

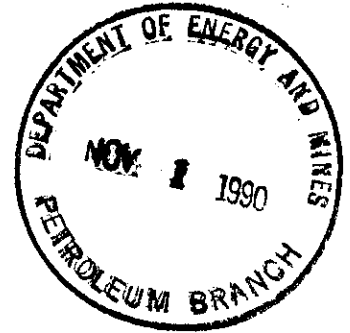


1300 SUN LIFE PLAZA III
112 4th AVENUE S.W.
CALGARY, ALBERTA, CANADA T2P 0H3
TELEPHONE (403) 261-0743
FAX (403) 264-5691

October 26, 1990

MANITOBA ENERGY & MINES
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: Mr. John Fox
Chief Petroleum Engineer



Dear Sir:

Re: Omega Waskada 7-14-2-25 WPM
Bottomhole Pressure Measurement

In accordance with Section 94 Subsection (1) of the Manitoba Petroleum Drilling and Production Regulations, a copy of a recently conducted pressure test and pressure analysis for well 7-14-2-25 WPM is enclosed.

If you have any questions related to this information, please contact the undersigned at (403) 261-0743 in our Calgary office.

Yours truly,

OMEGA HYDROCARBONS LTD.

R.A. Brekke, P. Eng.
Engineering Supervisor - Manitoba

RAB:jb

c.c.: Waskada Pressure Data Binder
Wellfile

4420

4380

4340

4300
P₁₀₀

4260

4220

4180

4140

4100

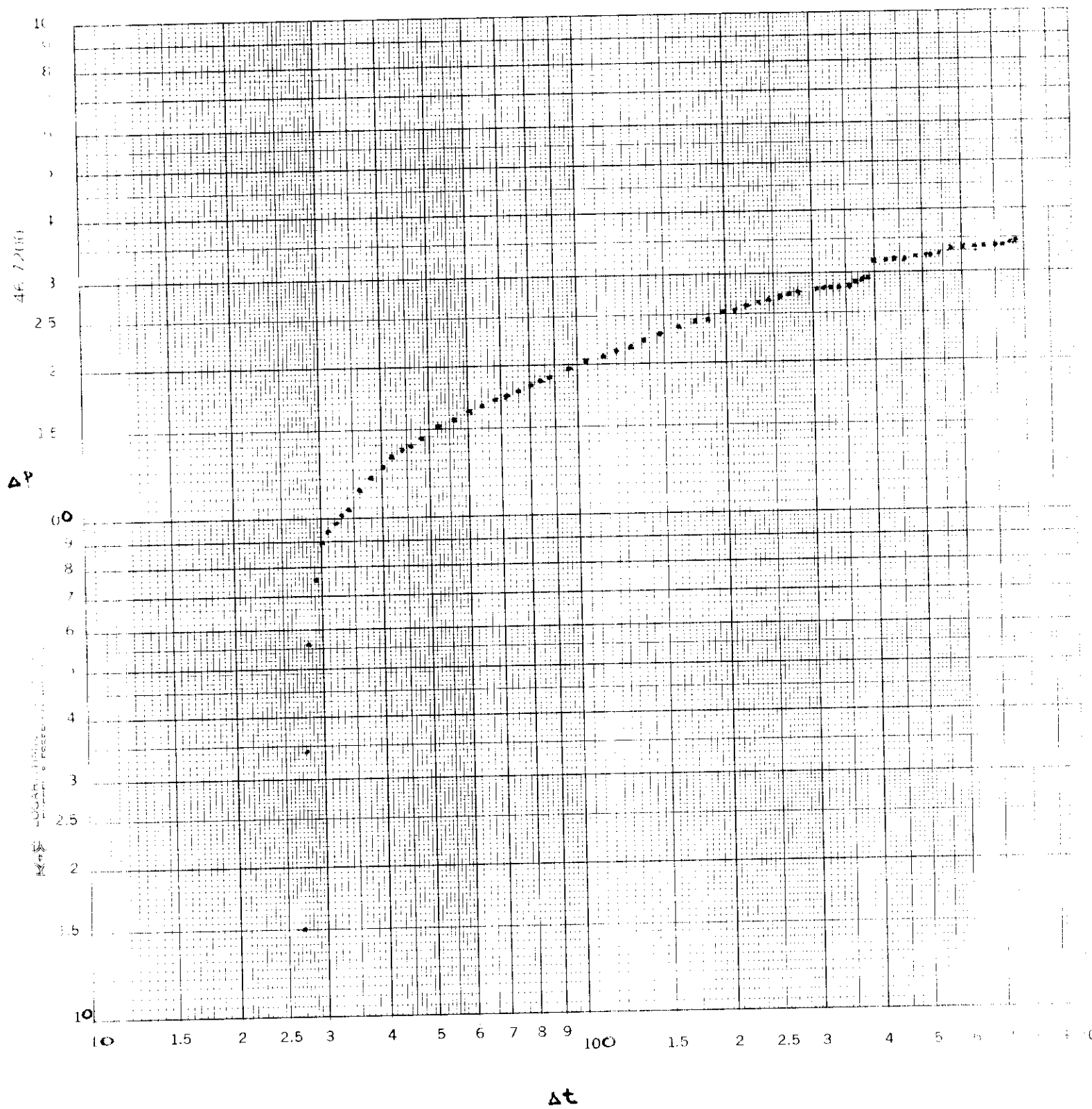
4060

4020

3980

REBAM RECORDS AUG 22/90

$t + \Delta t$ / Δt



$$t = \frac{\text{cumulative well production}}{\text{well production rate}} = \frac{2217.8 \text{ m}^3}{25.18 \text{ L/s}} = 88.1 \text{ days} = 2113.9 \text{ h}$$

Omega Waskada 07-14
07-14-002-25-W1M
Lower Amaranth

Build-up Test
Aug. 07, 1990 - Aug. 22, 1990

Reporting Date August 24, 1990

Page 1 of 9

Company: OMEGA HYDROCARBONS LTD.
1300, 112 - 4 AVE. S.W.
CALGARY, ALBERTA
T2P 0H3

Field : Waskada
Pool : Lower Amaranth
Perf./O.H. Interval (m,CF)
852.3 - 857.3

Elevation: 474.6 m,CF 478.8 m,KB

Well name: Omega Waskada 07-14
Location : 07-14-002-25-W1M
Status :
Date of test: Aug. 07/90 - Aug. 22/90
Producing through:
Mid-point of prod. int. (m,CF): 854.8
Pool datum (m,Subsea): 440.0-
Datum depth of well (m,CF): 914.6
Tubing (mm): 60.3 Depth (m,CF): 870.8
Casing (mm): Depth (m,CF):

Test Description	Test Length (hours)	Clock Ranges (hours)	Page No.
Build-up Test	358.8	360	
Static Gradient Test		3	

Static Test Information

Date tested	: Aug. 22/90	Shut-in time: 800	Date: Aug. 06/90
Tubing pressure (DWG)	: 60	Shut-in period: 388.3	
Casing pressure (DWG)	: 2,600	On bottom	: 1205
Run depth (m,CF)	: 857.0	Off bottom	: 1215
Temperature at run depth (C):	42	Pressure at M.F.O.P. (kPag):	4,276
Pressure at run depth (kPag):	4,293	Datum depth pressure (kPag):	4,728

Comments:

Primary Recorder

Serial No. : 045936
Range (kPag): 10343
Calibrated : 22-06-90
Deflection*(209.56) + (2.59-)

Secondary Recorder

Serial No. : 045938
Range (kPag): 10343
Calibrated : 22-06-90
Deflection*(207.19) + (5.58-)

** For calibration information see page(s): 8 - 9

Survey company: M.M.

Tested by: S. Hourd

Computed by: R. Doll

Reporting Date August 24, 1990

Page 2 of 9

Well Name : Omega Waskada 07-14
Pool : Lower Amaranth

Location : 07-14-002-25-W1M
Date of Test : Aug 07, 1990

----- Primary Gauge -----	----- Secondary Gauge -----
Serial # 45936 Range 10343	Serial # 45938 Range 10343
Depth 857.0	Depth 855.0

Date	Time	Period (hrs.)	Deflection (mm)	Corrected Pressure (kPag)	Deflection (mm)	Corrected Pressure (kPag)
			$t+\Delta t/\Delta t$	ΔP		
Aug07/90	1100	27.00	Set recorders at 857.0 m, CF			
	1100	27.00	79.3	19.058	3988	19.675
	1105	27.08	79.1	19.101	3997	4065
	1110	27.17	78.8	19.127	4003	
	1120	27.33	78.0	19.169	4011	
	1130	27.50	77.9	19.219	4022	
	1145	27.75	77.2	19.280	4035	
	1200	28.00	76.5	19.323	4044	19.696
	1230	28.50	75.2	19.382	4056	
	1300	29.00	73.9	19.417	4063	
	1330	29.50	72.6	19.454	4071	
	1400	30.00	71.5	19.483	4077	19.711
	1500	31.00	69.2	19.506	4082	
	1600	32.00	67.3	19.520	4085	19.749
	1700	33.00	64.2	19.540	4089	
	1800	34.00	63.2	19.556	4092	
	2000	36.00	59.7	19.601	4102	19.831
	2200	38.00	54.6	19.633	4108	
	2400	40.00	53.9	19.661	4114	19.888
Aug08/90	0200	42.00	51.3	19.687	4120	
	0400	44.00	49.0	19.707	4124	
	0600	46.00	46.9	19.720	4127	
	0800	48.00	45.0	19.745	4132	19.968
	1200	52.00	41.7	19.778	4139	
	1600	56.00	38.8	19.805	4144	20.024
	2000	60.00	36.2	19.830	4150	
	2400	64.00	34.0	19.849	4154	20.072
Aug09/90	0400	68.00	32.1	19.872	4158	
	0800	72.00	30.4	19.891	4162	
	1200	76.00	28.8	19.906	4165	20.115
	1600	80.00	27.4	19.927	4170	
	2000	84.00	26.2	19.945	4174	
	2400	88.00	25.0	19.960	4177	20.170
Aug10/90	0800	96.00	23.0	19.995	4184	
	1600	104.00	21.3	20.027	4191	
	2400	112.00	19.9	20.046	4195	20.254
Aug11/90	0800	120.00	18.6	20.074	4201	
	1600	128.00	17.5	20.087	4203	
	2400	136.00	16.5	20.123	4211	20.322
Aug12/90	1200	148.00	15.3	20.158	4218	
	2400	160.00	14.2	20.187	4224	20.383
Aug13/90	1200	172.00	13.3	20.213	4230	
	2400	184.00	12.5	20.234	4234	20.435

Reporting Date August 24, 1990

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Well Name : Omega Waskada 07-14
Pool : Lower AmaranthLocation : 07-14-002-25-W1M
Date of Test : Aug 07, 1990

----- Primary Gauge -----	----- Secondary Gauge -----
Serial # 45936 Range 10343	Serial # 45938 Range 10343
Depth 857.0	Depth 855.0

Date	Time	Period (hrs.)	Deflection (mm)	Corrected Pressure (kPag)	Deflection (mm)	Corrected Pressure (kPag)
Aug14/90	1200	196.00	11.8	20.264		
	2400	208.00	11.2	20.278		
Aug15/90	1200	220.00	10.6	20.299		
	2400	232.00	10.1	20.314		
Aug16/90	1200	244.00	9.7	20.326		
	2400	256.00	9.3	20.342		
Aug17/90	1200	268.00	8.9	20.356		
	2400	280.00	8.6	20.371		
Aug18/90	1200	292.00	8.2	20.374		
	2400	304.00	8.0	20.389		
Aug19/90	1200	316.00	7.7	20.396		
	2400	328.00	7.4	20.401		
Aug20/90	1200	340.00	7.2	20.406		
	2400	352.00	7.0	20.408		
Aug21/90	1200	364.00	6.8	20.433		
	2400	376.00	6.6	20.450		
Aug22/90	0935	385.58	6.5	20.455		
	0935	385.58	Recovered recorders & conducted Gradient			

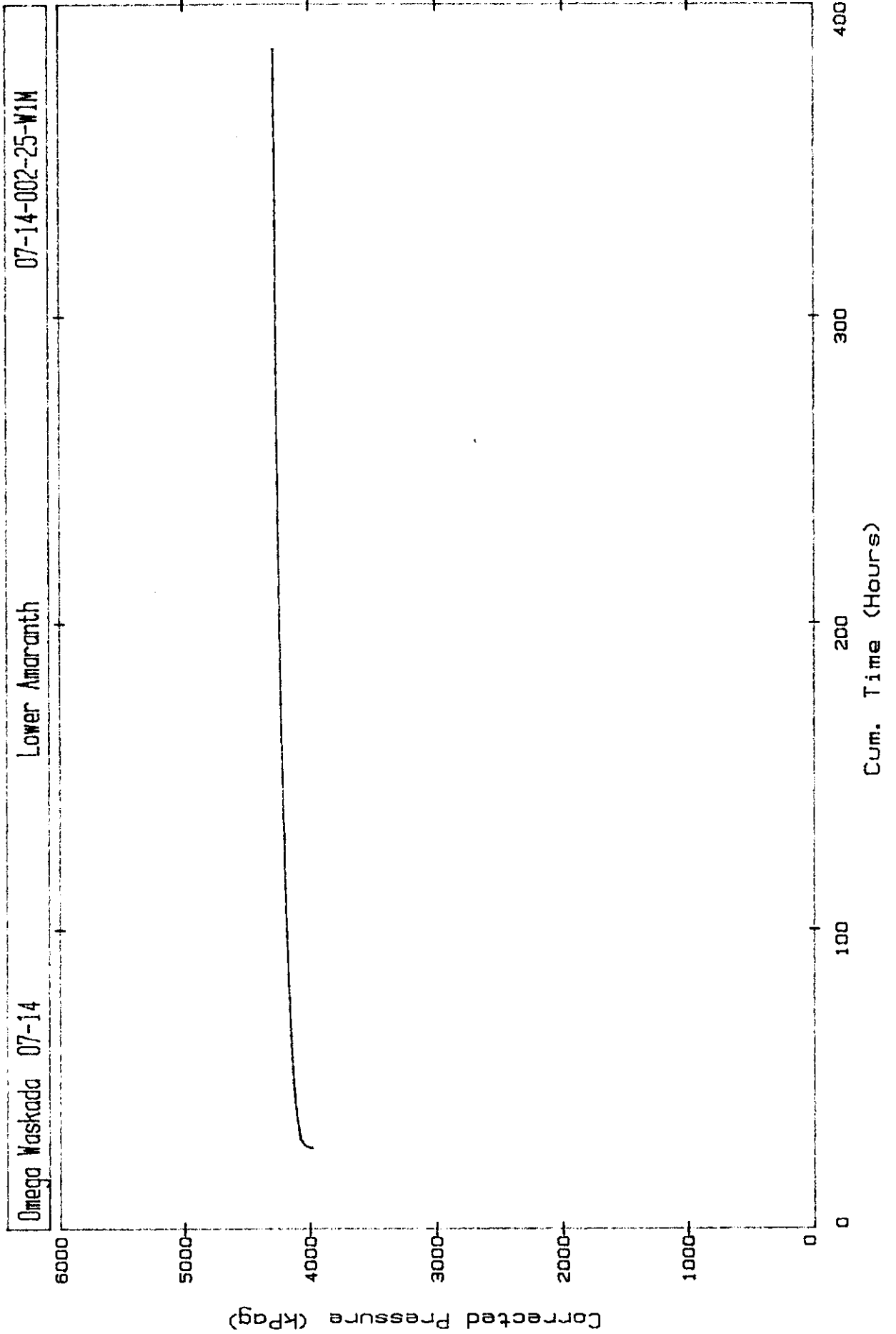
Job48

OPSCO

BUILDUP

GAUGE # 045936

Aug 07/90



Reporting Date August 24, 1990

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Company: OMEGA HYDROCARBONS LTD.
1300, 112 - 4 AVE. S.W.
CALGARY, ALBERTA
T2P 0H3

Field : Waskada
Pool : Lower Amaranth
Perf./D.H. Interval (m,CF)
852.3 - 857.3

Elevations: 474.6 m,CF 478.8 m,KB

Well name: Omega Waskada 07-14
Location : 07-14-002-25-W1M
Status :
Date of test: Aug. 22/90
Producing through:
Mid-point of prod. int. (m,CF): 854.8
Pool datum (m,Subsea): 440.0-
Datum depth of well (m,CF): 914.6
Tubing (mm): 60.3 Depth (m,CF): 870.8
Casing (mm): Depth (m,CF):

Test Description	Test Length (hours)	Clock Ranges (hours)	Page No.
Static Gradient Test		3	

Static Test Information

Date tested	: Aug. 22/90	Shut-in time: 800	Date: Aug. 06/90
Tubing pressure (DWG)	: 60	Shut-in period: 398.3	
Casing pressure (DWG)	: 2,600	On bottom	: 1205
Run depth (m,CF)	: 857.0	Off bottom	: 1215
Temperature at run depth (C):	42	Pressure at M.P.O.P. (kPag):	4,276
Pressure at run depth (kPag):	4,293	Datum depth pressure (kPag):	4,728

Comments:

Primary Recorder

Serial No. : 045936
Range (kPag): 10343
Calibrated : 22-06-90
Deflection*(209.56) + (2.59-)

Secondary Recorder

Serial No. : 045938
Range (kPag): 10343
Calibrated : 22-06-90
Deflection*(207.19) + (5.50-)

** For calibration information see page(s): 8 - 9

Survey company: M.M.

Tested by: S. Hound

Computed by: R. Doll

Reporting Date August 24, 1990

Page 6 of 9

Well Name : Omega Waskada 07-14
Pool : Lower AmaranthLocation : 07-14-002-25-W1M
Date of Test : Aug 22, 1990

<----- Primary Gauge -----> <----- Secondary Gauge ----->
 Serial # 45936 Range 10343 Serial # 45938 Range 10343

Depth CF(m)	Time Start	Time End	Corrected			Corrected		
			Deflection (mm)	Pressure (kPag)	Gradient (kPa/m)	Deflection (mm)	Pressure (kPag)	Gradient (kPa/m)
Surf	1109	1112	0.110	23		0.114	24	
100.0	1114	1119	0.112	24	0.010	0.116	24	
200.0	1120	1125	0.114	24		0.118	25	0.010
300.0	1126	1131	0.118	25	0.010	0.120	25	
400.0	1135	1140	3.437	720	6.950	3.438	712	6.870
500.0	1142	1147	7.288	1527	8.070	7.348	1520	8.080
600.0	1148	1153	11.074	2319	7.920	11.197	2315	7.950
700.0	1154	1159	14.793	3096	7.770	14.971	3094	7.790
800.0	1200	1205	18.461	3863	7.670	18.687	3861	7.670
852.0	1205	1215	20.511	4293	7.544	20.744	4285	7.439

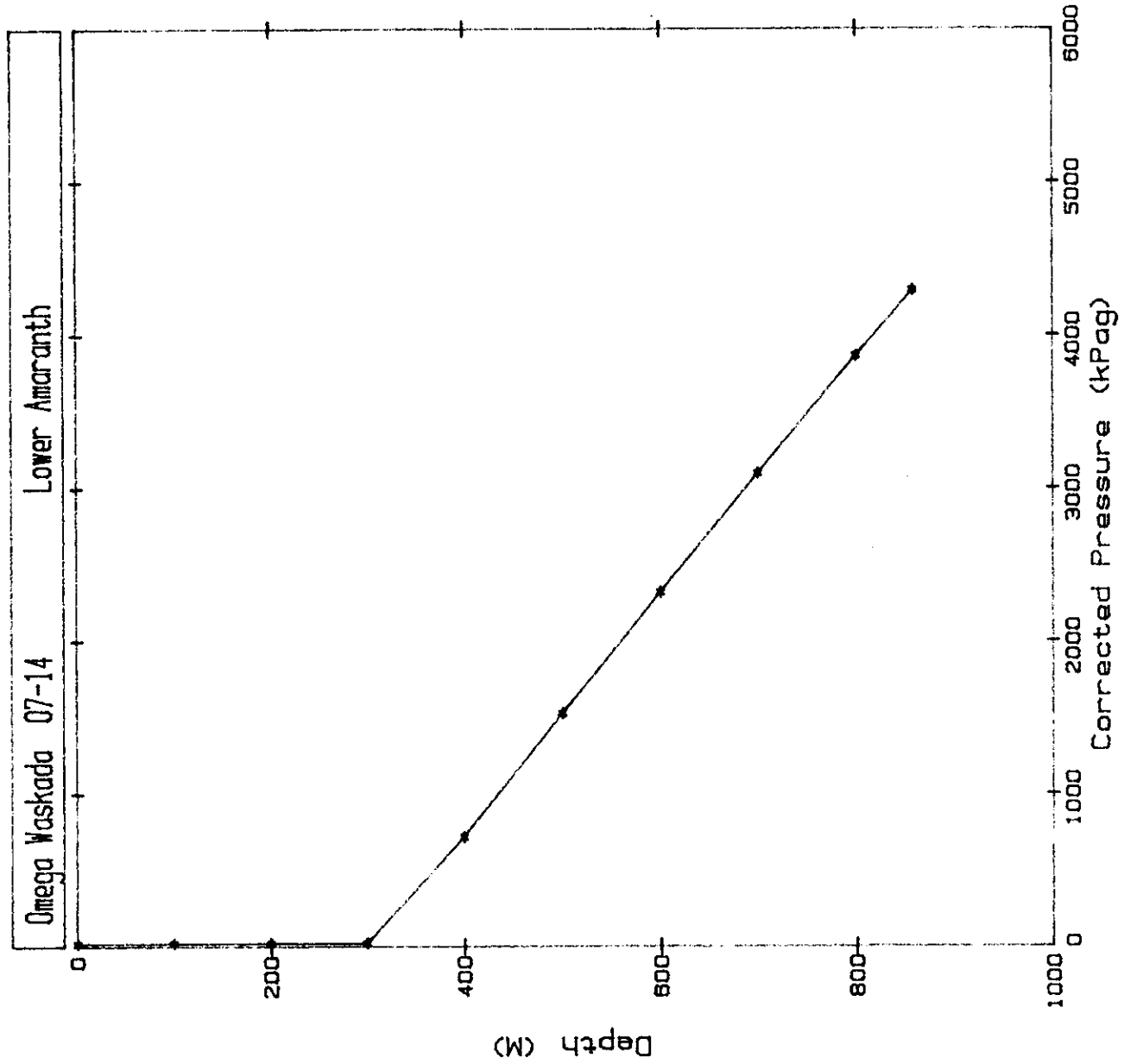
TBG pressure by DWG = 60 kPag

CSG pressure by DWG = 2600 kPag

Temperature at run depth = 42 C

Estimated liquid level at 314 m,CF

Job0118



Reporting Date August 24, 1990

Page 8 of 9

Serial # 45936
 Range 10343 kPag
 Calibration temperature (air) 20 C
 Calibration temperature (bath) 0
 Bath calibration date
 Last air calibration date 120190 12 Jan 90
 Current air calibration date 220690 22 Jun 90
 Comment MOOSE MOUNTAIN WELL SERVICES
 Recording section #
 File # DPG125

Pressure (kPag)	First Deflection (mm)	Second Deflection (mm)	Average Deflection (mm)	P - PC (kPa)	Bath Deflection (mm)
0	0.000	0.000	0.000	2.59	
2069	9.878	9.878	9.878	1.61	
4137	19.770	19.770	19.770	3.31-	
6206	29.650	29.650	29.650	4.72-	
8274	39.496	39.496	39.496	0.01	
10343	49.351	49.351	49.351	3.84	

Sum : 0.02

Previous m 209.5500
 A 2.7300-

Present m 209.5550
 A 2.5874-

Present pressure 10642.80
 Previous pressure 10642.41
 deviation 0.39
 allowable deviation 25.86

Reporting Date August 24, 1990

Page 9 of 9

Serial # 45938
 Range 10343 kPag
 Calibration temperature (air) 20 C
 Calibration temperature (bath) 0
 Bath calibration date
 Last air calibration date 120190 12 Jan 90
 Current air calibration date 220690 22 Jun 90
 Comment MOOSE MOUNTAIN WELL SERVICES
 Recording section #
 File # DPG125

Pressure (kPag)	First Deflection (mm)	Second Deflection (mm)	Average Deflection (mm)	F - PC (kPa)	Bath Deflection (mm)
0	0.000	0.000	0.000	5.58	
2069	10.001	10.001	10.001	2.50	
4137	20.025	20.025	20.025	6.34-	
6206	30.023	30.023	30.023	8.79-	
8274	39.969	39.969	39.969	1.47-	
10343	49.907	49.907	49.907	8.50	
			Sum :	0.02-	

Previous m 207.1800
 A 5.7300-

Present m 207.1869
 A 5.5834-

Present pressure 10519.51
 Previous pressure 10519.01
 Deviation 0.50
 Acceptable deviation 25.86

Omega Waskoda 07-14
07-14-002-25-W1M
Lower Amaranth

Build-up Test
Aug. 22, 1990 - Sep. 06, 1990

Reporting Date September 10, 1990

Page 1 of 8

Company: OMEGA HYDROCARBONS LTD.
1300, 112 - 4 AVE. S.W.
CALGARY, ALBERTA
T2P 0H3

Field : Waskada
Pool : Lower Amaranth
Perf./O.H. Interval (m,CF)
852.3-857.3

Elevation: 474.6 m,CF 478.8 m,KB

Well name: Omega Waskada 07-14
Location : 07-14-002-25-W1M
Status :
Date of test: Aug. 22/90 - Sep. 06/90
Producing through:
Mid-point of prod. int.(m,CF): 854.8
Pool datum (m,Subsea): 440.0-
Datum depth of well (m,CF): 914.6
Tubing (mm): 60.3 Depth (m,CF): 870.8
Casing (mm): Depth (m,CF):

Test Description	Test Length (hours)	Clock Ranges (hours)	Page No.
Build-up Test		360	
Static Gradient Test		3	

Static Test Information

Date tested	: Aug. 06/90	Shut-in timer: 800	Date: Aug. 06/90
Tubing pressure (BWG)	: 500	Shut-in period:	1.6
Casing pressure (BWG)	: 3,000	On bottom	: 926
Run depth (m,CF)	: 857.0	Off bottom	: 936
Temperature at run depth (C):	42	Pressure at M.P.O.P. (kPag):	4,332
Pressure at run depth (kPag):	4,349	Datum depth pressure (kPag):	4,722

Comments:

Estimated liquid level at 603 m,CF

Primary Recorder

Serial No. : 045936
Range (kPag): 10343
Calibrated : 22-06-90
Deflection*(207.56) + (2.59-)

Secondary Recorder

Serial No. : 045938
Range (kPag): 10343
Calibrated : 22-06-90
Deflection*(207.17) + (5.58-)

** For calibration information see page(s): 7 - 8

Reporting Date September 10, 1990

Page 2 of 8

Well Name : Omega Waskada 07-14
Pool : Lower Amaranth

Location : 07-14-002-25-W4M
Date of Test : Aug 22, 1990

----- Primary Gauge -----	----- Secondary Gauge -----
Serial # 45936 Range 10343	Serial # 45938 Range 10343
Depth 857.0	Depth 855.0

Date	Time	Period (hrs.)	Deflection (mm)	Corrected Pressure (kPag)	Deflection (mm)	Corrected Pressure (kPag)
<div style="text-align: center;"> $\frac{(\Delta P)}{(\Delta t)}$ Set recorders @ 857 m, CF ΔP </div>						
Aug22/90	1250	388.83	20.566	4304	20.819	4301
	1250	388.83 6.4	20.566	4304		
	1255	388.91	20.566	4304		
	1300	389.00	20.566	4304		
	1315	389.25	20.566	4304		
	1330	389.50	20.566	4304		
	1400	390.00 6.4	20.566	4304	20.819	4301
	1500	391.00	20.566	4304		
	1600	392.00	20.566	4304		
	1800	394.00 6.4	20.566	4304		
	2000	396.00	20.566	4304 316		
	2400	400.00	20.572	4305 317	20.820	4302
Aug23/90	0800	408.00 6.7	20.574	4305		
	1600	416.00	20.574	4305 317		
	2400	424.00 6.0	20.581	4307 319	20.819	4301
Aug24/90	0800	432.00	20.580	4307		
	1600	440.00 5.8	20.584	4307		
	2400	448.00	20.584	4307 319	20.825	4303
Aug25/90	1200	460.00 5.6	20.587	4308 320		
	2400	472.00	20.596	4310 322	20.834	4304
Aug26/90	1200	484.00 5.4	20.597	4310		
	2400	496.00	20.596	4310	20.832	4304
Aug27/90	1200	508.00 5.2	20.595	4310 322		
	2400	520.00 5.07	20.604	4312 324	20.832	4304
Aug28/90	1200	532.00 5.0	20.611	4313 325		
	2400	544.00 4.9	20.621	4315 327	20.835	4305
Aug29/90	1200	556.00 4.8	20.629	4317 329		
	2400	568.00 4.72	20.635	4318 330	20.857	4309
Aug30/90	1200	580.00 4.64	20.646	4320 332		
	2400	592.00 4.57	20.648	4321 333	20.873	4312
Aug31/90	1200	604.00 4.5	20.653	4322 334		
	2400	616.00 4.43	20.658	4323 335	20.873	4312
Sep01/90	1200	628.00 4.37	20.659	4323 335		
	2400	640.00 4.3	20.666	4325 337	20.872	4312
Sep02/90	1200	652.00 4.24	20.666	4325		
	2400	664.00 4.19	20.666	4325	20.872	4312
Sep03/90	1200	676.00 4.12	20.670	4325 337		
	2400	688.00 4.07	20.672	4326 338	20.872	4312
Sep04/90	1200	700.00 4.02	20.673	4326 338		
	2400	712.00 3.97	20.679	4327 339	20.872	4312
Sep05/90	1200	724.00 3.92	20.678	4327 339		
	2400	736.00 3.87	20.689	4329 340	20.871	4312
Sep06/90	1200	748.00 3.83	20.697	4331 343		

Reporting Date September 10, 1990

Page 3 of 8

Well Name : Omega Waskado 07-14
Pool : Lower AmaranthLocation : 07-14-002-25-W4M
Date of Test : Aug 22, 1990----- Primary Gauge -----
Serial # 45936 Range 10343
Depth 857.0----- Secondary Gauge -----
Serial # 45938 Range 10343
Depth 855.0

Date	Time	Period		Deflection	Corrected		Deflection	Corrected
		(hrs.)	$\frac{t+\Delta t}{\Delta t}$	(mm)	Pressure		(mm)	Pressure
					(kPag)			(kPag)
Sep06/90	2400	760.00	3.74	20.702	4332	ΔP 344	20.871	4312
Sep07/90	0739	767.65	3.75	20.705	4333	345	20.871	4312
	0739	767.65		Recovered recorders & conducted Gradient				

Job59

Reporting Date September 10, 1990

Page 4 of 8

Well Name : Omega Waskada 07-14
Pool : Lower AmaranthLocation : 07-14-002-25-W1M
Date of Test : Sep 06, 1990<----- Primary Gauge ----->
Serial # 45936 Range 10343<----- Secondary Gauge ----->
Serial # 45938 Range 10343

Depth CF(m)	Time Start	Time End	Corrected			Corrected		
			Deflection (mm)	Pressure (kPag)	Gradient (kPa/m)	Deflection (mm)	Pressure (kPag)	Gradient (kPa/m)
Surf	0820	0825	0.135	29		0.121	25	
100.0	0830	0835	0.155	33	0.040	0.135	29	0.030
200.0	0836	0841	0.160	34	0.010	0.154	32	0.040
300.0	0843	0848	0.163	35	0.010	0.159	33	0.010
400.0	0851	0856	3.706	776	7.410	3.689	763	7.300
500.0	0858	0903	7.551	1582	8.060	7.591	1570	8.070
600.0	0905	0910	11.281	2362	7.800	11.389	2355	7.850
700.0	0912	0917	15.022	3144	7.820	15.158	3133	7.780
800.0	0919	0924	18.692	3911	7.670	18.874	3900	7.670
857.0	0926	0936	20.779	4349	7.684	21.008	4340	7.719

TPG pressure by DWG = <500 kPag

CSG pressure by DWG = 3000 kPag

Temperature at run depth = 42 C

Estimated liquid level at 306 m,CF

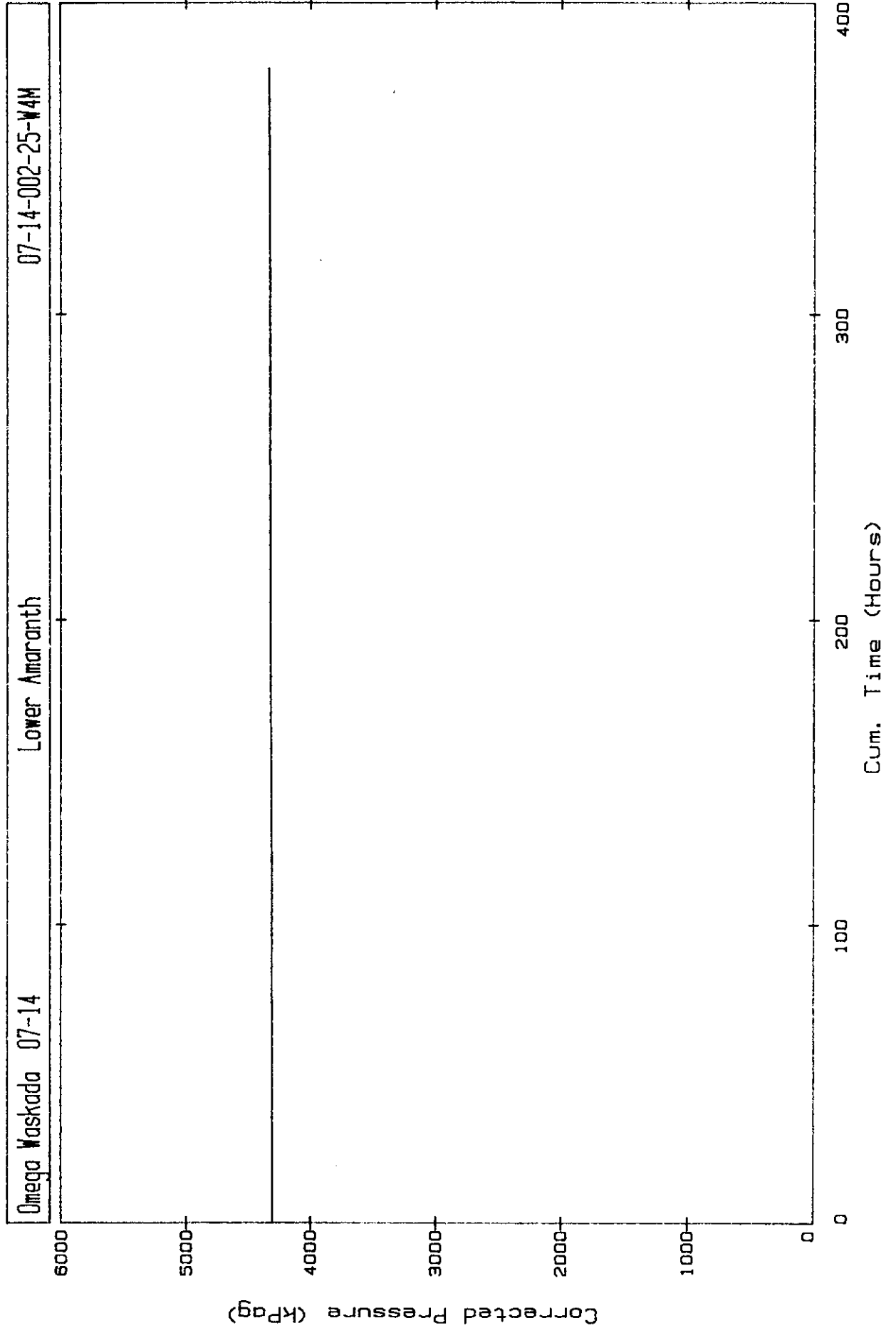
Job0177

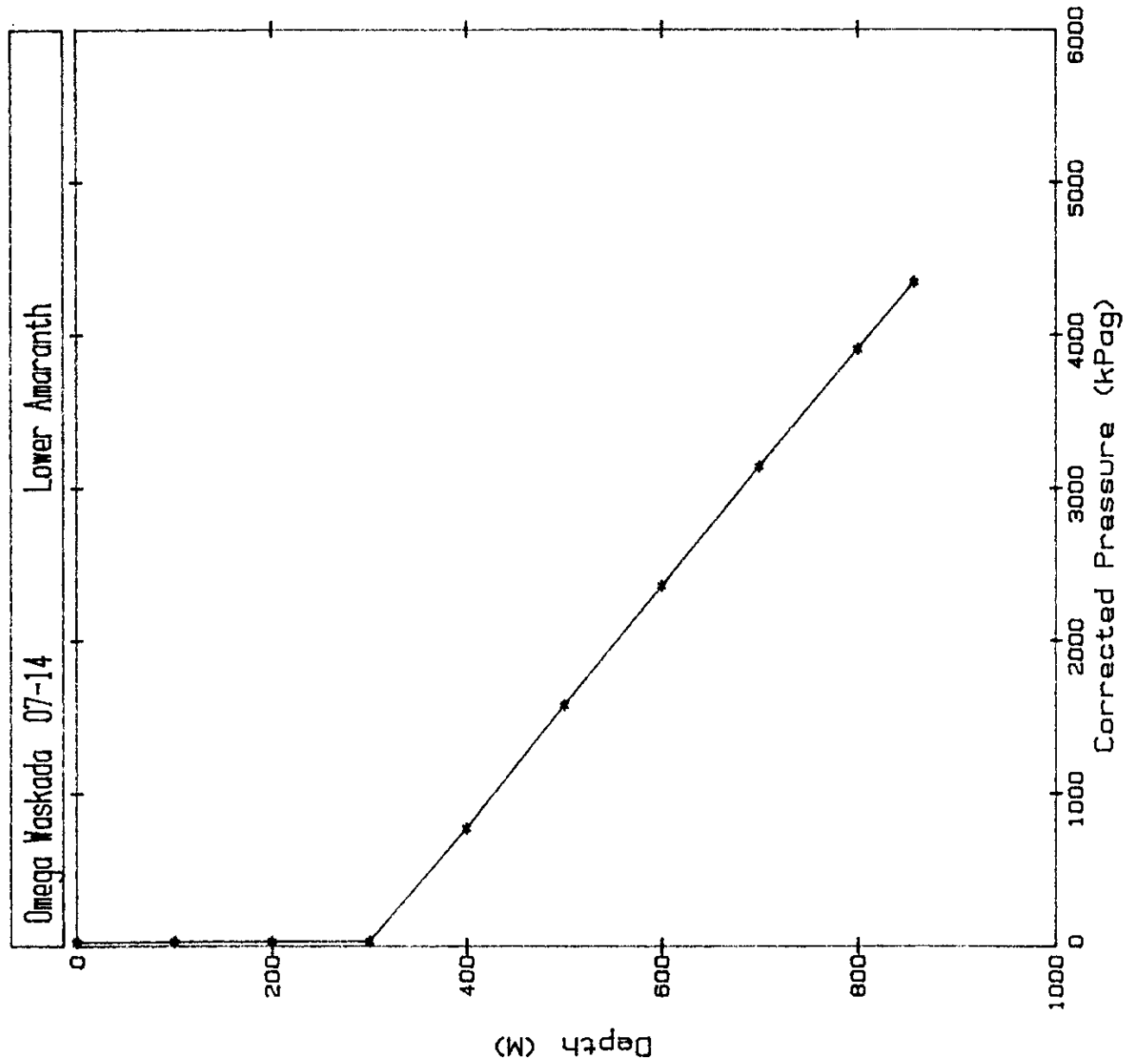
OPSCO

BUILDUP

GAUGE # 045936

Aug 22/90





Reporting Date September 10, 1990

Page 7 of 8

Serial # 45936
 Range 10343 kPag
 Calibration temperature (air) 20 C
 Calibration temperature (bath) 0
 Bath calibration date
 Last air calibration date 120190 12 Jan 90
 Current air calibration date 220690 22 Jun 90
 Comment MOOSE MOUNTAIN WELL SERVICES
 Recording section #
 File # DP6125

Pressure (kPag)	First Deflection (mm)	Second Deflection (mm)	Average Deflection (mm)	P - PC (kPa)	Bath Deflection (mm)
0	0.000	0.000	0.000	2.59	
2069	9.878	9.878	9.878	1.61	
4137	19.770	19.770	19.770	3.31-	
6206	29.650	29.650	29.650	4.72-	
8274	39.496	39.496	39.496	0.01	
10343	49.351	49.351	49.351	3.84	
			Sum :	0.02	

Previous m 209.5500
 A 2.7300-

Present m 209.5550
 A 2.5874-

Present pressure 10642.80
 Previous pressure 10642.41
 Deviation 0.39
 Acceptable deviation 25.86

Reporting Date September 10, 1990

Page 8 of 8

Serial # 45938
 Range 10343 kPag
 Calibration temperature (air) 20 C
 Calibration temperature (bath) 0
 Bath calibration date
 Last air calibration date 120190 12 Jan 90
 Current air calibration date 220690 22 Jun 90
 Comment MOOSE MOUNTAIN WELL SERVICES
 Recording section #
 File # DPG125

Pressure (kPag)	First Deflection (mm)	Second Deflection (mm)	Average Deflection (mm)	P - PC (kPa)	Bath Deflection (mm)
0	0.000	0.000	0.000	5.58	
2069	10.001	10.001	10.001	2.50	
4137	20.025	20.025	20.025	6.34-	
6206	30.023	30.023	30.023	8.79-	
8274	39.969	39.969	39.969	1.47-	
10343	49.907	49.907	49.907	8.50	
			Sum :	0.02-	

Previous m 207.1800
 A 5.7300-

Present m 207.1869
 A 5.5834-

Present pressure 10519.51
 Previous pressure 10519.01
 Deviation 0.50
 Acceptable deviation 25.86