

Well Name: Royce #1
Company: Helmerich & Payne Inc.
Location: 2-31s-34w
Seward County Kansas
Date: 6-30-99

Company: Helmerich & Payne Inc.
Address: 2606 Fleming #7
: Garden City, KS 67846
:

Date: June 28 1999
to: June 28 1999

Well Name : Royce #1			
Location : 2-31s-34w	Elev. :	0.00 KB(ft)	0.00 CF(ft)
Field/Pool: Hugoton	Prod. Interval:	0.00 to	0.00 ft(CF)
Test Type : Gradeint	Mid-Point Perf:	0.00 ft(CF)	
Status : Flowing	Tubing:	0.00 inches @	0.00 ft(CF)

Wire Line Company : Trilobite Testing LLC

Top Recorder	Serial # 3030	Run Depth:	0.00 ft(CF)
Range : 4995		Sample Memory:	21000 Samples
Start Date/Time: Jun 28 1999 @ 11:12:07		End Date/Time:	Jun 28 1999 @ 11:12:07
Date of Last Calibration: April 1 1999			

Bottom Recorder	Serial #	Run Depth:	0.00 ft(CF)
Range : 3 DEG F, 5 PSIG		Sample Memory:	0 Samples
Start Date/Time: Jun 28 1999 @ 11:12:07		End Date/Time:	Jun 28 1999 @ 11:12:07
Date of Last Calibration: 0 0			

NOTE - 1 Sample = Time, Pressure, Temperature

Program: Duration:	1 Min.	Sample Rate:	1 Sec.	ΔP :	1.33
	2 Hr.	Sample Rate:	5 Sec.	ΔP :	0.44

Tubing Pressure: Initial: Not Reported	Final: Not Reported
Casing Pressure: Initial: Not Reported	Final: Not Reported

Electronic Data supplied on disk in standard ASE format.

***** STATIC GRADIENT DATA *****

6-28-99 Gradient Test Royce #1 Helmrich & Payne

Date: 06/28/99

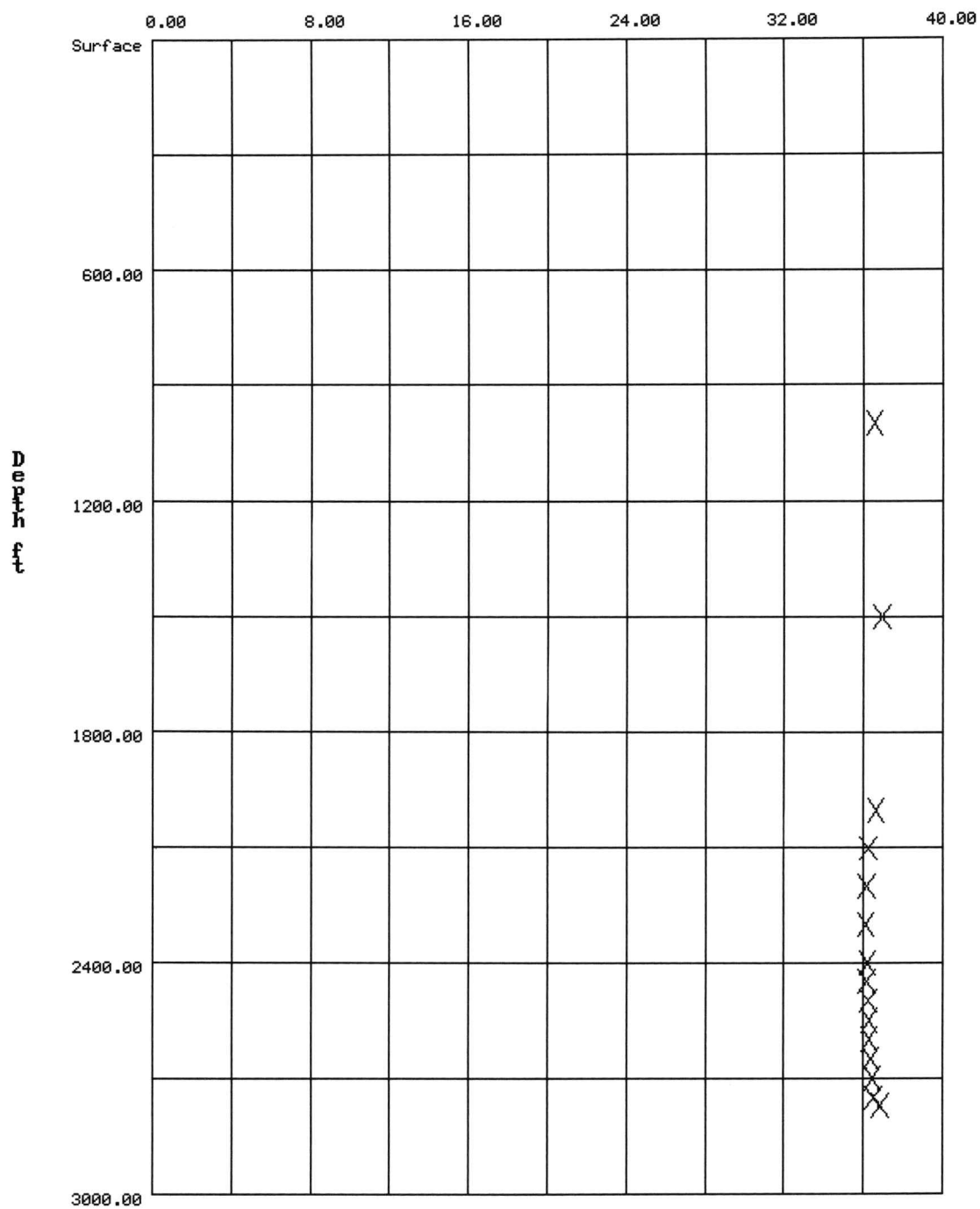
Time: 11:12:07

Depth ft	Time From hh:mm:ss	Time To hh:mm:ss	Pressure PSIg	Gradient PSIg/ft
1000.00	11:26:32	11:28:32	36.51	0.0000
1500.00	11:29:22	11:31:22	36.93	0.0008
2000.00	11:32:57	11:34:57	36.62	-0.0006
2100.01	11:35:27	11:37:27	36.25	-0.0037
2200.00	11:38:27	11:40:27	36.14	-0.0011
2300.00	11:40:47	11:42:47	36.08	-0.0006
2400.00	11:43:12	11:45:12	36.17	0.0009
2450.00	11:45:37	11:47:37	36.14	-0.0006
2500.00	11:47:52	11:49:52	36.22	0.0016
2550.00	11:49:57	11:51:57	36.29	0.0014
2600.00	11:52:32	11:54:32	36.30	0.0002
2650.00	11:55:07	11:57:07	36.39	0.0018
2700.00	11:57:22	11:59:22	36.45	0.0012
2750.00	11:59:57	12:01:57	36.48	0.0006
2770.00	12:01:57	12:03:57	36.83	0.0175

STATIC GRADIENT PLOT

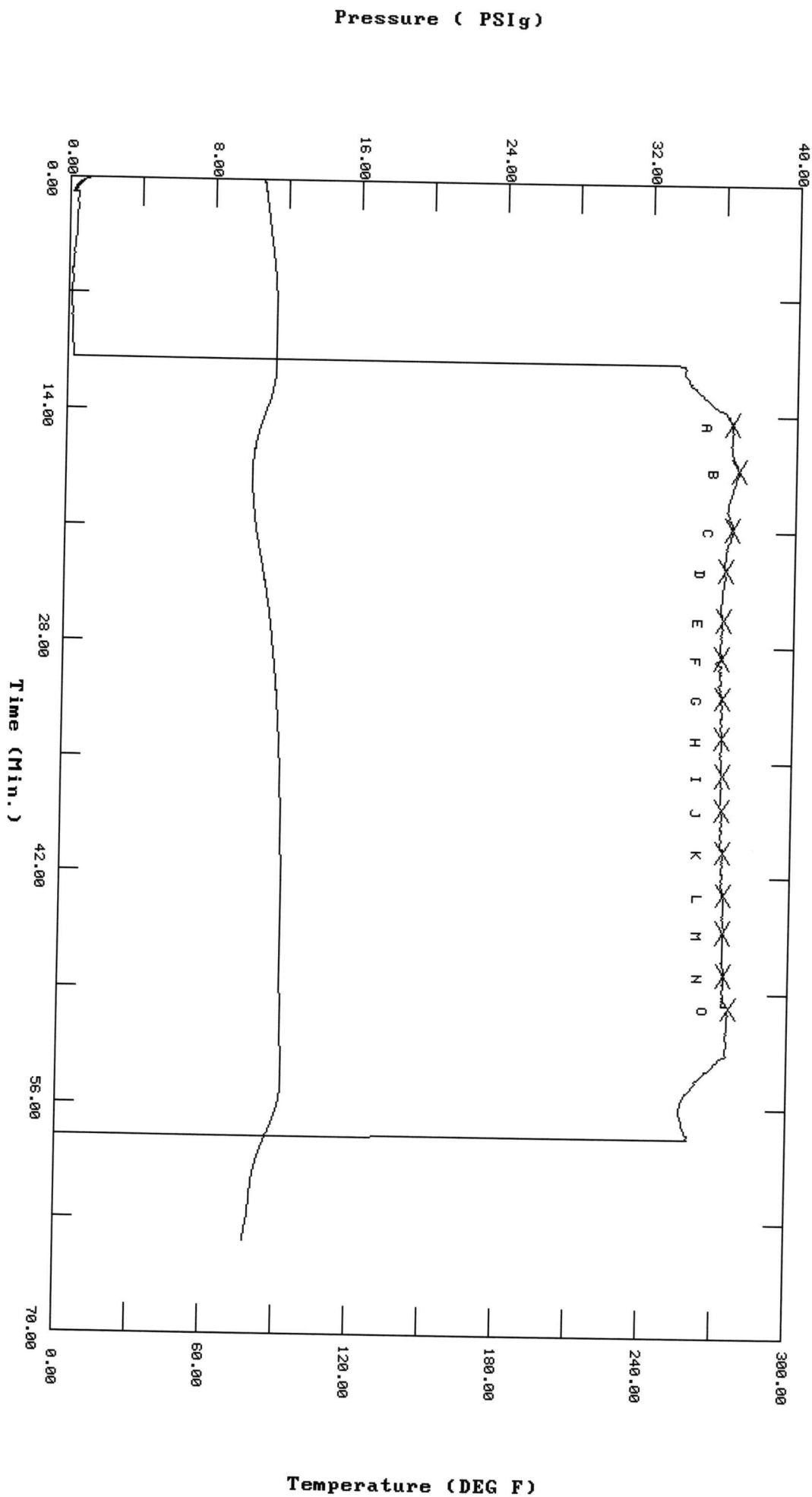
6-28-99 Gradient Test Royce #1 Helmrich & Payne

Pressure (PSig)



TEST HISTORY

6-28-99 Gradient Test Royce #1 Helmrich & Payne



ALPINE SUBSURFACE ELECTRONICS PROBE DATA LISTING
 TEST: 6-28-99 Gradient Test Royce #1 Helmrich & Payne
 DATE: 06/28/99 TIME: 11:12:07

PAGE: 001

Sample	Date	Time	Relative Seconds	Temperature DEG F	Pressure PSIg
1	99/06/28	11:12:08	000:00:01	79.73 DEG F	1.71 PSig
Print every 100 samples					
101	99/06/28	11:16:37	000:04:30	83.92 DEG F	0.24 PSig
201	99/06/28	11:24:57	000:12:50	84.38 DEG F	34.93 PSig
A 220	99/06/28	11:26:32	000:14:25	80.86 DEG F	36.51 PSig
** Flag Point A					
1000'					
B 254	99/06/28	11:29:22	000:17:15	76.77 DEG F	36.93 PSig
** Flag Point B					
1500'					
C 297	99/06/28	11:32:57	000:20:50	78.19 DEG F	36.62 PSig
** Flag Point C					
2000'					
D 327	99/06/28	11:35:27	000:23:20	81.26 DEG F	36.25 PSig
** Flag Point D					
2100'					
E 363	99/06/28	11:38:27	000:26:20	84.49 DEG F	36.14 PSig
** Flag Point E					
2200'					
F 391	99/06/28	11:40:47	000:28:40	86.34 DEG F	36.08 PSig
** Flag Point F					
2300'					
G 420	99/06/28	11:43:12	000:31:05	87.83 DEG F	36.17 PSig
** Flag Point G					
2400'					
H 449	99/06/28	11:45:37	000:33:30	88.99 DEG F	36.14 PSig
** Flag Point H					
2450'					
I 476	99/06/28	11:47:52	000:35:45	89.76 DEG F	36.22 PSig
** Flag Point I					
2500'					
J 501	99/06/28	11:49:57	000:37:50	90.27 DEG F	36.29 PSig
** Flag Point J					
2550'					
K 532	99/06/28	11:52:32	000:40:25	90.71 DEG F	36.30 PSig
** Flag Point K					
2600'					
L 563	99/06/28	11:55:07	000:43:00	90.98 DEG F	36.39 PSig
** Flag Point L					
2650'					
M 590	99/06/28	11:57:22	000:45:15	91.10 DEG F	36.45 PSig
** Flag Point M					
2700'					
N 621	99/06/28	11:59:57	000:47:50	91.26 DEG F	36.48 PSig
** Flag Point N					
2750'					
O 645	99/06/28	12:01:57	000:49:50	91.43 DEG F	36.83 PSig
** Flag Point O					
2770'					
745	99/06/28	12:10:17	000:58:10	85.86 DEG F	0.00 PSig
819	99/06/28	12:16:27	001:04:20	77.69 DEG F	0.00 PSig

Trilobite Testing L.L.C.

Bottom hole pressure build-up test / Multi-point back pressure test

Company Helmrich & Payne Date 6-28

Address _____

Well Name & No. Royce #1Legal Description Sec. 2 Twp. 31^S Rge. 34^W Co. Seward State. KS
2310 FSL 2310 FELField/pool Hugoton Elev. 2955 GL Recorder # .030Tubing 5 1/2" in. @ 2750 ft.Test type Gradient Test Interval 1000-2770 Status Flowing WellDate & Time Started 6-28 11:12:07 AM Date & Time Ended 6-28 12:15 PMDuration: 1 min Sample Rate: 1 sec ^{1.71}₄₄Duration: 5 hrs Sample Rate: 5 sec ⁰

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Duration: _____ Sample Rate: _____

Mileage FI Royce #1-2 1 miRod Steinbrink

Well Name: Royce 1
Company: Helmerich & Payne
Location: 2-31s-34w
Seward county Kansas
Date: 9-22-99

Company: Helmerich & Payne
Address: 1579 E. 21st
: Tulsa, Oklahoma 74114
:

Date: September 20 1999
to: September 20 1999

Well Name : test 2 Royce #1 Helmerich & Payne
Location : 2-31s-34w Seward co KS Elev. : 0.00 KB(ft) 0.00 CF(ft)
Field/Pool: Hugoton Prod. Interval: 1000.00 to 2770.00 ft(CF)
Test Type : Gradient Mid-Point Perf: 0.00 ft(CF)
Status : Flowing Tubing: 0.00 inches @ 0.00 ft(CF)

Wire Line Company : Trilobite Testing LLC

Recorder Serial # 2341 Run Depth: 0.00 ft(CF)
Range : 4995 Sample Memory: 21000 Samples
Start Date/Time: Sep 20 1999 @ 13:47:32 End Date/Time: Sep 20 1999 @ 13:47:32
Date of Last Calibration: April 1 1997

NOTE - 1 Sample = Time, Pressure, Temperature

Program: Duration: 1 Min. Sample Rate: 1 Sec.
Duration: 1 Hr. Sample Rate: 5 Sec.

Tubing Pressure: Initial: Not Reported Final: Not Reported
Casing Pressure: Initial: Not Reported Final: Not Reported

Electronic Data supplied on disk in standard ASE format.

***** STATIC GRADIENT DATA *****

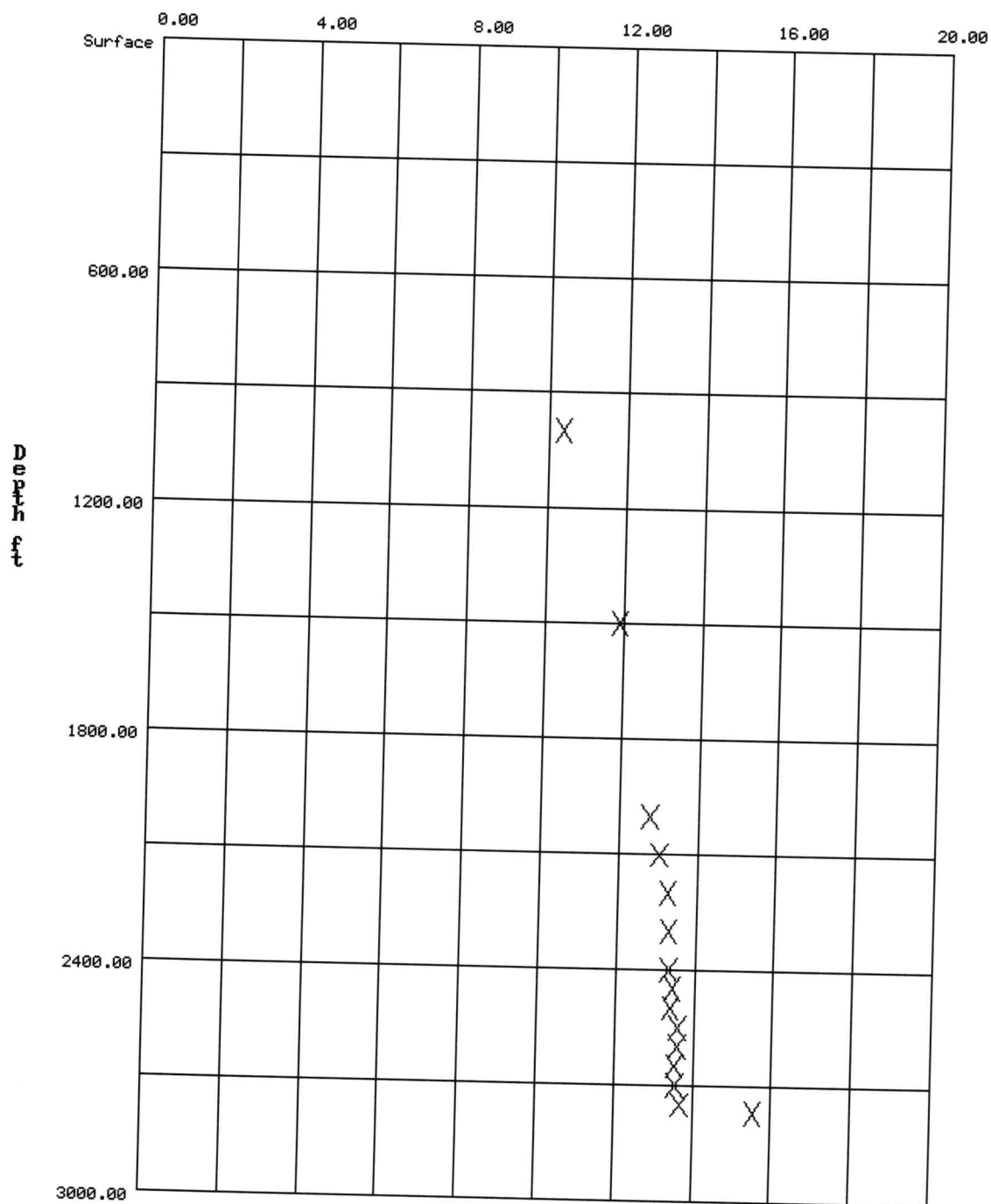
test 2 Royce #1 Helmerich & Payne
Date: 09/20/99 Time: 13:47:32

Depth ft	Time From hh:mm:ss	Time To hh:mm:ss	Pressure PSIg	Gradient PSIg/ft
1000.00	13:55:22	13:58:22	10.35	0.0000
1500.00	13:59:47	14:02:47	11.90	0.0031
2000.00	14:03:32	14:06:32	12.78	0.0018
2100.00	14:05:57	14:08:57	13.03	0.0025
2200.00	14:10:12	14:13:10	13.27	0.0024
2300.00	14:13:22	14:16:22	13.32	0.0005
2400.00	14:16:37	14:19:37	13.33	0.0001
2450.00	14:19:47	14:22:47	13.44	0.0022
2500.00	14:23:12	14:26:12	13.39	-0.001
2550.00	14:26:17	14:29:17	13.59	0.0040
2600.00	14:29:32	14:32:32	13.59	0.0000
2650.00	14:32:42	14:35:42	13.53	-0.0012
2700.00	14:35:57	14:38:57	13.54	0.0002
2750.00	14:39:02	14:42:02	13.68	0.0028
2770.00	14:42:17	14:45:17	15.52	0.0920

STATIC GRADIENT PLOT

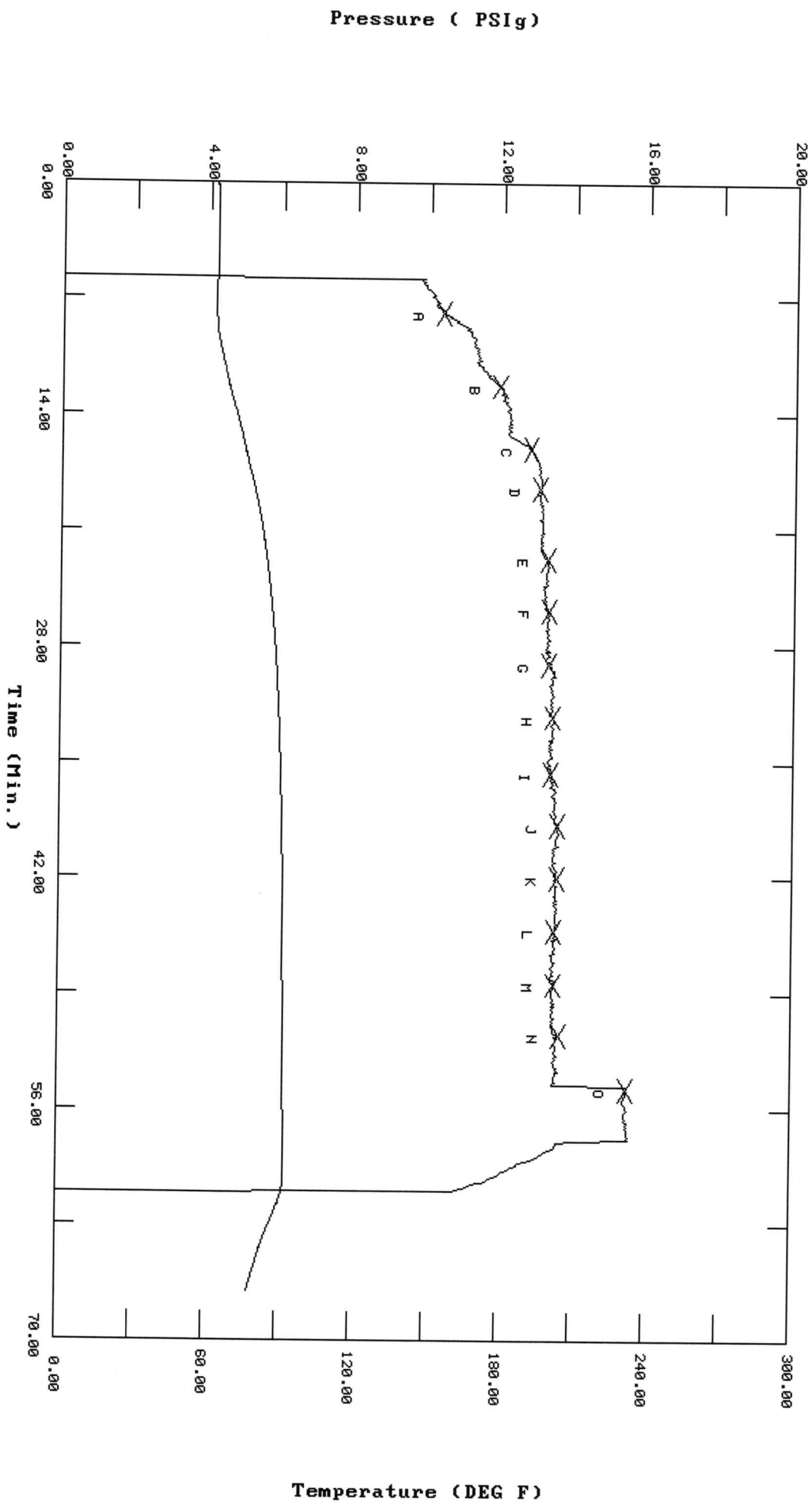
test 2 Royce #1 Helmerich & Payne

Pressure (PSig)



TEST HISTORY

test 2 Royce #1 Helmerich & Payne



ALPINE SUBSURFACE ELECTRONICS PROBE DATA LISTING

TEST: test 2 Royce #1 Helmerich & Payne

DATE: 09/20/99

TIME: 13:47:32

PAGE: 001

Sample	Date	Time	Relative Seconds	Temperature	Pressure
				DEG F	PSIg
1	99/09/20	13:47:33	000:00:01	62.23	0.00
Print every 100 samples					
101	99/09/20	13:52:02	000:04:30	62.73	0.00
A 141	99/09/20	13:55:22	000:07:50	62.48	10.35
** Flag Point A					
1000'					
B 194	99/09/20	13:59:47	000:12:15	67.93	11.90
** Flag Point B					
1500'					
C 239	99/09/20	14:03:32	000:16:00	74.71	12.78
** Flag Point C					
2000'					
D 268	99/09/20	14:05:57	000:18:25	78.80	13.03
** Flag Point D					
2100'					
E 319	99/09/20	14:10:12	000:22:40	84.04	13.27
** Flag Point E					
2200'					
F 357	99/09/20	14:13:22	000:25:50	86.56	13.32
** Flag Point F					
2300'					
G 396	99/09/20	14:16:37	000:29:05	88.31	13.33
** Flag Point G					
2400'					
H 434	99/09/20	14:19:47	000:32:15	89.54	13.44
** Flag Point H					
2450'					
I 475	99/09/20	14:23:12	000:35:40	90.49	13.39
** Flag Point I					
2500'					
J 512	99/09/20	14:26:17	000:38:45	91.11	13.59
** Flag Point J					
2550'					
K 551	99/09/20	14:29:32	000:42:00	91.53	13.59
** Flag Point K					
2600'					
L 589	99/09/20	14:32:42	000:45:10	91.81	13.53
** Flag Point L					
2650'					
M 628	99/09/20	14:35:57	000:48:25	91.99	13.54
** Flag Point M					
2700'					
N 665	99/09/20	14:39:02	000:51:30	92.15	13.68
** Flag Point N					
2750'					
O 704	99/09/20	14:42:17	000:54:45	92.40	15.52
** Flag Point O					
2770'					
804	99/09/20	14:50:37	001:03:05	87.14	0.00
851	99/09/20	14:54:32	001:07:00	78.55	0.00

End of File

Trilobite Testing L.L.C.

Bottom hole pressure build-up test / Multi-point back pressure test

Company Helmrich + Payne Date 9-20-99

Address _____

Well Name & No Keyce #1-2

Legal Description Sec 2 Twp 31S Rge 34W Co Seward State KS

Field/pool Hugoton Elev. 2955.61 Recorder # 2341

Casing 5 1/2" in @ 2816 ft.

Test type Gradient Test Interval 1000-2760 Status Flowing

Date & Time Started 9-20-99 12:15 P.M. Date & Time Ended 9-20 1:35 P.M.

Duration: <u>1 min</u> Sample Rate: <u>1 sec</u> <u>0.00</u>	Duration: _____ Sample Rate: _____
Duration: <u>5 hrs</u> Sample Rate: <u>5 sec</u> <u>0.00</u>	Duration: _____ Sample Rate: _____
Duration: _____ Sample Rate: _____	Duration: _____ Sample Rate: _____
Duration: _____ Sample Rate: _____	Duration: _____ Sample Rate: _____
Duration: _____ Sample Rate: _____	Duration: _____ Sample Rate: _____
Duration: _____ Sample Rate: _____	Duration: _____ Sample Rate: _____
Duration: _____ Sample Rate: _____	Duration: _____ Sample Rate: _____

Sample in Coke bottle

Mileage 1 1/4 mi to 12 miles

Scott Bugba & Tommy Salga

