

III 10 DRILLING FLUID SUMMARY

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA NORTH SEA, NORWAY

COST SUMMARY

OPERATOR	:	STATOIL
BLOCK No./LOCATION	:	34/10
WELL NAME/No.	:	34/10-13
TOTAL DEPTH	:	3391.5m
DEVIATION	:	NONE
SPUD DATE	:	August 24, 1981
DATE T.D. REACHED	:	December 4, 1981
TOTAL DRILLING DAYS	:	36.5
Cost Of Mud Materials Used On Well	:	\$ 370,206.15
Cost Of Mud Materials Used For Drilling	:	\$ 341,355.44
MUD COST/EX METER	:	\$ 109.16
MUD COST/DAY	:	\$ 2,742.27
MUD COST/ROTATING HOUR	:	\$ 1,000.56
DAYS ENGINEERING SERVICE	:	140
Cost Of Mud Materials & Engineering Service	:	\$ 428,306.15
END OF WELL INVENTORY ADJUSTMENT	:	NONE
Engineering Days Not Included In Total Cost	:	NONE

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA 34/10-13 STATOIL NORTH SEA NORWAY

TOTAL MATERIAL CONSUMPTION

MATERIAL	PACKAGING	QUANTITY
BARITE	M/T	1646 M/T
WYO BENTONITE	Bulk	122 M/T
CMC-LV	25 kg	456 SK
Q-BROXIN	25 kg	1133 SK
AQUAGEL	100 lb	1052 SK
SOLTEX	50 lb	231 SK
CC-16	50 lb	779 SK
NUTPLUG (F)	25 kg	804 SK
NUTPLUG (C)	25 kg	33 SK
MICA (F)	25 kg	670 SK
MICA (C)	25 kg	99 SK
CAUSTIC SODA	25 kg	586 SK
HPD	25 kg	148 SK
BARAZAN	50 lb	16 SK
BICARBONATE	50 lb	89 SK
STAFLO (REG)	25 kg	9 SK
CON DET	55 gal	4 DR
DEXTRID	50 lb	28 SK
SODA ASH	50 kg	52 SK
SALT	50 kg	55 SK
ALUMINUM STEARATE	25 kg	4 SK
LIME	40 kg	8 SK

NORSK PETROLEUM SERVICES A/S

OPERATING AREA NORTH SEA, NORWAY

OPERATOR STATOIL

WELL NAME/No. 34/10-13

CONTRACTOR ODFJELL DRILLING AND CONSULTING CO.

RIG DEEP SEA SAGA

BAROID ENGINEERS N. RUFFING, J. TATTERSFIELD, I. DRING

T.D. 3391.5m

HOLE SIZE	CASING SIZE	CASING SET AT	MUD TYPE	MUD COST	DRILLING DAYS
36	30	300m	SPUD MUD	\$ 4,710.52	1/2
26	20	869m	SEAWATER GEL	\$44,200.54	2
17 1/2	13 3/8	1535m	GEL/LIGNOSULFONATE	\$63,439.90	3 1/2
12 1/4	9 5/8	1720m	GEL/LIGNOSULFONATE	\$80,428.04	1 1/2
8 1/2	7	2680m	GEL/LIGNOSULFONATE	\$89,935.05	20
6	OH	3391.5m	GEL/LIGNOSULFONATE	\$58,641.39	9
TESTING PROGRAM	--	--	GEL/LIGNOSULFONATE	\$28,850.71	--

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA NORTH SEA, NORWAY

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RIG DEEP SEA SAGA

BAROID ENGINEERS N. RUFFING, J. TATTERSFIELD, I. DRING

T.D. 3391.5

CASING/DEPTH	DRILLING	CMT JOB DRIG+CMT CASING JOB	Circ LCM TESTING	NIPPLE UP AND TEST STACK	REAMING AND SCHLUMBERGER	STRIKE WOW	TOTAL
30" /300m	1/2	1/2					1
20" /869m	2	1 1/2	1/2	1 1/2	3 1/2		9
13 3/8 /1535m	3 1/2	1	--	1	1/2		6
9 5/8 /1720m	1 1/2	2	5	1	1/2		10
7" /2680m	20	1	3 1/2		2 1/2	1	28
6" OH	9	16		4	3 1/2	22 1/2	55
TESTING			26				26
TOTAL	36.5	22	35	7.5	10.5	23.5	135

Date moved on location/skidded over slot: August 23, 1981

Date moved off location/skid off: January 4, 1982

Total days on well: 135

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

CONCLUSIONS AND RECOMMENDATIONS

30" CSG SET AT 300m.

This section was drilled and cased off in one day. 20 bbl slugs of spud mud were spotted on connections. At 300m the hole was displaced with 390bbls of mud. A wiper trip was made and the hole displaced with 300 bbl of spud mud. A 100 bbl pill of spud mud weighted up to 1.20 sg was spotted on bottom and casing run and cemented without problem.

Lime was added to the gel slurry for added viscosity before drilling.

The actual mud usage was 850 bbl compared to an estimated 1000 bbl. The depth drilled was 61m which was less than the estimated 84m. The interval cost was \$4433.73 which was close to the estimated \$5059.13.

No charges are necessary in the mud program.

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

CONCLUSIONS AND RECOMMENDATIONS

20" CSG SET AT 869m.

This section was drilled and completed in 9 days. A 12 1/4" pilot hole was drilled, taking 2 days. Problems were encountered with tight hole, it being necessary to pump out of the hole on trips to stop swabbing. Difficulties were had controlling the mud wt at 1.10sg and lost circulation occurred at 807m, continuing to TD. Lost circulation material was added.

After running logs the hole was displaced with seawater. The level in the annular continued to drop. The hole was then displaced with 1.10sg mud, 9.6 % gas being recorded at bottoms-up. The 1.20sg kill mud was diluted and centrifuged to 1.10sg to maintain volume. 20 ppb LCM pills were pumped in stages into the open hole. Losses continued. A cement plug was set at the 30" casing shoe. The cement plug was drilled out and the hole opened to 26" using a closed system. There were no mud losses.

During opening the hole to 26", which took 3 days to complete, the drilling rate was controlled to 20m/hr, and the mud wt maintained at 1.10sg. Large amounts of gel and seawater were used to control the viscosity and mud wt. All solids control equipment was run. A 26" bit was run in the hole before running 20" casing. The casing and cement job took 1 day.

The total cost for this section was \$42462.92 as compared with an estimated \$13764.06. This was due to more mud being used. 8910 bbls compared with an estimated 2856 bbls. The estimated mud cost and mud usage was based on drilling with seawater using gel slugs with returns to sea bed. A closed system was used throughout the drilling of the section. While drilling the 12 1/4" pilot hole HPD polymer was used to maintain viscosity during dilution while losing circulation. The reserve pit was used for 1.20sg kill mud, reducing the volume available for the prehydration of gel to a 120 bbl pit, this was not sufficient to maintain gel additions during dilution. The cost of the LCM was not estimated for in the mud program. More Barite was used, as the hole was displaced with 1.21sg mud prior to running casing. Carry fill up and circulation was also done with 1.21sg mud.

The 12 1/4" pilot hole was drilled at an average ROP of 69 m/hr. It is recommended that this should be controlled to 40 m/hr, as this

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

CONCLUSIONS AND RECOMMENDATIONS

20" CSG SET AT 869m, cont.

would make it easier to control the mud wt and keep the annular mud wt lower. It would also reduce the risk of the hole packing off, causing lost circulation. It would also reduce the possibility of having to pump out of the hole during trips.

No changes are indicated in the mud program.

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

CONCLUSIONS AND RECOMMENDATIONS

17 1/2" HOLE AND 13 3/8" CASING SET 1535m

Drilled to 1542m, logged and set casing at 1535m in 6 days. Drilled hole in 3 1/2 days, logged 1/2 day. Run stack and raiser 1 day and run casing in one day.

The estimated cost of \$83,544.49 and the estimated mud built of 4776 bbl was higher than the actual mud cost of \$62,080.45 and mud built of 4300 bbl. The difference in cost was due to the amount of Barite used.

There were problems with tight hole during trips but no trouble occurred while logging or running casing. The addition of soltex at 3 lb/bbl to the mud did not seem to reduce drag during trips. The tight hole occurred between 1200 and 1500m. It began one or two stands off bottom. The drag was reduced after wiper trips and disappeared after reaching TD.

The mud system worked OK but the soltex did not seem to help. It is suggested that Lubra Beads mud lubricant be used in next well.

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

CONCLUSIONS AND RECOMMENDATIONS

9 5/8" CSG SET AT 1720m.

This section took 10 days to drill and complete. Problems were encountered with lost circulation and the well flowing. Combating this took the majority of time, 5 days being spent circulating, raising and lowering mud wts, spotting LCM pills etc.

The shoe was drilled out with a mud wt of 1.50sg, at 1635m. It was raised to 1.60sg, at 1682m it was raised to 1.70sg. At 1690m lost circulation occurred and the mud wt was reduced to 1.65sg, and LCM pills pumped. Drilling continued to 1725m without losses, the well was checked for flow and found to be flowing.

The mud wt was increased to 1.69sg, and the shakers bypassed to keep the LCM in the system. With 1.68sg mud at the shaker, the well was found to be static. The mud wt was then increased to 1.71sg, some mud being lost to the formation before the well stabilized.

Tight hole was also a problem in this section, but this was probably due to the low pressure differential between the hydrostatic head and the formation.

Logs and casing were run without problems, there being full returns during displacement of the cement.

The total cost for this interval was \$78,967.58, which greatly exceeded the estimated \$26,771.34. This was due to the greater mud usage, 2435 bbls as compared to an estimated 416 bbls. Lost circulation material used was not estimated for.

No charges are indicated in the mud program.

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

CONCLUSIONS AND RECOMMENDATIONS

7" LINER SET AT 2680m.

This section took 28 days to complete. 20 days were spent drilling, of which 10 were spent coring. 156m were cored with 15 cores.

The 9 5/8" shoe was drilled out with a mud wt of 1.71sg, this was increased to 1.80sg at 1751.5m, to 1.83sg at 1792m, and to 1.85sg at 1859m. At 2700m lost circulation occurred. LCM pills were spotted and the shakers bypassed, when full returns were gained. Logs were run without problems. A total of 3 1/2 days were lost due to lost circulation. Running logs took 2 1/2 days. Prior to running the liner the mud wt was reduced to 1.82sg. There were no problems running the liner, and full returns were obtained during the displacement of the cement.

The total cost for this interval was \$88,070.61 compared to an estimated \$60,788.36. More mud was used due to the lost circulation, 1020 bbls being lost downhole. A total of 2700 bbls were used in this section compared with an estimated 1533 bbls. The actual cost per barrel was less than estimated, \$32.62 compared to \$39.65.

Lost circulation material was an additional cost not estimated for \$8,454.66 was the cost of this material used.

The solids control equipment worked well. Generally top screens were 60 x 60 Mesh, with bottom screens 80 x 80 Mesh. During coring 100 x 100 Mesh screens were used on one shaker, with maximum volume being run over this shaker, without losing mud. The mud cleaners were run with 150 Mesh Screens, as 200 Mesh Screens were found to be throwing out too much Barite. The centrifuge was run effectively to control solids and to salvage Barite during additions of premix or diluting back.

There were no problems with the mud in this section and no changes are indicated in the mud program.

NORSK PETROLEUM SERVICES A/S

OPERATING AREA Statoil 34/10-13

CONCLUSIONS AND RECOMMENDATIONS

6" O.H. to 3391.5 m

This section of hole took 55 days to complete. 9 of which were spent drilling. One core was cut from 3373.5m to 3391.5m. A rig strike took up 16 days.

Problems were had getting a good cement job on the 7" liner, requiring cement squeezes. 16 days were spent in this section setting cement plugs, squeezes and drilling cement.

This interval was turbo drilled and it was found that the cuttings were very finely ground, necessitating the use of 200 Mesh Screens on the mud cleaners and 100 Mesh Screens on the shale shakers in order to control solids build up.

With 200 Mesh Screens mud losses over the mud cleaners increased and barite was also thrown out, requiring more barite to maintain weight.

The total cost for this section was \$58,641.39 compared to an estimated \$26,090.72. This difference was due to the greater mud usage, 1585 bbls being used compared to an estimated 653 bbls. The cost per bbl was less than the estimated cost \$36.99 compared to and estimated \$39.96.

The mud worked well in this interval and no changes are indicated in the mud program.

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

MATERIALS USED PER CASING INTERVAL

30" CASING SET AT 300 M

Materials	Units	Estimated		Actural	
		Qty	Cost \$	Qty	Cost \$
AQUAGEL	M/T	15.2	4,800.62	13	4,105.79
SODA ASH	50 kg	6	103.44	3	51.72
CAUSTIC SODA	25 kg	9	155.07	15	258.45
LIME	40 kg			6	61.56
BARITE	M/T			2	233.00
TOTAL COST			5,059.13		4,710.52
COST PER DAY				1	4,710.52
COST PER BARREL		1000	5.06	850	5.54
COST PER BBL/DAY					5.54
COST PER METER		84	60.23	61	77.22

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

MATERIALS USED PER CASING INTERVAL

20" CASING SET AT 869 M

Materials	Units	Estimated		Actural	
		Qty	Cost \$	Qty	Cost \$
BARITE	M/T	12	1,398.-	79	9,203.50
AQUAGEL	M/T	36.8	11,622.54	72	22,739.76
CAUSTIC SODA	25 kg	24	413.52	97	1,671.31
SODA ASH	50 kg	12	206.88	25	431.-
LIME	40 kg	12	123.12	2	20.52
HPH POLYMER	25 kg	If needed		71	4,447.44
BICARBONATE	50 kg			2	37.34
STAFLO	25 kg			7	991.48
Q-BROXIN	25 kg			1	17.68
WALLNUT (F)	25 kg			147	2,141.79
MICA (F)	25 kg			161	2,498.72
TOTAL COST			13,764.06		44,200.54
COST PER DAY				9	4,911.17
COST PER BARREL		2856	4.82	8910	4.96
COST PER BBL/DAY					0.55
COST PER METER		552	24.93	630	70.16

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OPERATING AREA Statoil 34/10-13

MATERIALS USED PER CASING INTERVAL

17 3/8" CASING SET AT 1535 M

Materials	Units	Estimated		Actural	
		Qty	Cost \$	Qty	Cost \$
WYO BENTONITE	M/T	54.3	17,149.57	28	8,843.24
HPD POLYMER	25 kg	87	5,449.68	4	250.56
CMC - LV	25 kg	87	4,343.04	113	5,640.96
CAUSTIC SODA	25 kg	130	2,239.90	144	2,481.12
SODA ASH	50 kg	43	741.32	14	241.36
Q-BROXIN	25 kg	261	2,614.48	187	3,306.16
CON DET	55 gal	32	9,280.00	4	1,161.60
AQUAGEL	100 lb			68	938.40
XC POLYMER	50 lb			2	537.90
SOLTEX	50 lb			231	14,054.04
DEXTRID	50 lb			28	1,112.16
SALT	50 kg			55	414.15
WALLNUT	25 kg			15	218.55
ALUM:STEARATE	25 kg			2	124.20
BARITE	M/T	341	39,726.50	207	24,115.50
TOTAL COST			83,544.49		63,439.90
COST PER DAY				7	9,062.84
COST PER BARREL		4776	17.49	4300	14.75
COST PER BBL/DAY					2:11
COST PER METER		665	125.63		97.75

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

MATERIALS USED PER CASING INTERVAL

· 9 5/8" CASING SET AT 1720 M

Materials	Units	Estimated		Actural	
		Qty	Cost \$	Qty	Cost \$
AQUAGEL	100 lb	158	2,180.40	255	3,519.-
Q-BROXIN	25 kg	68	1,202.24	159	2,811.12
CAUSTIC SODA	25 kg	20	344.60	116	1,998.68
HPD POLYMER	25 kg	20	1,252.80	17	1,064.88
CMC-LV	25 kg	20	998.40	117	5,840.64
SODA ASH	50 kg	10	172.40	-	-
BICARBONATE	50 kg	-	-	10	186.70
CC-16	50 lb			108	1,926.72
XC POLYMER	50 lb			8	2,151.60
STAFLO	25 kg			1	141.64
WALLNUT	25 kg			377	5,492.89
MICA	25 kg			334	5,183.68
WYO BENTONITE	M/T			3	947.49
BARITE	M/T	177	20,620.50	422	49,163.00
TOTAL COST			26,771.34		80,428.04
COST PER DAY				10	8,042.80
COST PER BARREL		416	15.26	2435	33.03
COST PER BBL/DAY					3.30
COST PER METER		210	127.48	185	434.75

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

MATERIALS USED PER CASING INTERVAL

7" LINER SET AT 2680 M

Materials	Units	Estimated		Actural	
		Qty	Cost \$	Qty	Cost \$
AQUAGEL	100 lb	306	4,222.80	265	3,657.-
Q-BROXIN	25 kg	195	3,447.60	497	8,786.96
CC-16	50 lb	92	1,641.28	397	7,082.48
SODA ASH	50 kg	14	241.36	5	86.20
CAUSTIC SODA	25 kg	42	723.66	159	2,739.57
HPD POLYMER	25 kg	42	2,630.88	15	939.60
CMC-LV	25 kg	84	4,193.28	76	3,793.92
BICARBONATE	50 kg			4	74.68
MICA (F)	25 kg			166	2,576.32
MICA (C)	25 kg			99	1,536.48
WALLNUT (F)	25 kg			265	3,861.05
WALLNUT (C)	25 kg			33	480.81
WYO BENTONITE	M/T			6	1,894.98
BARITE	M/T	375	43,687.50	450	52,425.-
TOTAL COST			60,788.36		89,935.05
COST PER DAY				28	3,211.97
COST PER BARREL		1538	39.65	2700	33.31
COST PER BBL/DAY					1.19
COST PER METER		775	78.44	960	93.68

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

MATERIALS USED PER CASING INTERVAL

6" HOLE

Materials	Units	Estimated		Actural	
		Qty	Cost \$	Qty	Cost \$
AQUAGEL	100 lb	80	1,104.-	345	4,761.-
Q-BROXIN	25 kg	142	2,510.56	286	5,056.48
CC-16	50 lb	112	1,998.08	274	4,888.16
CAUSTIC SODA	25 kg	28	482.44	48	827.04
SODA ASH	50 kg	14	241.36	5	86.20
CMC-LV	25 kg	72	3,594.24	150	7,488.-
HPD POLYMER	25 kg	72	4,510.08	32	2,004.48
BICARBONATE	50 kg			63	1,176.21
AL STEARATE	25 kg			2	126.20
STAFLO	25 kg			1	141.64
BARAZAN	50 lb			4	1,075.80
MICA	25 kg			9	139.68
BARITE	M/T	100	11,650.-	265	30,872.50
TOTAL COST			26,090.72		58,641.39
COST PER DAY				55	1,066.21
COST PER BARREL		653	39.96	1585	36.99
COST PER BBL/DAY					.67
COST PER METER		1100	23.72	711.5m	82.42

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 34/10-13

MATERIALS USED PER CASING INTERVAL

TESTING PROGRAM

Materials	Units	Estimated		Actural	
		Qty	Cost \$	Qty	Cost \$
AQUAGEL	100 lb			119 SK	1,642.20
CAUSTIC SODA	25 kg			7 SK	120.61
BICARBONATE	50 kg			10 SK	186.70
Q-BROXIN	25 kg			3 SK	53.04
HPD	25 kg			9 SK	563.76
BARAZAN	50 lb			2 SK	537.90
BARITE	BULK			221 M/T	25,746.50
TOTAL COST					28,850.71
COST PER DAY		26			1,109.64
COST PER BARREL		835			34.55
COST PER BBL/DAY					1.33
COST PER METER					-

NL PETROLEUM SERVICES (UK) LTD.
 NL BAROID

WELL NAME: 34/10-13 STATOIL

MUD PROPERTY RECAP

DATE	DEPTH	DENSITY	VISC-O-SITY	FILTRATE		HT/HP filt		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			OTHER			
				Cake	°500psi	pV	YP		10"	10'	Cl	Ca	Pf	Mf	Pm	Oil	Water	Corr. Solids	PPB	SD				
1981	metres	SG	secs	ccs	1/2" / 100'	ccs	1/2" / 100'	cp	lbs/100ft ² - 1000	mg/litre	ppm				%	%	%	Bent. Eq.	%					
31/8	742	1.10	47					10.1	6	42	12		12500	320	.15	.3				20	TR			
1/9	893	1.21	40					9.3	7	26	19		12500	400	.05	.10				20	TR			
	PIT	1.21	40					9.6	8	20	16		11500	280	.05	.15				25				
2/9	PIT	1.21	39					9.5	8	19	14		11500	280	.05	.15				25				
3/9	PIT	1.10	43	9.3	2	-	-	9.8	6	14	11	17	10000	120	.12	.3	-	0	93	7	18	N#1		
4/9	867	1.10	46	8.5	1	-	-	11.0	6	11	6	14	9000	100	.25	1.2	-	0	90	10	20	N#1		
	1000	1.12	43	8.4	1	-	-	10.7	7	12	11	20	11500	100	.2	.48	-	0	90	10	20	1		
	1093	1.10	44	9.7	1	-	-	10.2	7	15	15	26	12000	160	.22	.42	-	0	92	8	22 1/2	1/2		
5/9	1191	1.10	49	7.9	1	-	-	10.7	6	23	22	28	13000	100	.55	.9	-	0	90	10	25	1/3		
	1208	1.10	53	8.0	2	-	-	10.6	5	29	34	67	12500	100	.4	.7	-	0	90	10	25	1/2		
	1300	1.13	45	7.2	1	-	-	9.7	5	17	7	17	15500	160	.2	.6	-	0	90	10	30	1/2		
	1335	1.12	45	9.8	2	-	-	9.9	10	12	12	17	16000	360	.1	.35	-	0	90	10	27 1/2	1/2		
6/9	1381	1.26	45	8.5	2	-	-	9.4	9	9	4	11	15000	300	.15	.45	-	0	87	13	27 1/2	1/2		
	1381	1.25	48	9.1	2	-	-	9.3	9	10	6	9	15000	240	.1	.45	-	0	86	14	27 1/2	3/4		
	1435	1.30	50	7.2	2	-	-	9.0	15	10	5	49	18000	320	.1	.55	-	0	86	14	35	1/4		

WELL NAME: 34/10-13 STATOIL

MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spcl/ SG	VISC- OSITY secs	FILTRATE		HY/HP fill		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER				
				ccs	Cake 1" / 32" / min	ccs	°500psi 1" / 32" / min		PV	YP	10"	10'	Cl	Ca	PI	MI	Pm	Oil	Water	Corr. Solids		PPB	Bent. Eq.			
6/9	1525	1.40	49	8.7	2			10.1	17	12	6	22	16000	350	.3	.7	0	84	16	37½	½					
7/9	PIT	1.40	49	7.3	2			9.7	13	10	3	31	17000	260	.3	.8	0	84	16	37½	1/4					
	PIT	1.40	47	6.1	1			10.1	20	10	3	12	18500	300	.26	.61	0	83	17	32½	½					
8/9	1542	1.40	53	7.9	2			9.7	15	9	3	20	18000	240	.35	1.0	0	81	19	35	1/4					
	1542	1.40	54	6.8	2			9.8	13	11	5	30	18000	280	.3	.9	0	81	19	35	1/4					
	Pit	1.40	48	6.5	2			9.8	16	7	3	11	18500	350	.25	.63	0	83	17	35	1/4					
9/9	PIT	1.40	49	6.8	2			9.6	17	9	3	12	18000	360	.25	.6	0	83	17	35	1/4					
	PIT	1.50	49	6.4	2			10.4	17	11	4	22	18500	200	.4	.9	0	81	19	27½	1/4					
	1535	1.50	47	5.8	2			10.4	16	11	4	28	19000	160	.6	1.2	0	81	19	30	1/4					
10/9	1545	1.50	50	5.1	2	17.6	3	11.2	17	15	9	37	18500	160	1.4	2.3	0	81	19	30	1/4					
	1557	1.49	51	5.4	2	18.2	3	11.1	16	16	9	35	18500	140	1.1	2.1	0	80	20	30	1/4					
	1633	1.60	51	4.2	1	18.0	3	11.0	20	22	6	51	19500	120	1.0	2.0	0	79	21	30	TR					
11/9	1690	1.70	49	4.0	1	15.4	3	11.0	13	10	2	12	20500	160	1.1	2.0	0	77	23	30	TR					
	PIT	1.70	50	5.9	2	18.6	3	9.2	20	10	2	13	18000	400	.25	1.2	0	77	23	22½	TR					
12/9	557	1.65	49	5.5	2	19.8	3	10.0	18	9	1	12	1800	200	.45	1.3	0	77	23	20	TR					
12/9	657	1.65	55	6.0	2	20.2	4	9.8	20	9	1	12	15000	280	.35	1.0	0	77	23	22½	TR					
	1530	1.65	49	4.9	1	18.2	3	11.0	19	9	1	9	18000	200	1.1	2.2	0	78	22	25	TR					
13/9	1725	1.65	48	4.2	1	15.8	3	10.4	20	10	2	10	19500	200	.5	1.5	0	78	22	25	TR					
	1725	1.61	51	4.5	1	17.4	3	10.5	18	9	1	12	19000	200	.6	1.7	0	78	22	25	TR					

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WELL NAME: 34/10-13 STATOIL

MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spc/ SG	VISC- OSITY secs	FILTRATE ccs	HT/HP IIII			pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER			
					Cake 1"/32"	°500psi 1"/32"			PV cp	YP lbs/100ft ² -gms/cm ²	10" mg/litre	10' ppm	Cl	Ca	Pl	Mf	Pm	Oil %	Water %	Corr. Solids %		PPB Bent. Eq.			
						ccs	ccs																		
	1725	1.69	52	4.4	1	17.8	3	10.3	20	10	2	9	18000	240	.45	1.5		0	76	24	25	TR			
14/9	1725	1.69	48	3.7	1	15.6	3	9.7	20	9	1	10	20000	260	.35	1.5		0	76	24	22½	TR			
	1725	1.69	53	4.2	1	16.6	3	9.6	21	9	2	14	19500	280	.3	1.3		0	76	24	22½	TR			
	1535	1.69	49	4.2	1	15.6	2	10.8	21	9	1	9	18500	160	.8	2.2		0	76	24	22½	TR			
15/9	1509	1.67	49	3.9	1	15.6	2	11.0	21	9	1	13	18500	160	.9	2.7		0	76	24	22½	TR			
	1725	1.71	48	3.9	1	15.8	2	10.5	21	9	2	11	19000	200	.6	2.4		0	76	24	22½	TR			
16/9	1725	1.71	51	3.8	1	15.4	2	10.6	21	8	2	15	18500	200	.6	2.2		0	76	24	22½	TR			
	PIT	1.71	50	3.8	1	15.6	2	10.4	21	8	1	12	19000	240	.5	2.2		0	76	24	22½	TR			
17/9	PIT	1.71	50	3.9	1	16.6	3	10.2	19	10	1	12	18000	240	.45	2.0		0	76	24	25	TR			
	PIT	1.71	49	3.6	1	16.4	3	10.2	21	9	2	13	19000	200	.45	2.1		0	76	24	25	TR			
18.9	PIT	1.71	50	3.6	1	16.2	3	10.2	23	10	2	15	19000	200	.45	2.1		0	76	24	25	TR			
18/9	PIT	1.71	51	3.5	1	15.2	3	10.1	24	11	2	15	18500	240	.3	2.0		0	76	24	25	TR			
19/9	PIT	1.71	48	3.5	1	15.4	3	10.0	22	9	2	13	18500	240	.35	2.0		0	76	24	25	TR			
	1726	1.71	51	4.0	1	15.2	3	10.6	21	9	2	21	18500	200	.6	2.4		0	76	24	25	TR			
20/9	1741	1.71	51	4.0	1	15.8	3	10.9	23	13	2	15	19000	300	.7	2.5		0	75	25	25	TR			
	1751	1.71	55	4.3	1	16.0	3	10.9	25	13	3	24	19000	300	.75	2.4		0	75	25	25	1/4			
	1763	1.80	55	4.4	1	15.4	3	10.6	25	12	3	28	18000	240	.55	2.1		0	72	28	22.5	1/4			
	1808	1.83	55	4.2	1	15.2	3	10.0	26	14	3	32	18000	280	.35	1.7		0	72	28	22½	1/4			
21/9	1820	1.83	54	3.8	1	14.6	3	10.8	26	13	3	24	18000	280	.65	2.2		0	72	28	22½	1/4			

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MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spct/ SG	VISC- OSITY secs	FILTRATE		HY/HP fill		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB Bent. Eq.	OTHER				
				ccs	Cake 32/mm	°500psi			PV cp	YP lbs/100ft ²	10" gms/100 cm ²	10' mg/litre	Cl mg/litre	Ca ppm	Pf	Mf	Pm	Oil %	Water %	Corr. Solids %		PPB	Bent. Eq.			
						ccs	32/mm																			
	1837	1.83	56	3.5	1	14.4	3	10.8	25	13	4	29	18500	240	.70	2.3	0	72	28	22	1/4					
22/9	1859	1.85	54	3.6	1	14.4	3	10.8	25	12	3	34	18000	240	.65	2.3	0	71	29	22	TR					
	1859	1.85	55	3.4	1	14.4	3	10.9	24	12	2	32	18000	240	.75	2.2	0	71	29	22	TR					
23/9	1859	1.85	56	3.3	1	14.4	3	10.9	26	12	2	23	18000	240	.7	2.2	0	71	29	22	TR					
	1880	1.85	55	3.6	1	14.2	3	10.9	25	13	3	34	18500	280	.7	2.3	0	72	28	20	TR					
24/9	PIT	1.85	53	3.5	1	14.0	3	11.0	26	12	3	32	18000	200	.75	2.4	0	71	29	22	TR					
	1931	1.85	56	3.5	1	14.1	3	10.9	26	13	3	31	18000	240	.7	2.3	0	72	28	22	TR					
25/9	PIT	1.85	54	3.2	1	14.0	3	11.0	24	10	2	21	18000	200	.75	2.5	0	72	28	22	TR					
	1944	1.85	55	3.8	1	15.0	3	10.8	26	11	2	23	18000	200	.7	2.4	0	72	28	22	TR					
26/9	1961	1.85	56	3.4	1	14.6	3	10.9	25	12	3	31	18500	200	.75	2.5	0	71	29	25	TR					
	1963	1.85	55	3.6	1	14.2	3	10.8	26	11	3	29	18000	240	.7	2.3	0	71	29	22	TR					
27/9	PIT	1.85	51	3.5	1	13.8	3	10.6	25	12	2	24	17500	280	.65	2.2	0	71	29	22	TR					
	1970	1.85	55	3.8	1	14.6	3	10.4	22	10	2	18	18000	260	.55	2.3	0	71	29	22	TR					
28/9	1976	1.85	56	3.3	1	13.8	3	10.6	24	11	2	27	18000	280	.65	2.4	0	71	29	22	TR					
	1980	1.85	58	3.6	1	14.0	3	10.6	25	10	2	26	18000	280	.65	2.3	0	71	29	22	1/4					
	1988	1.84	54	3.2	1	16.6	3	10.6	24	12	2	27	18500	240	.7	2.5	0	72	28	23	TR					
29/9	PIT	1.85	55	3.0	1	15.8	3	11.1	24	10	2	26	18500	240	.85	2.7	0	71	29	22	TR					
	2011 1/2	1.85	54	2.8	1	14.6	3	10.8	24	10	2	24	18500	240	.75	2.6	0	71	29	21	TR					
30/9	PIT	1.85	55	2.6	1	14.6	3	11.1	24	11	2	22	18500	220	.9	2.8	0	71	29	21	TR					

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MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spct/ SG	VISC- OSITY secs	FILTRATE ccs	HT/HP IIII			pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB	OTHER			
					Cake 32/mm	°500psi			PV cp	YP lbs/100ft ² -gms/cm ²	10" 10'	10' 100'	Cl mg/litre	Ca ppm	Pf	MI	Pm	Oil %	Water %	Corr. Solids %		Bent. Eq.			
						ccs	32/mm																		
	PIT	1.85	56	2.7	1	15.0	3	10.7	24	11	2	24	19000	280	.8	2.7		0	71	29	21	TR			
1/10	2035	1.85	52	2.5	1	15.2	3	10.8	25	9	1	17	18500	240	.85	2.8		0	71	29	29	TR			
	2039	1.85	58	2.9	1	15.4	3	10.8	25	10	1	15	18500	240	.8	2.7		0	71	29	20	TR			
1/10	PIT	1.85	54	2.6	1	15 ⁰	3	11.0	25	9	1	22	18500	280	.85	2.9		0	71	29	20	TR			
2/10	2065	1.85	57	2.5	1	14.8	3	11.1	24	10	1	23	18000	240	.9	2.8		0	71	29	20	TR			
	2076	1.85	56	2.2	1	10.6	2	10.6	23	10	4	20	18000	280	.85	2.4		0	70	30	22½	1/4			
3/10	2079	1.85	54	2.6	1	13.2	3	11.4	21	11	4	19	18000	200	1.1	3.4		0	70	30	22½	TR			
	2080	1.85	57	3.1	1	14.0	3	11.2	21	10	4	20	18000	240	1.1	2.8		0	70	30	22½	TR			
	PIT	1.86	53	2.6	1	11.2	3	11.4	22	10	4	14	18000	240	1.2	3.0		0	70	30	22½	TR			
4/10	2092	1.85	55	2.6	1	11.0	3	11.0	21	11	4	21	18000	200	1.0	2.6		0	70	30	22½	TR			
	2102	1.85	58	3.2	1	12.8	3	11.2	22	11	4	24	18500	240	1.1	2.6		0	70	30	22½	TR			
	2176	1.85	57	2.9	1	12.8	3	11.0	23	10	3	27	18000	240	.8	2.4		0	70	30	25	TR			
5/10	2218	1.85	55	2.4	1	11.0	3	10.8	22	10	3	26	18000	240	.6	2.0		0	70	30	25	TR			
	2226	1.85	60	3.0	1	13.0	3	10.7	22	11	5	29	18000	240	.6	2.2		0	70	30	25	TR			
	PIT	1.85	54	2.8	1	13.4	3	10.9	22	9	3	27	18000	240	.8	1.9		0	70	30	25	TR			
6/10	2264	1.85	54	2.3	1	13.8	3	11.0	21	11	4	23	19000	240	.9	2.9		0	70	30	25	TR			
	2272	1.85	60	2.9	1	14.4	3	10.8	22	10	3	22	18500	260	.7	2.7		0	70	30	25	TR			
	2320	1.85	54	2.5	1	13.8	3	10.8	21	11	4	25	19000	280	.65	2.6		0	70	30	25	TR			
7/10	PIT	1.85	55	2.7	1	14.2	3	10.6	22	9	4	28	18500	220	.55	2.4		0	70	30	25	TR			

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MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spc/ SG	VISC- OSITY secs	FILTRATE		HT/HP IIII		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB Bent. Eq.	OTHER		
				ccs	Cake 1 1/2" /mm	°500psi ccs	1 1/2" /mm		PV cp	YP lbs/100ft ²	10" gms/100 cm ²	10' mg/litre	Cl ppm	Ca	Pl	Ml	Pm	Oil %	Water %	Corr. Solids %				
	2392	1.85	55	2.9	1	14.6	4	10.6	22	9	3	24	18500	260	.55	1.9		0	69	31	25	TR		
8/10	2456	1.86	53	3.1	1	14.8	4	10.4	20	11	5	25	18500	340	.5	1.6		0	70	30	25	TR		
	2501	1.85	57	2.7	1	10.8	3	10.5	22	9	3	25	18500	280	.5	1.6		0	70	30	27 1/2	TR		
9/10	2546	1.85	56	2.6	1	13.8	4	10.4	21	11	3	18	18000	260	.5	1.6		0	70	30	27 1/2	TR		
	2555	1.85	65	3.2	1	15.0	4	10.2	22	10	2	15	17500	300	.45	1.4		0	70	30	27 1/2	TR		
	2610	1.85	56	2.4	1	12.8	3	10.1	22	10	4	26	20000	240	.45	1.8		0	70	30	25	TR		
10/10	PIT	1.85	55	2.2	1	12.0	3	10.5	19	10	2	19	2000	220	.65	2.1		0	70	30	25	TR		
	2694	1.85	55	2.2	1	12.8	3	10.2	22	9	1	12	19500	240	.15	2.8		0	69	31	25	TR		
11/10	PIT	1.85	51	4.2	2	18.6	4	10.0	18	8	1	13	16500	300	.4	2.0		0	72	28	20	TR		
	PIT	1.85	58	4.2	2	19.4	4	11.0	25	8	4	19	16000	320	.8	1.8		0	72	28	20	TR		
12/10	2687	1.85	60	2.2	1	13.4	3	10.3	24	10	4	22	17000	280	.45	1.9		0	72	28	20	TR		
	2687	1.85	84	2.6	1	14.8	4	10.0	25	8	1	14	16000	440	.4	1.7		0	72	28	20	TR		
	PIT	1.85	60	2.5	1	16.0	3	10.0	22	8	3	18	17000	440	.45	2.2		0	70	30	20	TR		
13/10	PIT	1.85	58	2.6	1	16.4	4	9.8	21	7	1	18	17000	460	.4	2.0		0	70	30	20	TR		
13/10	PIT	1.85	60	2.4	1	15.8	3	10.0	23	8	2	18	17000	400	.45	2.3		0	70	30	20	TR		
14/10	PIT	1.85	60	2.5	1	15.8	3	9.5	23	8	3	17	17500	520	.25	2.0		0	70	30	20	TR		
	PIT	1.85	54	2.5	1	16.2	3	9.5	19	7	1	14	18000	360	.4	2.3		0	70	30	20	TR		
15/10	PIT	1.85	57	2.7	1	14.6	3	9.4	20	7	1	17	17500	480	.3	2.6		0	70	30	20	TR		
	PIT	1.85	53	2.6	1	13.4	3	9.1	19	7	1	16	17500	560	.2	1.8		0	70	30	20	TR		

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MUD PROPERTY RECAP

DATE	DEPTH	DENSITY	VISC-OSITY	FILTRATE			HT/HP (lit)		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER				
				PPG/ Spct/ SG	secs	Cake	°500psi			PV	YP	10'	10'	Cl	Ca	Pf	Mf	Pm	Oil	Water	Corr. Solids		PPB	Bent. Eq.			
							1"/32"	ccs																			
16/10	PIT	1.82	55	2.4	1	12.8	3	9.3	22	8	2	11	17500	440	.3	2.4	0	72	28	20	TR						
	PIT	1.82	54	2.6	1	13.4	3	9.6	23	7	1	12	17500	440	.4	2.6	0	72	28	20	TR						
17/10	PIT	1.82	61	3.0	1	16.2	3	11.2	22	13	1	23	17500	560	.85	2.9	0	72	28	17 1/2	TR						
	PIT	1.82	58	2.7	1	16.6	3	11.3	24	8	1	22	17500	440	.85	2.8	0	72	28	17 1/2	TR						
18/10	PIT	1.82	54	2.6	1	17.0	3	11.2	23	7	1	22	17500	320	.85	2.8	0	72	28	17 1/2	TR						
	PIT	1.82	60	3.0	1	16.6	3	11.1	23	9	1	21	17500	320	.85	2.9	0	72	28	17 1/2	TR						
19/10	PIT	1.82	53	3.1	1	16.8	3	11.4	24	10	1	17	17500	220	.85	3.1	0	72	28	17 1/2	TR						
	PIT	1.82	54	3.1	1	17.8	3	11.3	24	8	2	15	18000	240	1.1	3.2	0	72	28	17 1/2	TR						
20/10	PIT	1.82	50	3.2	1	17.8	3	11.2	23	7	1	11	18000	240	1.2	3.2	0	72	28	17 1/2	TR						
	PIT	1.82	54	3.0	1	18.2	3	11.3	22	8	1	13	17500	280	1.2	3.2	0	72	28	17 1/2	TR						
21/10	PIT	1.81	60	3.2	1	18.4	3	11.4	24	9	1	15	18000	280	1.2	3.3	0	72	28	17	TR						
22/10	PIT	1.80	55	3.2	1	18.6	3	11.5	24	8	1	16	18000	280	1.2	3.3	0	72	28	17	TR						
23/10	PIT	1.80	54	3.3	1	18.8	3	11.6	24	8	1	18	18000	280	1.3	3.4	0	72	28	17	TR						
24/10	PIT	1.80	53	3.6	1	20.4	3	11.6	25	8	1	19	18000	320	1.3	3.3	0	72	28	17	TR						
	PIT	1.80	57	3.0	1	19.8	3	10.9	25	10	1	23	14500	320	1.0	2.8	0	73	27	15	TR						
25/10	PIT	1.80	55	3.2	1	20.6	3	10.9	24	10	1	21	14500	340	1.0	2.8	0	73	27	15	TR						
	1560	1.80	55	4.0	1	22.4	3	11.7	24	9	1	20	17000	260	1.65	3.5	0	72	28	15	1/3						
26/10	PIT	1.80	52	3.2	1	19.2	3	11.9	23	8	1	22	16500	280	2.1	4.2	0	72	28	15	1/3						
	PIT	1.70	49	3.9	1	21.0	3	11.7	21	8	1	12	15000	240	1.55	3.1	0	75	25	15	1/3						

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MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spcf/ SG	VISC- OSITY secs	FILTRATE ccs	HT/HP fill		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB	OTHER			
					Cake 1"/ 32/mm	°500psi ccs		PV cp	YP lbs/100ft ² - gms/cm ²	10" 10'	10' 100'	Cl mg/litre	Ca ppm	P _f	M _f	P _m	Oil %	Water %	Corr. Solids %		Bent. Eq.			
																						3	3	3
27/10	PIT	1.75	53	3.4	1	18.8	3	12.1	22	8	1	11	16000	160	2.3	4.6	0	74	26	14	1/4			
	PIT	1.75	58	3.5	1	19.2	3	12.2	24	8	1	13	16000	240	2.4	4.6	0	74	26	14	1/3			
	PIT	1.75	53	3.2	1	18.2	3	12.2	22	8	1	14	16500	240	2.7	4.8	0	74	26	14	1/3			
28/10	PIT	1.75	51	3.1	1	17.8	3	12.2	21	8	1	12	17000	160	2.95	5.5	0	74	26	14	1/3			
	2703	1.75	57	2.5	1	16.8	2	12.3	21	9	1	11	17000	200	3.1	5.4	0	74	26	14	1/3			
29/10	2720	1.60	54	2.7	1	16.4	2	12.2	22	7	1	12	15500	240	2.5	4.3	0	78	22	17½	1/4			
29/10	1680	1.79	65	2.9	1	15.6	3	12.3	32	8	3	12	15000	200	2.2	4.6	0	12	28	17½	TR			
30/10	PIT	1.80	67	2.8	1	15.2	3	12.2	30	10	3	22	15500	280	2.0	3.4	0	72	28	17½	TR			
	2391	1.80	62	2.7	1	14.8	3	12.2	27	14	2	12	15000	220	1.8	3.0	0	72	28	17½	TR			
31/10	PIT	1.80	65	2.8	1	15.4	3	12.3	31	13	3	15	15000	240	2.0	3.1	0	72	28	17½	TR			
	PIT	1.81	63	2.7	1	16.8	3	12.5	33	10	3	18	15000	220	2.0	3.1	0	73	27	17½	TR			
1/11	PIT	1.81	64	2.7	1	16.2	3	11.8	27	13	2	19	15000	260	1.8	2.7	0	73	27	17½	TR			
	1694	1.80	70	2.6	1	16.0	3	12.2	29	12	2	15	15000	220	1.7	3.0	0	72	28	17½	TR			
2/11	2534	1.80	60	2.7	1	15.8	3	12.1	25	9	1	11	15000	200	1.7	3.1	0	72	28	17½	TR			
	PIT	1.80	65	2.7	1	16.2	3	12.4	27	10	2	16	16000	240	2.3	3.8	0	72	28	17½	TR			
3/11	2540	1.79	60	3.0	1	16.4	3	12.4	25	11	2	15	15000	220	2.1	4.0	0	73	27	17½	TR			
	2549	1.80	78	3.1	1	17.6	3	12.3	30	12	2	12	15000	280	2.2	4.0	0	72	28	17½	TR			
	2724	1.60	57	4.2	1	19.2	3	12.4	22	9	1	18	15000	220	2.4	3.4	0	78	22	17½	TR			
4/11	2725	1.60	54	3.8	1	18.4	3	12.3	19	9	1	7	16000	220	2.3	3.3	0	79	21	17½	TR			

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MUD PROPERTY RECAP

DATE	DEPTH	DENSITY	VISC-OSITY	FILTRATE	HT/HP III			pH	RHEOLOGY					FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER						
					feet	PPG/Spc/SG	secs		ccs	Coke		°500psi	PV	YP	10"	10'	Cl	Ca	Pf	Mf	Pm		Oil	Water	Corr. Solids	PPB	Bent. Eq.		
										1"/32"	1"/32"																		
4/11	2725	1.60	75	4.6	1	19.8	3	12.4	23	9	1	14	15000	240	2.5	3.3		0	78	22	17½	TR							
	PIT	1.61	54	3.3	1	17.6	3	12.2	22	9	1	9	15000	260	1.7	3.0		0	78	22	17.5	TR							
5/11	PIT	1.60	54	3.1	1	16.6	3	12.3	21	7	1	8	15000	260	1.7	2.9		0	78	22	17½	TR							
	2680	1.60	54	2.7	1	14.0	2	12.3	26	8	1	4	15000	200	2.3	3.9		0	79	21	17½	TR							
6/11	PIT	1.60	62	3.2	1	14.8	2	12.1	20	7	1	5	14500	220	2.2	3.5		0	78	22	17½	TR							
	1346	1.60	57	3.0	1	17.8	3	12.3	19	8	1	10	14500	220	2.1	3.8		0	78	22	17½	TR							
7/11	PIT	1.60	55	2.9	1	16.6	2	12.3	18	7	0	5	14500	180	2.1	3.6		0	79	21	17½	TR							
8/11	PIT	1.60	55	2.5	1	13.8	2	12.2	20	8	1	8	15000	180	2.3	4.0		0	78	22	17½	TR							
	PIT	1.60	53	2.6	1	12.5	2	12.5	22	7	1	8	15000	160	2.3	4.3		0	78	22	17½	TR							
9/11	PIT	1.60	53	2.5	1	12.4	2	12.4	24	7	1	8	16000	180	2.4	4.3		0	78	22	17½	TR							
	PIT	1.60	56	12.1	1	12.6	2	12.5	25	9	2	9	16000	160	2.4	4.3		0	78	22	17½	TR							
10/11	PIT	1.60	58	2.3	1	12.8	2	12.5	24	9	2	11	15500	160	2.4	4.3		0	78	22	17½	TR							
	PIT	1.60	57	2.4	1	13.2	2	12.4	23	10	2	11	16000	180	2.4	4.2		0	78	22	17½	TR							
11/11	PIT	1.60	58	2.6	1	13.8	2	12.3	23	8	1	5	15500	180	2.1	3.9		0	78	22	17½	TR							
	PIT	1.59	57	2.3	1	13.0	2	12.4	23	8	1	8	15000	180	2.2	4.1		0	78	22	17½	TR							
12/11	PIT	1.59	56	2.4	1	13.4	2	12.4	22	9	1	7	15500	180	2.2	4.2		0	78	22	17½	TR							
	PIT	1.59	57	2.2	1	13.4	2	12.4	23	9	1	9	16000	200	2.2	4.0		0	79	21	17½	TR							
13/11	PIT	1.59	57	2.3	1	13.2	2	12.4	22	9	1	7	16000	200	2.2	4.1		0	79	21	17½	TR							
14/11	PIT	1.59	58	2.2	1	13.8	2	12.4	22	10	1	7	16000	200	2.3	4.2		0	79	21	17½	TR							

MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spct/ SG	VISC- OSITY secs	FILTRATE		HY/HP filt		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB Bent. Eq.	OTHER			
				Cake ccs	1"/32mm	°500psi ccs	1"/32mm		PV cp	YP lbs/100ft ² -gms/100cm ²	10" 10'	10" 10'	Cl mg/litre	Ca ppm	Pl	Ml	Pm	Oil %	Water %	Corr. Solids %		PPB			
15/11	Pit	1.59	57	2.2	1	14.0	2	12.4	23	9	1	8	16000	200	2.2	4.2	0	79	21	17½	TR				
16/11	Pit	1.59	57	2.4	1	14.0	2	12.4	23	10	1	8	16000	220	2.2	4.3	0	79	21	17½	TR				
17-22/11	Rig on strike																								
23/11	Pit	1.60	56	2.4	1	14.6	2	12.4	22	8	2	10	16000	200	1.8	3.6	0	78	22	17½	TR				
	Pit	1.60	57	2.3	1	14.2	3	12.4	23	8	1	10	16000	180	1.8	3.6	0	78	22	17½	TR				
24/11	1524	1.60	55	2.6	1	15.4	3	12.5	21	7	1	7	15500	180	2.5	4.3	0	78	22	17½	TR				
	Pit	1.60	59	2.5	1	16.4	3	12.6	21	8	1	3	16500	220	3.0	5.0	0	78	22	17½	TR				
25/11	Pit	1.60	58	2.4	1	16.0	3	12.7	20	7	1	4	16500	240	3.1	5.0	0	78	22	17½	TR				
	Pit	1.60	57	2.4	1	17.8	3	12.6	22	7	0	7	16500	180	2.8	4.6	0	78	22	17½	TR				
26/11	2078	1.60	55	2.4	1	17.4	3	12.5	20	7	1	6	16500	200	2.8	4.6	0	78	22	17½	TR				
	2740	1.60	53	2.7	1	17.8	3	12.7	20	7	0	2	17000	120	3.9	5.9	0	78	22	17½	TR				
27/11	2760	1.60	53	2.6	1	17.8	3	12.7	20	7	1	3	16000	120	3.8	6.0	0	79	21	17½	TR				
	2770	1.60	60	3.3	1	18.8	3	12.6	20	7	1	2	16000	120	3.7	5.1	0	79	21	17½	TR				
	2827	1.60	54	2.4	1	17.4	3	12.8	21	8	1	4	16500	160	3.3	5.0	0	78	22	17½	TR				
28/11	2886	1.60	54	2.8	1	18.0	3	12.5	21	8	0	4	17000	160	2.6	4.3	0	78	22	17½	TR				
	2895	1.60	60	2.9	1	18.2	3	12.5	22	8	0	2	16500	180	2.6	4.3	0	78	22	17½	TR				
	2933	1.60	53	2.3	1	18.0	3	12.2	20	7	0	5	17000	180	1.8	3.5	0	78	22	17½	TR				
29/11	3012	1.60	56	2.3	1	16.4	3	11.8	21	7	0	4	17000	180	1.4	2.6	0	78	22	17½	TR				
	3023	1.60	66	3.0	1	17.8	3	12.1	22	8	1	4	17000	180	1.7	3.3	0	77	23	17½	TR				

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MUD PROPERTY RECAP

DATE	DEPTH	DENSITY	VISCOSITY	FILTRATE	HY/HP IIII		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER								
					feet	PPG/Spci/SG		secs	ccs	Cake	°500psi		PV	YP	10'	10'	Cl	Ca	Pl		Mf	Pm	Oil	Water	Corr. Solids	PPB			
											1"/32"	1"/32"																	
	3068	1.60	55	2.3	1	16.6	2	11.8	20	7	0	4	17000	180	1.3	3.2		0	77	23	17½	TR							
30/11	3134	1.60	53	2.5	1	16.2	2	11.4	19	7	0	3	19000	280	1.2	3.0		0	77	23	17½	TR							
	3138	1.60	60	3.0	1	16.8	2	11.4	20	9	1	4	18500	320	1.2	3.0		0	77	23	17½	TR							
	3147	1.60	57	2.0	1	16.0	2	11.1	20	11	1	7	17000	360	1.0	2.8		0	77	23	17½	1/4							
1/12	3188	1.60	54	2.6	1	14.6	2	11.1	21	8	0	4	17000	320	1.1	2.6		0	77	23	17½	1/3							
	3249	1.60	54	2.6	1	14.2	2	11.5	20	8	0	3	18000	310	1.1	2.8		0	78	22	17½	1/4							
2/12	3295	1.60	53	2.7	1	14.4	2	11.3	20	9	1	7	18500	300	1.1	2.3		0	78	22	17½	1/4							
	3302	1.60	63	3.2	1	15.0	2	11.2	20	9	1	5	18500	320	1.0	2.3		0	78	22	17½	1/4							
2/12	3345	1.60	54	2.7	1	15.0	2	11.0	21	8	1	8	19500	280	1.0	2.7		0	78	22	17½	1/4							
3/12	3374	1.60	55	2.8	1	14.4	2	11.1	21	9	1	6	19500	300	1.0	2.2		0	78	22	17½	1/4							
	Pit	1.60	54	2.6	1	15.4	2	11.3	22	9	1	7	19500	320	1.1	2.5		0	77	23	17½	1/4							
4/12	3374	1.60	58	2.6	1	15.4	2	11.3	24	8	1	8	19500	340	1.0	2.6		0	77	23	17½	1/4							
	3374	1.60	72	3.1	1	16.0	2	11.1	26	10	1	9	19500	340	9	2.6		0	77	23	17½	1/4							
	Pit	1.60+	57	2.4	1	13.8	2	11.3	24	8	1	5	19000	320	1.1	2.5		0	78	22	17½	TR							
5/12	Pit	1.60	58	2.3	1	13.6	2	11.4	21	9	1	6	19000	240	1.1	2.8		0	78	22	17½	TR							
	Pit	1.60	63	2.6	1	14.8	2	11.1	24	9	1	8	19500	280	1.1	2.8		0	78	22	17½	TR							
6/12	Pit	1.60	57	2.4	1	13.2	2	11.6	21	8	1	5	19500	280	1.2	2.9		0	78	22	17½	TR							
	Pit	1.65	57	2.7	1	13.2	2	11.4	24	7	1	6	19500	240	1.2	2.9		0	75	25	17½	TR							
7/12	Pit	1.66	55	2.2	1	13.0	2	11.4	25	7	1	6	19000	240	1.2	2.8		0	75	25	17½	TR							

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MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spcl/ SG	VISC- OSITY secs	FILTRATE ccs	HT/HP IIII		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB	OTHER			
					Coke 1 1/2 32/mm	°500psi ccs		PV cp	YP lbs/100ft ² -gms/100 cm ²	10" 10'	10' 10'	Cl mg/litre	Ca ppm	Pl	Mf	Pm	Oil %	Water %	Corr. Solids %		Bent. Eq.			
7/12	Pit	1.66	59	2.3	1	13.2	2	11.5	23	7	1	5	19000	260	1.2	2.9	0	75	25	17 1/2	TR			
8/12	Pit	1.65	56	2.7	1	13.8	2	11.3	22	7	1	7	19000	240	1.2	2.9	0	76	24	17 1/2	TR			
	Pit	1.66	62	2.3	1	13.4	2	11.2	24	7	1	8	19000	240	1.1	2.8	0	75	25	17 1/2	TR			
9/12	Pit	1.67	65	2.2	1	13.0	2	11.0	25	8	1	10	19000	280	1.0	2.8	0	75	25	17 1/2	TR			
9/12	Pit	1.66	60	2.3	1	13.4	2	11.0	24	7	1	8	19500	280	1.0	2.7	0	75	25	17 1/2	TR			
10/12	Pit	1.65	57	2.4	1	13.6	2	11.0	23	7	1	6	19000	280	1.0	2.6	0	76	24	17 1/2	TR			
	Pit	1.65	63	2.6	1			11.0	26	9	1	8	19500	300	.9	2.5	0	76	24	17 1/2	TR			
11/12	Pit	1.65	65	2.5	1			11.1	27	11	1	13	19500	320	.9	2.6	0	76	24	17 1/2	TR			
	Pit	1.65	64	2.5	1			11.0	26	10	1	11	19500	320	.9	2.5	0	76	24	17 1/2	TR			
12/12	Pit	1.85	69	2.6	1			10.8	35	15	3	24	19500	340	.8	2.5	0	70	30	16	TR			
	Pit	1.85	68	2.5	1			11.1	34	14	3	24	19500	340	.9	2.6	0	70	30	16	TR			
13/12	Pit	1.85	63	2.8	1			10.8	32	12	2	18	19500	240	.8	2.4	0	70	30	16	TR			
	Pit	1.85	57	2.9	1			10.7	28	12	2	19	19500	280	.8	2.4	0	70	30	15	TR			
14/12	Pit	1.85	57	2.5	1			10.8	29	11	2	21	19500	300	.8	2.5	0	70	30	15	TR			
	Pit	1.85	59	2.8	1			10.7	29	11	2	20	19500	300	.7	2.4	0	70	30	15	TR			
15/12	Pit	1.85	63	2.9	1			10.7	30	11	2	18	19500	320	.7	2.2	0	70	30	15	TR			
	Pit	1.85	59	2.9	1			10.7	30	11	2	22	19500	320	.8	2.4	0	70	30	15	TR			
16/12	Pit	1.85	58	2.8	1			10.7	29	12	2	23	19500	340	.8	2.3	0	70	30	15	TR			
	Pit	1.85	58	2.9	1			10.8	29	12	2	23	19500	340	.8	2.4	0	70	30	15	TR			

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MUD PROPERTY RECAP

DATE	DEPTH	DENSITY	VISC-OSITY	FILTRATE		HT/HP fill		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER						
				feet metres	PPG/ Spcl/ SG	secs	ccs		Coke		°500psi	PV	YP	10"	10'	Cl	Ca	Pf	Mf	Pm		Oil	Water	Corr. Solids	PPB			
									1"/32	3"/32																		
17/12	Pit	1.85	57	2.8	1			10.9	29	12	2	24	19500	340	.8	2.5		0	70	30	15	TR						
	Pit	1.85	57	2.9	1			11.0	23	10	3	25	19000	340	.8	2.1		0	70	30	15	TR						
18/12	Pit	1.85	60	3.0	1			10.7	28	12	2	26	20000	320	.5	1.9		0	70	30	15	TR						
	2107	1.85	55	3.1	1			10.6	25	11	2	23	19500	320	.5	2.0		0	70	30	15	TR						
19/12	Pit	1.85	58	3.3	1			10.7	26	10	2	26	19500	340	.55	1.9		0	70	30	15	TR						
	Pit	1.85	57	3.3	1			10.5	23	10	4	23	20500	340	.6	1.7		0	70	30	15	TR						
20/12	Pit	1.85	60	3.8	1			12.0	26	10	3	28	16500	220	1.3	2.6		0	70	30	15	TR						
	Pit	1.85	58	3.7	1			11.6	25	9	3	32	16500	220	.8	2.0		0	70	30	17	TR						
21/12	Pit	1.85	58	3.8	1			11.5	26	10	3	28	16500	240	.8	1.9		0	70	30	17	TR						
	Pit	1.85	60	3.3	1			11.7	24	9	3	31	16500	200	.85	2.1		0	70	30	17	TR						
22/12	Pit	1.85	58	3.6	1			11.5	24	8	3	32	16500	220	.8	2.0		0	70	30	17	TR						
	Pit	1.86	56	3.5	1			10.8	24	8	3	25	17500	260	.65	1.9		0	70	30	15	TR						
23/12	Pit	1.85	65	4.4	1			12.1	27	13	5	35	20500	200	1.9	3.1		0	70	30	15	TR						
	Pit	1.85	56	4.4	1			11.9	24	12	5	42	16000	220	1.2	2.6		0	70	30	15	TR						
24/12	Pit	1.85	60	4.0	1			12.1	24	12	5	38	16500	240	1.3	2.6		0	70	30	15	TR						
	Pit	1.84	58	4.1	1			12.0	24	13	3	41	16500	200	1.2	2.6		0	70	30	15	TR						
25/12	Pit	1.84	57	4.1	1			12.0	24	13	4	42	16500	200	1.2	2.5		0	70	30	15	TR						
	Pit	1.83	51	4.6	1			11.9	24	12	3	37	16500	200	1.2	2.4		0	71	29	15	TR						
26/12	Pit	1.85	51	4.5	1			11.9	24	12	4	35	16000	200	1.1	2.4		0	70	30	15	TR						

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MUD PROPERTY RECAP

DATE	DEPTH	DENSITY	VISC-OSITY	FILTRATE		HT/HP III		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER				
				feet	PPG/Spct/SG	secs	ccs		Coke 1 1/2"/min	°500psi		PV	YP	10"	10'	Cl	Ca	Pf	Mf	Pm		Oil	Water	Corr. Solids	PPB	
										cp	lbs/100ft ² -gms/100cm ²	mg/litre	ppm	%	%											%
26/12	Pit	1.85	53	4.6	1			11.9	24	12	3	37	16000	200	1.0	2.3		0	70	30	15	TR				
27/12	Pit	1.85	53	4.3	1			11.8	24	13	4	38	16000	200	.9	2.2		0	70	30	15	TR				
	Pit	1.85	54	4.4	1			11.8	24	13	3	37	16000	200	1.0	2.2		0	70	30	15	TR				
28/12	Pit	1.85	57	4.3	1			11.7	25	11	3	39	15500	180	1.0	2.3		0	70	30	15	TR				
	Pit	1.85	52	4.6	1			11.7	23	10	3	42	15500	180	1.0	2.3		0	70	30	15	TR				
29/12	Pit	1.85	54	4.8	1			11.7	25	10	4	44	15500	180	.9	2.2		0	70	30	15	TR				
	Pit	1.85	57	4.8	1			11.7	26	10	4	39	15500	200	.9	2.3		0	70	30	15	TR				
30/12	Pit	1.85	55	4.8	1			11.7	25	10	4	37	15500	200	.9	2.3		0	70	30	15	TR				
	Pit	1.75	55	5.6	1			11.9	24	12	5	34	13500	220	1.0	2.2		0	73	27	14	TR				
31/12	Pit	1.75	60	6.3	1			12.0	24	13	6	57	13000	280	1.2	2.1		0	73	27	14	TR				
	Pit	1.75	57	7.5	1			12.0	23	16	22	63	12500	280	1.2	2.0		0	73	27	15	TR				
1982																										
1/1	Pit	1.71	54	7.7	2			11.8	19	13	22	59	13000	320	1.0	1.8		0	76	24	12.5	TR				
	Pit	1.71	51	8.5	2			11.8	21	14	23	68	13000	300	.9	1.7		0	76	24	12.5	TR				
2/1	Pit	1.47	48	10.5	2			9.4	15	11	4	6	16500	680	.2	.8		0	82	18	7.5	TR				