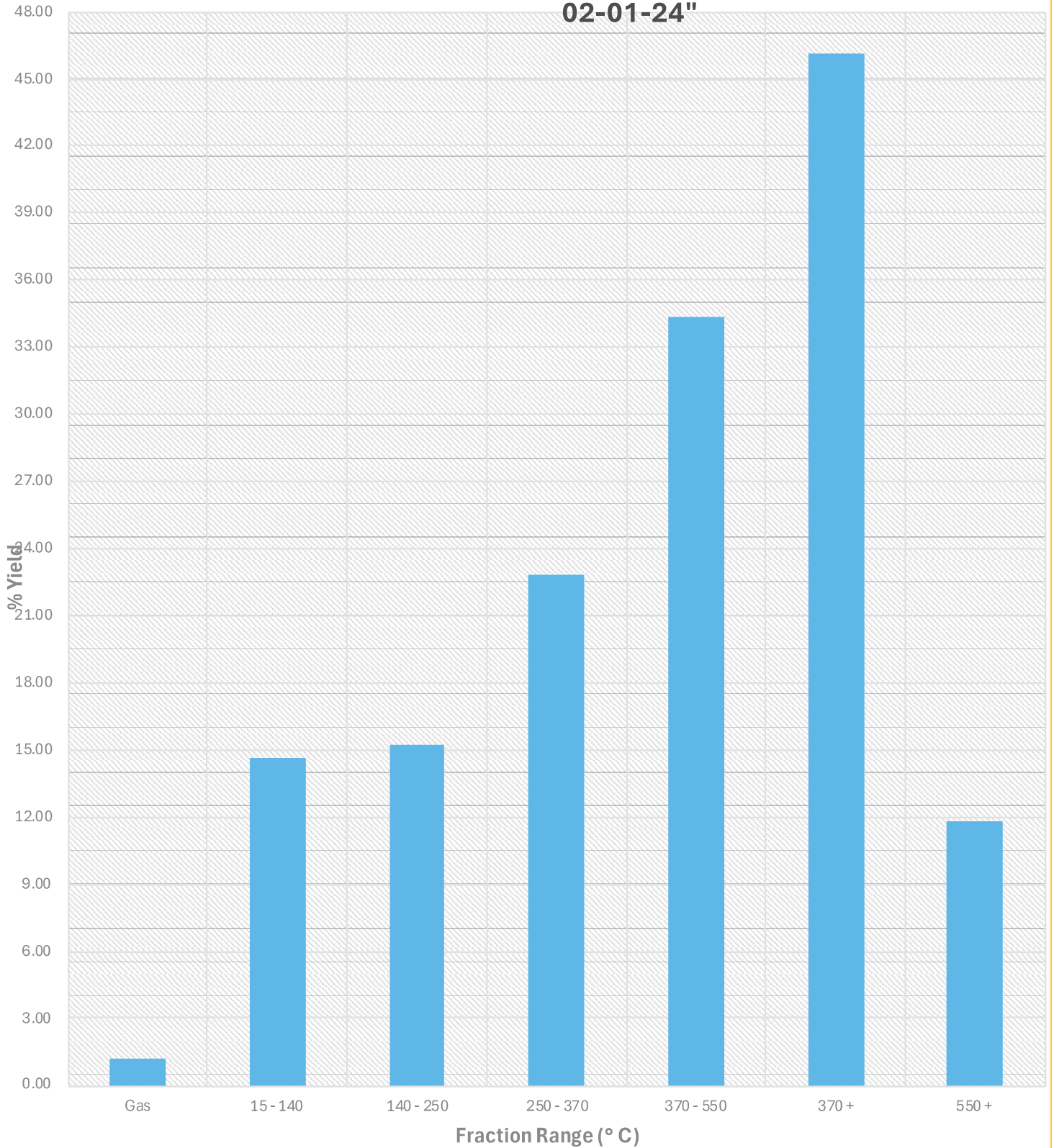


Yield Distribution-Graph (% Mass)
M Field Crude of KG-DWN 98-2 FPSO RUNDOWN Sample DATED
02-01-24"





Yield Distribution-Graph (% Volume)
M Field Crude of KG-DWN98-2 FPSO RUNDOWN Sample DATED
02-01-24"





LABORATORY REPORT NO. MUM/000524/24

SUMMARY OF LIGHT END COMPOSITION

Sample Descriptions : M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24)

Tests	Methods	Units	Results
Yield	ASTM D 2892	% Wt.	0.82
Yield		% Vol.	1.19
Density @ 15°C	GC / Calculated	kg/L	0.5645
Methane	GC	% Wt.	<0.010
Ethane			0.792
Propane			47.771
i-butane			20.557
n-Butane			29.263
i-pentane			1.228
n-Pentane			0.389



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Sample Descriptions:

M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24)

Tests	Methods	Units	Results
Initial BP		°C	15
Final BP		°C	140
Yield	ASTM D2892	% Wt.	12.72
		% Vol.	14.62
Density @ 15°C	ASTM D4052	kg/L	0.7350
Specific Gravity @ 60/60° F	Conversion		0.7352
API Gravity @ 60° F	Calculated	° API	61.0
Benzene	ASTM D5580	% Wt.	0.297
Paraffins	ASTM D6730	% Vol.	46.691
Olefins		% Vol.	<0.010
Naphthene		% Vol.	48.414
Aromatics		% Vol.	4.763
Hydrogen Sulphide (Liquid Phase)	UOP163	ppm wt	<1
Mercaptan Sulphur	UOP 163	ppm wt	<3
Organic Chloride	ASTM D4929B	ppm wt	<1
Motor Octane Number	ASTM D2700	Rating	67
Doctor Test	IP 30		Negative
Copper Strip Corrosion	ASTM D130		1a
Reid Vapour Pressure @ 100° F	ASTM D5191	psi	4.40
Research Octane Number	ASTM D2699	Rating	69
Sulphur	ASTM D5453	% Wt.	0.0021
Distillation			
Initial Boiling Point	ASTM D86	°C	39.8
5% recovered		°C	69.6
10% recovered		°C	74.3
20% recovered		°C	80.3
30% recovered		°C	85.8
40% recovered		°C	90.9
50% recovered		°C	95.5
60% recovered		°C	99.9
70% recovered		°C	104.5
80% recovered		°C	110.2
90% recovered		°C	118.1
95% recovered		°C	124.5
Final Boiling Point		°C	136.8
Recovery		Vol %	98.6
Residue		Vol %	0.50
Loss		Vol %	0.90



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Sample Descriptions:

M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE
DATED 02-01-24)

Tests	Methods	Units	Results
Initial BP		°C	140
Final BP		°C	250
Yield	ASTM D2892	% Wt.	14.42
Yield		% Vol.	15.26
Density @ 15° C	ASTM D4052	kg/L	0.8028
Specific Gravity @ 60/60° F	Conversion		0.8032
API Gravity @ 60° F	Calculated	° API	44.7
Aromatics			
Mono	IP 391	% Wt.	9.8
Di		% Wt.	1.0
Tri		% Wt.	<0.10
Poly		% Wt.	1.0
Basic Nitrogen	UOP 269	ppm wt	<1
Flash Point (PMCC)	ASTM D93	°C	51.8
Freezing Point	ASTM D2386	°C	-52
Cold Filter Plugging Point	IP 309	°C	<-30
Aniline Point	ASTM D611	°C	61.0
Aniline Point & API Product	Calculation		6347
Saybolt Color	ASTM D156		+30
Cetane Index	ASTM D976	Rating	38.7
Diesel Index	IP 21	-	63.5
Copper Strip Corrosion@50 degree C	ASTM D130		1a
Smoke Point	ASTM D1322	mm	26
Total Nitrogen	ASTM D4629	ppm wt	2.5
Total Sulphur	ASTM D5453	% Wt	0.0170
Distillation			
Initial Boiling Point	ASTM D86	°C	152.1
5% recovered		°C	166.5
10% recovered		°C	168.4
20% recovered		°C	172.2
30% recovered		°C	176.2
40% recovered		°C	180.8
50% recovered		°C	186.2
60% recovered		°C	192.7
70% recovered		°C	200.6
80% recovered		°C	210.1
90% recovered		°C	221.5
95% recovered		°C	230.9
Final Boiling Point		°C	239.8
Recovery		Vol %	98.4
Residue		Vol %	0.80
Loss		Vol %	0.80



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Sample Descriptions:

M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE
DATED 02-01-24)

Tests	Methods	Units	Results
Initial BP		°C	250
Final BP		°C	370
Yield	ASTM D2892	% Wt.	22.66
Yield		% Vol.	22.82
Density @ 15° C	ASTM D4052	kg/L	0.8451
Specific Gravity @ 60/60° F	Conversion		0.8455
API Gravity @ 60° F	Calculated	° API	35.9
Aromatics	IP 391		
Mono		% Wt.	12.6
Di		% Wt.	5.0
Tri		% Wt.	0.2
Poly		% Wt.	5.2
Carbon Residue- Micro	ASTM D4530	% Wt	<0.10
Basic Nitrogen	UOP 269	ppm wt	24
Flash Point (PMCC)	ASTM D93	°C	120
Kinematic Viscosity @ 40°C	ASTM D445	cSt	4.683
Kinematic Viscosity @ 50°C	ASTM D445	cSt	3.759
Pour Point	ASTM D97	°C	3
Cloud Point	ASTM D2500	°C	4
Aniline Point	ASTM D611	°C	80.5
Cetane Index	ASTM D976	Rating	54.3
Diesel Index	IP 21	-	63.6
Total Acid Number	ASTM D664	mg KOH/g	0.15
Total Nitrogen	ASTM D5762	ppm wt	59
Total Sulphur	ASTM D4294	% Wt	0.0493
Water Content	ASTM D6304	ppm	95
Sediment by Extraction	ASTM D473	% Wt	<0.01
Wax Content	UOP 46*	% Wt	9.5
Distillation			
Initial Boiling Point	ASTM D86	°C	258.8
5% recovered		°C	273.4
10% recovered		°C	275.9
20% recovered		°C	280.2
30% recovered		°C	284.3
40% recovered		°C	289.9
50% recovered		°C	296.3
60% recovered		°C	303.8
70% recovered		°C	312.3
80% recovered		°C	322.3
90% recovered		°C	335.6
95% recovered		°C	343.6
Final Boiling Point		°C	355.8
Recovery		Vol %	97.8
Residue		Vol %	1.40
Loss		Vol %	0.80

Note: (*) Withdrawn method



LABORATORY REPORT NO. MUM/000524/24

Sample Descriptions:

M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24)

Tests	Methods	Units	Results
Initial BP		°C	370
Final BP		°C	550
Yield	ASTM D5236	% Wt.	35.60
Yield		% Vol.	34.32
Density @ 15° C	ASTM D4052	kg/L	0.8825
Specific Gravity @ 60/60° F	Conversion		0.8830
API Gravity @ 60° F	Calculated	° API	28.8
Carbon Residue- Micro	ASTM D4530	% Wt	<0.10
Kinematic Viscosity @ 70°C	ASTM D445	cSt	12.46
Kinematic Viscosity @ 100°C	ASTM D445	cSt	6.625
Metals			
Copper	ICPOES	ppm wt	<1
Iron	ICPOES	ppm wt	<1
Nickel	ICPOES	ppm wt	<1
Zinc	ICPOES	ppm wt	<1
Vanadium	ICPOES	ppm wt	<1
Pour Point	ASTM D97	°C	48
Total Nitrogen	ASTM D5762	ppm wt	460
Total Sulphur	ASTM D4294	% Wt	0.0695
Wax Content	UOP 46*	% Wt.	41.5
Distillation			
Initial Boiling Point	ASTM D1160	°C	384.1
5% recovered		°C	396.6
10% recovered		°C	400.4
20% recovered		°C	411.8
30% recovered		°C	422.7
40% recovered		°C	432.4
50% recovered		°C	441.8
60% recovered		°C	450.8
70% recovered		°C	458.8
80% recovered		°C	472.3
90% recovered		°C	494.2
95% recovered		°C	515.8
AET @ 400 °C Kettle Temperature		°C	538.1
Recovery @ 400°C Kettle Temp.		Vol %	98.6

Note: (*) Withdrawn method



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Sample Descriptions:

M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24)

Tests	Methods	Units	Results	
Initial BP		°C	370 + Residue	550 + Residue
Final BP		°C		
Yield	ASTM D2892/D5236	% Wt.	49.38	13.78
Yield		% Vol.	46.11	11.79
Density @ 15° C	IP 365	kg/L	0.9105	0.9919
Specific Gravity @ 60/60° F	Conversion		0.9110	0.9925
API Gravity @ 60° F	Calculated	° API	23.8	11.1
Asphaltene	IP 143	% Wt.	<0.50	0.71
Carbon Residue- Micro	ASTM D4530	% Wt.	3.4	12.3
Kinematic Viscosity @ 70°C	ASTM D445	cSt	28.86	#
Kinematic Viscosity @ 100°C			11.76	209.1
Kinematic Viscosity @ 135°C				58.02
Metals				
Copper	ICPOES	ppm wt	<1	<1
Iron			17	55
Nickel			6	21
Zinc			<1	<1
Vanadium			<1	2
Pour Point	ASTM D97	°C	+48	81
Aniline Point	ASTM D611	°C	84.0	
Total Sulphur	ASTM D4294	% Wt.	0.0935	0.155
Basic Nitrogen	UOP 269	ppm wt	690	1900
Total Nitrogen	ASTM D5762	ppm wt	1380	3800
Wax Content	UOP 46*	% Wt.	40.5	
Initial boiling point	ASTM D1160	°C	343.9	
AET @ 5% Recovery		°C	401.6	
AET @ 10% Recovery		°C	410.3	
AET @ 20% Recovery		°C	418.0	
AET @ 30% Recovery		°C	428.6	
AET @ 40% Recovery		°C	442.2	
AET @ 50% Recovery		°C	453.6	
AET @ 60% Recovery		°C	469.0	
AET @ 70% Recovery		°C	496.8	
AET @ 80% Recovery		°C	547.4	
AET @ 400 °C Kettle Temperature		°C	547.4	
Recovery @ 400°C Kettle Temp.		Vol %	80.0	

Note: (*) Withdrawn method



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M- Field CRUDE of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED
02-01-24)

Sample Descriptions / Label :

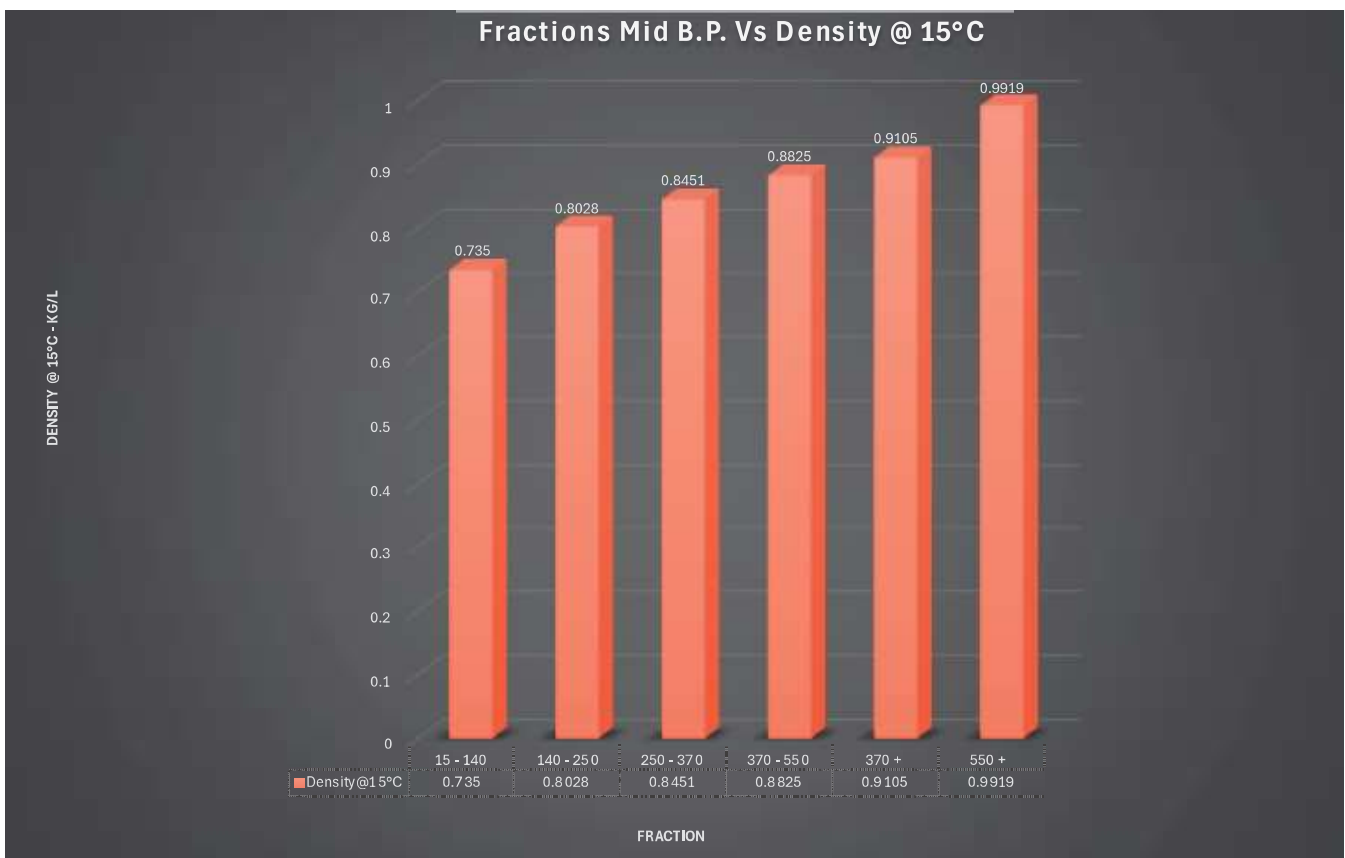
COMPOSITION UP TO C9

Component	Mass %	Volume %	Component	Mass %	Volume %
propane	0.172	0.343	unknown	0.012	0.017
i-butane	0.178	0.319	1c,2c,3-trimethylcyclopentane	0.252	0.323
n-butane	0.484	0.835	n-octane	0.481	0.684
i-pentane	0.504	0.813	1c,4-dimethylcyclohexane	0.029	0.036
n-pentane	0.539	0.861	unknown	0.111	0.159
2,2-dimethylbutane	0.011	0.017	2,4,4-trimethylhexane	0.024	0.033
cyclopentane	0.128	0.172	unknown	0.013	0.019
2,3-dimethylbutane	0.067	0.101	N3	0.019	0.025
2-methylpentane	0.356	0.545	2,2-dimethylheptane	0.017	0.024
3-methylpentane	0.215	0.323	N4	0.067	0.085
n-hexane	0.474	0.719	ethylcyclohexane	0.047	0.060
methylcyclopentane	0.611	0.817	2,4-dimethylheptane	0.448	0.627
2,4-dimethylpentane	0.026	0.038	4,4-dimethylheptane	0.146	0.204
benzene	0.034	0.039	2,5-dimethylheptane	0.030	0.042
cyclohexane	1.063	1.365	3,3-dimethylheptane	0.026	0.036
2-methylhexane	0.151	0.223	3,5-dimethylheptane	0.024	0.033
2,3-dimethylpentane	0.083	0.119	2,6-dimethylheptane	0.031	0.043
1,1-dimethylcyclopentane	0.053	0.070	1,1,3-trimethylcyclohexane	0.022	0.028
3-methylhexane	0.166	0.242	N10	0.021	0.027
1c,3-dimethylcyclopentane	0.166	0.223	ethylbenzene	0.105	0.122
1t,3-dimethylcyclopentane	0.159	0.212	1c,2t,4t-trimethylcyclohexane	0.087	0.112
3-ethylpentane	0.023	0.033	unknown	0.011	0.016
1t,2-dimethylcyclopentane	0.275	0.366	1,3-dimethylbenzene	0.126	0.146
n-heptane	0.490	0.716	1,4-dimethylbenzene	0.157	0.182
unknown	0.038	0.055	I7	0.065	0.089
methylcyclohexane	1.501	1.950	4-methyloctane	0.047	0.066
2,2-dimethylhexane	0.074	0.106	I4	0.072	0.099
ethylcyclopentane	0.140	0.182	1c,2t,3-trimethylcyclohexane	0.019	0.025
unknown	0.028	0.039	3-ethylheptane	0.017	0.023
1c,2t,4-trimethylcyclopentane	0.105	0.138	3-methyloctane	0.072	0.100
1t,2c,3-trimethylcyclopentane	0.135	0.175	unknown	0.027	0.038
toluene	0.436	0.503	unknown	0.013	0.018
2,3-dimethylhexane	0.026	0.037	unknown	0.012	0.018
2-methyl-3-ethylpentane	0.060	0.084	unknown	0.019	0.027
2-methylheptane	0.232	0.332	1,2-dimethylbenzene	0.059	0.067
4-methylheptane	0.039	0.055	unknown	0.014	0.021
unknown	0.016	0.023	unknown	0.012	0.017
3-methylheptane	0.081	0.114	I6	0.060	0.082
1t,4-dimethylcyclohexane	0.015	0.020	N18	0.143	0.183
1c,2t,3-trimethylcyclopentane	0.418	0.542	I8	0.086	0.117
unknown	0.034	0.049	N20	0.0104	0.0133
1,1-dimethylcyclohexane	0.138	0.177	N21	0.0124	0.0159
3c-ethylmethylcyclopentane	0.042	0.055	N22	0.0186	0.0238
3t-ethylmethylcyclopentane	0.062	0.080	unknown	0.0148	0.0212
2t-ethylmethylcyclopentane	0.056	0.073	n-nonane	0.4802	0.6691
1,1-methylethylcyclopentane	0.144	0.184			



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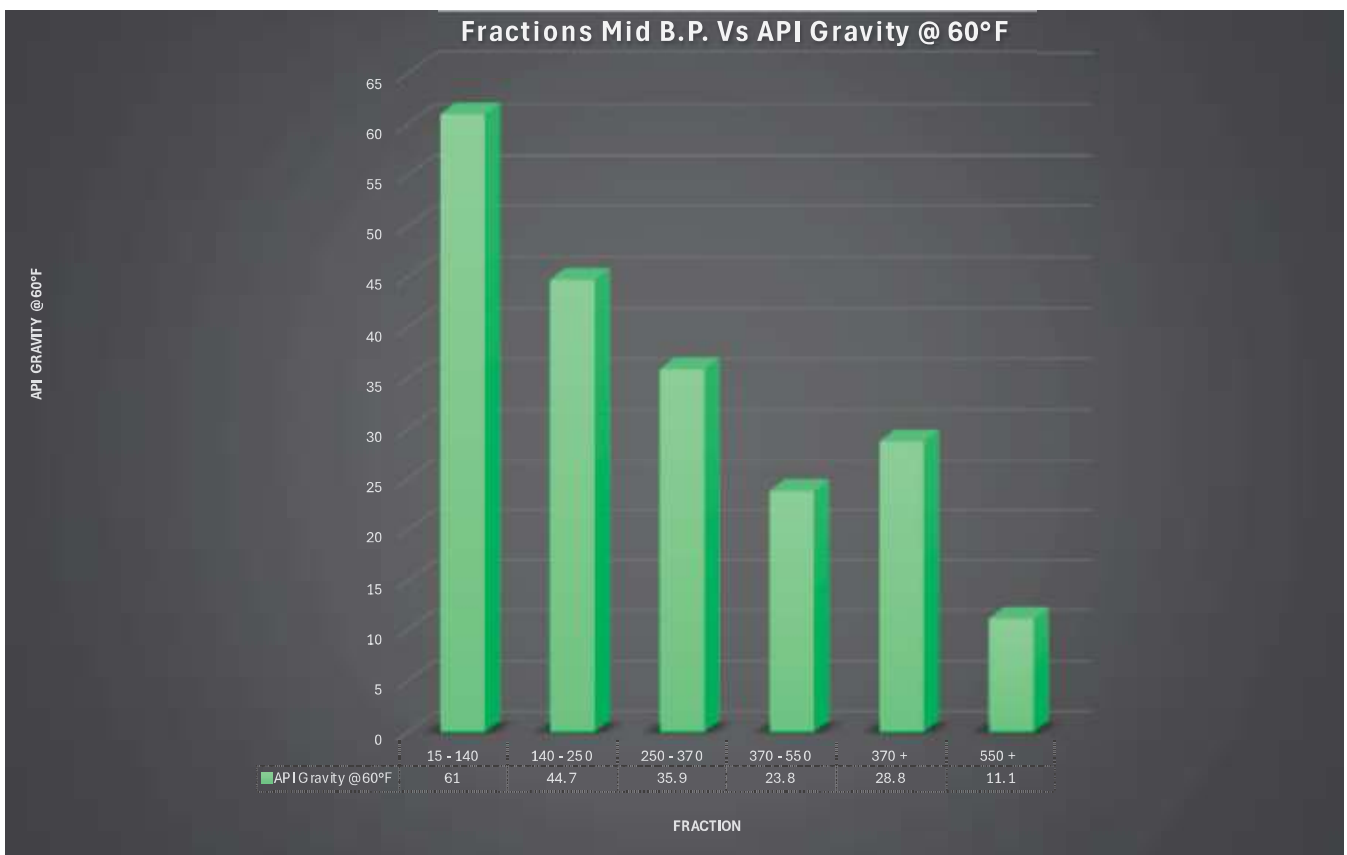
M- field Crude of KG-DWN 98/2 (FPSO RUNDOWN DATED 02-01-24"





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M -Field Crude of KG-DWN 98/2 (FPSO RUNDOWN DATED 02-01-24"





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M-Field crude of KG-DWN 98/2 (FPSO RUNDOWN SAMPLE DATED 02-01-24"

