

EAST MEREENIE NO. 18
WELL COMPLETION REPORT
PETROLEUM LEASE NO. 5, NORTHERN TERRITORY

BY

MOONIE OIL N.L.

NOVEMBER 1985

NORTHERN TERRITORY
GEOLOGICAL SURVEY

PR85/72 B



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**APPENDIX No 2.
SAMPLE DESCRIPTIONS
WAS NOT SUBMITTED
WITH THIS REPORT.**

S U M M A R Y

SUMMARY

East Mereenie No. 18 is the 18th well drilled in the current Mereenie field appraisal programme. It was designed for oil production from the upper and middle P3 reservoir horizons. It is located 1435 feet on a true bearing of 340 degrees from East Mereenie No. 11 and 1927 feet on a true bearing of 102 degrees from East Mereenie No. 12. East Mereenie No. 18 is an eastern nose northern flank well.

The well spudded in Parke Siltstone on the 26th June, 1985 using O.D.E. Rig No. 19, a Kremco K600H with a rated capacity of 7500 feet and reached TD at 4735 ft on the 24th July, 1985 in the Pacoota (P3) Sandstone.

The well was drilled to 2230 feet with air foam. 10-3/4" casing was run and cemented at 2229 feet. Drilling continued with air to 3687 feet where a continuous gas flare was encountered. An open hole flow test measured 69 mcf/d from the Lower Stairway Sandstone. The well was then killed with a 10.5 lb/gal water based mud and drilling continued to 4517 feet to the base of the Pacoota (P2). 8-5/8" casing was run and cemented at 4487 feet. The water based mud was then displaced with oil based mud. Drilling continued with 7-5/8" hole to TD at 4735 feet.

One conventional bottom hole test was run to test the oil production potential of the Pacoota P3-120/130 sands. Drill stem test No. 1 (4605 to 4660 feet) flowed oil at 1325 BOPD with associated gas measured at 775 mcf/d.

At TD electric logs were run, however neither the gas/oil or oil/water contacts could be established.

2-3/8" tubing was run to 4427 feet and the well was completed barefoot for oil production from the P3 sub-unit over the interval 4487 to 4735 feet.

After swabbing, the well was flowed to clean with a stabilized flow of 1592 BOPD and associated gas at 879.6 MCFD through a 1/2" choke.

The rig was released at 1700 hours, 28th July, 1985 having taken 33 days from spud to completion.

1. GENERAL DATA

1. GENERAL DATA:

Well Name & Number: East Mereenie No. 18

Operator: Moonie Oil N.L.

Beneficial Interst Holders: The Moonie Oil Company Limited
Flinders Petroleum N.L.
Magellan Petroleum Australia Limited

Petroleum Title: Petroleum Lease No. 5

District: Alice Springs, Northern Territory

Location: Latitude: 24°1'59"S
Longitude: 131°38'33"E

Elevation: Ground Level: 2313 ft MSL
Kelly Bushing: 2325 ft MSL

Total Depth: 4735 feet (DRILLER)
4734 feet (LOGGER)

Spudded: 26th June, 1985 (0430 hours)

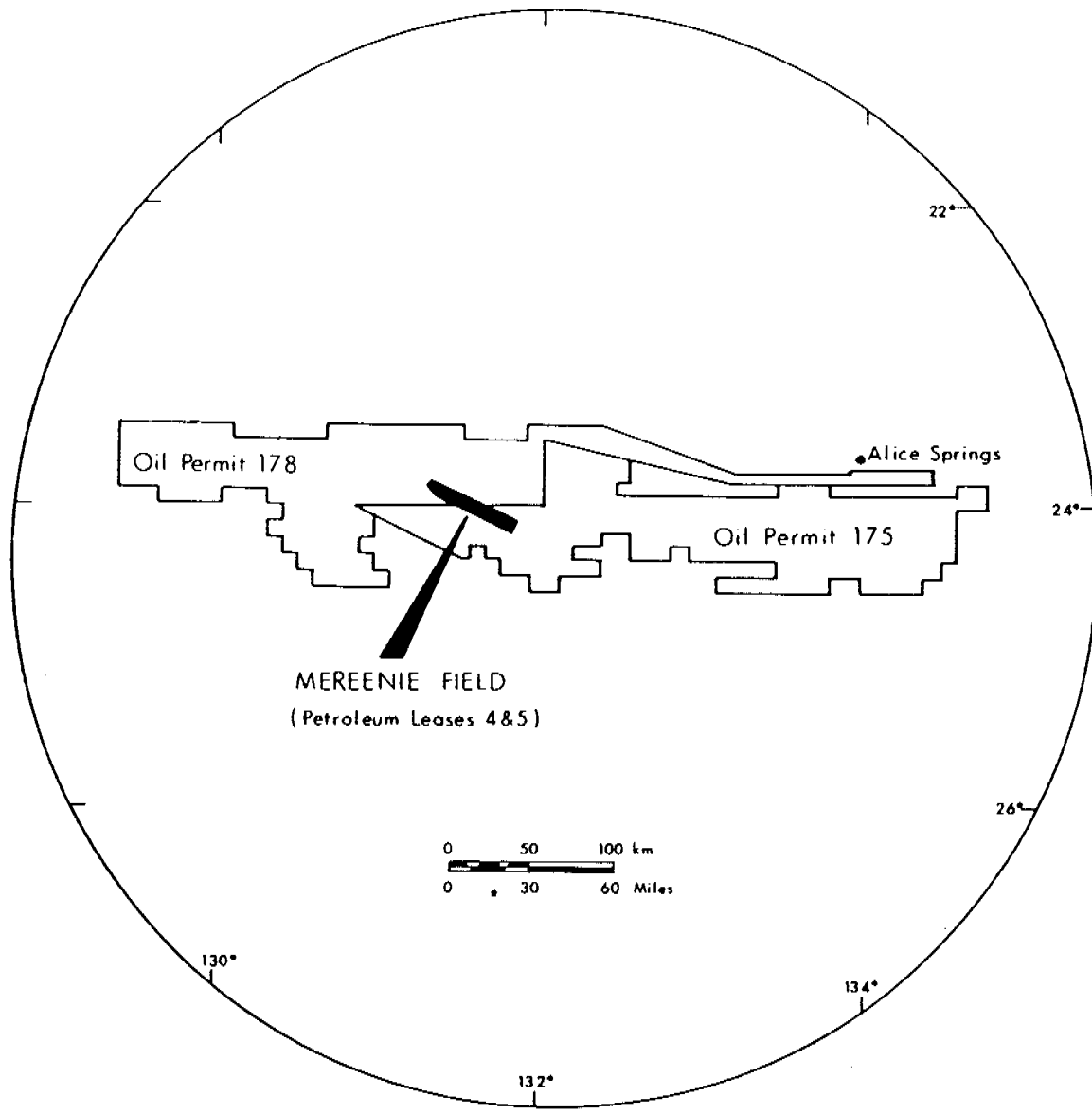
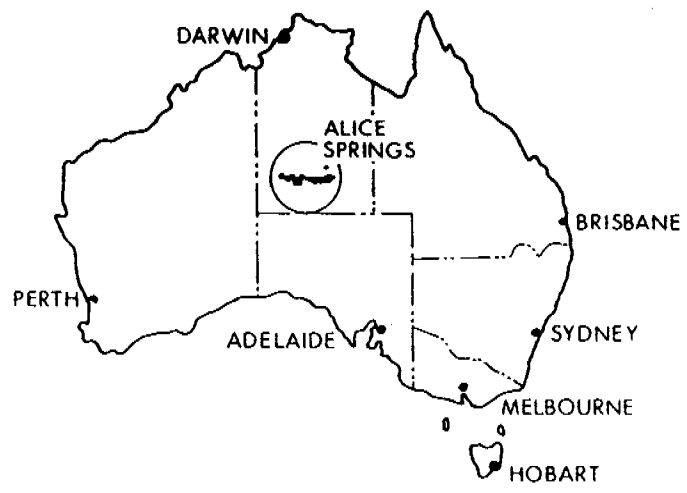
Rig Released: 28th July, 1985 (1700 hours)

Total Days Drilling: 33 days

Well Status: Oil producer from P3 sub-unit.

Geological Formation Tops:

Parke Siltstone	Surface
Mereenie Sandstone	Est 102 feet
Carmichael Sandstone	1721 feet
Stokes Siltstone	1924 feet
Stairway Sandstone	2944 feet
Horn Valley Siltstone	3702 feet
Pacoota Sandstone	3937 feet



LOCATION MAP

131°30'

MEREENIE OIL & GAS FIELD

WELL LOCATIONS

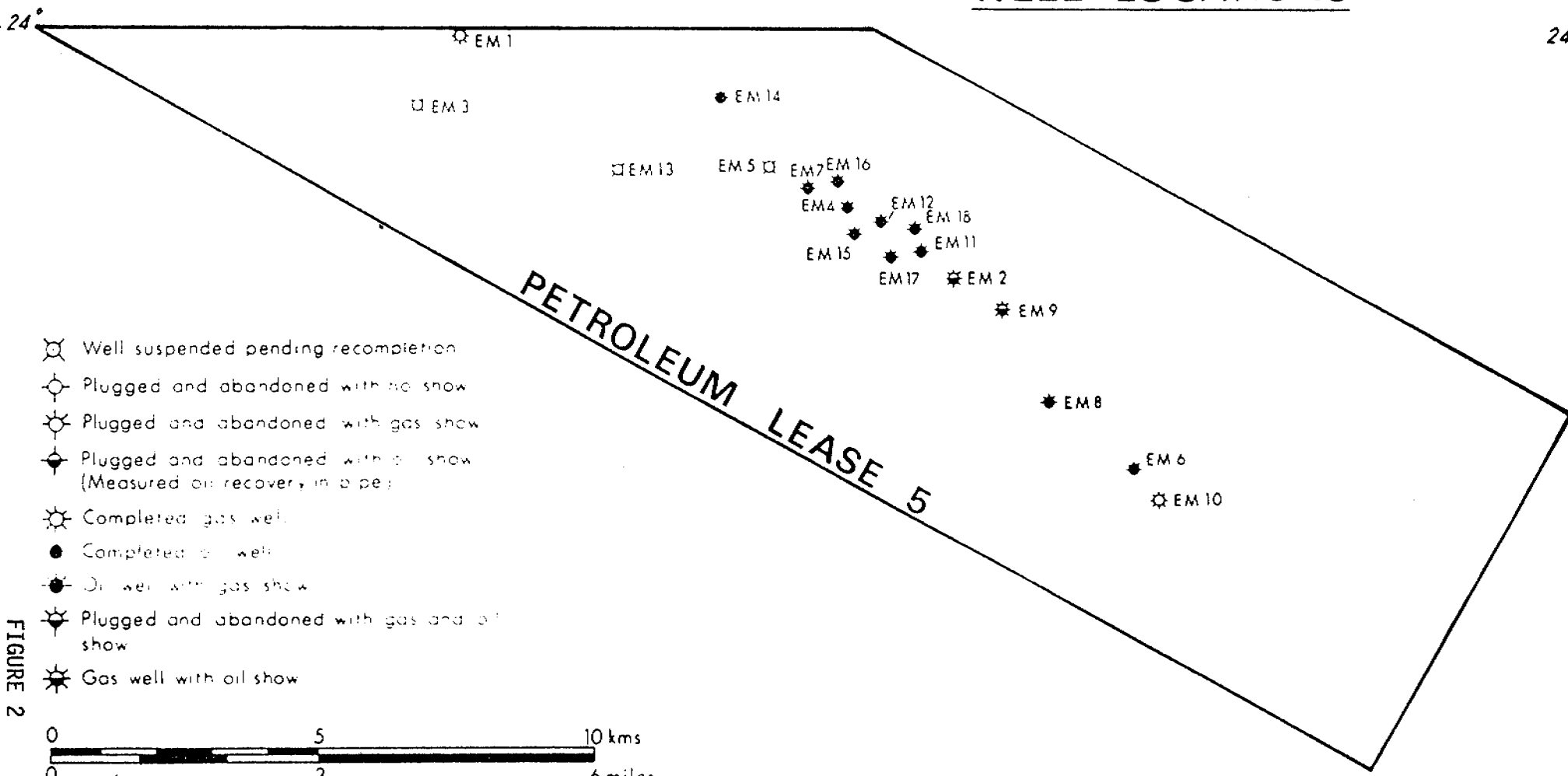
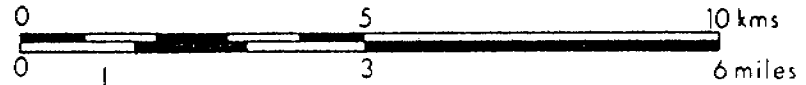


FIGURE 2



2. E N G I N E E R I N G D A T A

2. ENGINEERING DATA:2.1 Rig Data:

Drilling Contractor: O.D. & E.
 Drilling Contractor Rig: Rig 19

Drilling Plant: Make: KREMCO
 Type: K600H
 Rated Capacity: 7500 FT
 Motors: GM 8V92TA

Mast: Make: KREMCO
 Type: 109 FT
 Rated Capacity: 270000 #

Pumps: Make 1: Gardner Denver PZ-7/550HP
 Make 2: Gardner Denver PAHBFC/275HP
 Type: TRIPLEX
 Size 1: 7" x 5-1/2"
 Size 2: 8" x 5"

Rotary Table: Make: IDECO SR-175
 Capacity: 325 Tons

Blowout preventors: Make 1: NL Shaffer Spherical
 11" 5000#
 Make 2: NL Shaffer LWS
 11" 5000#
 Size: 11"
 Rating (psi) 5000

Choke Manifold: Make: Own
 Size & Type: 5000# with 1 x 3"
 Positive and 1 x 3"
 adjustable choke

Mud Tanks:	Size & Capacity:	Suction Tank - 317BBL Shaker Tank - 271BBL Trip Tank - 33BBL
Shale Shaker:	Make:	Harrisburg
	Type:	Single Dual Deck
Mud Mixers:	Make:	Harrisburg
	Type:	8" x 6" Centrifugal
Desander:	Make:	DSN-1000
	Capacity:	800 GPM
Mud Cleaner:	Make:	Harrisburg
	Model:	MC800
	Capacity:	800GPM
Drill pipe:	7000' 16.6#	'E' 4-1/2 "OD W/- 4" IF Conx.
Drill collars:	6 x 8" 24 x 6-1/2"	
Air drilling equipment:		
Air compressors:	Make 1:	Gardner Denver
	Make 2:	Sullair
	Model 1:	WEN
	Model 2:	900/350
	Capacity 1:	860 CFM/350 PSI
	Capacity 2:	900 CFM/350 PSI
Air compressor booster:	Make:	Gardner Denver
	Model:	RLD
	Capacity:	To 1000 PSI

Diverter:	Make:	Grant
	Model:	70685
Injection pumps:(1)	Make:	Gardner Denver P.A.H.
	Model:	Triplex HP
	Capacity:	300 GPM
(2)	Make:	Gardner Denver PZ7
	Model:	PZ7 Triplex
	Capacity:	300 GPM

2.2 Drilling Data:

DATE (FT)	E.T.D.	DETAILS OF OPERATIONS, DESCRIPTIONS AND RESULTS
26/6/85	171	East Mereenie No. 18 spudded at 0430 hours on 26/6/85. Drilled 17-1/2" hole with stiff foam to 171 feet.
27/6/85	171	POH to run 15" conductor. Ran 3 joints of 15" rolled conductor, 1/4" wall to 171 ft and cemented with 72 sacks Class "A" cement while maintaining a slurry weight of 15.2 ppg. Nipple up rotating head and install blooie line. Rig up and drill mouse hole.
28/6/85	370	RIH with Bit No. 2 picking up stabilizers and cross-overs. Unable to circulate. POH to remove obstructions. RIH. Drill out cement and shoe. Drilled 13-1/2" hole to 370 feet with air misting.
29/6/85	727	Drilled 13-1/2" hole to 727 feet with air misting. Foam injection rate 10 bbls/hr. Hole making approximately 600 bbls/hr water.
30/6/85	1000	Drilled 13-1/2" hole to 816 feet. POH to change bit. Make up BHA and Bit No. 3. RIH. Drilled 13-1/2" hole to 1000 feet with air misting. Foam injection rate 14 bbls/hr. Water influx approximately 800 bbls/hr.
1/7/85	1314	Drilled 13-1/2" hole to 1314 feet with air misting. Foam injection rate 16 bbls/hr. Water influx approximately 900 bbls/hr. POH Bit No. 3. RIH with Bit No. 4.
2/7/85	1457	RIH with Bit No. 4. Reamed from 1218 to 1314 feet. Drilled 13-1/2" hole to 1457 feet with air misting. Foam injection rate 18 bbls/hr. Water influx approximately 800 bbls/hr.
3/7/85	1594	Drilled 13-1/2" hole to 1569 feet. Water influx approximately 900 bbls/hr. POH to change bit No. 4. RIH with Bit No. 5. Reamed from 1534 to 1569 feet. Drilled 13-1/2" hole to 1594 feet with air misting. Foam injection rate 15 bbls/hr.

4/7/85	1937	Drilled 13-1/2" hole to 1937 feet with air misting. Foam injection rate 15 bbls/hr. Hole making approximately 1600 bbls/hr water.
5/7/85	2165	Drilled 13-1/2" hole to 2122 feet. Water influx approximately 1800 bbls/hr. POH to change Bit No. 5. RIH with Bit No. 6. Drilled 13-1/2" hole to 2165 feet with air misting. Foam injection rate 15 bbls/hr.
6/7/85	2230	Drilled 13-1/2" hole to 2230 feet with air misting. Water influx approximately 2000 bbls/hr. POH to run casing. Lay out 8" drill collars. Cut conductor. Rig to run 10-3/4" casing. Ran 56 joints of 40.5 lb/ft, H-40 to 2229 feet and cemented using 340 sacks Class "A" cement with 0.2% HR-4 while maintaining a slurry weight of 15.2 ppg. Cement basket located at 200 feet from surface. Weld conductor while WOC.
7/7/85	2230	Nipple up BOPs. Function test. Pressure test. Casing bowl leaking. Nipple down BOPs. Remove casing bowl to be machined. Wait on bowl.
8/7/85	2230	Wait on casing bowl. Cut and dress casing stub. Weld on casing bowl. Nipple up BOPs. Pressure test blind rams, HCR, choke and kill line valves to 1600 psi. Install rotating head.
9/7/85	2820	RIH with Bit No. 7. Tag plug at 2187 feet. Drill out plug and float. Drill cement to 2200 feet. Pressure test pipe rams and Hydril to 1000 psi. Drill out cement to 2230 feet. (Shoe at 2227 ft). Drilled 9-7/8" hole to 2235 feet with water. Displaced hole to air. Drilled 9-7/8" to 2820 feet with air dusting.
10/7/85	3563	Drilled 9-7/8" hole to 3563 ft with air dusting.
11/7/85	3687	Drilled 9-7/8" hole to 3687 ft with air dusting. Continuous flare whilst drilling. Open hole flow test measured 69 Mcfd gas from the Lower Stairway Sandstone. Mud up with a 10.5 ppg water based mud and circulate out gcm. Pump pill. POH to change Bit No. 7. RIH with Bit No. 8. Reamed from 3537 to 3563 ft.

12/7/85	3776	Reamed from 3563 to 3687 ft. Drilled 9-7/8" hole to 3776 ft with water based mud.
13/7/85	3834	Drilled 9-7/8" hole to 3803 ft. POH Bit No. 8. RIH with Bit No. 9 to casing shoe. Slip 15 ft and cut 45 ft drilling line. RIH to 3689 ft. Reamed from 3689 to 3803 ft. Drilled 9-7/8" hole to 3834 ft with water based mud.
14/7/85	3983	Drilled 9-7/8" hole to 3983 ft with water based mud.
15/7/85	4102	Drilled 9-7/8" hole to 4102 ft with water based mud. Pump pill. POH.
16/7/85	4218	POH to change bit no. 9. RIH with bit no. 10 to shoe. Slip drilling line. RIH. Drilled 9-7/8" to 4218 ft with water based mud.
17/7/85	4353	Drilled 9-7/8" hole to 4353 ft with water based mud.
18/7/85	4430	Drilled 9-7/8" hole to 4407 ft. POH to change Bit No. 10. RIH with Bit No. 11 and NB stabilizer. Drilled 9-7/8" hole to 4430 ft with water based mud.
19/7/85	4517	Drilled 9-7/8" hole to 4517 ft with water based mud. POH to run 8-5/8" casing. Rig to run casing.
20/7/85	4517	Ran combination of 56 joints Atlas Bradford, K55 32 lbs/ft and 50 joints of 8 round ST&C 32 lbs/ft to 4487 feet. Cemented casing using 260 sacks Class "G" cement with 0.75% CFR-2 and 0.5% Hallad 22-A. WOC. Raise BOPs, cut casing and install casing bowl cross-over. Nipple up BOPs. Pressure test casing, blind rams, choke manifold and HCR all to 1000 psi. Lay out 7" drill collars. Make up Bit No. 12 with NBR and pick up 6-1/4" drill collars.
21/7/85	4570	RIH with Bit No. 12. Slip and cut drilling line. RIH and tag plug at 4439 ft. Drill out plug, float, cement and shoe. Drilled 7-5/8" hole to 4526 ft with water based mud. Displaced hole to oil based mud and drilled 7-5/8" hole to 4570 ft.
22/7/85	4660	Drilled 7-5/8" hole to 4660 ft with oil based mud. POH for DST No. 1. Strap out.

23/7/85	4660	<p>POH Bit No. 12. Make up test tools and RIH for DST No. 1, over the P3-120/130 interval 4605 to 4660 feet. Open tool initially for 15 minutes, close in for 30 minutes. Re-open for 92 minutes, close for 214 minutes. Oil flow 1325 BPD. Gas flow 775 Mcfd. Field chart readings:</p> <table border="0"> <tr> <td data-bbox="693 470 759 492">IHP</td> <td data-bbox="809 470 875 492">IFP</td> <td data-bbox="925 470 991 492">ISIP</td> <td data-bbox="1040 470 1106 492">FFP</td> <td data-bbox="1156 470 1222 492">FSIP</td> <td data-bbox="1272 470 1338 492">FHP</td> <td data-bbox="1387 470 1453 492">BHT</td> </tr> <tr> <td data-bbox="693 504 759 526">2103</td> <td data-bbox="809 504 875 526">954</td> <td data-bbox="925 504 991 526">1716</td> <td data-bbox="1040 504 1106 526">1201</td> <td data-bbox="1156 504 1222 526">1716</td> <td data-bbox="1272 504 1338 526">2098</td> <td data-bbox="1387 504 1453 526">140</td> </tr> </table> <p>Pull free and reverse circulate. POH and lay out test tools. Make up Bit No. 13.</p>	IHP	IFP	ISIP	FFP	FSIP	FHP	BHT	2103	954	1716	1201	1716	2098	140
IHP	IFP	ISIP	FFP	FSIP	FHP	BHT										
2103	954	1716	1201	1716	2098	140										
24/7/85	4735	<p>RIH with Bit No. 13. Slip drilling line. Lay out 8 joints DP. Drilled 7-5/8" hole to 4735 ft (TD). POH to log. Run Gearhart electric logs.</p>														
25/7/85	4735	<p>Log with Gearhart. RIH Bit No. RR13 to circulate and condition hole. Spot scavenger pill. POH laying down DP & BHA. Lift BOPs and nipple up tubing bowl.</p>														
26/7/85	4735	<p>Nipple up BOPs and change rams to 2-3/8". Rig to run tubing, make up packer and run 141 joints 2-3/8" tubing. Install do-nut and land into tubing head. Nipple down BOPs. Nipple up Christmas Tree. Rig up kill line and return line and pump 20 bbls crude followed by 300 bbls KCl brine to surface, followed by 20 bbls crude. Drop ball and attempt to set packer. Pressure test tree to 1375 psi. Pressure test annulus for communication.</p>														
27/7/85	4735	<p>Attempt to set packer, circulate and kill well with 100 bbls brine. Flow check well. Nipple up BOPs. Pull packer free with 1200 lbs overpull. POH and lay out packer. Make up a second TIW hydroset packer and RIH. Nipple down BOPs. Flow check.</p>														
28/7/85	4735	<p>Nipple up Christmas Tree. Attempt to set packer. Displace annulus with crude. Open well to flare line - small flow oil to surface. Rig up Gearhart and swab well in. Choke well back to 32/64 ths and flow well to clean for 1 hour. Switch flow through to separator for 1 hour and measured flow.</p>														
		<p>East Mereenie No. 18 was shut in as an oil producer and OD & E Rig No. 19 released at 1700 hours.</p>														

2.3 Hole Sizes and Depths:

17-1/2" to 171 feet

13-1/2" to 2230 feet

9-7/8" to 4517 feet

7-5/8" to 4735 feet

2.4 Casing and Cementing Record:

15" conductor:	Weight:	1/4" wall ERW
	Grade/ Connections	1/4" wall ERW/welded
	Shoe Depth:	171 feet
	Cement Used:	72 sacks
	Additives:	2% Calcium chloride
	Slurry Weight:	15.2 lb/gal
10-3/4" casing:	Weight:	40.5 lb/ft
	Grade/ Connections:	H40
	No. of Joints:	56 joints
	Shoe Depth:	2229 feet
	Cement Used:	340 sacks Class "A"
	Additives:	0.2% HR4
	Slurry Weight:	15.2 lb/gal
8-5/8" casing:	Weight:	32 lb/ft
	Grade/ Connections:	Combination of: Atlas Bradford K55 (56 jts) & 8 Round ST & C (50 jts)
	No. of Joints:	106 joints
	Shoe Depth:	4487 feet
	Cement Used:	260 sacks class "G"
	Additives:	0.75% CFR-2, 0.5% HALAD 22-A
	Slurry weight:	15.5 lb/gal

A summary of the drilling fluid properties is listed in Table 1.

TABLE 1

DEPTH IN KB (FT)	DAYS FROM SPUD	FLUID TYPE	INJECTION ADDITIVE	INJECTION RATE (LBS/HR)	MUD WEIGHT (PPG)	FUNNEL VISCOSITY (SEC/QRT)	PLASTIC VISCOSITY (CP)	YIELD POINT (LBS/100FT ²)	CAKE THICKNESS (32nd of in)	GEL STRENGTH		WATER LOSS (CC)	OIL/WATER RATIO % - %	SOLIDS CONTENT %	SAND CONTENT %	P H	SALINITY x 1000 PPM	ELECT. STABILITY (VOLTS)	FLUID LOSS (-) or GAIN (+) to FORMATION ± (b) s - hr)	FORMATION
										SEC	MIN									
43	1	AIR	FOAM																	MEREENIE/PARKE
171	2	AIR	FOAM	7																MEREENIE
410	4	AIR	FOAM	7																MEREENIE
816	5	AIR	FOAM	13																+ 600
1185	6	AIR	FOAM	16																+ 800
1341	7	AIR	FOAM	18																+ 900
1505	8	AIR	FOAM	15																+ 800
1676	9	AIR	FOAM	15																+ 900
2060	10	AIR	FOAM	15																+1600
2230	11	AIR	FOAM	15																+1800
3017	15	AIR	FOAM																	+2000
3675	16	AIR																		UPPER STOKES
3687	17	AIR																		U.STOKES/L.STOKES
3803	18	W. MUD			10.5	45	17	14	2	4 / 6	8.0		10	0.75	10.0	0.5				UPPER/MID/LOW STAIR.
3860	19	W. MUD			10.7	43	18	17	2	5 / 11	8.8		9	0.75	10.0	0.8				LOWER STAIRWAY
4020	20	W. MUD			10.7	44	16	14	2	5 / 9	6.4		10	0.50	10.0	1.5				LOW STAIR/H.VALLEY
4102	21	W. MUD			10.7	46	16	13	2	2 / 13	7.0		10	0.25	10.0	1.6				H.VALLEY/P1
4260	22	W. MUD			10.7	43	15	13	2	4 / 12	7.4		10	0.25	10.0	1.4				P1
4388	23	W. MUD			10.6	46	17	16	2	5 / 13	6.5		11	0.50	10.0	1.5				P1
4481	24	W. MUD			10.7	44	18	15	2	6 / 18	6.8		11	TR	9.5	1.7				P2
4517	25	O. MUD			8.5	46				- / -										P2/P3
4548	26	O. MUD			8.6	44	17	16		4 / 7		75-25	9	0.50		100	480			P3
4593	27	O. MUD			8.5	49	18	17		5 / 10		74-26	9	0.75		210	410			P3
4660	28	O. MUD			8.6	50	18	16		7 / 10		76-24	10	0.75		175	430			P3
4670	29	O. MUD			8.6	52	20	17		7 / 9		75-25	10	0.50		160	410			P3

A summary of drilling bits used is listed in Table 2.

TABLE 2

DEPTH IN KB (FT)	DAYS FROM SPUD	BIT NO.	SIZE (INS)	MAKE	TYPE	JET SIZE 3/2nds Inch			SERIAL NO.	DEPTH OUT KB (FT)	DRILLED FOOTAGE	HOURS	AVERAGE FEET PER HOUR	ACCUMULATED DRILLING HOURS	WOB x 1000 lbs	R P M	VERTICAL DEVIATION (DEGS)	PUMP PRESSURE (PSI)	DRILLING FLUID TYPE	SPM		MUD DATA			BIT CONDITION			FORMATION
						PUMP NO 1	PUMP NO 2	MUD WEIGHT (LBS/GAL)												VISCOSITY (SEC)	WATER LOSS (CC)	TEETH	BEARINGS	GAUGE (INS)				
																									1	2	3	
0		RR1	17.5	HTC	X3A	0	0	0	VE805	171	171	12.5	13.7	12.5	7	66	0.00	100	A.FM				1	1	IN	MEREENIE/PARK		
171	3	NB2	13.5	HTC	X33	0	0	0	BD381	816	645	32.5	19.8	45.0	18	70	0.75	200	A.FM				8	8	0.25	MEREENIE		
816	6	NB3	13.5	HTC	X33	0	0	0	BD378	1314	498	26.0	19.1	71.0	25	90	0.75	200	A.FM				6	4	0.25	MEREENIE		
1314	7	NB4	13.5	HTC	X33	0	0	0	BD403	1569	255	34.5	7.4	105.5	27	85	0.50	300	A.FM				7	7	0.25	MEREENIE		
1569	9	NB5	13.5	HTC	X33	0	0	0	BD379	2122	553	36.5	15.2	142.0	25	90	2.00	350	A.FM				6	6	0.13	MEREENIE		
2122	11	NB6	13.5	HTC	X33	0	0	0	BD405	2230	108	7.5	14.4	149.5	22	95	2.00	350	A.FM				3	2	IN	MEREENIE/CARM/U.STOK		
2230	14	NB7	9.875	HTC	J22	0	0	0	FC710	3687	1457	41.5	35.1	191.0	23	95	4.50	300	A.DS				8	6	1.40	U/L ST/ U/M/L/ STAIR		
3687	17	NB8	9.875	HTC	J44	16	16	16	DL124	3803	116	21.0	5.5	212.0	40	80	4.50	500	WHUD	120		10.5	44	7.5	4	2	0.38	LOW STAIR/H.VALLEY
3803	19	NB9	9.875	HTC	J44	16	16	12	DL126	4102	299	49.5	6.0	261.5	40	65	6.25	550	WMUD	128		10.7	46	7.5	5	4	0.06	H.VALLEY/P1
4102	21	NB10	9.875	HTC	J55	12	12	12	WZ697	4407	305	49.5	6.2	311.0	42	65	6.00	850	WMUD	128		10.7	45	7.0	6	3	0.13	P1/P2
4407	24	NB11	9.875	HTC	J44	12	12	12	AT601	4517	110	18.0	6.1	329.0	40	70	6.00	850	WMUD	128		10.8	47	7.0	3	3	IN	P2/O3
4517	26	NB12	7.625	SMITH	F4	16	16	16	EP9665	4660	143	27.5	5.2	356.5	40	60	7.00	550	OHUD			8.7	50		6	3	IN	P3
4660	29	NB13	7.625	SMITH	F4	16	16	16	EP9646	4735	75	10.0	7.5	366.5	42	65	8.00	550	OHUD	120		8.6	49		3	3	IN	P3

EAST MEREENIE NO. 18 BIT DATA SUMMARY

2.7

Deviation Surveys and Computations

The deviation surveys are listed in Table 3.

TABLE 3

DEPTH KB (FT) A	SURVEY NO.	DEVIATION ANGLE (DEGS) B	DEPTH INTERVAL (2A-1A=C)	MEAN DEVIATION (DEGS) (1B+2B=D)	DEPTH CORRECTION (FT) C-(C x COSD)	CUMULATIVE CORRECTION (FT)	TRUE VERTICAL DEPTH (FT) (C x COSD)	LATERAL DRIFT (FT) (C x SIND)	CUMULATIVE LATERAL DRIFT (FT)
213	1	0.25	213	0.13	0.0	0.0	213	0.5	0.5
463	2	0.75	250	0.50	0.0	0.0	463	2.2	2.7
664	3	0.75	201	0.75	0.0	0.0	664	2.6	5.3
895	4	0.75	231	0.75	0.0	0.0	895	3.0	8.3
1182	5	0.75	287	0.75	0.0	0.0	1182	3.8	12.1
1547	6	0.50	365	0.63	0.0	0.0	1547	4.0	16.1
1865	7	0.25	318	0.38	0.0	0.0	1865	2.1	18.2
2086	8	1.00	221	0.63	0.0	0.0	2086	2.4	20.6
2210	9	2.00	124	1.50	0.0	0.0	2210	3.2	23.8
2526	10	1.00	316	1.50	0.1	0.1	2526	8.3	32.1
2778	11	1.50	252	1.25	0.1	0.2	2778	5.5	37.6
2990	12	3.00	212	2.25	0.2	0.4	2990	8.3	45.9
3217	13	3.00	227	3.00	0.3	0.7	3216	11.9	57.8
3469	14	4.25	252	3.63	0.5	1.2	3468	16.0	73.8
3687	15	4.50	218	4.38	0.6	1.8	3685	16.6	90.4
3757	16	4.00	70	4.25	0.2	2.0	3755	5.2	95.6
3803	17	4.50	46	4.25	0.1	2.1	3801	3.4	99.0
3897	18	5.00	94	4.75	0.3	2.4	3895	7.8	106.8
3991	19	5.75	94	5.38	0.4	2.8	3998	8.8	115.6
4054	20	6.25	63	6.00	0.3	3.1	4051	6.9	122.5
4153	21	7.00	99	6.63	0.7	3.8	4149	11.4	133.9
4249	22	7.25	96	7.13	0.7	4.5	4244	11.9	145.8
4334	23	6.75	85	7.00	0.6	5.1	4329	10.4	156.2
4517	24	6.25	183	6.50	1.2	6.3	4511	20.7	176.9
4655	25	7.00	138	6.63	0.9	7.2	4648	15.9	192.8
4735	26	8.00	80	7.50	0.7	7.9	4727	10.4	203.2

DEVIATION SURVEYS AND COMPUTATIONS - EM18

2.8 Formation Testing:

One drill stem test was run during the drilling of the well. Summary results are given below and full details are included as Appendix 2.

(1403.60 1420.37 m)

Drill Stem Test No. 1 (4605 to 4660 ft)

Date: 23rd July, 1985

Tester: Halliburton Services

Formations: Pacoota Sandstone P3-120/130 sands

Type of Test: Bottom hole conventional dual packers

Water cushion: Nil.

Times:

First flow:	15.2 mins
First shut-in:	30.3 mins
Final flow:	91.2 mins
Final shut-in:	214.3 mins

Pressures: Bottom Borden Recorder Pressures (Lab Results)

Initial hydrostatic:	2099.6 psig
First flow:	947.9 psig
Initial shut-in:	1711.5 psig
Final flow:	1198.2 psig
Final shut-in:	1712.1 psig
Final hydrostatic:	2095.1 psig

Field Results: Tool opened with immediate strong blow. Gas to surface after 5 minutes. Pressure 15 psi through 1/2" choke after 4 minutes. Oil to surface after 9 minutes. Tool shut-in. Oil to surface 6 minutes after second opening. Oil slugged for 23 minutes then diverted through separator for 1 hour, recovering 8710 litres (equivalent to 1325 bbl/day), of 46 API oil. Gas measured through the 2" flow prover recorded equivalent to 775 mcf/d and a GOR at 584 cu ft/bbl with a gas gravity of 0.964 sg.

2.9 Completion Data:

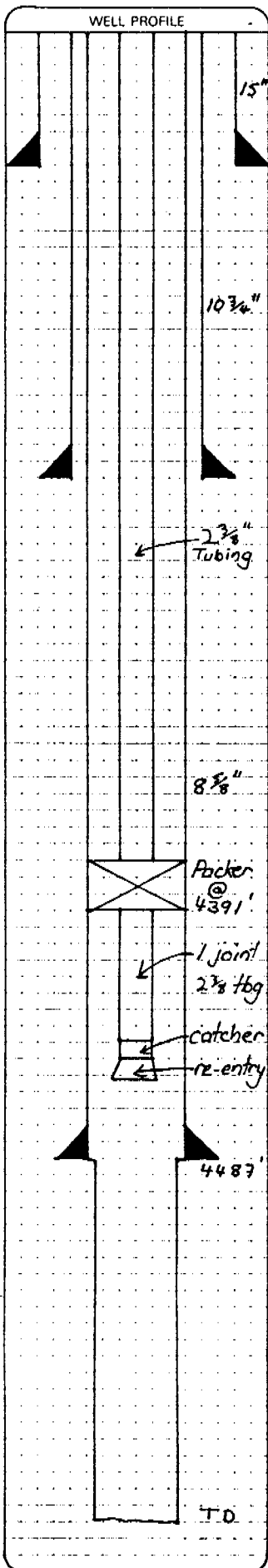
8-5/8" casing was run to 4487 feet and the well drilled to TD at 4734 feet (logger) in 7-5/8" hole. Oil based mud was displaced with 20 bbls crude followed by 300 bbls of KCL brine to surface followed by 20 bbls of crude. 2-3/8" tubing was run to 4427 feet with the packer being set at 4391 feet.

The well was completed open hole. The clean up flow test flowed oil at 1592 BOPD with a GOR of 552.3 cu ft/bbl on a 1/2" choke.

East Mereenie No. 18 was shut-in for future production testing and the rig released.

**MOONIE OIL N.L.
WELL COMPLETION SUMMARY**

DATE: 1 8 85
DAY MONTH YEAR



WELL NAME EAST MEREENIE #18

WELL LOCATION LAT°24 1' 59" S LONG 131°38' 33" E

K.B. ELEVATION 2325 K.B. TO CASING FLGE 13.33' K.B. TO TUBING FLGE 12.80'

	SIZE (O.D.)	WEIGHT	SET AT,	TOP	INTERVAL DEPTH
CASING	15"	39.4	171'		
CASING	10-3/4"	40.5	2229		
PERFS.	8-5/8"	32.0	4487		OPEN HOLE

DIAMETER OPEN HOLE 7-5/8"

TUBING: SIZE 2-3/8" O.D. WEIGHT 47#/FT LB/F 83 GRADE J-55

TYPE/CLASS E.U.E. MAKE JAPAN

No. OF JOINTS ON LOCATION TALLIED LENGTH.....

No. of JOINTS PERMANENTLY IN WELL 140 TALLIED LENGTH 4405.69

FINAL TUBING STRING FROM BOTTOM UPWARD

DESCRIPTION	LENGTH ft	SET AT TOP	REMARKS
WIRELINE RE-ENTRY	46		OTIS
BALL CATCHER SUB	22		OTIS
1 x 2-3/8" JOINT	31	61	JAP
X/O SUB.	45		T.I.W.
T.I.W. PACKER	5	16	T.I.W.
X/O SUB	48		T.I.W.
139 x 2-3/8" JOINTS	4374	08	JAP
TUBING HANGER	1	02	BARBER
TOTAL STRING LENGTH	4413	98	
K.B. TO TUBING HANGER FLANGE (PLUS)	12	80	
SETTING DEPTH K.B.	4426	78	

TIME PIPE STARTED

TIME ON BOTTOM

CASING INTERNAL DEPTH BY TUBING

WEIGHT OF TUBING STRING 24m WEIGHT ON PACKER NIL WEIGHT ON HANGER 24m

WELLHEAD W-2000-3" MAKE MCEVOY FLANGED/OPEN NO

MASTER VALVE TYPE GATE 3# MAKE MCEVOY SIZE 2"

CASING VALVES TYPE GATE 3# MAKE MCEVOY SIZE 2"

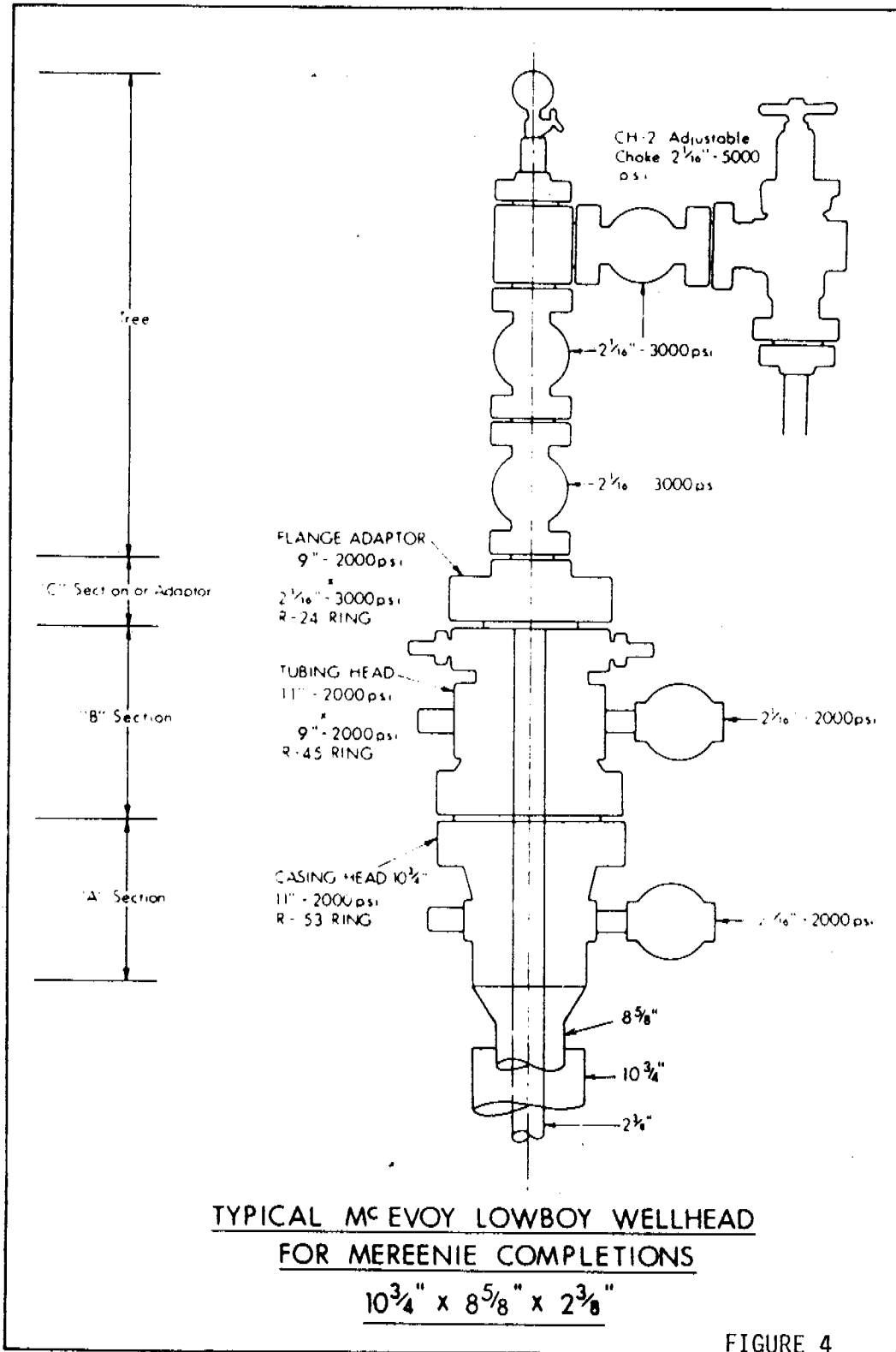
CHOKE 2 TYPE ADJ. MAKE MCEVOY

REMARKS (Note Additional Equipment).....
T.D 4735'

COMPLETE IN DETAIL

- TD, PBTD
- Casing & Tubing Depths
- Perforations
- Packers, Nipples, etc.

AGENT/OPERATOR'S SIGNATURE **FIGURE 3**



EAST MEREENIE No. 18

TIME / DEPTH GRAPH

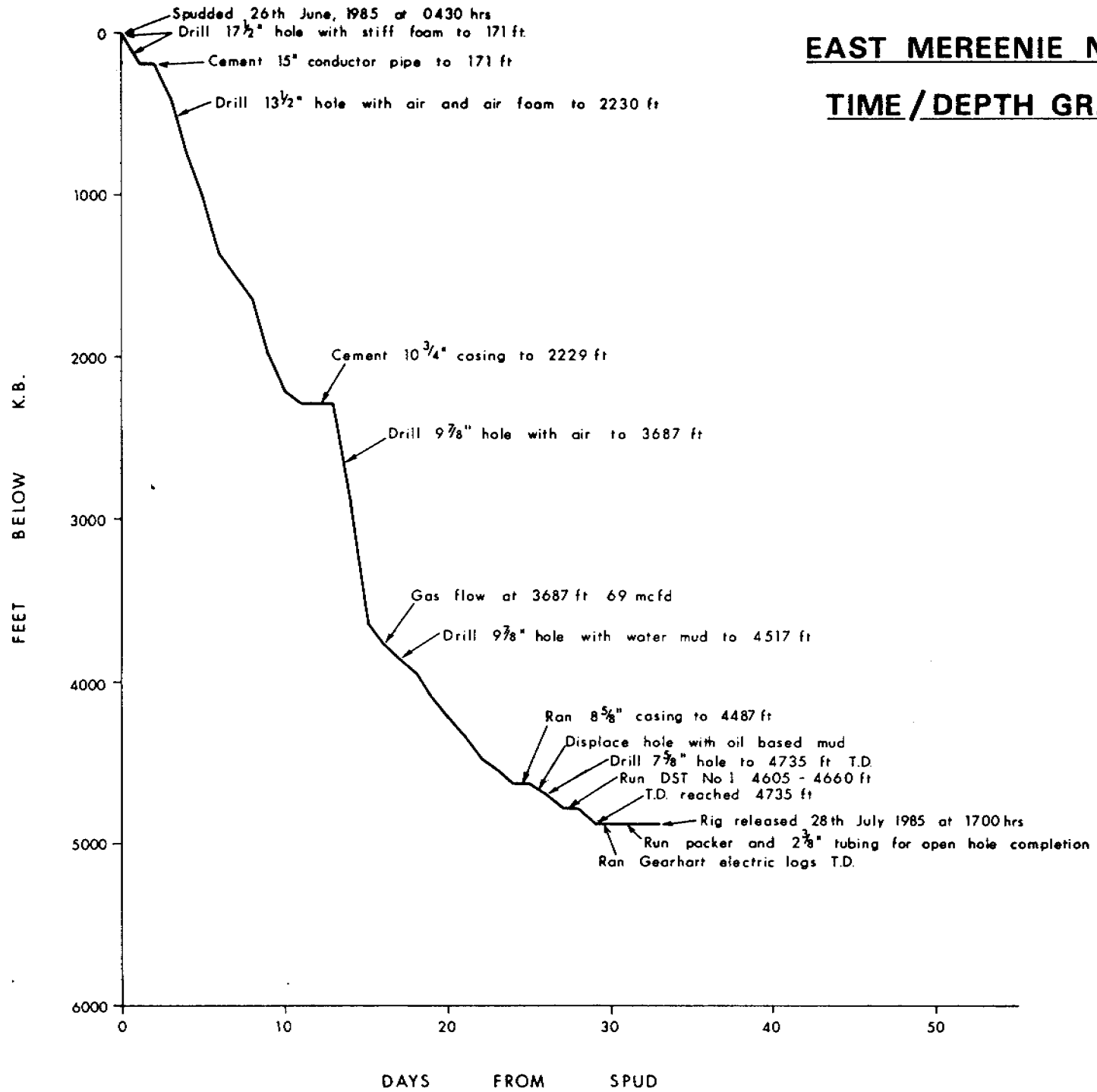
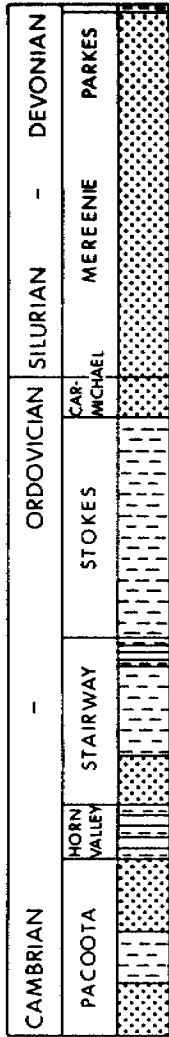


FIGURE 5

3. G E O L O G I C A L D A T A

3. GEOLOGICAL DATA:

3.1 Reasons for Drilling:

East Mereenie No. 18 is the 18th well in the current Mereenie Appraisal Programme.

The well intersected the oil column in the lower half of the Pacoota P2 Sandstone and was designed as an oil producer from the P3-120/130, with the P3-190 sands included in the completion. A secondary objective was to provide information on prospective P1 target horizons in the area.

3.2 Stratigraphy:

East Mereenie No. 18 spudded in the Parke Siltstone and reached TD at 4735 feet at the base of the P3-190 sandstone sub-unit of the Pacoota Sandstone.

Except for minor changes in formation thickness, the stratigraphy remains similar to that encountered in the adjacent wells, East Mereenie Nos. 11 and 12. A porosity change was noted in the P3-190 sands with a maximum porosity development in East Mereenie No. 18 of 15% compared with 13% and 9% in East Mereenie No. 12 and East Mereenie No. 11 respectively.

The intervals of anomalously high gamma sandstone that occur in the Pacoota P3 sub-unit are at comparable stratigraphic positions to that occurring in adjacent wells and subject to some gamma count discrepancies, are correlatable.

Table 6 shows the summary of the Stratigraphy for East Mereenie No. 18.

3.3 Formation Sampling:

(1) Ditch Cuttings -

Cutting samples were taken at 30 foot intervals from 300 to 3990 feet with 10 foot sampling undertaken around predicted formations tops. From 3990 feet to TD the sample interval was reduced to 10 feet with 5 foot sampling undertaken around predicted formation tops.

From beginning of sampling to Total Depth the samples were retained and split as follows :

Magellan: 1 set washed and dried

NT Dept of Mines: 1 set unwashed
1 set washed and dried

Moonie: 1 set washed and dried
1 set unwashed

For a detailed description of samples see Appendix 1.

3. GEOLOGICAL DATA:

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TABLE 6

EAST MEREENIE NO. 18 STRATIGRAPHIC TABLE

SYSTEM & SERIES	FORMATION	SUB UNIT	DEPTH (FT)			TRUE THICKNESS	AVERAGE FORMATION DIP	DEVIATION
			KB	TVD	MSL			
MIDDLE TO LATE DEVONIAN	PARKE SILTSTONE		12	0	+2313	101	6	0
MIDDLE DEVONIAN TO LATE SILURIAN	MEREENIE SANDSTONE		102	102	+2223	1611	6	0.3
LATE ORDOVICIAN	CARMICHAEL SANDSTONE		1721	1721	+604	202	6	0.4
MIDDLE ORDOVICIAN	STOKES SILTSTONE	UPPER	1924	1924	+401	754	6	0.5
		LOWER	2681	2681	-356	262	6	1.3
	STAIRWAY SANDSTONE	UPPER	2944	2944	-619	141	6	2.7
		MIDDLE	3085	3084	-759	412	6	3.0
		LOWER	3497	3496	-1171	205	6	4.3
EARLY ORDOVICIAN	HORN VALLEY SILTSTONE		3702	3700	-1375	235	6	4.4
EARLY ORDOVICIAN TO LATE CAMBRIAN	PACOOTA SANDSTONE	P1	3937	3934	-1609	341	6	5.3
		P2	4278	4273	-1948	229	6	7.1
		P3	4507	4501	-2176	227 +	6	6.3
		P4	N.R.					
LATE CAMBRIAN	GOYDER FORMATION							
	TOTAL DEPTH		4734	4727	-2402		6	8.0

(2) Coring -

No cores were taken during the drilling of this well, either conventional or sidewall.

3.4 Logging and Surveys:

(1) Electric Logging -

<u>LOG</u>	<u>RUN</u>	<u>INTERVAL</u>	<u>DATE</u>
GR	1	36-2971	24/7/85
CNS/GR	1	2971-4485	24/7/85
CDL/CNS/GR/CAL	1	4485-4733	24/7/85
DIL/GR	1	4432-4725	24/7/85
CBL/VDL/GR/CCL	1	2144-4506	24/7/85

(2) Velocity Survey -

No velocity survey was run.

(3) Penetration Rate and Gas Logs -

The penetration rate was recorded continuously from spud to TD. The mud gas was monitored and recorded continuously on a conventional hotwire detector during the mud drilling phase.

A mud log showing penetration rate, gas, lithological and other pertinent data was prepared at the wellsite daily and is included as Enclosure 2.

A composite log is also included as Enclosure 1.

(4) Deviation Surveys -

Deviation surveys were taken at regular intervals during the drilling of the well. The drift and depth corrections are shown in Table 3. Full details are included as Appendix 4.

(5) Temperature Surveys -

Temperature surveys were not carried out, however the following temperatures were recorded:

140^oF at 4656 ft Halliburton

134^oF at 4734 ft Gearhart

(2) Coring -

No cores were taken during the drilling of this well, either conventional or sidewall.

3.4 Logging and Surveys:

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140^oF at 4656 ft Halliburton

134^oF at 4734 ft Gearhart

3.5 Formation Dips

A formation dip of approximately 6 degrees north east was prognosed for this well.

Based on formation thicknesses as compared with surrounding wells, and well directional control, an actual true formation dip would be 6-1/4 degrees approximately north-east.

3.6 Petroleum Geology

In this section Gross sandstone refers to: GR \leq 80 API and/or CDL porosity \geq 3%. Net sandstone refers to: CDL porosity \geq 6%.

Upper Stairway Sandstone

The Upper Stairway Sandstone has a gross sand thickness of 116 feet. In most cases the original porosity has been reduced by silica cementation. Permeability throughout is considered poor as no signs of hydrocarbons were noted whilst drilling this section with air. No oil fluorescence was observed, however the information from surrounding wells indicate the Upper Stairway Sandstone contains gas.

Middle Stairway Sandstone

This unit is dominantly siltstone, but does contain a gross sand thickness of 63 feet, however the sandstones are very fine to fine grained with porosity primarily reduced by silicification. Permeability throughout is poor. Several small gas flares of short duration during connections were noted below 3120 feet. These correspond approximately to some minor sand development at the top of the Middle Stairway and although indicating gas saturation of the Middle Stairway sub-unit would also indicate very low permeability development. No oil fluorescence was observed.

Lower Stairway Sandstone

The Lower Stairway Sandstone has a gross sand thickness of 132 feet, with 69 feet of gross sand development in the upper sand unit and 63 feet of gross sand development in the lower sand unit. At 3687 feet a gas flow of 69 mcf/d was recorded from the basal lower Stairway Sandstone confirming the poor Lower Stairway permeability and the presence of gas saturation.

Pacoota Sandstone (Pl Sub-unit)

The Pacoota Pl sub-unit has a gross sand thickness of 157 feet based on GR \leq 80 API.

<u>SAND</u>	<u>INTERVAL</u>	<u>GROSS SAND THICKNESS</u>
P1-40	3983-3985	2
P1-60	3999-4004	5
P1-80	4010-4026	16
P1-110	4035-4043	8
P1-120	4046-4056	10
P1-140	4073-4078	5
P1-190	4116-4119	3
P1-200	4124-4135	11
P1-210	4137-4150	8
P1-240	4158-4175	14
P1-280	4210-4216	6
P1-310	4228-4259	31
P1-350	4267-4278	11
MISC	3936-3950	14
MISC	3964-3966	2
MISC	3970-3973	3
MISC	3976-3977	1
MISC	4183-4188	5
MISC	4198-4200	2
TOTAL		157 FEET

Primary porosity within the Pacoota P1 sub-unit has been severely reduced by silica cementation. No cores were cut and no drill stem testing was done. The CNS porosity was run through casing over this interval.

No oil fluorescence was noted in the top 150 feet of the Pacoota P1. Below 4120 feet, intermittent yellow to white dead oil fluorescence was noted, giving nil to trace cut, and occasional black tarry residual oil staining. It can be assumed, based upon surrounding well data, that the P1 lies within the gas column.

Pacoota Sandstone (P2 Sub-unit)

This sub-unit has poor reservoir potential, but does contain a total gross sand thickness of 33 feet, with the main sand development being the P2-110 sand over the interval 4391 to 4408 feet (17 feet gross sand) and the P2-200 sand over the interval 4486 to 4490 feet (4 feet gross sand) with a net sand of 1 foot having a maximum porosity of 7%.

No significant gas shows were detected through this sub-unit. Fluorescence was present through most of the unit, being poor to fair blue-white and yellow fluorescence, with common dead tarry oil staining in some sample. The gas/oil contact was not detected, but is assumed to be at 4461 feet (-2130 ft) coinciding with the field gas/oil contact.

Pacoota Sandstone (P3 Sub-unit)

The Pacoota P3 interval was penetrated 228 feet, with total depth 4735 feet being reached immediately below the P3-190 sand. The oil/water contact was not detected. The P3-230 sands were not reached. The gross sand interval encountered within the P3 was 184 feet, with a net sand thickness of 108 feet. A list of sands for the P3 sub-unit is provided below -

<u>SAND</u>	<u>INTERVAL</u> <u>FEET</u>	<u>THICKNESS</u> <u>NET SAND</u>	<u>AVERAGE POROSITY</u>	<u>MAXIMUM POROSITY</u>
P3-10	4507-4562	21	7%	9%
P3-70	4566-4580	2	7%	7%
P3-90	4585-4600	6	8%	10%
P3-120	4610-4620	9	8%	9.5%
P3-130	4620-4672	33	12.5%	15.5%
P3-150	4679-4705	16	7.5%	10%
P3-190	4707-4729	21	10.5%	15%

TOTAL 106 FEET NET SAND.

Throughout the P3 sub-unit primary porosity has been reduced mainly by siliceous cement, with minor carbonate cement and tarry/carbonaceous oil residue also reducing effective porosity.

Permeabilities throughout the P3 sub-unit are generally poor though variable. Permeability in the P3-120/130 sands was good and flowed 1325 BPD and 775 mcf/d gas in drill stem test No. 1. No other drill stem tests were carried out and no cores cut.

As the P3 sub-unit was drilled with oil based mud the samples contain a high background of oil mud filtrate contamination. However, increases in fluorescence and cut were noted in the major sandstone intervals.

The oil/water contact was not intersected in this well, with TD being reached while still within the oil column. It is assumed the oil/water is -2450 feet below mean sea level.

3.7 Relevance to Appraisal Programme:

The P3-120/130 sand remains the most prospective oil producing reservoir, as confirmed by DST No. 1 producing 1325 BOPD and 775 mcf/d gas.

Neither the gas/oil or oil/water contacts were detected, however, the upper and middle P3 sub-unit sands are known to occur within the oil column, confirming the presently accepted gas/oil and oil/water contacts of -2130 feet MSL and -2450 feet MSL respectively.

Pacoota Sandstone (P3 Sub-unit)

The Pacoota P3 interval was penetrated 228 feet, with total depth 4735 feet being reached immediately below the P3-190 sand. The oil/water contact was not detected. The P3-230 sands were not reached. The gross sand interval encountered within the P3 was 184 feet, with a net sand thickness of 108 feet. A list of sands for the P3 sub-unit is provided below -

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The clean-up flow rate of 1592 BOPD, 879,600 CFD, shows an improvement over DST No. 1 result of 1325 BOPD from the P3-120/130 sands. The P3-190 sand shows a net sand development of 21 feet with an average porosity of 10.5%, maximum porosity of 15%, and could be assumed to have a significant contribution to the higher oil flow rates achieved on the clean-up flow.

The Pacoota P3 sub-unit was drilled with an oil based mud and completed barefoot, confirming this procedure as most effective for production from the Pacoota Sandstone.