



**International
Drilling Fluids a.s.
NORGE**

OIL COMPANY: AMOCO NORWAY OIL COMPANY

WELL NO: 34/2-4

RIG: WEST VENTURE

General Summary

OPERATOR: AMOCO NORWAY OIL COMPANY

TOOL PUSHERS

MR. ALEC OGSTON
KEITH COOMBER
BEN MOHLMANN
.....

PETROLEUM ENGINEERS OPERATORS REPRESENTATIVES

MR. JACK FORD
JOHN MIDDLETON
FRED BONDER
BO MEADOWN
.....

DRILLING FLUID COMPANY:

I.D.F. ENGINEERS:

INTERNATIONAL DRILLING FLUIDS

1. PETER MYSKO
2. FRANK STAMPER
3.
4.
5.

WATER DEPTH:	396	/M
SEA BED TO K.G.:	429	/M
1. 36" HOLE DRILLED TO:	543	/M
30" CASING SET AT:	524	/M
2. 26" HOLE DRILLED TO:	814	/M
20" CASING SET AT:	804	/M
3. 17½" HOLE DRILLED TO:	2145	/M
13 3/8" CASING SET AT:	2126	/M
4. 12 1/4" HOLE DRILLED TO:	3570	/M
9 5/8" CASING SET AT:	3559	/M
5. 8½" HOLE DRILLED TO:	4107 T.D.	/M
- CASING SET AT:	-	/M

OIL COMPANY: AMOCO NORWAY OIL COMPANY

WELL NO: 34/2-4 RIG: WEST VENTURE

Time Breakdown

ENGINEERS ON LOCATION:	18TH MARCH..... 19. 85 (10.30 a.m.)
SPUD DATE:	22ND MARCH.... 19. 85
30" CASING SET ON: DAYS ON INTERVAL:	26TH MARCH..... 19. 85 5..... DAYS
20" CASING SET ON: DAYS ON INTERVAL:	5TH APRIL..... 10..... DAYS
13 3/8" CASING SET ON: DAYS ON INTERVAL:	18TH APRIL..... 13..... DAYS
9 5/8" CASING SET ON: DAYS ON INTERVAL:	18TH MAY..... 30..... DAYS
8 1/2" O.H. T.D. ON DAYS ON INTERVAL:	1ST JUNE..... 15..... DAYS
TESTING & COMPLETION: P + A 4..... DAYS
TOTAL DAYS ON WELL: 77..... DAYS

Ref. No.

Customer
AMOCO NORWAY OIL COMPANY LTD.

Block/
well No.
34/2-4

Mud System
SPUD MUD (BENTONITE/INSTAVIS) - 36" + 26" OPEN HOLE
GYP/POLYMER NON-DISPERSED - 17½" + 12 1/4" + 8½" OPEN HOLE

Rig/Platform
WEST VENTURE

Exchange Rate

Spud Date
22ND MARCH 85

T. D. Date
1ST JUNE 85

Depth -
KB to Seabed.
429 M

Casing Programme		Set at:	Depth Drilled	Time on Interval	Cost of Interval	Cost/Day	Cost/ft. M
36" O.H.	30" CSG	524 M	543 M	5 DAYS	16,894.15	3,378.83	143.17
26" O.H.	20" CSG	804 M	814 M	10 DAYS	19,019.70	1,901.97	70.18
17½"	13 3/8"	2126 M	2145 M	13 DAYS	61,262.55	4,712.50	46.00
12½" O.H.	9 5/8" CSG	3559 M	3570 M	30 DAYS	101,098.46	3,369.94	70.94
8½" O.H.		PLUG + ABANDON	4107 M	15 DAYS	37,100.15	2,473.34	69.09
Totals			4107 M	73 DAYS	253,375.01	3,224.30	57.31

Engineers
FRANK STAMPER/ PETER MYSKO

Materials (Top 10 inc. barite when not of I. D. F. Supply)	Product	Qty Used	Qty Program:	Variance
	BARITE	1138 M.T.	885 M.T.	253 M.T.
	INSTAVIS	164 sxs/25 kg	110 sxs	54 sxs
	F.L.R.	257 sxs/25 kg	540 sxs	283 sxs
	F.L.R. XL	177 sxs/25 kg	-	-
	IDFLO	544 sxs/25 kg	660 sxs	116 sxs
	CAUSTIC	576 sxs/25 kg	308 sxs	268 sxs
	BENTONITE	1082 sxs/50 kg	20 M.T.	34 M.T.
	GYP SUM	730 sxs/40 kg	700 sxs	30 sxs
	F:C:L.	563 sxs/25 kg	-	-
	LIGNITE	175 sxs/25 kg	-	-

Problems -
(Inc. Drilling Days Lost)

**2 FISHING JOBS; 3 WASHHOOLS; GAS KICK REQ 14.2 PPG TO KILL;
DIFFERENTIALLY STUCK PIPE.**

Completed by:
 Date:

CHEMICALS CONSUMPTION 36" HOLE + 30" CASING

SPUD 22.03.85

DRILL 543 M

SHOE AT 524 M

INTERVAL COST = \$ 16,894.15

		<u>SACKS USED</u>	<u>COST</u>
BARITE	MT	9	\$ 693.00
BENTONITE	MT	450	\$ 6,966.00
INSTAVIS	25 KG	52	\$ 9,100.00
CAUSTIC SODA	25 KG	17	\$ 135.15
			<hr/>
			\$ 16,894.15

DAYS ON INTERVAL	5
COST PER DAY	\$ 3,378.83
METRES DRILLED	543
COST PER METRE	\$ 143.17
BBL MUD BUILT	2,780
COST PER BBL	\$ 6.08

CHEMICALS CONSUMPTION 26" OPEN HOLE + 20" CASING

DRILLED TO 814 M

SHOE AT 804 M

INTERVAL COST = \$ 19,019.70

		<u>SACKS USED</u>	<u>COST</u>
BENTONITE	50 KG	240	\$ 3,715.20
INSTAVIS	25 KG	87	\$ 15,225.00
CAUSTIC SODA	25 KG	10	\$ 79.50
			<hr/>
			\$ 19,019.70

DAYS ON INTERVAL 10

COST PER DAY \$ 1,901.97

METRES DRILLED 271

COST PER METRE \$ 70.18

BBLs MUD BUILT 4,586

COST PER BBL \$ 5.15

CHEMICALS CONSUMPTION 17½" HOLE + 13 3/8" CASING

DRILLED FROM 814 - 2145 M

SHOE AT 2126 M

INTERVAL COST = \$ 61,262.55

		<u>SACKS USED</u>	<u>COST</u>
BARITE	MT	173	\$ 13,321.00
BENTONITE	50 KG	375	\$ 5,805.00
INSTAVIS	25 KG	25	\$ 4,375.00
CAUSTIC SODA	25 KG	181	\$ 1,438.95
IDF FLR	25 KG	199	\$ 14,308.10
IDFLO	25 KG	281	\$ 7,727.50
GYPSUM	40 KG	298	\$ 2,309.50
IDVIS	25 KG	31	\$ 6,758.00
IDTEX	25 KG	80	\$ 5,632.00
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			\$ 61,675.05
		IDFLO CREDIT	\$ 412.50
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			\$ 61,262.55

DAYS ON INTERVAL 13
COST PER DAY \$ 4,712.50
METRES DRILLED 1331
COST PER METRE \$ 46.00
BBLs MUD BUILT 4,716
COST PER BBL \$ 12.99

CHEMICALS CONSUMPTION 9 5/8" CASING

DRILLED FROM 2145 - 3570 M

SHOE AT 3559 M

INTERVAL COST = \$ 101,098.46

		<u>SACKS USED</u>	<u>COST</u>	<u>TOTAL COST</u>
BARITE	MT	631	\$ 77.00	\$ 48,587.00
BENTONITE	MT	17	\$ 15.48	\$ 263.16
CAUSTIC SODA	25 KG	267	\$ 7.95	\$ 2,122.65
IDF FLR	25 KG	58	\$ 71.90	\$ 4,170.20
IDF FLR XL	25 KG	129	\$ 75.00	\$ 9,675.00
GYPSUM	40 KG	273	\$ 7.75	\$ 2,115.75
DETERGENT	200 LT	15	\$ 140.00	\$ 2,100.00
BICARBONATE	50 KG	9	\$ 12.50	\$ 112.50
IDTEX	25 KG	15	\$ 70.40	\$ 1,056.00
LIGNITE	25 KG	149	\$ 25.00	\$ 3,725.00
IDCIDE L	25 LT	39	\$ 318.00	\$ 12,402.00
DEFOAMER	25 LT	7	\$ 94.60	\$ 662.20
IDFLO	25 KG	278	\$ 27.50	\$ 7,645.00
FCL	25 KG	360	\$ 9.95	\$ 3,582.00
IDFILM	200 LT	3	\$ 960.00	\$ 2,880.00
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				\$ 101,098.46

DAYS ON INTERVAL	30
COST PER DAY	\$ 3,369.94
METRES DRILLED	1425
COST PER METRE	\$ 70.94
BBLs MUD BUILT	2,370
COST PER BBL	\$ 42.65

CHEMICALS CONSUMPTION 8½" OPEN HOLE DRILLING

DRILL - 537 M

INTERVAL COST = \$ 37,100.15

		<u>SACKS USED</u>	<u>COST</u>	<u>TOTAL COST</u>
BARITE	MT	325	\$ 77.00	\$ 25,025.00
CAUSTIC SODA	25 KG	101	\$ 7.95	\$ 802.95
IDF FLR XL	25 KG	48	\$ 75.00	\$ 3,600.00
GYPSUM	40 KG	159	\$ 7.75	\$ 1,232.25
DETERGENT	200 LT	4	\$ 140.00	\$ 560.00
BICARBONATE	50 KG	5	\$ 12.50	\$ 62.50
FCL	25 KG	203	\$ 9.95	\$ 2,019.85
DEFOAMER	25 LT	12	\$ 94.60	\$ 1,135.20
LIGNITE	25 KG	26	\$ 25.00	\$ 650.00
IDCIDE L	25 LT	5	\$ 318.00	\$ 1,590.00
IDTEX	25 KG	6	\$ 70.40	\$ 422.00
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				\$ 37,100.15

DAYS ON INTERVAL	15
COST PER DAY	\$ 2,472.34
METRES DRILLED	537
COST PER METRE	\$ 69.09
BBLs MUD BUILT	501
COST PER BBL	\$ 74.05

TOTAL CHEMICAL CONSUMPTION WELL 34/2-4

	<u>QUANTITY USED</u>	<u>COST \$</u>	<u>TOTAL COST \$</u>
BARITE	1138 MT	\$ 77.00	\$ 87,626.00
BENTONITE	1082 SACKS	\$ 15.48	\$ 16,749.36
INSTAVIS	164 SACKS	\$ 175.00	\$ 28,700.00
CAUSTIC SODA	576 SACKS	\$ 7.95	\$ 4,579.20
IDF FLR	257 SACKS	\$ 71.90	\$ 18,478.30
IDFLO	544 SACKS	\$ 27.50	\$ 14,960.00
GYPSUM	730 SACKS	\$ 7.75	\$ 5,657.50
IDVIS	31 SACKS	\$ 218.00	\$ 6,758.00
IDTEX	101 SACKS	\$ 70.40	\$ 7,110.40
IDF FLR XL	177 SACKS	\$ 75.00	\$ 13,331.25
DRILLING DETERGENT	19 DRUMS	\$ 140.00	\$ 2,660.00
BICARBONATE	14 SACKS	\$ 12.50	\$ 175.00
LIGNITE	175 SACKS	\$ 25.00	\$ 4,375.00
IDCIDE L	44 DRUMS	\$ 318.00	\$ 13,992.00
DEFOAMER	19 DRUMS	\$ 94.60	\$ 1,797.40
F.C.L.	563 SACKS	\$ 9.95	\$ 5,601.85
IDFILM	3 DRUMS	\$ 960.00	\$ 2,880.00
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			\$ 235,431.26
		CREDIT AMOUNT\$	56.25
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	<u>FINAL TOTAL MUD COST</u>		<u>\$ 235,375.01</u>

Mud Volume Record Sheet

WELL NO: 34/2-4

DATE FROM: 23 MARCH 1985

TO: 9 APRIL 1985

Day No.	Vol. Mud Chem. added	Vol. Diesel added	Vol. Water added	Total Vol. Mud Made	Cum. Vol. Mud Made	Mud Lost on Surface	Cum. Mud lost on surface	Mud Lost subsurf	Cum. Mud Lost subsurf	Vol. of mud in pits	Vol. of mud in flow-line etc.	Hole Vol.	Total mud Vol.
1				1600	1600	150	1650						1450
2				200	1800	200	350						1450
3				480	2280	480	830						1450
4				500	2780	500	1330						1450
5				1500	4330	1400	2730						1600
6				-	4330	.	2730						1600
7				450	4780	450	3180						1600
8				-	-	-	-						1600
9				-	-	-	-						1600
10				675	5455	1171	4351			1600			1600
11				-	5455	-	4351			1600			1600
12				-	5455	-	4351			1600			1600
13				336	5791	-	4351			1936			1936
14				1585	7376	2886	7237			635			635
15				302	7678	-	7237			937			937
16				763	8441	-	7237			1700			1700
17				1420	9861	200	7437			2040	-	880	2920
18				630	10491	252	7689			2100	-	1198	3298

Mud Volume Record Sheet

WELL NO: 34/2-4

DATE FROM: 10 APRIL 1985

TO: 27 APRIL 1985

Day No.	Vol. Mud Chem. added	Vol. Diesel added	Vol. Water added	Total Vol. Mud Made + CHEM.	Cum. Vol. Mud Made	Mud Lost on Surface	Cum. Mud lost on surface	Mud Lost subsurf	Cum. Mud Lost subsurf	Vol. of mud in pits	Vol. of mud in flow-line etc.	Hole Vol. + RISER	Total mud Vol.
19				551	11042	470	8159			1870	VOLUME FROM 13 3/8" CASING DISPLACEMENT ← 41	1509	3379
20			100	100	11142	270	8429		HOLE WASHOUT 45	1314		1850	3164
21			0	0	11142	254	8683	WASHOUT 40	85	970		1900	2870
22			950	950	12092	233	8916	0	85	1440		2147	3587
23					12092	0	8916	0	85	1364		2223	3587
24					12092	0	8916	0	85	1364		2223	3587
25					12092	0	8916	0	85	1364		2223	3587
26					12092	0	8916	0	85	1405		2223	3637
27					12092	DUMP 220	9136	TO OMT DISPL. 405	490	1700		1312	3012
28					12092		9136		490	1836		1206	3042
29					12092	437	9573		490	1290	1315	2605	
30			200	200	12292	100	9673		490	1520	1364	2884	
31			100	100	12392	34	9707		490	1520	1430	2950	
32			200	200	12592	131	9838		490	1520	1499	3019	
33			280	280	12872	27	9865		490	1760	1512	3272	
34					12872	113	9978		490	1615	1544	3159	
35			400	400	13272	608	10586		490	1390	1561	2951	
36			540	540	13812	50	18636		490	1874	1567	3441	

Mud Volume Record Sheet

WELL NO: 34/2-4

DATE FROM: 28 APRIL 1985

TO: 15 MAY 1985

Day No.	Vol. Mud Chem. added	Vol. Diesel added	Vol. Water added	Total Vol. Mud Made	Cum. Vol. Mud Made	Mud Lost on Surface	Cum. Mud lost on surface	Mud Lost subsurf	Cum. Mud Lost subsurf	Vol. of mud in pits	Vol. of mud in flow-line etc.	Hole Vol. + RISER	Total mud Vol.
37	28/4/85		250	250	14062	64	10700		490	2010		1617	3627
38					14062		10700		490	2010		1617	3627
39					14062	403	11103		490	1579		1645	3224
40			400	400	14462	250	11353		490	1709		1665	3374
41					14462	231	11584		490	1457		1686	3143
42					14462	57	11641		490	1166		1690	3086
43					14462	32	11673		490	1349		1705	3054
44					14462	244	11917		490	1080		1730	2810
45					14462	20	11937		490	1058		1752	2790
46					14462	50	11987		490	770		1770	2740
47					14462	50	12037		490	902		1788	2690
48					14462	91	12128		490	770		1829	2599
49					14462	6	12134		490	760		1833	2593
50					14462	8	12142		490	745		1840	2585
51					14462	54	12196		490	665		1866	2531
52					14462	49	12245		490	585		1877	2482
53					14462	12	12257		490	445		2028	2473
54					14462		12257		490	445		2028	2473

Mud Volume Record Sheet

WELL NO: 34/2-4

DATE FROM: 16 MAY 1985

TO:

Day No.	Vol. Mud Chem. added	Vol. Diesel added	Vol. Water added	Total Vol. Mud Made	Cum. Vol. Mud Made	Mud Lost on Surface	Cum. Mud lost on surface	Mud Lost subsurf	Cum. Mud Lost subsurf	Vol. of mud in pits	Vol. of mud in flow-line etc.	Hole Vol.	Total mud Vol.
55	16/5				14462		12257		490	445		2028	2473
56	17/5				14462	20	12277		490	1190		1263	2453
57	18/5	9 5/8	CSG FINISH		14462		12277		490	1190		1263	2453
58	19/5	START	8½ HOLE		14462	63	12340		490	1235		1155	2390
59	20/5				14462	6	12346		490	1220		1164	2384
60	21/5				14462	19	12365		490	1200		1165	2365
61	22/5		49	49	14511		12365		490	1240		1174	2414
62	23/5		28	28	14539		12365		490	1360		1182	2442
63	24/5				14539	44	12409		490	1210		1188	2398
64	25/5				14539	4	12413		490	1190		1204	2394
65	26/5				14539	24	12437		490	1045		1325	2370
66	27/5		WATER + BARITE	44	14583		12437		490	1200		1214	2414
67	28/5			212	14795		12437		490	1409		1217	2626
68	29/5					4	12441		490	1390		1232	2622
69	30/5			50	14845		12441		490	1425		1247	2672
70	31/5			94	14939	40	12481		490	1468		1258	2726
71	1/6					11	12492		490	1461		1265	2726
72	2/6			24	14963		12492		490	1465		1274	2739

8.10.85

Well No. : 34/2-4

Subject : Source Rock Analyses.
Screening Analyses Data
and Interpretation.

Client : AMOCO

Authors : Malvin Bjorøy
Peter Hall
Kjell Arne Bakken

23 OKT. 1985

REGISTRERT
OLJEDIREKTORATET

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
3250	0.67	70	Sh/Clst : m to drk gy
		20	Sst/S : vy calc, pyr, glauc, Q Sh/Clst intl with Sst/S
		10	Lst : lt gy to lt ol gy Pyr Coal ad Rust, Fe, paint, plastic
3270	0.66	50	Sh/Clst : m to drk gy
		50	Sst/S : calc, pyr, glauc, Q Sh/Clst intl with Sst/S
			Lst : lt gy Pyr Rust, Fe Paint, plastic, fibers
3290	0.65	70	Sh/Clst : m to drk gy
		30	Sst/S : calc, pyr, glauc, Q Sh/Clst intl with Sst/S
			Lst : lt ol gy to lt gy Pyr Rust, Fe Paint, plastic, fibers
3310	0.92	80	Sh/Clst : m to drk gy
		20	Sst/S : calc, glauc, Q Sh/Clst intl with Sst/S
			Lst : pnk gy Rust, Fe, fibers
	0.82		BULK
3330	1.05	80	Sh/Clst : m gy to drk gy
		20	Sst/S : calc, glauc, Q Sh/Clst intl with Sst/S
			Lst : pnk gy Rust, Fe, fibers
3350	0.92	80	Sh/Clst : m gy to drk gy
		20	Sst/S : calc, glauc, Q Sh/Clst intl with Sst/S
			Lst : pnk gy Rust
3370	0.67	90	Sh/Clst : m gy to drk gy
		10	Sst/S : calc, glauc, Q Sh/Clst intl with Sst/S
			Lst : lt gy to pnk gy Pyr Rust

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
=====			
3390	0.70	50	Sh/Clst : m gy to drk gy
		50	Coal ad Fibers, Fe
3410	0.73	70	Sh/Clst : m gy to drk gy, slt
		10	Sst/S : calc, glauc, Q
		20	Coal ad Lst : lt gy to pnk gy, prt xtl Rust
3430	0.83	80	Sh/Clst : m gy to drk gy, slt
		10	Sst/S : calc, glauc, Q
		10	Coal ad Lst : lt gy to pnk gy Dol : pnk gy Rust, Fe
3450	0.90	90	Sh/Clst : m gy to drk gy, slt, pyr
		10	Sst/S : calc, glauc, Q Lst : lt gy to pnk gy Dol : pnk gy Pyr, Glauc Coal ad Plastic, paint
3470	0.78	90	Sh/Clst : m gy to drk gy, slt, pyr
		10	Sst/S : calc, glauc, Q Lst : lt gy to pnk gy Dol : pnk gy Pyr, Glauc Coal ad Plastic, paint
	0.77		BULK
3490	0.85	90	Sh/Clst : m gy to drk gy, slt
	0.63	10	Dol : drk ol gy Sst/S : calc, glauc, Q
3510	0.85	90	Sh/Clst : m gy to drk gy, slt
		10	Dol : drk ol gy Sst/S : calc, glauc, Q Rust
3530	0.82	90	Sh/Clst : m gy to drk gy, slt
		10	Dol : drk ol gy Sst/S : calc, glauc, Q Rust

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
3550	0.87	80	Sh/Clst : m gy to drk gy, slt
		10	Sst/S : calc, glauc, Q
		10	Sh/Clst : blk red, calc, glauc
			Dol : drk ol gy
			Pyr
			Rust
3569	0.83	70	Sh/Clst : m gy to drk gy, slt
	0.21	20	Sh/Clst : blk red, prt slt
		10	Dol : drk ol gy
			Sst/S : Q, calc, glauc
			Rust, fibers
	0.80		BULK
3578	1.35	50	Sh/Clst : m gy to drk gy, slt
		15	Sh/Clst : blk red, prt slt
		5	Dol : drk ol gy
		30	Cem
			Rust, fibers, rubber
3587	1.77	80	Sh/Clst : m gy to drk gy, slt
		15	Lst : gy red
		5	Sh/Clst : blk red, prt slt
			Rust, Fe, Coal ad, plastic
			Glauc, Pyr, paint, fibers
3596	1.45	80	Sh/Clst : m gy to drk gy, slt
		15	Lst : gy red
		5	Sh/Clst : blk red, prt slt
			Rust, Fe, Coal ad, plastic
			Glauc, Pyr, paint, fibers
			** All lith vy rusty **
3605	1.64	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Sh/Clst : blk red, prt slt
		10	Lst : gy red
			Cem, rust, Fe, fibers
			Pyr
3614	2.04	70	Sh/Clst : m drk gy to blk, prt slt, prt calc
	0.20	20	Sh/Clst : blk red, prt slt
		10	Lst : gy red
			Cem, rust, Fe, fibers, plastic

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
3623	1.90	40	Sh/Clst : m drk gy to blk, prt slt, prt calc
	0.20	30	Sh/Clst : blk red, prt slt
		20	Rust, fibers, plastic, paint, Pyr, Cem, Fe
3632	1.70	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
	0.23	30	Sh/Clst : blk red, prt slt
		20	Rust, fibers, plastic, paint, Pyr, Cem, Fe
3641	1.85	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
	0.22	30	Sh/Clst : blk red, prt slt
		20	Rust, fibers, plastic, paint, Pyr, Cem, Fe
3650	2.08	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : blk red, prt slt
		15	Lst : gy red
		20	Rust, Fe, fibers, plastic, paint, Pyr, Cem
3659	1.60	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : blk red, prt slt
		15	Lst : gy red
		20	Rust, Fe, fibers, plastic, Pyr, paint, Cem
3668	1.74	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : blk red, prt slt
		15	Lst : gy red
		20	Rust, Fe, fibers, plastic, paint, Pyr, Cem
3677	1.42	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : blk red, prt slt
		15	Lst : gy red
		20	Rust, Fe, fibers, plastic, paint, Pyr, Cem, Coal ad
3686		100	Coal ad, Cem, fibers, caved mat PS

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
3695		100	Coal ad, Cem, fibers, caved mat, plastic, rust PS
3704	1.80	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : blk red, prt slt
		15	Lst : gy red
		20	Rust, Fe, fibers, plastic, paint, Pyr, Cem, Coal ad
3713	2.45	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : blk red, prt slt
		15	Lst : gy red
		20	Rust, Fe, fibers, plastic, paint, Pyr, Cem, Coal ad
3722	2.04	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Sh/Clst : blk red, prt slt
		10	Cem, fibers, Coal ad, rust Pyr
3731	2.10	90	Sh/Clst : m drk gy to blk, prt vy slt, prt calc
		10	Coal ad, paint, plastic, fibers, Pyr, rust, nut shells
3740	1.90	90	Sh/Clst : m drk gy to blk, prt vy slt, prt calc
		10	Coal ad, paint, plastic, fibers, rust, Pyr Sh/Clst : blk red, prt slt
3749	1.93	90	Sh/Clst : m drk gy to blk, prt vy slt, prt calc
		10	Coal ad, paint, plastic, fibers, rust, Pyr, caved mat Sh/Clst : blk red, prt slt
3758	1.19	100	Sh/Clst : m drk gy to blk, prt slt, prt calc Coal ad, paint, plastic rust, caved mat Pyr
3767	1.95	90	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Coal ad, paint, plastic, rust, Pyr, caved mat

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
3776	1.80	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		20	Coal ad, paint, plastic, rust, Pyr, caved mat
3785	1.52	90	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Coal ad, paint, plastic, rust, caved mat
3794	1.34	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		20	Caved mat, Fe, rust, fibers
3803	1.40	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		20	Caved mat, Fe, rust, fibers, paint, plastic
3812	1.28	90	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Caved mat, Fe, rust, fibers, paint, plastic
3821		100	Caved mat and cont PS
3827	1.55	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		50	Caved mat and cont
3857	2.10	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
	0.12	50	Sst/S : Q, calc, pyr Fibers, rust, caved mat Pyr
3866	1.94	60	Sh/Clst : m drk gy to blk, prt slt, prt calc
	0.14	20	Sh/Clst : blk red, prt slt
		20	Sst/S : Q, calc, pyr Fibers, rust Pyr
3875	2.10	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		5	Sh/Clst : blk red, prt slt
		10	Sst/S : Q, calc, pyr
		5	Caved mat Fibers, rust

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
3884	1.83	85	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sst/S : Q, calc, pyr
		5	Caved mat Pyr
3893	1.85	40	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Sh/Clst : blk red, prt slt
		15	Sh/Clst : m gy
		35	Sst/S : Q, calc Mica ad Pyr
3902	1.40	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : m gy
		35	Sst/S : Q, calc, pyr Mica ad, rust
3911	1.95	60	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : m gy
		25	Sst/S : Q, calc, pyr Rust, Fe, Mica ad, fibers Pyr
3920	1.70	60	Sh/Clst : m drk gy to blk, prt slt, prt calc
		15	Sh/Clst : m gy
		20	Sst/S : Q, calc, pyr
		5	Sh/Clst : blk red, prt slt Rust, Fe, Mica ad, fibers Pyr
3929	1.69	60	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Sh/Clst : m gy
		30	Sst/S : Q, calc, pyr Sh/Clst : blk red, prt slt Rust, fibers, Fe
3938	1.72	50	Sh/Clst : m drk gy to blk, prt slt, prt calc
		40	Sst/S : Q, calc, pyr
		10	Caved mat Rust, Fe, Mica ad

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
3947	0.68	90	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Sst/S : Q, calc Rust, Fe, fibers, Mica ad Pyr BULK
3956	0.58	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Sst/S : Q, calc
		10	Caved mat Rust, Fe, fibers, Mica ad Pyr BULK
3965	0.70	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Sst/S : Q, calc
		10	Caved mat Rust, Fe, fibers, Mica ad Pyr BULK
3974	1.94	80	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Sst/S : Q, calc
		10	Caved mat Rust, Fe, fibers, Mica ad Pyr
3983	2.00	90	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Caved mat Sst/S : Q, calc Rust, Fe, fibers, Mica ad Pyr
3992	1.89	90	Sh/Clst : m drk gy to blk, prt slt, prt calc
		10	Caved mat Sst/S : Q, calc Sh/Clst : blk red, prt slt Rust, Fe, fibers, Mica ad Pyr

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
=====			
4001	1.86	80	Sh/Clst : m drk gy to blk, prt slt
		20	Sh/Clst : m gy, calc Lst : drk red brn Sst/S : Q Fibers, paint, plastic, rust
4010	1.75	80	Sh/Clst : m drk gy to blk, prt slt
		20	Sh/Clst : m gy, calc Lst : drk red brn Sst/S : Q Fibers, paint, plastic, rust
4019	1.85	40	Sh/Clst : m drk gy to blk, prt slt
		10	Sh/Clst : m gy, calc
		50	dd, Mica ad, fibers, rust, Sh/Clst : blk red, prt slt Fe, plastic, Q, Pyr
4028	1.96	40	Sh/Clst : m drk gy to blk, prt slt
		10	Sh/Clst : m gy, calc
		50	dd, Mica ad, fibers, rust, Sh/Clst : blk red, prt slt Fe, plastic, Q, Pyr
4037	1.96	60	Sh/Clst : m drk gy to blk, prt slt
	0.62	20	Sh/Clst : m gy, calc
		20	dd, Mica ad, fibers, rust, Sh/Clst : blk red, prt slt Fe, plastic, Q, Pyr
4046	1.98	80	Sh/Clst : m drk gy to blk, prt slt
		15	Sh/Clst : m gy, calc
		5	Lst : drk red brn Sh/Clst : blk red, prt slt Rust, Fe, fibers
4055	2.00	80	Sh/Clst : m drk gy to blk, prt slt
		15	Sh/Clst : m gy, calc
		5	Lst : drk red brn Rust, Fe, fibers

Description of lithology for well 34/2-4. AMOCO.

Depth (m)	TOC %	Lith. %	Description
4064	1.93	40	Sh/Clst : m drk gy to blk, prt slt
		40	Sh/Clst : m gy, calc
		20	Sst/S : Q, calc
			Lst : drk red brn
			Rust, Fe, fibers, Mica ad, paint
4073	2.20	20	Sh/Clst : m drk gy to blk, prt slt
		30	Sh/Clst : m gy, calc
		25	Sst/S : Q, calc
		25	Coal
			Mica ad, fibers, rust
			Pyr
4082	2.26	30	Sh/Clst : m drk gy to blk, prt slt
		30	Sst/S : Q, calc
		40	Coal
			Lst : drk red brn
			Rust, fibers, plastic
			Pyr
4091	2.90	30	Sh/Clst : m drk gy to blk, prt slt
		30	Sst/S : Q, calc
		40	Coal
			Sh/Clst : m gy, calc
			Lst : drk red brn
			Rust, fibers, plastic
			Pyr
4100	1.81	30	Sh/Clst : m drk gy to blk, prt slt
		30	Sst/S : Q, calc
		40	Coal
			Sh/Clst : m gy, calc
			Lst : drk red brn
			Rust, fibers, plastic
			Pyr
4107	1.95	10	Sh/Clst : m drk gy to blk, prt slt
		90	Sst/S : Q, calc
			Lst : drk red brn
			Rust, Fe, fibers, Mica ad
			Termination at 4107 m

Alphabetic list of abbreviations and words used for the lithology description. This list is used by GEOLAB NOR.

Abbreviation Meaning

=====

ad	additive
arg	argillaceous
bit	bituminous
bl	blue/bluish
blk	black
bloc	blocky
brn	brown/brownish
BULK	All of the sample, minus obvious contamination
C/Coal	Coal
c/coaly	coaly
calc	calcareous
CARB	Inorganic carbon (oxidated state)
Cem	Cement (added during drilling)
cem	cemented (natural cement)
Cgl	Conglomerate
chk	chalky
Cl	clay
Clst	Claystone
Coal ad	Coal-like mud additive eg. lignosulphonate
col	colour
Cont	Contamination(s)
crs	coarse
cut	cut (colour of solvent under UV-light)
dd	dried drill mud additive (mostly bentonite)
dk/drk	dark
Dol	Dolomite
dol	dolomitic
dsk	dusky
f/fin	fine
Fe	Iron (contamination during or after drilling)
fib/fibers	fibers used as a mud additive
fis	fissile
fl	fluorescence (under UV-light)
frags	fragments

Alphabetic list of abbreviations and words used for the lithology description. This list is used by GEOLAB NOR.

Abbreviation Meaning

=====

Fsp	Feldspar(s)
Glauc	Glaucinite
glauc	glaucinitic
gn	green/greenish
Grn	Grains
grn	grained
gy	grey/greyish
Gyp	Gypsum (often a drill mud additive)
hd	hard
intl	interlaminated
lam	laminated
Lig	Lignite
Lith	Lithology/Lithologies
Lst	Limestone
lt	light
lu	lustre/lustrous
m	medium/moderate
main	mainly
mat/mater	material
Mica ad	Mica as a drill mud additive
mic	micaceous
mimic	micromicaceous
Mrl	Marl
mrl	marly
ns	nutshell
ol	olive
Oo	Oolite
or	orange
pa/pl	pale
paint	paint mainly from the mud-tank
pi	pink
plastic	plastic fragments from additives, bags or equipment
prt	part/partly
PS	Poor Sample (can not be used for further analysis)

Alphabetic list of abbreviations and words used for the lithology description. This list is used by GEOLAB NOR.

Abbreviation Meaning

=====

pu	purple
Pyr	Pyrite
pyr	pyritic
Q	Quartz
red	red/reddish
rnd	rounded
rust	undetermined material covered with rust
S	Sand
s	sandy
Sh	Shale
Sid	Siderite
sid	sideritic
Slt/Sltst	Siltstone
slt	silty
Sst	Sandstone
st	stained
str	strings
sl	slightly
sub	sub
TC	Total carbon content (reduced and oxidated state)
TOC	Total organic carbon content (reduced state)
Tuf	Tuff
tuff	tuffaceous
var	various/variable
vy	very
w	white
wx	waxy
xtl	crystalline
y	yellow/yellowish
?	possible
!	probable
**	Note/Observe