

1902

N.E.B. COPY

Box K9, 100

Para et al Ft. Liard N-01
N-01
Mattson Formation

Static Gradient Test
February 19, 2003



GENERAL INFORMATION

Client Information:

Company: Paramount Resources Ltd.

Contact: Wayne Tomm

Phone: 403-290-3600 Fax: e-mail:

Site Information:

Contact:

Phone: Fax: e-mail:

Well Information:

Name: Para et al Ft. Liard N-01

Operator: Paramount Resources Ltd.

Location-Downhole: N-01

Location-Surface: N-01

Test Information:

Company: OPSCO Energy Industries Ltd.

Representative: Lawrence Bews

Supervisor: Rick Kimmie

Test Type: Static Gradient Test Job Number:

Test Unit:

Start Date: 2003/02/19 Start Time: 15:24:00

End Date: 2003/02/19 End Time: 17:56:00

Report Date: 2003/02/25 Prepared By: Rick Doll

Remarks: Qualified By: Rick Doll

Perforated Intervals: Fantasque (1455.5-1469.0 mKB) MPP @ 1462.25 mKB
Mattson M2a (1644.0-1648.0 mKB) MPP @ 1646.0 mKB
Mattson M2b (1684.0-1689.0 mKB) MPP @ 1686.5 mKB
Mattson M3 (1731.5-1736.5, 1739.5-1750.0 mKB) MPP @ 1740.75 mKB
Mattson M5 (1778.0-1782.0, 1785.0-1787.5 mKB) MPP @ 1782.75 mKB

All pressures are Absolute

All depths are measured from KB

Paramount Resources Ltd.
N-01
Start Test Date: 2003/02/19
Final Test Date: 2003/02/19

Static Gradient N-01

Para et al Ft. Liard N-01
Formation: Mattson

Gauge 1

Gauge Serial Number	1190	Gauge Type	Strain
Gauge Manufacturer	Panther Corp.	Maximum Recorder Range	41369.00 kPa
Run Depth	1720.00 m	Date of Last Calibration	2003/01/27
Gauge Start Date	2003/02/19 15:20:00	Gauge Stop Date	2003/02/19 18:22:30
Date Gauge On Bottom	2003/02/19 17:41:00	Date Gauge Off Bottom	2003/02/19 17:56:00

Test Data

Test/Prod Interval Top KB (TVD)	1455.50 m	Base KB (TVD)	1787.50 m
Pool Datum Depth (SS)	m	Well Datum Depth	m
Tubing Pressure Initial	2271.00 kPa(a) Final		kPa(a)
Casing Pressure Initial	3678.00 kPa(a) Final		kPa(a)
Start Test Date	2003/02/19 15:24:00	Date Well Shut-In	

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
5.10	15:32:00		2233.73		2.61	
305.10	15:48:59	17.00	2293.41	0.199	25.77	0.077
605.10	16:02:50	13.84	2343.67	0.168	33.17	0.025
905.10	16:15:59	13.16	2393.61	0.166	37.45	0.014
1205.10	16:30:30	14.50	2444.59	0.170	39.28	0.006
1405.10	16:42:40	12.17	2479.41	0.174	38.76	
1469.00	16:59:29	16.83	2490.82	0.179	38.16	
1605.10	17:12:00	12.52	2515.12	0.179	57.39	0.141
1676.60	17:28:51	16.84	2526.73	0.162	61.78	0.061
1705.10	17:40:30	11.66	2567.56	1.432	63.27	0.052
1720.00	17:48:41	8.17	2593.76	1.758	63.43	0.011
1720.00	17:57:50	9.16	2582.30		63.41	

Results

Gradient 1	kPa/m	Liquid Interface 1	m	kPa(a)
Gradient 2	kPa/m	MPP	1621.50 m	kPa(a)

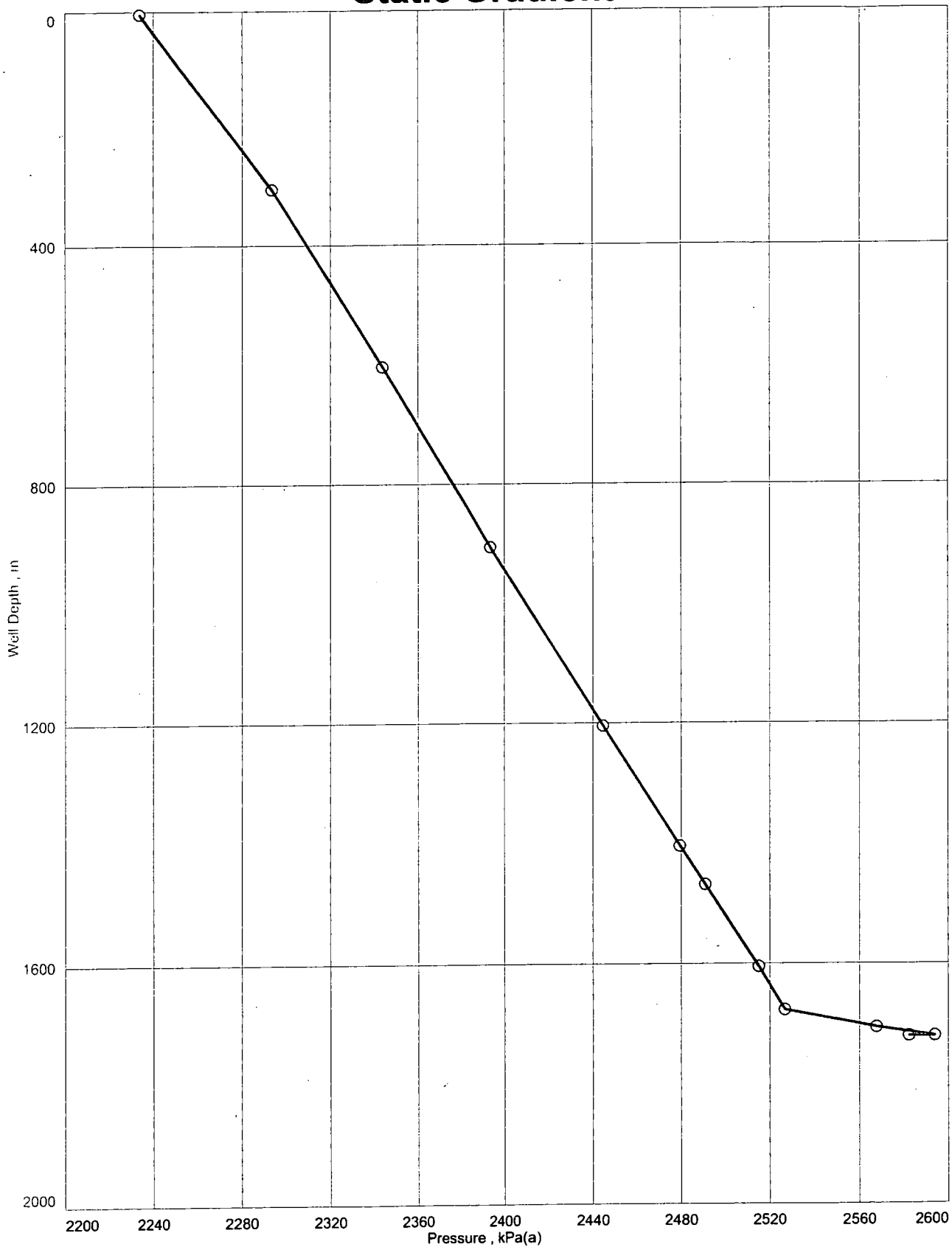
Remarks

MPP Pressures: Fantasque (1462.25 mKB) = 2489.6 kPaa.
Mattson M2a (1646.0 mKB) = 2521.8 kPaa.
Mattson M2b (1686.5 mKB) = 2540.9 kPaa.
Mattson M3 (1740.75 mKB) = 2630.2 kPaa.
Mattson M5 (1782.75 mKB) = 2704.1 kPaa.
Commingle MPP (1621.5 mKB) = 2517.8 kPaa.

Paramount Resources Ltd.
N-01
Start Test Date: 2003/02/19
Final Test Date: 2003/02/19

Para et al. Ft. Liard N-01
Formation: Mattson

Static Gradient



DPSON

Paramount Resources Ltd.

N-01

Start Test Date: 2003/02/19

Final Test Date: 2003/02/19

Recorder

Para et al Ft. Liard N-01

Formation: Mattson

Gauge 1

Gauge Serial Number	1190	Gauge Type	Strain
Gauge Manufacturer	Panther Corp.	Maximum Recorder Range	41369.00 kPa
Run Depth	1720.00 m	Date of Last Calibration	2003/01/27
Gauge Start Date	2003/02/19 15:20:00	Gauge Stop Date	2003/02/19 18:22:30
Date Gauge On Bottom	2003/02/19 17:41:00	Date Gauge Off Bottom	2003/02/19 17:56:00

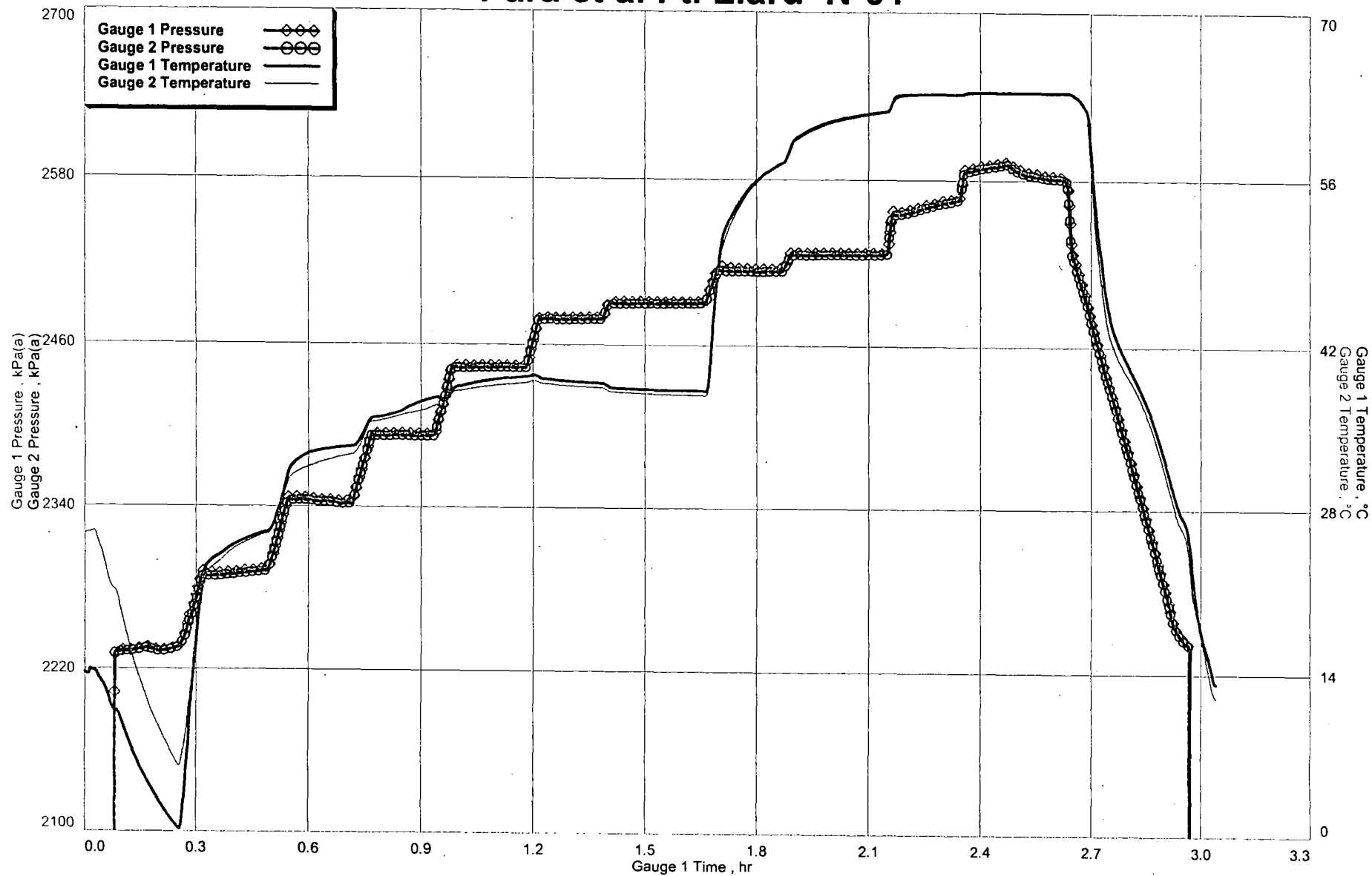
Gauge 2

Gauge Serial Number	1077	Gauge Type	Strain
Gauge Manufacturer	Panther Corp.	Maximum Recorder Range	41369.00 kPa
Run Depth	1719.00 m	Date of Last Calibration	2003/01/27
Gauge Start Date	2003/02/19 15:20:00	Gauge Stop Date	2003/02/19 18:22:30
Date Gauge On Bottom	2003/02/19 17:41:00	Date Gauge Off Bottom	2003/02/19 17:56:00

Paramount Resources Ltd.
N-01
Start Test Date: 2003/02/19
Final Test Date: 2003/02/19

Para et al Ft. Liard N-01
Formation: Mattson

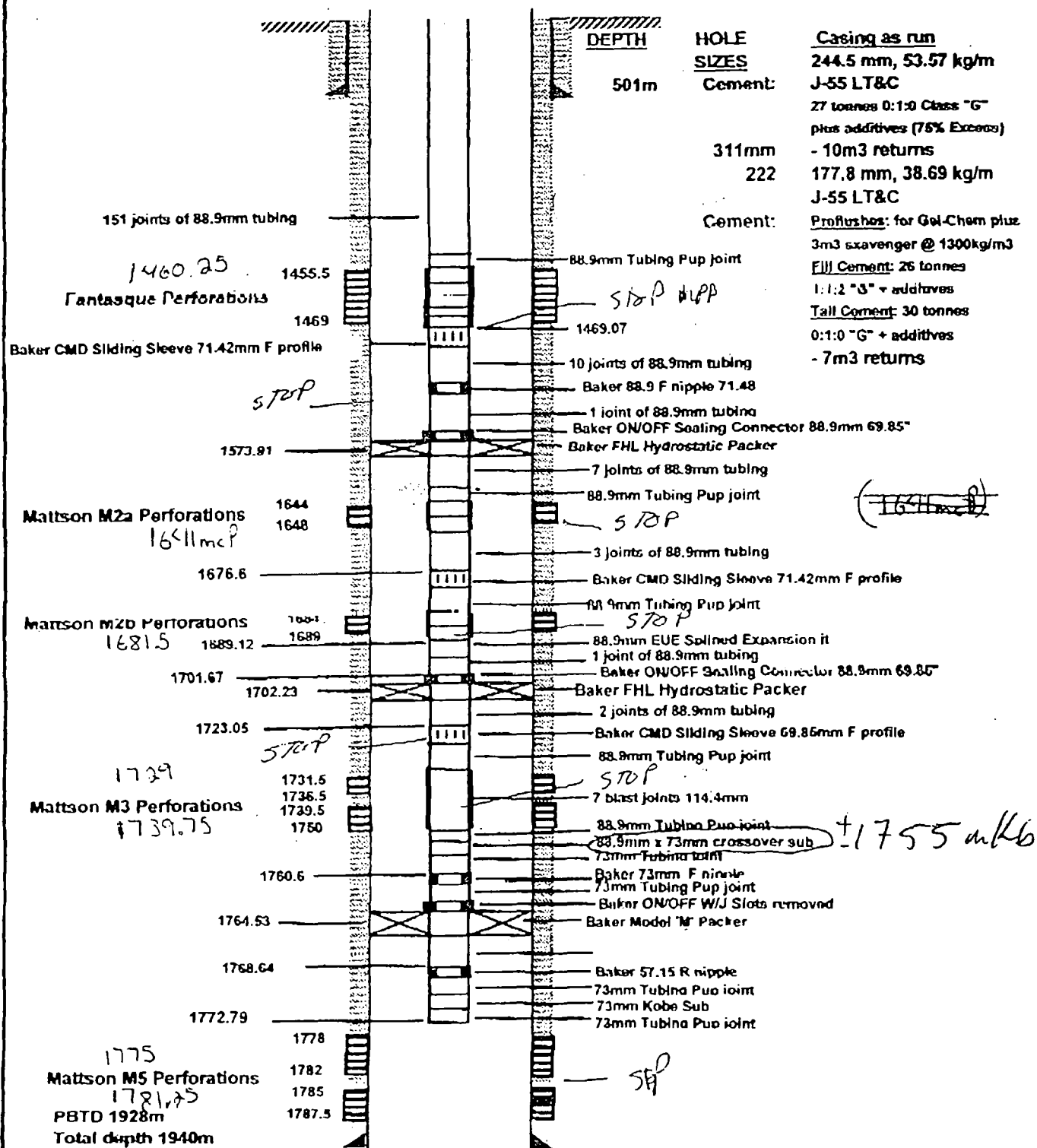
Para et al Ft. Liard N-01



PARA ET AL FORT LIARD N-01

60deg 10' N, 123deg 15' W

(as completed)



1780

Para et al Ft. Lard N-01.

Fantasque Perfs : 1455.5 - 1469.0 mKB
MPP @ 1462.25 mKB.

Mattson M2a Perfs : 1644.0 - 1648.0 mKB
MPP @ 1646.0 mKB.

Mattson M2b Perfs : 1684.0 - 1689.0 mKB
MPP @ 1686.5 mKB.

Mattson M3 Perfs : 1731.5 - 1736.5, 1739.5 - 1750.0 mKB
MPP @ 1740.75 mKB.

Mattson M5 Perfs : 1778.0 - 1782.0, 1785.0 - 1787.5 mKB.
MPP @ 1782.75 mKB.

Moose Mountain
Well Services
Ltd.



Subsurface Pressure Measurements

DIXON
WIRELINE SERVICES
Ltd.

1. Basic Data ☐ GRADIENT BEFORE ☐ FLOW BUILD-UP ☐ GRADIENT AFTER ☐ GRADIENT ONLY

Company <u>Paramant</u>	Well Name <u>Para et al Richard</u>
Address _____	Location <u>12:01 NW1</u>
Field <u>Richard</u> Pool <u>Mattson</u>	Status: Oil _____ Gas ☒ Other _____
Type of test <u>SC</u>	Production through tubing _____ Casing _____
Perf ☒ Open hole _____ Interval: (CF) _____ m	Mid Point of Producing Interval (CF) _____ m
_____ m	Datum Depth of Well (CF) _____ m
Elevation CF <u>482</u> GRD _____ KB <u>492.1</u> DFF <u>5.1</u> m TGB <u>283</u> mm to _____ CF CSG _____ mm. to _____ CF	

2. Recorder Data

PRIMARY REC.	SECONDARY REC.
Ser. No. <u>1190</u> Range <u>5K</u> KPa	Ser. No. <u>1077</u> Range <u>5K</u> KPa
Type: <u>Panther</u>	Type: <u>Panther</u>
COMMENTS: <u>Same as SCUT on 1520</u>	
<u>SC-NLB off 1632</u>	
<u>BHP -- 2512 Kpa</u>	
<u>BHT -- 63.4</u>	
<u>Fluid -</u>	

3. Test Data

DEAD WEIGHTS	Date of Test <u>Feb 19/03</u>
TBG Pressure: Time: _____ DWG <u>2178 Kpa</u>	Recorders on Bottom _____
CSG Pressure: Time: _____ DWG <u>3585 Kpa</u>	Recorders off Bottom _____
TBG Pressure: Time: _____ DWG _____	Run Depth (M, CF) _____
CSG Pressure: Time: _____ DWG _____	Shut In Time _____ Date _____
(All Pressures in KPa)	

Depths And Deflections For Gradient Tests

Date	Depth	Time	Time	Deflection	Pressure	Date	Depth	Time	Time	Deflection	Pressure
10	Surf	15:29	15:34								
	300	15:38	15:48								
	600	15:52	16:02								
	900	16:05	16:15								
	1200	16:19	16:29								
	1400	16:32	16:42								
15	1463.9	16:43	16:52								
10	1600	17:01	17:11								
15	1671.5	17:18	17:28								
10	1700	17:30	17:40								
15	1714.9	17:41	17:56								

Wireline Operator Bill

Field Contact & No. _____

02/18/03 09:02 FAX 403 268 8032

PARAMOUNT RES. FLR 30

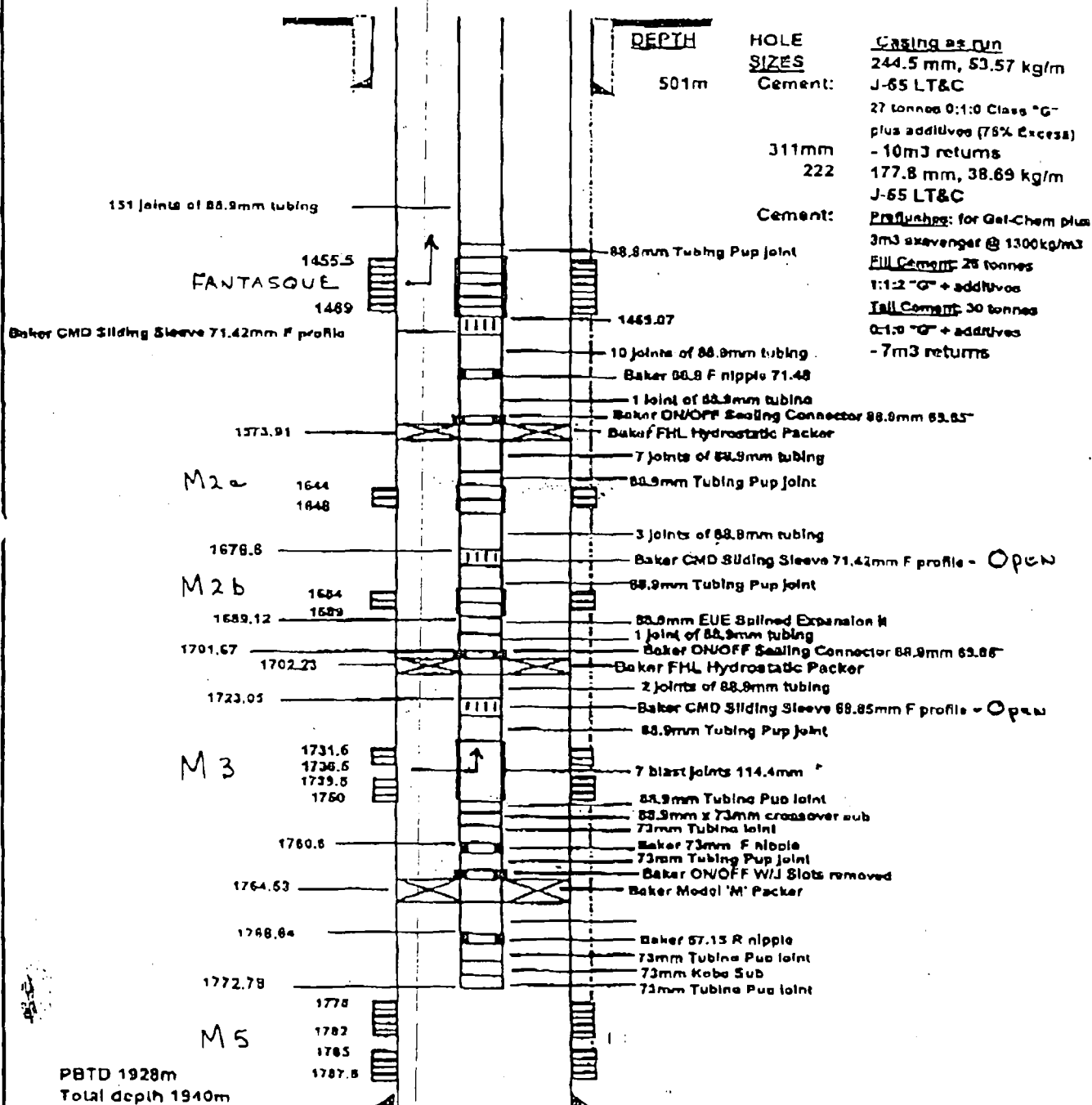
4001

Kb = 492.1
CF = 487.0

PARA ET AL FORT LIARD N-01

60deg 10' N, 123deg 15' W

(as completed)



N-01WELLBORE completion.xls06/26/2001

GENERAL INFORMATION

Client Information:

Company: Paramount Resources Ltd.

Contact: Wayne Tomm

Phone: 403-290-3600 Fax: e-mail:

Site Information:

Contact:

Phone: Fax: e-mail:

Well Information:

Name: Para et al Ft. Liard N-01

Operator:

Location-Downhole: N-01

Location-Surface:

Test Information:

Company: OPSCo Energy Industries Ltd.

Representative: Lawrence Bews

Supervisor: Garth Willson

Test Type: Flowing Gradient Test

Job Number:

Test Unit:

Start Date: 2003/01/16

Start Time: 11:10:00

End Date: 2003/01/16

End Time: 16:04:00

Report Date: 2003/01/17

Prepared By: Rick Doll

Remarks:

Qualified By: Rick Doll

Paramount Resources Ltd.
N-01

Start Test Date: 2003/01/16
Final Test Date: 2003/01/16

Static Gradient N-01

Para et al Ft. Liard N-01

Gauge 1

Gauge Serial Number		Gauge Type	
Gauge Manufacturer		Maximum Recorder Range	kPa
Run Depth	m	Date of Last Calibration	
Gauge Start Date	2003/01/16 11:01:00	Gauge Stop Date	
Date Gauge On Bottom		Date Gauge Off Bottom	

Test Data

Test/Prod Interval Top KB (TVD)	m	Base KB (TVD)	m
Pool Datum Depth (SS)	m	Well Datum Depth	m
Tubing Pressure Initial	kPa(a) Final		kPa(a)
Casing Pressure Initial	kPa(a) Final		kPa(a)
Start Test Date		Date Well Shut-In	

Results

Gradient 1	kPa/m	Liquid Interface 1	m	kPa(a)
Gradient 2	kPa/m	MPP	m	kPa(a)

N-01

Start Test Date: 2003/01/16

Final Test Date: 2003/01/16

N-01

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
5.00	11:19:50		1506.60		-1.46	
305.00	11:34:20	14.50	1522.74	0.054	29.39	0.103
605.00	11:47:59	13.66	1560.30	0.125	34.69	0.018
905.00	12:03:30	15.50	1596.69	0.121	37.68	0.010
1205.00	12:16:50	13.33	1784.50	0.626	38.29	0.002
1405.00	12:28:29	11.66	1983.50	0.995	36.37	
1465.25	12:41:30	13.00	2028.29	0.743	41.71	0.089
1485.00	12:52:29	11.00	2021.55		58.88	0.870
1505.00	13:03:49	11.33	2051.71	1.508	59.93	0.052
1525.00	13:14:30	10.67	2068.49	0.839	60.33	0.020
1545.00	13:25:39	11.17	2067.96		60.65	0.016
1565.00	13:35:50	10.17	2051.19		60.93	0.014
1585.00	13:58:50	23.00	2151.61	5.021	61.27	0.017
1605.00	14:08:59	10.16	2134.96		61.47	0.010
1625.00	14:20:19	11.33	2146.66	0.585	61.73	0.013
1646.00	14:31:29	11.17	2163.16	0.786	61.96	0.011
1665.00	14:42:49	11.33	2187.95	1.305	62.21	0.013
1686.50	14:55:39	12.83	2203.23	0.711	62.47	0.012
1705.00	15:07:10	11.50	2204.63	0.076	62.58	0.006
1725.00	15:18:09	11.00	2262.89	2.913	62.69	0.005
1744.75	15:29:19	11.17	2348.89	4.354	63.08	0.020
1765.00	15:39:20	10.00	2459.92	5.483	63.57	0.024
1780.00	15:52:39	13.33	2596.50	9.106	63.58	0.001
1786.25	15:58:50	6.17	2649.63	8.500	63.62	0.006

Results

Gradient 1

kPa/m

Liquid Interface 1

m

kPa(a)

Gradient 2

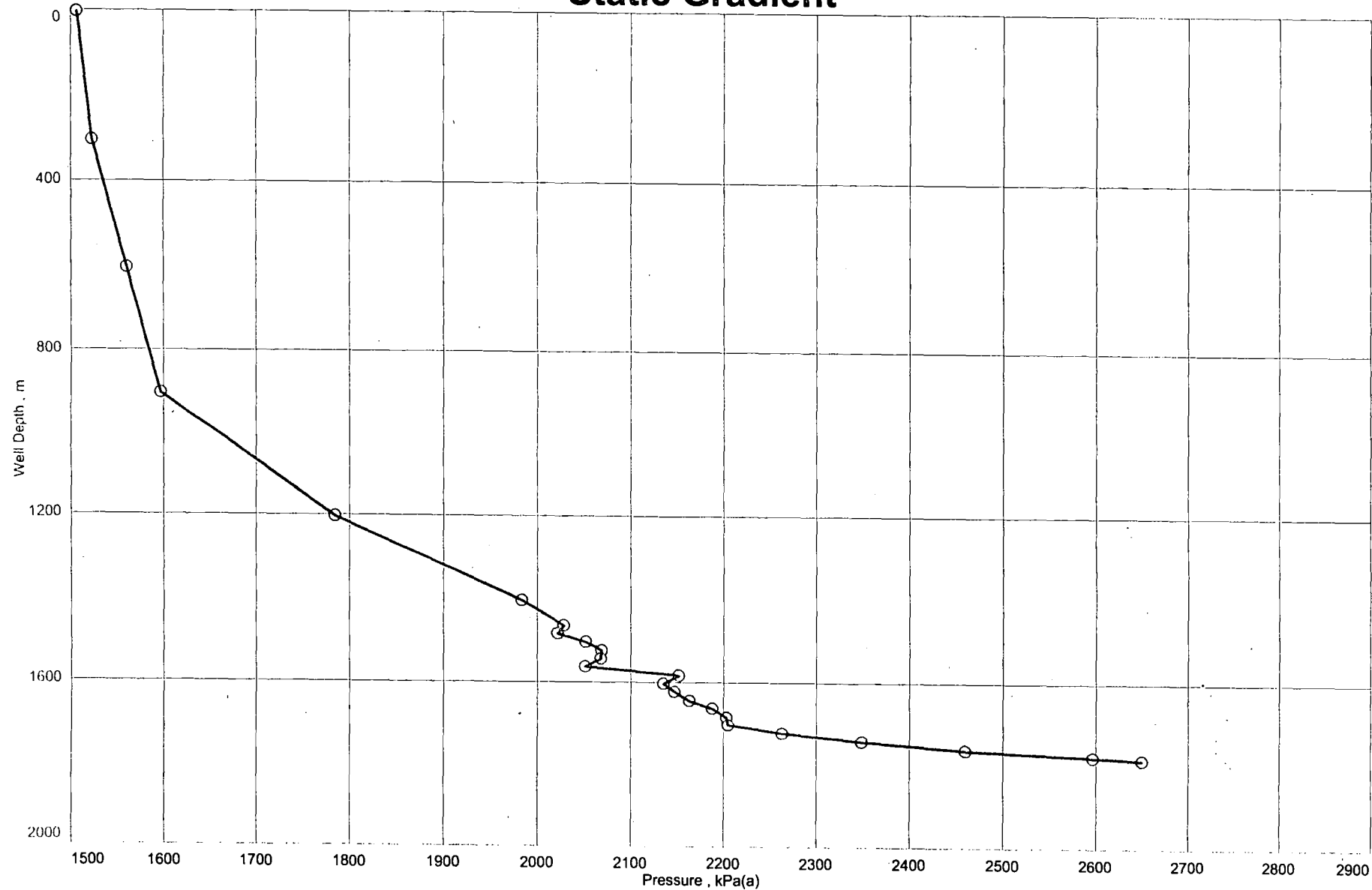
kPa/m

MPP

m

kPa(a)

Static Gradient



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N-01
Start Test Date: 2003/01/16
Final Test Date: 2003/01/16

Para et al Ft. Liard N-01

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