Attachment-2

Mobil Exploration Norway Inc.

WELL RECORD SHEET **WELL NAME** 33/9-9

COMPANY: Mobil Exploration Norway Inc.	STATUS: Successful Appraisal
AREA / BLOCK: Norway 33/9	RIG & PICK UP DATE: Borgny Dolphin 22 July 77
LATITUDE: 61° 17' 10.1928" N	SPUDDED: 27 July 77 — REACHED T. D.: 29 Sept 77
LONGITUDE: 01° 54' 26.0466" E	RIG RELEASE DATE: 19 November 1977
CLASSIFICATION: Appraisal	RIG MONTHS: 3.7 — TRADE DATA:
K. B.: 25.3m D.F.: 25.0m — G. L.	WATER DEPTH: 145m
T. D.: 3100m	CASING: 30" at 244m, 20" at 475m, 13 3/8" at 1984m, 9 5/8" at 3067.5m

LOGS: ISF/SONIC 245.5-3100m, FDC/CNL 475.5-3100m, DLL 2350-3100m, HDT 2300-3100m
GR Spectroscopy 2350-3100, Long Space Sonic 1990-3098.5, 12CheckShots (355-2955m)
RFT 15 zones in Jurassic

STRATIGRAPHIC TOPS

UNIT	DEPTH	SUBSEA	THICKNESS / REMARKS
Paleocene	1660.0 m	-1635.0m	187.6 m
U. Cretaceous	1847.6 m	-1822.6m	548.7 m
L. Cretaceous	2396.3 m	-2371.3m	16.2 m
Barremian Limestone	2407.0 m	-2382.0m	5.5 m
Jurassic Hot Shale	2412.5 m	-2387.5m	0.5 m
M. Jurassic Brent Fm.	2413.0 m	-2388.0m	91.5 m
Base zone 1 Brent Fm.	2432.6 m	-2407.6m	19.5 m
Top zone 2/3 Brent Fm	2432.6 m	-2407.6m	24.4 m
Top zone 3 (Est)	2443.5 m	-2418.5m	
Top zone 4 Brent Fm.	2457.0 m	-2332.0m	14 m
Top zone 5	2471.0	-2446.0m	33.5 m (Fault at 2471m, + 44m measured against 33/9-3)
L. Jurassic Dunlin Fm.	2504.5 m	-2479.5m	210.5 m
Top Dunlin Sand	2528.4 m	-2503.4m	63.6 m
Base Dunlin Sand	2592.0 m	-2567.0m	
L. Jurassic Statfjord Fm.	2715.0 m	-2690.0m	100 m
Base Upper Unit Stat. Fm.	2815.0 m	-2790.0m	
T.D.	3100.0 m	-3075.0m	

ADDITIONAL INFORMATION: Depths for cores 1 through 16 are 11.3m too high.

Core	1	2402.7-2421 m	100% rec.	Core	9	2707 - 2711 m	63% rec.	DEPTH CORRECT:			
"	2	2421 -2433 m	97% "	"	10	2711 - 2721 m	80%	"	Core	17 2793 -2807.5m	47%
"	3	2433 -2435 m	25% "	"	11	2721 - 2729 m	81%	"	"	18 2807.5-2818.4m	80%
"	4	2435 -2444 m	100% "	"	12	2729 - 2743.5 m	90%	"	"	19 2814.4-2826.2m	100%
"	5	2444 -2457 m	85% "	"	13	2743.5 - 2757.3 m	90%	"	"	20 2826.2-2837.5m	88%
"	6	2457 -2471 m	93% "	"	14	2757.3 - 2763 m	9%	"	"	21 2837.5-2853.5m	94%
"	7	2471 -2489.3m	100% "	"	15	2763 - 2775.3 m	97%	"	"	22 2853.5-2866 m	96%
"	8	2489.3-2506.5m	95% "	"	16	2775.3 - 2781.7 m	100%	"	"	23 2866 -2876.5m	100%

NOTE: ALL LOG TOPS PICKED ON/OR CORRELATED TO THE IES OR ISF/SONIC LOG UNLESS OTHERWISE NOTED.
Two runs for sidewall cores resulted in 51 of 60 possible SWC in the Jurassic.

Paleontology / Palynology

Interval Meters-KB	Thickness-M	Stage/Substage	System/Subsystem
254-506	± 252		Tertiary-Pliocene
512-548	± 36		Tertiary-Upper Miocene
554-905	± 351		Tertiary-Middle Miocene
914-977	± 63		Tertiary-Lower Miocene
986-1352	± 366		Tertiary-Oligocene
1358-1388	± 30		Tertiary-Upper Eocene
1394-1406	± 12		Tertiary-Middle Eocene
1412-1628	± 216		Tertiary-Lower Eocene-Paleocene
1634-1844	± 210		Tertiary-Paleocene
Unconformity	-		
1850-1856	± 6	Late Maastrichtian	Upper Cretaceous
1862-1922	± 60	Maastrichtian	Upper Cretaceous
1928-2078	± 50	Early Maastricht Late Campanian	Upper Cretaceous
2081-2393	± 312	Early Campanian - ? Santonian	Upper Cretaceous
Unconformity			
2396	± 3	Barremian	Lower Cretaceous
Unconformity			
2399.0-2417.7	± 18.7	?Bathonian (? t/V1)	Middle Jurassic
2422.2-2431.0	± 8.8	Earliest Bathonian - Bajocian (V1)	Middle Jurassic
2435.5-2492.0	± 56.5	Early Bajocian (V2)	Middle Jurassic
2492.5-2519.0	± 26.5	Late Toarcian (W)	Lower Jurassic
2522.0-2555.0	± 33	Early Toarcian (X1)	Lower Jurassic
2558.0-2597.0	± 39	Domerian (X2)	Lower Jurassic
2600.0-2693.0	± 93	Carixian-Late Sinemurian (Y)	Lower Jurassic
2696.0-2762.0	± 66	?Early Sinemurian-Hettangian (Z)	Lower Jurassic
2764.0-3100.0	± 33	Indeterminate Red Beds	?Triassic

Note: The summary is based on telex report by Robertson Research, dated 18 January, 1978.

TEST DATA (INDICATE IF DST, PT, OR FIT) (TIMES IN MINUTES, PRESSURE IN P.S.I.)

NO	INTERVAL	TOTAL FLOW PERIOD	RECOVERY AND REMARKS	MAX. PRESSURE FFP	FSIP	HH
DST 2	2847.5-2852.5m Statfjord Fm	7:19	1350 BWPD on 3/4" choke 14200 ppm Chlorides 30 WHP	4057	5960	7027
DST 3	2800 - 2803.5m Statfjord Fm	14:40	9034 BOPD on 3/4" choke 1500 WHP GOR 412,37.8° API	4387	5912	6890
DST 5	2742 - 2745m Statfjord Fm	21:47	7577 BOPD on 5/8" choke 2158 WHP GOR 545, 38.0° API	4982	5852	6731
DST 7	2531 - 2537.5m Dunlin Sand	25:54	8314 BOPD on 1 1/4" choke 1130 WHP GOR 569,34.4° API	3538	5295	6240
DST 8	2458 - 2460.7m Brent Fm	35:15	9224 BOPD on 3/4" choke 2300 WHP GOR 1058,37.6° API	5041	5539	6014
DST 9	2426 - 2432.8m Brent Fm	24:28	10500 BOPD on 50/64" choke 2300 WHP GOR 1058,37.6° API	5249	5488	5974

ABBREVIATIONS:

NP	NOT PRESENT	ER	ERODED	SL	SONIC LOG
NL	NOT LOGGED	F	FAULTED	DL	DENSITY LOG
NR	NOT REACHED	GR	GAMMA RAY LOG	NL	NEUTRON LOG
		PT	PALEO TOP	ST	SAMPLE TOP
				SD	SCOUT DATA

BY: N. Tank

DATE: 27 January, 1978 REVISED: PAGE ..... OF .....

Form. MOEX N 75/H-1-76

STATFJORD WELL 33/9-9 TEST RESULTS

FIRST TEST INTERVAL (STATFJORD SAND): 2847.5-2852.5 m (66 perfs.)

DST No. 1

Misrun: Could not open downhole (APR) test valve.

DST No. 2

Choke (in.)	Rate (BWPD)	WHP (psig)	Oil (%)	Chlorides (ppm)	BHT (°F)	FBHP (psig)	Flow Period
3/4	1350	30	trace	14,200	196	4057	7:19

Initial Hydrostatic Pressure	6970 psig
Initial Buildup Pressure	-
Final Buildup Pressure	5960 psig
Final Hydrostatic Pressure	7027 psig

Remarks: Produced sand throughout test, declining from 0.2% to 0.05% (1200 to 300 ptb).

SECOND TEST INTERVAL (STATFJORD SAND): 2800-2803.5 m (46 perfs.)

DST No. 3

Choke (in.)	Rate (BOPD)	WHP (psig)	Sep. Press (psig)	GOR (SCF/ bbl)	BS&W (%)	Grav. (°API)	FBHP (psig)	BHT (°F)	Flow Period
3/4	9034	1500	675	412	0.0	37.8	4387	-	4:26
5/8	4929	1243	660	528	0.0	38.8	5177	-	2:42
1/2	4435	1760	610	507	0.0	38.8	5258	-	2:19
1/4	1595	2750	585	458	0.0	39.0	5678	187	5:18

Initial Hydrostatic Pressure	7113 psig	
Initial Buildup Pressure	-	
Final Buildup Pressure	5912 psig	
Final Hydrostatic Pressure	6890 psig	(Field reading - difficult to read due to gauge vibration).

Remarks: Sand was produced over initial flow period, declining from 90 ptb to about 1-4 ptb just before the flow period ended. No further sand production was noted in succeeding tests.

THIRD TEST INTERVAL (STATFJORD SAND): 2742-2745 m (40 perfs.)

DST No. 4

Misrun: Could not open downhole (APR) test valve.

DST No. 5

Choke (in.)	Rate (BOPD)	WHP (psig)	Sep. Press. (psig)	GOR (SCF/ bbl)	BS&W (%)	Gravity (°API)	FBHP (psig)	BHT (°F)	Flow Period
1/4	2906	2849	430	606	0.0	32.4	5603	-	6:25
3/8	3316	2780	435	671	0.0	38.8	5535	-	3:07
1/2	6218	2300	775	526	0.0	38.5	5106	-	3:10
5/8	7577	2158	795	545	trace	38.0	4982	-	4:20
5/16	3225	2920	460	522	trace	38.7	5637	193	4:45

Initial Hydrostatic Pressure	6877 psig
Initial Buildup Pressure	-
Final Buildup Pressure	5852 psig
Final Hydrostatic Pressure	6731 psig

Remarks: Sand produced after each rate change (20 ptb), but cleaned up rapidly. Sand began producing more or less continuously, in bursts, on 5/8" choke (40 ptb) indicating formation was breaking down.

DST No. 6

Choke (in.)	Rate (BOPD)	WHP (psig)	Sep. Press (psig	GOR (SCF/ bbl)	BS&W (%)	Grav. (°API)	FBHP (psig)	BHT (°F)	Flow Period
7/16	5420	2760	465	618	trace	-	5569	-	1:30
1/4	1883	3040	435	722	trace	38.6	5759	193	3:15

Initial Hydrostatic Pressure	6736 psig
Initial Buildup Pressure	5885 psig
Final Buildup Pressure	5857 psig
Final Hydrostatic Pressure	6753 psig

Remarks: Same zone tested as in DST No. 5 in an unsuccessful effort to obtain bottom hole samples. Maximum rate was designed to avoid sand production, and no sand was observed other than a few grains upon initial clean up on 7/16" choke.

FOURTH TEST INTERVAL (DUNLIN SAND): 2531-2537.5 m (85 perfs.)

DST No. 7

Choke (in.)	Rate (BOPD)	WHP (psig)	Sep. Press (psig)	GOR (SCF/ bbl)	BS&W (%)	Gravity (°API)	FBHP (psig)	BHT (°F)	Flow Period
1/4	4027	1940	405	688	0.0	-	4457	-	8:20
1/2	4613	1817	420	695	0.0	-	4302	-	4:12
9/16	4887	1760	405	683	0.0	-	4219	-	2:13
3/4	7514	1370	705	509	0.0	-	3780	-	4:07
7/8	8120	1260	705	531	0.0	-	3653	-	1:56
1 1/4	8314	1130	705	569	trace	-	3538	-	1:26
23/64	2777	2105	360	656	0.0	34.4	4729	181	3:40

Initial Hydrostatic Pressure	6328 psig
Initial Buildup Pressure	-
Final Buildup Pressure	5295 psig
Final Hydrostatic Pressure	6240 psig

Remarks: Sand production of 1-6 ptb after each choke size change. On 1 1/4" choke sand production observed on continuous basis at about 120 ptb.

FIFTH TEST INTERVAL (BRENT SAND): 2458-2460.7 m (36 perfs.)

DST No. 8.

Choke (in.)	Rate (BOPD)	WHP (psig)	Sep. Press. (psig)	GOR (SCF/ bbl)	BS&W (%)	Grav. (°API)	FBHP (psig)	BHT (°F)	Flow Period
20/64	2279	2920	300	849	trace	37.6	5349	-	8:02
26/64	4099	2790	395	821	"	-	5221	-	3:34
30/64	5008	2750	475	788	"	-	5201	-	2:43
40/64	7311	2535	720	763	"	-	5102	-	3:00
var.	5194	2440	705	756	0.0	-	5278	-	1:30
22/64	2758	3010	430	876	0.0	-	5405	-	1:39
var.	7493	2430	410	1213	0.0	-	5083	-	2:32
48/64	9224	2300	735	1058	0.0	-	5041	-	3:32
21/64	1757	3045	400	868	0.0	-	5443	-	2:43
24/64	3300	2995	450	806	0.0	-	5417	177	6:00

Initial Hydrostatic Pressure	6109 psig
Initial Buildup Pressure	-
Final Buildup Pressure	5539 psig
Final Hydrostatic Pressure	6014 psig

Remarks: There were five unscheduled shut ins during test due to leaking chicksans and changing burners. No sand was produced other than a small amount during initial cleanup and a few grains after each increase in test rate. Bottomhole samplers were left in the lubricator at end of test.

SIXTH TEST INTERVAL (BRENT SAND): 2426-2432.8 m (90 perfs.)

DST NO. 9

Choke (in.)	Rate (BOPD)	WHP psig	Sep. Press. (psig)	GOR (SCF/ bbl)	BS&W (%)	Grav. (°API)	FBHP (psig)	BHT (°F)**	Flow Period
22/64	2868	3030	440	837	0.1 to 0.6	38.5	5430	-	6:02
28/64	4643	2910	530	841	0.15	38.4	5371	-	2:48
34/64	5673	2825	615	824	0.1	-	5324	-	2:39
40/64	8313	2570	690	884	0.1 to 0.4	38.4	5264	-	3:35
46/64	9250	2500	720	856	0.0	36.8	5257	-	2:19
50/64*	10500	2370	765	900	0.0	37.4	5249	-	2:21
22/64	2615	3085	465	955	0.0	-	5439	-	4:27

* Adjustable choke

** Temperature gauge failed to work

Initial Hydrostatic Pressure	6102 psig
Initial Buildup Pressure	-
Final Buildup Pressure	5486 psig
Final Hydrostatic Pressure	5974 psig

Remarks: Five liter samples and sand detector showed small amounts down to traces of sand throughout the test. At the highest rate there were no measurable amounts.

JWG/TCMc/

CORE RECORD

WELL: 33/9-9

NO.	DRILLERS' DEPTH INTERVAL	DRILLERS' DEPTH RECOVERY FT/M - (%)	CORRECTED DEPTH INTERVAL	CORRECTED DEPTH RECOVERY FT/M - (%)	REMARKS
1*	2402.7-2421.0	18.3 -(100)	2415.0-2433.3	18.3 -(100)	-
2*	2421.0-2433.0	11.65-(97)	2433.3-2445.8	11.65 -(93)	2444.95 - 2445.8 (LCD) NR
3*	2433.0-2435.0	0.50-(25)	2445.8-2446.3	0.5 -(100)	-
4*	2435.0-2444.0	9.0 -(100)	2446.3-2456.7	9.0 -(75)	2453.3 - 2454.7 (LCD) NR
5*	2444.0-2457.0	11.0 -(85)	2458.7-2471.0	11.0 -(89)	2469.7 - 2471.0 (LCD) NR
6*	2457.0-2471.0	13.0 -(93)	2471.0-2484.0	13.0 -(100)	-
7*	2471.0-2489.3	18.3 -(100)	2486.4-2505.5	18.3 -(96)	2497.5 - 2498.3 (LCD) NR
8*	2489.3-2506.5	16.3 -(95)	2507.8-2524.8	16.3 -(96)	2524.1 - 2524.8 (LCD) NR
9*	2707.7-2711.0	2.4 -(73)	2719.0-2721.4	2.4 -(100)	-
10*	2711.0-2721.0	8.0 -(80)	2721.4-2731.4	8.0 -(80)	2729.4 - 2731.4 (LCD) NR
11*	2721.0-2729.0	6.5 -(81)	2732.9-2740.4	6.5 -(87)	2739.4 - 2740.4 (LCD) NR
12*	2729.0-2743.5	13.0 -(90)	2740.4-2754.8	13.0 -(90)	2750.2 - 2751.6 (LCD) NR
13*	2743.5-2757.3	12.4 -(90)	2754.8-2769.0	12.4 -(87)	2767.2 - 2769.0 (LCD) NR
14*	2757.3-2763.0	0.5 -(9)	2769.0-2773.2	0.6 -(11)	2769.6 - 2773.2 (LCD) NR
15*	2763.0-2775.3	12.0 -(98)	2773.2-2786.5	12.3 -(92)	2781.9 - 2782.9 (LCD) NR
16*	2775.3-2781.7	6.4 -(100)	2786.5-2792.9	6.4 -(100)	-
17	2793.0-2807.5	6.9 -(47)	2795.0-2809.1	6.8 -(48)	2799.2-2800.5;2803.1-2809.1(LCD) NR
18	2807.5-2818.4	8.7 -(80)	2809.1-2818.0	8.7 -(98)	2817.8 - 2818.0 (LCD) NR
19	2818.4-2826.2	7.8 -(100)	2818.0-2826.0	7.8 -(98)	2825.8 - 2826.0 (LCD) NR
20	2826.2-2837.5	10.0 -(88)	2826.0-2836.0	10.0 -(100)	-

LCD = Log Corrected Depth
NR = No Recovery
*NOTE: Core Nos. 1 through 16 were recorded 11.3 meters to high.

CORE RECORD

WELL: 33/9-9

NO.	DRILLERS' DEPTH INTERVAL	RECOVERY ~~FT~~/M - (%)	CORRECTED DEPTH INTERVAL	RECOVERY ~~FT~~/M - (%)	REMARKS
21	2837.5-2853.5	15.0 -(94)	2836.0-2853.2	15.0 -(86)	2842.5-2843.5;2844.7-2845.0; 2848.0-2848.9 (LCD) NR
22	2853.5-2866.0	12.0 -(96)	2853.2-2866.0	12.0 -(94)	2865.2 - 2866.0 (LCD) NR
23	2866.0-2876.5	10.5 -(100)	2866.0-2876.5	10.5 -(100)	-

Mobil Oil Corporation Mobil Technical Services Inc.

Company MOBIL EXPLORATION NORWAY, INC.   Well 33/9-9

Drilling Summary

Mud Properties

DATE 1977 Mud Report	DEPTH	WEIGHT LBS/GAL	FUNNEL VIS, SEC.	API W.L. CC	PH	% SOLIDS	% SAND	% OIL	CL, PPM	O/W RATIO	HT/HP W.L. CC	FL TEMP.
July 24		8.8	158									
25		8.8	125		9.1							
26		8.8	133		9.0							
27	205	9.0	185		9.0							
28	249	9.0	195		9.0							
29	249	9.0	76	5.7	8.4	4	0	0	12000			
30	438	9.1	83	5.4	8.4	5	0	0	12000			
31	486	9.1	66	6.4	9.5	3	1/2	0	13000			
Aug. 1	486	9.2	65	8.7	9.4	4	3/4	0	14000			
2	486	8.8	46	4.1	10.0	3	0	0	14000			
3	635	9.2+	54	4.9	10.0	7	1 1/2	0	14000			
4	1011	9.6	48	6.2	8.7	8	3/4	0	14500			
5	1303	9.7	48	7.9	8.8	7	1/2	0	14500			
6	1351	10.0	49	6.7	8.8	10	1	0	15000			
7	1550	10.5	49	7.6	8.5	12	3/4	0	15000			
8	1757	10.5	56	8.9	8.7	14	1 1/4	0	14500			
9	1993	10.4	70	13.8	8.4	12	1/2	0	15000			
10	1993	10.9	54	11.2	9.0	12	3/4	0	14000			
11	1993	10.9	63	11.2	9.2	13	1/2	0	14500			
12	1993	11.5	48	12.1	8.7	16	1/2	0	14000			
13	1993	10.5	45	13.0	8.6	13	1/2	0	13500			
14	1993	10.4	45	14.2	8.6	13	1/4	0	12000			
15	1993	10.4	49	13.0	8.5	13	1/4	5	11500			
16	1993	10.9	45	13.8	8.5	14	1/4	5	12000			
17	1993	10.9	70	7.2	8.0	14	1/2	3	11500			
18	1993	10.9	72	7.6	8.4	12	1/2	3	8200			
19	1993	10+	63	8.0	8.4	12	2/3	3	9000			
20	1999	9.4	41		10	Building 13.5 PPG mud						
21	2132	13.2	43	5.2	10.5	19	TR	2	5000			
22	2254	14.5	48	7.0	10.4	23	1/4	1	5000			

Mud Material Consumption

DATE	BARYTE MT	BENTONITE 50kg	CMC, 25kg	CAUSTIC 25kg	50kg Soda Ash	Lime 25kg	H-921 25kg	25kg Ligno-sulf.	50lb Dex-trid	50lb Dris-pac	Soltex 50lb	Con Det 55gal	B-Free 55gal	Torq-Trim 55gal	Diesel gal	EZ Spot 55gal	Mil-plate 55gal	Mica 25kg		Other material
July 24		275		6	6															
25		40																		
26																				
27						6														
28																				
29		63					60													
30		67		4	2	5														
31		60		16	2		11													
Aug. 1																				
2		111	63	28	6		28	15												
3				8	10		18													
4				6	3		18													
5	23		14	9	3		26													
6	54		12	4			16		7	6		1								
7				9					24	13		1								
8	33			10				5	27	4	65	1								
9	35		9	58	9			56			45	1								
10	60			15	3			24			13									
11	38			15				24												
12																				
13	3.5									1			6	2	2394					
14	27.8									1			12	6	7980	8				
15	12.5																			
16	14.8		31	20	10			20	47		90						4			40 (25kg Wallnut
17	21.9																	40		
18	9.3																			
19	6.7	180			30			80	45	2				2						
20	23.6	205		10	5			38	18	6		1								17(50kg) Bicarb
21	93	55			1			40									5			
22	68	30		10	7			10												

Bits, Hydraulics, Parameters

DATE	BIT NO.	SIZE	TYPE	JETS	HOURS RUN	DEPTH OUT	M	M / HOUR	CONDITION T	B	G	G.P.M.	PRESSURE P.S.I.	D.P. ANNL VEL. FT./MIN.	PUMP HHP	ΔP AT BIT	BIT HHP	JET NOZZLE VEL. FT./SEC.	WT. ON BIT 1000 LBS.	ROTARY R.P.M.	TOTCO AT BIT CHANGE
July 24																					
25																					
26																					
27	1	26" +36"HO	Smith TS25	Open	8 1/2	249	79	9.3				962	650	19	360				10	150	
28																					
29	2	17 1/2	SEC S3SJ	3x20								1058	1850	93	1140	1100	680	370	4-5	60	
30	RR2	"	"	"	7	485	236	33.7	2	1	I	1058	2100	93	1300	1100	680	370	5-15	130	
31	RR2	+A-Z	Underreamer									1039	1900	39	1150				5-8	50	
Aug. 1	RR2	+A-Z	Underreamer			485	237					673	800	25	310						
2																					
3	RR2	17 1/2	SEC S3SJ	3x18								1020	2900	88	1730	1580	940	440	15-20	140	
4	RR2	"	"	"	19 1/2	936	450	23.1	6	5	I	1049	2900	91	1770	1750	1070	453	10-15	140	
5	3	17 1/2	HTC OSC-3J	18x22x22								1097	3000	97	1920	1100	700	357	15-25	120-140	
6	RR3	17 1/2	"	"	26	1347	411	15.8	6	4	I	1077	3100	94	1950	1090	680	350	15	100	
7	4	17 1/2	HTC OSC-3AJ	18x22x22								1077	3250	94	2040	1090	680	350	20-40	100-120	
8	4	"	"	"								981	3200	86	1830	950	540	318	45	125	
9	4	"	"	"								933	3250	83	1770	850	460	302	45	125	
10	4	17 1/2	HTC OSJ-3AJ	18x22 x22	52 1/2	1993	646	12.3													
11	RR4	17 1/2	"	"																	
12																					
13																					
14																					
15																					
16	RR4	17 1/2	HTC OSJ-3AJ	24x24 x24																	
17																					
18																					
19	5	12 1/4	SEC S-44	18x18x18																	
20	5	"	"	"								803	3050	156	1430	1000	470	346	10-20	60-100	
21	5	"	"	"								673	2350	132	920	990	390	290	20-25	160	
22	5	"	"	"	29	2254	261	9.0	6	4	I	606	3000	118	1050	880	310	261	30	145	

Mobil Oil Corporation

Mobil Technical Services Inc.

Company MOBIL EXPLORATION NORWAY, INC. Well 33/9-9

Drilling Summary

DATE 1977 Mud Report	DEPTH	MUD PROPERTIES										MUD MATERIAL CONSUMPTION										
		WEIGHT FUNNEL LBS/GAL. VIS, SEC.	API W.L. CC	PM	% SOLIDS	% SAND	% OIL	CL, PPM	O/W RATIO	HT/HP W.L. CC	FL TEMP.	BARYTE MT	BENT-ONITE 50kg	CMC, 25kg	CAUSTIC 25kg	Lignosulfo. 25kg	Soda Ash 50kg	Dextrid 50lb	Mil-plate 55 gal	Dris-pac 50lb	Torq-Trim 55gal	Soltex 50lb
Aug.23	2388	14.5 46	5	9.5	23	TR	TR	6000				40.4		4	10	65		9	2			
24	2420	14.4 49	4.6	9.5	24	1/4	TR	6000				Missing										
25	2433	14.4 48	4.2	9.5	23	1/4	TR	6000				Missing										
26	2435	14.4 47	4.4	9.5	25	1/4	TR	5500				8.5		4	4	10		7		1		
27	2456	14.4 49	4.2	10.0	24	½	TR	5500				1.5	35			14	5	24	2			
28	2471	14.4 49	3.8	10.0	24	½	TR	5500				Missing										
29	2489	14.4 50	3.8	10	24	1/4	TR	5500				40.5	81		11	38		28			1	
30	2506	14.4 52	3.4	10	25	½	0	5500				23.1			3	15		8		2	1	
31	2604	14.4 53	3.8	10	26	3/4	0	5500				19	7		10	18		16		1	1	
Sept 1	2646	14.4 53	3.8	10	26	3/4	0	4800				47	49		5	46		13		2		
2	2707	14.4 51	3.4	10	26	3/4	0	4600				9						6				
3	2707	14.4 51	3.8	9.5	26	½	0	4000														
4	2707	14.4 47	3.8	9.5	26	1/4	0	4400														
5	2707	14.4 46	3.8	9.5	26	1/4	0	4400				2.9	10		2							2
6	2707	14.4 48	3.8	9.5	26	1/4	0	4400					20		5							
7	2707	14.4 43	3.8	10.0	26	TR	0	4400				44	24		6		1					
8	2718	14.4 46	3.8	9.6	26	TR	0	4600				6.3	6							1	1	
9	2729	14.4 46	4.0	9.9	25	1/4	0	4600				14.8	40	5				11				
10	2744	14.4 46	3.8	9.8	25	1/4	0	4400				12.5	27	5								40
11	2760	14.4 46	4.2	10	25	TR	0	4200				6	10									
12	2757	14.4 47	3.8	9.8	25	1/4	0	4400				3.5	5								1	
13	2781	14.4 47	3.6	9.8	25	1/4	0	4200				1.5	10	5	6	12		10				
14	2781	14.4 48	3.6	9.8	25	1/4	0	4200				8	5									
15	2781	14.4 48	3.8	10	25	1/4	0	4200				31	60					11				
16	2781	14.4 48	3.2	9.8	25	1/4	0	4200				15		5							1	
17	2781	14.4 47	3.8	9.6	25	1/4	0	4200				16	15									
18	2812	14.4 48	3.6	9.4	25	1/4	0	4200				6	4		4							15
19	2824	14.4 48	4.0	9.6	25	1/4	0	4200				16	6	9				12			1	15
20	2833	14.4 48	3.6	9.5	25	1/4	0	4200				27	27		10							
21	2841	14.4 49	3.7	9.8	24	1/4	0	4000				6.2	5	4	4	10		10			1	

DATE 1977 Mud Report	DEPTH	BITS									HYDRAULICS							PARAMETERS		
		BIT NO.	SIZE	TYPE	JETS	HOURS RUN	DEPTH OUT	M	M/ hour	CONDITION T B G	G.P.M.	PRESSURE P.S.I.	ANNL VEL. FT./MIN.	PUMP HHP	ΔP AT BIT	BIT HHP	JET NOZZLE VEL. FT./SEC.	WT. ON BIT 1000 LBS.	ROTARY R.P.M.	TOTCO AT BIT CHANGE
Aug.23	2388	6	12 1/4	SEC S-44	16-16-16	24	2402	113	4.7	4 1 I	577	3000	113	1010	1270	430	314	30-40	140	
24	2420	7	12 7/32	XSEN C-221							433	2500	85	630				10-20	65-80	
25	2433	7	"	"							481	2500	94	700				15	60	
26	2435	7	"	"		13½	2435	33	2.4		437	2400	86	610				10-15	55	
27	2456	8	"	"							457	2360	90	630				18-22	90	
28	2471	8	"	"							433	2350	85	590				20-25	115	
29	2489	8	"	"							462	2560	91	690				19-22	90-95	
30	2506	8	"	"		27½	2506	71	2.6		460	2600	91	700				20	95	
31	2604	9	12 1/4	Smith SDS	15-15-15						510	3020	99	900	1280	380	317	40-42	120	
Sept 1	2646	9	"	"	"	38½	2646	139	3.6	5 4 I	510	3020	99	900	1280	380	317	40-42	120	
2	2707	10	"	HTC X3	"						510	3020	99	900	1280	380	317	40-42	120	
3	2707	10	"	"	"															
4	2707	10	"	"	"															
5	2707	10	"	"	"															
6	2707	10	"	"	"															
7	2707	10	"	HTC C-221	"	10½	2707	61	5.8	2 4 I										
8	2718	RR 7	12 7/32	XSEN C-221		4½	2711	4	.9		443	2140	87	550				18	83	
9	2729	11	"	"		23	2743	32	1.4		404	2120	80	500				20	90	
10	2744	12	"	"							419	2070	82	510				18	94	
11	2760	12	"	"		11	2757.3	14.3	1.3		419	2070	82	510				23	150	
12	2757	13	"	XSEN C-20		1.3	2763	5.7	4.4		419	2050	82	500				29	90	
13	2781	RR12	"	XSEN C-221		22½	2781.7	18.7	.8		419	2060	82	500				20	98	
14	2781	14	12 1/4	XSEN C-18			2781.7													
15	2781	15	"	HTC X1G	16-16-16															
16	2781	15	"	"	"															
17	2781	15	"	"	"	REAMING														
18	2812	16	12 7/32	XSEN C-221							380	2100	74	470				5	60	
19	2824	16	"	"							420	2300	82	560				20	100	
20	2833	16	"	"							440	2100	86	540				20	95	
21	2841	16	"	"							440	2300	86	590				25-27	105	

Mobil Oil Corporation Mobil Technical Services Inc.

Company MOBIL EXPLORATION NORWAY, INC. Well 33/9-9

Drilling Summary

MUD PROPERTIES

DATE 1977 Mud Report	DEPTH	WEIGHT LBS/GAL	FUNNEL VIS, SEC.	API W.L. CC	PH	% SOLIDS	% SAND	% OIL	CL, PPM	O/W RATIO	HT/HP W.L. CC	FL TEMP.
Sep. 22	2854	14.4	49	3.6	9.5	24	1/4	0	3900		13.4	
23	2866	14.4	49	3.9	10.0	24	1/4	0	4000		13.8	
24	2876	14.4	52	4.1	9.5	25	½	0	4000		14.0	
25	2934	14.4	50	4.0	9.5	24	½	0	4000		13.8	
26	2984	14.4	52	3.8	9.0	26	3/4	0	4000		13.8	
27	3039	14.4	52	4.0	10.0	26	½	0	4000		13.8	
28	3100	14.4	52	3.8	10.0	26	½	0	4000		13.8	
29	3100	14.4	49	4.5	10.0	26	½	0	3500		14.4	
30	3100	14.4	48	4.5	10.0	26	1/4	0	3500		14.4	
Oct. 1	3100	14.4	48	4.5	10.0	26	1/4	0	3500		14.4	
2	3100	14.4	49	4.8	10.0	25	1/4	0	3500		14.8	
3	3100	14.4	49	4.4	10.0	26	1/4	0	3600		14.6	
4	3100	14.4	49	4.2	10.0	26	1/4	0	3700		13.6	
5	3100	14.4	50	4.0	10.0	26	1/4	0	3700		13.6	
6	3100	14.4	50	3.5	9.8	26	1/4	0	3800		13.8	
7	PB3067	14.4	50	3.5	9.8	26	1/4	0	3800		14.0	
8	PB3067	14.4	48	3.5	9.7	25	1/4	0	3800		13.9	
9	PB3067	14.4	50	3.6	9.6	26	1/4	0	3800		14.0	
10	PB3002	14.4	50	3.5	10.0	26	1/4	0	3600		13.8	
11	PB3002	14.4	49	3.9	9.8	25	1/4	0	3000		14.2	
12	PB3002	14.4	49	3.9	9.8	25	1/4	0	3000		14.4	
13	PB3002	14.4	50	4.3	10.0	25	1/4	0	3000		14.8	
14	PB 2824	14.4	45	4.8	10.0	25	TR	0	3800		14.9	
15	PB2824	14.4	50	4.8	10.0	25	TR	0	3500		15.0	
16	PB2824	14.4	47	4.8	10.0	25	TR	0	3800		15.0	
17	PB2770	14.4	50	4.6	10.0	25	TR	0	4000		14.6	
18	PB2770	14.4	50	4.2	10.0	24	TR	0	4700		14.5	
19	PB2770	14.4	53	4.6	9.5	25	TR	0	6700		15.0	
20	PB2770	14.4	53	4.6	9.5	25	TR	0	6200		14.6	
21	PB2770	14.4	52	4.2	9.5	24	TR	0	6200		14.8	

MUD MATERIAL CONSUMPTION

DATE	BARYTE MT	BENTONITE 50kg	CMC, 25kg	CAUSTIC 25kg	Ligno-Sulfc 25kg	Soda Ash 50kg	Dex-trid 50lb	Mil-plate 55gal	Dris-pac 50lb	Torq-Trim 55gal	Sol-tex 50lb	Desco 25lb	Lime 25kg	Alum-ste-rate 25kg	Bicarb of soda 50kg
Sep. 22	6.0	10													
23	6.6			2	6							2			
24	78.4			6	24		15			2					
25	59.3	30		6	36		27					10			
26	19.4		12	9	15		12					9	5		
27	42.7														
28	12.7			10	28								5		
29															
30															
Oct. 1	2.7	5		7	8								2		
2	1.4	2		2	10								2		
3	17.5	10		4	10		3						1		
4	3.6											4	1		
5										1					
6	5.5	10	1	1					2				10		
7	3.5	5							1						
8	15.3	2				2									
9	5.7	19	3	3	11							2			3
10	33.5	25	4		5										2
11	15.7	8	2												
12	3.0	10	1												
13	31.2	21	4	2											
14	32.0	53	9	4	3	3									
15		11	2												
16	4.3	22	6		9	1									
17	30.4	23	11		16	1									
18	19.0	9	6			1									
19		6	4						1						
20															
21	24.6	8	13		4	1									1

BITS / HYDRAULICS / PARAMETERS

DATE	BIT NO.	SIZE	TYPE	JETS	HOURS RUN	DEPTH OUT	M	M/HOUR	COND-ITION T	B	G	G.P.M.	PRES-SURE P.S.I.	ANNL VEL. FT./MIN.	PUMP HHP	ΔP AT BIT	BIT HHP	JET NOZZLE VEL. FT./SEC	WT. ON BIT 1000 LBS.	ROTARY R.P.M.	TOTCO AT BIT CHANGE
Sep. 22	RR 16	12 7/32	XSEN C-221		22	2853	18	0.82				420	2250	83	550				25	110	
23	17	"	"									400	2100	78	490				25	110	
24	17				20	2876	23	1.15				410	2200	80	530				25	110	
25	18	12 1/4	SMITH SVH	3x15								505	3000	99	880	1260	370	313	40	115	
26	18				28	2946	70	2.5	3	7	I	520	3100	102	940	1340	410	323	45	115	
27	19	12 1/4	SMITH SDT	3x14	20	3016	70	3.5	5	7	I	490	3200	96	910	1570	450	350	45-50	115	
28	20	"	HTC X1G	3x14								505	3200	99	940	1660	490	360	45-50	115	
29	20	"	"	3x14	22½	3100	84	3.7	4	6	I										
30																					
Oct. 1	20	12 1/4	HTC X1G	3x14	CIRCULATION																
2																					
3	RR 20	12 1/4	HTC X1G	3x14	CIRCULATION																
4	RR 20	"	"	3x14	CIRCULATION																
5	RR 20	"	"	3x14	CIRCULATION																
6																					
7																					
8	21	8½	SMITH SVH		CHECK TRIP																
9–21																					

Mobil Oil Corporation Mobil Technical Services Inc.

Company MOBIL EXPLORATION NORWAY, INC. Well 33/9-9

Drilling Summary

MUD PROPERTIES

DATE 1977 Mud Report	DEPTH	WEIGHT LBS/GAL	FUNNEL VIS, SEC.	API W.L. CC	PH	% SOLIDS	% SAND	% OIL	CL, PPM	O/W RATIO	HT/HP W.L. CC	FL TEMP.
Oct. 22	PB2770	14.4	53	4.6	9.5	24	TR	0	6200		14.8	
23	PB2691	14.4	50	4.4	9.5	24	TR	0	6200		14.6	
24	PB2691	14.4	53	3.8	9.5	24	TR	0	5600		14.3	
25	PB2691	14.4	53	3.7	9.5	24	TR	0	5800		14.3	
26	PB2476	14.4	53	3.8	9.5	24	TR	0	5800		14.3	
27	PB2476	14.4	54	3.8	9.5	24	TR	0	5200		14.3	
28	PB2476	14.4	53	3.6	9.5	24	TR	TR	5400		14.1	
29	PB2476	14.4	52	3.6	9.5	24	TR	TR	5400		14.1	
30	PB2476	14.4	53	3.6	9.5	24	TR	TR	5400		14.1	
31	PB2476	14.4	53	3.6	9.5	24	TR	0	5400		14.1	
Nov. 1	PB2476	14.4	52	3.6	9.5	24	TR	0	5800		14.1	
2	PB2476	14.4	54	3.4	9.C	23	0	0	5200		13.9	
3	PB2454	14.4	54	3.4	9.5	24	0	0	5200		13.9	
4	PB2454	14.4	53	3.4	9.5	24	0	0	5400		13.9	
5	PB2454	14.4	53	3.4	9.5	24	0	0	5400		13.9	
6	PB2374	14.4	54	3.4	9.5	24	0	0	5400		14.1	
7	PB1754	14.4	54	3.6	9.5	24	0	0	5400		14.3	
8	PB1754	14.4	55	3.6	9.5	24	0	0	5200		14.3	
9	PB1754	14.4	65	3.6	9.5	24	0	0	4800		-	
10	PB1599	14.4	60	3.6	9.5	24	0	0	5200		-	
11	PB 200	14.4	60	3.6	9.5	24	0	0	5400		-	

MUD MATERIAL CONSUMPTION

DATE	BARYTE MT	BENTONITE 50kg	CMC, 25kg	CAUSTIC 25kg	Lignosulfo 25kg	Soda Ash 50kg	Dextrid 50lb	Milplate 55gal	Drispac 50lb	Torqtrim 55gal	Soltex 50lb	Dexco 25lb	Alumsterate 25kg	Bicarb of soda 50kg
Oct. 22	63	67	11	1	14 sx									
23		8	21		10									1
24	6													2
25		3				1							1	2
26	12.5	47												
27	8.5	4	1											
28	9.4													
29														
30	32	4							1					
31	9.7													
Nov. 1		5		2										
2	24.4	75	6	2	10									2
3	28.6			4										
4	9.4		2	1					1					
5	3.3				1									
6														
7	19.1								1					
8	18.3		1	1										
9	38.2	52	6	2	9				1					5
10	6.4													1
11	12.7		1											1

BITS / HYDRAULICS / PARAMETERS

DATE	BIT NO.	SIZE	TYPE	JETS	HOURS RUN	DEPTH OUT	FOOTAGE	FEET/HOUR	CONDITION B	CONDITION T	CONDITION G	G.P.M.	PRESSURE P.S.I.	ANNL VEL. FT./MIN.	PUMP HHP	ΔP AT BIT	BIT HHP	JET NOZZLE VEL. FT./SEC	WT. ON BIT 1000 LBS	ROTARY R.P.M.	TOTCO AT BIT CHANGE
Oct. 22																					
23																					
24																					
25																					
26																					
27																					
28																					
29																					
30																					
31																					
Nov. 1																					
2																					
3																					
4																					
5																					
6																					
7																					
8	22	8½	SMITH SVH	NONE		DRILL OUT CEMENT PLUG															
9	RR 22	"	"	"		CIRCULATION															
10																					
11																					