

3.3 FMT pressures

Seven FMT-run were performed in the well (table 3.3.1 - 3.3.8). It confirmed the presence of hydrocarbons, (oil and gas) in the sample taken at 1576 m RKB and traces of oil in the sample from 1588.8 m RKB. Pressure measurements at 115 different depths were performed.

Twenty-six measurements gave a formation pressure, the others were tight or supercharged.

Due to tight formation, no FMT pressure points were obtained below 2156,5m RKB.

In the FMT samples taken at 1572.7 m RKB, the 10 liter chamber contained 0.106 m³ of gas with an initial pressure of 1200 psi. 8274 kPa. The 4 litre chamber contained 183 litre of gas, 0.5ml of oil and 1380 ml of water/mudfiltrate. The density of the gas was measured by Geco to 0.637 (air=1).

Samples taken at 1576 m RKB the 10 litre chamber contained 2,5 litre of oil with a density of 0.81 g/cm³, 0.190 m³ of gas and the total liquid(mudfiltrate/oil) volume was 9.3 litre. The 4 litre chamber contained 63.5 litre of gas, 225 ml of oil and the water volume was not possible to measure due to water leakage past the piston when the Geco transfered from FMT bottle to a PVT bottle. The gas gravity was measured to 0.790 (air=1).

The oil density of stabilized oil was measured to 0.817 g/cm³ at 15 °C.

One 10 litre sample was taken at 1588.8 m RKB contained 2.5 litre of mudfiltrate. The sampling aborted after 4 hrs and 17 min.

All pressure measurements in the different run are summarized on the next pages and a graphical presentation with the gradient interpretation is presented in figure 3.3.1 and figure 3.3.1.

WELL NO.: 7128/4-1

LOG RUN NO.: 3A, 12 1/4" SECTION

FMT-RESULTS						
Test No.	Depth m MD	Depth m TVD	Hydrostat Press bef. kPa	HP-Form. Pressure KPa	SG-Form. Pressure kPa	Remarks
1	1.570,4	1.569,6	18.537	16.191	1.051	Fair
2	1.572	1.571	18.550	16.191	1.050	Fair
3	1.573,7	1.572,8	18.570	16.194	1.049	Fair/Good
4	1.572,2	1.571,3	18.560	18.400	-	Lost seal
5	1.573,7	1.572,8	18.572	16.194	-	Sample, not able to open valve.
6	1.573,7	1.572,8	18.575	16.194	-	No seal
7	1.571,5	1.570,7	18.550	16.192	1.050	Fair
8	1.574,4	1.573,5	18.584	16.196	1.049	Fair
9	1.577,1	1.576,2	18.620	16.198	1.047	Tight
10	1.579,6	1.578,7	18.645	16.880	1.089	Plugged?
11	1.581,8	1.580,9	18.665	-	-	No seal
12	1.581,5	1.580,6	18.665	-	-	No seal
13	1.582	1.581,1	18.670	16.630	1.072	Tight
14	1.584,7	1.583,8	18.708	-	-	Tight, aborted
15	1.584,5	1.583,6	18.703	16.307	1.049	Tight
16	1.586,5	1.585,6	18.730	16.357	1.051	Tight
17	1.589	1.588,1	18.765	-	-	Tight, aborted
18	1.589,5	1.588,6	18.765	-	-	No seal
19	1.588	1.587	18.750	16.525	1.061	Tight
20	1.587,6	1.586,7	18.745	-	-	Tight, aborted

Table 3.3.1

WELL NO.: 7128/4-1

LOG RUN NO.: 3A, 12 1/4" SECTION

FMT-RESULTS						
Test No.	Depth m MD	Depth m TVD	Hydrostat Press bef. kPa	HP-Form. Pressure KPa	SG-Form. Pressure kPa	Remarks
21	1.593,2	1.592,3	18.810	-	-	No seal
22	1.593	1.592,1	18.810	-	-	No seal
23	1.593,5	1.592,6	18.815	-	-	No seal
24	1.579,6	1.578,7	18.650	16.202	1.046	Fair
25	1.573,7	1.572,8	-	-	-	Sample, neg after surface check.
Log run no.: 3B, 12 1/4" section						
1	1.572,7			16.158	1.047	Segregated sample
Log run no.: 3C, 12 1/4" section						
1	1576.0			16.183	1.047	Seg. sample

Table 3.3.2

WELL NO.: 7128/4-1

LOG RUN NO.: 4D, 12 1/4" SECTION

FMT-RESULTS						
Test No.	Depth m MD	Depth m TVD	Hydrostat Press bef. kPa	HP-Form. Pressure KPa	SG-Form. Pressure kPa	Remarks
1	1.584,5	-	18.690	-	-	Tight, abandon test
2	1.586,8	-	18.820	16.330	1.049	Good
3	1.588,8	-	18.850	16.415	1.053	Sample closed after 4h 17 min.
4	1.586,2	-	18.810	16.322	1.049	No seal

Table 3.3.3

WELL NO.: 7128/4-1

LOG RUN NO.: 4E, 12 1/4" SECTION

FMT-RESULTS						
Test No.	Depth m MD	Depth m TVD	Hydrostat Press bef. kPa	HP-Form. Pressure KPa	SG-Form. Pressure kPa	Remarks
1	1.652,5	1.651,5	19.600	-	-	Tight, abandon
2	1.652	1.651	19.592	-	-	a/a
3	1.651,5	1.650,5	19.583	-	-	a/a
4	1650.0	1.649	19.567	-	-	No seal
5	1.649,5	1.648,5	19.561	-	-	No seal
6	1.648,2	1.647,2	19.549	-	-	a/a
7	1.647	1.646	19.532	-	-	a/a
8	1.646,5	1,645,5	19.525	-	-	a/a
9	1.645	1.644	19.510	-	-	No seal
10	1.644	1.643	19.500	-	-	a/a
11	1.643	1.642	19.485	-	-	a/a
12	1.642	1.640,9	19.475	-	-	a/a
13	1.593,6	1.592,7	18.902	-	-	a/a
14	1.603,7	1.602,8	19.020	-	-	a/a
15	1.619	1.618,1	19.205	-	-	a/a
16	1.659	1.658	19.672	-	-	Tight, abandon
17	1.664,2	1.663,1	19.732	-	-	a/a
18	1.667,4	1.666,3	19.775	-	-	a/a
19	1.666,9	1.665,8	19.769	-	-	a/a
20	1.673,3	1.672,2	19.847	-	-	a/a

Table 3.3.4

WELL NO.: 7128/4-1

LOG RUN NO.: 4E, 12 1/4" SECTION

FMT-RESULTS						
Test No.	Depth m MD	Depth m TVD	Hydrostat Press bef. kPa	HP-Form. Pressure KPa	SG-Form. Pressure kPa	Remarks
21	1.678,5	1.677,4	19.900	-	-	No seal
22	1.681,3	1.680,2	19.935	-	-	a/a
23	1.815	1.813,7	21.513	18.893	1.061	Fair
24	1.848	1.846,6	21.906	19.207	1.060	Fair
25	1.870,5	1.869,1	22.170	19.500	1.063	Fair/Good
26	1.913,2	1.911,7	22.667	19.926	1.062	Fair
27	1.942	1.940,5	23.015	20.262	1.063	Fair/Good
28	1.956,3	1.954,8	2.385	-	-	Tight, abandon
29	1.979,5	1.977,9	23.460	20.714	1.067	Fair
30	1.991	1.989,4	23.596	-	-	No seal
31	1.992	1.990,4	23.609	-	-	a/a
32	1.993	1.991,4	23.619	-	-	a/a
33	1.994	1.992,4	23.631	-	-	a/a
34	1.995	1.993,4	23.645	-	-	a/a
35	1.996	1.994,4	23.655	-	-	a/a
36	2.041,8	2.040,1	24.198	-	-	a/a
37	2.043	2.041,3	24.609	21.885	1.09	Fair
38	2.077	2.075,3	24.799	21.942	1.077	Fair/Good
39	2.092,6	2.090,9	25.370	22.012	1.072	Good
40	2.141	2.140,2	25.370	22.865	1.089	Good

Table 3.3.5

WELL NO.: 7128/4-1

LOG RUN NO.: 4E, 12 1/4" SECTION

FMT-RESULTS						
Test No.	Depth m MD	Depth m TVD	Hydrostat Press bef. kPa	HP-Form. Pressure KPa	SG-Form. Pressure kPa	Remarks
41	2.156,5	2.154,7	25.555	22.834	1.079	Good.
42	2.351,3	2.349,8	27.865	-	-	No seal
43	2.359,6	2.357,7	27.960	-	-	No seal
44	2.365,2	2.363,3	28.025	27.326	-	Supercharge
45	2.400	2.398,1	28.430	-	-	No seal
46	2.404,2	2.402,3	28.485	-	-	a/a
47	2.408	2.406,1	28.528	-	-	a/a
48	2.411	2.409,1	28.568	-	-	a/a
49	2.416	2.414,1	28.625	-	-	a/a
50	2.420	2.418,1	28.670	-	-	a/a
51	2.424,3	2.422,4	28.728	-	-	a/a
52	2.430	2.428,1	28.798	-	-	a/a
53	2.444	2.442	28.960	-	-	a/a
54	2.447	2.445,1	28.995	-	-	a/a
				-	-	

Table 3.3.6.

WELL NO.: 7128/4-1

LOG RUN NO.: 4F, 12 1/4" SECTION

FMT-RESULTS						
Test No.	Depth in MD	Depth in TVD	Hydrostat Press bef. kPa	HP-Form. Pressure KPa	SG-Form. Pressure kPa	Remarks
1	1.593,6	1.592,7	18.910	-	-	No seal
2	1.594	1.593,1	18.910	-	-	No seal
3	1.603,7	1.602,8	19.015	-	-	No seal
4	1.602,5	1.601,6	19.000	-	-	No seal
5	1.619	1.618,1	19.193	-	-	Tight abandon test.
6	1.643	1.642	19.477	-	-	No seal
7	1.646	1.645	19.508	-	-	a/a
8	1.648	1.647	19.530	-	-	a/a
9	1.650	1.649	19.555	-	-	a/a
10	1.679,1	1.678	19.900	-	-	a/a
11	1.682,4	1.681,3	19.944	-	-	a/a
12	1.991,8	1.990,2	23.595	-	-	a/a
13	2.351,3	2.349,8	27.860	-	-	Tight abandon test.
14	2.359,6	2.357,7	27.964	-	-	No seal
15	2.400	2.398,1	28.435	-	-	a/a
16	2.411	2.409,1	28.573	-	-	a/a
17	2.416	2.414,1	28.630	-	-	Tight abandon test.
18	2.420	2.418,1	28.675	-	-	a/a

Table 3.3.7

WELL NO.: 7128/4-1

LOG RUN NO.: 4G, 12 1/4" SECTION

FMT-RESULTS						
Test No.	Depth in MD	Depth in TVD	Hydrostat Press bef. kPa	HP-Form. Pressure Kpa	SG-Form. Pressure kPa	Remarks
1	1.657,5		19.624	-	-	Tight, abandon test.
2	1.658		19.630	-	-	No seal
3	1.657		19.616	-	-	Tight, abandon test.
4	1.660,2		19.646	-	-	Tight, abandon test.
5	1.664,2		19.697	-	-	No seal
6	1.665,7		19.714	-	-	No seal
7	1.667,5		19.735	-	-	No seal
8	1.670,2		19.768	-	-	No seal
9	1.676,2		19.840	-	-	No seal
10	1.679,5		19.878	-	-	Tight. abandon test.
11	1.682,5		19.913	-	-	Tight. abandon test.
12	1.685,2		19.945	-	-	No seal

Table 3.3.8

3.4 Well Testing

Two drill stem test were performed Test no. 1
(1A+1B) was performed in the cherty limestone interval between 1592 -
1610m RKB. No initial flow was recorded. After HCl stimulation the well
produced 320000 Sm³/d of gas, 17 m³/d of oil and 70 m³/d of water on a 72
mm choke. The density of oil is measured to
0.793 g/cm³ at 15° C.

The HCl stimulation may have effected the cement, and the producing interval
was probably the porous spiculite between 1569m - 1590m RKB.

Test no. 2 was perforated in the porous spiculite interval between 1577 - 1586
m RKB. The test produced 215000 m³/d of gas, 15 m³/d of oil and 85 m³/d of
water with a 25.4mm choke. The oil density was measured to 0.798 g/cm³ at
15.0° C.

TOTAL MATERIAL COST AND CONSUMPTION

OPERATOR: STATOIL

WELL: 7128/4-1

Product	Unit size	Unit price NOK	36" sect.	Cost NOK	26" sect.	Cost NOK	17 1/2" sect.	Cost NOK	12 1/4" sect.	Cost NOK	8 1/2" sect.	Cost NOK	TEST, P & A	Cost NOK	Total consumed	Total cost NOK
Barite	M.T	825,00	53	43 725,00	85	70 125,00	149	122 925,00	133	109 725,00	85	70 125,00	35	28 875,00	540	445 500,00
Bentonite	M.T.	2 240,00	6	13 440,00	42	94 080,00	16	35 840,00	1	2 240,00	3	6 720,00			68	152 320,00
Celcol LV	kg	28,00					11925	333 900,00	9050	253 400,00	2650	74 200,00	625	17 500,00	24250	679 000,00
Celcol Reg	kg	28,00					3475	97 300,00	2775	77 700,00	1400	39 200,00	375	10 500,00	8025	224 700,00
Gypsum	kg	1,62					13675	22 477,50	11000	17 820,00	950	1 539,00			25825	41 836,50
Mica Fine	kg	3,92							800	3 136,00	1925	7 546,00	225	882,00	2950	11 564,00
Mica Coarse	kg	3,92							500	1 960,00	750	2 940,00	125	490,00	1375	5 390,00
CMC EHV	kg	14,56	775	11 284,00	2600	37 856,00	125	1 820,00							3500	50 960,00
Lime	kg	2,30	20	46,00	130	299,00	190	437,00	1260	2 898,00	25	57,50	35	80,50	1660	3 818,00
Ancocide	kg	16,22					850	13 787,00	2250	36 495,00	150	2 433,00	75	1 216,50	3325	53 931,50
Ironite Sponge	kg	24,81					635	15 754,35							635	15 754,35
Nutplug Fine	kg	3,75							800	3 000,00	150	562,50			950	3 562,50
Nutplug Coarse	kg	3,75							500	1 875,00	200	750,00			700	2 625,00
NaCl brine	m3	450,00											248	111 600,00	248	111 600,00
Caustic soda	kg	5,50											225	1 237,50	225	1 237,50
Sodium sulphite	kg	8,28											175	1 449,00	175	1 449,00
Soda ash	kg	2,31	25	57,75	175	404,25	25	57,75	425	981,75	350	808,50			1000	2 310,00
Bicarbonate	kg	2,31					2100	4 851,00	725	1 674,75	475	1 097,25			3300	7 623,00
Citric Acid	kg	13,00					2000	26 000,00	2050	26 650,00	725	9 425,00			4775	62 075,00
NaCl	kg	1,45											23000	33 350,00	23000	33 350,00
Defoamer	kg	15,55					40	622,00			20	311,00			60	933,00
Total cost	NOK			68 552,75		202 764,25		675 771,60		539 555,50		217 714,75		207 180,50		1 911 539,35
Hole drilled	m			63		313		755		941		64		N/A		2134
Cost per metre	NOK			1 088,14		647,81		895,06		573,39		3 401,79		N/A		894,92
Total days				2		5		9		27		6		20		61
Cost per day	NOK			34 276,38		40 552,85		75 085,73		19 983,54		36 285,79		10 359,03		27 703,41
Mud mixed	m3			185		786		1 425		779		444		563		418
Cost per m3	NOK			370,56		257,97		474,23		692,63		490,35		367,99		457,0

MUD VOLUME DISTRIBUTION SUMMARY

WELL: 7128/4-1

AREA: BARENTS SEA

RIG: ROSS RIG

Hole size	Hole From-to	Hole Length	Mud/brine Built	Dumped	Lost to Formation	Lost on surface equipment	Mud left between csg/csg plus left in hole	cuttings volume drilled	Mud transf. to next section	Mud type used for interval
inch	m	m	m3	m3	m3	m3	m3	m3	m3	
36	394-457	63	185	135				41,37	50	BENTONITE/CMC EHV
26	457-770	313	786	781				107,20	55	BENTONITE/CMC EHV
17 1/2	770-1525	755	1425	516		489	85	117,18	390	GYP/PAC
12 1/4	1525-2466	941	779	306	70	378	35	71,52	380	GYP/PAC
8 1/2	2466-2530	64	444	177	117	145		2,34	385	GYP/PAC
TEST, P & A	-	-	563	657	31	208	52	-	0	GYP/PAC & NaCl BRINE
TOTALS										
Start volume:			0	m3				Total mud/Brine left/lost downhole:	390	m3
Mud/Brine built:			4182	m3				Total mud/Brine to sea:	3792	m3
Mud/Brine dumped:			2572	m3				Total cuttings volume drilled:	339,61	m3
Mud/Brine lost to formation:			218	m3						
Mud/Brine lost over solids control equipment:			1220	m3						
Mud/Brine left between csg/csg plus left in hole:			172	m3						
Final volume:			0	m3						

COMMENTS: 36" SECTION: Returns to seabed.
 26" SECTION: Returns to seabed.
 17 1/2" SECTION: 85 m3 left behind casing.
 12 1/4" SECTION: 35 m3 left behind casing.
 TEST, P & A SECTION: 31 m3 lost downhole is NaCl brine.
 Volume built is 480 m3 NaCl brine and 83 m3 Gyp/Pac mud.
 Volume left in hole is 1 m3 NaCl brine and 51 m3 Gyp/Pac mud.



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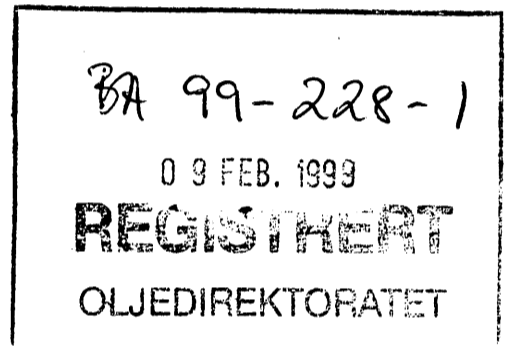
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Title:

**ORGANIC GEOCHEMICAL ANALYSIS OF VARIOUS
BARENTS SEA OILS**

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SUMMARY & INTRODUCTION

Client name	Saga Petroleum A.S.A.
Well names	7119/12-3 7120/1-2 7120/2-1 7120/2-2 7120/6-1 7120/7-1 7120/7-2 7120/8-1 7120/8-2 7120/9-1 7120/12-2 7121/4-1 7121/4-2 7121/5-1 7121/5-2 7121/7-1 7121/7-2 7122/6-1 7124/3-1 7125/1-1 7128/4-1
Location	Barents Sea
Dates of receipt	3/7/98
Dates of analysis	7/7/98 - 1/10/98
Sample type	Oils
RL job no	97023
Client ref. nos.	K-FK-94-052 9 000 000 784

Thirtyone crude oils were received from various Barents Sea wells.

The objective of this report is to present analytical data produced from the samples documented above. All selection of analysis was carried out by Saga's personnel.

The table on page 4 of this report fully document the analysis carried out on each sample.

EXPERIMENTAL PROCEDURES

Unless otherwise stated, analysis was carried out following 'the Norwegian Industry Guide to Organic Geochemical Analysis, November 1992'. A detailed table documenting the methodologies adopted can be found overleaf.

EXPERIMENTAL PROCEDURES (Table 1)

PREPARATION

The oils supplied were very light in nature, therefore it was assumed that they had little or no asphaltene content. Samples were all small in volume (all less than 2ml), consequently the oils were topped prior to analysis by Robertson's in house method OLS 026. The samples were gently warmed on a hotplate for one hour (The NPD methodology was not possible due to small sample volume). All oils were deasphalted following the NPD methodology, but this was carried out nonquantitatively.

The resultant topped and deasphalted oils were then analysed as follows:-

ANALYSIS	INSTRUMENT	METHOD	TEMPERATURE PROGRAM	COLUMNS
Liquid Chromatography separation	Kontron HPLC	NPD method		Lobar Lichroprep Si60
Whole Oil GC	HP5890	NPD method	-10C, 10C/min to 300C, 300C 20 min.	CP SIL-5 (50m)
Gasoline GC	HP5890	NPD method	-10C, 6C/min to 300C, 300C 20 min.	CP SIL-5 (50m)
Alkane GC	HP5890 (on column)	NPD method	50C 3min, 5C/min to 300C, 300C 20 min.	CP SIL-5 (30m)
Aromatic GC	AI 92	NPD method	80C 1min, 1C/min to 103C, 4C/min to 240C, 10C/min to 300C 20 min	CP SIL-8 (30m)

Robertson Laboratories has been UKAS accredited for the majority of its geochemical services since 1991. UKAS, an organisation established by the UK government, has reciprocal agreements with Norske Veritas. UKAS accreditation is specifically designed for laboratory testing and is broadly based on ISO 9001. Robertson Laboratories were audited by Saga (Audit no. SAGA-93-110) and its geochemical methods were found to be satisfactory.

ANALYTICAL PROGRAM (Table 2)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	MPLC	Gasoline GC	Whole Oil GC	Saturate GC	Aromatic GC
						/	/	/	/	/
7119/12-3	NOR	98023-1	DST1A	DST1A	Oil	/	/	/	/	/
7120/1-2	NOR	98023-2	DST3A	DST3A	Oil	/	/	/	/	/
7120/1-2	NOR	98023-3	DST3B	DST3B	Oil	/	/	/	/	/
7120/1-2	NOR	98023-4	RFT	RFT	Oil	/	/	/	/	/
7120/2-1	NOR	98023-5	PT1	PT1	Oil	/	/	/	/	/
7120/2-2	NOR	98023-6	RFT	RFT	Oil	/	/	/	/	/
7120/6-1	NOR	98023-7	DST2	DST2	Oil	/	/	/	/	/
7120/6-1	NOR	98023-8	DST4	DST4	Oil	/	/	/	/	/
7120/7-1	NOR	98023-9	DST2	DST2	Oil	/	/	/	/	/
7120/7-2	NOR	98023-10	DST1	DST1	Oil	/	/	/	/	/
7120/8-1	NOR	98023-11	DST1	DST1	Oil	/	/	/	/	/
7120/8-1	NOR	98023-12	DST2	DST2	Oil	/	/	/	/	/
7120/8-1	NOR	98023-13	DST3	DST3	Oil	/	/	/	/	/
7120/8-2	NOR	98023-14	DST1	DST1	Oil	/	/	/	/	/
7120/9-1	NOR	98023-15	DST2A	DST2A	Oil	/	/	/	/	/
7120/12-2	NOR	98023-16	DST2	DST2	Oil	/	/	/	/	/
7121/4-1	NOR	98023-17	DST2	DST2	Oil	/	/	/	/	/
7121/4-1	NOR	98023-18	DST3	DST3	Oil	/	/	/	/	/
7121/4-1	NOR	98023-19	DST4	DST4	Oil	/	/	/	/	/
7121/4-2	NOR	98023-20	DST1	DST1	Oil	/	/	/	/	/
7121/5-1	NOR	98023-21	DST1	DST1	Oil	/	/	/	/	/
7121/5-2	NOR	98023-22	FMT3	FMT3	Oil	/	/	/	/	/
7121/7-1	NOR	98023-23	DST2	DST2	Oil	/	/	/	/	/
7121/7-2	NOR	98023-24	DST1	DST1	Oil	/	/	/	/	/
7122/6-1	NOR	98023-25	DST2	DST2	Oil	/	/	/	/	/
7122/6-1	NOR	98023-26	RFT?	RFT?	Oil	/	/	/	/	/
7124/3-1	NOR	98023-27	RFT3B	RFT3B	Oil	/	/	/	/	/
7125/1-1	NOR	98023-28	RFT?	RFT?	Oil	/	/	/	/	/
7128/4-1	NOR	98023-29	DST1.1-1.2	DST1.1-1.2	Oil	/	/	/	/	/
7128/4-1	NOR	98023-30	DST1-1.1	DST1-1.1	Oil	/	/	/	/	/
7128/4-1	NOR	98023-31	DST2	DST2	Oil	/	/	/	/	/

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Liquid Chromatography Data (Table 3)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	SAT mg/g	AROM mg/g	POLAR mg/g
7119/12-3	NOR	98023-1	DST1A	DST1A	Oil	957.4	39.1	3.5
7120/1-2	NOR	98023-2	DST3A	DST3A	Oil	687.8	229.7	82.5
7120/1-2	NOR	98023-3	DST3B	DST3B	Oil	724.6	205.4	70.0
7120/1-2	NOR	98023-4	RFT	RFT	Oil	614.9	300.9	84.2
7120/2-1	NOR	98023-5	PT1	PT1	Oil	773.6	179.1	47.3
7120/2-2	NOR	98023-6	RFT	RFT	Oil	644.4	293.2	62.4
7120/6-1	NOR	98023-7	DST2	DST2	Oil	710.6	225.1	64.3
7120/6-1	NOR	98023-8	DST4	DST4	Oil	870.8	108.1	21.1
7120/7-1	NOR	98023-9	DST2	DST2	Oil	871.0	106.2	22.8
7120/7-2	NOR	98023-10	DST1	DST1	Oil	845.3	133.0	21.7
7120/8-1	NOR	98023-11	DST1	DST1	Oil	861.6	110.2	28.2
7120/8-1	NOR	98023-12	DST2	DST2	Oil	865.8	110.2	24.0
7120/8-1	NOR	98023-13	DST3	DST3	Oil	840.3	137.5	22.1
7120/8-2	NOR	98023-14	DST1	DST1	Oil	840.8	137.3	21.9
7120/9-1	NOR	98023-15	DST2A	DST2A	Oil	706.4	208.4	85.3
7120/12-2	NOR	98023-16	DST2	DST2	Oil	758.7	152.7	88.6
7121/4-1	NOR	98023-17	DST2	DST2	Oil	771.1	189.4	39.5
7121/4-1	NOR	98023-18	DST3	DST3	Oil	656.2	260.2	83.6
7121/4-1	NOR	98023-19	DST4	DST4	Oil	737.6	207.3	55.1
7121/4-2	NOR	98023-20	DST1	DST1	Oil	776.6	182.9	40.5
7121/5-1	NOR	98023-21	DST1	DST1	Oil	669.1	251.3	79.6
7121/5-2	NOR	98023-22	FMT3	FMT3	Oil	695.7	242.8	61.5
7121/7-1	NOR	98023-23	DST2	DST2	Oil	755.5	194.0	50.5
7121/7-2	NOR	98023-24	DST1	DST1	Oil	735.9	210.1	54.0
7122/6-1	NOR	98023-25	DST2	DST2	Oil	820.7	142.0	37.3
7122/6-1	NOR	98023-26	RFT?	RFT?	Oil	814.0	150.5	35.5
7124/3-1	NOR	98023-27	RFT3B	RFT3B	Oil	633.1	278.1	88.7
7125/1-1	NOR	98023-28	RFT?	RFT?	Oil	748.0	184.7	67.4
7128/4-1	NOR	98023-29	DST1.1-1.2	DST1.1-1.2	Oil	844.6	125.4	30.0
7128/4-1	NOR	98023-30	DST1-1.1	DST1-1.1	Oil	849.8	122.4	27.8
7128/4-1	NOR	98023-31	DST2	DST2	Oil	840.9	127.1	32.0

GASOLINE GC PEAK AREA DATA (Table 4)

Well Name	Nation	Sample Name	Upper depth	Lower depth	Sample Type	i_C4 uVs	n_C4 uVs	i_C5 uVs	n_C5 uVs	2,2 DMB uVs	CP uVs	2,3-DMB uVs	2MP uVs	3MP uVs
7119/12-3	NOR	98023-1	DST1A	DST1A	Oil	11212	16406	33742	27877	7476	3007	9190	39016	26271
7120/1-2	NOR	98023-2	DST3A	DST3A	Oil	11770	34405	43780	65244	2345	10153	6267	53153	35223
7120/1-2	NOR	98023-3	DST3B	DST3B	Oil	3785	14136	29546	46449	2944	8391	6695	45629	30476
7120/1-2	NOR	98023-4	RFT	RFT	Oil	24647	108013	153464	214493	941	30413	11576	144401	92218
7120/2-1	NOR	98023-5	PT1	PT1	Oil	2832	10196	18797	35231	1577	7499	4491	37629	26014
7120/2-2	NOR	98023-6	RFT	RFT	Oil	8499	58562	56640	122207	792	30892	6533	77747	56354
7120/6-1	NOR	98023-7	DST2	DST2	Oil	14021	45923	44009	57992	3791	10154	6295	36547	24567
7120/6-1	NOR	98023-8	DST4	DST4	Oil	27071	120061	217376	302138	23662	43949	39945	238240	151231
7120/7-1	NOR	98023-9	DST2	DST2	Oil	5678	17746	42975	62514	8972	11609	15191	75494	54051
7120/7-2	NOR	98023-10	DST1	DST1	Oil	17825	60388	96277	132048	11299	18630	23495	122212	80139
7120/8-1	NOR	98023-11	DST1	DST1	Oil	8977	33157	85448	125831	12062	18349	23868	121340	80652
7120/8-1	NOR	98023-12	DST2	DST2	Oil	5590	24258	58689	88045	8673	14011	19329	105642	71227
7120/8-1	NOR	98023-13	DST3	DST3	Oil	2849	6507	21088	32935	3579	5923	8232	45090	31268
7120/8-2	NOR	98023-14	DST1	DST1	Oil	3204	7894	32213	54397	5131	10248	12749	70823	48162
7120/9-1	NOR	98023-15	DST2A	DST2A	Oil	18043	72838	121278	175951	11650	25221	25304	155057	99750
7120/12-2	NOR	98023-16	DST2	DST2	Oil	41547	126875	371165	376373	53333	40130	70851	359882	237948
7121/4-1	NOR	98023-17	DST2	DST2	Oil	2583	14293	71149	98331	12133	20438	22177	128821	86386
7121/4-1	NOR	98023-18	DST3	DST3	Oil	9628	32429	39466	54859	4003	9433	6673	39774	26730
7121/4-1	NOR	98023-19	DST4	DST4	Oil	8304	51504	162182	239273	21592	39383	37417	223255	143394
7121/4-2	NOR	98023-20	DST1	DST1	Oil	3541	23226	79650	129601	9109	22655	21105	132457	86433
7121/5-1	NOR	98023-21	DST1	DST1	Oil	8090	27596	30638	41013	2931	7656	5100	28246	19236
7121/5-2	NOR	98023-22	FMT3	FMT3	Oil	11166	37733	39655	53314	2446	8752	5783	35601	23509
7121/7-1	NOR	98023-23	DST2	DST2	Oil	17272	58043	90591	124815	8980	18637	19039	113500	73900
7121/7-2	NOR	98023-24	DST1	DST1	Oil	756	5154	38657	75553	6063	15285	15856	102807	69219
7122/6-1	NOR	98023-25	DST2	DST2	Oil	795	682	7925	10890	6508	4724	14807	60149	46914
7122/6-1	NOR	98023-26	RFT?	RFT?	Oil	5351	1282	69545	30047	19678	9242	30531	97831	73205
7124/3-1	NOR	98023-27	RFT3B	RFT3B	Oil	9326	30151	69184	82767	10125	15267	17489	90196	61596
7125/1-1	NOR	98023-28	RFT?	RFT?	Oil	27690	67053	202504	164217	26527	13756	38762	216168	138738
7128/4-1	NOR	98023-29	DST1.1-1.2	DST1.1-1.2	Oil	8368	30472	67298	92244	11193	11774	15374	91605	61808
7128/4-1	NOR	98023-30	DST1-1.1	DST1-1.1	Oil	16762	57673	118666	150943	17267	17485	22052	129165	84923
7128/4-1	NOR	98023-31	DST2	DST2	Oil	2312	13222	40841	66710	9578	10528	13823	83081	57675

GASOLINE GC PEAK AREA DATA (Table 4)

Well Name	Nation	Sample Name	Upper depth	Lower depth	Sample Type	n_C6 uVs	MCP/2,2DMP uVs	2,4DMP uVs	BENZENE uVs	3,3DMP uVs	CH uVs	2MH uVs	1,1DMCP uVs	3MH uVs
7119/12-3	NOR	98023-1	DST1A	DST1A	Oil	54013	34465	8059	99442	5823	50014	71642	1928	54143
7120/1-2	NOR	98023-2	DST3A	DST3A	Oil	103669	60080	5626	33139	1848	72896	62153	2128	51743
7120/1-2	NOR	98023-3	DST3B	DST3B	Oil	86589	52914	5041	31733	1234	65475	54900	1247	44354
7120/1-2	NOR	98023-4	RFT	RFT	Oil	194119	170801	8967	52504	724	91283	112283	507	100100
7120/2-1	NOR	98023-5	PT1	PT1	Oil	83243	58906	5284	30954	2036	86308	66617	977	51834
7120/2-2	NOR	98023-6	RFT	RFT	Oil	166692	194945	6083	51121	3687	192395	93555	910	72098
7120/6-1	NOR	98023-7	DST2	DST2	Oil	67206	51621	4814	68376	1498	70062	39274	339	29890
7120/6-1	NOR	98023-8	DST4	DST4	Oil	417897	263983	31772	240885	6793	329625	254495	2020	192722
7120/7-1	NOR	98023-9	DST2	DST2	Oil	163124	108860	15261	136965	4384	193640	144599	885	108957
7120/7-2	NOR	98023-10	DST1	DST1	Oil	269403	165374	18337	178322	6580	275710	190977	1981	136255
7120/8-1	NOR	98023-11	DST1	DST1	Oil	239273	154731	23902	236783	8476	243972	186796	1593	136992
7120/8-1	NOR	98023-12	DST2	DST2	Oil	224252	141826	18916	203874	7414	232188	198975	1649	146167
7120/8-1	NOR	98023-13	DST3	DST3	Oil	98975	65899	8649	94746	4754	113104	97355	880	72987
7120/8-2	NOR	98023-14	DST1	DST1	Oil	159819	109313	16132	151861	4215	188850	152301	685	112952
7120/9-1	NOR	98023-15	DST2A	DST2A	Oil	303913	193292	20751	162855	5443	250453	223736	1097	169909
7120/12-2	NOR	98023-16	DST2	DST2	Oil	537412	333868	47694	74087	15806	428157	375364	1373	274068
7121/4-1	NOR	98023-17	DST2	DST2	Oil	221420	163234	22278	102983	6229	217309	186063	488	142920
7121/4-1	NOR	98023-18	DST3	DST3	Oil	74775	53948	5385	66459	1830	73066	46612	406	36224
7121/4-1	NOR	98023-19	DST4	DST4	Oil	398066	256603	31670	234696	10638	320313	255914	1603	194587
7121/4-2	NOR	98023-20	DST1	DST1	Oil	272860	177913	20143	175476	6106	271719	182051	2159	138941
7121/5-1	NOR	98023-21	DST1	DST1	Oil	52318	41332	3749	56114	1286	60720	32552	223	24534
7121/5-2	NOR	98023-22	FMT3	FMT3	Oil	67918	50964	4134	59067	1422	78885	40770	234	31033
7121/7-1	NOR	98023-23	DST2	DST2	Oil	219997	145557	18753	123633	5610	192200	171914	1026	131305
7121/7-2	NOR	98023-24	DST1	DST1	Oil	229761	152062	19650	134866	7159	208320	196177	783	151213
7122/6-1	NOR	98023-25	DST2	DST2	Oil	92484	105218	22391	15940	9466	220256	173077	1144	120701
7122/6-1	NOR	98023-26	RFT?	RFT?	Oil	90600	132125	28603	8503	10678	262934	183324	1140	122241
7124/3-1	NOR	98023-27	RFT3B	RFT3B	Oil	153573	118088	15842	38417	5493	157005	133702	292	100692
7125/1-1	NOR	98023-28	RFT?	RFT?	Oil	235744	182110	32738	11209	13594	93048	229687	1155	179125
7128/4-1	NOR	98023-29	DST1.1-1.2	DST1.1-1.2	Oil	194314	119434	15667	74090	7125	242008	145242	918	107120
7128/4-1	NOR	98023-30	DST1-1.1	DST1-1.1	Oil	255030	151079	19042	92096	7911	292096	162739	497	117346
7128/4-1	NOR	98023-31	DST2	DST2	Oil	186484	115618	15045	77978	5847	240989	139923	558	102925