

DRILL-STEM TEST DATA

Well Name:	CYNTHIA SAUNDERS A #2		
Company :	ANADARKO PETROLEUM CORP		
Location - Sec:	35	Twp:	32S
County:	SEWARD	State:	KS
Date:	8/22/95		

Rge: 31W

TRILOBITE TESTING L.L.C.

OPERATOR : ANADARKO Pet. Corp.

DATE 8/17/95

WELL NAME: Cynthia Saunders A #2

KB 0.00 ft

TICKET NO: 7883

DST #1

LOCATION : 35-32-31w

GR 2774.00 ft

FORMATION: Judy

INTERVAL : 4648.00 To 4673.00 ft

TD 4673.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10038	11038	2342			PF Fr. 30 to hr
SI 60 Range(Psi)	5075.0	5075.0	4995.0	0.0	0.0	IS Fr. 60 to hr
SF 60 Clock(hrs)	12HR.	12 hr	elect			SF Fr. 60 to hr
FS 120 Depth(ft)	4670.0	4670.0	4653.0	0.0	0.0	FS Fr. 120 to hr

	Field	1	2	3	4	
A. Init Hydro	2080.0	2119.0	2229.0	0.0	0.0	T STARTED 0430 hr
B. First Flow	82.0	87.0	17.0	0.0	0.0	T ON BOTM 0728 hr
B1. Final Flow	82.0	87.0	22.0	0.0	0.0	T OPEN 0730 hr
C. In Shut-in	1008.0	1005.0	1022.0	0.0	0.0	T PULLED 1200 hr
D. Init Flow	95.0	93.0	26.0	0.0	0.0	T OUT 330 hr
E. Final Flow	82.0	80.0	44.0	0.0	0.0	
F. Fl Shut-in	995.0	999.0	1019.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2055.0	2097.0	2149.0	0.0	0.0	Tool Wt. 18000.00 lbs
Inside/Outside	I	I	O			Wt Set On Packer 25000.00 lbs
						Wt Pulled Loose 82000.00 lbs
						Initial Str Wt 75000.00 lbs
						Unseated Str Wt 80000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 482.00 ft
						D.P. Length 4157.00 ft

RECOVERY

Tot Fluid 150.00 ft of 150.00 ft in DC and 0.00 ft in DP
 150.00 ft of G&WCM w/trace oil 18g 2o 30w 50m
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

1st. open
 Very strong blow, Built to bottom of
 bucket 30 sec. GTS in 5 min.

2nd open
 Bottom of bucket as tool opened.

SAMPLES:

SENT TO: CARAWAY

MUD DATA-----

Mud Type	CHEMICAL
Weight	9.10 lb/c
Vis.	51.00 S/L
W.L.	8.80 in3
F.C.	0.00 in
Mud Drop	

Amt. of fill	0.00 ft
Btm. H. Temp.	109.00 F
Hole Condition	GOOD
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out N	
Tool Chased N	

Tester	TOM HORACEK
Co. Rep.	JIM BARLOW
Contr.	BIG A Drlg.
Rig #	1
Unit #	
Pump T.	

Test Successful: Y

Operator.....: ANADARKO PETROLEUM CORP
Well Name.....: CYNTHIA SAUNDERS A #2
DST Number.....: 1

Location.: 35-32S-31W Recorder No....: 2342
Test Type: CONVENTIONAL Recorder Depth: 4653
Formation: JUDY Test Interval.: 4648-4673

RESERVOIR CALCULATIONS: Gas calculations based on shut-in #2

RESERVOIR PARAMETERS USED:

Net Pay.....: 5.00 ft
Porosity.....: 7.00 %
Bottom Hole Temp.....: 109.00 F
Specific Gravity.....: 0.706
Z factor.....: $\gamma_g/3f \gamma_s$
Compressibility.....: 0.022850 /psi
Viscosity.....: 0.0134 cp
Total Flowing Time.....: 90.00 min.
Flow Rate.....: 50.20 bbls/d
Final Flowing Pressure.....: 44.00 psi
Horner Slope.....: $0.9511 \times 10^{-6} \text{ psi}^2/\text{cycle}$
Extrapolated Pressure.....: 1118.83 psi
Assumed Drainage Radius.....: 1500.00 ft
Well Bore Radius.....: 3.94 in

RESULTS:

Effective Permeability.....: 0.131335 md
Flow Capacity.....: 0.6567 md.ft
Transmissibility.....: 49.0056 md.ft/cp
Skin Factor.....: 2.0364
Pressure Drop Across Skin.....: 1254.0909 psi
Radius of Investigation.....: 2.7803 ft
Damage Ratio.....: 0.9933
Absolute Open Flow.....: 50.2629 bbls/d
Absolute Open Flow W/O Damage.: 50.2629 bbls/d
Estimated Stabilized AOF.....: 6.3083 bbls/d

GAS RECOVERY

COMPANY: ANADARKO Pet. Corp.

DATE: 8/17/95

WELL NAME: Cynthia Saunders A #2

KB Elev: 0.00

ft TICKET #7883

DST #1

WELL LOCATION: 35-32-31w

GR Elev: 2774.00

ft FORMATION: Judy

INTERVAL Fr.: 4648.00 To 4673.00 T.D.: 4673.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Merla

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	8	0	28.0
15	0.25	20	0	47.1
20	0.25	35	0	69.0
25	0.25	38	0	73.0
30	0.25	38	0	73.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.25	38	0	73.0
10	0.25	38	0	73.0
15	0.25	36	0	70.3
20	0.25	34	0	67.5
25	0.25	31	0	63.2
30	0.25	28	0	59.0
35	0.25	26	0	56.3
40	0.25	25	0	54.7
45	0.25	23	0	51.8
50	0.25	22	0	50.2
55	0.25	22	0	50.2

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Cynthia Saunders A #2

LOCATION : 35-32-31w

TICKET No. 7883 D.S.T. No. 1 DATE 8/17/95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30 ft.

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 25 ft.

TOTAL TOOL 55 ft.

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 55 ft.

D.C. ABOVE TOOLS.Stands8 Single Total 482 ft.

D.P. ABOVE TOOLS.Stands59 Single 1 Total 4157 ft.

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4694 ft.

TOTAL DEPTH 4673 ft.

TOTAL DRILL PIPE ABOVE K.B. 21 ft.

REMARKS:

SAMPLER

12.3 cubic ft. gas

trace oil

1000 ml mud

600 ml water

Pressure 1010 PSI

P.O. SUB

C.O. SUB

4618

S.I. TOOL

4623

Sampler

4626

HMV Hyd. Tool

4631

JARS

4636

SAFETY JOINT

4638

PACKER

4643

PACKER

4648

DEPTH 4648

STUBB Perf. 4 ft.

4652

ANCHOR Alpine Rec.

4653

Pick up sub 5 ft.

4657

Perf. 5 ft.

4662

Perf. 5 ft.

4667

T.C.

DEPTH

Perf. 1 ft.

4668

A-K1 Rec.

4670

BULLNOSE

T.D. Bull Plug 5 ft.

4673

7883 DST #1 CYNTHIA SAUNDERS A #2 Anadarko Pet.

TEST HISTORY

Flag Points
t(Min.) P(PSig)

A: 0.00 2229.28
B: 0.00 17.03
C: 26.00 72.00
D: 62.00 1022.06
E: 0.00 26.01
F: 58.00 44.72
G: 122.00 1019.04
H: 0.00 2149.47

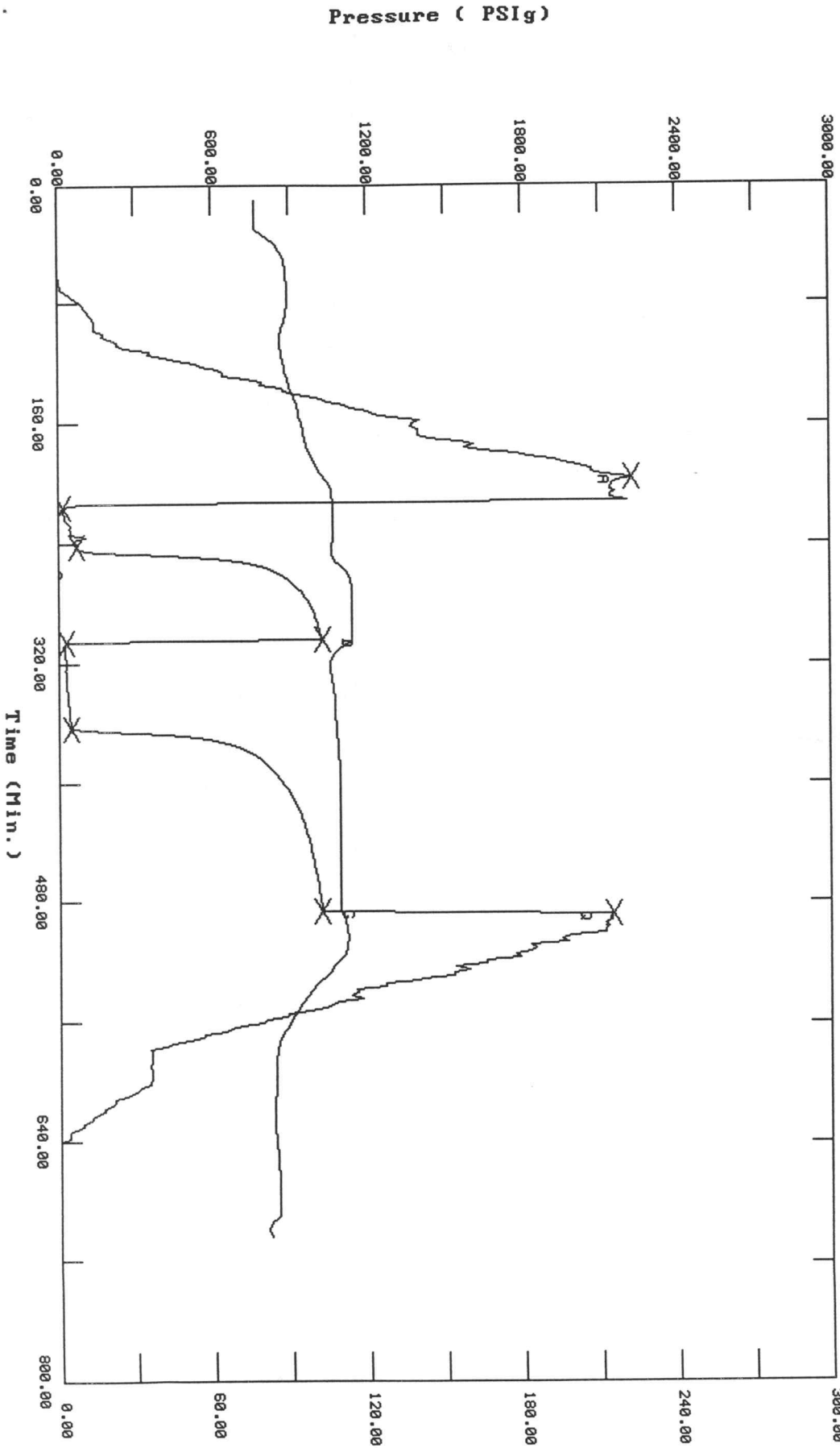
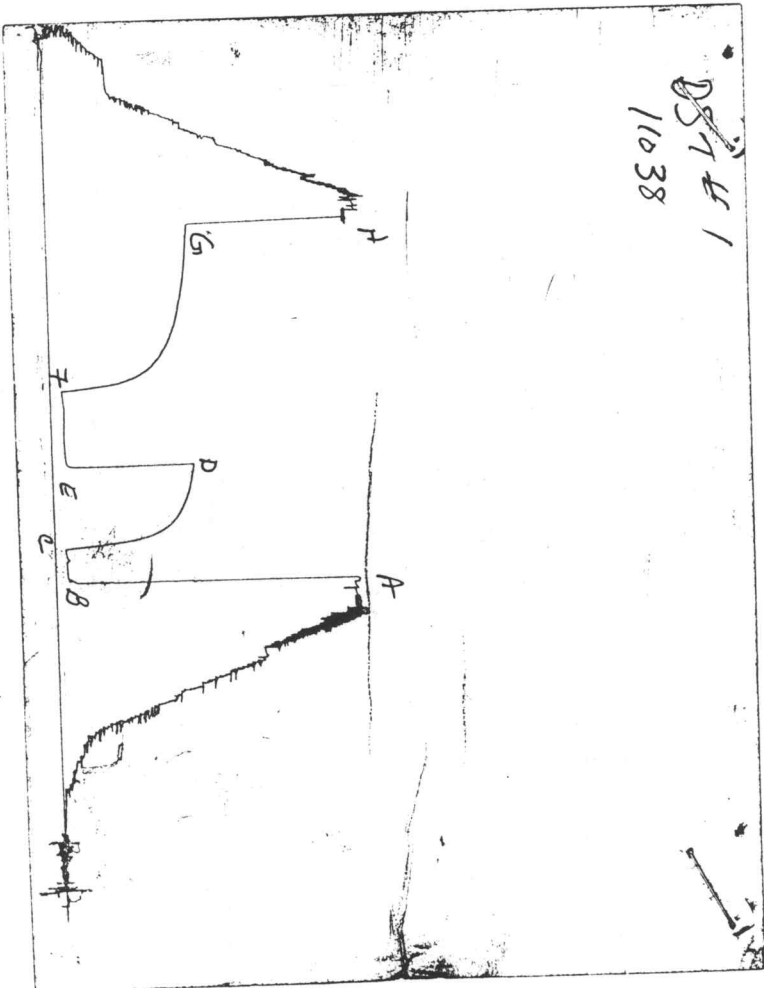


CHART PAGE



This is an actual photograph of recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7883 DST #1 CYNTHIA SAUNDERS A #2 Anadarko Pet.

DATE: 08/17/95

TIME: 02:48:42

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	196.00	2229.3	0.0	103.10		
***** Start Flow 1	0.00	17.0	0.0	106.52		
	2.00	14.8	-2.2	106.70		
	4.00	15.6	-1.4	106.70		
	6.00	24.4	7.4	106.70		
	8.00	23.7	6.6	106.70		
	10.00	36.2	19.1	106.70		
	12.00	43.3	26.3	106.52		
	14.00	40.7	23.7	106.52		
	16.00	46.5	29.5	106.52		
	18.00	45.1	28.1	106.52		
	20.00	105.6	88.5	106.52		
	22.00	56.3	39.3	106.52		
	24.00	70.7	53.7	106.34		
***** End Flow 1	26.00	72.0	55.0	106.16		
***** Start Shutin 1	0.00	72.0	0.0	106.16	0.0000	0.005
	2.00	76.0	4.0	106.16	14.0000	0.006
	4.00	153.5	81.5	106.16	7.5000	0.024
	6.00	429.0	357.0	106.16	5.3333	0.184
	8.00	597.6	525.6	106.52	4.2500	0.357
	10.00	697.8	625.8	107.60	3.6000	0.487
	12.00	759.7	687.7	109.22	3.1667	0.577
	14.00	801.3	729.3	110.48	2.8571	0.642
	16.00	832.5	760.5	111.56	2.6250	0.693
	18.00	855.8	783.8	112.28	2.4444	0.732
	20.00	875.0	803.0	112.82	2.3000	0.766
	22.00	890.8	818.8	113.18	2.1818	0.794
	24.00	904.4	832.4	113.54	2.0833	0.818
	26.00	916.7	844.6	113.72	2.0000	0.840
	28.00	927.6	855.6	113.72	1.9286	0.860
	30.00	938.0	866.0	113.90	1.8667	0.880
	32.00	946.9	874.9	113.90	1.8125	0.897
	34.00	955.6	883.6	113.90	1.7647	0.913
	36.00	963.3	891.3	114.08	1.7222	0.928
	38.00	970.2	898.2	114.08	1.6842	0.941
	40.00	976.5	904.5	114.08	1.6500	0.954
	42.00	982.6	910.6	113.90	1.6190	0.966
	44.00	988.1	916.1	113.90	1.5909	0.976
	46.00	992.9	920.9	113.90	1.5652	0.986
	48.00	997.3	925.3	113.90	1.5417	0.995
	50.00	1001.5	929.5	113.90	1.5200	1.003
	52.00	1005.4	933.4	113.90	1.5000	1.011
	54.00	1009.4	937.4	113.90	1.4815	1.019
	56.00	1012.7	940.7	113.72	1.4643	1.025
	58.00	1015.9	943.9	113.72	1.4483	1.032
	60.00	1019.1	947.1	113.72	1.4333	1.039
***** End Shut-in 1	62.00	1022.1	950.1	113.72	1.4194	1.045
***** Start Flow 2	0.00	26.0	0.0	113.18		
	2.00	15.7	-10.3	111.02		
	4.00	19.0	-7.0	108.86		
	6.00	21.5	-4.5	107.78		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7883 DST #1 CYNTHIA SAUNDERS A #2 Anadarko Pet.

DATE: 08/17/95

TIME: 02:48:42

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	8.00	20.1	-5.9	106.70		
	10.00	23.2	-2.8	105.98		
	12.00	25.2	-0.8	105.44		
	14.00	25.3	-0.7	105.44		
	16.00	25.0	-1.0	105.44		
	18.00	24.6	-1.4	105.62		
	20.00	24.7	-1.3	105.80		
	22.00	26.4	0.4	105.98		
	24.00	27.5	1.5	106.16		
	26.00	28.0	2.0	106.34		
	28.00	28.9	2.9	106.52		
	30.00	29.9	3.9	106.70		
	32.00	30.6	4.6	106.70		
	34.00	31.7	5.7	106.88		
	36.00	32.7	6.7	107.06		
	38.00	33.3	7.3	107.06		
	40.00	34.6	8.6	107.24		
	42.00	35.7	9.7	107.24		
	44.00	36.9	10.9	107.42		
	46.00	38.3	12.3	107.42		
	48.00	39.4	13.3	107.42		
	50.00	40.6	14.6	107.60		
	52.00	41.7	15.7	107.60		
	54.00	42.8	16.8	107.78		
	56.00	43.5	17.5	107.78		
***** End Flow 2	58.00	44.7	18.7	107.78		
***** Start Shutin 2	0.00	44.7	0.0	107.78	0.0000	0.002
	2.00	184.0	139.3	107.96	43.0000	0.034
	4.00	424.8	380.0	107.96	22.0000	0.180
	6.00	543.8	499.0	108.14	15.0000	0.296
	8.00	611.2	566.4	108.32	11.5000	0.374
	10.00	658.2	613.4	108.50	9.4000	0.433
	12.00	694.2	649.5	108.50	8.0000	0.482
	14.00	723.1	678.4	108.68	7.0000	0.523
	16.00	746.0	701.3	108.68	6.2500	0.557
	18.00	765.7	720.9	108.68	5.6667	0.586
	20.00	781.9	737.2	108.68	5.2000	0.611
	22.00	796.5	751.7	108.86	4.8182	0.634
	24.00	809.4	764.7	108.86	4.5000	0.655
	26.00	821.1	776.4	108.86	4.2308	0.674
	28.00	832.1	787.4	108.86	4.0000	0.692
	30.00	842.5	797.7	108.86	3.8000	0.710
	32.00	851.9	807.2	109.04	3.6250	0.726
	34.00	860.8	816.1	109.04	3.4706	0.741
	36.00	869.6	824.8	109.04	3.3333	0.756
	38.00	877.5	832.7	109.04	3.2105	0.770
	40.00	885.4	840.7	109.04	3.1000	0.784
	42.00	892.3	847.6	109.04	3.0000	0.796
	44.00	899.4	854.7	109.04	2.9091	0.809
	46.00	905.8	861.1	109.04	2.8261	0.821
	48.00	912.0	867.2	109.22	2.7500	0.832

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7883 DST #1 CYNTHIA SAUNDERS A #2 Anadarko Pet.

DATE: 08/17/95

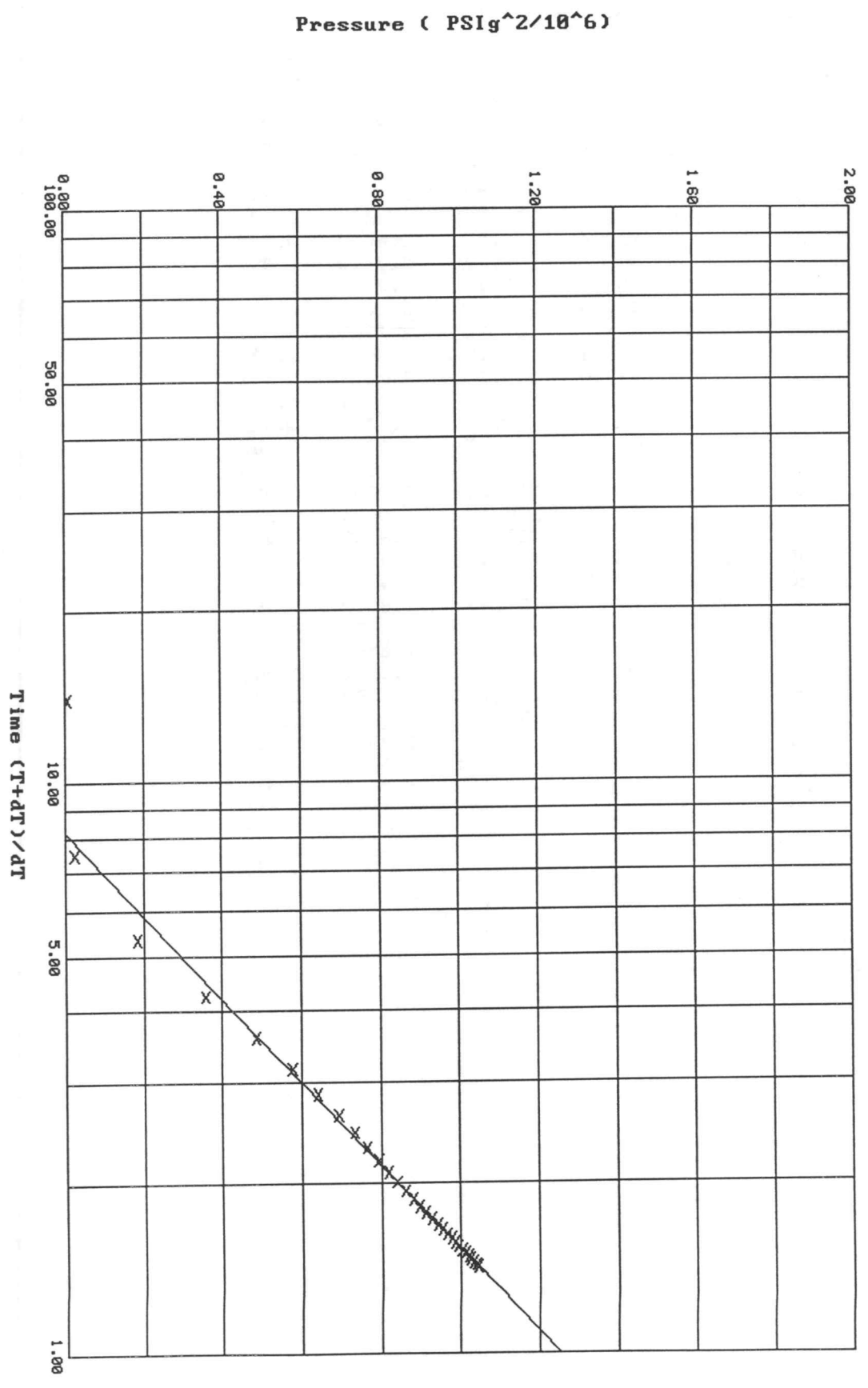
TIME: 02:48:42

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
50.00	917.7	872.9	109.22	2.6800	0.842
52.00	923.1	878.4	109.22	2.6154	0.852
54.00	928.3	883.6	109.22	2.5556	0.862
56.00	933.0	888.3	109.22	2.5000	0.871
58.00	937.9	893.2	109.22	2.4483	0.880
60.00	942.2	897.4	109.22	2.4000	0.888
62.00	946.3	901.6	109.22	2.3548	0.895
64.00	950.6	905.8	109.22	2.3125	0.904
66.00	954.3	909.6	109.22	2.2727	0.911
68.00	957.7	913.0	109.22	2.2353	0.917
70.00	961.2	916.5	109.22	2.2000	0.924
72.00	964.7	920.0	109.22	2.1667	0.931
74.00	967.9	923.2	109.22	2.1351	0.937
76.00	970.8	926.1	109.22	2.1053	0.942
78.00	974.0	929.2	109.22	2.0769	0.949
80.00	976.6	931.9	109.22	2.0500	0.954
82.00	979.3	934.5	109.22	2.0244	0.959
84.00	982.2	937.5	109.40	2.0000	0.965
86.00	984.5	939.8	109.40	1.9767	0.969
88.00	987.2	942.5	109.40	1.9545	0.975
90.00	989.6	944.9	109.40	1.9333	0.979
92.00	991.8	947.0	109.40	1.9130	0.984
94.00	994.2	949.5	109.40	1.8936	0.988
96.00	996.1	951.4	109.40	1.8750	0.992
98.00	998.2	953.5	109.40	1.8571	0.996
100.00	1000.6	955.9	109.40	1.8400	1.001
102.00	1002.3	957.5	109.40	1.8235	1.005
104.00	1004.1	959.4	109.40	1.8077	1.008
106.00	1006.2	961.5	109.40	1.7925	1.012
108.00	1008.0	963.3	109.40	1.7778	1.016
110.00	1009.8	965.1	109.40	1.7636	1.020
112.00	1011.5	966.8	109.40	1.7500	1.023
114.00	1013.1	968.4	109.40	1.7368	1.026
116.00	1014.5	969.8	109.40	1.7241	1.029
118.00	1016.2	971.5	109.40	1.7119	1.033
120.00	1017.9	973.1	109.40	1.7000	1.036
122.00	1019.0	974.3	109.40	1.6885	1.038
***** End Shut-in 2					
***** Final Hydro.	488.00	2149.5	0.0	109.94	

P² Horner Plot: shut-in #1

7883 DST #1 CYNTHIA SAUNDERS A #2 Anadarko Pet.

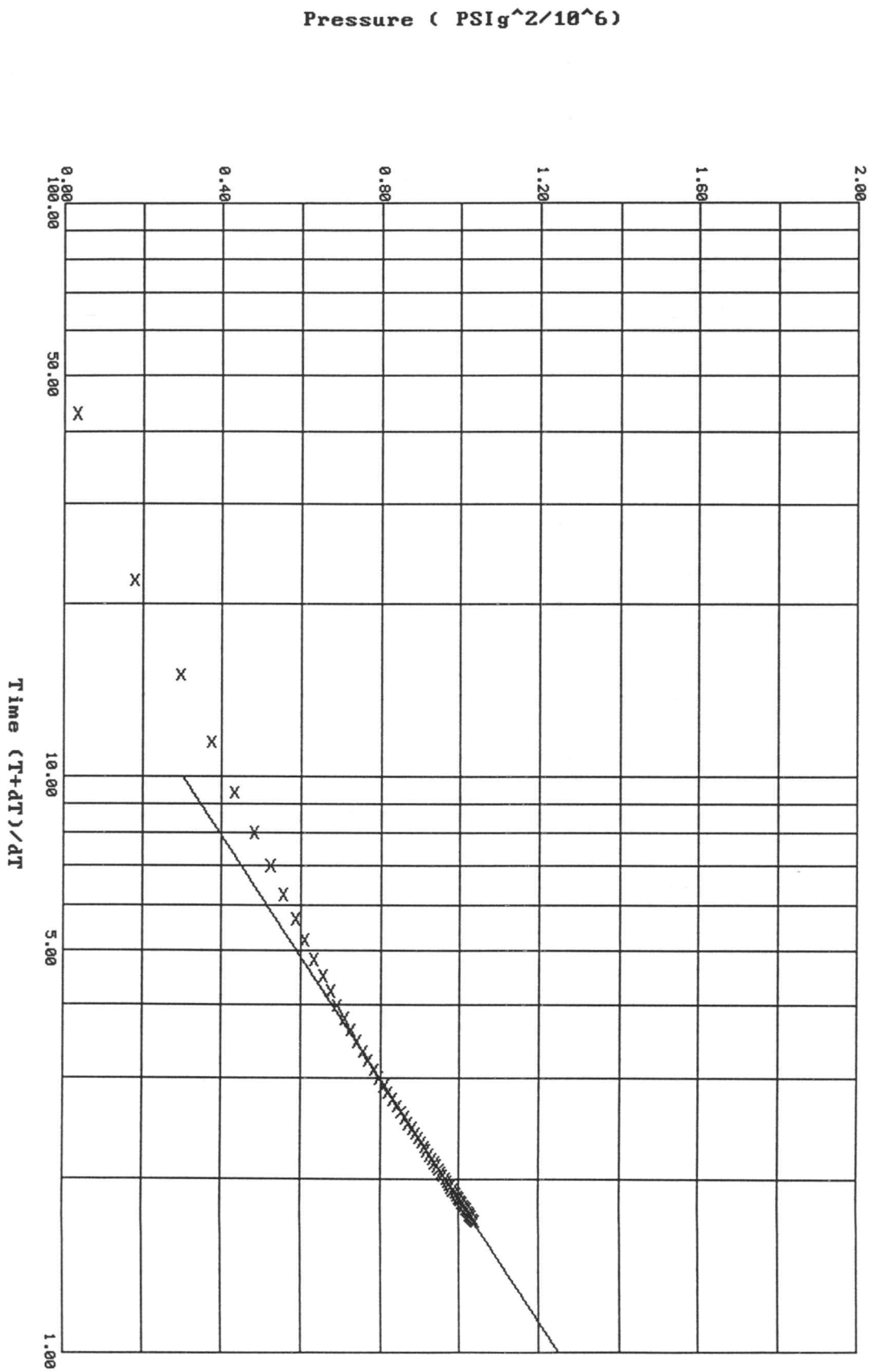
Slope: 1.3724 PSig²/10⁶/cycle
Ext. Pressure: 1119.2164 PSig



P² Horner Plot: Shut-in #2 7883 DST #1 CYNTHIA SAUNDERS A #2 Anadarko Pet.

Slope: 0.9511 PSig²/10⁶/cycle

Ext. Pressure: 1118.8341 PSig



NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L.L.C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
Fax: 913-625-5620

Analyzed by:
Caraway Analytical, L.L.C.
728 North Roosevelt
Liberal, Kansas 67901
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number:	950437	Analyzed:	08/17/95
Sample From:	Cynthia Saunders A #2 DST 1	Pressure:	
Producer:	Anadarko Petroleum Corp	Temperature:	
Date:		Location:	35-32-31W
Time:		County:	Seward
Sampler:		State:	Kansas
Source:		Formation:	Judy

	Mole %	GPM
Helium	He: 0.322	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 11.590	0.000
Carbon Dioxide	CO2: 0.124	0.000
Methane	C1: 76.915	0.000
Ethane	C2: 5.463	1.461
Propane	C3: 3.033	0.836
Iso Butane	iC4: 0.461	0.151
Normal Butane	nC4: 0.965	0.304
Iso Pentane	iC5: 0.289	0.106
Normal Pentane	nC5: 0.279	0.101
Hexanes Plus	C6+: 0.559	0.244
TOTAL:	100.000	3.203
Z Fact:	0.9975	
SP.GR.:	0.7061	
BTU (SAT):	1034.4 @ 14.73 psia	
BTU (DRY):	1052.8 @ 14.73 psia	
OCTANE RATING:	110.4	

COMMENTS:

TRILOBITE TESTING L.L.C.

OPERATOR : ANADARKO Pet. Corp.

DATE 8/19/95

WELL NAME: CYNTHIA SAUNDERS A #2

KB 2784.00 ft

TICKET NO: 7884

DST #2

LOCATION : 35-32-31w

GR 2774.00 ft

FORMATION: Hodges

INTERVAL : 4844.00 To 4880.00 ft

TD 4880.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	11038	11038	ALPINE			PF Fr. 30 to hr
SI 60 Range(Psi)	5075.0	5075.0	4995.0	0.0	0.0	IS Fr. 60 to hr
SF 60 Clock(hrs)	12 HR	12 hr	ELECT			SF Fr. 60 to hr
FS 120 Depth(ft)	4877.0	4877.0	4849.0	0.0	0.0	FS Fr. 120 to hr

	Field	1	2	3	4	
A. Init Hydro	2374.0	2423.0	2412.0	0.0	0.0	T STARTED 0245 hr
B. First Flow	82.0	95.0	11.0	0.0	0.0	T ON BOTM 0530 hr
B1. Final Flow	95.0	103.0	54.0	0.0	0.0	T OPEN 0610 hr
C. In Shut-in	830.0	818.0	813.0	0.0	0.0	T PULLED 0104 hr
D. Init Flow	55.0	69.0	2.0	0.0	0.0	T OUT 130 hr
E. Final Flow	95.0	113.0	73.0	0.0	0.0	
F. Fl Shut-in	817.0	825.0	809.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2349.0	2310.0	2285.0	0.0	0.0	Tool Wt. 18000.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 25000.00 lbs
						Wt Pulled Loose 85000.00 lbs
						Initial Str Wt 76000.00 lbs
						Unseated Str Wt 82000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 482.00 ft
						D.P. Length 4372.00 ft

RECOVERY

Tot Fluid 20.00 ft of 20.00 ft in DC and 0.00 ft in DP

20.00 ft of Drlg. mud

0.00 ft of

0.00 ft of

0.00 ft of

0.00 ft of

0.00 ft of

0.00 ft of

0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

1st. open

Very strong blow, BOB in 1 min.

{ GTS in 6 min.}

2nd. open

Very strong blow, BOB as tool open.

SAMPLES:

SENT TO: CARAWAY

MUD DATA-----

Mud Type CHEMICAL

Weight 9.00 lb/c

Vis. 50.00 S/L

W.L. 8.60 in3

F.C. 0.00 in

Mud Drop Y 20.0 ft

Amt. of fill 0.00 ft

Btm. H. Temp. 114.00 F

Hole Condition GOOD

% Porosity 0.00

Packer Size 6.75 in

No. of Packers 2

Cushion Amt. 0.00

Cushion Type

Reversed Out N

Tool Chased N

Tester TOM HORACEK

Co. Rep. JIM BARLOW

Contr. BIG A Drlg.

Rig # 1

Unit #

Pump T.

Test Successful: Y

Operator.....: ANADARKO PETROLEUM CORP
Well Name.....: CYNTHIA SAUNDERS A #2
DST Number.....: 2

Location.: 35-32S-31W Recorder No...: 2342
Test Type: CONVENTIONAL Recorder Depth: 4849
Formation: HODGES Test Interval.: 4844-4880

RESERVOIR CALCULATIONS: Gas calculations based on shut-in #2

RESERVOIR PARAMETERS USED:

Net Pay.....: 24.00 ft
Porosity.....: 7.00 %
Bottom Hole Temp.....: 114.00 F
Specific Gravity.....: 0.694
Z factor.....: $\gamma_{g/3f}$ %s
Compressibility.....: 0.013818 /psi
Viscosity.....: 0.0128 cp
Total Flowing Time.....: 90.00 min.
Flow Rate.....: 132.80 bbls/d
Final Flowing Pressure.....: 73.00 psi
Horner Slope.....: $0.0631 \times 10^{-6} \text{ psi}^2/\text{cycle}$
Extrapolated Pressure.....: 816.90 psi
Assumed Drainage Radius.....: 1500.00 ft
Well Bore Radius.....: 3.94 in

RESULTS:

Effective Permeability.....: 1.051539 md
Flow Capacity.....: 25.2369 md.ft
Transmissibility.....: 1971.6350 md.ft/cp
Skin Factor.....: 11.2852
Pressure Drop Across Skin.....: 717.0271 psi
Radius of Investigation.....: 10.3509 ft
Damage Ratio.....: 4.2565
Absolute Open Flow.....: 133.8416 bbls/d
Absolute Open Flow W/O Damage.: 569.7020 bbls/d
Estimated Stabilized AOF.....: 134.0953 bbls/d

GAS RECOVERY

COMPANY: ANADARKO Pet. Corp.

DATE: 8/19/95

WELL NAME: CYNTHIA SAUNDERS A #2

KB Elev: 2784.00 ft TICKET #7884

DST #2

WELL LOCATION: 35-32-31w

GR Elev: 2774.00 ft FORMATION: Hodges

INTERVAL Fr.: 4844.00 To 4880.00 T.D.: 4880.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Merla

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	18	0	43.9
15	0.25	30	0	61.9
20	0.25	38	0	73.0
25	0.25	46	0	83.9
30	0.25	50	0	89.7

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.25	20	0	47.1
10	0.25	28	0	59.0
15	0.25	45	0	82.7
20	0.25	54	0	95.3
25	0.25	56	0	98.1
30	0.25	60	0	103.6
35	0.25	65	0	110.6
40	0.25	72	0	120.3
45	0.25	76	0	125.9
50	0.25	80	0	131.4
55	0.25	81	0	132.8

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: CYNTHIA SAUNDERS A #2

LOCATION : 35-32-31w

TICKET No. 7884 D.S.T. No. 2 DATE 8/19/95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30 ft.

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 36 ft.

TOTAL TOOL 66 ft.

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 66 ft.

D.C. ABOVE TOOLS.Stands8 Single Total 482 ft.

D.P. ABOVE TOOLS.Stands62 Single 1 Total 4340 ft.

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4888 ft.

TOTAL DEPTH 4880 ft.

TOTAL DRILL PIPE ABOVE K.B. 8 ft.

REMARKS:

SAMPLER

23.6 cubic ft. gas

200 ml Drlg. mud

Pressure 780 PSI

P.O. SUB	
C.O. SUB	4814
S.I. TOOL	4819
Sampler	4822
HMV Hyd. Tool	4827
JARS	4832
SAFETY JOINT	4834
PACKER	4839
PACKER	4844
DEPTH 4844	
STUBB Perf. 4 ft.	4848
ANCHOR Alpine Rec.	4849
Pick up sub 5 ft.	4853
Perf. 5 ft.	4858
Perf. 5 ft.	4863
T.C.	
DEPTH	
Perf. 5 ft.	4868
Perf. 5 ft.	4873
Perf. 2 ft.	4875
BULLNOSE AK-1 Rec.	4877
T.D. Bull Plug 5 ft.	4880

TEST HISTORY

#7834 DST.#2 Cynthia Saunders A#2 Anadarko Pet.

Flag Points

t(Min.)	P(PSig)
A: 0.00	2344.01
B: 0.00	11.49
C: 26.00	54.29
D: 60.00	813.50
E: 0.00	12.08
F: 52.00	73.01
G: 122.00	808.97
H: 0.00	2277.12

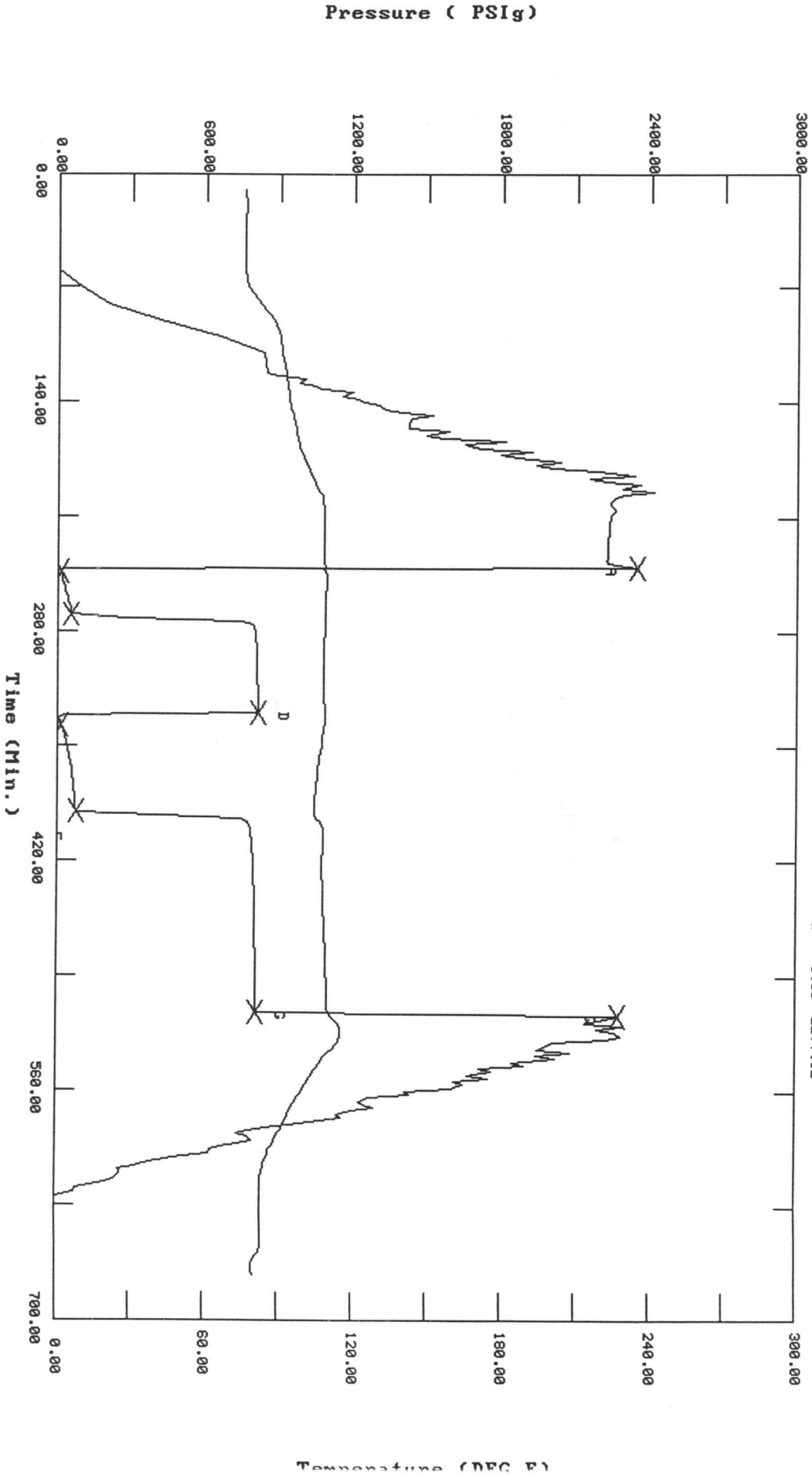
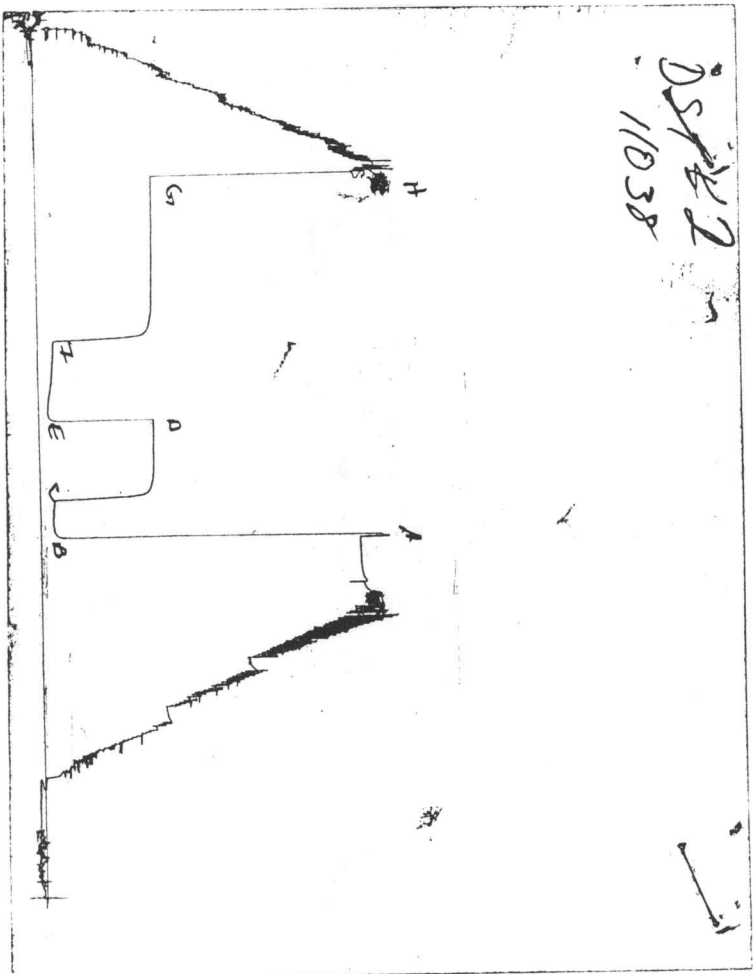


CHART PAGE



This is an actual photograph of recorder chart

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING
 TEST: #7834 DST.#2 Cynthia Saunders A#2 Anadarko Pet.
 DATE: 08/19/95 TIME: 01:01:55

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	240.00	2344.0	0.0	108.32		
***** Start Flow 1	0.00	11.5	0.0	108.50		
	2.00	13.3	1.8	108.86		
	4.00	12.7	1.2	108.86		
	6.00	16.9	5.4	109.04		
	8.00	20.6	9.1	108.86		
	10.00	25.5	14.0	108.86		
	12.00	30.1	18.6	108.68		
	14.00	34.4	22.9	108.68		
	16.00	38.1	26.6	108.50		
	18.00	42.0	30.5	108.50		
	20.00	45.4	33.9	108.50		
	22.00	48.7	37.2	108.50		
	24.00	51.3	39.8	108.50		
***** End Flow 1	26.00	54.3	42.8	108.32		
***** Start Shutin 1	0.00	54.3	0.0	108.32	0.0000	0.003
	2.00	282.6	228.3	108.32	14.0000	0.080
	4.00	748.2	693.9	108.32	7.5000	0.560
	6.00	791.2	736.9	108.32	5.3333	0.626
	8.00	797.1	742.8	108.32	4.2500	0.635
	10.00	800.2	745.9	108.32	3.6000	0.640
	12.00	802.2	747.9	108.32	3.1667	0.643
	14.00	803.8	749.5	108.14	2.8571	0.646
	16.00	805.0	750.7	108.14	2.6250	0.648
	18.00	806.0	751.7	108.14	2.4444	0.650
	20.00	806.9	752.6	108.14	2.3000	0.651
	22.00	807.4	753.1	108.14	2.1818	0.652
	24.00	808.0	753.8	107.96	2.0833	0.653
	26.00	808.6	754.3	107.96	2.0000	0.654
	28.00	809.3	755.0	107.96	1.9286	0.655
	30.00	809.8	755.5	107.96	1.8667	0.656
	32.00	809.9	755.6	107.96	1.8125	0.656
	34.00	810.6	756.3	107.96	1.7647	0.657
	36.00	810.7	756.4	107.96	1.7222	0.657
	38.00	810.9	756.6	107.96	1.6842	0.658
	40.00	811.2	756.9	107.96	1.6500	0.658
	42.00	811.4	757.1	108.14	1.6190	0.658
	44.00	812.0	757.7	108.14	1.5909	0.659
	46.00	812.2	757.9	108.14	1.5652	0.660
	48.00	812.3	758.0	108.14	1.5417	0.660
	50.00	812.4	758.1	108.14	1.5200	0.660
	52.00	812.6	758.3	108.14	1.5000	0.660
	54.00	812.7	758.5	108.14	1.4815	0.661
	56.00	813.0	758.7	108.32	1.4643	0.661
	58.00	813.1	758.8	108.32	1.4483	0.661
***** End Shut-in 1	60.00	813.5	759.2	108.32	1.4333	0.662
***** Start Flow 2	0.00	12.1	0.0	108.14		
	2.00	17.1	5.0	107.96		
	4.00	21.3	9.2	107.78		
	6.00	25.3	13.3	107.60		
	8.00	28.9	16.8	107.42		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #7834 DST.#2 Cynthia Saunders A#2 Anadarko Pet.

DATE: 08/19/95 TIME: 01:01:55

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
10.00	32.1	20.1	107.24		
12.00	35.2	23.2	107.06		
14.00	38.8	26.7	106.70		
16.00	41.5	29.5	106.52		
18.00	44.7	32.6	106.34		
20.00	47.3	35.2	106.16		
22.00	50.1	38.0	105.98		
24.00	52.4	40.3	105.80		
26.00	54.7	42.6	105.62		
28.00	56.6	44.6	105.44		
30.00	58.7	46.7	105.26		
32.00	60.3	48.3	105.26		
34.00	62.3	50.3	105.08		
36.00	63.7	51.6	104.90		
38.00	65.0	53.0	104.72		
40.00	66.4	54.3	104.72		
42.00	67.8	55.7	104.54		
44.00	69.1	57.1	104.36		
46.00	70.2	58.1	104.36		
48.00	71.3	59.3	104.18		
50.00	72.1	60.0	104.18		
52.00	73.0	60.9	104.00		

***** End Flow 2

***** Start Shutin 2

0.00	73.0	0.0	104.00	0.0000	0.005
2.00	414.1	341.1	104.00	40.0000	0.171
4.00	741.6	668.6	104.90	20.5000	0.550
6.00	771.3	698.3	106.52	14.0000	0.595
8.00	777.8	704.8	107.60	10.7500	0.605
10.00	781.8	708.8	107.96	8.8000	0.611
12.00	784.2	711.2	108.14	7.5000	0.615
14.00	786.6	713.6	108.14	6.5714	0.619
16.00	788.3	715.3	107.96	5.8750	0.621
18.00	789.8	716.8	107.96	5.3333	0.624
20.00	790.8	717.8	107.78	4.9000	0.625
22.00	791.9	718.9	107.78	4.5455	0.627
24.00	792.9	719.9	107.78	4.2500	0.629
26.00	794.0	721.0	107.60	4.0000	0.630
28.00	794.9	721.9	107.60	3.7857	0.632
30.00	795.4	722.4	107.60	3.6000	0.633
32.00	796.0	723.0	107.60	3.4375	0.634
34.00	796.7	723.7	107.60	3.2941	0.635
36.00	797.6	724.5	107.60	3.1667	0.636
38.00	797.9	724.9	107.60	3.0526	0.637
40.00	798.6	725.6	107.60	2.9500	0.638
42.00	798.9	725.9	107.78	2.8571	0.638
44.00	799.2	726.2	107.78	2.7727	0.639
46.00	799.8	726.8	107.78	2.6957	0.640
48.00	800.2	727.2	107.78	2.6250	0.640
50.00	800.6	727.6	107.78	2.5600	0.641
52.00	801.2	728.2	107.96	2.5000	0.642
54.00	801.5	728.5	107.96	2.4444	0.642
56.00	801.7	728.7	107.96	2.3929	0.643

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #7834 DST.#2 Cynthia Saunders A#2 Anadarko Pet.

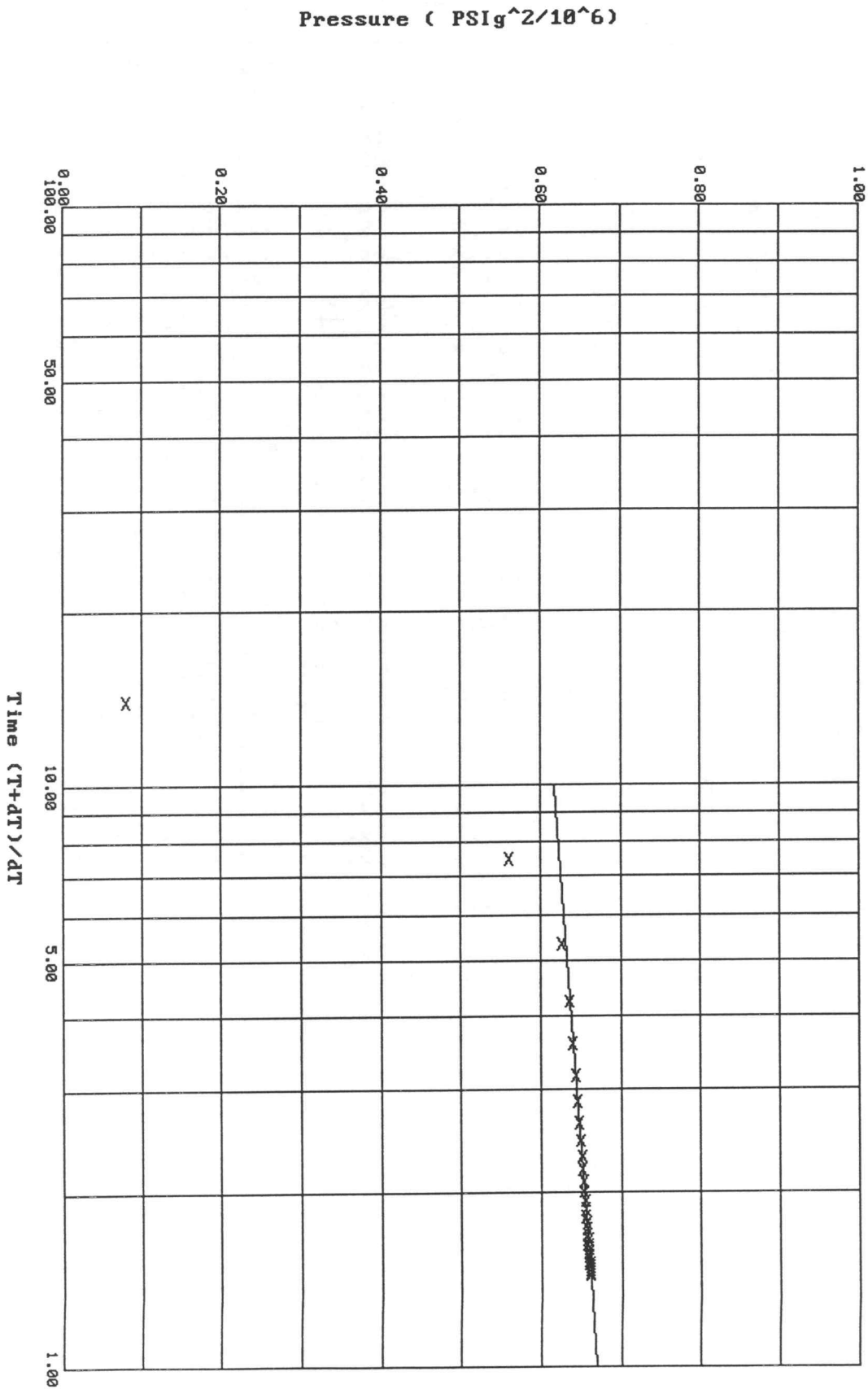
DATE: 08/19/95

TIME: 01:01:55

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	58.00	802.3	729.2	108.14	2.3448	0.644
	60.00	802.4	729.4	108.14	2.3000	0.644
	62.00	802.7	729.7	108.14	2.2581	0.644
	64.00	802.9	729.9	108.32	2.2188	0.645
	66.00	803.4	730.4	108.32	2.1818	0.646
	68.00	803.7	730.7	108.32	2.1471	0.646
	70.00	803.8	730.8	108.50	2.1143	0.646
	72.00	804.2	731.2	108.50	2.0833	0.647
	74.00	804.4	731.4	108.68	2.0541	0.647
	76.00	804.4	731.4	108.68	2.0263	0.647
	78.00	804.9	731.9	108.68	2.0000	0.648
	80.00	805.2	732.2	108.86	1.9750	0.648
	82.00	805.5	732.5	108.86	1.9512	0.649
	84.00	805.8	732.8	109.04	1.9286	0.649
	86.00	806.0	733.0	109.04	1.9070	0.650
	88.00	806.3	733.3	109.04	1.8864	0.650
	90.00	806.3	733.3	109.22	1.8667	0.650
	92.00	806.4	733.4	109.22	1.8478	0.650
	94.00	806.9	733.9	109.22	1.8298	0.651
	96.00	807.0	734.0	109.40	1.8125	0.651
	98.00	807.2	734.2	109.40	1.7959	0.652
	100.00	807.5	734.5	109.40	1.7800	0.652
	102.00	807.6	734.6	109.58	1.7647	0.652
	104.00	807.6	734.6	109.58	1.7500	0.652
	106.00	807.7	734.7	109.58	1.7358	0.652
	108.00	807.9	734.9	109.76	1.7222	0.653
	110.00	808.3	735.3	109.76	1.7091	0.653
	112.00	808.4	735.4	109.76	1.6964	0.653
	114.00	808.6	735.5	109.94	1.6842	0.654
	116.00	808.7	735.7	109.94	1.6724	0.654
	118.00	808.7	735.7	109.94	1.6610	0.654
	120.00	809.1	736.0	109.94	1.6500	0.655
***** End Shut-in 2	122.00	809.0	736.0	110.12	1.6393	0.654
***** Final Hydro.	514.00	2277.1	0.0	110.66		

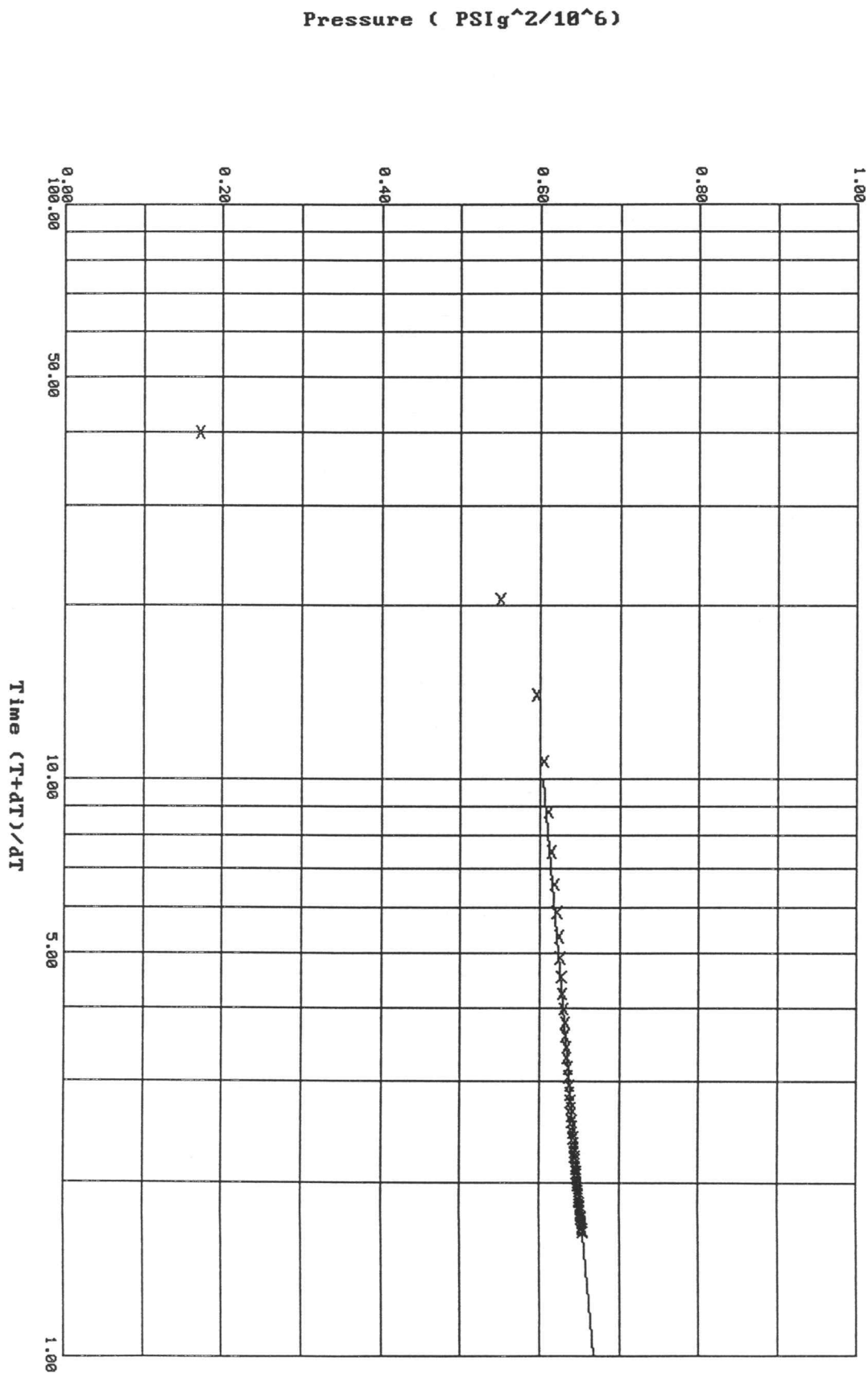
P² Horner Plot: shut-in #1 #7834 DST.#2 Cynthia Saunders A#2 Anadarko Pet.

Slope: 0.0522 PSig²/10⁶/cycle
 Ext. Pressure: 818.2901 PSig



P² Horner Plot: shut-in #2 #7834 DST.#2 Cynthia Saunders A#2 Anadarko Pet.

Slope: 0.0631 PSig²/10⁶/cycle
 Ext. Pressure: 816.9050 PSig



NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L.L.C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
Fax: 913-625-5620

Analyzed by:
Caraway Analytical, L.L.C.
728 North Roosevelt
Liberal, Kansas 67901
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number:	950439	Analyzed:	08/19/95
Sample From:	Cynthia Saunders A #2 DST 2	Pressure:	
Producer:	Anadarko Petroleum Corp	Temperature:	
Date:		Location:	35-32-31W
Time:		County:	Seward
Sampler:		State:	Kansas
Source:		Formation:	Hodges

	Mole %	GPM
Helium	He: 0.343	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 12.772	0.000
Carbon Dioxide	CO2: 0.000	0.000
Methane	C1: 76.855	0.000
Ethane	C2: 5.151	1.378
Propane	C3: 3.046	0.839
Iso Butane	iC4: 0.53	0.115
Normal Butane	nC4: 0.742	0.234
Iso Pentane	iC5: 0.195	0.071
Normal Pentane	nC5: 0.185	0.067
Hexanes Plus	C6+: 0.358	0.156

TOTAL: 100.000 2.861
Z Fact: 0.9977
SP.GR.: 0.6944
BTU (SAT): 1000.3 @ 14.73 psia
BTU (DRY): 1018.0 @ 14.73 psia
OCTANE RATING: 109.5

COMMENTS:



GAS VOLUME REPORT

Anadarko Pet. Corp.
OPERATOR

Cynthia Saunders A #2
WELL NAME AND NO.

42
DST NO

Remarks: CTS in 6 min.
Gas will burn.

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 7884 Date 8-19-95
Company Name Anadarko Pet. Corp.
Lease Cynthia Saunders A #2 Test No. #2
County Seward Ks. Sec. 35 Twp. 32 Rng. 31w

SAMPLER RECOVERY

Gas 23.6 Cubic ft
Oil _____ ML
Mud 200 ML
Water _____ ML
Other _____ ML
Pressure 780 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 4000 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 50
Mud Weight 9.0
Filtrate 8.6
Other _____

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.