

N.E.B. COPY

MICROFILMED
SUR MICROFILM:

Company: PARAMOUNT RESOURCES LTD.
Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65
Date of test: 1999 02 02 - 02 14
Test by TRI-ALTA BEWS SERVICES
Interp. by Cal-Scan Services Ltd.

TRI-ALTA BEWS SERVICES

SUMMARY

Company: PARAMOUNT RESOURCES LTD.
Date of test: 1999 02 02 - 02 14

Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65

FEB 02-21:20
FEB 14-14:52

ON BOTTOM
OFF BOTTOM

Remarks:

Top recorder stopped early.
Top recorder was stair stepping during test.

Interpretation by CAL-SCAN SERVICES LTD.

TRI-ALTA BEWS SERVICES

Subsurface Pressure Measurements

Company: PARAMOUNT RESOURCES LTD.
Address: CALGARY, ALBERTA
Field & Pool: ARROWHEAD
Type of test: BUILD UP
Prod. Int CF: 2572.7 to 2594.7
Elev. (CF) 568.3 (KB) 574.6
Pool datum:

Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65
Status: GAS
Date of test: 1999 02 02 - 02 14
Prod. through: 88.9MM
Mid-point prod.int. CF: 2583.7
Datum depth of well CF:

Tubing pres:
Casing pres:
Temperature at run depth: 158.0 C

Shut in time:
On/off btm: 02 02-2120:00-02 14-1452:0
Surface temperature:

Note: All units in metric, depth in meters cf; pressure in KPAG

TOP RECORDER

Element serial#: 22437
Pressure Range: 0 to 37577
Cal. equation: 738.6 * DEFL -3.2
Latest calibration: 10-22-98
Clock range: 360 HOUR
Run depth (CF): 2553.2

BOTTOM RECORDER

Element serial#: 22436
Pressure range: 0 to 37750
Cal. equation: 741.5 * DEFL +15.5
Latest calibration: 10-22-98
Clock range: 360 HOUR
Run depth (CF): 2555

TOP RECORDER

BOTTOM RECORDER

COMMENT REAL TIME	DELTA TIME HOURS	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT
FEB 02-21:20	0.00	8.690	6429.4		8.600	6410.3	
ON BOTTOM	0.25	9.120	6747.6		9.215	6868.7	
21:50	0.50	9.390	6947.0		9.490	7072.4	
22:05	0.75	9.640	7131.0		9.705	7231.5	
22:20	1.00	9.900	7322.3		9.840	7331.5	
22:35	1.25	10.125	7487.9		10.085	7512.8	
22:50	1.50	10.400	7690.2		10.315	7683.0	
23:05	1.75	10.700	7911.0		10.600	7893.9	
23:20	2.00	11.000	8131.7		10.885	8104.9	
23:35	2.25	11.300	8352.5		11.150	8301.0	
23:50	2.50	11.575	8554.8		11.400	8486.0	
00:05	2.75	11.845	8753.5		11.740	8737.7	
00:20	3.00	12.125	8959.6		12.020	8944.9	
00:35	3.25	12.410	9169.3		12.305	9155.8	
00:50	3.50	12.715	9393.7		12.590	9366.7	
01:05	3.75	13.000	9603.4		12.885	9585.1	
01:20	4.00	13.330	9846.2		13.215	9829.3	
01:35	4.25	13.565	10019.2		13.445	9999.5	
01:50	4.50	13.850	10228.9		13.700	10188.3	
02:05	4.75	14.135	10438.6		13.960	10380.7	
02:20	5.00	14.425	10652.0		14.260	10602.7	
02:35	5.25	14.655	10821.2		14.470	10758.1	

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Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65

TOP RECORDER
Element serial#: 22437
Run Depth (CF): 2553.2

BOTTOM RECORDER
Element serial#: 22436
Run depth (CF): 2555

COMMENT REAL TIME	DELTA TIME HOURS	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT
02:50	5.50	14.900	11001.5		14.770	10980.2	
03:05	5.75	15.220	11237.0		15.020	11165.2	
03:20	6.00	15.405	11373.1		15.230	11320.6	
03:35	6.25	15.660	11560.7		15.510	11527.8	
03:50	6.50	15.950	11774.1		15.820	11757.3	
04:05	6.75	16.235	11983.9		16.080	11949.7	
04:20	7.00	16.500	12178.9		16.305	12116.2	
04:35	7.25	16.700	12326.0		16.520	12275.3	
04:50	7.50	17.000	12546.8		16.820	12497.4	
05:05	7.75	17.160	12664.5		17.010	12638.0	
05:20	8.00	17.400	12841.1		17.235	12804.5	
05:35	8.25	17.585	12977.2		17.460	12971.0	
05:50	8.50	17.850	13172.2		17.670	13126.5	
06:05	8.75	18.055	13323.1		17.870	13274.5	
06:20	9.00	18.265	13477.6		18.120	13459.5	
06:35	9.25	18.480	13635.8		18.300	13592.7	
06:50	9.50	18.705	13801.4		18.540	13770.4	
07:05	9.75	18.900	13945.3		18.715	13899.9	
07:20	10.00	19.070	14070.7		18.915	14047.8	
07:35	10.25	19.325	14258.9		19.120	14199.5	
07:50	10.50	19.500	14388.0		19.370	14384.5	
08:05	10.75	19.705	14539.3		19.500	14480.7	
08:20	11.00	19.740	14565.1		19.695	14625.0	
08:35	11.25	20.025	14775.4		19.905	14780.4	
08:50	11.50	20.220	14919.3		20.100	14924.7	
09:05	11.75	20.415	15063.2		20.275	15054.2	
09:20	12.00	20.520	15140.7		20.460	15191.1	
09:35	12.25	20.800	15347.3		20.650	15331.6	
09:50	12.50	21.200	15642.4		21.010	15598.0	
10:05	12.75	21.400	15790.0		21.300	15812.6	
10:20	13.00	21.650	15974.5		21.510	15968.0	
10:35	13.25	21.885	16147.9		21.780	16167.8	
10:50	13.50	22.100	16306.5		21.960	16301.0	
11:05	13.75	22.300	16454.1		22.205	16482.3	
11:20	14.00	22.450	16564.8		22.365	16600.6	
11:35	14.25	22.700	16749.3		22.530	16722.7	
11:50	14.50	22.730	16771.4		22.595	16770.8	
12:05	14.75	22.415	16539.0		22.340	16582.1	
12:20	15.00	22.405	16531.6		22.300	16552.6	
12:35	15.25	22.335	16479.9		22.175	16460.1	
12:50	15.50	22.410	16535.3		22.300	16552.6	
13:05	15.75	22.600	16675.5		22.450	16663.5	
13:20	16.00	22.700	16749.3		22.585	16763.4	
13:35	16.25	22.900	16896.8		22.745	16881.8	
13:50	16.50	23.100	17044.4		22.925	17015.0	
14:05	16.75	23.280	17177.2		23.130	17166.7	

TRI-ALTA BEWS SERVICES

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Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65

TOP RECORDER
Element serial#: 22437
Run Depth (CF): 2553.2

BOTTOM RECORDER
Element serial#: 22436
Run depth (CF): 2555

COMMENT REAL TIME	DELTA TIME HOURS	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT
14:20	17.00	23.420	17280.5		23.240	17248.1	
14:35	17.25	23.600	17413.4		23.445	17399.8	
14:50	17.50	23.755	17527.7		23.570	17492.3	
15:05	17.75	23.885	17623.7		23.710	17595.9	
15:20	18.00	24.005	17712.2		23.810	17669.9	
15:35	18.25	24.090	17774.9		23.870	17714.3	
15:50	18.50	24.130	17804.4		23.925	17755.0	
16:05	18.75	24.175	17837.6		23.985	17799.4	
16:20	19.00	24.200	17856.1		23.990	17803.1	
16:35	19.25	24.230	17878.2		23.990	17803.1	
16:50	19.50	24.255	17896.7		24.050	17847.5	
17:05	19.75	24.300	17929.9		24.170	17936.2	
17:20	20.00	24.360	17974.1		24.260	18002.8	
17:35	20.25	24.420	18018.4		24.320	18047.2	
17:50	20.50	24.460	18047.9		24.380	18091.6	
18:05	20.75	24.520	18092.2		24.465	18154.5	
18:20	21.00	24.630	18173.4		24.580	18239.6	
18:35	21.25	24.680	18210.3		24.690	18321.0	
18:50	21.50	24.795	18295.1		24.795	18398.7	
19:05	21.75	24.850	18335.7		24.885	18465.3	
19:20	22.00	24.910	18380.0		24.965	18524.5	
19:35	22.25	25.020	18461.2		25.050	18587.4	
19:50	22.50	25.085	18509.1		25.125	18642.9	
20:05	22.75	25.240	18623.5		25.210	18705.8	
20:20	23.00	25.340	18697.3		25.305	18776.1	
20:35	23.25	25.405	18745.2		25.375	18827.9	
20:50	23.50	25.405	18745.2		25.385	18835.3	
21:05	23.75	25.405	18745.2		25.385	18835.3	
21:20	24.00	25.380	18726.8		25.200	18698.4	
21:35	24.25	25.380	18726.8		25.200	18698.4	
21:50	24.50	25.390	18734.2		25.260	18742.8	
22:05	24.75	25.390	18734.2		25.325	18790.9	
22:20	25.00	25.390	18734.2		25.400	18846.4	
22:35	25.25	25.390	18734.2		25.505	18924.1	
22:50	25.50	25.530	18837.5		25.580	18979.6	
23:05	25.75	25.600	18889.1		25.640	19024.0	
23:20	26.00	25.650	18926.0		25.755	19109.1	
23:35	26.25	25.760	19007.2		25.815	19153.5	
23:50	26.50	25.825	19055.2		25.865	19190.5	
00:05	26.75	25.900	19110.5		25.920	19231.2	
00:20	27.00	25.955	19151.1		25.975	19271.8	
00:35	27.25	25.965	19158.5		26.015	19301.4	
00:50	27.50	25.965	19158.5		26.050	19327.3	
01:05	27.75	26.115	19269.1		26.080	19349.5	
01:20	28.00	26.180	19317.1		26.120	19379.1	
01:35	28.25	26.180	19317.1		26.150	19401.3	

TRI-ALTA BEWS SERVICES

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Location: N-65

TOP RECORDER
Element serial#: 22437
Run Depth (CF): 2553.2

BOTTOM RECORDER
Element serial#: 22436
Run depth (CF): 2555

COMMENT REAL TIME	DELTA TIME HOURS	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT
01:50	28.50	26.190	19324.5		26.180	19423.5	
02:05	28.75	26.190	19324.5		26.115	19375.4	
02:20	29.00	26.190	19324.5		26.115	19375.4	
02:35	29.25	26.190	19324.5		26.115	19375.4	
02:50	29.50	26.190	19324.5		26.115	19375.4	
03:05	29.75	26.200	19331.9		26.140	19393.9	
03:20	30.00	26.200	19331.9		26.165	19412.4	
03:35	30.25	26.200	19331.9		26.205	19442.0	
03:50	30.50	26.260	19376.1		26.280	19497.5	
04:05	30.75	26.320	19420.4		26.340	19541.9	
04:20	31.00	26.415	19490.5		26.405	19590.0	
04:35	31.25	26.470	19531.1		26.470	19638.1	
04:50	31.50	26.535	19579.0		26.525	19678.8	
05:05	31.75	26.580	19612.3		26.595	19730.6	
05:20	32.00	26.600	19627.0		26.660	19778.7	
05:35	32.25	26.665	19675.0		26.710	19815.7	
05:50	32.50	26.710	19708.2		26.735	19834.2	
06:05	32.75	26.760	19745.1		26.750	19845.3	
06:20	33.00	26.760	19745.1		26.780	19867.5	
06:35	33.25	26.775	19756.1		26.815	19893.4	
06:50	33.50	26.775	19756.1		26.840	19911.9	
07:05	33.75	26.840	19804.1		26.850	19919.3	
07:20	34.00	26.870	19826.2		26.870	19934.1	
07:35	34.25	26.880	19833.6		26.895	19952.6	
07:50	34.50	26.890	19841.0		26.855	19923.0	
08:05	34.75	26.890	19841.0		26.815	19893.4	
08:20	35.00	26.890	19841.0		26.830	19904.5	
08:35	35.25	26.905	19852.1		26.850	19919.3	
08:50	35.50	26.910	19855.8		26.870	19934.1	
09:05	35.75	26.920	19863.1		26.930	19978.5	
09:20	36.00	26.930	19870.5		26.995	20026.6	
09:50	36.50	27.025	19940.6		27.105	20108.0	
10:20	37.00	27.095	19992.3		27.170	20156.1	
10:50	37.50	27.135	20021.8		27.245	20211.6	
11:20	38.00	27.155	20036.5		27.315	20263.4	
11:50	38.50	27.225	20088.2		27.340	20281.9	
12:20	39.00	27.310	20150.9		27.350	20289.3	
12:50	39.50	27.335	20169.4		27.310	20259.7	
13:20	40.00	27.345	20176.7		27.360	20296.7	
13:50	40.50	27.355	20184.1		27.465	20374.4	
14:20	41.00	27.355	20184.1		27.540	20429.9	
14:50	41.50	27.560	20335.4		27.620	20489.1	
15:20	42.00	27.620	20379.7		27.705	20551.9	
15:50	42.50	27.635	20390.7		27.720	20563.0	
16:20	43.00	27.645	20398.1		27.730	20570.4	
16:50	43.50	27.655	20405.5		27.745	20581.5	

TRI-ALTA BEWS SERVICES

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Date of test: 1999 02 02 - 02 14

Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65

TOP RECORDER
Element serial#: 22437
Run Depth (CF): 2553.2

BOTTOM RECORDER
Element serial#: 22436
Run depth (CF): 2555

COMMENT REAL TIME	DELTA TIME HOURS	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT
17:20	44.00	27.655	20405.5		27.750	20585.2	
17:50	44.50	27.655	20405.5		27.775	20603.7	
18:20	45.00	27.660	20409.2		27.825	20640.7	
18:50	45.50	27.860	20556.7		27.885	20685.1	
19:20	46.00	27.885	20575.2		27.920	20711.1	
19:50	46.50	27.890	20578.9		27.960	20740.7	
20:20	47.00	27.890	20578.9		27.990	20763.0	
20:50	47.50	27.900	20586.3		28.015	20781.5	
21:20	48.00	27.900	20586.3		28.020	20785.2	
21:50	48.50	27.900	20586.3		28.060	20814.9	
22:20	49.00	28.045	20693.3		28.100	20844.5	
22:50	49.50	28.195	20804.3		28.155	20885.3	
23:20	50.00	28.200	20808.0		28.190	20911.2	
23:50	50.50	28.200	20808.0		28.210	20926.1	
00:20	51.00	28.215	20819.1		28.235	20944.6	
00:50	51.50	28.215	20819.1		28.235	20944.6	
01:20	52.00	28.215	20819.1		28.260	20963.1	
01:50	52.50	28.215	20819.1		28.315	21003.9	
02:20	53.00	28.375	20937.5		28.345	21026.1	
02:50	53.50	28.390	20948.6		28.390	21059.5	
03:20	54.00	28.400	20956.0		28.415	21078.0	
03:50	54.50	28.400	20956.0		28.420	21081.7	
04:20	55.00	28.410	20963.4		28.430	21089.1	
04:50	55.50	28.410	20963.4		28.460	21111.4	
05:20	56.00	28.420	20970.8		28.510	21148.5	
05:50	56.50	28.555	21070.7		28.555	21181.8	
06:20	57.00	28.560	21074.3		28.580	21200.3	
06:50	57.50	28.585	21092.8		28.590	21207.8	
07:20	58.00	28.585	21092.8		28.600	21215.2	
07:50	58.50	28.595	21100.2		28.600	21215.2	
08:20	59.00	28.595	21100.2		28.635	21241.1	
08:50	59.50	28.695	21174.2		28.675	21270.8	
09:20	60.00	28.785	21240.8		28.715	21300.4	
09:50	60.50	28.785	21240.8		28.750	21326.4	
10:20	61.00	28.795	21248.2		28.780	21348.6	
10:50	61.50	28.795	21248.2		28.810	21370.8	
11:20	62.00	28.795	21248.2		28.835	21389.4	
11:50	62.50	28.805	21255.6		28.860	21407.9	
12:20	63.00	28.805	21255.6		28.890	21430.1	
12:50	63.50	28.870	21303.7		28.915	21448.7	
13:20	64.00	28.950	21362.9		28.935	21463.5	
13:50	64.50	28.975	21381.4		28.950	21474.6	
14:20	65.00	28.975	21381.4		28.980	21496.9	
14:50	65.50	28.980	21385.1		29.010	21519.1	
15:20	66.00	28.980	21385.1		29.035	21537.6	
15:50	66.50	28.980	21385.1		29.050	21548.8	

TRI-ALTA BEWS SERVICES

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TOP RECORDER
Element serial#: 22437
Run Depth (CF): 2553.2

BOTTOM RECORDER
Element serial#: 22436
Run depth (CF): 2555

COMMENT REAL TIME	DELTA TIME HOURS	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT
16:20	67.00	28.980	21385.1		29.070	21563.6	
16:50	67.50	28.990	21392.5		29.090	21578.4	
17:20	68.00	28.990	21392.5		29.110	21593.2	
17:50	68.50	28.990	21392.5		29.120	21600.6	
18:20	69.00	28.990	21392.5		29.165	21634.0	
18:50	69.50	29.140	21503.5		29.180	21645.1	
19:20	70.00	29.200	21547.9		29.215	21671.1	
19:50	70.50	29.220	21562.7		29.235	21685.9	
20:20	71.00	29.230	21570.1		29.250	21697.0	
20:50	71.50	29.230	21570.1		29.275	21715.5	
21:20	72.00	29.240	21577.5		29.280	21719.3	
22:20	73.00	29.250	21584.9		29.345	21767.4	
23:20	74.00	29.250	21584.9		29.360	21778.6	
00:20	75.00	29.460	21740.3		29.380	21793.4	
01:20	76.00	29.470	21747.7		29.410	21815.6	
02:20	77.00	29.485	21758.8		29.455	21849.0	
03:20	78.00	29.485	21758.8		29.490	21874.9	
04:20	79.00	29.485	21758.8		29.520	21897.2	
05:20	80.00	29.490	21762.5		29.570	21934.2	
06:20	81.00	29.580	21829.1		29.595	21952.8	
07:20	82.00	29.700	21917.9		29.620	21971.3	
08:20	83.00	29.700	21917.9		29.650	21993.5	
09:20	84.00	29.720	21932.7		29.690	22023.2	
10:20	85.00	29.720	21932.7		29.720	22045.4	
11:20	86.00	29.730	21940.1		29.760	22075.1	
12:20	87.00	29.765	21966.0		29.805	22108.4	
13:20	88.00	29.860	22036.3		29.835	22130.7	
14:20	89.00	29.875	22047.4		29.865	22152.9	
15:20	90.00	29.880	22051.1		29.895	22175.1	
16:20	91.00	29.880	22051.1		29.925	22197.4	
17:20	92.00	29.880	22051.1		29.945	22212.2	
18:20	93.00	29.890	22058.5		29.985	22241.9	
19:20	94.00	29.915	22077.0		30.010	22260.4	
20:20	95.00	30.100	22213.9		30.030	22275.2	
21:20	96.00	30.135	22239.8		30.065	22301.2	
22:20	97.00	30.135	22239.8		30.080	22312.3	
23:20	98.00	30.135	22239.8		30.095	22323.4	
00:20	99.00	30.155	22254.6		30.120	22341.9	
01:20	100.00	30.155	22254.6		30.165	22375.3	
02:20	101.00	30.155	22254.6		30.190	22393.8	
03:20	102.00	30.155	22254.6		30.220	22416.1	
04:20	103.00	30.165	22262.0		30.245	22434.6	
05:20	104.00	30.175	22269.4		30.260	22445.7	
06:20	105.00	30.345	22395.2		30.290	22468.0	
07:20	106.00	30.370	22413.7		30.320	22490.2	
08:20	107.00	30.380	22421.0		30.340	22505.0	

TRI-ALTA BEWS SERVICES

Company: PARAMOUNT RESOURCES LTD.
Date of test: 1999 02 02 - 02 14

Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65

TOP RECORDER
Element serial#: 22437
Run Depth (CF): 2553.2

BOTTOM RECORDER
Element serial#: 22436
Run depth (CF): 2555

COMMENT REAL TIME	DELTA TIME HOURS	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT
09:20	108.00	30.380	22421.0		30.350	22512.4	
10:20	109.00	30.380	22421.0		30.380	22534.7	
11:20	110.00	30.380	22421.0		30.415	22560.6	
12:20	111.00	30.380	22421.0		30.430	22571.7	
13:20	112.00	30.380	22421.0		30.450	22586.6	
14:20	113.00	30.380	22421.0		30.475	22605.1	
15:20	114.00	30.395	22432.1		30.490	22616.2	
16:20	115.00	30.395	22432.1		30.510	22631.0	
17:20	116.00	30.395	22432.1		30.525	22642.2	
18:20	117.00	30.560	22554.2		30.540	22653.3	
19:20	118.00	30.640	22613.4		30.560	22668.1	
20:20	119.00	30.640	22613.4		30.570	22675.5	
21:20	120.00	30.640	22613.4		30.590	22690.3	
23:20	122.00	30.640	22613.4		30.620	22712.6	
01:20	124.00	30.640	22613.4		30.650	22734.8	
03:20	126.00	30.655	22624.5		30.680	22757.1	
05:20	128.00	30.655	22624.5		30.700	22771.9	
07:20	130.00	30.665	22631.9		30.730	22794.1	
09:20	132.00	30.665	22631.9		30.760	22816.4	
11:20	134.00	30.995	22876.1		30.790	22838.6	
13:20	136.00	31.000	22879.8		30.810	22853.4	
15:20	138.00	31.010	22887.2		30.830	22868.3	
17:20	140.00	31.010	22887.2		30.850	22883.1	
19:20	142.00	31.010	22887.2		30.870	22897.9	
21:20	144.00	31.030	22902.0		30.900	22920.2	
23:20	146.00	31.050	22916.8		30.930	22942.4	
01:20	148.00	31.050	22916.8		30.960	22964.6	
03:20	150.00	31.095	22950.1		30.985	22983.2	
05:20	152.00	31.095	22950.1		31.000	22994.3	
07:20	154.00	31.095	22950.1		31.020	23009.1	
09:20	156.00	31.110	22961.2		31.040	23023.9	
11:20	158.00	31.135	22979.7		31.060	23038.8	
13:20	160.00	31.160	22998.2		31.080	23053.6	
15:20	162.00	31.160	22998.2		31.100	23068.4	
17:20	164.00	31.160	22998.2		31.130	23090.6	
19:20	166.00	31.190	23020.4		31.140	23098.1	
21:20	168.00	31.200	23027.8		31.160	23112.9	
23:20	170.00	31.210	23035.2		31.170	23120.3	
01:20	172.00	31.255	23068.5		31.180	23127.7	
05:20	176.00	31.265	23075.9		31.215	23153.7	
09:20	180.00	31.265	23075.9		31.230	23164.8	
13:20	184.00	31.275	23083.3		31.250	23179.6	
17:20	188.00	31.275	23083.3		31.280	23201.8	
21:20	192.00	31.280	23087.0		31.300	23216.7	
01:20	196.00	31.280	23087.0		31.320	23231.5	
05:20	200.00	31.280	23087.0		31.340	23246.3	

TRI-ALTA BEWS SERVICES

Company: PARAMOUNT RESOURCES LTD.
Date of test: 1999 02 02 - 02 14

Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65

TOP RECORDER
Element serial#: 22437
Run Depth (CF): 2553.2

BOTTOM RECORDER
Element serial#: 22436
Run depth (CF): 2555

COMMENT REAL TIME	DELTA TIME HOURS	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT	DEFL mm	PRESSURE RUNDEPTH	PRESSURE MIDPNT
09:20	204.00	31.280	23087.0		31.365	23264.9	
13:20	208.00	31.280	23087.0		31.380	23276.0	
17:20	212.00	31.335	23127.7		31.405	23294.5	
21:20	216.00	31.335	23127.7		31.420	23305.6	
01:20	220.00	31.340	23131.4		31.435	23316.7	
05:20	224.00	0.000	0.0		31.450	23327.9	
09:20	228.00	0.000	0.0		31.470	23342.7	
13:20	232.00	0.000	0.0		31.480	23350.1	
17:20	236.00	0.000	0.0		31.490	23357.5	
21:20	240.00	0.000	0.0		31.510	23372.3	
01:20	244.00	0.000	0.0		31.530	23387.2	
05:20	248.00	0.000	0.0		31.540	23394.6	
09:20	252.00	0.000	0.0		31.550	23402.0	
13:20	256.00	0.000	0.0		31.560	23409.4	
17:20	260.00	0.000	0.0		31.570	23416.8	
21:20	264.00	0.000	0.0		31.580	23424.2	
01:20	268.00	0.000	0.0		31.590	23431.6	
05:20	272.00	0.000	0.0		31.600	23439.1	
09:20	276.00	0.000	0.0		31.610	23446.5	
13:20	280.00	0.000	0.0		31.620	23453.9	
FEB 14-14:52	281.54	0.000	0.0		31.630	23461.3	
OFF BOTTOM	0.00	0.000	0.0		31.630	23461.3	

Remarks:

Top recorder stopped early.

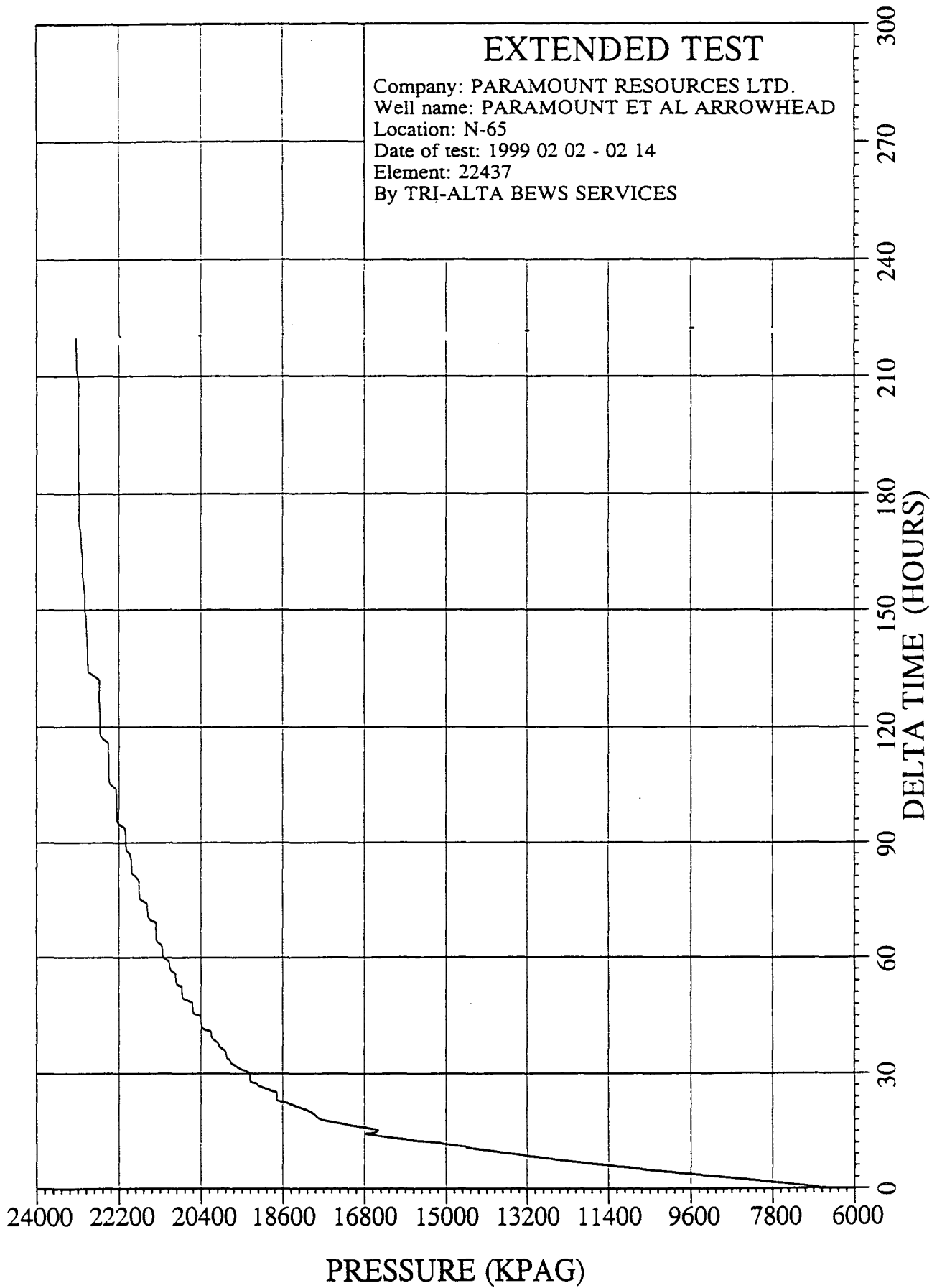
Top recorder was stair stepping during test.

Test by:

Interpretation by CAL-SCAN SERVICES LTD.

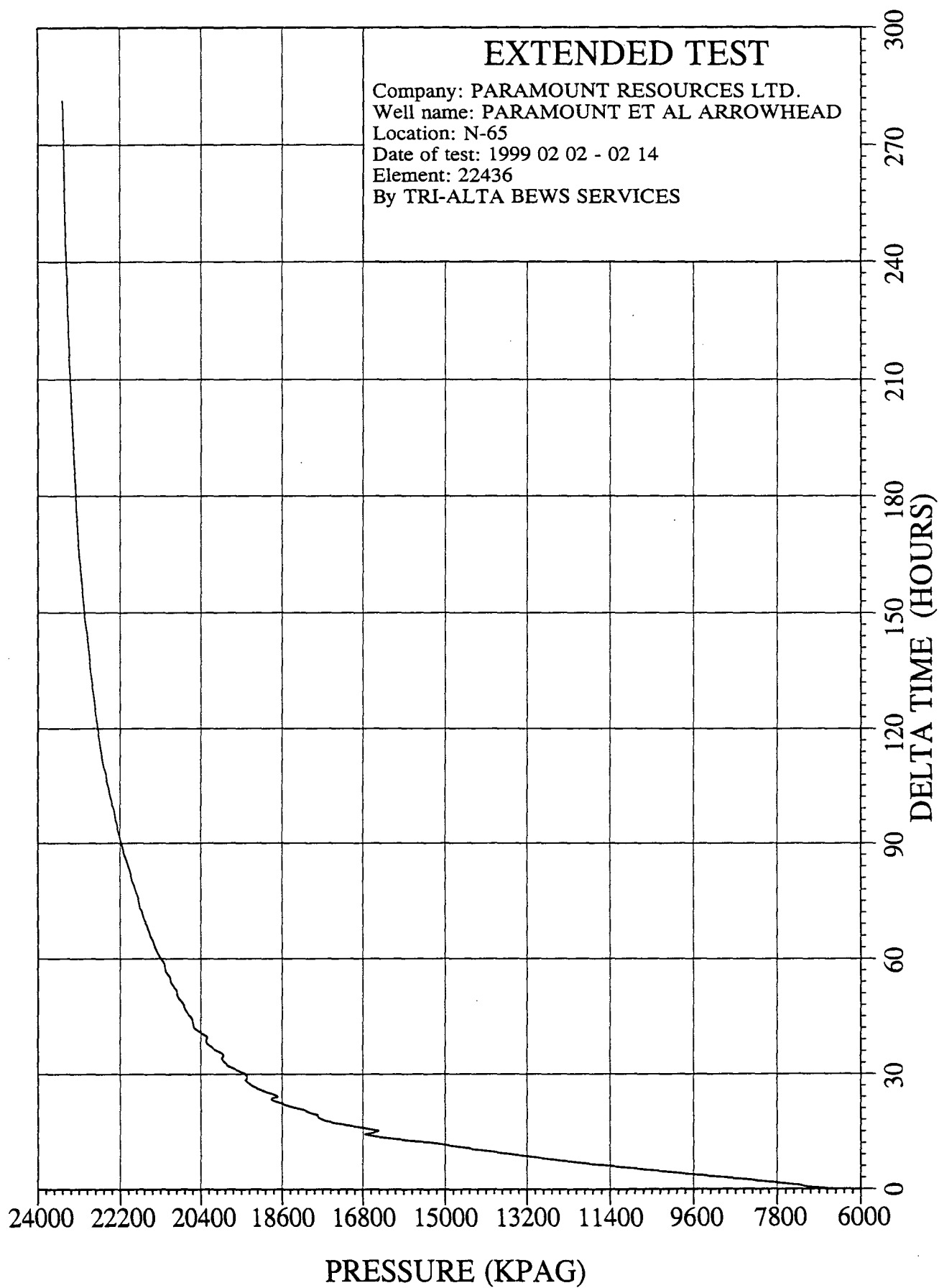
EXTENDED TEST

Company: PARAMOUNT RESOURCES LTD.
Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65
Date of test: 1999 02 02 - 02 14
Element: 22437
By TRI-ALTA BEWS SERVICES



EXTENDED TEST

Company: PARAMOUNT RESOURCES LTD.
Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65
Date of test: 1999 02 02 - 02 14
Element: 22436
By TRI-ALTA BEWS SERVICES



TRI-ALTA BEWS SERVICES

Subsurface Pressure Measurements

Company: PARAMOUNT RESOURCES LTD.
Address: CALGARY, ALBERTA
Field & Pool: ARROWHEAD
Type of test: STATIC GRADIENT
Prod. Int CF: 2572.7 to 2594.7
Elev. (CF) 568.3 (KB) 574.6
Pool datum:

Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65
Status: GAS
Date of test: 1999 02 14
Prod. through: 88.9MM
Mid-point prod.int. CF: 2583.7
Datum depth of well CF:

Tubing pres: 17630
Casing pres: 15620
Temperature at run depth: 158.0 C

Shut in time:
On bottom/off bottom: 1835:00-1841:00
Surface temperature:

Note: All units in metric, depth in meters cf; pressure in KPAG

TOP RECORDER

Element serial#: 22437
Pressure Range: 0 to 37577
Cal. equation: 738.6 * DEFL -3.2
Latest calibration: 10-22-98
Clock range: 3 HOUR

Run depth (CF): 2553.2
Grad. at run depth: 8.139
Pres. at run depth: 23442.2
Pres. at mid point perf.: 23690.4
Pres. at datum depth:

Depth m	Defl mm	Pressure KPAG	Gradient KPAG/m
-1.8	23.635	17439.2	
-1.8	23.320	17206.7	
498.2	25.150	18557.1	2.701
998.2	26.580	19612.3	2.110
1498.2	27.840	20542.0	1.859
1998.2	29.040	21429.5	1.775
2493.2	31.090	22946.4	3.064
2523.2	31.430	23198.0	8.386
2553.2	31.760	23442.2	8.139

Fluid level at 2396.7 mcf

Remarks:

BOTTOM RECORDER

Element serial#: 22436
Pressure range: 0 to 37750
Cal. equation: 741.5 * DEFL +15.5
Latest calibration: 10-22-98
Clock range: 3 HOUR

Run depth (CF): 2555
Grad. at run depth: 8.772
Pres. at run depth: 23513.2
Pres. at mid point perf.: 23764.9
Pres. at datum depth:

Depth m	Defl mm	Pressure KPAG	Gradient KPAG/m
0.0	23.510	17447.9	
0.0	23.340	17322.1	
500.0	25.000	18550.4	2.457
1000.0	26.430	19608.5	2.116
1500.0	27.690	20540.9	1.865
2000.0	28.895	21433.9	1.786
2495.0	30.990	22986.9	3.137
2525.0	31.345	23250.0	8.772
2555.0	31.700	23513.2	8.772

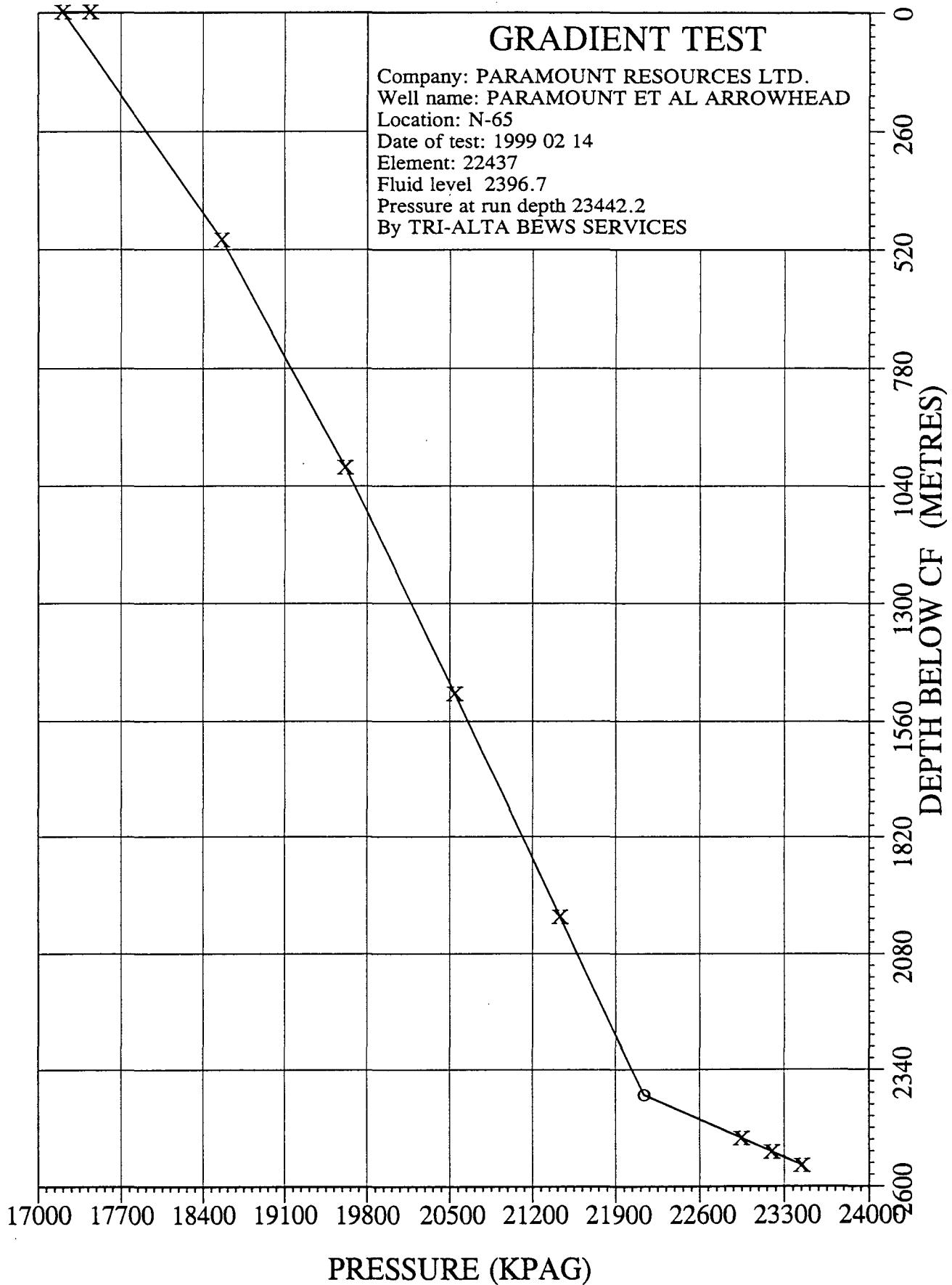
Fluid level at 2399.2 mcf

Test by:

Interpretation by CAL-SCAN SERVICES LTD.

GRADIENT TEST

Company: PARAMOUNT RESOURCES LTD.
Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65
Date of test: 1999 02 14
Element: 22437
Fluid level 2396.7
Pressure at run depth 23442.2
By TRI-ALTA BEWS SERVICES



GRADIENT TEST

Company: PARAMOUNT RESOURCES LTD.
Well name: PARAMOUNT ET AL ARROWHEAD
Location: N-65
Date of test: 1999 02 14
Element: 22436
Fluid level 2399.2
Pressure at run depth 23513.2
By TRI-ALTA BEWS SERVICES

