

AMOCO AUSTRALIA PETROLEUM COMPANY

CORE DESCRIPTION

Well Name: Amoco Broadmere 1 Core No: 1 Date: June 4, 1984
 Location: O.P. 191 Northern Territory Interval: 3295' - 3302'4" (1004.32 - 1006.55m)
 Formation: Corcoran Recovery: 100% Geologist: McCullough/Noyes
 Mud: Type: Bentonite Gal Bit: Type: E.H. Star
 Weight: 8.9 lb/gal Size: 8.4 Core Diam: 4"
 Viscosity: 38 W.O.B.: 12,000 lb R.P.M.: 60
 Pump Pressure: 200 to 1000 psi Time to Cut: 3.75 hrs.

ESTIMATED POROSITY	DEPTH	GRAPHIC LOG	GAS	SHOWS		DESCRIPTIONS
	Scale 1:12"			VIS	FL.	
None	3295'		None	None	None	<p><u>Diorite Sill:</u> dk green with white and pink mottling very homogeneous, coarsely x-tallic ($\approx 1\text{cm}$) intergrowths of dark and light silicate minerals, 40% euhedral to anhedral Feldspars (30% plagioclase, 10% K-feldspar), 55% dark green Ferromagnesian minerals, euhedral to anhedral, long prismatic to bulky tabular pyroxenes and amphiboles, 5% euhedral tabular crystals, non-metallic, brassy sheen. Trace pyrite, chlorite. No quartz observed, Basic to Intermediate composition.</p> <p>Fractures: dark green-lined (chlorite or serpentine?), subvertical fracture faces common slickensided perpendicular to coring orientation. Trace amounts of calcite present along fracture faces.</p>
	3296'					
	3297'					
	3298'					
	3299'					
	3300'					
	3301'					
	3302' 3302'4"	None	None	None		

Scale 1" = 1foot

(2 of 3)
PR85/15B

NORTHERN TERRITORY
GEOLOGICAL SURVEY

SIDEWALL CORE DESCRIPTION REPORT 1.

Broadmere No. 1.

Shot 21, Recovered 9, using hard rock bullets.

Depth (ft)	Condition	Rec. (Inches)	Lithology and Shows
1008	No rec.		
1093	Broken	1.5	<u>Shale</u> : dark brown to black, sub-fissile to blocky, firm, non-calcareous, clay rich. <u>No Shows.</u>
1421	Broken	1.5	<u>Shale</u> : medium grey to light brown, very soft, disaggregates upon wetting, non-calcareous. Trace pyrite and mica. <u>No Shows.</u>
1479	No rec.		
1514	No rec.		
1615	No rec.		
1640	No rec.		
1747	Very poor rec.	.25	<u>Sandstone</u> : dark grey to brown/black, medium grained, subrounded, moderate sorting, very hard, non-calcareous, siliceous. Quartz Arenite. <u>Trace to common pyrite. Tight. No Shows.</u>

1815	Very poor rec.	.25	<p><u>Sandstone</u>: beige to yellow, fine grained, sub-rounded. moderate to well sorted, very hard, non-calcareous, siliceous. Quartz Arenite. <u>Tight. No Shows.</u> Interlaminated with <u>Sandstone</u>: dark brown, medium grained, sub-rounded, moderately sorted, very hard, non-calcareous, siliceous. Quartz Arenite. <u>Trace to common desiccated oil with associated pyrite. Tight. No Shows.</u></p>
2015	No rec.		
2207	Shattered	1.25	<p><u>Sandstone</u>: white to pink, fine grained, sub-rounded, poor to moderate sorting, friable (?), non-calcareous. Rare banded hematite, argillaceous (?). <u>Poor apparant porosity. No Shows.</u></p>
2460	No rec.		
2645	No rec.		
2713	No rec.		
2828	Broken	1.25	<p><u>Mudstone/Shale</u>: medium brown, moderatly firm, sub-fissile, non-calcareous, clay rich. Common mica, trace siltstone. <u>No Shows.</u></p>

2946	Broken	1.00	<u>Shale</u> : dark brown, firm to hard, finely laminated, fissile, clay rich, non-calcareous. <u>No Shows.</u>
3194	Broken	1.00	<u>Mudstone</u> : light brown to grey, hard, blocky, non-calcareous, siliceous, silty. <u>No Shows.</u>
3650	No rec.		
3718	Broken	1.00	<u>Shale</u> : light brown to green, very hard, fissile, non-calcareous, siliceous. Interlaminated with <u>Igneous Intrusive</u> : dark green to white intergrowths of euhedral - subhedral light and dark silicate minerals. <u>No Shows.</u>
3807	No rec.		
3950	Broken	.75	<u>Shale</u> : light green, very hard in places, fissile, non-calcareous, siliceous. <u>No Shows.</u>

SIDEWALL CORE DESCRIPTION REPORT 2.

Broadmere No. 1.

Shot 23, Recovered 19, using hard rock and combination bullets.

Depth (ft.)	Condition	Rec (Inches)	Lithology and Shows
4296	Fair	.5	<u>Shale</u> : med grey, hard, blk fracture, argillaceous, non-calc, siliceous, brittle. No fluor, no cut fluor, no crush fluor.
5206	No rec.		
5238	No rec.		
5306	No rec.		
5351	No rec.		
6278	Good	1.0	<u>Shale</u> : reddish brown, blk to fissile, very hematitic with veinlets of anhydrite (?), specular hematite, glauconite. Possible slickensides. No fluor, no cut fluor, no crush cut fluor.

- 6291 Fair .5 Shale: dk brown-green with red mottling, hard, sub-fissile, siliceous, non-calc, glauconitic, v hematitic. Trace specular hematite. A siliceous sheen common to sample. No fluor, no cut fluor, no crush cut fluor.
- 6313 Fair .75 Sandstone: white to pink, f to vfn grnd. Quartz Arenite, poor sort, sub-rnd, firm to soft, very hematitic with siliceous cmt. No vis porosity. Glauconitic (chloritic ?) with laminations of Shale: red, soft, fissile, non-calc, v hematitic. No fluor, no stain, no cut fluor, no crush cut fluor.
- 6330 Fair .75 Sandstone: pink to white, fn to vfn grnd. Quartz Arenite, firm to hard, common indistinct grn boundaries, poorly sorted, sub-rnd. Siliceous cmt, no vis porosity, micaceous, glauconitic, interlaminated with Shale: firm to soft, fissile, non-calc, hematitic, siliceous. No fluor, no stain, no cut fluor, no crush cut fluor.

6366	Fair	.75	<p><u>Sandstone</u>: lt grey, vfn grnd, poor sort, sub-rnd. Quartz Arenite. Siliceous cmt, no vis porosity. Thin laminations (1mm) of <u>Shale</u>: med grey, soft to firm, fissile, non-calc, siliceous, micromicaceous. No fluor, no stain, no cut fluor, no crush fluor.</p>
*6436A	Good	1.0	<p><u>Shale</u>: med grey, firm to soft, fissile, non-calc, siliceous, micaceous to micromicaceous, silty to sandy in part. No fluor, no cut fluor, no crush cut fluor.</p>
*6436B	Good	1.25	<p><u>Shale</u>: med grey, soft to firm, fissile, non-calc, siliceous. Micromicaceous. Silty and sandy in part (vfn grnd). No fluor, no stain, no cut fluor, no crush cut fluor.</p>
6443	Fair	.75	<p><u>Sandstone</u>: lt grey, fn grnd, mod sort, sub-ang. Quartz Arenite. V silica cmted, no vis porosity. Hard, blk fracture, glauconitic. Interlaminated with <u>Shale</u>: med grey, firm, fissile, non-calc, siliceous. No fluor, no stain, no cut fluor, no crush cut fluor.</p>

6451	Good	1.0	<p><u>Shale</u>: med grey, hard, fissile, brittle, non-calc, siliceous. Interlaminated with <u>Siltstone</u>: med grey, quartzose, poorly sorted, siliceous, argillaceous (?). No vis porosity. No fluor, no stain, no cut fluor, no crush cut fluor.</p>
6525	Good	1.0	<p><u>Shale</u>: med grey, hard, argillaceous, fissile, non-calc, micromicaceous producing a phyllitic sheen. No fluor, no cut fluor, no crush cut fluor.</p>
6534	Good	1.0	<p><u>Shale</u>: med grey to brown, hard, fissile, non-calc, micromicaceous producing a phyllitic sheen, siliceous. Interlaminated with <u>Sandstone</u>: med grey, fn grnd, fair sort, sub-rnd. Quartz Arenite. Hard, common indistinct grn boundaries. No vis porosity, siliceous cmt. Glauconitic. No fluor, no stain, no cut fluor, no crush cut fluor.</p>

- *6543A Good 1.0 Sandstone: lt green/grey to green, fn grnd, med sort, sub-rnd. Qtz Arenite. No vis porosity, siliceous cmt, common indistinct grn boundaries, v glauconitic. No fluor, no stain, no cut fluor, no crush cut fluor.
- *6543B Fair .75 Siltstone: med grey, poorly sorted, very hard, siliceous cmt. Micaceous and tight. Interlaminated with Sandstone: lt grey, fn grnd, mod sort, sub-rnd. Common indistinct grn boundaries. Trace pyrite and mica. No fluor, no stain, no cut fluor, no crush cut fluor.
- 6554 Fair .75 Shale: med grey, hard, fissile, non-calc, silicious, argillaceous. Interlaminated (less than 1 cm) with Sandstone: white, vfn grnd, med sort, sub-rnd. Quartz Arenite. No vis porosity, siliceous cmt, hard. No fluor, no stain, no cut fluor, no crush cut fluor.

*6574A Fair	.50	<p><u>Sandstone</u>: white, fn grnd, med sort, sub-ang. Quartz Arenite. Soft, friable (disagg by SWC bullet?). Glauconitic, siliceous cmt, evidence of qtz overgrowths. No fluor, no stain, no cut fluor, no crush cut fluor.</p>
*6574B Fair	.75	<p><u>Sandstone</u>: lt grey, fn grnd, poorly sorted, sub-ang. Hard, common indistinct grain boundaries. Quartz Arenite. No vis porosity; siliceous cmt. Qtz filled fractures common. Interlaminated with <u>Shale</u>: dk grey, fissile, firm, non-calc, siliceous and micromicaceous. No fluor, no stain, no cut fluor, no crush cut fluor.</p>
6605 Good	1.0	<p><u>Shale</u>: med to dk grey, firm, fissile, non-calc, siliceous and micromicaceous. Poorly developed phyllitic sheen (mica orientated parallel to bedding?). No fluor, no cut fluor, no crush cut fluor.</p>

6611 Good .75 Shale: med to dk grey, hard, brittle,
fissile, non-calc, siliceous, micaceous
forming a phyllitic sheen. No fluor,
no cut fluor, no crush cut fluor.

*NOTE: Repeat of three intervals was due to a mechanical inter-
pretation. No pull was registered on line after shot
was fired. The decision was made to repeat attempt with
extra bullets from gun.

RMCC/mct

515/A

DEVIATION SURVEY

MEASURED DEPTH (ft)	INCL. ANGLE (deg)	DRIFT DIRECTION (deg)	TRUE VERTICAL DEPTH	VERTICAL SECTION (ft)	TOTAL RECTANGULAR COORDINATES (ft)	DOG LEG SEVERITY (deg/100')
0.00	0.00	N 0.00 E	0.00	0.00	0.00 N 0.00 E	0.00
116.20	.50	S 49.50 W	116.20	.39	.33 S .39 W	.43
210.55	.65	S 42.50 W	210.54	1.06	.99 S 1.06 W	.18
241.95	.60	S 43.50 W	241.94	1.29	1.25 S 1.29 W	.16
336.30	.50	S 69.50 W	336.29	2.02	1.74 S 2.02 W	.28
430.65	.40	S 45.50 E	430.64	2.17	2.12 S 2.17 W	.81
525.00	.60	S 13.50 E	524.98	1.82	2.83 S 1.82 W	.36
619.35	.50	S 11.50 W	619.33	1.79	3.71 S 1.79 W	.27
713.70	.50	S 53.50 E	713.68	1.54	4.36 S 1.54 W	.57
808.05	.65	S 21.50 W	808.02	1.40	5.11 S 1.40 W	.75
839.50	.70	S 23.50 W	839.47	1.54	5.45 S 1.54 W	.18
876.90	.75	S 56.50 W	876.87	1.84	5.79 S 1.84 W	1.11
888.50	.75	S 56.50 W	888.47	1.97	5.88 S 1.97 W	0.00
983.27	1.20	S 47.50 W	983.22	3.22	6.89 S 3.22 W	.50
1077.37	1.60	S 32.50 W	1077.29	4.65	8.66 S 4.65 W	.57
1171.47	1.20	S 46.50 W	1171.37	6.07	10.45 S 6.07 W	.56
1265.57	1.60	S 28.50 W	1265.44	7.41	12.28 S 7.41 W	.63
1360.09	1.70	S 56.50 W	1359.92	9.21	14.21 S 9.21 W	.85
1454.44	1.30	S 51.50 W	1454.24	11.21	15.65 S 11.21 W	.45
1548.93	1.60	S 62.50 W	1548.70	13.22	16.93 S 13.22 W	.43
1640.31	1.40	S 45.50 W	1640.05	15.15	18.30 S 15.15 W	.53
1734.87	1.20	S 74.50 W	1734.58	16.93	19.38 S 16.93 W	.72
1829.19	.90	S 62.50 W	1828.89	18.54	19.98 S 18.54 W	.39
1923.49	.80	N 85.50 W	1923.18	19.85	20.27 S 19.85 W	.51
2017.89	1.00	N 88.50 W	2017.57	21.33	20.20 S 21.33 W	.22
2112.22	.90	S 34.50 W	2111.88	22.57	20.79 S 22.57 W	.97
2206.52	.50	S 64.50 W	2206.18	23.36	21.58 S 23.36 W	.56
2300.92	1.00	S 69.50 W	2300.57	24.51	22.04 S 24.51 W	.53
2395.12	1.00	S 80.50 W	2394.76	26.09	22.46 S 26.09 W	.20
2488.37	.90	S 84.50 W	2487.99	27.62	22.67 S 27.62 W	.13
2582.77	1.10	S 46.50 W	2582.38	29.02	23.36 S 29.02 W	.72
2676.97	1.00	S 74.50 W	2676.56	30.46	24.21 S 30.46 W	.55
2771.32	1.10	S 71.50 W	2770.90	32.12	24.71 S 32.12 W	.12
2865.54	1.10	S 66.50 W	2865.10	33.80	25.36 S 33.80 W	.10
2959.92	.80	S 36.50 W	2959.47	35.05	26.25 S 35.05 W	.60
3053.39	1.10	S 10.50 E	3052.93	35.25	27.66 S 35.25 W	.86
3147.89	1.60	S 22.50 E	3147.40	34.58	29.77 S 34.58 W	.61
3241.99	1.90	S 19.50 W	3241.46	34.60	32.45 S 34.60 W	1.37
3336.20	1.00	S 44.50 W	3335.64	35.70	34.51 S 35.70 W	1.15
3430.54	1.00	S 6.50 W	3429.97	36.37	35.92 S 36.37 W	.69
3524.64	1.10	S 9.50 W	3524.05	36.61	37.62 S 36.61 W	.12
3618.74	.50	S 6.50 W	3618.14	36.80	38.92 S 36.80 W	.64
3713.17	.50	S 77.50 W	3712.57	37.25	39.42 S 37.25 W	.61
3807.57	.50	S 38.50 W	3806.96	37.91	39.83 S 37.91 W	.35
3902.03	.60	N 19.50 E	3901.42	38.00	36.69 S 38.00 W	1.15
3996.63	1.20	N 25.50 E	3996.01	37.41	38.33 S 37.41 W	.64
4088.61	1.20	N 63.50 W	4086.98	37.86	37.03 S 37.86 W	1.83
4122.61	2.10	N 60.50 W	4121.96	38.72	36.56 S 38.72 W	2.66
4288	4.25	N 68.00 W	4287.71	46.86	33.02 S 46.86 W	1.37
4382	3.5	N 69.00 W	4380.87	52.87	30.26 S 52.87 W	0.80
4459	2	S 83.5 W	4457.78	56.50	29.79 S 56.50 W	2.54
4551	1.5	S 88.5 W	4549.74	59.31	29.99 S 59.31 W	.59
4690	2.0	S 78.5 W	4688.67	63.52	30.47 S 63.52 W	.42
4790	2.0	S 72.5 W	4788.61	66.90	31.34 S 66.90 W	.21
4821	2.5	S 59.5 W	4819.59	68.00	31.84 S 68.00 W	2.30
4883	3.5	S 56.5 W	4881.50	70.76	33.56 S 70.76 W	1.63
4950	4.75	S 42.0 W	4948.33	74.40	36.69 S 74.40 W	2.42
5051	5.0	S 42.5 W	5048.96	80.17	43.04 S 80.17 W	.25
5082	5.5	S 44.5 W	5079.83	82.13	45.10 S 82.13 W	1.72
5145	5.5	S 41.5 W	5142.54	86.24	49.52 S 86.24 W	.46
5206	6.25	S 36.0 W	5203.22	90.15	54.38 S 90.15 W	1.54
5248	6.75	S 34.5 W	5244.95	92.89	58.27 S 92.89 W	1.26
5335	6.0	S 32.5 W	5331.41	98.23	66.32 S 98.23 W	.90
5366	6.25	S 33.5 W	5362.23	100.03	69.10 S 100.03 W	.88
5397	6.0	S 34.5 W	5393.06	101.88	71.84 S 101.88 W	.88
5428	6.0	S 35.0 W	5423.89	103.72	74.50 S 103.72 W	.17
5496	6.5	S 31.5 W	5491.48	107.78	80.69 S 107.78 W	.92
5558	7.5	S 29.0 W	5553.02	111.59	87.22 S 111.59 W	1.62
5602	7.75	S 28.0 W	5596.63	114.37	92.35 S 114.37 W	.64
5640	8.0	S 24.5 W	5634.27	116.67	97.02 S 116.67 W	1.42

DEVIATION SURVEY

MEASURED DEPTH (ft)	INCL. ANGLE (deg)	D R I F T DIRECTION (deg)	T R U E VERTICAL DEPTH	VERTICAL SECTION (ft)	TOTAL RECTANGULAR COORDINATES (ft)		DOGLEG SEVERITY (deg/100')
5703	8.75	S 25.5 W	5696.60	120.55	105.33 S	120.55 W	1.21
5731	9.5	S 30.0 W	5724.24	122.62	109.26 S	122.62 W	3.70
5792	9.0	S 35.0 W	5784.45	127.89	117.53 S	127.89 W	1.55
5794	8.75	S 32.5 W	5786.43	128.06	117.78 S	128.06 W	22.98
5833	8.00	S 34.5 W	5825.01	131.19	122.52 S	131.19 W	2.06
5890	7.75	S 42.0 W	5881.47	136.02	128.65 S	136.02 W	1.85
5926	8.00	S 46.0 W	5917.13	139.45	132.20 S	139.45 W	1.67
5957	9.00	S 47.0 W	5947.79	142.77	135.35 S	142.77 W	3.26
6017	9.75	S 46.0 W	6006.99	149.86	142.08 S	149.86 W	1.28
6071	10.25	S 44.0 W	6060.17	156.49	148.71 S	156.49 W	1.13
6080	10.25	S 44.0 W	6069.03	157.60	149.86 S	157.60 W	0.00
6145	10.25	S 51.0 W	6132.99	166.12	157.67 S	166.12 W	1.92
6171	10.25	S 55.0 W	6158.57	169.82	160.46 S	169.82 W	2.74
6205	10.25	S 57.0 W	6192.03	174.83	163.84 S	174.83 W	1.05
6243	10.25	S 62.0 W	6229.42	180.66	167.27 S	180.66 W	2.34
6288	9.25	S 63.0 W	6273.77	187.42	170.79 S	187.42 W	2.25
6319	9.25	S 60.5 W	6304.37	191.81	173.15 S	191.81 W	1.30
6370	9.00	S 64.0 W	6354.73	198.96	176.91 S	198.96 W	1.19
6402	8.25	S 60.5 W	6386.36	203.21	179.15 S	203.21 W	2.86
6433	7.75	S 61.0 W	6417.06	206.97	181.25 S	206.97 W	1.63
6453	7.50	S 64.0 W	6436.88	209.33	182.48 S	209.33 W	2.35
6487	7.00	S 71.0 W	6470.61	213.29	184.12 S	213.29 W	2.98
6518	6.25	S 71.0 W	6501.41	216.67	185.28 S	216.67 W	2.42
6550	5.75	S 71.0 W	6533.23	219.83	186.37 S	219.83 W	1.56
6581	6.00	S 69.0 W	6564.07	222.82	187.46 S	222.82 W	1.04
6613	5.00	S 59.0 W	6595.92	225.57	188.80 S	225.57 W	4.32
6860	4.00	S 24.0 W	6842.15	230.90	205.71 S	230.90 W	2.43
7080	10.50	S 65.0 E	7060.28	211.86	125.08 S	211.86 W	3.60

PLUG BACK TO 6426 FT. MD SIDETRACK

MD (ft)	INC	DIR (deg)	TVD (ft)	VS (ft)	SOUTH (ft)	WEST (ft)	DOG LEG (deg/100 ft)
6581	6.00	S 69.0 W	6564.07	222.82	187.46 S	222.82 W	1.04
6593	6.25	S 68.0 W	6576.00	224.01	187.93 S	224.01 W	2.27
6626	5.75	S 57.5 W	6608.82	227.07	189.51 S	227.07 W	3.65
6633	5.75	S 58.5 W	6615.79	227.67	189.88 S	227.67 W	1.43
6639	6.50	S 51.5 W	6621.19	228.19	190.25 S	228.19 W	17.62

DAY REPORT

MAY

- 16 Spudded at 08:15 hrs on the 15th (22:45, 5-14-84 Zulu) with a 17½" bit. Drilled 13 ft below conductor pipe and became stuck. Rigged up Halliburton and washed down annulus with a 1" pipe. Found cuttings 15 ft below rotary. Elapsed time stuck in hole 6.5 hrs.
- 17 Drilled to 741 ft making 564 ft in the last 24 hrs. The RKB is 23 ft from ground level. The conductor pipe setting depth reported on 5-5-84 as 28 ft below ground level is equivalent to a RKB depth of 51 ft.
- 18 Drilled to 910 ft and pulled out of the hole at 20" casing point. The Smith, 17.5", DSJ bit, drilled the 910 ft in 39.5 hrs for a penetration rate of 23 ft/hr. A short trip was made circulating on both ends then pulled out of the hole to run the multi-shot survey. The survey indicated the bottom hole location to be 6.2 ft, S.56.50W at 888.46 ft TVD. Rigged up Schlumberger and ran ISF, BHC, SP on caliper. Preparing to drill out 17.5" pilot hole with 26" bit.
- 19 Opening hole from 17.5" to 26" at 295 ft, the four cone Reed S26 performed poorly drilling only 9.5 ft/hr.

DAY REPORT

- MAY 20 Opened hole to 7770 ft with a Smith DSJ bit and drilled at 19.5 ft/hr.
- 21 Finished opening hole to 26" and began running 20" casing.
- 22 Continued running casing. All 20" was run with an endless rope. The casing was landed with the shoe at 908 ft.

The circulating head was then installed and the well was circulated for 30 minutes. The circulating head was then removed and the drill pipe stab in stinger was run in the hole. After engaging the stinger, the well was then again circulated for 30 minutes. A 20 bbl preflush was pumped in front of the lead slurry. A lead filler slurry of 296 bbl, Class G 2.5% prehydrated bentonite mixed at 12.8 ppg was then pumped. A tail slurry followed that consisted of 145 bbl of Class G neat, 15.8 ppg cement. This cement was displaced by 16 bbl of water. Cement returns were observed of approximately 60 bbl. The pumping rate averaged 5 bbl/minute with an average pressure of 350 psi. The float shoe held against any backflow. The drill pipe was then unstung and cement was circulated free of the drill pipe. The drill pipe was pulled out of the hole and began

DAY REPORT

MAY

- 23 Work began by removing the 30" casing. Failure to drain the cement from the 30"-20" annulus in a timely fashion required the cement to be chipped out. Final cut was made on the 20" casing. The Braden head was then installed using a "Hot Hed" to insure an effective weld. Began nipping up the BOP.
- 24 Nipped up BOP. An attempt was made to install wear bushing but an obstruction in the bell nipple would not allow passage. Operation continued without wear bushing. Tested casing and BOP to 600 psi. Drilled to 921 ft encountering 5 ft of cement in casing. Tested formation to 11.5 ppg and continued drilling.
- 25 Drilled 12.25" hole from 921 ft to 1010 ft. Circulated the hole to trip for change in BHA. Replaced shakers with new double decked Brandt shakers. Began drilling then circulated to run survey. Survey taken at 1002 ft indicated 1° inclination. Unplugged jet and drilled to 1105 ft.

MAY

- 26 Drilled to 1138 ft and ran a survey. Inclination was determined to be 1.5° at 1138 ft. Unplugged a jet and continued drilling to 1232 ft. A high viscosity pill was circulated before running a survey at 1232 ft. Inclination was found to be 1.5° . Continued drilling to 1358 ft and rigged up to run survey number 3. Inclination was 1.75° . Continued drilling to 1452 ft where a tight spot was encountered. Worked the tight spot from 1415 to 1452 ft. A survey was run and indicated 1.25° inclination. Drilled to 1517 ft and pulled out of the hole to check the bit. All three cones were left in the hole and the bit was calipered $0.125''$ out of gauge. Tripped in the hole with a magnet to try to recover the cones.
- 27 Chained out of the hole and recovered 37 rollers and 16 ball bearings. Metal shavings were also collected on the magnet. Tripped back into the hole with the magnet and junk sub. Chained out of the hole again and recovered 15 rollers and 9 ball bearings. A bit was then picked up and run into the hole with a junk basket. Pulled out of the hole and recovered 10 rollers and 10 ball bearings in the junk basket. Picked up the magnet and ran into the hole recovering one cone. Ran back in and recovered another cone. Tripped again and recovered the third cone. One

DAY REPORT

MAY

- 27 more trip was made and nothing was recovered. Tripped back into the hole with same rerun bit, drilled 2 ft and pulled out of hole.
- 28 Picked up shock sub and tripped into hole with new bit. Drilled 7 ft and pulled out of hole. (Penetration rate slowed to 3.5 ft/hr) Tripped into hole with a F-6 bit and drilled to 1626 ft.
- 29 A single shot survey at 1650 ft showed an inclination 1.25° . Drilled to 1752 ft and surveyed (1.5°). Drilled to 1876 ft and surveyed (1°). Drilled to 1910 ft.
- 30 Drilled to 1970 ft, dropped a survey, pulled out of hole, checked the bit. Found wellbore had an inclination of 1.25° . The 12.25" stabilizer was completely worn to 8" OD, the bit showed extensive wear due to sharp sandstone being drilled. Tripped in the hole with a Smith F5 without stabilization. Drilled to 2091 ft, ran a survey indicating $.75^\circ$ inclination. Continued drilling to 2130 ft.

DAY REPORT

31 Drilled to 2215 ft and ran survey (.75°). Drilled to 2342 ft, another survey was run (.75°). Drilled to 2446 ft.

JUNE 1 Drilled to 2455 ft, ran survey and POH. Inclination of .75°. LD junk sub and calipered DC, found no significant wear. RIH with Smith F4 bit with no stabilization. One pump, down (8 hrs) for repairs resulted in inadequate hydraulics. Drilled to 2590 ft and ran survey (1°). Encountered shale at 2680 ft. Drilled to 2700 ft.

2 Drilled to 2716 ft and ran survey (1.25°) at 2674 ft. Drilled to 2780 ft, dropped survey POH. Inclination of 1.5°. Cut drill line. RIH with Smith F4 bit with no stabilization. Reamed 155 ft from 2611 - 2780 ft. Drilled to 2904 ft and dropped survey (.5°). Drilled to 2929 ft.

3 Drilled to 3029 ft and ran survey. Inclination was .75° at 2987 ft. Drilled to 3144 ft and ran survey. Temperature tape was also included in the deviation survey. Inclination was 1° at 3113 ft and temperature 160°F. Drilled 3196 ft. Circulated bottoms up and determined penetration of igneous rock had been made at 3190 ft. Drilled to 3281 ft.

DAY REPORT

- JUNE
- 4 Drilled to 3295 ft, and TOH. TIH with core barrel.
Cored to 3302 ft and TOH. Recovered 100% of core
cut, 7 ft 4". Pick up Smith's F5 bit and TIH.
- 5 Continued TIH with bit #14. Reamed from 3295 to
3302 ft. Drilled to 3436 ft and ran survey (1°).
Drilled to 3450 ft and chained out of hole to look
for washouts. LD two 8" DC. Washout occurred in
tool joint. Checking all BHA connections.
- 6 LD two 6.25" DC's with a washed out connection. TIH
running bit #14. Shut down 3 hrs to repair
rotary chain and continued drilling to 3559 ft.
Ran survey at 3517 ft (1°). Drilling continues
in igneous rock at 3598 ft.
- 7 Drilled to 3717 ft, circulated bottoms up at
3625 ft and 3661 ft to check for formation
change. Ran survey at 3674 ft (1°). Taped
Halliburton thermometer to side of survey tool
and found bottom hole circulating temperature
to be 154°F. Drilled to 3748 ft and TOH. PU a
new shock sub along with a monel and junk sub.
TIH with bit #15, Smith F5.

DAY REPORT

- 8 Drilled to 3827 ft and circulated samples to surface to check for formation change. Drilled to 3840 ft and surveyed (.25° at 3784 ft). Drilled to 3940 ft, circulated samples to surface and drilled to 3962 ft. Surveyed at 3908 ft (1°). Drilled to 4142 ft. (575 ft of igneous rock was penetrated 3190 to 3765 ft)
- 9 Drilled to 4152 ft, conditioned mud and made a short trip. Conditioned mud for logging and dropped multi-shot. TOH. Survey indicated BHL was 53.26 ft S46W of surface. RU Schlumberger and began logging.
- 10 Completed logging. Ran ISF-BHC-MSFL-GR-SP-Caliper, DLL-GR-SP, LDL-CNL-GR-Caliper, HDT-Caliper. Also ran STG (SWC): Shot 25 cones, recovered 9. LD monel and shock sub. PU new BHA. TIH with bit #17. 17.5" Smith DGJ. Opened hole from 910 to 1043 ft and ran survey, (1° at 1002 ft). Opened hole to 1135 ft.
- 11 Opened 12.25" hole to 17.5" at 1169 ft and ran survey (1.25° at 1127 ft). Opened hole to 1263 ft and TOH. PU 12.25" bit, BHA and TIH to wash and ream tight spots. Worked through tight spots at 1338 ft and 2090 ft. Washed to 4152 ft and circulated bottom.

DAY REPORT

- 12 Conditioned mud and RU Schlumberger to run velocity survey (VSP). Ran VSP and RD Schlumberger. Cut and slipped drill line. TIH with bit #19 (RR17).
- 13 Finish RIH to 1221 ft. Wash and ream from 1221' to 1263 ft. Open hole to 1388. Survey of 1° at 1346 ft. Open hole to 1419 ft. Circulate. RT to change bit, bit #20, Smith 4JS. Two ft fill on bottom. open hole to 1493 ft. Survey of 1.5° at 1451 ft. Open hole to 1522 ft.
- 14 Open hole to 1583 ft. Survey of 0.75° at 1583 ft. RT to change bit, #21, Smith S53. Ream 1414 to 1583 ft. Open hole 1583 to 1650 ft. RT to change bit, #22, Reed S 62. Began reaming from 1546 ft.
- 15 Wash and ream to 1650 ft. Open hole to 1693 ft. Chain out of hole. Found X-over cracked between 6½" and 8" drill-collar. RIH with bit#23, Smith DTJ. Wash and ream from 1623 to 1693 ft. Open hole to 1702 ft.

DAY REPORT

- 16 Dropped survey and TOH. Survey indicated .5° at 1671 ft. The mill tooth, Smith DTJ, bit was graded at 8-8-8. TIH with a Reed S62. Reamed under gauge hole from 1623 to 1703 ft and opened hole to 1714 ft. TOH to check bit due to torque reading. Found bit in good condition with little gauge wear. TIH with bit #25, Reed S53 and opened hole to 1745 ft.
- 17 Open hole to 1751 ft. RT for Bit #26, S62J. Open hole to 1866 ft. RT for Bit #27, S62J. Open hole 1866 ft. RT for Bit #27, S62J. W and R 1830 to 1866 ft and open hole to 1870 ft.
- 18 Open hole to 1937 ft. Survey (0.5°) at 1937 ft. found crack in 6½" drill-collar pin while RT for Bit #28, S53J. W and R 1889 to 1937 ft. Open hole to 1992 ft.
- 19 Open hole to 2000 ft. POH to check for washout. LD one 8" drill-collar with cracked box, another with washed out pin. TIH with 12½" pilot bit and 17½" hole opener (Security) dressed with H8 cutters. W and R from 1930 to 2000 ft. Open hole to 2059 ft.

DAY REPORT

JUNE

- 20 Open hole w/12½" pilot bit and 17½" HO (H8 cutters) from 2059 to 2067 ft. RT to dress HO w/type H cutters. W and R from 1193 to 2067 ft. Open hole to 2075 ft. POH and LD HO. RIH w/bit #31, Reed S51. Open hole to 2097 ft. POH for washout found between two 6½" drill-collars.
- 21 RIH w/bit #32, Smith 4JS. Open hole from 2097 to 2182 ft. Survey (1°) and RT to change bit. RIH w/bit #33, Smith 3JS. Open hole to 2187 ft.
- 22 Open hole from 2187 to 2222 ft. POH for washout. LD two 8" drill-collars w/cracked boxes and one 8" drill-collar w/washed pin. Service all drill-collars and crossovers. RIH w/bit #34, Reed S62. open hole from 2222 to 2263 ft.
- 23 Open hole to 2274 ft. RT to change bit, RIH w/bit #35 (RR22), Reed S62. PU 3 additional 9½" drill-collars. W and R from 2220 to 2274 ft. open hole to 2314 ft.
- 24 POH for bit change. RIH w/bit #36 (RR19), Reed S62. Open hole from 2314 to 2395 ft. Survey (0.75°). RT to change bit. RIH w/bit #37 (RR26), Reed S61.
- 25 Finish RIH w/bit #37 (RR26). W and R from 2385 to 2395 ft. Open hole to 2418. Chain out to look for wash out. None. RIH w/bit #38, Reed S51. W and R from 2356 to 2418 ft. Open hole to 2462 ft.

DAY

REPORT

- 26 Open hole from 2462 to 2464 ft. RT for new bit #39, Reed S53. Ream from 2426 to 2464 ft. open hole to 2501 ft. Chain out of hole for washout (mandrel washed out in shock sub). RIH w/bit #40, Reed S53. W and R from 2471 to 2501 ft. Open hole to 2513 ft.
- 27 Open hole to 2529 ft. POH. RIH w/ 17½" hole opener w/H-8 cutters and bit #16 pilot bit (run No. 41). W and R from 2522 to 2529 ft. Open hole to 2577 ft.
- 28 Open hole to 2601 ft. POH. LD hole opener (cracked shanks). RIH w/17½" bit #42, Reed S53. W and R from 2591 to 2601 ft. Open hole to 2647 ft.
- 29 RT for bit #32, Reed S51. W and R from 2418 to 2647 ft, open hole to 2677 ft. Chained out of hole for washout located in 8" drill-collars. RIH w/bit#44, Security S84. W and R from 2648 to 2677 ft. Open hole to 2704 ft.
- 30 Open hole to 2865 ft.

DAY REPORT

- 1 Open hole to 2914 ft. RT for bit #45, Hughes OSC1G. Survey of 1°. W and R 2888 to 2914 ft. Open hole to 3036 ft.
- 2 Open hole to 3054 ft. RT for new bit #46, Security S84. W and R from 3024 to 3054 ft. Open hole to 3202 ft.
- 3 Open hole to 3206 ft. POH. MV 17½" HO w/H-8 cutters and 12½" pilot bit (RR16) for bit #47. W and R from 3186 to 3206 ft. Open hole to 3230 ft. Circ.
- 4 Circ. POH. RU Schlumberger. Ran RFT at 28 points. No apparant permeability. RD Schlumberger. RIH w/ RR14 12½" bit to 3230. Tag fill. W and R 10 ft. POH. RIH w/17½" bit #49 (RR46).
- 5 Finish RIH w/bit #49 (RR46). C and C. POH. LD 9½" drill-collars. RU and ran 13 3/8" casing, K-55, 68 ppf.
- 6 Finish running 13 3/8" casing, 84 jts, shoe at 3224 ft. Circulate. Test Howco liner to 2500 psi. Cement w/15 bbls water (preflush) followed by 2100 sx class 'G' w/1.0% CFR-2 plus 0.4% Halad 22A. Slurry weight 15.8 ppg, yield 1.15.

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JULY

- 6 cont.
Displaced w/470 bbl mud. Did not bump plug.
Plug down at 1240 hrs. Av pressure - 600 psi,
final pressure - 800 psi. Float held. Landed
casing w/127 kips. Install 20x13 3/8" casing
spool w/slip and seal assembly and X-bushing.
Test to 1500 psi. NU 13 3/8" BOPE.
- 7 NU BOP and choke manifold. RU test line, test
plug and subs. Fill BOP stack and lines with
water. Remove flow nipple (test plug would not
go thru). Modify flow nipple, wash contaminated
cement from BOP stack. Test lines to 5,000 psi.
Lost 250 psi in 5 mins. Found small leak in
cement line under substructure. Repairing leak.
- 8 Test lines to floor to 5,000 psi. Seat test plug
in 13 5/8" head. Attempt to test lower pipe rams
and lower kelly cock - failed. Break off kelly
and pump directly into 1 jt DP with test plug
seated. Attempt test - test plug leaked. Re-
place test plug seals, found hard cmt chips on
top of plug, washed out CSG head and stack. Seat
test plug. Attempt test - test plug leaked.
Inspect test lines - no leaks. Nipple down stack.
Lift BOP's. Inspect 13 3/8" seal area - found
small burr. Cameron dressed out burr. Nipple up
BOP stack.

DAY REPORT

JULY 8

cont.

Seat test plug in head. Attempt test - test plug held but high pressure leak developed in test line under substructure. Move Howco truck to v-door and RU Howco steel hose to floor. Test Howco lines to 5,000 psi. Test upper and lower pipe rams, test choke line valve, HCR, all choke manifold valves, Howco choke and manual chokes to 5,000 psi. Test two kill valves to 5,000 psi. Replace seal in kill line check valve and test to 5,000 psi. Found small leak in upper pipe ram bonnet seal. Tightened seal and tested to 5,000 psi. Test upper and lower kelly cock, kelly, safety valves, swivel, kelly hose, stand pipe, stand pipe valves, mud line to pumps to 3,000 psi. Test blind rams to 5,000 psi. Test Hydrill to 1,500 psi. Test CSG to 2,000 psi for 15 minutes. Install flow nipple. MU 12 $\frac{1}{4}$ " bit and begin installing wear bushing.

9

Install wear bushing. PU drill-collars. Tag top of contaminated cement at 2997 ft. Wash to top of plug at 3032 ft. Drill plug and hard cmt to 3141 ft. Drill float collar at 3141 ft. Drill hard cement to 3148 ft. Test casing to 2,000 psi. O.K. Drill hard cement to 3209 ft. Test casing to 2,000 psi. O.K. Drill hard cement to 3220 ft.

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JULY

- 9 cont.
Drill float shoe at 3220 ft. Drill hard cement to 3225 ft.
- 10 Drill hard cement to 3230 ft. Wash to 3254 ft.
Ran FIT test to 14.5 ppg EMW. W and R to 4158 ft.
Ran FIT to 16.15 ppg EMW at shoe (14.5 ppg at TD).
RT for bit #51, HTC J55R. Drill to 4173 ft.
- 11 Survey of $2\frac{1}{2}^{\circ}$ at 4173 ft. Drill to 4237 ft.
Survey of $2\frac{1}{4}^{\circ}$. Drill to 4307 ft. RT for bit #52, Smith F6. (Note - recovered 1 gal inserts from $17\frac{1}{2}''$ hole in junk sub).
- 12 RIH to 4256 ft. W and R to 4307 ft. Circ to recover junk. survey 4.25° at 4307 ft. Drill to 4328 ft. POH. Washout between X-over sub and bottom $6\frac{1}{2}''$ drill-collar. RIH w/ bit #53 (RR52).
Survey of 4.25° , N68W, at 4288 ft. Drill from 4328 to 4382 ft.
- 13 Drill to 4417 ft. Survey of 3.5° , N69W, at 4382.
Drill to 4436 ft. RT for bit No. 54, HTC J77.
Ream from 4347 to 4436 ft. Drill to 4466 ft. Circ.
- 14 RIH w/ bit #55, Smith F9. W and R from 4354 to 4466 ft. Drill to 4486 ft. Survey - 2° , $583\frac{1}{2}''$ W, at 4459 ft. Drill from 4486 to 4531 ft. POH.

DAY REPORT

JULY 14 cont.

Prepare to RIH w/ bit #56, Smith F9.

15 RIH w/ bit #56. W and R from 4475 to 4531 ft.
Drill to 4564 ft. Short trip. RT to PU bit #57,
HTC J77 and roller reamer w/ knobby cutters.
Inspect drill-collars. W and R from 4512 to
4564 ft. Drill to 4586 ft. Survey (misrun).

16 Survey (1.5°, S 81.5 W at 4551 ft. RT to pick
bit #58, HTC J55 and change roller reamer
cutters. W and R from 4612 to 4627 ft. Drill
to 4649 ft. POH to change bit.

17 Change cutters. RIH w/ bit #59, HTC J-55R.
W and R 4617 to 4649 ft. Drill to 4668 ft.
RT to run bit #60, HTC J-77. W and R 4648
to 4668 ft. Drill to 4693 ft.

18 Drill to 4770 ft.

19 Drill to 4783 ft. POH. Test BOP's
RIH w/bit #61, Reed HP-H. W and R 4750 to 4783 ft.
Drill to 4826 ft.

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JULY

- 20 Drill from 4826 to 4864 ft w/ bit #61.
Survey 2°, S72.5W at 4790 ft. RT for
bit #62 Smith F7. Minor mud loss (18 bbl).
Drill to 4943 ft. Survey 2.5°, S 55.5W at
4821 ft; 3.5°, S 56.5W at 4883 ft.
- 21 Drilled from 4943 to 4972 ft w/bit #62. RT for
bit #63 Reed HPH and new reamer cutters. W and R
from 4942 to 4972 ft. Drill to 5043 ft. Survey
4.75°, S42W at 4950 ft.
- 22 Drilled from 5043 to 5104 ft w/bit #63. Survey
5°, S42.5W at 5051 ft; 5.5°, S44.5W at 5082 ft.
RT for bit #64, Reed HPH.
- 23 W and R 5029 to 5104 ft. Drill to 5183 ft.
Survey 5.5°, S41.5W, at 5145 ft. POH for bit
change.
- 24 RIH w/bit #65, Reed HPH. W and R 5177 to 5183 ft.
Drill to 5267 ft. Survey 6.25°, S 36 W at 5206 ft;
6.75°, S34.5W at 5248 ft. POH for bit change.
- 25 LD one 6½ DC with washed pin, another with washed
box. Test BOP's. OK. RIH w/bit #66, Smith F5.
Drill from 5267 to 5326 ft.

DAY REPORT

- JULY
- 26 Drill 5326 to 5442 ft. Surveys of 6°, S32.5W at
at 5335 ft; 6.25°, S33.5W at 5366 ft; 6.0° S34.5W
at 5397 ft.
- 27 Drill 5442 to 5450 ft. Survey of 6°, S35.W at
5428 ft. RT for bit #67, Smith F5. W and R 5444
to 5450 ft. Drill to 5546 ft. Survey of 6.5°,
.S31.5W at 5496 ft.
- 28 Drill 5546 to 5602 ft. Surveys of 7.5°, S29W at
5558 ft; 7.75°, S28W at 5602 ft. RT for bit #68,
Smith F5. Drill 5622 to 5636 ft.
- 29 Drill 5636 to 5747 ft. Surveys of -8.0°, S24.5W
at 5640 ft, 8.75°, S25.5W at 5703 ft. POH. PU
Dynadrill (high speed), 1.25° bent sub, and bit
#69, Reed HPH. RIH To shoe. RU steering tool.
- 30 RU steering tool complete. RIH. W and R 5729 to
5747 ft. Seat steering tool. Drill 5748 to 5782
ft. Chain out and SLM. RIH w/bit #70, Reed HPH.
W and R 5752 to 5781 ft. Survey 9.5°, S30W at
5731 ft. (hole took 240 bbls while tripping).
- 31 RU steering tool. W and R 5776 to 5782 ft. Dyna-
drill from 5782 to 5837 ft. Survey of 9°, S35W at
5792 ft. POH and LD Dynadrill BHA. RIH w/bit #71,
Reed HPH. W and R 5747 to 5770 ft.

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- AUGUST 1 W and R 5765 to 5837 ft. Survey 8.75°, S32.5W at 5794 ft. Drill from 5837 to 5851 ft. Lost complete returns. Fill annulus with 350 bbls water (equivalent to 8.6 ppg to stand). Mix 60 bbl pill w/ 48 ppb LCM material and displace w/100 bbl mud. Observe well. Slight trace rotten egg odour. Mix and pump pill No 2 as above. Pressure on DP after pumping 26.5 bbls, partial returns after pumping 88 bbls. Observe well. Fluid level dropped after displacement finished. Pump pill No 3 as above. Partial returns after pumping 41 bbls. Fluid level dropped after displacement finished. Circulated. Partial returns of 70% after pumping 153bbls (use carbide marker). Drill from 5851 to 5873 ft in stages of 3 to 5 ft. Pick up and ream to bottom several times after each stage. Drilled stages w/ very low weight (5 to 20 k).
- 2 Wash and ream 5860 to 5873 ft. Survey 8°, S 34.5 W at 5833 ft. Wash and ream bottom 24 ft repeatedly. TOH. RIH open ended w/ DP. Spot 100 sx Class G cement at 16 ppg. WOC.
- 3 WOC. Fill hole w/30 bbls. Still loosing mud. RIH open ended and tag cement at 5867 ft. RU Howco. Test lines to 2000 psi. Mix and pump 150 sx Class G at 16 ppg. POH 10 stands. Circ 10 bbl mud

DAY REPORT

AUGUST

3

Cont.

thru choke manifold, choke open. WOC. RIH and tag cement at 5863 ft. Circ. POH. Pick up bit #72, Reed HPH. Wash and ream from 5791 to 5863 ft. High torque at 5844 ft. Drill firm cement from 5863 to 5865 ft.

4

Drill cement from 5865 to 5873 ft. Drill new formation from 5873 to 5896 ft. Ream from 5873 to 5896 ft experiencing high torque. High torque inducing reverse turns. Back off occurred. DP backed off 1 joint below kelly. Located fish 74 ft below kelly. PU 15 ft pup joint and screwed in. TOH and found DP has also backed off down hole. Checked connections while coming out. String had backed off at 1504 ft, 16 stands down. PU 1 joint of bent DP. TIH and screwed into fish. Worked pipe and fish came free w/300000 lbs total pull, 110K over. Circulate and slug pipe. TOH and checked all DP connections. Shock sub was found to have lost its seal and was LD. PU bit #73, Hughes J77. TIH, break and service DC connections.

5

TIH. LD one DC and XO w/gaulded shoulder. LD one joint DP w/damaged pin, LD 3 joints of bent DP. TIH to 5872 ft. PU kelly and ream 5872 to

DAY REPORT

AUGUST

- 5 Cont.
5881 ft. TOH, found washout at 2164 ft. LD 2 joints DP. TIH. Ream 5876 to 5884 ft. TOH to check for washouts, found cracked pin between 8" DC and 6.25" DC. LD one DC and XO. LD one joint of bent DP. Cut and slip drill line.
- 6 Finish TIH. Ream 5849 to 5886 ft. Slow reaming occurred from 5872 to 5886 ft. Circulate and pump mud pill. TOH. PU bit #75, Hughes J77. TIH. Ream from 5881 to 5884 ft.
- 7
Ream from 5884 to 5896 ft. Drill from 5896 to 5906 ft. Survey (5890 ft, 7.75°, S42W). TOH, check for washouts. LD two joints DP, pin broke off in box of other. TIH open ended.
- 8 TIH, PU 20 joints DP. Tag fill at 5901 ft. RU Howco. Mix and pump 150 sx Class G neat at 16 ppg. TOH 10 stands. Pump thru DP to clear cement. Closed rams and squeezed 200 psi for 10 minutes. No leaks. TOH. PU bit #76, Smith F5 and near bit roller reamer. TIH, tag cement at 5875 ft. Drill hard cmt from 5875 to 5896 ft. Torque increase due to undergauge hole. Ream from 5896 to 5906 ft. Drill from 5929 to 5959 ft. Survey (5925 ft, 8°, S46W). Drill from 5959 to 5983 ft.

DAY REPORT

- 9 Drill from 5983 to 5992 ft. Mixed high viscosity pill for trip. Survey (5957 ft, 9°, S47W). TOH with no drag. LD and dress roller rmr. Service rig. PU bit #77, Reed FP63. PU rmr and 2-8" DC. TIH to 3224 ft. Slip and cut 84 ft of drill line. TIH to 5945 ft, wash and ream from 5945 to 5985 ft. Ream under gauge hole from 5985 to 5992 ft. Drill from 5992 to 6042 ft. Circulate and mix pill for TOH.
- 10 Survey (6017 ft, 9.75°, S46W). TOH. LD bit and dress roller rmr. TIH to 6008 ft with no drag. Wash and ream from 6008 to 6035 ft. Ream under-gauge hole from 6035 to 6045 ft. Drill from 6045 to 6095 ft. Survey (6071 ft, 10.25°, S44W). TOH w/ no drag. PU Dyna Drill w/1.25° bent sub and orientating sub. TIH.
- 11 Finish TIH. RU directional tools. Drill from 6095 to 6137 ft. Pull steering tool out of hole. Survey (6081 ft, 10.25° S44W). TOH PU bit #80, Reed HPH w/Dyna Drill. TIH. Ream from 6117 to 6137 ft.
- 12 Position steering tool. Drill from 6137 to 6195 ft. TOH w/steering tool. Survey (6145 ft, 10.25°, S51W). RIH w/steering tool and position face w/75° right

DAY REPORT

- AUGUST 12 Cont.
hand lead. Drill from 6195 to 6216 ft. TOH with steering tool. Survey (6171 ft, 10.25°, S55W). TOH. TIH w/ bit #81, Reed HPH w/Dyna Drill. Replace 1-8" DC due to OD wear. TIH to 3224 ft. Slip 42 ft of drill line. Continue TIH.
- 13 Continue TIH. RU circulating head. Ream from 6168 to 6188 ft. RIH w/steering tool. Ream from 6188 to 6216 ft. Dyna Drill 12.25" hole from 6216 to 6250 ft. POH w/steering tool and run single shot (6205 ft, 10.25°, S57W). RIH w/steering tool and orient Dyna Drill. Dyna Drill 12.25" hole from 6250 to 6288 ft, POH w/steering tool and single shot (6243 ft, 10.25°, S62W). TOH and LD Dyna Drill. PU BHA w/NB roller ream, string ream at 30 ft and another string ream at 40 ft from bit. TIH.
- 14 TIH to 6061 ft and ream from 6061 to 6288 ft. Drilled from 6288 to 6320 ft. Survey (6288 ft, 9.25°, S63W). Drill from 6320 to 6351 ft. Survey (6319 ft, 9.25°, S60W). Drill from 6351 to 6361 ft. Circulate bottoms up and pump a high viscous pill. POH and experienced 60,000 lb drag from 4460 to 3995 ft. LD roller rmr, short DC. PU Dyna Drill. TIH. Orient Dyna Drill. RU circulating head for steering tool.

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AUGUST

- 15 Drill from 6361 to 6370 ft. POH w/steering tool to check probe and repair. Work pipe while investigating probe. PU and RIH w/steering tool. Seat steering tool in monel and electrical failure to tool occurred. POH w/steering tool. Repair tool and RIH. Seat and orient steering tool. Tool failed. POH w/tool and change out probes. Repaired Otis wireline. RIH w/steering tool. Tool failed. POH w/steering tool and LD. TOH w/Dyna Drill inspecting DC on trip out. LD the DP to 6.25" DC XO. LD 6-6.25" DC.
- 16 Continue inspecting DC while TOH. LD Dyna Drill, inspect elevators, bails, block ears, swivel bail and saver sub. PU bit and BHA w/NB roller rmr and string roller rmr at 60 ft. PU 3 new 8" DC and 6-6.25" DC. TIH. Hit bridge at 4446 ft. PU kelly wash and ream from 4446 to 4538 ft. TIH. Break circulation and precautionary ream from 6327 to 6370 ft. The bottom 10 ft of hole reamed tight. Circulate bottoms up. Drill from 6370 to 6400.ft. Survey (6370 ft, 9°, S64W). Drill from 6400 to 6414 ft.
- 17 Drill from 6414 to 6432 ft. Survey (6402 ft, 8.25°, S60.5W). Drill from 6432 to 6463 ft. Survey (6433 ft, 7.75°, S61W). Drill from 6463 to 6465 ft. Circulate bottoms up. TOH experiencing 25,000 lb drag at 4584 ft.

DAY REPORT

- AUGUST 17 Cont.
PU Dyna Drill and TIH. Orient Dyna Drill and
drill from 6465 to 6492 ft.
- 18 Drill from 6492 to 6504 ft. Survey (6453 ft, 7.5°, S64W). Drill 6504 to 6506 ft. Mix and pump high viscosity pill and TOH. Cut drill line. LD 4-6.25" DC and Dyna Drill. Install rotating head. Weld flowline from blooie line to shaker suction sump. MU BHA and TIH to 3129 ft. Install rotary bushing.
- 19 Install rotating rubber. Displace hole w/air from 3171 ft to surface using 850 CFM while injecting 14 bbl of water containing 7 gal of soap. One compressor and one booster was engaged at 900 psi. Circulate w/ foam. Water flow occurred w/approx 75 BPH w/FLT at 119°F. TIH to 4230 ft. Water flow increased to approx 175 to 200 BPH. Shut in well and pump 37 bbl of 8.8 ppg mud. Water flow stopped. Began circulation losing 20% of returns. Spot LC pill at 4272 ft. Regained total circulation. Lost approx 150 bbl of mud. TOH. PU 4-6.25" DC and TIH. Circulated bottoms up. Drill from 6506 to 6522 ft. Survey (6487 ft, 7°, S71W). Drill from 6522 to 6530 ft.

DAY REPORT

AUGUST 20 Drill from 6530 to 6533 ft. Survey (6518 ft, 6.25°, S71W). Drill from 6553 to 6585 ft. Survey (6550 ft, 5.75°, S71W). Drill from 6585 to 6616 ft. Survey (6581 ft, 6°, S69W). Drill from 6616 to 6647 ft. Survey (6613 ft, 5°, S59W). Drill from 6647 to 6649 ft. Circulate bottoms up and made short trip from 6649 to 4700 ft. TIH and pump 50 bbl of high viscosity pill. Drop multi-shot and TOH. Retrieve multi-shot. LD ND reamer. RU Schlumberger to log.

21 Logged for 24 hours. Ran:
Run #1 6649 to 3223 ft ISF, BHC, MSFL, GR, SP, CAL
Run #2 6649 to 3572 ft DDL, MSFL, GR, SP, CAL
Run #3 6649 to 3722 ft LDL, CNL, GR, CAL
Run #4 6649 to 4030 ft HDT
Run #5 6611 to 4296 ft SWC
23 shots 4 no recovery 19 recovered

Hole took 25 bbl of fluid while logging.

22 RD Schlumberger. TIH to 6649 w/5 ft of fill. Circulated bottoms up for samples. Drill from 6649 to 6735 ft. Survey (miss run). Drill from 6735 to 6823 ft.

DAY REPORT

- AUGUST 23 Drill from 6823 to 6828 ft. Survey (miss run).
Drill from 6828 to 6891 ft. Survey (6860 ft, 4°, S24E). Drill from 6891 to 7048 ft.
- 24 Survey (miss run). Drill from 7048 to 7133 ft.
Circulate bottoms up. TOH and LD 14 joints of DP.
Test BOP. TIH. Break and service all DC going in hole.
- 25 TIH servicing DC connections. Ream from 7065 to 7133
ft. Survey (7080 ft, 10.5°, S65E). Drop multi-shot
and spot high viscosity pill. TOH experiencing 40K
drag from 7100 to 6674 ft. Retrieve multi-shot and
continue TIH. PU stabilizer and bit #88, Hughes, J77.
TIH and test tight spot at 3873 ft. Stuck pipe at
4351 ft and worked free. TOH to LD stabilizer.
Change out drill line.
- 26 Spool on new drill line. TIH to 7133 ft slick.
Encountered no tight spots. Circulated 2.5 hrs.
TOH. PU 24 joints of DP and TIH open ended to set
kick off plug. Circulated 2 hrs. Mix and pump
440 sx of Class 'G' 16.5 ppg, .6% HR6 with 20 bbl,
10 ppg scavenger in front. Displace with 120 bbl
mud. TOH to 5808 ft on 14 stands. Could not
circulate DP w/ rig pumps. Broke circulation w/
Howco 2000 psi and then switched back to rig pumps.
Plug in place at 0430 hrs.

DAY REPORT

AUGUST

- 27 Circulated open ended DP. TOH and LD 24 joints of DP. MU slick BHA and TIH to 3224 ft. WOC 14.5 hrs. TIH and tag cmt at 5781 ft. Drill cmt from 5781 to 5824 ft. (cmt from circulating DP) TIH tag cmt at 6469 ft. Drill cmt from 6469 to 6524 ft. Drilled at .8 ft/min. Circulate losing fluid. Drill from 6524 to 6599 ft at 3ft/min. Drill 6599 to 6618 ft at .8ft/min. Circulate bottoms up. Survey (6562 ft, 5.75°, S69W). Mix and pump high viscosity pill.
- 28 TOH. PU 9.625" Dyna Drill w/ 1.5° bent sub. TIH. MU circulating head. Survey (6562 ft, 5.75°, S69W). RIH w/steering tool and orient same. Drill from 6618 to 6637 ft.
- 29 Drill from 6637 to 6638 ft. Survey (6593 ft, 6.25°, S68W). Mix and pump high viscosity pill. TOH. Slip drill line. TOH. LD 9.625" Dyna Drill. PU 7.75" Dyna Drill w/1.5° bent sub. MU bit #90, Smith F2. TIH. RU circulating head. Run and orient steering tool. Drill from 6638 to 6666 ft. Mix and pump high viscosity pill. Survey (6626 ft, 5.75°, S57.5W). POH w/steering tool. TOH w/ Dyna Drill.

DAY REPORT

AUGUST 30 TOH. Experienced 30 to 40 k drag from 6660 to 5940 ft. MU bit #91, Smith F2. TIH. Break circulation and ream from 6616 to 6666 ft. RU circulating head and RIH w/ steering tool. Drill from 6666 to 6673 ft. POH w/ steering tool. LD circulating head. TOH. MU bit #92, Hughes J77. TIH. Break circulation and RIH w/ steering tool. Orient tool. Wash and ream from 6600 to 6673 ft.

31 Ream from 6660 to 6673 ft. POH w/ steering tool and LD circulating head. TOH and LD DC, subs and Dyna Drill. TIH open ended to 6205 ft. Circulate and pump plug #1, 300 sx of Class 'G' cement with .75% CFR2. Pull up hole to 5701 ft and pump plug #2, 300 sx of Class 'G' cement with .75% CFR2. Pull up hole, LD DP, to 3528 ft. Pump plug #3, 400 sx of Class 'G' cement with .75% CFR2.

SEPTEMBER 1 Pull up hole to 2761 ft and circulate out cmt. TOH and LD 88 jts of DP. TIH to 500 ft and pump plug #4, 150 sx of Class 'G' cement with .75% CFR2.

Broadmere #1 Plugged and Abandoned

Released Richter Rig #9 on September 1, 1984 at 12:00 noon.



Amoco Production Company
DRILLING MUD RECORD

FEET

OPERATOR AMOCO AUSTRALIA	LAT 16° 19' 47.963 S LONG 133° 19' 16.896 E	TYPE WELL DRILLING EXPLORATORY	SURFACE WATER & GEL 910	CASING SIZE SURFACE 20"	CASING DEPTH 910	BIT SIZE 17.5 26	NO BITS 1 2	ROTATING HOURS 39.5 92.0	COST OF MATERIALS \$ 109460
WELL BROADMERE # 1	FIELD WILDCAT	SPUD DATE 5-15-84	INTERMEDIATE WATER & GEL 3224	INTERMEDIATE 13,375	3224	12.25 17.5	15 32	232.5 338.0	TAX \$ 0
CONTRACTOR RICHTER RIG 9	COUNTY/PARISH NORTHERN TERRITORY	ID DATE 9.1.84 RREL	FOOTAGE 10566 ft			12.25	42	469.5	DRAWAGE \$ 0
MUD CO/ENGINEER BAROID	STATE AUSTRALIA	DAYS TO ID 109	TOTAL DEPTH 7133/6673	PRODUCTION PKA	PRODUCTION				TOTAL MUD COST \$ 109466
									COST/FOOT \$ 10.

MUD PROPERTIES														MATERIALS ADDED TO CONTROL PROPERTIES											DAILY COST	CUMULATIVE COST																		
DATE	DEPTH	WT	V6	PV	TV	GELS O/10	PH	API FL 100 PSI	FIT-HP FL at 300'	CHLORIDES PPM	CA PPM	% SOLIDS	% OIL	HBT # PER BBL	DRILL SOLIDS # PER BBL	BAR SX	CLAY		pH		THINNERS						FWYATE CONTROL		OTHER															
																	GEL SX	SX	CAUSTIC	SX	SX	SX	SX	SX			SX	CEL POL	SX	LIME	SODA	BT-CARB	SX	SX										
5-16	140	9	65																																									
5-17	710	8.5	35	8	9	5/14	11.5	30																																	3465	3465		
5-18	910	8.8	36	9	7	2/14	10.5	31																																	1472	4937		
5-19	250	8.9	40	12	9	5/15	10.5	22																																	1404	6327		
5-20	775	9.3	45	14	11	4/15	10.0	23																																	1542	7869		
5-21	910	9.3	42	15	7	2/14	10.0	15																																	2265	9309		
5-22	910	9.3	42	16	9	2/11	10.0	15																																	0	9309		
5-23	PLT	8.4	32	5	4		9.0				0	2	0																											2513	11822			
5-24	921	8.4	35	11	6	2/8	10.0				0	2	0																											602	11950			
5-25	1100	8.5	35	10.5	7	1/5	10.5	12			0	2	0																											1440	13390			
5-26	1517	8.8	38	11	8	2/10	10.0	11			0	2	0																											150	2124	15514		
5-27	1517	8.8	39	12	7	2/10	10.0	12			0	2	0																											0	15514			
5-28	1626	8.6	36	10	8		10.0	14			0	2	0																											60	1023	16537		
5-29	1910	8.8	35	7	6	1/7	10.0	15			0	2	0																												102	1584	18122	
5-30	2130	8.9	39	10	9	1/7	10.0	15			0	4	0																												82	1350	19472	
5-31	2446	8.8	41	10	11	1/7	10.0	15			0	3	0																												64	1147	20620	
6-1	2665	8.8	38	10	10	1/5	10.0	15	100		0	3	0	15																											102	1985	22235	
6-2	2872	8.8	37	10	8	1/4	10.5	14.7	100		0	3	0	15																											1	805	23010	
6-3	3291	8.9	39	12	8	1/4	10.0	15	100		0	3.5	0	15																										25	1021	24031		
6-4	3302	8.9	38	12	10	1/5	9	15.8	100		0	3.5	0	15																											12	307	24338	
6-5	3450	8.9	44	15	12	2/18	10	16.2	100		0	3	0	15																												38	923	25268
6-6	3598	8.9	44	14	11	2/18	10.5	15.6	100		0	3	0	15																												6R	1013	26280



Amoco Production Company
DRILLING MUD RECORD

RUN

OPERATOR AMOCO AUSTRALIA	LAT 16°19'47.963 S LONG 135°19'16.896 E	TYPE WELL DRILLING EXPLOR	INTERVAL MUD PROGRAM SURFACE WATER & GEL 910'	CASING SIZE SURFACE 20"	CASING DEPTH 910	BIT SIZE 17.3 2A	NO. BITS 1 2	ROTATING HOURS 39.5 52.0	COST OF MATERIALS \$ 100466
WELL ONDACHENE #1	FIELD WILDCAT	SPUD DATE 5-15-84	INTERMEDIATE WATER & GEL 3224	INTERMEDIATE 13.375	3224	12.25 17.3	15 32	232.5 338.0	TAX \$ 0 DRAYAGE \$ 0
CONTRACTOR RICHTER RIO 9	COUNTY/PARISH NORTHERN TERRITORY	TD DATE 9.1.84	FOOTAGE 10566 FT	LINER(S)		12.25	42	469.5	TOTAL MUD COST \$ 100466
MUD CO/ENGINEER BAROID	STATE AUSTRALIA	DAYS TO I.D. 109	TOTAL DEPTH 7133/6673	PRODUCTION PKA	PRODUCTION				COST/FOOT \$ 10.

MUD PROPERTIES															MATERIALS ADDED TO CONTROL PROPERTIES												DAILY COST	CUMULATIVE COST					
DATE	DEPTH	WT	V8	PV	TP	GELS O/10	PM	AM FL 100 PSI	HT-HP FL at 300'	CHLORIDES ppm	CA ppm	% SOLIDS	% OIL	MBT # PER BBL	DRILL SOLIDS # PER BBL	BAR SZ	CLAY		pH		THINNERS				TETRATE CONTROL				OTHER				
																	GEL SZ	SZ	CAUSTIC SZ	SZ	SZ	SZ	SZ	SZ	CEL POL	SZ			LINE	SODA	BI CARB	SZ	SZ
6-7	3748	8.9	48	13	9	2/8	10	15.6		100	0	3	0	15	24	20	28		1													675	26956
6-8	4110	8.9	42	12	9	2/16	10.5					3	0	15	24		56		2												1623	28579	
6-9	4132	8.9	41	12	8	2/16	10.5	13.2		100	0	3	0	15	24	34															320	28907	
6-10	1060	8.9	37	9	7	1/10	10.5	16		100	0	3	0	15	24		31		1												824	29732	
6-11	1263	9.1	47		11	2/14	9.5	16		100	0	4	0	15	32	160	69		1												2537	32369	
6-12	1263	9.0	47	16	11	2/14	9.5	16		100	0	3.5	0	15	26	105															1013	33382	
6-13	1530	8.9	42	12	8	2/14	10.5	16		100	0	3	0	15	22	40	80		2												1707	35089	
6-14	1650	8.9	43	15	10	2/12	10.5	18		200	0	3	0	15	24	40	70		1												749	35838	
6-15	1702	8.9	44	13	9	3/14	10.5	17		180	0	3	0	15	24	40	30		1												897	36735	
6-16	1742	8.9	41	13	10	4/15	10.5	16		200	0	3	0	15	24	20	46		1												749	37484	
6-17	1866	8.9	40	12	9	4/21	10.5	16		200	0	3	0	15	24	20	40		1												853	38337	
6-18	1984	8.9	40	13	10	2/8	10.0	14		200	0	3	0	15	24	25	79														1418	39222	
6-19	2052	8.9	41	13	9	1/4	10.0	14		200	0	3	0	15	24		36														556	40293	
6-20	2097	8.9	40	14	9	1/5	10.0	14		200	0	3	0	15	24	40	31		1												912	41206	
6-21	2182	8.9	45	15	11	2/5	10.0	14		200	0	3	0	15	24	20	65														1161	42567	
6-22	2228	8.9	44	16	10	2/5	10.0	15		200	0	3	0	15	24		37														849	43216	
6-23	2311	8.9	43	15	10	1/5	10.0	15		200	0	3	0	15	24		34														507	43723	
6-24	2395	8.9	45	16	11	2/5	10.0	14.5		200	0	3	0	15	24	25	12														420	43656	
6-25	2460	8.9	43	15	10	1/5	10.0	13.5		200	0	3	0	15	24				7												64	43701	
6-26	2508	8.9	43	16	11	1/5	10.0	13.5		200	0	3	0	15	24	20	10														342	43978	
6-27	2577	8.9	42	16	10	1/5	10.0	13.0		200	0	3	0	15	24	56	70		1												1857	45836	
6-28	2645	8.9	42	15	10	1/4	10.0	12.2		200	0	3	0	15	24	10	50		1												1625	47461	
6-29	2698	8.9	44	17	11	1/5	10.0	11.5		100	0	3	0	15	24	52	10														651	48112	



Amoco Production Company
DRILLING MUD RECORD

FLAME

OPERATOR AMOCO AUSTRALIA	LAT 16° 19' 47.963 S LONG 135° 19' 16.896 E	TYPE WELL DRILLING EXPLORATION	INTERVAL MUD PROGRAM SURFACE WATER & GEL 910'	CASING SIZE SURFACE 20"	CASING DEPTH 910	BIT SIZE 17.5 26.0	NO. BITS 1 2	ROTATING HOURS 39.5 52.0	COST OF MATERIALS \$ 109466 TAX \$ 0 DRAYAGE \$ 0 TOTAL MUD COST \$ 109466 COST/FOOT \$ 10.1
WELL BROADHURST #1	FIELD WILDCAT	SPUD DATE 5-15-84	INTERMEDIATE WATER & GEL 3224	INTERMEDIATE 13,375	3224	12.25 17.5	15 32	232.5 358.0	
CONTRACTOR RICHTER RIG 9	COUNTY/PARISH NORTHERN TERRITORY	TD DATE 9.1.84	FOOTAGE 10966	INNER(S)		12.25	42	469.5	
MUD CO /ENGINEER BAROID	STATE AUSTRALIA	DAYS TO T.O. 109	TOTAL DEPTH 7133/6673	PRODUCTION PXA					

MUD PROPERTIES														MATERIALS ADDED TO CONTROL PROPERTIES												DAILY COST	CUMULATIVE COST									
DATE	DEPTH	WT	VS	PV	TP	GELS O/10	PH	API FL 100 PSI	MT-PP FL @ 300°	CHLORIDES ppm	CA ppm	% SOLIDS	% OIL	MST # PER BBL	DRILL SOLIDS # PER BBL	BAR SX	CLAY		PH CAUSTIC	THINNERS			TREATMENT CONTROL		OTHER											
																	GEL SX	SX		SX	SX	SX	SX	SX	SX			SX	SX	SX	SX	SX	SX	SX	SX	SX
6-30	2857	9.0	43	19	12	1/2	9.5	12.0		100	0	3.5	0	15	28																					
7-1	3018	8.9	47	22	14	1/2	9.5	10.8		200	0	3.5	0	17.5	28	15	35																670	48782		
7-2	3197	9.0	43	15	8	1/2	9.5	10.8		200	0	3.5	0	17.5	28	34	30															1004	49786			
7-3	3229	9.0	41	16	8	1/2	9.5	11.4		200	0	3.5	0	15	28	22	38		1													775	50561			
7-4	3220	9.0	41	16	8	1/2	9.5	11.4		200	0	3.5	0	15	28	22	38															844	51405			
7-5	3230	9.0	41	16	8	1/2	9.5	11.4		200	0	3.5	0	15	28	206																2586	53991			
7-6	DUMP SYSTEM																																	66	54057	
7-7	3230	8.7	41	13	5	2/10	10	15.0		200	0	2.0	0	12.5	12.5	24			1														0	54057		
7-8	3230	8.7	41	13	5	2/10	10	15.0		200	0	2.0	0	12.5	12.5																			422	54479	
7-9	3234	8.8	45	14	9	10/21	11	16.0		200	20	2.5	0	12.5	19.7																			0	54479	
7-10	4167	8.8	37	8	7	8/11	12	16.5		200	0	2.5	0	15	19.5																			516	54995	
7-11	4307	8.9	39	14	8	2/6	11	15.0		200	0	3.0	0	17.5	24																			518	55513	
7-12	4382	8.9	36	9	6	1/4	10	14.4		200	16	3.0	0	20	24																			629	56142	
7-13	4466	8.9	40	10	8	1/6	10	14.0		200	0	3.0	0	22	24																			408	56550	
7-14	4530	8.9	40	10	9	1/5	10	14.0		200	0	3.0	0	20	24																			730	57279	
7-15	4586	8.9	39	9	8	1/5	10	14.0		200	0	3.0	0	18	24				1															1061	58340	
7-16	4649	8.9	40	9	9	1/6	10	13.5		200	0	3.0	0	18	24																			524	58864	
7-17	4693	8.9	39	9	8	1/4	10	13.5		200	0	3.0	0	18	24																			1163	60028	
7-18	4710	8.4	27	2	1	0/0	0	N/C		200	0	1.0	0	-5	-10																			878	60905	
7-19	4826	8.4	26	0	0	0	9	N/C		200	0	1.0	0	5	0																			556	61461	
7-20	4943	8.7	37	10	9	1/4	9.5	17		200	0	2.0	0	12	8																			293	60520	
7-21	5043	8.7	38	10	8	1/4	10	14		200	0	2.0	0	15	22																			2020	62371	
7-22	5104	8.6	39	10	10	1/5	10	15		200	0	2.0	0	15	20																			596	62967	
																	70																		1107	64075



Amoco Production Company
DRILLING MUD RECORD

OPERATOR AMOCO AUSTRALIA	LAT 16° 19' 47.963 S LONG 135° 19' 16.896 E	TYPE WELL DRILLING EXPLORATION	INTERVAL MUD PROGRAM SURFACE WATER & GEL 910'	CASING SIZE SURFACE	CASING DEPTH 910	BIT SIZE 17.5 26.0	NO. BITS 1 2	ROTATING HOURS 39.5 52.0	COST OF MATERIALS \$ 109466
WELL BROADMERE # 1	FIELD WILDCAT	SPUD DATE 5-15-84	INTERMEDIATE WATER & GEL 3224	INTERMEDIATE 13.375	3224	12.25 17.5	15 32	232.5 338.0	TAX \$ 0 DRAYAGE \$ 0
CONTRACTOR RICHTER RIG 9	COUNTY/PARISH NORTHERN TERRITORY	TD DATE 9.1.84	FOOTAGE 10566	LINER(S)		12.25	42	469.5	TOTAL MUD COST \$ 109466
MUD CO / ENGINEER BAROID	STATE AUSTRALIA	DAYS TO TD 109	TOTAL DEPTH 7133/6623	PRODUCTION PKA	PRODUCTION				COST/FOOT \$ 10.3

DATE	DEPTH	WT	VS	PV	YP	GELS O/10	PH	API FL 100 PSI	HT-HP FL at 300'	CHLORIDES ppm	CA ppm	% SOLIDS	% OIL	MBT # PER BBL	DRILL SOLIDS # PER BBL	MATERIALS ADDED TO CONTROL PROPERTIES												DAILY COST	CUMULATIVE COST		
																BAR SZ	CLAY		pH		THINNERS			HYDRATE CONTROL		OTHER					
																	GEL SZ	CAUSTIC SZ	SZ	SZ	Q. BROKIN SZ	SZ	SZ	KWIK SEAL SZ	WALNUT SZ	COATINGS SZ	AL. STER SZ			BI CARB SZ	SZ
7-23	5183	8.8	39	11	9	1/3	9.5	14.5		200	0	3.0	0	15	30	30	50													1034	63109
7-24	5267	8.8	39	7	8	1/4	9.5	14.5		200	0	3.0	0	15	30	20	46	1												942	66052
7-25	5326	8.8	39	13	9	1/6	10	15.0		200	0	3.0	0	15	30	15	22													472	66525
7-26	5440	8.8	39	13	8	1/5	10	14.5		200	0	3.0	0	15	30		93	1												1450	67975
7-27	5538	8.8	40	14	10	1/2	10	12.6		200	0	3.0	0	17.5	24	30	62	1												1323	69298
7-28	5622	8.8	40	12	10	1/3	10	13.5		200	0	3.0	0	15	24	30														290	69587
7-29	5740	8.8	37	10	7	1/1	10	13.2		200	0	3.0	0	17.5	24	30	30													737	70324
7-30	5781	8.8	42	16	12	1/1	9.0	13.5		200	0	3.0	0	17.5	24	45	45	1												1169	71493
7-31	5837	8.8	43	12	11	1/2	10.5	15.0		200	0	3.0	0	17.5	24	20	10	1												407	71900
8-01	5875	8.8	50	14	8	1/1	9.5	10.2		200	0	3.0	0	20	24		260													10512	82411
8-02	5873	8.8	39	12	8	1/1	10	12.9		200	0	3.0	0	20	24		60	2												1023	83434
8-03	5872	8.8	41	10	10	1/15	11	15.0		200	0	3.0	0	17.5	24															256	83690
8-04	5896	8.8	66	12	8	2/20	10.5	12.6		200	0	3.0	0	17.5	24	124	6													1178	84868
8-05	5896	8.8	36	11	8	1/8	10	14.7		200	0	3.0	0	24			30													660	85529
8-06	5896	8.8	50	14	12	2/15	11	15.2		200	0	3.0	0	15.5	24	45	144	2												2709	86237
8-07	5906	8.8	58	15	15	2/12	10	12.6		200	0	3.0	0	20	24	30	60													1183	86421
8-08	5970	8.8	58	13	10	7/16	11	15.8		200	0	3.0	0	17.5	24		50													1096	90518
8-09	6042	8.8	45	15	10	1/22	10	13.2		200	0	3.0	0	20	24	23	25													682	91200
8-10	6078	8.8	41	13	10	1/19	10	15.0		200	0	3.0	0	17.5	24	20	29													625	91825
8-11	6137	8.8	39	10	8	1/2	10	15.3		200	0	3.0	0	17.5	24	20	25													587	92412
8-12	6215	8.8	37	9	8	1/1	9.5	15.0		200	0	3.0	0	20	24	20	55													1013	93425
8-13	6286	8.8	45	15	15	1/3	10	15.3		200	0	3.0	0	20	24	50	46	1												1296	94721
8-14	6361	8.8	55	16	11	1/15	10	15.0		200	0	3.0	0	20	24	55	45	1												1265	95986

BIT RECORD (DAILY)

COMPANY AMOCO AUSTRALIA	CONTRACTOR RICHTER RIG 9	NORTHERN TERRITORY	AUSTRALIA
LEASE BROADMEERE	WELL NO 1	LONG 135° 19' 16.896 E	API 970330293200
TOOL PUSHER ROSS ENSOR	DRILL PIPE 5" GRADE E 19.5 #/ft	DOWN WORKS NATIONAL 110 M	UPDR SURF
DAY DRILLER	TOOL JOINT 4.5" IF	POWER M.P. 1500	INT DATE 5-15-84 SPUD
EVENING DRILLER	DRILL COLLAR NO 00 10 LENGTH 6 9.75	PUMP NO 1 NATIONAL MODEL 9-P-100 STROKE 6.25 x 9.25	ID DATE 9-1-84 RREL
MORNING DRILLER	DRILL COLLAR NO 00 10 LENGTH 12 8.00	PUMP NO 2 NATIONAL MODEL 9-P-100 STROKE 6.25 x 9.25	

BIT NO	BIT SIZE	BIT WGR	BIT TYPE	SERIAL NO OF BIT	JET SIZE			DLPIN OUT	FICE	HOURS RUN	ACC HOURS	F1/HR	WEIGHT 1000 LBS	ROTARY R P M	VEBI DIV	PUMP PRESS	PUMPS			MUD			DULL CODE			REMARKS FORMATION CIRC FLUID TIC	DATE	
					1	2	3										No	1	2	3	SPM	WT	Y-4	I	B			C
1	17.5	SM	DSJ	XB6116	20	20	20	DRL	146	11	11	13.3	6	100	0	500	2	6.25	93	9	65				STUCK @ 64'	5-16-84		
1								DRL	710	33	33	21.5	20/25	75/100	.5	800	1	6.25	110	8.5	35					5-17-84		
1								DRL	910	39.5	39.5	23	15/20	80/100	.75	1200	2	6.25	110	8.8	36	2	4	1		CSG POINT 20"	5-18-84	
2	26	REED	S26	125992-44	20	20	20	DRL	86	6	6	9.5	2/5	60	0	400	1	6.25	100	8.9	40	1	6	1		HOLE OPENING	5-19-84	
3	26	SM	DSJ	SBF622	20	20	20	DRL	209	11.5	17.5	2	5/15	80/100	.5	1000	1	6.25	110	8.9	40					HOLE OPENING	5-20-84	
3								DRL	691	35.5	41.5	19.5	15/20	100/120	.5	1200	2	6.25	120	9.3	45					HOLE OPENING	5-20-84	
3								DRL	910	46.0	52.0	17.9	18/20	100/120	.75	1250	2	6.25	120	9.3	45	3	5	1		CSG POINT 20"	5-21-84	
4	17.5	SM	DGJ	WT 429	20	20	20	DRL	921	11	1.0	40.5	11.0	5/15	45/60	.75	1000	2	6.25	120	8.4	35	1	2	1		DRL CNT & FORM TST	5-24-84
5	12.25	SM	SDGH	WT 017	15	15	15	DRL	9	0.5	41.0	18.0	15	90	.75	1300	2	6.25	91	8.4	35						5-24-84	
5								DRL	184	6.5	47.0	28.3	25/30	95	1.0	1400	2	6.25	90	8.5	35						5-25-84	
5								DRL	1517	596	22	62.5	27	35/45	95/100	1.25	1450	2	6.25	90	8.8	38	8	9	1		LOST ALL 3 CONES	5-26-84
6R	12.25	H	OSC3A	12211	14	14	14	DRL	1517	0	0	0	0	60	1.25	1250	2	6.25	70	8.8	39						WASHED HOLE	5-27-84
7R	12.25	H	OSC3A	12211	14	14	14	DRL	1519	2	.5	63.0	4	4	60	1.25	1250	2	6.25	70	8.8	39	5	6	1		CLEANING BOTTOM	5-27-84
8	12.25	SM	SDGH	WS 541	16	16	16	DRL	1526	7	2	65.0	3.5	40/50	60/80	1.25	1550	2	6.25	90	8.6	36	8	7	3		ALL TEETH BROKEN	5-28-84
9	12.25	SM	F-6	BL 0239	16	16	16	DRL	100	9	74.0	11.1	50/57	62	1.25	1600	2	6.25	90	8.6	36							5-28-84
9								DRL	384	31.5	96.5	12.9	55/57	60/65	1.0	1600	1	6.25	90	8.8	35							5-29-84
9								DRL	1970	440	37.5	102.5	11.3	55/57	60/55	1.25	1600	2	6.25	90	8.9	39	7	6	1		SHARP SAND DRILL	5-30-84
10	12.25	SM	F-5	BN 0959	16	16	16	DRL	160	11	113.5	14.5	55/57	60/65	.75	1550	2	6.25	90	8.9	39							5-30-84
10								DRL	476	34	136.5	14.0	55/57	60/65	.75	1525	2	6.25	90	8.8	41							5-31-84
10								DRL	2455	485	32	127.5	13.9	55/57	60/65	.75	1550	2	6.25	90	8.8	38	6	6	1			6-1-84
11	12.25	SM	F-4	BK 4195	14	14	14	DRL	245	16	153.5	15.3	60	60/65	1.0	1250	2	6.25	90	8.8	38							6-1-84

Appendix 6

** OPENING HOLE

BIT RECORD

COMPANY		CONTRACTOR		NORTHERN TERRITORY		AUSTRALIA																					
AMOCO AUSTRALIA		RICHTER RIG 9		LONG 135°19'16.896 E		API 970330293200																					
LEASE		WELL NO		LAT																							
BROADMERE		1		16°19'47.963 S																							
TOOL PUSHER		DRILL PIPE		DRAW WORKS		UNDER SURF																					
ROSS ENSOR/BRIAN DAVIES		5" GRADE E 19.5 #/ft		NATIONAL 110M																							
DAY DRILLER		TOOL JOINT		POWER		H.P.																					
		4.5" IF		1500																							
EVENING DRILLER		DRILL COLLAR		PUMP NO 1		INT DATE																					
		NO 0 8 10 UNGIN		NATIONAL 9-P-100 6.25 x 9.25		9-15-84 SPUD																					
MORNING DRILLER		DRILL COLLAR		PUMP NO 2		INT DATE																					
		NO 0 0 10 LENGTH		NATIONAL 9-P-100 6.25 x 9.25		9-1-84 RREL																					
BIT NO	BIT SIZE	BIT MFCR	BIT TYPE	SERIAL NO OF BIT	JET SIZE			DEPIN OUT	FICE	HOURS RUN	ACC HOURS	F1/MB	WEIGHT 1000 LBS	ROTIARY R.P.M	VERT DEV	PUMP PRESS	PUMPS			MUD		DULL CODE			REMARKS FORMATION CIRC FLUID ETC	DATE	
					1	2	3										No	Line	SPM	WE	VIS	F	B	G			
11	2.25	SM	F4	BK 4195	14	14	14	2780	325	23	180.5	14.1	55/60	50/65	1.5	2150	2	6.25	90	8.8	37	8	8	3	DRL SHARP SN W/SH	6-2-84	
12	2.25	SM	F5	BL 0888	14	14	14	DRL 149	149	11.5	172.0	19.9	55/60	50/65	1.5	2200	2	6.25	90	8.8	37						6-2-84
12								DRL 501	29	189.5	17.3	57/60	50/65	1.0	2200	2	6.25	88	8.9	39					HIT IGNEOUS ROCK	6-3-84	
12								3294	114	30.5	191	16.9	57/60	50/65	1.0	2200	2	6.25	88	8.9	38	3	5	1		6-4-84	
**13	5	ACC	EH*	22950	TFA	4"	3301	7	4	195	1.75	10/20	70	1.0	308	2	6.25	65	8.9	38	8	8	1		CORE	6-4-84	
14	2.25	SM	F5	BM 8330	14	14	14	3450	149	12.5	207.5	11.9	60	62	1.0	2200	1	6.25	88	8.9	44	2	2	1	POH DUE TO WASHOU	6-5-84	
15R	2.25	SM	F5	BM 8330	14	14	14	DRL 148	148	16.0	223.5	9.25	58/60	62	1.0	2200	2	6.25	88	8.9	44				RR# 14	6-6-84	
15R								3748	298	29.5	237.0	10.1	55/60	50/65	1.0	2200	2	6.25	88	8.9	48	4	6	1	IGNEOUS ROCK	6-7-84	
16	2.25	SM	F5	BL 1011	14	14	14	DRL 394	394	20.5	257.5	19.2	58/60	52/54	1.0	2200	2	6.25	88	8.9	42				BTM OF IGNEOUS	6-8-84	
16								4152	404	21.5	258.5	18.8	58/60	62/64	2.0	2200	2	6.25	88	8.9	41	3	2	1	BIT IN V. GOOD COND.	6-9-84	
17R	17.5	SM	DGJ	MZ 429	20	20	20	DRL 236	6	6	36	20/25	100	1.0	100	2	6.25	90	8.9	37					RERUN OF BIT #4	6-10-84	
17R								1263	345	10.5	10.5	32.9	20/25	100	1.25	1100	2	6.25	90	9.1	47	3	3	1		6-11-84	
18R	17.5	SM	F5	BL 1011	14	14	14	RMR																		RERUN OF BIT #16	6-11-84
19R	17.5	SM	DGJ	MZ 429	20	20	20	1418	155	4.5	15	34.4	20/25	100	1.0	1100	2	6.25	93	8.9	42	4	7	1	RERUN OF BIT #17	6-12-84	
**20	17.5	SM	4JH	SAT 460	20	20	20	DRL 134	134	10.5	25.5	13.7	20/25	100	1.5	1300	2	6.25	85	8.9	42				HOLE OPENING	6-13-84	
**20								1583	165	14	29	11.7	20	94	.75	1300	2	6.25	85	8.9	43	8	4	4	OUTER TWO ROWS GONE	6-14-84	
**21	17.5	REED	S53	Y 29715	20	20	20	1650	67	7	36	9.6	5/27	80	.75	850	2	6.25	75	8.9	43	8	6	4	OUTER TWO ROWS GONE	6-14-84	
**22	17.5	REED	S62	A 33193	20	20	20	1693	43	6	42	7.1	20	64	.75	1550	2	6.25	75	8.9	44	4	4	1	OUTER BUTTON BROKEN	6-15-84	
**23	17.5	SM	DT1	XA 430	20	20	20	1703	10	3	45	3.3	20	100	.5	1800	2	6.25	120	8.9	41	8	8	8		6-16-84	
**24	17.5	REED	S62	AZ 0452	20	20	20	1714	11	4.5	49.2	2.5	12	55	.5	1800	2	6.25	120	8.9	41	2	3	1	6 BUTTON BROKE	6-16-84	
**25	17.5	REED	S53	Y 26419	20	20	20	DRL 31	9	38.5	3.4	15	55	.5	1800	2	6.25	120	8.9	41	2	3	1		6-16-84		

** HOLE OPENING

*** CORE

BIT RECORD

COMPANY: **MOOIL AUSTRALIA** CONTRACTOR: **RICHTER RIG 9** COUNTY: **NORTHERN TERRITORY** STATE: **AUSTRALIA**
 LEASE: **BROADMERE** WELL NO: **#1** SEC: **LAT 16°19'47.965 S** TOWNSHIP: **LONG 135°19'16.896 E** RANGE: **API 970330293200** BLOCK: **FILED**

TOOL PUSHER: **ROSS ENSOR/BRIAN DAVIES** DRILL PIPE: **5" GRADE E 19.5 #/ft** DRAW WORKS: **NATIONAL 110M** UNDER SURF: **5-15-84 SPUD**
 DAY DRILLER: **1000** JOINT: **MAKE 4.5" SIZE IF** PUMPER: **N P 1500** INT DATE: **9-1-84**
 EVENING DRILLER: **DRILL COLLAR 6 NO 0 D 9.75" 1 D 3" LENGTH** PUMP NO 1: **MAKE NATIONAL MODEL 9-P-100 STROKE 6.25 x 9.25** INT DATE: **9-1-84**
 MORNING DRILLER: **DRILL COLLAR 12 NO 0 D 8.00" 1 D 2.875** PUMP NO 2: **MAKE NATIONAL MODEL 9-P-100 STROKE 6.25 x 9.25** INT DATE: **9-1-84**

BIT NO	BIT SIZE	BIT MFCR	BIT TYPE	SERIAL NO OF BIT	JET SIZE			DEPTH OUT	FUGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LBS	ROTARY R P M	VERT DEVI	PUMP PRESS	PUMPS			MUD		DULL CODE			REMARKS FORMATION CIRC FLUID ETC	DATE
					1	2	3										No	Lines	SPM	WT	Vis	T	B	G		
25	17.5	REED	S53	Y26419	20	20	20	1751	37	61.0	165	3.2	12	54	.5	1800	1/2	6.25	120	8.9	40	8	8	.5	HOLE OPENING	6-17-84
26	17.5	REED	S62	A20452	20	20	20	1866	115	75.5	177.5	9.2	25	60	.5	1800	1/2	6.25	120	8.9	40	8	5	1	HOLE OPENING	6-17-84
27	17.5	REED	S62	A33191	20	20	20	DRL	4	74.0	178	8.0	12	52	.5	1800	1/2	6.25	120	8.9	40				BREAKING IN BIT	6-17-84
27								1937	71	83.0	187	7.5	25	68	.5	1800	1/2	6.25	120	8.9	40	8	6	.5	HOLE OPENING	6-18-84
28	17.5	REED	S53	Y26684	20	20	20	DRL	55	91.0	195	6.9	20	62	.5	1800	1/2	6.25	120	8.9	40				HOLE OPENING	6-18-
28								2000	63	93.0	197	6.3	25	65	.5	1800	1/2	6.25	120	8.9	40	8	5	.5	HOLE OPENING	6-19-
29	17.5	SEC	HD	6802	32	32	32	DRL	59	105.0	207	5.9	15	60	.5	1300	1/2	6.25	120	8.9	40				CUTTERS HB W80575, W20761, W80763	6-19-
29								2067	67	105.0	209	5.6	16	60	.5	1300	1/2	6.25	120	8.9	40	2	4	1	12.25" F5 #BL1011 ON BTM	6-20-
30	17.5	SEC	HD	6802	32	32	32	2074	8	107.5	211.5	3.2	15	60	.5	1300	1/2	6.25	120	8.9	40	4	2	1	CUTTERS H W66138, W66139, W66334	6-20-
31	17.5	REED	S51	D97405	20	20	20	2097	23	112.0	216.0	5.1	15	60	.5	1800	1/2	6.25	120	8.9	40	6	3	1	HEEL ROW OF BUTTONS BROKE	6-20-
32	17.5	SM	4JS	SAT461	20	20	20	2182	85	128.0	232.0	5.3	15	58	1	1725	1/2	6.25	120	8.9	43	8	2	.5		6-21-
33	17.5	SM	3JS	XC3989	20	20	20	DRL	5	129.5	233.5	3.3	13	58	1	1725	1/2	6.25	120	8.9	43				HOLE OPENING	6-21-
33								2222	40	138.5	242.5	3.8	13	58	1	1750	1/2	6.25	120	8.9	44	8	3	.5	HEEL ROW OF BUTTON BROKE	6-22-
34	17.5	REED	S62	427677	20	20	20	DRL	41	147.5	251.5	4.6	10/13	58	1	1750	1/2	6.25	120	8.9	44					6-22-
34								2274	52	151.5	255.5	4.0	13	60	1	1725	1/2	6.25	120	8.9	43	7	4	1	REURNABLE	6-23-
35R	17.5	REED	S62	A33193	20	20	20	2314	40	163.0	267	3.5	13	60	1	1750	1/2	6.25	120	8.9	43	7	4	1	REURN # 22 WAPHR 2220' - 2274'	6-23-
36R	17.5	REED	S62	A20455	20	20	20	2395	81	180.0	284	4.8	15	60	.75	1800	1/2	6.25	120	8.9	45	7	4	1	REURN OF #24	6-24-
37R	17.5	REED	S51	D97405	20	20	20	2418	23	185.5	289.5	4.2	13	60	.75	1800	1/2	6.25	120	8.9	43	7	3	1	REURN OF #31	6-24-
38	17.5	REED	S51	E92923	20	20	20	DRL	44	197.5	301.5	3.7	13/15	60	.75	1800	1/2	6.25	120	8.9	43				TIGHT HOLE 2356' - 2418'	6-25-
38								2464	46	198.0	302	3.7	15	60	.75	1800	1/2	6.25	120	8.9	43	8	4	.5	BOTH HEEL ROW BUTTONS GONE	6-26-
39	17.5	REED	S53	LB35286	20	20	20	2501	37	206.0	309.5	4.6	13	60	.75	1800	1/2	6.25	120	8.9	43	6	3	.5	REURNABLE	6-26-

** HOLE OPENING

COMPANY	CONTRACTOR	WELL NO	SEC	TOWNSHIP	RANGE	BLOCK	FIELD																				
MOOD AUSTRALIA	RICHTER RIG 9	#1	LAT 16°19'47.963 S	LONG 135°19'16.896 E	NORTHERN TERRITORY	AUSTRALIA	API 970330293200																				
LEASE	DRILL PIPE	TOOTH JOINT	DRILL COLLAR	DRILL COLLAR	DRAW WORKS	POWER	PUMP NO 1	PUMP NO 2																			
BROADMERE	5" GRADE E 19.5 R/FT	MAKE	NO	NO	NATIONAL 110 M	H P 1500	NATIONAL	NATIONAL																			
FOOT USHER	MAKE	SIZE	TYPE	NO <th colspan="1">O.D.</th> <th colspan="1">I.D.</th> <th colspan="1">LENGTH</th> <th colspan="1">STROKE</th> <th colspan="1">I.D. DATE</th>	O.D.	I.D.	LENGTH	STROKE	I.D. DATE																		
ROSS ENSOR/BRIAN DAVIES	4.5"	IF		6	9.75"	3"		6.25 x 9.25	9-15-84 SPUD																		
BY MILLER	NO	O.D.	I.D.	LENGTH	PUMP NO 1	MAKE	MODEL	STROKE	I.D. DATE																		
	12	8.00"	2.875		NATIONAL	9-P-100	9-P-100	6.25 x 9.25	9-1-84 RREL																		
VENING MILLER	NO	O.D.	I.D.	LENGTH	PUMP NO 2	MAKE	MODEL	STROKE	I.D. DATE																		
	12	8.00"	2.875		NATIONAL	9-P-100	9-P-100	6.25 x 9.25	9-1-84 RREL																		
MORNING MILLER	NO	O.D.	I.D.	LENGTH	PUMP NO 2	MAKE	MODEL	STROKE	I.D. DATE																		
	12	8.00"	2.875		NATIONAL	9-P-100	9-P-100	6.25 x 9.25	9-1-84 RREL																		
BIT NO	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO OF BIT	JET SIZE			DEP IN OUT	FIGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LBS	ROTARY R P M	VERT DEV	PUMP PRESS	PUMPS			MUD		DULL CODE			REMARKS FORMATION, CIRC FLUID ETC	DATE	
					1	2	3										No	Line	SPM	WT	VIS	I	B	G			
					20	20	20	DRL	12	3	209.0	4.0	10	65	.75	1800	1/2	6.25	120	8.9	43				NO SHOCKSUB	6-28-84	
40	17.5	NEED	S53	EM4368				DRL	29	7.5	213.5	3.9	13	60	.75	1800	1/2	6.25	120	8.9	42	7	4	1	OUTER HEEL ROW BROKEN	6-27-84	
40								DRL	29	7.5	213.5	3.9	13	60	.75	1250	1/2	6.25	120	8.9	42				HB CUTTERS BL1011 ON BTM	6-27-84	
41	17.5	SEC	HO	6802	32	32	32	DRL	47	12.5	226.0	3.8	13	60	.75	1225	1/2	6.25	120	8.9	42	2	6	1	BODY DAMAGED HB CUTTER #M20757	6-28-84	
41								DRL	71	22	235.5	3.2	13	60	1.0	1225	1/2	6.25	120	8.9	42	8	4	1	HEEL ROW ALL BROKEN	6-28-84	
42	17.5	NEED	S53	L39140	20	20	20	DRL	46	9.5	245.0	4.8	13	60	1.0	1750	1/2	6.25	120	8.9	42	8	4	1	HEEL ROW ALL BROKEN	6-28-84	
42								DRL	46	9.5	245.0	4.8	13	60	1.0	1750	1/2	6.25	120	8.9	44	4	4	1	HEEL ROW ALL BROKEN	6-29-84	
43	17.5	NEED	S51	D97138	20	20	20	DRL	30	6.5	251.5	4.6	13	60	1.0	1750	1/2	6.25	120	8.9	44				WASH & RMR 29'	6-29-84	
44	17.5	SEC	S84	193803	20	20	20	DRL	27	4.5	256.0	6.0	13	60	1.0	1750	1/2	6.25	120	9.0	43					6-30-84	
44								DRL	188	28	279.5	6.7	9/13	60	1.0	1750	1/2	6.25	120	8.9	47	3	3	1	TWO TEETH BROKEN ON HEEL	7-1-84	
44								DRL	237	33.5	285.0	7.1	9/13	60	1.0	1750	1/2	6.25	120	8.9	47					7-1-84	
45	17.5	HU	OSC3A	RFG174	18	18	18	DRL	122	13.5	298.5	9.0	10/12	65	1.0	1900	1/2	6.25	113	8.9	47				DRL WASHED OUT HOLE	7-2-	
45								DRL	140	16.0	301.0	8.8	12/65	65	1.0	1900	1/2	6.25	113	9.0	43	5	4	1		7-2-	
46	17.5	SEC	S84	193519	20	20	20	DRL	148	18.5	319.5	8.0	10	65	1.0	1800	1/2	6.25	120	9.0	43					7-3-	
46								DRL	152	20.5	321.5	7.4	10	65	1.0	1800	1/2	6.25	120	9.0	41	3	3	1		7-3-	
47	17.5	SEC	HO	377706	32	32	32	DRL	24	15.5	337.0	1.6	10	65	1.0	1350	1/2	6.25	120	9.0	41	3	4	1	HB CUTTERS BL1011 ON BTM	7-3-	
47								DRL	24	15.5	337.0	1.6	10	65	1.0	1350	1/2	6.25	120	9.0	41	3	4	1	WASHED 30'	7-4-	
48	12.25	SM	F5	BL 1011	32	32	32	WASH																		WIPER TRIP	7-5-
48	17.5	SEC	S84	193519	20	20	20	WASH																		CLEAN PREVIOUS DRILL HOLE	7-8-
	2.25	SM	SDGH	WT 021	32	32	32	DRL	193	14.5	351.5	13.3	10/15	65	1.0	700	1/2	6.25	72	8.8	45	3	3	1		NEW HOLE	7-10-
	12.25	H	J55	PB 932	14	14	14	DRL	15	3	261.5	5.0	10/12	60	1.0	2100	1/2	6.25	85	8.8	37					RECOVERED 1/2 GAL INSERTS	7-11-
51								DRL	149	19	277.5	7.8	45/55	65	2.5	1900	1/2	6.25	85	8.9	39	8	8	4		PULLED FOR WASH OUT	7-12-
52	12.25	SM	F6	BL 0222	14	14	14	DRL	21	2	279.5	10.5	45	60	4.25	1750	1/2	6.25	94	8.9	36	1	2	1		RE-RUN OF # 52	7-12-
53R	12.25	SM	F6	BL 0222	14	14	14	DRL	54	8.5	288.0	6.3	65	45	3.5	2700	1/2	6.25	85	8.0	36						

COMPANY: AMOCO AUSTRALIA
 CONTRACTOR: RICHTER RIG 9
 WELL NO: # 1
 SEC: LAT 16° 19' 47.963 S
 TOWNSHIP: LONG 135° 19' 16.896 E
 RANGE: API 970330293200
 BLOCK:
 FIELD:
 NORTHERN TERRITORY AUSTRALIA

LEASE: BROADMERE
 TOOL PUSHER: ROSS ENSOR/BRIAN DAVIES
 DAY DRILLER:
 EVENING DRILLER:
 MORNING DRILLER:
 DRILL PIPE: 5" GRADE E 19.5 #/FT
 DRILL JOINT: MAKE SIZE TYPE
 DRILL COLLAR: NO 0 0 ID LENGTH
 DRILL COLLAR: NO 6 9.75" 3"
 DRILL COLLAR: NO 0 0 ID LENGTH
 DRILL COLLAR: NO 12 8.00" 2.875"
 DRAW WORKS: NATIONAL 110 M
 POWER: HP 1500
 PUMP NO 1: MAKE NATIONAL MODEL 9-P-100 STROKE 6.25 x 9.25
 PUMP NO 2: MAKE NATIONAL MODEL 9-P-100 STROKE 6.25 x 9.25
 UNDER SURF: 5-15-84 SPUD
 IN DATE: 9-1-84
 ID DATE: 9-1-84

BIT NO	BIT SIZE	BIT MFG	BIT TYPE	SERIAL NO OF BIT	JET SIZE			DEPTH OUT	FT/HR	HOURS RUN	ACC HOURS	FF/HR	WEIGHT 10-10 LBS	ROTARY R P M	VERT DEV	PUMP PRES'	PUMPS			MUD		DULL CODE			REMARKS FORMATION, CIRC FLUID, ETC
					1	2	3										No	Line	SPM	WT	VIS	1	2	3	
53R	12.25	SM	F6	BL 0222	14	14	14	4436	108	18.5	298.0	5.8	60	65	3.5	2100	1/2	6.25	85	8.9	40	8	8	5	1 CUP OF INSERTS RECOVERED BELIEVED PINCHED
54	12.25	H	J77	ZV 876	14	14	14	4466	30	5.5	303.5	5.5	55	47	2	2200	1/2	6.25	85	8.9	40	7	8	5	
55	12.25	SM	F9	CP 6892	14	14	14	4531	65	11	314.5	5.9	55	47	2	2200	1/2	6.25	85	8.9	40	8	8	1	OUTSIDE ROW OF INSERTS WORN OFF- INSIDE OK
56	12.25	SM	F9	CP 6539	14	14	14	4564	35	6	320.5	5.5	54	48	1.5	2200	1/2	6.25	85	8.9	39	8	4	1	
57	12.25	H	J77	ZM 029	14	14	14	DRL	22	4.5	325.0	4.5	55	47	1.5	2180	1/2	6.25	85	8.9	39				
57								4627	65	12	332.5	5.5	45	47	1.5	2180	1/2	6.25	85	8.9	40	8	5	1	
58	12.25	H	J55	439 PS	14	14	14	4649	22	5.5	338.0	4.0	35	47	1.5	1260	2	6.25	127	8.9	40	8	6	2	PUMP #1 DOWN
59	12.25	H	J55R	KZ 352	14	14	14	4668	19	7.0	345.0	2.7	30/35	47	1.5	1260	2	6.25	127	8.9	39	8	4	1	PUMP #1 DOWN
60	12.25	H	J77	MB 117	14	14	14	DRL	25	8.5	355.0	2.9	40	47	1.5	1940	1/2	6.25	86	8.9	39				
60								DRL	96	31.5	376.5	3.1	40	42/47	2	1800	1/2	6.25	80	8.4	27				
60								4783	115	36.5	381.5	3.2	40	42	2.0	1800	1/2	6.25	80	8.4	26	8	5	2	
61	12.25	REED	HPH	DO 5216	14	14	14	DRL	43	5.5	387.0	7.8	48	54	2.0	1800	1/2	6.25	80	8.4	26				
61								4864	81	9.5	391.0	8.5	45	55	3.0	1800	1/2	6.25	80	8.7	37	6	4	.5	
62	12.25	SM	F7	CD 4187	14	14	14	DRL	79	9.0	400.0	8.8	45/48	50	3.5	1800	1/2	6.25	80	8.7	37				
62								4972	108	14	405.0	7.7	45	50/55	4.75	1900	1/2	6.25	80	8.7	38	8	8	4	
63	12.25	REED	HPH	DO 5212	14	14	14	DRL	71	12	417.0	5.9	45/50	50	4.75	1940	1/2	6.25	81	8.7	38				NO SHOCK SUB
63								5104	132	28	433.0	4.7	50	45/50	5.5	1900	1/2	6.25	80	8.6	39	7	5	1	
64	12.25	REED	HPH	DO 5219	14	14	14	5183	79	18.5	451.5	4.3	50	48/50	5.5	1900	1/2	6.25	80	8.8	39	7	5	1	RMR 75' 5029-5104
65	12.25	REED	HPH	DO 5222	14	14	14	5267	84	16.5	468.0	5.1	50/55	50	6.75	1900	1/2	6.25	80	8.8	38	6	6	.5	PULLED DUE TO HI TORQUE
66	12.25	SM	F5	BN 1625	14	14	14	DRL	59	10.5	478.5	5.6	50	50	6.75	1960	1/2	6.25	80	8.8	39				PU NB AND STG RMR
66								DRL	175	33.0	501.0	5.5	50/60	50	6.0	1980	1/2	6.25	80	8.8	39				

BIT RECORD

COMPANY AMOCO AUSTRALIA	CONTRACTOR RICHTER RIG 9	NORTHERN TERRITORY	AUSTRALIA
LEASE BROADMERE	WELL NO #1	LAT 16° 19' 47.963 S	RANGE API 970330293200

TOOL PUSHER JIM TUCKER/ROSS ENSOR	DRILL PIPE 5" GRADE E	19.5 #/FT	DRAW WORKS NATIONAL 110 M
DAY DRILLER	1000 ID INI	MAKE 4.9"	TYPE IF
EVERING DRILLER	DRILL COLLAR	NO 6	OD ID LENGTH 0.0 9.75" 3"
MORNING DRILLER	DRILL COLLAR	NO 12	OD ID LENGTH 0.0 8.00" 2.875"
			POWER HP 1500
			PUMP NO 1
			PUMP NO 2
			STROKE 6.25 x 9.25
			STROKE 6.25 x 9.25
			INT DATE 5-15-84
			INT DATE 9-1-84

BIT NO	BIT SIZE	BIT MFGR	BIT TYPE	SERIAL NO OF BIT	KI SIZE			DEPTH OUT	FT/CE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LBS	ROTARY R P M	VERT DEV	PUMP PRESS	PUMPS			MUD			DULL CODE			REMARKS FORMATION CIRC FLUID ETC	DATE
					No	Line	SPM										WT	Y-L	I	B	C	I	B	C			
66	12.25	SM	F5	BN 1625	14	14	14	5450	183	34.5	302.5	5.3	50/60'	50	6.0	1980	2	6.25	80	8.8	40	7	5	1		7-27-84	
67	12.25	SM	F5	BY 5081	14	14	14	DRL	88	12.5	515.0	7.0	60	50	6.5	2000	2	6.25	80	8.8	40				NO STRING RMR REAR 6' 5444-5450	7-27-84	
67								5622	172	23	525.5	7.5	60	50	7.75	1980	2	6.25	80	8.8	40	8	8	5		7-28-84	
68	12.25	SM	F5	CH 6819	14	14	14	DRL	14	1.5	527.0	9.3	60	50	7.75	1960	2	6.25	80	8.8	40				PU SHOCK SUB	7-28-84	
68								5747	125	14	539.5	8.9	60	50	8.75	1960	2	6.25	80	8.8	37	8	8	5		7-29-84	
69	12.25	REED	HPH	DO 5220	32	32	32	5781	34	5.5	545.0	8.8	25/30	200	9.5	900	1	6.25	120	8.8	42	6	3	1	RUN ON 9 5/8" DYNA DRILL	7-30-84	
70	12.25	REED	HPH	DO 5218	32	32	32	5837	56	8.5	553.5	8.8	37	200	9.0	1000	1	6.25	120	8.8	43	7	4	1	RUN ON 9 5/8" DYNA DRILL	7-31-84	
71	12.25	REED	HPH	E 80055	14	14	14	5873	36	2	555.5	18.0	0/60	50	8.75	2000	2	6.25	80	8.8	50	8	8	5	SHANKS WERE TWISTED LOST CIRCULATION	8-1-84	
72	12.25	REED	HPH	A 37532	13	13	15	5896	23	1.5	557.0	15.3	2/50	50	8.75	2100	2	6.25	80	8.8	68	8	8	1	RMR 72' 5791-5863'	8-4-84	
73	12.25	H	J77	CP 709	14	14	14	5896	RMR	0	557.0	0.0	0/5	50	8.75	1950	2	6.25	80	8.8	38	2	2	1	RMR 12' 5884-5896'	8-5-84	
74R	12.25	H	J77	CP 709	14	14	14	5896	RMR	0	557.0	0.0	50	50	8.75	1850	2	6.25	80	8.8	50	5	7	1	RMR 37' 5849-5886'	8-6-84	
75	12.25	H	J77	CP 707	14	14	14	5906	10	3	560.0	3.3	5/25	40/70	7/75	1850	2	6.25	85	8.8	58	3	3	2		8-7-84	
76	12.25	SM	F5	BO 6477	14	14	14	DRL	77	7	567.0	11.0	60	50	8.0	1950	2	6.25	80	8.8	58				PU 3PT RMR, DRILL 21' CNT	8-8-84	
76								5992	86	8.5	568.5	10.0	60	50	9.0	1950	2	6.25	80	8.8	45	8	8	6	BIT X RMR BUTTONS WORN SMOOTH-NO BROKEN BUTTONS	8-9-84	
77	12.25	REED	FP63	NBM 585	14	14	14	6045	53	7.5	576.0	7.0	60	50	9.75	2000	2	6.25	80	8.8	45	8	6	5	MIDDLE ROW OF BUTTONS GONE	8-9-84	
78	12.25	SM	F9	CP 6541	14	14	14	6095	50	9	585.0	9	65	50	10.25	1950	2	6.25	80	8.8	41	8	4	1	MIDDLE ROW OF BUTTONS GONE	8-10-84	
79	12.25	REED	REED	A 34445	32	32	32	6137	42	6.5	591.5	6.5	40/45	200	10.25	1000	2	6.25	62	8.8	39	6	6	2	HEELWARE D.O. 2 INTER ROWS CHIP INSERTS	8-11-84	
80	12.25	REED	HPH	DO 5224	32	32	32	6216	79	10	601.5	7.9	35	200	10.25	1000	2	6.25	62	8.8	37	6	7	2	MIDDLE ROW BUTTONS BROKE ALL OTHERS ABRASIVE WARE	8-12-84	
81	12.25	REED	HPH	A 39632	32	32	32	6288	72	8	609.5	9.0	20/25	200	10.25	1000	2	6.25	62	8.8	45	5	7	5	INTER ROW CHIPPED-WEAR ON HEEL ROW-1 CONE SKIDDED	8-13-84	
82	12.25	SM	F7	CT 0748	14	14	14	6361	73	6.5	616.0	11.2	60	60	9.25	2000	2	6.25	80	8.8	55	5	3	1	CHIPPED TEETH ON HEEL AND INTER ROW	8-14-84	
83	12.25	REED	FP63	NBM 587	32	32	32	6370	9	2	618.0	4.5	20/25	200	9.0	1400	2	6.25	75	8.8	39	3	5	1	3 CONES SKIDDED 1 CONE LOOSE SEAL	8-14-84	

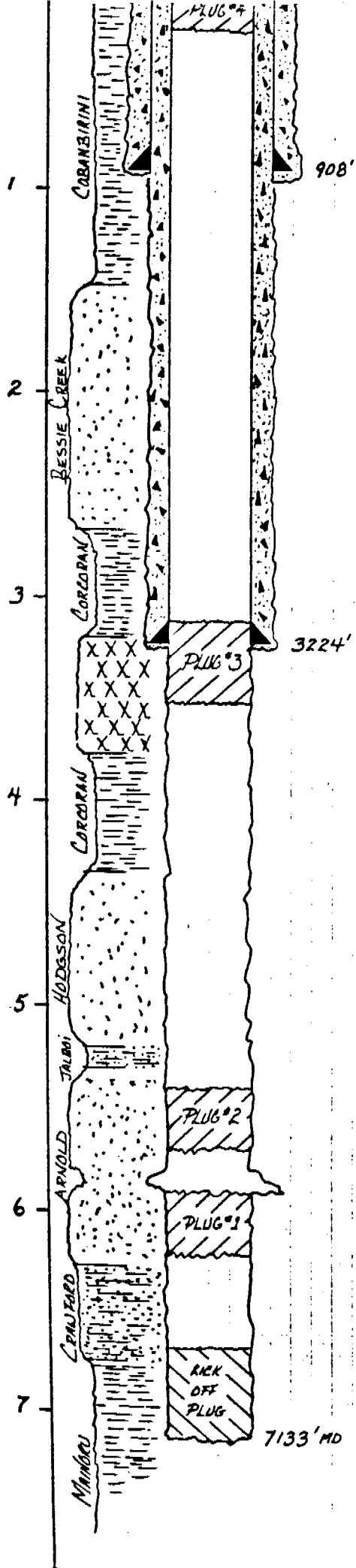
BIT RECORD

COMPANY AMOCO AUSTRALIA		CONTRACTOR RICHTER RIG 9			NORTHERN TERRITORY				AUSTRALIA					
LEASE BROADMERE		WELL NO #1			LAT 16° 19' 47.963 S				LONG 135° 19' 16.896E				RANGE API 970330293200	
TOOL PUSHER JIM TUCKER/ROSS ENSOR		DRILL PIPE 9" GRADE E 19.5 #/FT			DRAW WORKS NATIONAL 110 M									
DAY DRILLER		TOOL JOINT MAKE SIZE TYPE			POWER H P 1500				UPDR SURF 9-15-84 SPUD					
EVENING DRILLER		DRILL COLLAR NO O D I D LENGTH			PUMP NO 1 MAKE MODEL STROKE				INT DATE					
MORNING DRILLER		DRILL COLLAR NO O D I D LENGTH			PUMP NO 2 MAKE MODEL STROKE				I D DATE 9-1-84 RREL					

BIT NO	BIT SIZE	BIT MCR	BIT TYPE	SERIAL NO OF BIT	JET SIZE			DEPTH OUT	FICE	HOURS RUN	ACC HOURS	F1/NO	WEIGHT 1000 LBS	ROTARY R P M	VERT DEV	PUMP PRESS	PUMPS			MUD		DULL CODE			REMARKS FORMATION CIRC FLUID ETC	DATE		
					1	2	3										HP	LINE	SPW	WT	VOL	F	B	G				
84	12.25	H	J77	CP 712	14	14	14	DRL	44	5	623.0	8.8	55	55	9	2000	2	6.25	80	8.8	38							8-16-84
84								6465	95	10	628.0	9.5	60	55	7.75	2050	2	6.25	80	8.8	38	2	3	.5	CHIPPED INSERTS ON HEEL ROW		8-17-84	
85	12.25	REED	FP63	NEM 1310	20	20	20	DRL	27	5	633.0	5.4	10	200	7.75	1000	2	6.25	48	8.8	38							8-17-84
85								6506	41	9	637.0	4.5	10	200	7.5	925	2	6.25	99	8.8	38	8	8	1	ON DYNA DRILL		8-18-84	
86	12.25	H	J77	CP 706	14	14	14	DRL	24	3.5	640.5	6.9	60	50	7.0	1900	2	6.25	80	8.6	34							8-19-84
86								6649	143	14.5	651.5	9.8	65	50	5.0	1900	2	6.25	80	8.6	37	3	4	1	PULLED TO LOG FEW CHIPPED HEEL INSERTS		8-20-84	
87	12.25	H	J77	CP 711	14	14	14	DRL	174	16.5	668.0	10.5	62	60	4.5	2000	2	6.25	80	8.6	42							8-22-84
87								DRL	399	39	690.0	10.2	63	60	4.0	2000	2	6.25	80	8.7	40							8-23-84
87								7133	484	48	699.5	10.0	63	60	10.5	2000	2	6.25	80	8.8	40	6	5	1	HEEL & INTER ROW CHIPPED TEETH		8-24-84	
88	12.25	H	J77	CP 708	14	14	14	6618	192	3	703.5	64.0	0/20	50	6.0	1800	2	6.25	80	8.7	47	0	0	1	WASH & DRL CEMENT		8-24-84	
89R	12.25	H	J77	CP 708	32	32	32	DRL	19	12.5	715.0	1.5	0	225	5.75	620	2	6.25	52	8.7	39							8-28-84
89R								6636	20	13.5	716.0	1.5	0	225	5.75	620	2	6.25	52	8.8	39	2	4	1	R R # 88		8-29-84	
90	12.25	SM	F2	OK 2181	32	32	32	6666	28	7.0	723.0	4.0	8/10	150	5.75	450	1	6.25	78	8.8	39	4	4	1	ON 8.75" DYNA DRILL		8-29-84	
91	12.25	SM	F2	OK 4283	32	32	32	6673	7	5.0	728.0	1.4	8/10	150	5.75	450	1	6.25	78	8.7	38	7	6	2	ON 7.75" DYNA DRILL		8-30-84	
92	12.25	H	J77	OK 239	32	32	32	6673	0	2.0	730.0	0	8/10	150	5.75	450	1	6.25	80	8.7	38	2	2	1	ON 7.75" DYNA DRILL PXA		8-31-84	

** PLUG BACK TO 6426 FT.

FINAL WELLBORE DIAGRAM



CONDUCTOR 0' - 51'
 36" HOLE
 30", 309 PPF, GRADE B, PLAIN END
 SET AT 51' WITH 200 SK CLASS A CEMENT

SURFACE 51' - 908'
 17 1/2" PILOT HOLE OPENED UP TO 26"
 20", 94 PPF, X56, VETCO L
 SET AT 908' WITH LEAD SLURRY: 857 SK CLASS G
 2.5% PREHYDRATED GEL
 TAIL SLURRY: 711 SK CLASS G
 NEAT

INTERMEDIATE 908' - 3224'
 12 1/4" PILOT HOLE OPENED UP TO 17 1/2"
 13 7/8", 68 PPF, X55, BUTTRESS
 SET AT 3224' WITH 2088 SK CLASS G
 1% CFR2
 .4% HALAD 22A

ABANDON PLUGS

PLUG #1 5900' - 6200' = 300'
 300 SK, CLASS G, .75% CFR2

PLUG #2 5400' - 5700' = 300'
 300 SK, CLASS G, .75% CFR2

PLUG #3 3125' - 3525' = 400'
 400 SK, CLASS G, .75% CFR2

PLUG #4 30' - 230' = 200'
 150 SK, CLASS G, .75% CFR2

