Well Name: Herd 34-14
Company: Sam Gary Jr.
Location: 34-32s-19w
Comanche County Kansas
Date: 10-29-98

4 days @ 250.00		1000.00
mileage	125RT x 2 = 250 @ .85	212.50
analysis	60.00	60.00
		1272.50

Darren 2/3 of 1290
Gary 1/3 of 1290

Company: Samuel Gary Jr. & Associates
Address: 1670 Broadway #3300
: Denver, CO 80202
:

Date: October 16 1998
to: October 16 1998

Well Name : Sam Gary Jr Herd 34-14 Wireline Test
Location : 34-32s-19w
Field/Pool: Colter
Test Type : Build up with gradients
Status : Shut-in

Elev. : 0.00 KB(ft) 0.00 CF(ft)
Prod. Interval: 5098.00 to 5113.00 ft(CF)
Mid-Point Perf: 5105.00 ft(CF)
Tubing: 2.00 inches @ 5125.00 ft(CF)

Wire Line Company : Trilobite Testing

Top Recorder Serial # 3030
Range : 4995
Start Date/Time: Oct 16 1998 @ 12:34:52
Date of Last Calibration: April 1 1997

Run Depth: 5150.00 ft(CF)
Sample Memory: 21000 Samples
End Date/Time: Oct 16 1998 @ 12:34:52

Bottom Recorder Serial #
Range :
Start Date/Time: Oct 16 1998 @ 12:34:52
Date of Last Calibration: 0 0

Run Depth: 0.00 ft(CF)
Sample Memory: 0 Samples
End Date/Time: Oct 16 1998 @ 12:34:52

NOTE - 1 Sample = Time, Pressure, Temperature

Program:	Duration:	1	Min.	Sample Rate:	1	Sec.	ΔP: 1.07
	Duration:	23	Hr.	Sample Rate:	15	Sec.	ΔP: 1634.71
	Duration:	24	Hr.	Sample Rate:	1	Min.	ΔP: 16.56
	Duration:	54	Hr.	Sample Rate:	5	Min.	ΔP: 121.40

Tubing Pressure: Initial: 595.0 PSIg Final: 1417.0 PSIg
Casing Pressure: Initial: 0.0 PSIg Final: 0.0 PSIg

Electronic Data supplied on disk in standard ASE format.

FieldNotes

Job Number:	
Customer:	Sam Gary Jr. & Associates
Wellname:	Herd 34-14
Well Location:	34 32s 19w Comanche
Formation:	Cherokee
Supervisors	Paul Simpson
Customer Rep:	Tom Larsen
Start Date:	10-16-98
Start Time:	12:35 started recorder
Test Unit:	
Operation:	buildup for pressure transient analysis with gradient stops
Remarks:	Wire parted during test due to unspent acid in hole

FieldNotes

Job Number:
Customer:
Wellname:
Well Location:
Formation:

Gas Meter 1

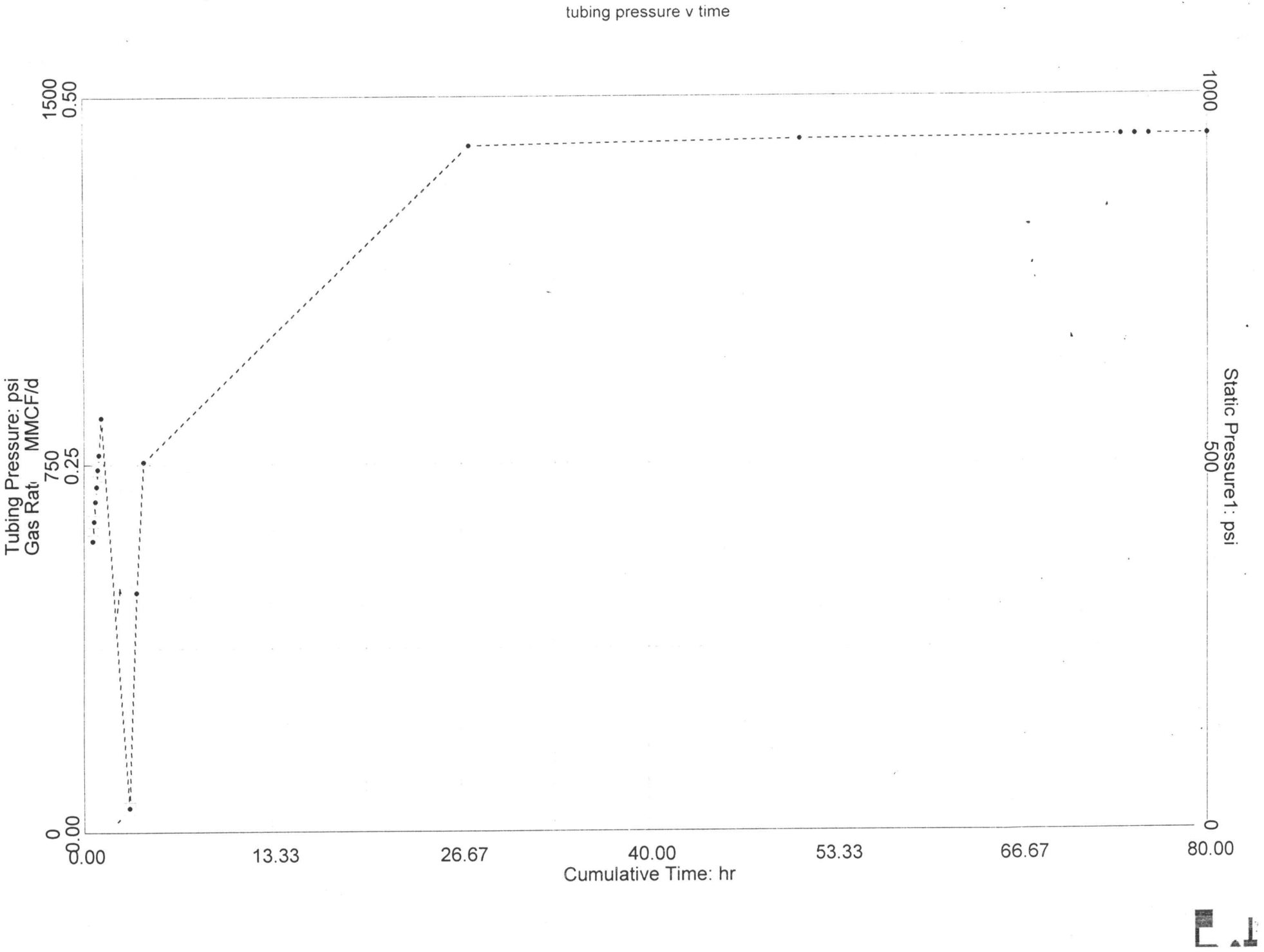
Meter Type:	Flow Prover	
Meter Run Size:	2.0000	in
Previous Gas Production:	0.000	MMCF
Gauge to Absolute Adjustment:	13.1	
Gas Gravity:	0.65	decimal
CO2:	0.13	%
H2S:	0.00	%
N2:	3.26	%
Critical Temperature:	364.8	R
Critical Pressure:	663.1	psi
Condensate:	Yes	

Job Number:
Customer:
Wellname:
Well Location:
Formation:

FieldNotes

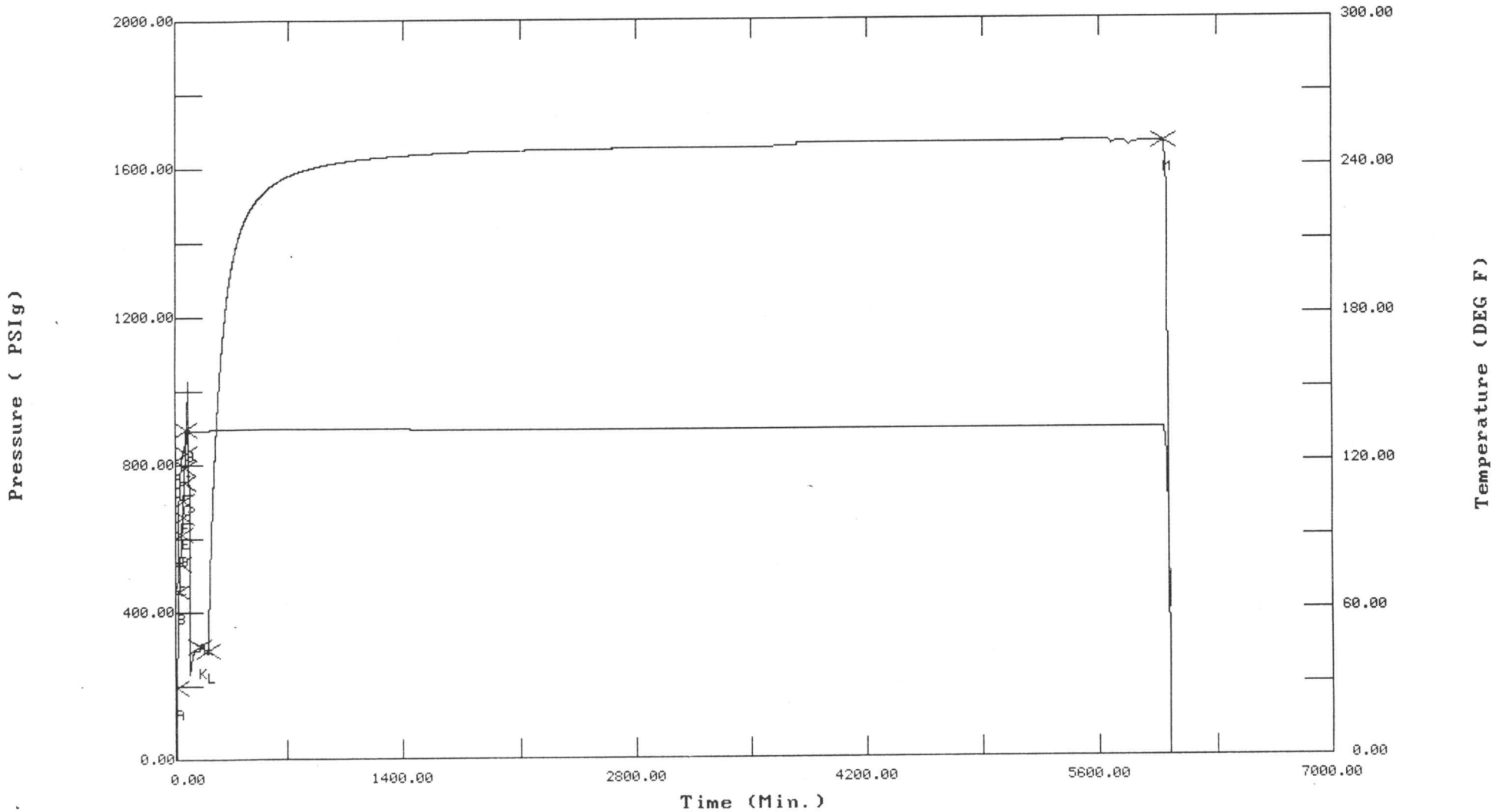
Row	Date	Clk Tim	Csg Pres	Tbg Pres	Static1	Orif1	Temp1	Gas Rate1	Cum Gas1
	yy/mm/dd	clock	psi	psi	psi	in	F	MMCF/d	MMCF
1									
2	1998/10/16	12:46:00		Started in with rec #3030					
3		13:00:00		4000'					
4		13:07:00		4250'					
5		13:14:00		4500'					
6		13:19:00		4600'					
7		13:24:00		4700'					
8				595.00					
9		13:30:00		4800					
10				635.00					
11		13:35:00		4900'					
12				675.00					
13		13:40:00		5000'					
14				705.00					
15		13:45:00		5100'					
16				740.00					
17		13:50:00		5150'					
18				770.00					
19				shutin @ 5150					
20		14:00:00		845.00					
21				blew down to tank					
22		14:10:00							
23				start gauging thru merla					
24		15:10:00			15.00	0.500	75.0	0.150	0.015
25		15:20:00			18.00	0.500	75.0	0.166	0.016
26		15:30:00			17.00	0.500	75.0	0.161	0.017
27				blowing back to tank					
28		15:35:00							
29				shutin					
30		16:00:00		50.00					
31		16:30:00		490.00					
32		17:00:00		755.00					
33	1998/10/17	16:00:00		1399.00					
34	1998/10/18	15:30:00		1411.00					
35	1998/10/19	14:30:00		1417.20					
36		15:30:00		1417.20					
37		16:30:00		1417.20					
38	1998/10/20	11:15:00		1417.60					

tubing pressure v time


tubing pressure v time
Tubing Pressure: psi
Gas Rat MMCF/d
Static Pressure1: psi
1500
0.50
750
0.25
0
0.00
1000
500
0
0.00
13.33
26.67
40.00
53.33
66.67
80.00
Cumulative Time: hr

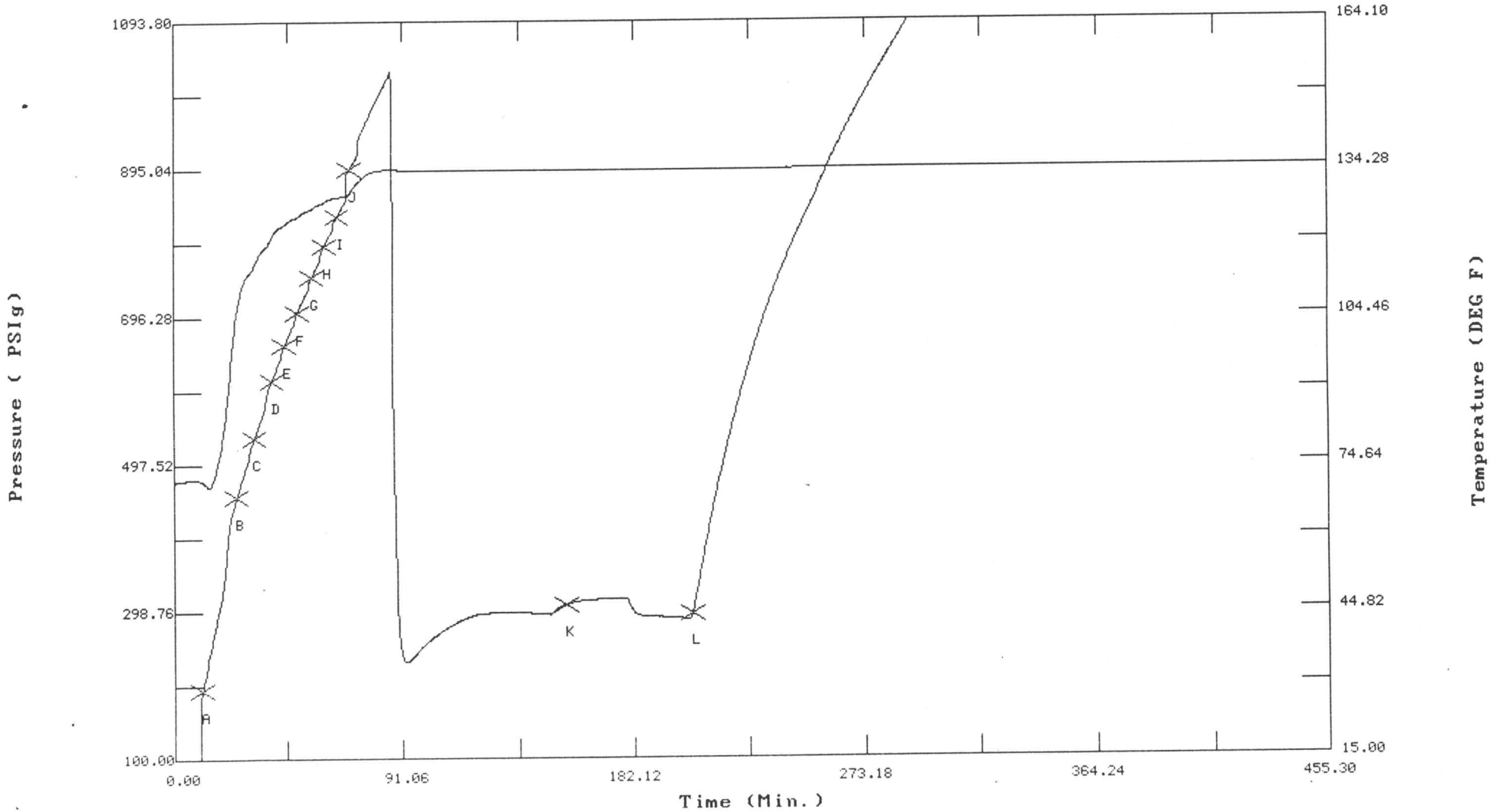
TEST HISTORY

Sam Gary Jr Herd 34-14 Wireline Test



TEST HISTORY

Sam Gary Jr Herd 34-14 Wireline Test



ALPINE SUBSURFACE ELECTRONICS PROBE DATA LISTING

TEST: Sam Gary Jr Herd 34-14 Wireline Test

DATE: 10/16/98 TIME: 12:34:52 PAGE: 001

Sample	Date	Time	Relative Seconds	Temperature DEG F	Pressure PSIg
1	98/10/16	12:34:53	000:00:01	70.86 DEG F	1.63 PSIg
Print every 100 samples					
A 100	98/10/16	12:46:07	000:11:15	71.35 DEG F	192.85 PSIg
** Flag Point A					
started in with rec.					
B 156	98/10/16	13:00:07	000:25:15	105.57 DEG F	453.72 PSIg
** Flag Point B					
4000					
C 184	98/10/16	13:07:07	000:32:15	115.00 DEG F	532.91 PSIg
** Flag Point C					
4250'					
D 212	98/10/16	13:14:07	000:39:15	120.82 DEG F	610.75 PSIg
** Flag Point D					
4500'					
E 232	98/10/16	13:19:07	000:44:15	123.27 DEG F	658.28 PSIg
** Flag Point E					
4600'					
F 252	98/10/16	13:24:07	000:49:15	124.77 DEG F	702.90 PSIg
** Flag Point F					
4700'					
G 276	98/10/16	13:30:07	000:55:15	126.48 DEG F	750.89 PSIg
** Flag Point G					
4800'					
H 296	98/10/16	13:35:07	001:00:15	127.80 DEG F	792.60 PSIg
** Flag Point H					
4900'					
I 316	98/10/16	13:40:07	001:05:15	128.73 DEG F	831.19 PSIg
** Flag Point I					
5000'					
J 336	98/10/16	13:45:07	001:10:15	129.43 DEG F	894.82 PSIg
** Flag Point J					
5100'					
356	98/10/16	13:50:07	001:15:15	132.52 DEG F	946.95 PSIg
5150 shut-in					
456	98/10/16	14:15:07	001:40:15	133.94 DEG F	254.57 PSIg
556	98/10/16	14:40:07	002:05:15	133.98 DEG F	295.31 PSIg
656	98/10/16	15:05:07	002:30:15	133.99 DEG F	297.69 PSIg
K 676	98/10/16	15:10:07	002:35:15	133.99 DEG F	306.80 PSIg
** Flag Point K					
started gauging thru merla					
776	98/10/16	15:35:07	003:00:15	134.02 DEG F	308.82 PSIg
L 876	98/10/16	16:00:07	003:25:15	134.01 DEG F	293.92 PSIg
** Flag Point L					
Shut-in					
976	98/10/16	16:25:07	003:50:15	134.12 DEG F	657.24 PSIg
1076	98/10/16	16:50:07	004:15:15	134.20 DEG F	870.57 PSIg
1176	98/10/16	17:15:07	004:40:15	134.25 DEG F	1037.09 PSIg
1276	98/10/16	17:40:07	005:05:15	134.29 DEG F	1169.23 PSIg
1376	98/10/16	18:05:07	005:30:15	134.30 DEG F	1265.22 PSIg
1476	98/10/16	18:30:07	005:55:15	134.29 DEG F	1334.56 PSIg
1576	98/10/16	18:55:07	006:20:15	134.30 DEG F	1386.19 PSIg

ALPINE SUBSURFACE ELECTRONICS PROBE DATA LISTING

TEST: Sam Gary Jr Herd 34-14 Wireline Test

DATE: 10/16/98 TIME: 12:34:52

Sample	Date	Time	Relative Seconds	Temperature DEG F	Pressure PSIg
1676	98/10/16	19:20:07	006:45:15	134.29 DEG F	1425.36 PSIg
1776	98/10/16	19:45:07	007:10:15	134.28 DEG F	1455.82 PSIg
1876	98/10/16	20:10:07	007:35:15	134.27 DEG F	1479.84 PSIg
1976	98/10/16	20:35:07	008:00:15	134.26 DEG F	1499.14 PSIg
2076	98/10/16	21:00:07	008:25:15	134.26 DEG F	1515.06 PSIg
2176	98/10/16	21:25:07	008:50:15	134.26 DEG F	1528.34 PSIg
2276	98/10/16	21:50:07	009:15:15	134.26 DEG F	1539.48 PSIg
2376	98/10/16	22:15:07	009:40:15	134.24 DEG F	1549.01 PSIg
2476	98/10/16	22:40:07	010:05:15	134.25 DEG F	1557.18 PSIg
2576	98/10/16	23:05:07	010:30:15	134.24 DEG F	1564.35 PSIg
2676	98/10/16	23:30:07	010:55:15	134.24 DEG F	1570.62 PSIg
2776	98/10/16	23:55:07	011:20:15	134.24 DEG F	1576.21 PSIg
2876	98/10/17	00:20:07	011:45:15	134.24 DEG F	1581.21 PSIg
2976	98/10/17	00:45:07	012:10:15	134.24 DEG F	1585.68 PSIg
3076	98/10/17	01:10:07	012:35:15	134.23 DEG F	1589.71 PSIg
3176	98/10/17	01:35:07	013:00:15	134.24 DEG F	1593.43 PSIg
3276	98/10/17	02:00:07	013:25:15	134.23 DEG F	1596.80 PSIg
3376	98/10/17	02:25:07	013:50:15	134.23 DEG F	1599.78 PSIg
3476	98/10/17	02:50:07	014:15:15	134.23 DEG F	1602.52 PSIg
3576	98/10/17	03:15:07	014:40:15	134.23 DEG F	1605.19 PSIg
3676	98/10/17	03:40:07	015:05:15	134.23 DEG F	1607.59 PSIg
3776	98/10/17	04:05:07	015:30:15	134.22 DEG F	1609.85 PSIg
3876	98/10/17	04:30:07	015:55:15	134.23 DEG F	1611.88 PSIg
3976	98/10/17	04:55:07	016:20:15	134.23 DEG F	1613.82 PSIg
4076	98/10/17	05:20:07	016:45:15	134.22 DEG F	1615.64 PSIg
4176	98/10/17	05:45:07	017:10:15	134.22 DEG F	1617.35 PSIg
4276	98/10/17	06:10:07	017:35:15	134.22 DEG F	1618.96 PSIg
4376	98/10/17	06:35:07	018:00:15	134.22 DEG F	1620.46 PSIg
4476	98/10/17	07:00:07	018:25:15	134.21 DEG F	1621.87 PSIg
4576	98/10/17	07:25:07	018:50:15	134.23 DEG F	1623.20 PSIg
4676	98/10/17	07:50:07	019:15:15	134.22 DEG F	1624.42 PSIg
4776	98/10/17	08:15:07	019:40:15	134.22 DEG F	1625.61 PSIg
4876	98/10/17	08:40:07	020:05:15	134.23 DEG F	1626.69 PSIg
4976	98/10/17	09:05:07	020:30:15	134.20 DEG F	1627.78 PSIg
5076	98/10/17	09:30:07	020:55:15	134.21 DEG F	1628.78 PSIg
5176	98/10/17	09:55:07	021:20:15	134.22 DEG F	1629.73 PSIg
5276	98/10/17	10:20:07	021:45:15	134.21 DEG F	1630.58 PSIg
5376	98/10/17	10:45:07	022:10:15	134.21 DEG F	1631.44 PSIg
5476	98/10/17	11:10:07	022:35:15	134.20 DEG F	1632.34 PSIg
5576	98/10/17	11:35:07	023:00:15	134.20 DEG F	1633.11 PSIg
5676	98/10/17	12:00:07	023:25:15	134.21 DEG F	1633.79 PSIg
5776	98/10/17	12:25:07	023:50:15	134.20 DEG F	1634.51 PSIg
5876	98/10/17	13:33:52	024:59:00	133.82 DEG F	1636.78 PSIg
5976	98/10/17	15:13:52	026:39:00	133.81 DEG F	1639.17 PSIg
6076	98/10/17	16:53:52	028:19:00	133.81 DEG F	1641.06 PSIg
6176	98/10/17	18:33:52	029:59:00	133.80 DEG F	1642.71 PSIg
6276	98/10/17	20:13:52	031:39:00	133.77 DEG F	1644.06 PSIg
6376	98/10/17	21:53:52	033:19:00	133.77 DEG F	1645.26 PSIg
6476	98/10/17	23:33:52	034:59:00	133.76 DEG F	1646.33 PSIg
6576	98/10/18	01:13:52	036:39:00	133.74 DEG F	1647.38 PSIg
6676	98/10/18	02:53:52	038:19:00	133.74 DEG F	1648.16 PSIg

ALPINE SUBSURFACE ELECTRONICS PROBE DATA LISTING

TEST: Sam Gary Jr Herd 34-14 Wireline Test

DATE: 10/16/98 TIME: 12:34:52

Sample	Date	Time	Relative Seconds	Temperature DEG F	Pressure PSIg
6776	98/10/18	04:33:52	039:59:00	133.73 DEG F	1648.89 PSIg
6876	98/10/18	06:13:52	041:39:00	133.73 DEG F	1649.59 PSIg
6976	98/10/18	07:53:52	043:19:00	133.73 DEG F	1650.29 PSIg
7076	98/10/18	09:33:52	044:59:00	133.71 DEG F	1650.92 PSIg
7176	98/10/18	11:13:52	046:39:00	133.71 DEG F	1651.40 PSIg
7276	98/10/18	14:10:52	049:36:00	133.61 DEG F	1652.31 PSIg
7376	98/10/18	22:30:52	057:56:00	133.59 DEG F	1653.95 PSIg
7476	98/10/19	06:50:52	066:16:00	133.81 DEG F	1663.92 PSIg
7576	98/10/19	15:10:52	074:36:00	133.79 DEG F	1665.01 PSIg
7676	98/10/19	23:30:52	082:56:00	133.78 DEG F	1665.89 PSIg
7776	98/10/20	07:50:52	091:16:00	133.77 DEG F	1666.80 PSIg
M 7847	98/10/20	16:20:52	099:46:00	133.76 DEG F	1663.25 PSIg
** Flag Point M					
7849	98/10/20	16:50:52	100:16:00	59.63 DEG F	0.00 PSIg

End of File

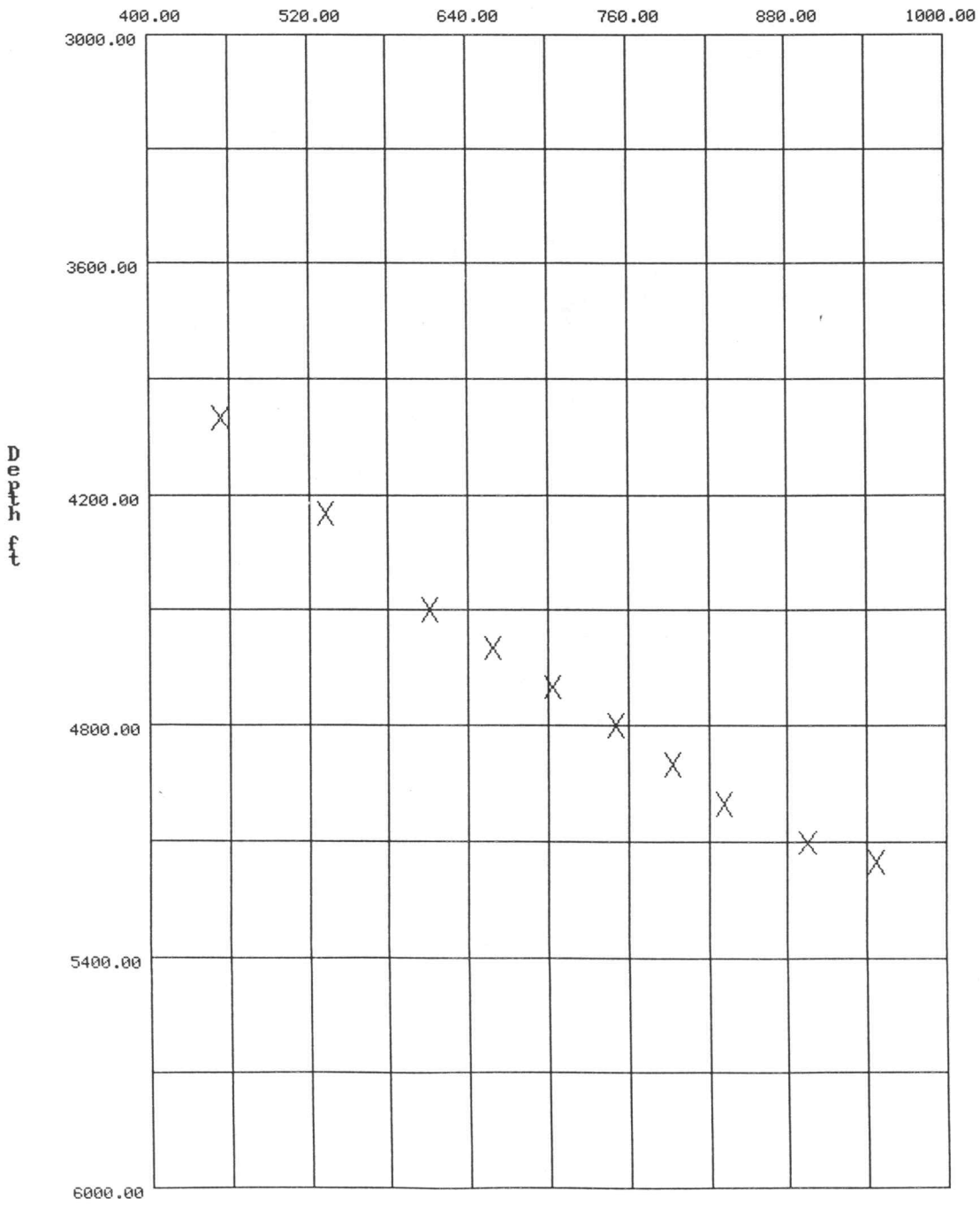
****** STATIC GRADIENT DATA ******

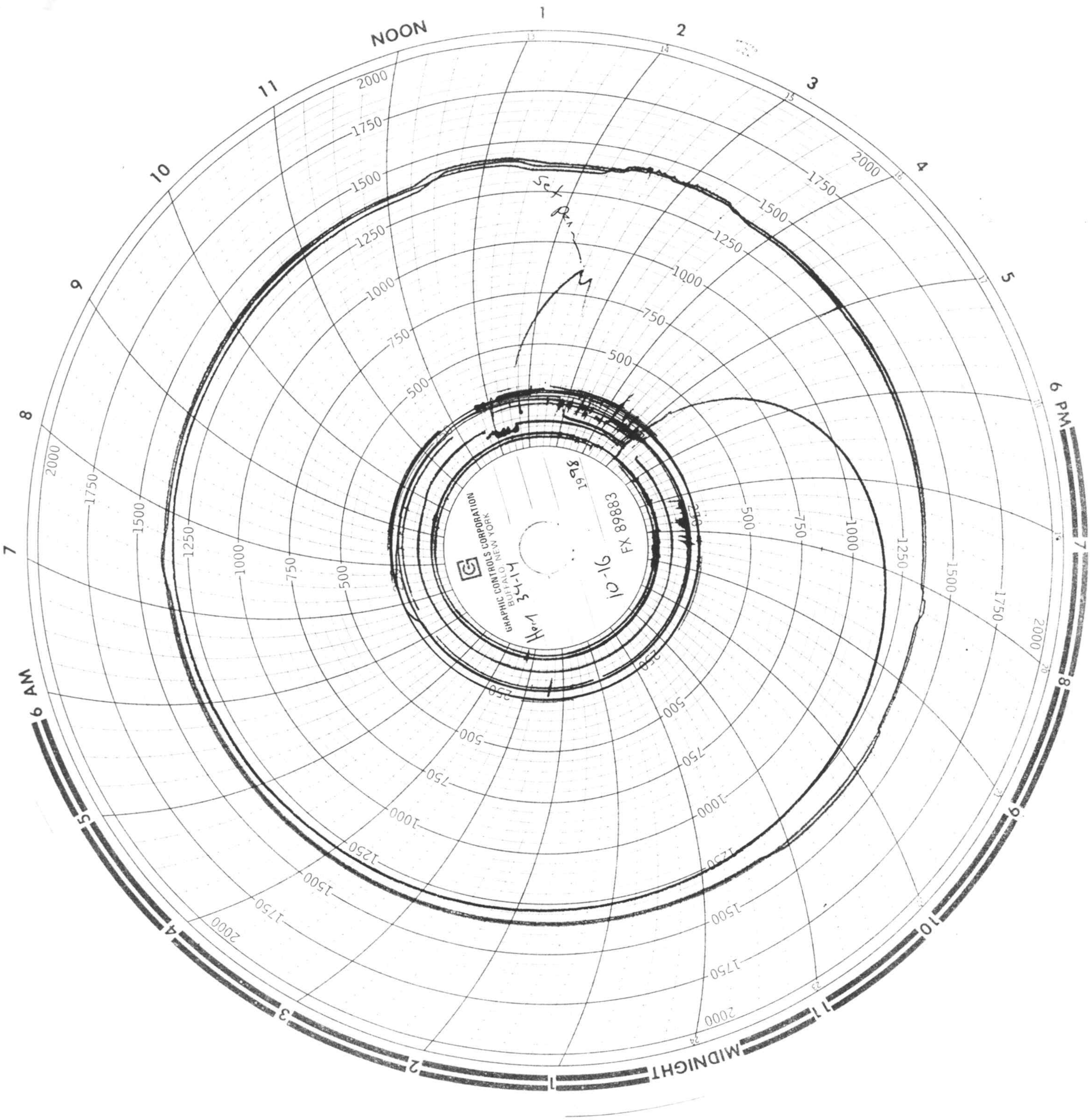
Sam Gary Jr Herd 34-14 Wireline Test
Date: 10/16/98 Time: 12:34:52

Depth ft	Time From hh:mm:ss	Time To hh:mm:ss	Pressure PSIg	Gradient PSIg/ft
4000.00	13:00:07	13:05:07	453.72	0.0000
4250.00	13:07:07	13:12:07	532.91	0.3168
4500.00	13:14:07	13:19:07	610.75	0.3114
4600.00	13:19:07	13:24:07	658.28	0.4753
4700.00	13:24:07	13:29:07	702.90	0.4462
4800.00	13:30:07	13:35:07	750.89	0.4799
4900.00	13:35:07	13:40:07	792.60	0.4171
5000.00	13:40:07	13:45:07	831.19	0.3859
5100.00	13:45:07	13:50:07	894.82	0.6363
5150.00	13:50:07	13:55:07	946.98	1.0432

STATIC GRADIENT PLOT

Sam Gary Jr Herd 34-14 Wireline Test




NOON
1
2
3
4
5
6 PM
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8
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11
MIDNIGHT
1
2
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6 AM
7
8
9
10
11
250
500
750
1000
1250
1500
1750
2000
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
FX 89883
10-16
1998

KANSAS CORPORATION COMMISSION
ONE POINT STABLIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2
(Rev.8/98)

TYPE TEST:
☒ Open Flow
☒ Deliverability

TEST DATE: 7/23/2001 API No. 15-033-20921

Company	Lease	Well Number
Samuel Gary Jr. & Associates	Herd	34-14

County	Location	Section	TWP	RNG(E/W)	Acres Attributed
Comanche	SE SW	34-32s-19w			

Field	Reservoir	Gas Gathering Connection
Colter	Marmaton	

Completion Date	Plug Back Total Depth	Packer Set at
11-7-98	4948	4893

Casing Size	Weight	Internal Diameter	Set at	Perforations	To
5.500	15.500	4.950	6103	4928	4932

Tubing Size	Weight	Internal Diameter	Set at	Perforations	To
2.375	4.700	1.995	4893		

Type Completion (Describe)	Type Fluid Production	Pump Unit or Traveling Plunger?
Recomplete		

Producing Thru(Annulus/Tubing)	% Carbon Dioxide	% Nitrogen	Gas Gravity- Gg
tubing	.078	4.957	.692

Vertical Depth (H)	Pressure Taps	Meter Run Size
4930	flange	2.067

Pressure Buildup: Shut in	7-19-01 @ 1700	TAKEN	7-22-01 @ 1115
Well on Line: Started	7-22-01 @ 1115	TAKEN	7-23-01 @ 0900

OBSERVED SURFACE DATA

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H_2O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P_w) (P_t) (P_c) psig	Casing psia	Tubing WellHead Press. (P_w) (P_t) (P_c) psig	Tubing psia	Duration (Hours)	Liquid Prod. Barrels
Shut-in								1578	1592	66.3	
Flow	1.250	104.0	5.50	62				1062	1076	22.3	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F_b) Mcfd	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW R Mcfd	GOR	G_m
8.329	118.4	25.52	1.2021	.9981	1.0114	257		.692

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

$(Pc)^2$ = 2535.7 $(Pw)^2$ = 1160.0 Pd = 6.5 % (Pc - 14.4) + 14.4 = $(Pa)^2$ = 0.207 $(Pd)^2$ = 10.82

$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	$\frac{(P_c)^2 - (P_a)^2 \text{ or } (P_c)^2 - (P_d)^2}{(P_c)^2 - (P_w)^2}$	LOG [ ]	Backpressure Curve Slope"n" ---- or ---- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability = R x Antilog Mcfd
2535.53	1375.71	1.843	.2655	.736	.1954	1.568	404
2524.92	1375.71	1.835	.2637	.736	.1941	1.564	403

OPEN FLOW 404 Mcfd @ 14.65 psia DELIVERABILITY 403 Mcfd @ 14.65 psia

The undersigned authority, on behaf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated herein and that said report is true and correct. Executed this the 26 day of July, 20 01

Witness (if any)

For Company

For Commission

Checked by

I declare under penelty or perjury under the laws of the state of kansas that I am authorized to request exempt status under rule K.A.R. 82-3-304 on behalf of the operator Samuel Gary Jr. & Associates and that the foregoing information and statements contained on this application form are true and correct to the best of my knowledge and belief based upon gas production records and records of equipment installation and/or of type completion or upon use of the gas well herein named.

I hereby request a permanent exemption from open flow testing for the Herd gas well on the grounds that said well:

(check one)

- ☐ is a coalbed methane producer
- ☐ is cycled on plunger lift due to water
- ☐ is a source of natural gas for injection into an oil reservoir undergoing ER
- ☐ is on vacum at the present time; KCC approval Docket No. _____
- ☐ is incapable of producing at a daily rate in exess of 150 mcf/D

Date: _____

Signature: _____

Title: _____

Instructions:

All active gas wells must have at least an original G-2 form on file with the conservation division. If a gas well meets the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to obtain a testing exemption.

At some point during the succeeding calendar year, wellhead shut-in pressure shall be measured after a minimum of 24 hours shut-in/buildup time and shall be reported on the front side of this form under "observed surface data." Shut-in pressure shall thereafter be reported yearly in the same manner.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than thirty (30) days after the taking of the pressure reading. The form must be signed and dated on the front side as though it was a verified report of test results.

WELL TESTER: Trilobite Testing

GAS WELL BACK PRESSURE CURVE

TEST DATE: 7-22-01