

LOWER STAIRWAY RESERVOIR EVALUATION -

EAST MEREENIE 10 AREA

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1. SUMMARY

East Mereenie 10 log and well test data have been interpreted to assess the Lower Stairway reservoir in that area. Gas and liquids were recovered in drill stem and production tests and there is evidence of a gas/oil contact at about 715 m (2345 ft) subsea.

Reservoir porosity is poorer than that of the Pacoota reservoirs. Permeability also appears poorer, though well test interpretations are considered tentative.

On the basis of an arbitrary Stairway oil/water contact at 852 m (2795 ft) subsea and pay parameters from East Mereenie 10, a possible Lower Stairway oil resource of 4.3 million barrels in place is suggested.

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2. INTRODUCTION AND REPORT SCOPE

East Mereenie 10, drilled in late 1982 as the sixth well of an appraisal programme of the Mereenie field, was positioned to test the easterly extent of the Pacoota P1 oil reservoir.

Although the Pacoota reservoirs were found to be water saturated, a drill stem test in the Lower Stairway Sandstone produced gas at a reported rate of 3.02 MMCF/D and a small quantity of liquid hydrocarbons. The well is completed in this zone.

Flow tests of the Stairway Sandstone in earlier wells produced gas at more modest rates of up to 0.44 MMCF/D.

The results suggested that a significant new reservoir had been discovered and, in August 1984, a series of well tests was performed.

East Mereenie 10 log and well test data have been interpreted to evaluate the reservoir. The possibility of a Lower Stairway oil accumulation is discussed.

3. RESERVOIR PRESSURE AND TEMPERATURE

Static gradient data recorded in East Mereenie 10 on 1 April, 1984 with a Hewlett Packard gauge indicated a pressure of 2113.51 psia at 1341.1 mKB and 2125.88 psia at 1402.1mKB (gradient 0.0619 psi/ft).

At an adopted datum of 1413 mKB (714.7 m subsea), initial Lower Stairway reservoir pressure is 2128.04 psia. In comparison with the Pacoota reservoirs (P3: 1899 psia at 746.8 m (2450 ft) subsea; P1: 1931 psia at 816.9 m (2680 ft) subsea) the reservoir is overpressured*.

A static survey on 10 August 1984 indicated a reservoir pressure of 2127.36 at the datum, but pressure was increasing during the survey.

Temperature data recorded during the static surveys on 1 April 1984 and 10 August 1984 indicate a reservoir temperature of 59.78°C (139.6°F) and 59.39°C (138.9°F) respectively at the datum.

An average reservoir temperature of 59.6°C (139.3°F) is adopted.

Temperatures recorded during logging runs and drill stem tests were somewhat lower while temperatures recorded during a static survey on 24 August 1984 appear anomalous.

*Based on a Lower Stairway oil/water contact at 852 m (2795 ft) subsea (see later), the reservoir pressure is higher by some 240 psia.

4. RESERVOIR FLUID PROPERTIES

No subsurface sample of reservoir fluid has been taken in East Mereenie 10 and samples were not taken during the August 1984 flow tests.

Separate compositional analysis was performed on gas and liquid recovered from the Lower Stairway reservoir during DST #1 in East Mereenie 10. Reservoir fluid composition may be determined by combining the gas and liquid analyses if production rates are known.

The liquid flow rate in DST #1 is known from the volume recovered from the drill string on reverse circulation (6.5 barrels). The gas flow rate was calculated at 3.02 MMCF/D using a pressure drop of 290 psi across a 0.5" positive choke assuming a gas gravity of 0.65. As subsequent gas analysis indicated a gravity of 0.724, the calculated flow rate should be adjusted to 2.86 MMCF/D. On this basis, the gas/oil ratio would be 31.34 MCF/bbl and the reservoir fluid composition would be as listed in column (1) of Table 1. Dewpoint pressure at the reservoir temperature is estimated to be 2077 psia using a published correlation (Nemeth and Kennedy).

However, since the flow rate calculation assumes single-phase dry gas flow and no separator was used to remove natural gas liquids, it is expected that the actual flow rate was significantly lower.

As discussed in Section 6, DST and flow test interpretations would yield the same value of reservoir flow capacity if the DST flow rate were in fact only 0.52 MMCF/D of total fluids (0.44 MMCF/D of gas). On this basis, the gas/oil ratio would be 4.82 MCF/bbl and the reservoir fluid composition would be as listed in column (2) of Table 1. Dewpoint pressure is estimated to be 2273 psia, significantly above the average reservoir pressure of 2128 psia.

Column (3) of Table 1 shows the composition of the richest gas/liquid mixture predicted to exist in a single vapour phase at reservoir conditions. This reservoir fluid composition corresponds to a gas/oil ratio of 26.74 MCF/bbl and a DST gas flow rate of 2.44 MMCF/D. This is plausible - if the gas flow rate was in fact less than this figure, a Stairway oil leg in close proximity to East Mereenie 10 would be indicated. Composition (3) is assumed in well test interpretation (Section 6).

Table 1 also shows average Stairway gas composition from early wells. The markedly different composition confirms that the gas accumulation in the East Mereenie 10 area is separate from that seen in early wells. The lack of data precludes any conclusion on the areal extent of the accumulation, though drilling difficulties in East Mereenie 6 suggest that it is not confined to the immediate area of East Mereenie 10.

Gas properties at the adopted average reservoir conditions are noted in the Appendix. If there is a gas/oil contact at the datum (see later), the average gas reservoir pressure would be somewhat lower.

5. EAST MEREENIE 10 LOG INTERPRETATION

A very limited log suite comprising CDL-GR-CAL and DIL-GR was run through the Lower Stairway reservoir. Hole condition was good; oil-based drilling fluid had been used.

Log interpretation indicates 4.6 m of net pay with 5.6% porosity and 18.1% water saturation between 1402.1 and 1437.1 m and 4.0 m of net pay with 5.6% porosity and 15.8% water saturation between 1411.0 and 1437.1 m KB. Cut-off limits for determination of net pay are shown in the Appendix, a 4% porosity cut-off being most significant.

Sensitivity analysis for the wider interval indicates that a 4.5% porosity cut-off would reduce hydrocarbon capacity by 21% while a 5% cut-off would reduce capacity by 50%.

No core was taken which might confirm log-derived porosity estimates.

Reservoir porosity is poorer than that of the Pacoota reservoirs (typically 8-12%).

6. EAST MEREENIE 10 WELL TEST INTERPRETATION

In all well test interpretations, the rigorous pseudo-pressure technique is used. Although the gas composition on which pseudo-pressures are based is considered uncertain (refer Section 4), it is not expected that this would significantly affect results.

Computer printouts detailing test interpretation parameters are appended. Only buildup data are analysed.

On 10 November 1982, an open hole drill stem test (DST #1) over part of the Lower Stairway reservoir (1411.1-1436.8 m or 4629.7-4714 ft KB) was performed.

6½ barrels of liquid hydrocarbons were recovered from the drill string on reverse circulation. The gas flow rate was estimated without liquid separation facilities at 3.02 MMCF/D.

As mentioned in Section 4, the gas flow rate should be adjusted to 2.86 MMCF/D to account for the measured gas gravity. The calculated reservoir fluid flow rate was 2.94 MMCF/D allowing for the liquid hydrocarbons produced (average molecular weight 121.7, gas equivalent 831.9 SCF/bbl).

Interpretation suggests good reservoir permeability (21 md) and significant wellbore damage (skin pressure drop 1205 psi). If the DST gas flow rate were 2.44 MMCF/D (Section 4), the estimated reservoir permeability would 18 md.

These preliminary results justified further well testing which was undertaken in August 1984.

The well was flowed initially for 72 h (18/64" choke) with a 72 h buildup. The gas flow rate from the test separator varied from 0.61 to 0.80 MMCF/D while 6140 litres (38.6 bbl) of liquids were recovered. This is taken to be equivalent to a gas flow of 0.80 MMCF/D (0.81 MMCF/D of reservoir fluid) for 65 h.

A second flow period of 8 h (10/64" choke) with gas flow ranging from 0.55 to 0.433 MMCF/D is taken to be equivalent to a 9.52 h flow at the final rate or 0.44 MMCF/D of reservoir fluid.

A 16 h buildup was followed by a third flow (8 h, 14/16" choke) and buildup (16 h) and a fourth flow (4 h, 18/64" choke) and buildup. Data from these tests are treated in a similar manner.

The second, third and fourth buildups are interpreted as multi-rate tests. In each case, there is evidence of fluid inversion in the well tubing. The second flow was marred by variations in flowing pressure which appear not adequately explained by choke freezing. Because of this, the low value of skin factor from this test is considered erroneous.

Table 2 summarises the well test interpretations which are considered in very good agreement. Reservoir flow capacity is 48.5 md ft, reservoir permeability is 3.2 md if net pay is taken to be 4.6 m, apparent wellbore damage is substantial (apparent skin effect $S'=17.71$). Deduction of the non-Darcy contribution (estimated from a general correlation) gave a true skin effect of 17.56.

A major difference between interpretations of the drill stem test and the subsequent flow tests of longer duration is notable. DST and flow test data would yield the same value of flow capacity if the DST flow rate were 0.52 MMCF/D. As discussed in Section 4, this would imply recovery of gas and oil. It is possible that an area around the well might have a higher permeability. Alternatively, a gas/liquid interface in the vicinity of the well and two-phase flow of oil and gas within the reservoir yield anomalous well test data. This seems a distinct possibility, and the well test interpretations are therefore considered tentative.

7. POSSIBLE STAIRWAY OIL RESOURCE

As discussed in previous sections, there is evidence of a gas/oil contact in the vicinity of East Mereenie 10.

The radius of investigation in DST #1 was 80 m, so the gas/oil contact would probably be within 50 m of the well. The implied contact level of 715 ± 3 m (2345 ± 10 ft) subsea differs from the gas/oil contact in the Pacoota P1 reservoir (649 m or 2130 ft subsea) indicating that the presumed Stairway oil reservoir is isolated. A different oil/water contact must also be present.

Figure 1 shows the possible extent of the oil pool based on an arbitrary Stairway oil/water contact at 852 m (2795 ft) subsea. The nature of western closure is unknown, but an oil accumulation covering 4.5 sq km is possible.

On this basis, and taking pay parameter in East Mereenie 10 as being representative of this area (and $B=1.4$), a possible oil resource of 4.3 million STB in place is suggested.

If the oil/water contact is lower, a significantly larger resource is possible.

TABLE 1

POSSIBLE STAIRWAY RESERVOIR FLUID COMPOSITION

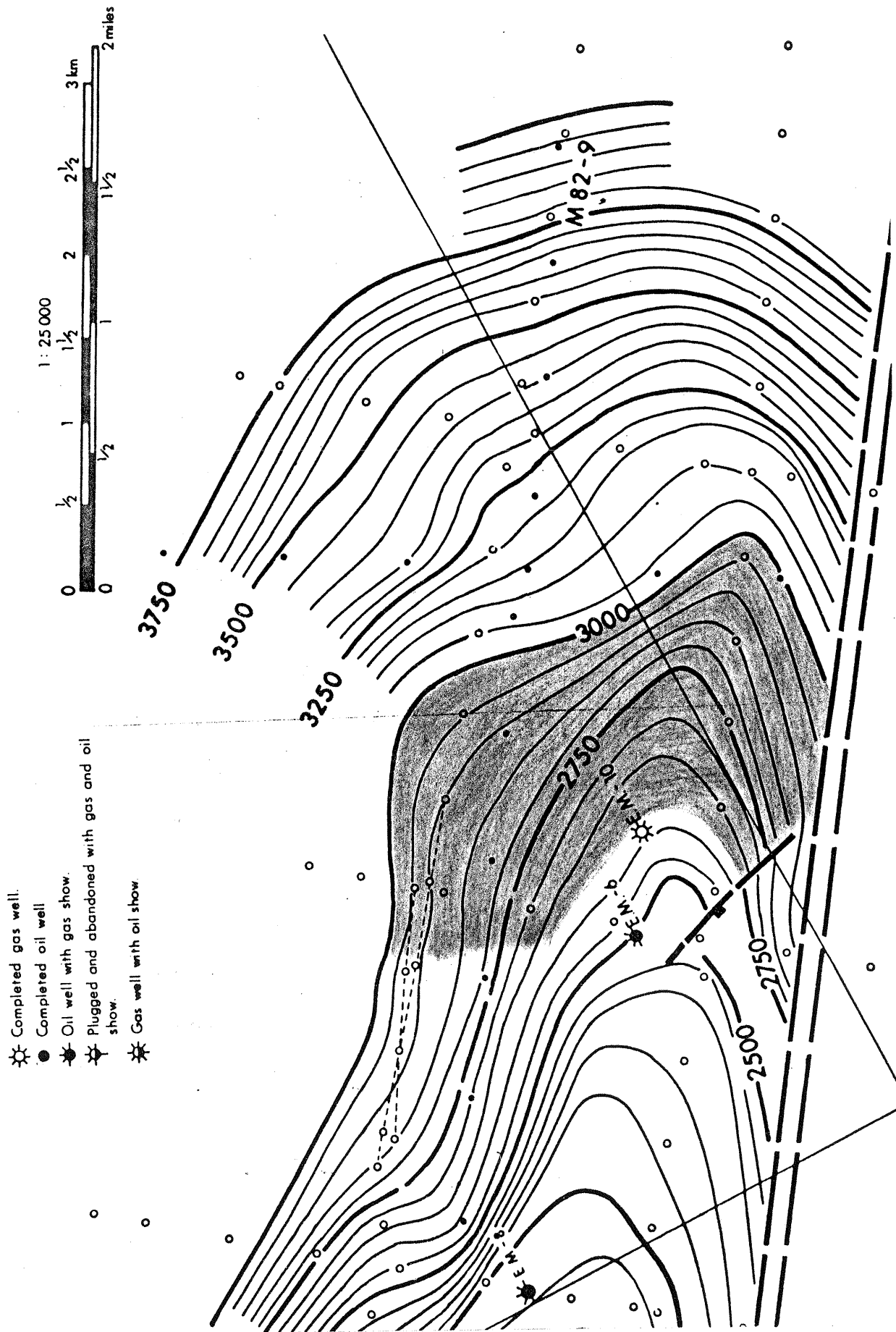
<u>COMPONENT</u>	<u>CONCENTRATION (MOLE%)</u>			
	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>
N2	2.68	2.35	2.67	2.6
CO2	0.05	0.04	0.05	0.1
C1	78.43	68.67	78.08	63.5
C2	9.06	7.95	9.02	20.8
C3	3.32	2.94	3.31	7.5
iC4	0.44	0.55	0.45	1.0
nC4	1.11	1.18	1.11	2.4
iC5	0.46	0.62	0.46	
nC5	0.68	0.81	0.68	
C6	1.17	2.88	1.23	
C7	1.08	3.94	1.18	
C8	0.58	2.69	0.65	
C9	0.28	1.61	0.33	
C10	0.20	1.16	0.24	
C11	0.13	0.75	0.15	
C12	0.08	0.46	0.09	
C13	0.07	0.38	0.08	
C14	0.04	0.25	0.05	
C15	0.03	0.19	0.04	
C16	0.02	0.14	0.03	
C17	0.02	0.11	0.02	
C18+	0.03	0.33	0.08	

- (1) Based on fluid samples from DST #1, East Mereenie 10, assuming GOR of 31.34 MCF/bbl (0.1536 lb condensate/lb gas).
- (2) Based on above samples, assuming GOR of 4.82 MCF/bbl (1.00 lb condensate/lb gas).
- (3) Based on above samples, assuming GOR of 26.74 MCF/bbl (0.18 lb condensate/lb gas).
- (4) Average Stairway gas composition from early wells (BMR Record 1975/123).

TABLE 2
SUMMARY OF WELL TEST INTERPRETATIONS

		<u>Buildup</u>			
	<u>DST #1</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Flow Rate (MMCF/D)	2.94*	0.81	0.44	0.76	0.77
Flow Capacity (md-ft)	275.7*	48.9	48.4	47.8	48.7
Permeability (md)	21.0*	3.2	3.2	3.2	3.2
Apparent Skin Factor	28.61*	17.33	4.63*	17.52	18.29
Extrapolated Pressure (psia)	2120.4	2121.4	-	-	-

* These calculated values are considered invalid (see text).



Possible Extent of Stairway Oil Reservoir
 Based on Top Pacoota Structure Map and Oil/Water Contact at 852 m (2795 ft) Subsea

APPENDICES

EAST MEREENIE 10 - STAIRWAY RESERVOIR GAS COMPOSITION (MOLE %)

NITROGEN:	2.670
CARBON DIOXIDE:	.050
METHANE:	78.080
ETHANE:	9.020
PROPANE:	3.310
iso-BUTANE:	.450
n-BUTANE:	1.110
iso-PENTANES:	.460
n-PENTANE:	.680
HEXANES:	1.230
HEPTANES:	1.180
OCTANES AND HEAVIER:	1.760

PROPERTIES [STANDARD CONDITIONS: 101.325 kPa (15.19 psia) and 15 °C (59 °F)]

MEAN MOLECULAR WEIGHT:	23.4	
GRAVITY RELATIVE TO AIR:	.809	
PSEUDO-CRITICAL TEMPERATURE:	226.8 °K	(408.8 °R)
PSEUDO-CRITICAL PRESSURE:	4363 kPa	(634.0 psia)
GROSS HEATING VALUE (DRY):	50.92 MJ/cu m	
GROSS HEATING VALUE (WET):	50.04 MJ/cu m	
NET HEATING VALUE:	46.32 MJ/cu m	
ESTIMATED DEWPOINT PRESSURE:	14190 kPa (2127 psia) at	59.6 °C (139.3 °F)

PVT DATA AT 59.6 °C (139.3 °F)

PRESSURE (psia)	DEV'N FACTOR	FORM. VOL. (RB/MCF)	COMPRESS. (10 ⁻⁶ /psi)	VISCOSITY (cp)	PSEUDO-PRESSURE (10 ⁶ psia ² /cp)	DENSITY (lb/CF)
2200.0	.749	1.063	465.0	.0194	388.93	10.71
2128.0	.750	1.101	491.9	.0190	367.25	10.35
2100.0	.750	1.116	502.6	.0189	358.91	10.20
2000.0	.753	1.176	542.6	.0184	329.60	9.68
1900.0	.757	1.244	585.1	.0179	301.08	9.15
1800.0	.762	1.322	630.3	.0174	273.43	8.61
1700.0	.768	1.411	678.2	.0169	246.73	8.07
1600.0	.776	1.514	729.4	.0164	221.06	7.52
1500.0	.784	1.633	784.3	.0159	196.48	6.97
1400.0	.794	1.772	843.8	.0155	173.07	6.43
1300.0	.805	1.934	909.2	.0150	150.89	5.89
1200.0	.817	2.125	982.2	.0145	130.01	5.36
1100.0	.829	2.354	1065.3	.0141	110.47	4.84
1000.0	.842	2.631	1162.2	.0136	92.33	4.33
900.0	.856	2.972	1277.9	.0132	75.65	3.83
800.0	.871	3.401	1420.2	.0127	60.47	3.35
700.0	.886	3.954	1601.0	.0123	46.85	2.88
600.0	.902	4.693	1840.4	.0119	34.84	2.43
500.0	.917	5.731	2174.3	.0115	24.50	1.99
400.0	.934	7.290	2674.2	.0111	15.88	1.56
300.0	.950	9.890	3506.8	.0107	9.04	1.15
200.0	.967	15.095	5176.1	.0103	4.07	.75
100.0	.983	30.710	10170.2	.0099	1.03	.37

EAST MEREENIE 10 (LOWER STAIRWAY) LOG DATA

DEPTH (m)	GAMMA (API)	DENSITY (g/cc)	CNL (%)	BCS (usec/ft)	SP (mv)	RXO (-----	RM ohm-m	RD -----)	CAL (in)
1402.1	148.5	2.65	0.0	0.0	0.0	0.0	40.7	40.5	8.1
1402.4	174.7	2.66	0.0	0.0	0.0	0.0	39.5	39.1	8.0
1402.7	193.4	2.67	0.0	0.0	0.0	0.0	39.8	40.2	8.0
1403.0	174.4	2.68	0.0	0.0	0.0	0.0	40.1	40.2	8.1
1403.3	119.7	2.69	0.0	0.0	0.0	0.0	42.2	41.1	8.1
1403.6	61.0	2.66	0.0	0.0	0.0	0.0	50.2	43.9	8.1
1403.9	49.0	2.62	0.0	0.0	0.0	0.0	53.9	35.3	8.1
1404.2	67.6	2.61	0.0	0.0	0.0	0.0	32.0	28.6	8.1
1404.5	60.7	2.60	0.0	0.0	0.0	0.0	22.1	25.3	8.2
1404.8	58.8	2.62	0.0	0.0	0.0	0.0	20.7	22.2	8.1
1405.1	97.3	2.62	0.0	0.0	0.0	0.0	19.6	20.4	7.9
1405.4	104.6	2.61	0.0	0.0	0.0	0.0	20.1	23.0	8.1
1405.7	113.7	2.62	0.0	0.0	0.0	0.0	21.7	24.9	8.1
1406.0	134.6	2.64	0.0	0.0	0.0	0.0	24.1	26.2	8.1
1406.3	180.7	2.66	0.0	0.0	0.0	0.0	27.1	27.2	8.2
1406.7	190.2	2.69	0.0	0.0	0.0	0.0	27.3	27.2	8.1
1407.0	142.8	2.71	0.0	0.0	0.0	0.0	25.8	27.0	8.1
1407.3	114.1	2.67	0.0	0.0	0.0	0.0	23.3	30.3	8.2
1407.6	103.6	2.59	0.0	0.0	0.0	0.0	27.9	35.8	8.2
1407.9	96.4	2.60	0.0	0.0	0.0	0.0	41.3	46.5	8.1
1408.2	76.5	2.55	0.0	0.0	0.0	0.0	84.5	85.5	8.1
1408.5	42.3	2.56	0.0	0.0	0.0	0.0	190.1	190.0	8.2
1408.8	46.8	2.60	0.0	0.0	0.0	0.0	814.9	400.3	8.2
1409.1	87.8	2.60	0.0	0.0	0.0	0.0	605.6	462.7	8.1
1409.4	122.9	2.60	0.0	0.0	0.0	0.0	378.2	456.1	8.1
1409.7	89.1	2.59	0.0	0.0	0.0	0.0	551.2	486.8	8.1
1410.0	51.2	2.59	0.0	0.0	0.0	0.0	651.0	472.9	8.1
1410.3	60.3	2.63	0.0	0.0	0.0	0.0	313.3	600.0	8.1
1410.6	58.8	2.66	0.0	0.0	0.0	0.0	236.2	456.1	8.2
1410.9	40.1	2.66	0.0	0.0	0.0	0.0	315.6	415.1	8.1
1411.2	35.4	2.66	0.0	0.0	0.0	0.0	264.8	417.6	8.0
1411.5	37.0	2.62	0.0	0.0	0.0	0.0	195.3	482.7	8.0
1411.8	43.3	2.59	0.0	0.0	0.0	0.0	192.5	843.8	8.0
1412.1	65.7	2.58	0.0	0.0	0.0	0.0	348.8	1004.2	8.0
1412.4	58.1	2.57	0.0	0.0	0.0	0.0	664.8	2000.0	8.0
1412.7	62.2	2.53	0.0	0.0	0.0	0.0	1112.0	2000.0	8.0
1413.1	89.1	2.51	0.0	0.0	0.0	0.0	2000.0	2000.0	8.0
1413.4	71.1	2.52	0.0	0.0	0.0	0.0	2000.0	2000.0	8.0
1413.7	48.3	2.54	0.0	0.0	0.0	0.0	2000.0	2000.0	8.0
1414.0	50.6	2.60	0.0	0.0	0.0	0.0	2000.0	2000.0	8.0
1414.3	52.1	2.63	0.0	0.0	0.0	0.0	406.1	724.6	8.0
1414.6	44.9	2.62	0.0	0.0	0.0	0.0	208.5	1011.5	8.0
1414.9	38.5	2.60	0.0	0.0	0.0	0.0	299.6	1793.8	8.0
1415.2	69.2	2.58	0.0	0.0	0.0	0.0	550.6	2000.0	8.0
1415.5	71.4	2.57	0.0	0.0	0.0	0.0	826.2	2000.0	8.0
1415.8	83.4	2.58	0.0	0.0	0.0	0.0	2000.0	2000.0	8.0
1416.1	60.3	2.60	0.0	0.0	0.0	0.0	2000.0	1820.1	8.0
1416.4	61.9	2.60	0.0	0.0	0.0	0.0	1034.3	2000.0	8.0
1416.7	53.7	2.58	0.0	0.0	0.0	0.0	2000.0	2000.0	8.0
1417.0	52.1	2.60	0.0	0.0	0.0	0.0	2000.0	2000.0	8.0
1417.3	47.7	2.63	0.0	0.0	0.0	0.0	1313.7	2000.0	8.0
1417.6	74.6	2.69	0.0	0.0	0.0	0.0	297.4	300.0	8.0
1417.9	112.5	2.73	0.0	0.0	0.0	0.0	96.0	125.3	8.0
1418.2	98.9	2.67	0.0	0.0	0.0	0.0	70.3	103.0	8.0
1418.5	79.0	2.64	0.0	0.0	0.0	0.0	67.8	106.8	8.1
1418.8	53.1	2.61	0.0	0.0	0.0	0.0	90.6	126.2	8.1
1419.1	41.1	2.59	0.0	0.0	0.0	0.0	113.4	166.2	8.1
1419.5	37.9	2.60	0.0	0.0	0.0	0.0	146.2	232.1	8.2
1419.8	35.4	2.62	0.0	0.0	0.0	0.0	142.0	258.7	8.1

cont...

EAST MEREEENIE 10 (LOWER STAIRWAY) LOG DATA

DEPTH (m)	GAMMA (API)	DENSITY (g/cc)	CNL (%)	BCS (u sec/ft)	SP (mv)	RXO (-----)	RM ohm-m	RD (-----)	CAL (in)
1420.1	36.0	2.63	0.0	0.0	0.0	0.0	154.9	274.2	8.1
1420.4	37.9	2.62	0.0	0.0	0.0	0.0	183.0	288.5	8.1
1420.7	61.0	2.59	0.0	0.0	0.0	0.0	239.3	396.9	8.1
1421.0	39.8	2.60	0.0	0.0	0.0	0.0	284.7	482.7	8.1
1421.3	53.1	2.59	0.0	0.0	0.0	0.0	336.4	1248.3	8.1
1421.6	56.2	2.58	0.0	0.0	0.0	0.0	443.0	825.6	8.1
1421.9	52.1	2.58	0.0	0.0	0.0	0.0	875.5	1160.9	8.1
1422.2	47.4	2.59	0.0	0.0	0.0	0.0	562.7	562.1	8.1
1422.5	74.6	2.62	0.0	0.0	0.0	0.0	348.8	361.2	8.2
1422.8	87.5	2.65	0.0	0.0	0.0	0.0	185.7	178.7	8.1
1423.1	78.7	2.65	0.0	0.0	0.0	0.0	129.2	140.7	8.0
1423.4	76.5	2.64	0.0	0.0	0.0	0.0	107.1	131.8	8.1
1423.7	58.1	2.62	0.0	0.0	0.0	0.0	101.0	158.0	8.2
1424.0	32.9	2.61	0.0	0.0	0.0	0.0	172.7	178.7	8.1
1424.3	28.1	2.58	0.0	0.0	0.0	0.0	341.3	232.1	8.2
1424.6	35.4	2.57	0.0	0.0	0.0	0.0	570.9	258.7	8.1
1424.9	56.2	2.59	0.0	0.0	0.0	0.0	774.0	119.1	8.1
1425.2	79.6	2.62	0.0	0.0	0.0	0.0	160.6	88.5	8.1
1425.5	87.2	2.60	0.0	0.0	0.0	0.0	75.6	72.7	8.1
1425.9	79.6	2.61	0.0	0.0	0.0	0.0	66.8	62.9	8.1
1426.2	61.0	2.62	0.0	0.0	0.0	0.0	97.4	58.1	8.1
1426.5	57.8	2.62	0.0	0.0	0.0	0.0	119.3	66.2	8.1
1426.8	89.1	2.68	0.0	0.0	0.0	0.0	129.2	149.1	8.1
1427.1	122.9	2.74	0.0	0.0	0.0	0.0	160.6	36.8	8.1
1427.4	126.1	2.72	0.0	0.0	0.0	0.0	50.4	10.3	8.1
1427.7	106.8	2.69	0.0	0.0	0.0	0.0	6.5	6.5	8.1
1428.0	126.1	2.70	0.0	0.0	0.0	0.0	3.7	6.6	8.2
1428.3	113.1	2.64	0.0	0.0	0.0	0.0	6.3	6.7	8.3
1428.6	100.5	2.63	0.0	0.0	0.0	0.0	9.4	9.8	8.2
1428.9	96.4	2.62	0.0	0.0	0.0	0.0	28.4	41.9	8.1
1429.2	93.8	2.63	0.0	0.0	0.0	0.0	119.3	159.2	8.2
1429.5	99.5	2.66	0.0	0.0	0.0	0.0	2073.8	68.6	8.2
1429.8	83.1	2.64	0.0	0.0	0.0	0.0	353.9	71.2	8.2
1430.1	70.8	2.64	0.0	0.0	0.0	0.0	157.2	75.4	8.2
1430.4	102.7	2.67	0.0	0.0	0.0	0.0	123.7	73.8	8.2
1430.7	117.2	2.69	0.0	0.0	0.0	0.0	96.7	66.2	8.2
1431.0	128.6	2.67	0.0	0.0	0.0	0.0	75.6	55.6	8.3
1431.3	161.5	2.64	0.0	0.0	0.0	0.0	58.2	45.7	8.3
1431.6	171.2	2.58	0.0	0.0	0.0	0.0	43.6	43.5	8.3
1432.0	179.8	2.54	0.0	0.0	0.0	0.0	46.9	46.4	8.3
1432.3	158.9	2.59	0.0	0.0	0.0	0.0	54.2	45.1	8.3
1432.6	145.3	2.64	0.0	0.0	0.0	0.0	54.2	46.7	8.3
1432.9	140.6	2.71	0.0	0.0	0.0	0.0	51.5	39.8	8.3
1433.2	137.4	2.73	0.0	0.0	0.0	0.0	39.7	33.5	8.3
1433.5	145.3	2.72	0.0	0.0	0.0	0.0	33.8	27.9	8.3
1433.8	154.2	2.71	0.0	0.0	0.0	0.0	28.0	26.0	8.2
1434.1	147.2	2.72	0.0	0.0	0.0	0.0	26.1	26.0	8.2
1434.4	133.3	2.73	0.0	0.0	0.0	0.0	27.0	25.2	8.2
1434.7	130.2	2.75	0.0	0.0	0.0	0.0	27.0	25.0	8.2
1435.0	145.3	2.74	0.0	0.0	0.0	0.0	24.9	23.6	8.4
1435.3	149.4	2.70	0.0	0.0	0.0	0.0	24.6	23.6	8.4
1435.6	130.2	2.70	0.0	0.0	0.0	0.0	26.1	24.5	8.5
1435.9	137.8	2.73	0.0	0.0	0.0	0.0	27.4	26.0	8.4
1436.2	142.2	2.74	0.0	0.0	0.0	0.0	26.4	25.4	8.3
1436.5	155.8	2.70	0.0	0.0	0.0	0.0	24.1	20.9	8.3
1436.8	154.2	2.69	0.0	0.0	0.0	0.0	21.3	20.7	8.3
1437.1	142.2	2.71	0.0	0.0	0.0	0.0	21.3	22.0	8.2

FILE:

L3EM10

EAST MEREENIE 10 (LOWER STAIRWAY) - LOG INTERPRETATION

Number of data points	116
Borehole diameter (cm)	20.32

FORMATION FLUID PROPERTIES

Formation water resistivity (ohm-metre)	.050
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MUD FILTRATE PROPERTIES

Resistivity (ohm-metre)	0.000
Density (g/cc)	1.007

MATRIX PROPERTIES

Gamma ray minimum (API units)	28.0
Density (g/cc)	2.650

SHALE/CLAY PROPERTIES

Gamma ray maximum (API units)	240.0
Resistivity (ohm-metre)	70.00
Density (g/cc)	2.650

CUT-OFF LIMITS

Porosity minimum (%)	4.0
Water saturation maximum (%)	55.0
Shale volume maximum (%)	45.0

PAY DATA FOR INTERVAL 1402.1 TO 1437.1 METRES

Gross interval (metres)	35.1
Number of pay sands	5
Net pay (metres)	4.6
Average porosity (net, %)	5.6
Average water saturation (net, %)	18.1

PAY DATA FOR INTERVAL 1411.0 TO 1437.1 METRES

Gross interval (metres)	26.1
Number of pay sands	4
Net pay (metres)	4.0
Average porosity (net, %)	5.6
Average water saturation (net, %)	15.8

NOTES

Porosity was estimated from the density log
without correction for hydrocarbon effects

Water saturation was estimated from the dual laterolog without Rxo

Clay content was estimated from gamma-ray data

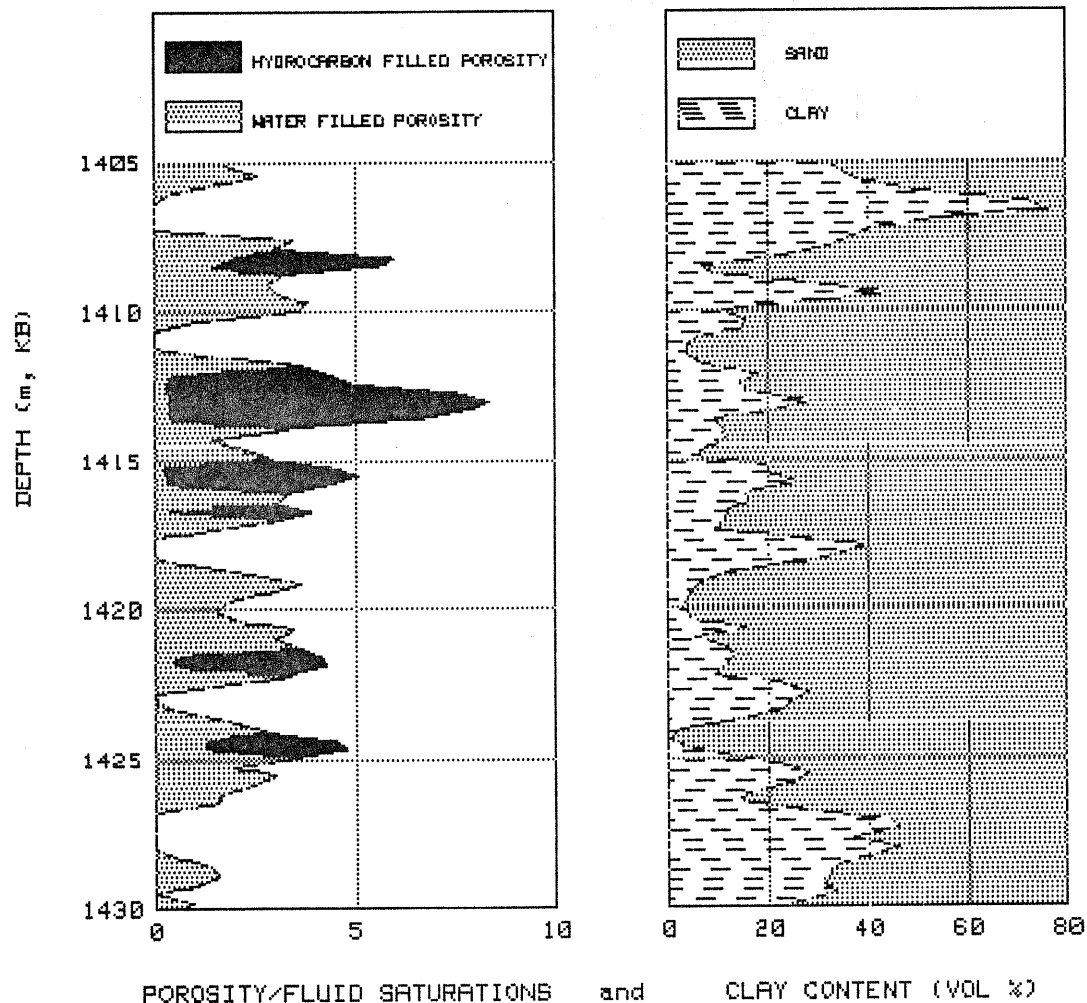
Data file used: L3EM10

EAST MEREENIE 10 (LOWER STAIRWAY) - LOG INTERPRETATION

SENSITIVITY ANALYSIS FOR INTERVAL 1402.1 TO 1437.1 METRES

<u>POROSITY LIMIT (%)</u>	<u>NET PAY (m)</u>	<u>NUMBER OF SANDS</u>	<u>AVERAGE POROSITY (%)</u>	<u>AVERAGE WATER SATURATION (%)</u>	<u>HYDROCARBON CAPACITY (m)</u>
3.5	4.6	5	5.5	18.1	.205
4.0	4.6	5	5.6	18.1	.208
4.5	3.4	4	6.1	19.5	.164
5.0	1.8	2	6.9	18.3	.104
5.5	1.8	2	7.0	18.3	.105
6.0	1.2	1	7.6	11.1	.082
6.5	1.2	1	7.7	11.1	.083
7.0	.9	1	7.9	12.9	.063
7.5	.9	1	8.0	12.9	.063
8.0	0.0	0	0.0	0.0	0.000

Water saturation maximum (%) : 55.0
Shale volume maximum (%) : 45.0



EAST MEREENIE 10 (LOWER STAIRWAY)

EAST MEREENIE 10 - DST #1 SECOND FLOW

GROSS INTERVAL 1411.1 TO 1436.8 METRES

TIME CODE	FLOW TIME (h)	FLOW RATES (MCF/D)
00000000	.0000	0
00014330	1.7250	2940

PT	TIME CODE	SHUT-IN TIME (h)	SHUT-IN PRESSURES (psia)
			# 7984
	00014330	.0000	733.50
1:	00014430	.0167	1844.50
2:	00014530	.0333	2019.20
3:	00014630	.0500	2046.20
4:	00014730	.0667	2057.60
5:	00014830	.0833	2064.50
6:	00014930	.1000	2068.90
7:	00015030	.1167	2072.30
8:	00015130	.1333	2076.30
9:	00015230	.1500	2078.50
10:	00015330	.1667	2081.00
11:	00015530	.2000	2084.10
12:	00015730	.2333	2086.50
13:	00015930	.2667	2088.40
14:	00020130	.3000	2090.30
15:	00020330	.3333	2092.40
16:	00020530	.3667	2093.10
17:	00020730	.4000	2094.60
18:	00020930	.4333	2096.50
19:	00021130	.4667	2096.50
20:	00021330	.5000	2097.60
21:	00021830	.5833	2099.60
22:	00022330	.6667	2101.00
23:	00022830	.7500	2102.10
24:	00023330	.8333	2103.50
25:	00023830	.9167	2104.30
26:	00024330	1.0000	2104.70
27:	00025330	1.1667	2106.40
28:	00030330	1.3333	2107.60
29:	00031330	1.5000	2109.30
30:	00032330	1.6667	2109.70
31:	00033330	1.8333	2110.20

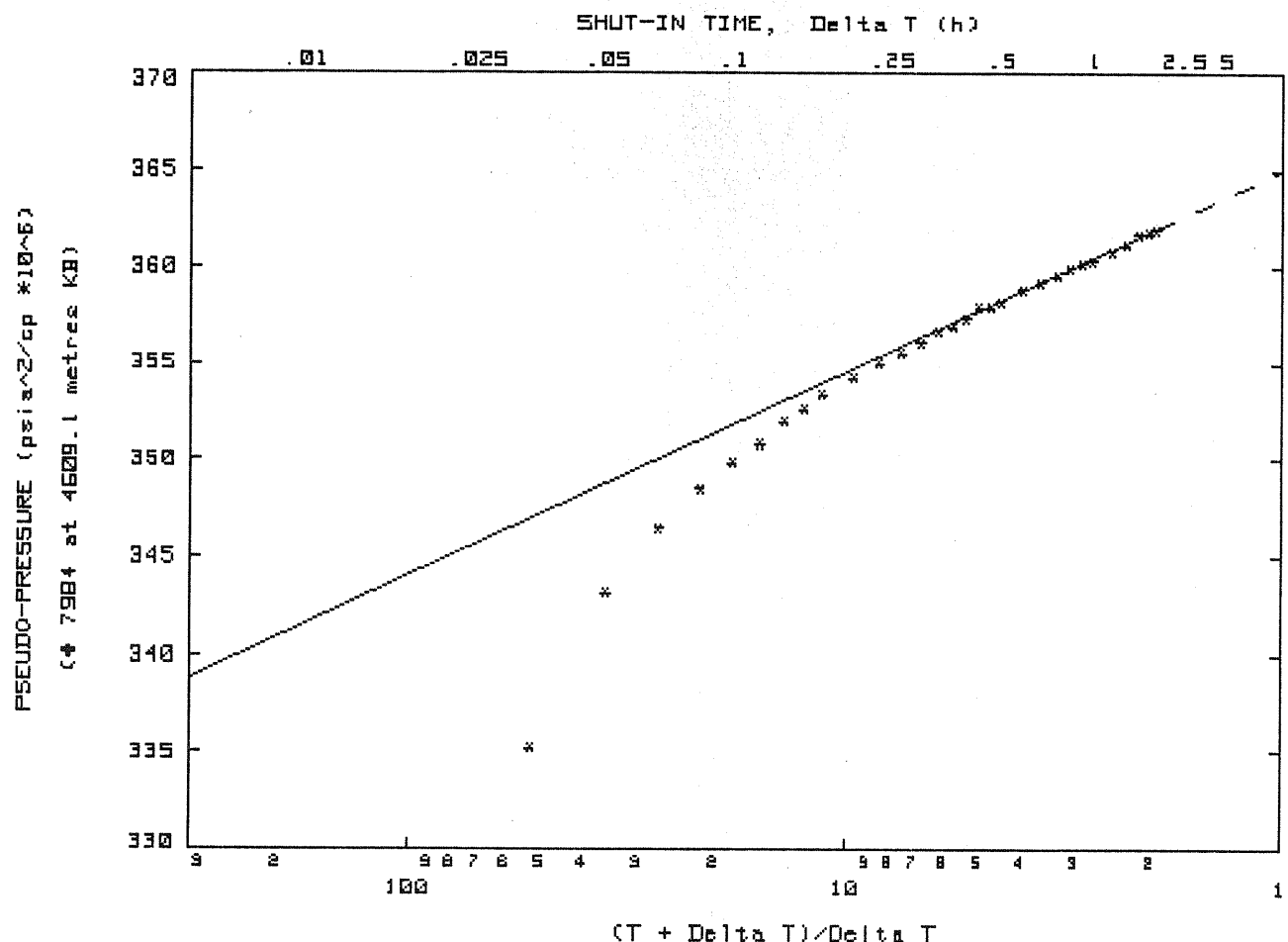
DATA FILE : B1EM10

EAST MEREENIE 10 - DST #1 SECOND FLOW

SEMI-LOG INTERPRETATION

FORMATION TEMPERATURE:	59.6	°C
FORMATION VOLUME FACTOR @ 2120.4 psia:	1.105	RB/MSCF
GAS VISCOSITY @ 2120.4 psia:	.0190	cp
NET PAY THICKNESS:	4.0	metres (13.1 feet)
POROSITY:	5.6	%
GAS COMPRESSIBILITY @ 2120.4 psia:	.0004948	/psi
FORMATION WATER COMPRESSIBILITY:	.0000030	/psi
ROCK COMPRESSIBILITY:	.0000050	/psi
WATER SATURATION:	15.8	%
TOTAL COMPRESSIBILITY:	.0004221	/psi
WELLBORE RADIUS:	20.3	cm
FLOW CAPACITY:	275.5	md-ft
PSEUDO-PRESSURE Mp 1hr:	360.4	*10 ⁶ psia ² /cp
PSEUDO-PRESSURE, INFINITE SHUT IN:	365.0	*10 ⁶ psia ² /cp
PRESSURE AT INFINITE SHUT IN TIME:	2120.4	psia at 4609.1 m KB
AVERAGE PERMEABILITY:	21.0	md
SKIN FACTOR (TOTAL):	28.69	
DELTA P SKIN:	1205	psi
RADIUS OF INVESTIGATION:	79	metres
POINTS REGRESSED:	20 TO 31	
GRADIENT:	10.47	*10 ⁶ psi ² /cp/cycle
COEFFICIENT OF DETERMINATION:	.996	

DATA FILES USED: B1EM10, GPVEMS



EAST MEREENIE 10 - AUGUST '84 TEST - FIRST BUILDUP

TIME CODE	FLOW TIME (h)	FLOW RATES (MCF/D)
11160000	.0000	0
14090030	65.0083	810

PT	TIME CODE	SHUT-IN TIME (h)	SHUT-IN PRESSURES (psia)
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H.P. # 627

	14090030	.0000	506.96
1:	14090040	.0028	509.32
2:	14090050	.0056	516.50
3:	14090100	.0083	524.76
4:	14090200	.0250	576.53
5:	14090300	.0417	628.17
6:	14090400	.0583	680.00
7:	14090500	.0750	731.43
8:	14090700	.1083	832.41
9:	14090900	.1417	927.91
10:	14091100	.1750	1018.97
11:	14091500	.2417	1185.44
12:	14092000	.3250	1367.11
13:	14092500	.4083	1520.08
14:	14093000	.4917	1648.37
15:	14094000	.6583	1840.66
16:	14100000	.9917	2017.05
17:	14103000	1.4917	2063.45
18:	14120000	2.9917	2072.20
19:	14140000	4.9917	2074.79
20:	14160000	6.9917	2076.21
21:	14200000	10.9917	2078.51
22:	15000000	14.9917	2082.03
23:	15040000	18.9917	2084.98
24:	15080000	22.9917	2087.54
25:	15120000	26.9917	2091.55
26:	15160000	30.9917	2092.84
27:	15200000	34.9917	2093.05
28:	16000000	38.9917	2096.34
29:	16040000	42.9917	2098.52
30:	16080000	46.9917	2100.24
31:	16120000	50.9917	2103.06
32:	16160000	54.9917	2104.39
33:	16200000	58.9917	2105.26
34:	17000000	62.9917	2106.31
35:	17040000	66.9917	2107.41
36:	17080000	70.9917	2108.97
37:	17090050	72.0056	2109.69

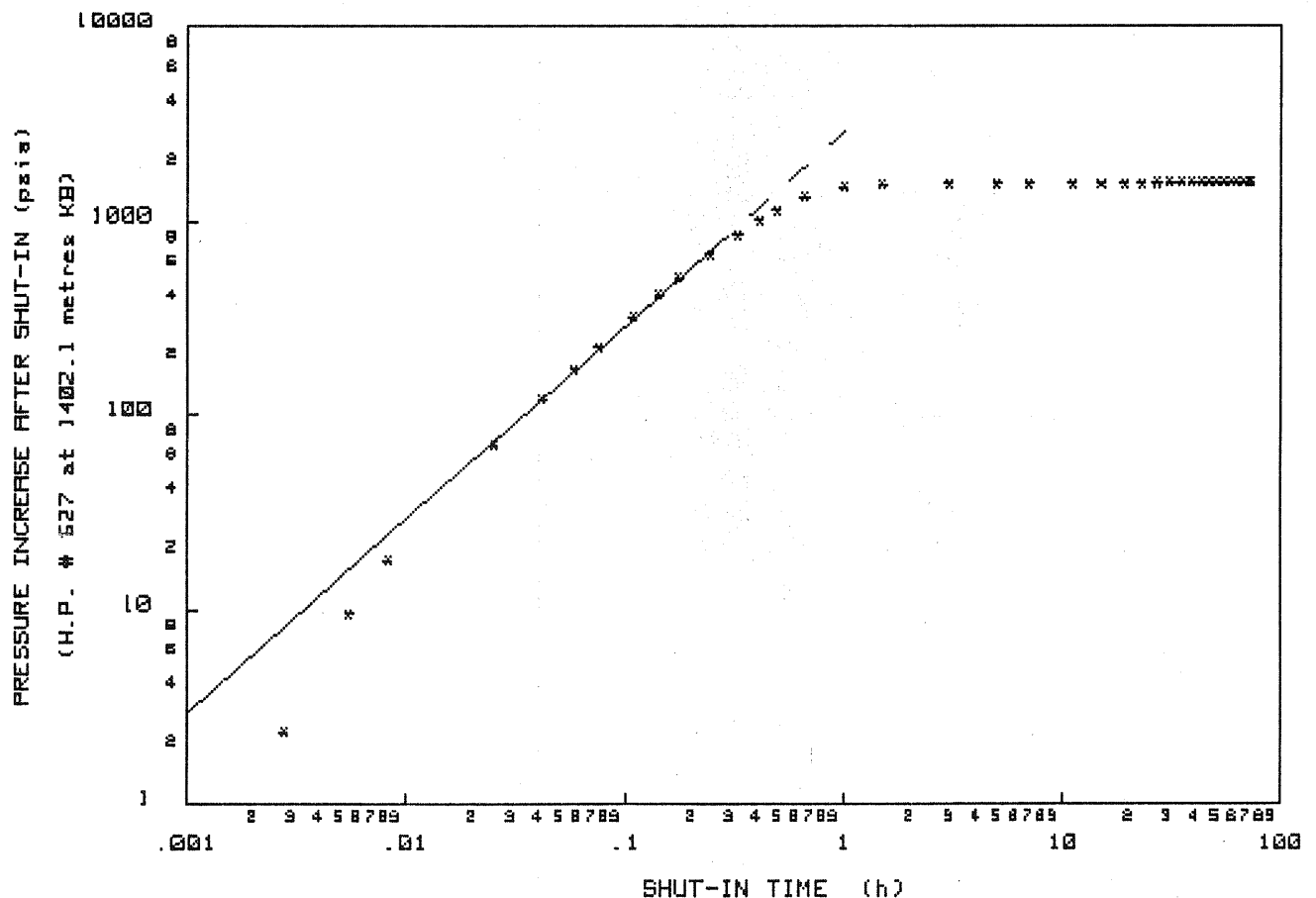
DATA FILE : B2EM10

EAST MEREEENIE 10 - AUGUST '84 TEST - FIRST BUILDUP

LOG-LOG INTERPRETATION

FORMATION TEMPERATURE:	59.6	°C
FORMATION VOLUME FACTOR @ 2121.4 psia:	1.104	RB/MSCF
MATCH POINT BUILDUP:	705.4	psi
MATCH POINT TIME	.242	hours
APPARENT STORAGE COEFFICIENT:	.013	RB/psi
ESTIMATED END OF STORAGE EFFECTS:	10.3	hours
POINTS REGRESSED:	4 TO 11	
GRADIENT:	1.000	

DATA FILES USED: B2EM10, GPVEMS

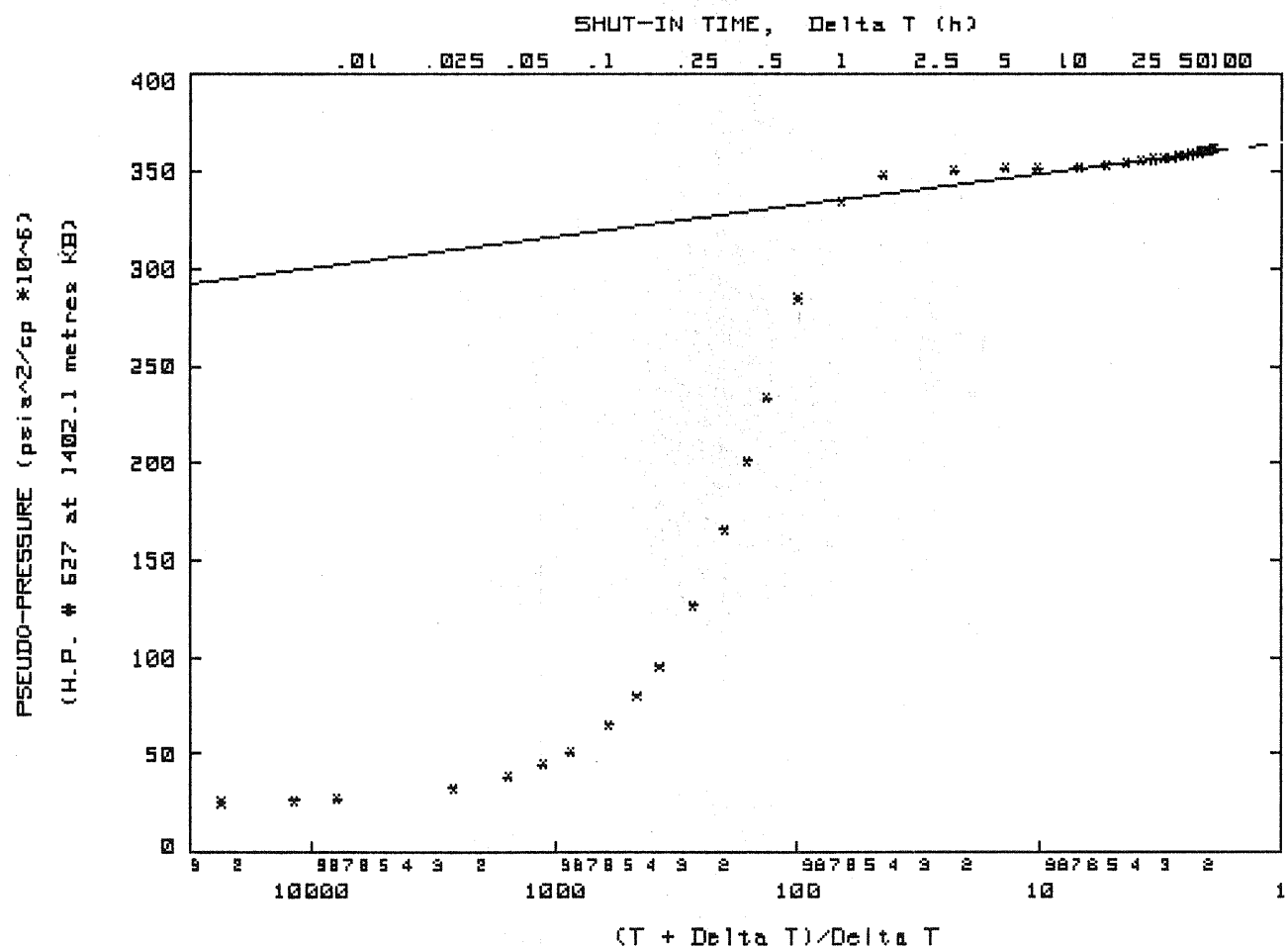


EAST MEREENIE 10 - AUGUST '84 TEST - FIRST BUILDUP

SEMI-LOG INTERPRETATION

FORMATION TEMPERATURE:	59.6	°C
FORMATION VOLUME FACTOR @ 2121.4 psia:	1.104	RB/MSCF
GAS VISCOSITY @ 2121.4 psia:	.0190	cp
NET PAY THICKNESS:	4.6	metres (15.1 feet)
POROSITY:	5.6	%
GAS COMPRESSIBILITY @ 2121.4 psia:	.0004944	/psi
FORMATION WATER COMPRESSIBILITY:	.0000030	/psi
ROCK COMPRESSIBILITY:	.0000050	/psi
WATER SATURATION:	18.1	%
TOTAL COMPRESSIBILITY:	.0004105	/psi
WELLBORE RADIUS:	20.3	cm
FLOW CAPACITY:	48.9	md-ft
PSEUDO-PRESSURE Mp 1hr:	335.7	*10 ⁶ psia ² /cp
PSEUDO-PRESSURE, INFINITE SHUT IN:	365.3	*10 ⁶ psia ² /cp
PRESSURE AT INFINITE SHUT IN TIME:	2121.4	psia at 1402.1 m KB
AVERAGE PERMEABILITY:	3.2	md
SKIN FACTOR (TOTAL):	17.38	
DELTA P SKIN:	1283	psi
RADIUS OF INVESTIGATION:	194	metres
POINTS REGRESSED:	21 TO 35	
GRADIENT:	16.27	*10 ⁶ psi ² /cp/cycle
COEFFICIENT OF DETERMINATION:	.960	

DATA FILES USED: B2EM10, GPVEMS



EAST MEREENIE 10 - AUGUST '84 TEST - SECOND BUILDUP

TIME CODE	FLOW TIME (h)	FLOW RATES (MCF/D)
11160000	.0000	0
14090030	65.0083	810
17072816	135.4711	0
17170000	145.0000	440

PT	TIME CODE	SHUT-IN TIME (h)	SHUT-IN PRESSURES (psia)
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H.P. # 627

	17170000	.0000	1819.00
1:	17170010	.0028	1819.08
2:	17170020	.0056	1819.11
3:	17170030	.0083	1819.79
4:	17170040	.0111	1822.18
5:	17170050	.0139	1824.47
6:	17170100	.0167	1826.79
7:	17170200	.0333	1839.88
8:	17170300	.0500	1852.39
9:	17170400	.0667	1866.32
10:	17170500	.0833	1875.93
11:	17170600	.1000	1886.92
12:	17170700	.1167	1897.46
13:	17170800	.1333	1907.43
14:	17171000	.1667	1926.07
15:	17171200	.2000	1943.94
16:	17171500	.2500	1966.58
17:	17172000	.3333	1997.23
18:	17172500	.4167	2020.18
19:	17173000	.5000	2036.80
20:	17174000	.6667	2060.11
21:	17175000	.8333	2072.94
22:	17180000	1.0000	2078.44
23:	17190000	2.0000	2086.35
24:	17200000	3.0000	2087.36
25:	17220000	5.0000	2089.63
26:	17230000	6.0000	2090.42
27:	18000000	7.0000	2091.40
28:	18010000	8.0000	2092.27
29:	18020000	9.0000	2093.04
30:	18030000	10.0000	2093.73
31:	18040000	11.0000	2094.35
32:	18050000	12.0000	2094.93
33:	18060000	13.0000	2095.41
34:	18070000	14.0000	2095.82
35:	18080000	15.0000	2096.48
36:	18090000	16.0000	2097.24
37:	18090050	16.0139	2097.26

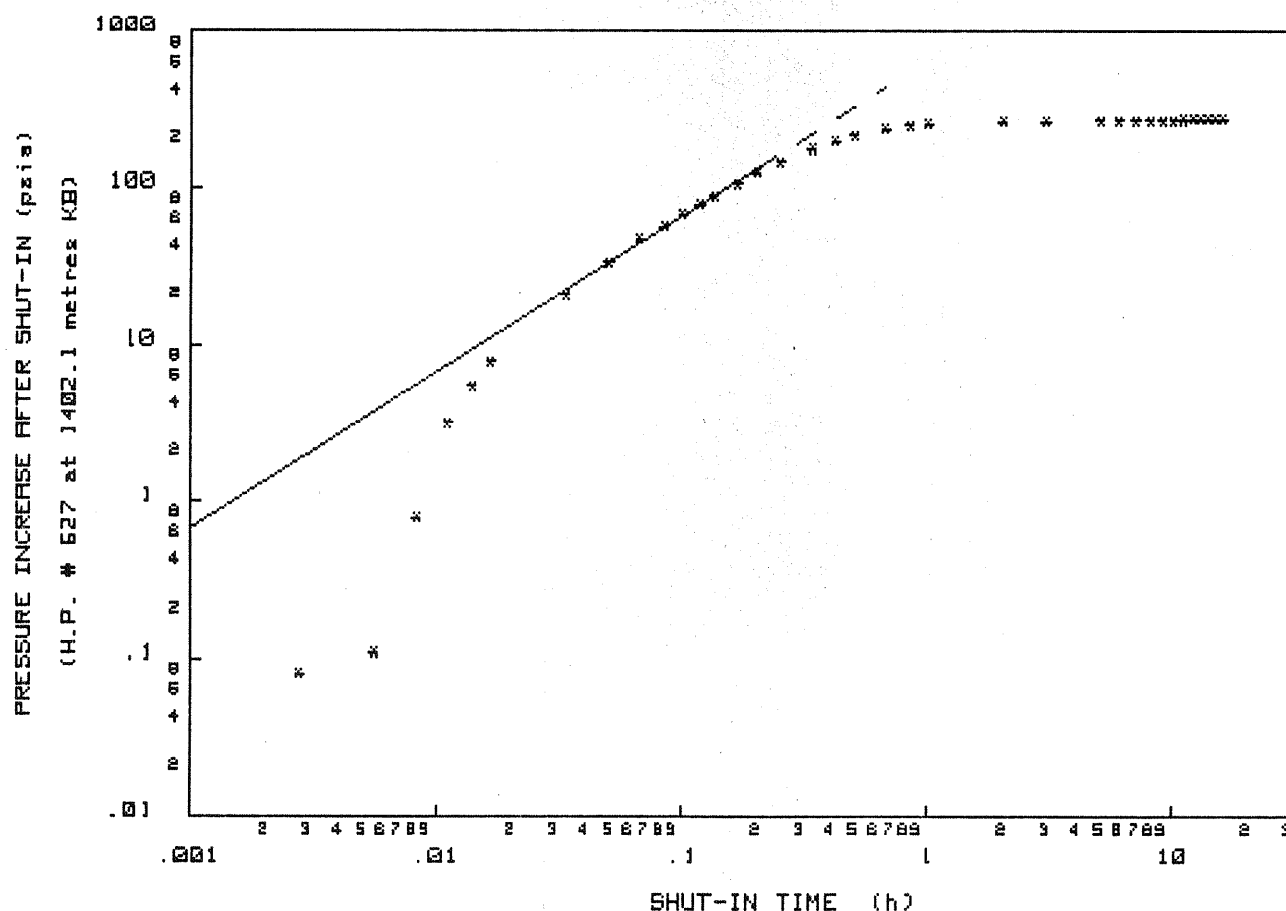
DATA FILE : B3EM10

EAST MEREENIE 10 - AUGUST '84 TEST - SECOND BUILDUP

LOG-LOG INTERPRETATION

FORMATION TEMPERATURE:	59.6	°C
FORMATION VOLUME FACTOR @ 2115.5 psia:	1.107	RB/MSCF
MATCH POINT BUILDUP:	132.5	psi
MATCH POINT TIME	.200	hours
APPARENT STORAGE COEFFICIENT:	.056	RB/psi
ESTIMATED END OF STORAGE EFFECTS:	7.9	hours
POINTS REGRESSED:	7 TO 15	
GRADIENT:	1.000	

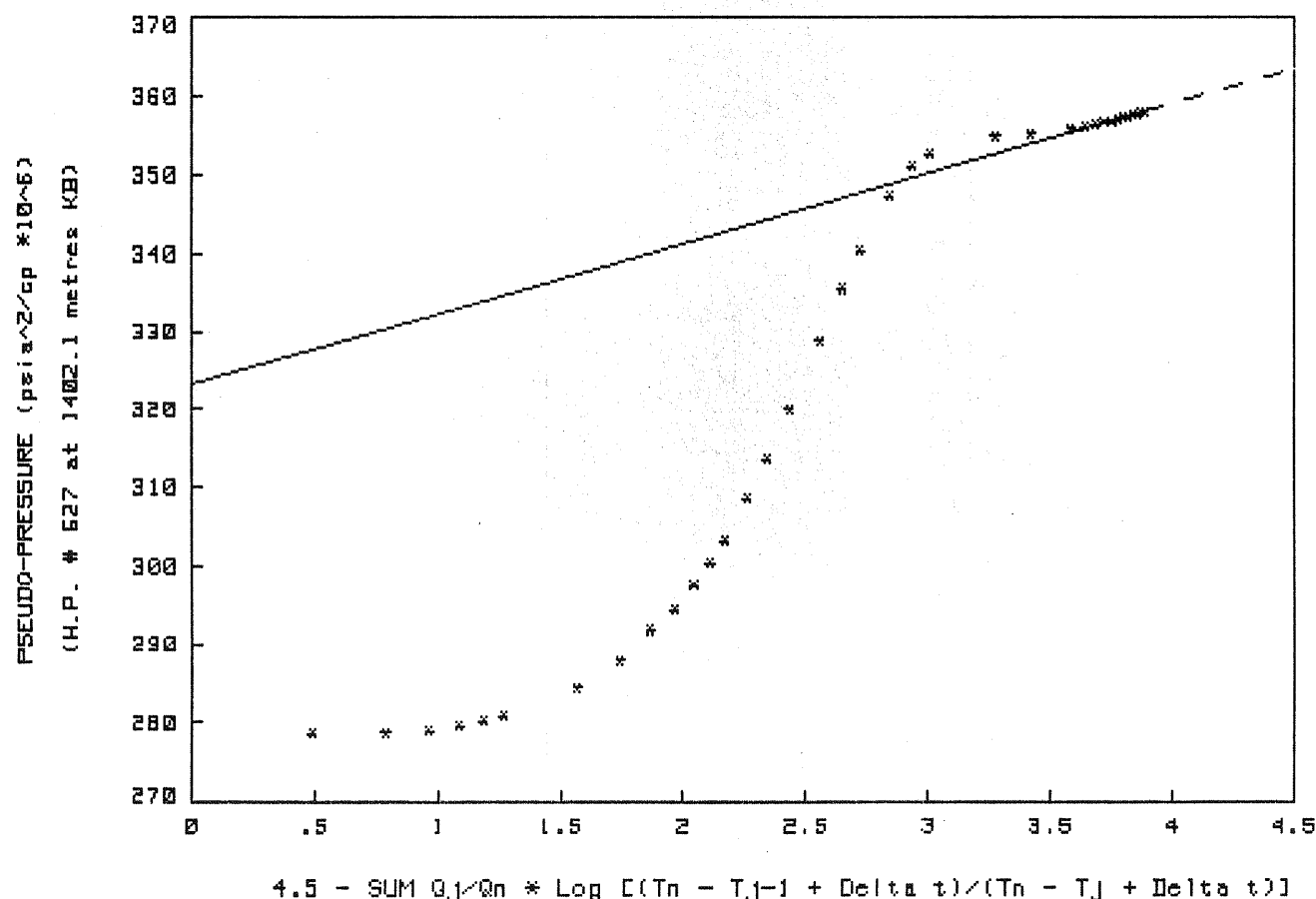
DATA FILES USED: B3EM10, GPVEMS



EAST MEREENIE 10 - AUGUST '84 TEST - SECOND BUILDUP

FORMATION TEMPERATURE:	59.6	°C
FORMATION VOLUME FACTOR @ 2115.5 psia:	1.107	RB/MSCF
GAS VISCOSITY @ 2115.5 psia:	.0189	cp
NET PAY THICKNESS:	4.6	metres (15.1 feet)
POROSITY:	5.6	%
GAS COMPRESSIBILITY @ 2115.5 psia:	.0004967	/psi
FORMATION WATER COMPRESSIBILITY:	.0000030	/psi
ROCK COMPRESSIBILITY:	.0000050	/psi
WATER SATURATION:	18.1	%
TOTAL COMPRESSIBILITY:	.0004123	/psi
WELLBORE RADIUS:	20.3	cm
FLOW CAPACITY:	48.3	md-ft
PSEUDO-PRESSURE M_p 1hr:	350.2	$\times 10^6$ psia ² /cp
PSEUDO-PRESSURE, INFINITE SHUT IN:	363.5	$\times 10^6$ psia ² /cp
PRESSURE AT INFINITE SHUT IN TIME:	2115.5	psia at 1402.1 m KB
AVERAGE PERMEABILITY:	3.2	md
SKIN FACTOR (TOTAL):	4.63	
DELTA P SKIN:	128	psi
RADIUS OF INVESTIGATION:	288	metres
POINTS REGRESSED:	29 TO 37	
GRADIENT:	8.93	$\times 10^6$ psi ² /cp/cycle
COEFFICIENT OF DETERMINATION:	.984	

DATA FILES USED: B3EM10, GPVEMS



EAST MEREENIE 10 - AUGUST '84 TEST - THIRD BUILDUP

TIME CODE	FLOW TIME (h)	FLOW RATES (MCF/D)
11160000	.0000	0
14090030	65.0083	810
17072816	135.4711	0
17170000	145.0000	440
18090000	161.0000	0
18170000	169.0000	760

PT	TIME CODE	SHUT-IN TIME (h)	SHUT-IN PRESSURES (psia)
			H.P. # 627
	18170000	.0000	664.58
1:	18170010	.0028	664.95
2:	18170020	.0056	665.06
3:	18170030	.0083	669.53
4:	18170040	.0111	676.56
5:	18170050	.0139	683.82
6:	18170100	.0167	690.92
7:	18170200	.0333	734.21
8:	18170300	.0500	778.91
9:	18170400	.0667	822.07
10:	18170500	.0833	864.10
11:	18170700	.1167	967.61
12:	18171000	.1667	1064.09
13:	18171230	.2083	1155.80
14:	18171500	.2500	1241.67
15:	18172000	.3333	1392.99
16:	18173000	.5000	1632.27
17:	18180000	1.0000	1995.94
18:	18190000	2.0000	2067.19
19:	18200000	3.0000	2077.39
20:	18210000	4.0000	2078.91
21:	18220000	5.0000	2079.79
22:	18230000	6.0000	2080.43
23:	19000000	7.0000	2081.17
24:	19010000	8.0000	2082.31
25:	19020000	9.0000	2083.63
26:	19030000	10.0000	2085.00
27:	19040000	11.0000	2086.21
28:	19050000	12.0000	2087.34
29:	19060000	13.0000	2088.32
30:	19070000	14.0000	2089.13
31:	19080000	15.0000	2089.85
32:	19090000	16.0000	2090.46

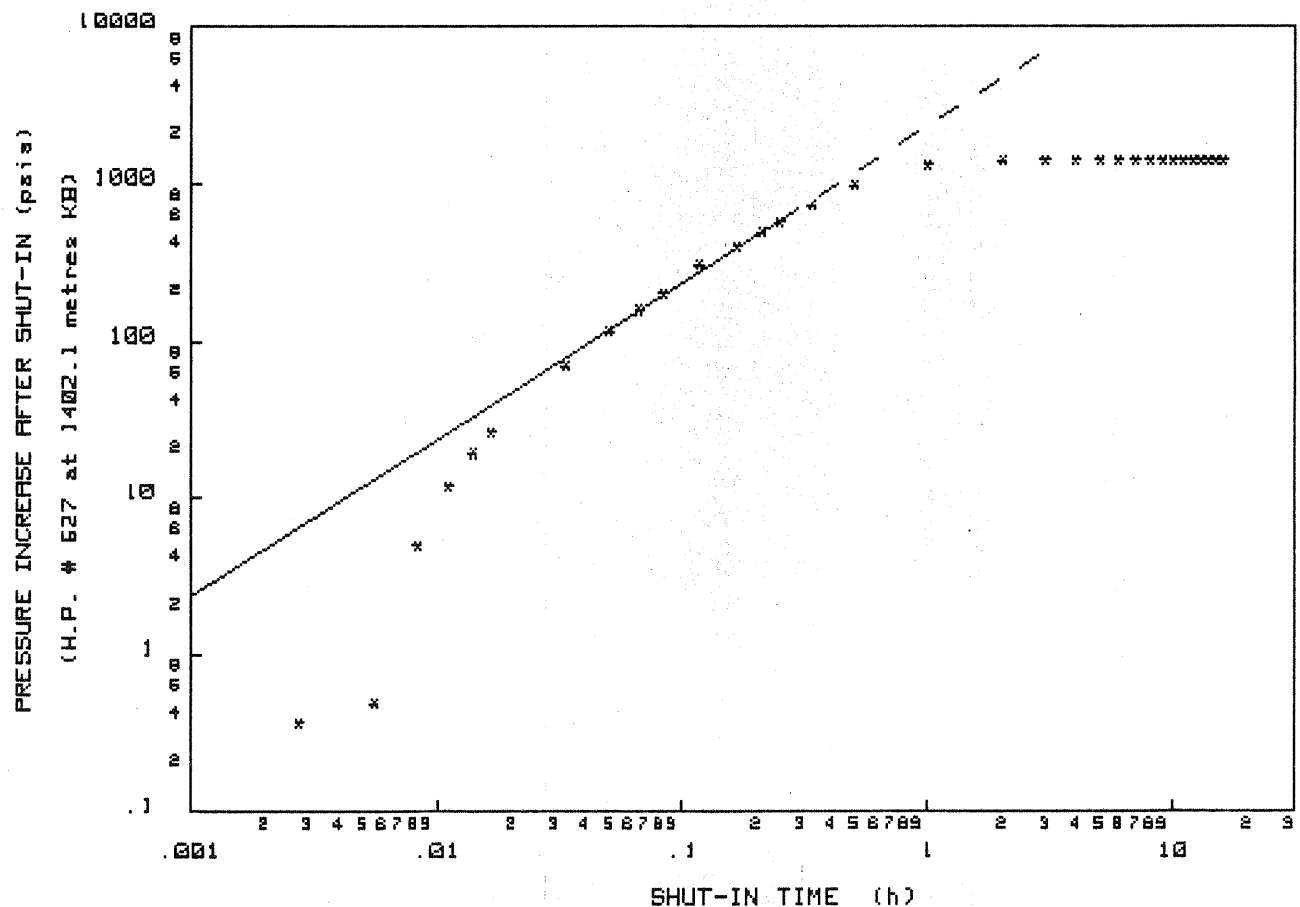
DATA FILE : B4EM10

EAST MEREENIE 10 - AUGUST '84 TEST - THIRD BUILDUP

LOG-LOG INTERPRETATION

FORMATION TEMPERATURE: 59.6 °C
FORMATION VOLUME FACTOR @ 2113.2 psia: 1.109 RB/MSCF
MATCH POINT BUILDUP: 586.3 psi
MATCH POINT TIME .250 hours
APPARENT STORAGE COEFFICIENT: .016 RB/psi
ESTIMATED END OF STORAGE EFFECTS: 10.5 hours
POINTS REGRESSED: 7 TO 14
GRADIENT: 1.000

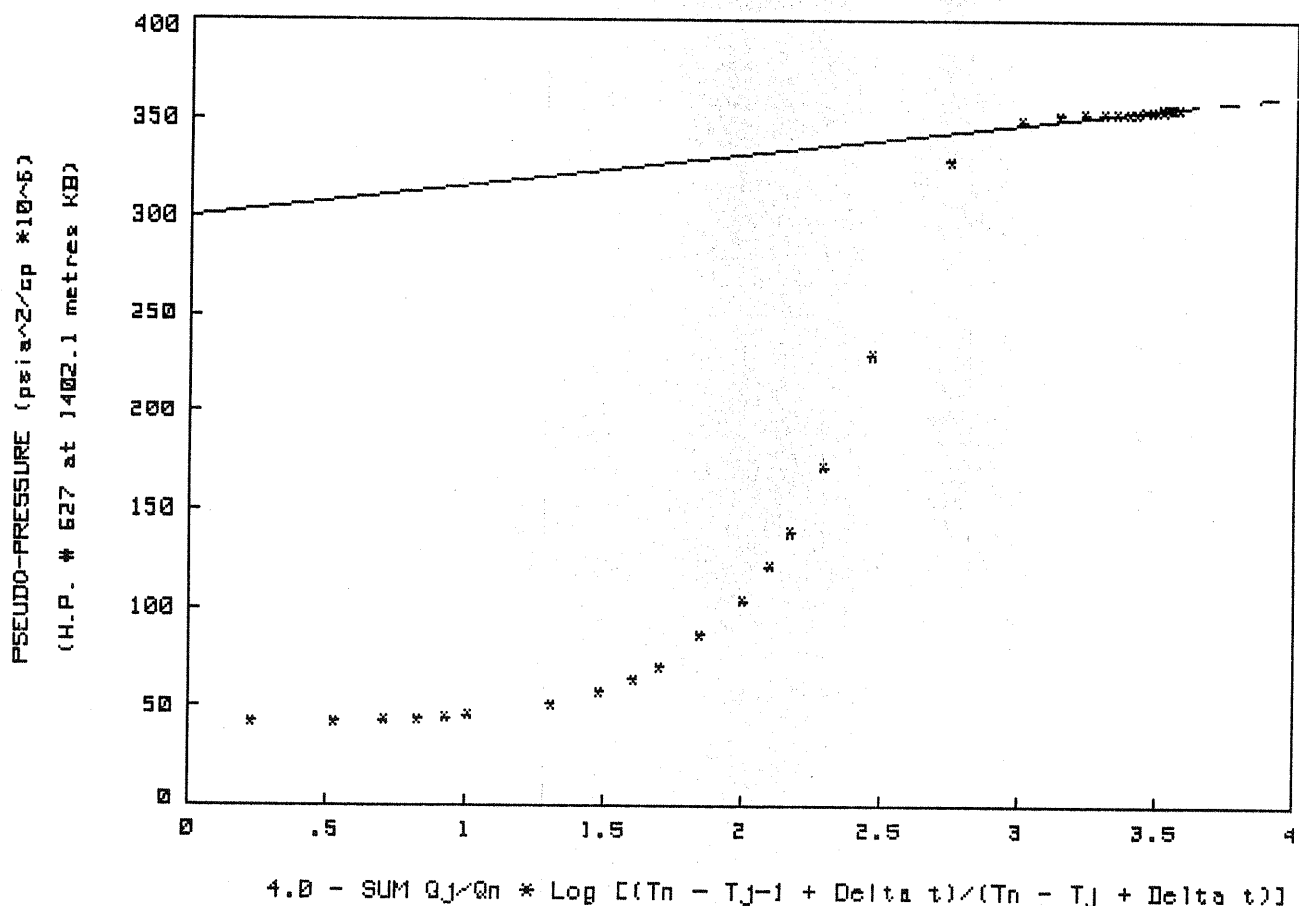
DATA FILES USED: B4EM10, GPVEMS



EAST MEREENIE 10 - AUGUST '84 TEST - THIRD BUILDUP

FORMATION TEMPERATURE:	59.6	°C
FORMATION VOLUME FACTOR @ 2113.2 psia:	1.109	RB/MSCF
GAS VISCOSITY @ 2113.2 psia:	.0189	cp
NET PAY THICKNESS:	4.6	metres (15.1 feet)
POROSITY:	5.6	%
GAS COMPRESSIBILITY @ 2113.2 psia:	.0004976	/psi
FORMATION WATER COMPRESSIBILITY:	.0000030	/psi
ROCK COMPRESSIBILITY:	.0000050	/psi
WATER SATURATION:	18.1	%
TOTAL COMPRESSIBILITY:	.0004131	/psi
WELLBORE RADIUS:	20.3	cm
FLOW CAPACITY:	47.7	md-ft
PSEUDO-PRESSURE Mp 1hr:	343.2	*10 ⁶ psia ² /cp
PSEUDO-PRESSURE, INFINITE SHUT IN:	362.8	*10 ⁶ psia ² /cp
PRESSURE AT INFINITE SHUT IN TIME:	2113.2	psia at 1402.1 m KB
AVERAGE PERMEABILITY:	3.2	md
SKIN FACTOR (TOTAL):	17.57	
DELTA P SKIN:	1162	psi
RADIUS OF INVESTIGATION:	309	metres
POINTS REGRESSED:	29 TO 32	
GRADIENT:	15.63	*10 ⁶ psi ² /cp/cycle
COEFFICIENT OF DETERMINATION:	1.000	

DATA FILES USED: B4EM10, GPVEMS



EAST MEREENIE 10 - AUGUST '84 TEST - FOURTH BUILDUP

TIME CODE	FLOW TIME (h)	FLOW RATES (MCF/D)
11160000	.0000	0
14090030	65.0083	810
17072816	135.4711	0
17170000	145.0000	440
18090000	161.0000	0
18170000	169.0000	760
19090000	185.0000	0
21090040	233.0111	770

PT	TIME CODE	SHUT-IN TIME (h)	SHUT-IN PRESSURES (psia)
			H.P. # 627
	21090040	.0000	509.17
1:	21090100	.0056	514.79
2:	21090110	.0083	523.09
3:	21090130	.0139	540.35
4:	21090140	.0167	549.06
5:	21090200	.0222	566.60
6:	21090300	.0389	619.59
7:	21090400	.0556	672.24
8:	21090500	.0722	724.10
9:	21090700	.1056	825.77
10:	21091100	.1722	1014.27
11:	21091500	.2389	1181.75
12:	21092000	.3222	1363.98
13:	21093000	.4889	1644.54
14:	21094000	.6556	1834.38
15:	21095000	.8222	1948.79
16:	21100000	.9889	2009.82
17:	21103000	1.4889	2055.73
18:	21110000	1.9889	2058.06
19:	21120000	2.9889	2065.62
20:	22000000	14.9889	2076.21
21:	22060000	20.9889	2080.66
22:	22120000	26.9889	2084.44
23:	22180000	32.9889	2086.35
24:	23000000	38.9889	2086.55
25:	23060000	44.9889	2090.80
26:	23120000	50.9889	2094.71
27:	23180000	56.9889	2096.15
28:	24000000	62.9889	2096.80
29:	24060000	68.9889	2098.97
30:	24090000	71.9889	2100.71

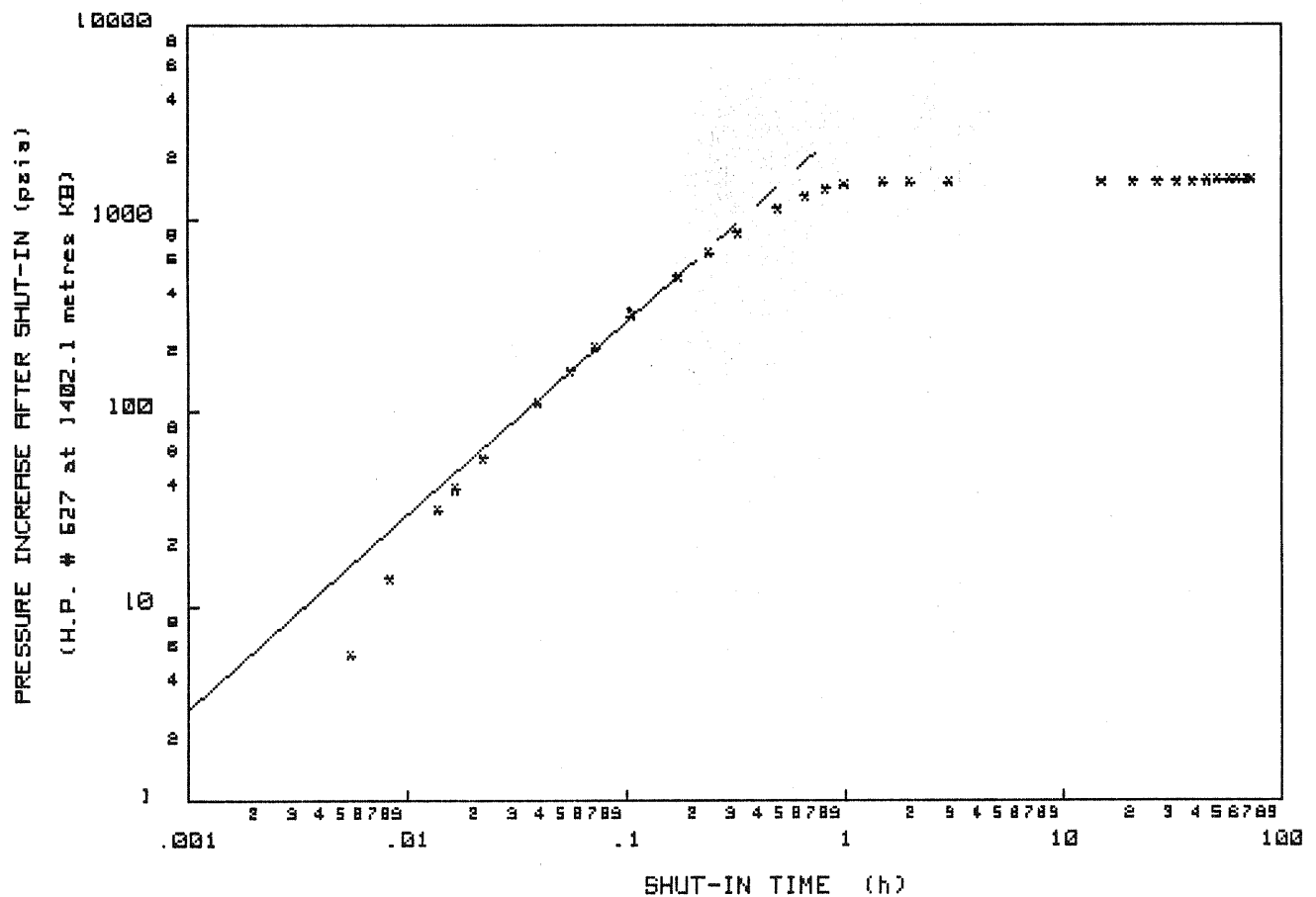
DATA FILE : B5EM10

EAST MEREEENIE 10 - AUGUST '84 TEST - FOURTH BUILDUP

LOG-LOG INTERPRETATION

FORMATION TEMPERATURE:	59.6	°C
FORMATION VOLUME FACTOR @ 2117.7 psia:	1.106	RB/MSCF
MATCH POINT BUILDUP:	505.7	psi
MATCH POINT TIME	.172	hours
APPARENT STORAGE COEFFICIENT:	.013	RB/psi
ESTIMATED END OF STORAGE EFFECTS:	7.6	hours
POINTS REGRESSED:	6 TO 10	
GRADIENT:	1.000	

DATA FILES USED: B5EM10, GPVEMS



EAST MEREENIE 10 - AUGUST '84 TEST - FOURTH BUILDUP

FORMATION TEMPERATURE:	59.6	°C
FORMATION VOLUME FACTOR @ 2117.7 psia:	1.106	RB/MSCF
GAS VISCOSITY @ 2117.7 psia:	.0189	cp
NET PAY THICKNESS:	4.6	metres (15.1 feet)
POROSITY:	5.6	%
GAS COMPRESSIBILITY @ 2117.7 psia:	.0004958	/psi
FORMATION WATER COMPRESSIBILITY:	.0000030	/psi
ROCK COMPRESSIBILITY:	.0000050	/psi
WATER SATURATION:	18.1	%
TOTAL COMPRESSIBILITY:	.0004116	/psi
WELLBORE RADIUS:	20.3	cm
FLOW CAPACITY:	48.7	md-ft
PSEUDO-PRESSURE Mp 1hr:	334.5	*10 ⁶ psia ² /cp
PSEUDO-PRESSURE, INFINITE SHUT IN:	364.2	*10 ⁶ psia ² /cp
PRESSURE AT INFINITE SHUT IN TIME:	2117.7	psia at 1402.1 m KB
AVERAGE PERMEABILITY:	3.2	md
SKIN FACTOR (TOTAL):	18.34	
DELTA P SKIN:	1287	psi
RADIUS OF INVESTIGATION:	367	metres
POINTS REGRESSED:	20 TO 30	
GRADIENT:	15.52	*10 ⁶ psi ² /cp/cycle
COEFFICIENT OF DETERMINATION:	.953	

DATA FILES USED: B5EM10, GPVEMS

