

## 2.7.4 Fluid Sampling

Separator fluid samples were taken during the main flow of the well test. Gas and condensate from Tarbert and Upper Ness formations were sampled.

Table 2.8: Sample list.

Sample No.	Date	Type	Volume	P (bar)	Cyl. No.	P. final (bar)	Comments
1.01	13.4.08	methanol	1 litre	atm		atm	Background
1.02	15.4.08	glycol	1 litre	atm		atm	Background
1.03	15.4.08	condensate	600 cc	19 barg	PT-2111	10 barg	PVT set # 1
1.04	15.4.08	gas	20 litre	19 barg	2764	19 barg	PVT set # 1
1.05	15.4.08	gas	20 litre	19 barg	5501-A	19 barg	PVT set # 1
1.06	15.4.08	condensate	600 cc	19 barg	PT-2106	10 barg	PVT set # 2
1.07	15.4.08	gas	20 litre	19 barg	5700-A	19 barg	PVT set # 2
1.08	15.4.08	gas	20 litre	19 barg	2750	19 barg	PVT set # 2
1.09	15.4.08	condensate	600 cc	19,5 barg	PT-2012	13 barg	PVT set # 3
1.10	15.4.08	gas	20 litre	19,5 barg	2748	19,5 barg	PVT set # 3
1.11	15.4.08	gas	20 litre	19,5 barg	5325-A	19,5 barg	PVT set # 3
1.12	15.4.08	condensate	600 cc	19,5 barg	PT-2142	13,5 barg	PVT set # 4
1.13	15.4.08	gas	20 litre	19,5 barg	2710	19,5 barg	PVT set # 4
1.14	15.4.08	gas	20 litre	19,5 barg	5315-A	19,5 barg	PVT set # 4
1.15	15.4.08	condensate	1 litre	atm		atm	1 x Viscosity
1.16	15.4.08	condensate	1 litre	atm		atm	Geochem set #1
1.17	15.4.08	gas	500 cc	19,5 barg	PT-632	19,5 barg	Geochem set #1
1.18	15.4.08	condensate	1 litre	atm		atm	Geochem set #2
1.19	15.4.08	gas	500 cc	19,5 barg	PT-628	19,5 barg	Geochem set #2
1.20	15.4.08	condensate	1 litre	atm		atm	NPD
1.21	15.4.08	condensate	200 litre	atm		atm	Mixing study

The samples were sent to ResLab in Stavanger for PVT analysis. Final PVT results will be issued in a separate report.

## 2.7.5 Well Testing

### Introduction

A conventional well test was planned in order to achieve the major dynamic parameters to characterise the Brent Group.

During the well test planning, one major concern was testing during winter-time and that the testing required a weather window of at least 10 days. The possibility of hydrate formations were issued, and the test was designed to be as short as possible with only one build up period in order to keep the well warm.

Summarising, the objectives of the testing were to:

#### HSE

- Conduct all operations in a safe and efficient manner
- Conduct all operations with zero discharge to the sea
- Business ethics and valuing all people

#### Technical

- Determine the initial and final reservoir pressures
- Define the nature and amount of produced fluids
- Estimate the well productivity (PI)
- Determine average reservoir properties (Kh, K, Skin)
- Obtain representative reservoir fluid samples from the separator
- Quantify CGR, H<sub>2</sub>S, CO<sub>2</sub> and other contaminants

#### Cost

- Perform the operation and achieve the objectives in a cost efficient manner within the approved AFE

### Testing Execution

The test was carried out between the 2nd and the 20th of April 2008 and can be briefly summarised as follows:

A DST (Drill Stem Test) string was successfully run in the well after the casing clean out string was pulled out, following all standard space out and equipment testing procedures. The string was made of perforating guns (see Fig. 2.12), a 7" testing packer, bottom hole testing -and reversing valves, down hole gauge carriers, subsea testing tree (allowing for emergency disconnection of the rig) and surface flowhead. 1,45 sg oil based mud was displaced through tubing to provide for underbalanced conditions for the perforation operation. The 7" testing packer was set @ 4293,86 m MD RKB.

The Brent Group was perforated on the intervals 4321-4330 m MD RKB and 4346-4356 m MD RKB utilizing 3 3/8" HPHT 6 spf 60 deg Power Jet Charge guns with HDF firing mechanism (J3406HNS Guns). Immediately after the perforation a decrease of approximately 110 bars was observed in the tubing pressure, indicating that the well was perforated with 110 bars underbalance.

The well was opened on a 12/64" adjustable choke to unload the mud below the downhole pressure control valve (approximately 360 litres flowing for 15 min). Then the well was shut in downhole for 2,5 hours to allow for a short build up to get the initial reservoir pressure. The well was re-opened for clean up on a 12/64"

adjustable choke and stepwise increased to 16/64" and 20/64". First gas to surface was observed after 70 min. The choke size was increased further to 24/64", 28/64", 32/64", 36/64", 40/64" and 44/64" to obtain the maximum gas flow rate. The hydrate inhibitor was changed over from methanol to glycol in order to get good quality samples for the PVT analysis. The well was choked back to 40/64" to prepare for the main flow and PVT sampling. After the well head pressure, the well head temperature and the gas-condensate ratio (GCR) had been stable for 4 hours and the BS&W was below 5%, the well was declared clean and the sampling operation could start. The well was shut in downhole at the pressure controlled test valve and at the choke manifold for 51 hours of build up. The total amount of fluids recovered at surface was 21,5 m<sup>3</sup> of condensate, and the gas rate was in the range of 210-230 kSm<sup>3</sup>/day with a maximum reading of 293 kSm<sup>3</sup>/day.

### 3.4.6 Mud Summary by Phase

In the following table are summarized the fluid type used for each section.

Hole Section	Drilling Fluid System	TD (mMD/mTVD)	CSG/shoe depth (m)
9 7/8" Pilot Hole	Spud Mud	1260/1260	NA
36"	Spud Mud	448/448	30"/445
26"	Spud Mud	1261/1261	20"/1246
17 1/2"	Ultradril WBM	3210/3208	13 3/8"/3185
12 1/4"	Paratherm OBM	4110/4110	9 7/8"/4098
8 3/8"	Paratherm OBM	4520/4520	7"/4519
5 7/8"X 6 1/2"	Paratherm OBM	4713/4711	NA

Table 3.1. 34/12-1 Mud Properties, daily record Nov. 3 - 13, 2007.

Operator:		ENI Norge AS																		Transocean Leader								
Mud Properties, daily record																				34/12-1 Afrodite								
Operator:		ENI Norge AS																		Transocean Leader								
FSR	Date	Depth	BMV	T	FV	VG-meter readings @ 50			AV	FV	YP	Gel	Get	API	pH	PF	MC	CL	Ultratab NS	Ultratab	Ultratab NS	Solids	MET	HGS	LGS	Sand		
09.						600	388	209	100	8	3									%	kg/m <sup>3</sup>	%	cc/l					
		10 sec @ 3 min																										
		37.0° Plot Hole Spud Mud																										
1	03.nov.07	460	1.05		150										8.5													
2	04.nov.07	1147	1.05	18	150										9													
3	05.nov.07	1260	1.05	18	170										9													
		30° mud cut																										
4	06.nov.07	1260	1.05	18	170										9													
		30° mud cut																										
5	07.nov.07	448	1.05	18	160										9													
6	08.nov.07	648	1.05	18	160										9													
7	09.nov.07	648	1.05	18	160										9													
8	10.nov.07	839	1.05	18	160										9													
9	11.nov.07	1261	1.05	18	160										9													
10	12.nov.07	1261	1.2	18	80										9													
11	13.nov.07	1261	1.2	18	80										9													

Table 3.2. 34/12-I Mud Properties, daily record Nov. 14, 2007 - Jan.2, 2008.

Mud Properties, daily record		34/12-1 Afrodite																													
Operator: ENI Norge AS		Transocean Leader																													
FSR no.	Date	Depth	RW	T	FV	VG-motor readings @ 50 RPM				AV	PV	YP	Gel	Gel	API	pH	FF	MF	Cl	URratlab	NS	Ultracap	Ultrafree	NS	Solids	MEI	HRS	LGS	Sand		
						600	300	200	100	S	J	10-sec	5-min							%	kg/m3	%	cc/ft								
17.107 Ultracap																															
13	14-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
14	15-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
15	16-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
16	18-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
17	18-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
18	20-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
19	20-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
20	21-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
21	22-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
22	23-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
23	24-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
24	27-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
25	28-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
26	28-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
27	28-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
28	30-Nov-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
29	03-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
30	03-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
31	04-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
32	04-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
33	05-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
34	06-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
35	07-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
36	08-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
37	09-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
38	10-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
39	11-Dec-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
40	12-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
41	13-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
42	14-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
43	16-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
44	16-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
45	17-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
46	18-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
47	19-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
48	20-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
49	21-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
50	22-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
51	23-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
52	24-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
53	25-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
54	26-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
55	27-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
56	30-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
57	30-Jan-07	1300	1.52	28	98	102	88	88	88	21	9	3	24	22	11	2	8	3	9.5	10	11	35000	0	6.2	0	14	28				
58	30-Jan-07	1300	1.52	28	98	102	88	88	88																						

Table 3.3. 34/12-I Mud Properties, daily record Jan. 3 - Feb. 1, 2008.

Mud Properties, daily record																				34/12-1 Afrodite							
Operator: ENI Norge AS																Transocean Leader											
FSR no.	Date	Depth	MW	T	VO-meter readings @ 50 C					AV	PV	YP	Gel		ES	Excess Lime	HTHP **°C	CL	Solids	Oil	Water	O/W RATIO	Sand	HOS	LOS	Dev cog	
					600	300	200	100	6				3	10													sed 0 min
(2.25' section)																											
52	03.jan.08	3265	1.32	20	63	51	35	25	9	8	41.5	32	9.5	5	11	542	3.52	2.4	52600	20.34	53	20	75.25	0.1	823.2	15.63	1.33
53	04.jan.08	3535	1.52	35	89	53	39	26	9	7	44.5	36	8.5	10	13	563	7.77	3.6	103091	22.6	55	22	71.29	0.25	891.8	21.01	1.33
54	05.jan.08	3593	1.6	32	90	53	39	26	9	7	45	37	6	5	7	508	9.25	2	129268	21.57	56	20.5	73.27	0.25	854.1	49.95	1.33
55	06.jan.08	3556	1.6	34	92	54	40	27	9	8	45	36	6	5	7.5	542	3.52	1.6	129329	23.56	55	20.5	73.27	0.25	856	81.53	1.33
56	07.jan.08	3568	1.6	34	91	53	40	27	9	8	45.5	36	7.5	5	7.5	517	3.52	3.8	129520	23.56	55	20.5	73.27	0.25	855.9	81.53	1.33
57	08.jan.08	3568	1.6	25	92	53	40	26	8	7	45	36	7	5	7.5	513	3.25	2	124395	23.56	55	20.5	73.27	0.25	857	81.67	0.34
58	09.jan.08	3545	1.71	33	94	56	42	27	9	8	47	36	9	5	7.5	529	3.91	?	141567	26.56	54.5	18	75.25	0.4	991.4	75.01	0.34
59	10.jan.08	4110	1.74	32	89	58	44	28	9	8	40.5	41	8.5	6.5	8	595	11.84	1.8	139880	28.1	53	18	75.25	0.4	1025	94.48	0.34
70	11.jan.08	4110	1.74	30	101	59	46	29	9	8	50.5	43	8.5	5	8	577	11.47	1.6	138869	28.1	53	18	75.25	0.4	1025	94.48	0.34
71	12.jan.08	4110	1.74	32	100	58	44	28	9	9	50	42	6	6	9	574	11.04	1.6	136111	28.1	53	18	75.25	0.4	1025	94.65	0.34
72	13.jan.08	4110	1.74	32	89	58	44	28	9	8	40.5	41	8.5	6	9	570	11.84	1.8	139880	28.1	53	18	75.25	0.4	1025	94.48	0.34
73	14.jan.08	4110	1.74	30	103	60	46	29	9	8	51.5	43	8.5	6.5	9	508	11.1	2	136111	27.59	53	18	75.25	0.25	1025	94.65	0.34
74	15.jan.08	4110	1.74	35	103	60	45	29	9	9	51.5	43	6.5	5	9	560	11.47	2	139309	27.59	53	18	75.25	0.25	1025	94.48	0.34
75	16.jan.08	4110	1.74	22	101	58	43	27	9	8	50.5	43	7.5	4.5	9	512	9.14	2.3	105135	27.59	53	19.5	75.25	0.25	1032	78.92	0.34
76	17.jan.08	4110	1.74	20	102	59	44	28	9	8	51	43	6	4.5	8	468	7.03	2.7	128947	27.59	53	19	74.26	0.25	1054	51.36	0.34
77	18.jan.08	4110	1.74	20	103	60	44	28	9	8	51.5	43	6.5	4.5	8	455	6.56	2.8	128947	27.59	53	19	74.26	0.25	1054	51.36	0.34
78	19.jan.08	4110	1.74	25	102	59	44	28	9	8	51	43	6	4.5	9	455	6.63	2.6	129347	27.59	53	19	74.26	0.25	1054	51.36	0.34
79	20.jan.08	4110	1.74	20	102	59	44	28	9	8	51	43	6	4.5	8	455	6.66	2.6	129347	27.59	53	19	74.26	0.25	1054	51.36	0.34
80	21.jan.08	4110	1.74	20	103	59	44	28	9	8	51.5	44	7.5	4.5	8	462	7.03	2.6	128947	27.59	53	19	74.26	0.25	1054	51.36	0.34
81	22.jan.08	4110	1.74	20	104	60	44	28	9	8	52	44	6	4.5	9	462	7.03	2.6	129347	27.59	53	19	74.26	0.25	1054	51.36	0.34
82	23.jan.08	4110	1.74	20	104	60	44	29	9	8	52	44	6	4.5	8	462	7.03	2.6	129347	27.59	53	19	74.26	0.25	1054	51.36	0.34
83	24.jan.08	4110	1.74	18	102	58	43	27	9	8	51	44	7	4.5	8	462	7.03	2.6	128947	27.59	53	19	74.26	0.25	1054	51.36	0.34
84	25.jan.08	4110	1.74	18	102	58	43	27	9	8	51	44	7	4.5	9	462	7.03	2.6	129347	27.59	53	19	74.26	0.25	1053.57	51.36	0.34
85	26.jan.08	4110	1.74	15	100	58	42	28	8	7	50	42	8	4	7	462	6.66	3	128947	27.59	53	19	74.26	0.25	1054	51.36	0.34
86	27.jan.08	4110	1.74	15	100	58	42	28	8	7	50	42	8	4	7	462	6.66	3	128947	27.59	53	19	74.26	0.25	1054	51.36	0.34
87	28.jan.08	4110	1.73	15	101	59	42	28	8	7	50.5	42	8.5	4	7	462	6.66	3.2	129347	27.11	53	19	74.26	0.25	1054	51.36	0.34
88	29.jan.08	4110	1.73	15	101	59	42	28	8	7	50.5	42	8.5	4	7	462	6.66	3.2	129347	27.11	53	19	74.26	0.25	1054	51.36	0.34
89	30.jan.08	4110	1.73	15	101	59	42	28	8	7	50.5	42	8.5	4	7	462	6.66	3.2	128947	27.11	53	19	74.26	0.25	1054	51.36	0.34
90	31.jan.08	4110	1.73	15	101	59	42	28	8	7	50.5	42	8.5	4	7	462	6.66	3.2	128947	27.11	53	19	74.26	0.25	1054	51.36	0.34
91	01.feb.08	4110	1.73	15	102	61	43	29	8	7	51.5	42	9.6	4	7	460	6.23	3.5	131579	27.09	53	19	74.26	0.25	1053	61.21	0.34

Table 3.4. 34/12-I Mud Properties, daily record Feb.2 - March 10, 2008.

Operator:		ENI Norge AS										Transocean Leader																
FSR no.	Date	Depth	MW	T	VG-meter readings @ 50 C					AV	PV	YP	Gel	Col	ES	Excess	HTHP	CL	Solids	Oil	Water	O/W	Sand	HGS	LGS	Dev		
				Temp	600	300	200	100	6	3	10 sec/6 min					Limit	sec	RATIO										deg
8 3/8" section																												
92	03.feb.08	4075	1.73	25	130	60	42	27	8	7	50	40	15	5	5	535	5.92	3.5	157585	27.58	54	19	74.26	0.25	1108	-14.26	3.34	
93	03.feb.08	4075	1.94	25	08	57	42	27	8	7	49	41	8	4	5	500	5.91	3.6	125030	32.26	51	16	76.24	0.25	1318	-14.22	3.34	
94	04.feb.08	4115	1.95	24	136	61	48	32	10	3	54	47	7	5	3	565	15.94	4.2	190000	35.9	50	15	77.20	0.25	1299	75.29	3.34	
95	05.feb.08	4120	1.95	23	133	60	45	29	9	8	51.5	43	8.5	5	5	705	14.8	4.4	177532	33.77	50	15.2	77.23	0.25	1308	66.04	3.34	
96	06.feb.08	4120	1.94	23	136	57	42	27	8	7	50	40	7	4	5	555	5.25	3.8	164215	32.72	51	15.2	77.23	0.2	1325	25.85	3.34	
97	07.feb.08	4130	1.94	20	133	60	46	28	8	7	51.5	43	8.5	5	5	731	9.82	3.6	164236	33.28	49.5	15.7	75.25	0.2	1281	85.1	3.34	
98	08.feb.08	4330	1.97	25	53	55	42	25	9	9	47.5	40	7.5	4	5	585	5.02	4.2	160367	32.14	50	15.6	75.25	0.2	1190	80.62	3.34	
99	09.feb.08	4330	1.97	20	127	74	58	37	13	11	53.5	43	10.5	5	7	795	11.1	4.5	165867	30.48	52.3	15.2	76.24	0.1	1249	17.71	3.34	
100	10.feb.08	4330	1.97	30	126	76	58	38	13	12	54	52	12	5	7	527	8.98	4.4	168811	30.76	52.3	15.9	77.23	0.2	1237	32.75	3.34	
101	11.feb.08	4330	1.97	30	127	83	48	32	10	9	55.5	44	9.5	5.5	5.5	567	10.36	3.4	150250	31.12	52	16	76.24	0.2	1229	44.89	3.34	
102	12.feb.08	4403	1.97	28	131	80	49	30	9	7.5	50.5	41	9.5	5	5.5	597	11.1	3.2	123750	31.3	52	16	76.24	0.3	1222	54.72	1.22	
103	13.feb.08	4457	1.98	28	91	54	45	27	8	7	45.5	37	6.5	5	7	587	10.73	3.4	141635	31.17	52.5	15.5	77.23	0.3	1219	59.9	2.1	
104	14.feb.08	4480	1.98	25	69	51	39	26	0	7	44.5	36	6.5	5	8	576	10.73	2.8	143333	32.5	52.5	15	76.22	0.3	1209	77.27	2.57	
105	15.feb.08	4520	1.98	32	80	60	43	28	9	7.5	40.5	30	10.5	5	5.5	1052	12.06	2.2	142867	33	52	16	78.22	0.3	1215.66	80.72	3.11	
106	16.feb.08	4520	1.98	30	99	59	43	29	9	7.5	45.5	40	9.5	5	5.5	569	12.21	2.2	142000	33	52	15	78.22	0.3	1219	80.76	3.14	
107	17.feb.08	4520	1.98	27	89	58	43	29	9	3	45.5	41	8.5	4.5	5.5	527	12.21	2.2	142000	32.22	52	15	78.22	0.3	1232	72.6	3.14	
108	18.feb.08	4520	1.98	27	89	58	43	29	9	3	45.5	41	8.5	4.5	5.5	527	12.21	2.2	142000	32.22	52	15	78.22	0.3	1232	72.6	3.14	
109	19.feb.08	4520	1.98	27	89	58	43	29	9	3	45.5	41	8.5	4.5	5.5	527	12.21	2.2	142000	32.22	52	15	78.22	0.3	1232	72.6	3.14	
110	20.feb.08	4520	1.98	27	80	50	42	29	9	3	45	40	5	5	5.5	531	11.04	3.2	142000	32.22	52	15	78.22	0.3	1232	72.6	3.14	
111	21.feb.08	4520	1.98	28	89	58	42	29	9	7.5	45.5	41	8.5	4	6	521	11.84	2.4	140000	33	52	15	78.22	0.25	1232	72.6	3.14	
112	22.feb.08	4520	1.98	18	90	52	38	25	8	7	45	36	7	4	6	518	11.1	2.4	140838	31.22	53	14.5	78.21	0.25	1245	51.42	3.14	
113	23.feb.08	4520	1.98	15	90	52	38	25	8	7	45	36	7	4	6	510	11.1	2.4	144520	31.22	53	14.5	78.21	0.25	1245	51.42	3.14	
114	24.feb.08	4520	1.98	30	84	54	41	27	8	7	47	40	7	4.5	7	702	5.88	3.8	145867	31.34	53	15	78.22	0.25	1265	26.0	3.11	
115	25.feb.08	4520	1.98	25	134	61	45	30	9	8	52	43	8	5	7	535	7.77	3.8	121575	31.26	52	16	76.24	0.3	1236	45.83	3.14	
116	26.feb.08	4520	1.98	32	134	61	40	30	9	3	52	43	8	5	7	581	11.1	2.2	138710	30.72	52	15.5	77.20		1239	55.52	3.14	
117	27.feb.08	4520	1.98	26	134	60	45	30	9	7.5	52	44	8	5	7	385	10.73	2.8	137500	31.10	52	16	76.24	0.25	1238	46.1	3.11	
118	28.feb.08	4520	1.98	25	133	60	45	30	9	8	51.5	43	8.5	5	7	333	9.25	2.8	140000	32.23	52	15	76.24	0.25	1271.5	49.01	3.14	
119	29.feb.08	4520	1.9	22	136	63	45	31	9	3	53	44	9	5	7	522	8.93	2.4	140000	31.73	52	15	76.24	0.25	1271	49.01	3.14	
120	01.mar.08	4520	1.93	25	136	63	45	30	9	3	52.5	44	8.5	5	7	780	8.51	2.4	140000	31.73	52	15	76.24	0.25	1271.9	49.01	3.14	
121	02.mar.08	4520	1.9	19	136	60	46	29	9	8	52	44	8	5	7	740	8.51	2.5	140000	31.73	52	15	76.24	0.25	1271	49.01	3.14	
122	03.mar.08	4520	1.9	15	133	59	44	29	9	9	51.5	44	7.5	5	7	725	8.51	2.5	140000	31.73	52	15	76.24	0.25	1271	49.01	3.14	
123	04.mar.08	4520	1.9	24	133	60	44	29	9	9	51.5	44	7.5	5	7	738	7.77	2.6	139575	32.21	51	16	76.24	0.25	1264	63.09	3.14	
124	05.mar.08	4520	1.9	30	95	54	41	25	7	5	47.5	41	6.5	4	5	711	7.33	2.6	140635	32.25	50.8	16	76.24	0.25	1279	47.75	3.14	
125	07.mar.08	4520	1.9	20	95	54	41	25	7	3	47.5	41	6.5	4	5	722	7.33	2.6	141575	32.15	50.9	15.2	76.24	0.25	1287	37.52	3.14	
126	08.mar.08	4520	1.9	20	95	54	41	25	7	3	47.5	41	6.5	4	5	722	7.33	2.6	141575	32.15	50.8	15.2	76.24	0.25	1287	37.52	3.14	
129	09.mar.08	4520	1.9	20	97	55	41	25	7	3	46.5	42	6.5	4	5	709	5.25	2.7	141575	32.15	50.9	15.2	76.24	0.25	1287	37.52	3.14	
128	10.mar.08	4520	1.9	20	97	55	41	25	7	3	46.5	42	6.5	4	5	709	5.25	2.7	141575	32.15	50.8	15.2	76.24	0.25	1287	37.52	3.14	



Table 3.5. 34/12-1 Mud Properties, daily record March 11 - April 1, 2008.

Mud Properties, daily record		34/12-1 Afrodite																									
Operator: ENI Norge AS															Transocean Leader												
FSR no.	Date	Depth	MW	T	VG-meter readings @ 50 C					AV	PV	YP	Gel	Gel	ES	Excess	HTHP	CL	Solids	Oil	Water	O/W	Sand	HGS	LGS	Dev	
				Temp	600	300	200	100	6	3			10	sed	G min	Lime	psi-C		%	%	%	RATIO	%	%	%	Seg	
5700' Section																											
130	11.mar.08	4520	1.9	20	98	56	42	28	7	8	49	42	7	5	8	655	8.28	2.7	150000	32.31	50.8	16	76.04	0.25	1278	47.21	3.14
131	12.mar.08	4520	1.9	20	98	56	42	28	7	8	49	42	7	5	8	655	8.28	2.7	150000	32.31	50.8	16	76.04	0.25	1278	47.21	3.14
132	13.mar.08	4520	1.9	22	100	57	43	27	7	8	50	43	7	5	8	635	8.28	3	147561	31.9	50.8	16.4	76.04	0.2	1293	25.91	3.14
133	14.mar.08	4520	1.9	20	101	58	44	29	7	8	50.5	43	7.5	6	7	605	8.28	3.6	149090	31.88	50.8	16.4	76.04	0.2	1293	25.91	3.14
134	15.mar.08	4520	1.9	21	101	58	44	28	7	8	50.5	43	7.5	6	7	605	8.28	3.6	149090	31.88	50.8	16.4	76.04	0.2	1293	25.91	3.14
135	16.mar.08	4520	1.9	25	101	58	43	29	7	8	50.5	43	7.5	6	7	605	8.28	4	151235	32.09	50.8	16.2	76.04	0.2	1285	38.96	3.14
136	17.mar.08	4520	1.9	22	99	57	42	28	7	8	49.5	42	7.5	6	7	583	8.28	4.2	151675	32.29	50.8	16	76.04	0.2	1277	47.1	3.14
137	18.mar.08	4524	1.9	13	87	66	40	28	7	8	48.5	42	6.5	4	8	550	7.4	4	135284	31.86	50.5	17	75.05	0.25	1253	45.48	3.14
138	19.mar.08	4558	1.9	15	101	58	42	27	7	8	50.5	43	7.5	4	8.5	567	8.88	4	138255	31.12	50.5	17	75.05	0.25	1253	45.3	3.44
139	20.mar.08	4588	1.9		101	58	42	27	7	8	50.5	43	7.5	4	8.5	525	8.51	4	138235	31.64	50.5	17	75.05	0.25	1253	45.3	3.44
140	21.mar.08	4513	1.9	13	103	60	44	28	8	8.5	51.5	43	8.5	4.5	8.5	577	8.07	3.6	132353	31.68	50.5	17	75.05	0.25	1254	45.62	3.44
141	22.mar.08	4571	1.9	15	101	58	42	27	7.5	8.5	50.5	43	7.5	5	8	584	8.51	2.8	132363	31.88	50.5	17	75.05	0.25	1264	45.62	4.45
142	23.mar.08	4595	1.9	12	99	56	41	28	7	8	49.5	41	6.5	5	8.5	557	8.14	2.6	128471	31.72	50.5	17	75.05	0.25	1269	37.95	4.45
143	24.mar.08	4713	1.9	12	98	56	41	27	7	8	49	42	7	5	8.5	567	8.14	2.2	134375	18	51	16	76.04	0.25	1264	53.09	4.45
144	25.mar.08	4713	1.9	11	99	57	41	27	7	8	49.5	42	7.5	5	8.5	536	8.14	2.2	134375	18	51	16	76.04	0.25	1264	53.09	4.45
145	26.mar.08	4713	1.9	17	101	58	41	26	7	8	50.5	43	7.5	5	8.5	518	8.14	2.2	134375	18	51	16	76.04	0.25	1264	53.09	4.45
146	27.mar.08	4713	1.9	16	101	56	41	26	7	8	50.5	43	7.5	5	8.5	567	8.14	2.2	134375	18	51	16	76.04	0.25	1264	53.09	4.45
147	28.mar.08	4713	1.9	18	102	59	42	26	7	8	51	43	8	8	8.5	588	8.14	2.3	134375	18	51	16	76.04	0.25	1264	53.09	4.45
148	29.mar.08	4710	1.9	14	99	57	42	26	7	8	49.5	42	7.5	4.5	7	501	8.28	3.6	129412	31.16	50.5	17	75.05	0.25	1254	46.7	4.45
149	30.mar.08	4713	1.9	14	100	58	42	27	7	8	50	42	8	4.5	7	489	5.92	3.8	129412	31.16	50.5	17	75.05	0.25	1254	46.7	4.45
150	31.mar.08	4710	1.9	14	105	59	43	26	7	8	52.5	46	6.5	4	7	453	7.03	3.6	122222	32.21	49	16	73.07	0.25	1249	62.57	4.45
151	01.apr.08	4713	1.9	18	106	64	45	29	7.5	8.5	54.5	45	9.5	4	7	402	7.03	3.9	122222	32.21	49	16	73.07	0.25	1249	62.57	4.45



Table 3.6 34/12-I Mud Properties, daily record April 2 - April 29, 2008.

Operator:		ENI Norge AS														Transocean Leader											
FSR#	Date	Depth	MW	T	VG-meter readings @ 50 C				AV	PV	YP	Gel	Gel	ES	Excess	HHP	CL	Solids	Oil	Water	O/W	Sand	HGS	LGS	Dev		
no					Temp	600	300	100	100	6	3				10 sec 2 min	Lime	ppm	%	%	%	RATIO	ppm	ppm	ppm	deg		
Last row																											
132	02 apr 08	4409	1.45	32	48	29	20	13	4	3	28.5	20	4.5	5	7	705	14.0	2.6	112957	18.27	62	40	78.02	0.2	720.5	53.49	4.45
132	03 apr 08	4467	1.45	50	63	38	30	19	8	7	31.5	28	6.5	6.5	5	751	15.2	2.6	111117	18.25	62	38	78.22	0.25	721.8	53.71	4.45
134	04 apr 08	4407	1.45	50	62	37	28	15	8	7	31	25	6	4.5	5	759	15.25	2.7	111117	18.25	62	40	78.22	0.25	721.8	53.71	4.45
136	05 apr 08	4467	1.45	50	63	38	30	19	8	7	31.5	28	6.5	6.5	5	732	15.25	2.7	111117	18.25	62	38	78.22	0.25	721.8	53.71	4.45
138	06 apr 08	4467	1.45	50	62	37	28	15	8	7	31	25	6	4.5	5	715	15.25	2.7	111117	18.25	62	40	78.22	0.25	721.8	53.71	4.45
137	09 apr 08	4467	1.45	50	61	37	28	13	8	7	30.5	26	6.5	4.5	5	888	15.25	3.8	122222	18.21	62	38	78.02	0.25	718.2	53.25	4.45
130	20 apr 08	4487	1.44	50	62	30	28	13	7	5	31	28	5	4	5	273	15.25	3	123500	18.41	62	47.8	70.22	0.2	715.2	63.53	4.45
138	04 apr 08	4467	1.45	50	64	38	28	19	7	5	32	26	6	4	5	553	15.25	3.2	122222	18.21	62	38	78.02	0.2	719.2	53.25	4.45
136	10 apr 08	4407	1.45	50	65	39	28	20	7	5	25.5	26	6.5	5	5	520	15.35	3.5	120279	18.21	62	40.2	78.02	0.2	727.5	42.00	4.45
141	11 apr 08	4467	1.44	50	64	38	28	20	7	5	30	26	6	5	5	511	15.85	3.6	122222	18.21	62	38	78.02	0.2	715.2	53.25	4.45
132	12 apr 08	4467	1.44	50	65	38	28	21	7	5	32.5	26	6.5	5	5	509	15.85	3.8	121078	18	62	38.2	78.02	0.2	731	52.13	4.45
143	13 apr 08	4467	1.45	70	68	41	30	23	7	5	34	27	7	5	7	729	15.85	3.6	104798	18.15	62	40.2	78.22	0.2	705.5	59.04	4.45
134	14 apr 08	4467	1.44	50	70	42	34	24	7	5	35	34	7	5	7	505	15.95	3.6	107222	18.55	62	38	78.22	0.2	695.5	70.1	3.35
135	15 apr 08	4759	1.9	15	490	58	42	27	7	3	37	42	6	5	7	553	15.95	4.7	100255	18.13	50.5	47	75.05	0.2	1279	23.33	4.45
136	16 apr 08	4558	1.9	15	121	58	42	28	7	5	50.5	43	7.5	5	7	553	16.14	4.2	132908	21.36	50.5	47.3	75.25	0.2	1291	14.43	4.45
137	17 apr 08	4558	1.9	15	100	57	42	20	7	5	50	45	7	5	7	550	16.14	4.2	132640	21.36	50.5	47.3	75.25	0.2	1291	14.43	4.45
138	18 apr 08	4558	1.9	20	121	58	42	30	7	5	50.5	43	7.5	5	7	554	17.77	4.4	141505	21.89	52	45.5	75.05	0.2	1290	13.5	4.45
130	18 apr 08	4350	1.9	20	108	62	45	23	8	7	54	46	8	7	5	554	7.4	4.5	141020	21.85	52	45.6	70.24	0.2	1294	13.45	4.45
170	20 apr 08	4558	1.9	20	106	60	45	29	8	7	55	46	7	7	5	564	7.4	4.6	139401	21.39	52	45.8	75.04	0.2	1302	8.29	4.45
171	21 apr 08	4550	1.9	15	127	61	42	23	8	7	53.5	46	7.5	7	5	551	7.4	4.6	143226	21.88	52	45.5	70.24	0.2	1290	23.43	4.45
172	22 apr 08	4558	1.99	27	106	62	42	30	8	7	54	46	8	7	5	552	7.4	4.8	142857	21.75	52	45.4	75.04	0.2	1285	25.53	4.45
173	24 apr 08	4558	1.82	16	110	63	43	31	8	7	55	47	8	7	5	554	5.85	4.8	141068	21.89	52	45.6	75.04	0.2	1291	13.45	4.45
174	24 apr 08	4558	1.85	18	110	63	43	31	8	7	55	47	8	7	5	554	5.85	4.6	141068	21.89	52	45.6	75.04	0.2	1291	13.45	4.45
175	25 apr 08	4558	1.85	18	110	63	43	31	8	7	55	47	8	7	5	554	5.85	4.8	141068	21.89	52	45.6	75.04	0.2	1291	13.45	4.45
175	26 apr 08	4759	1.85	15	110	63	43	31	8	7	55	47	8	7	5	554	5.85	4.6	141068	21.89	52	45.6	75.04	0.2	1294	13.45	4.45

Operator:		ENI Norge AS														Transocean Leader													
FSR#	Date	Depth	MW	T	VG-meter readings @ 50 C				AV	PV	YP	Gel	Gel	API	PI	PI	MF	CL	URS	MS	Ultracarb	1M	Free	HS	Solids	MOI	HGS	LGS	Sand
no					Temp	600	300	100	100	6	3			10 sec 2 min	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	
Last row																													
173	25 apr 08	1245	1.54	21																									
173	25 apr 08	1245	1.54	21																									

3.4.7

Deviation Summary