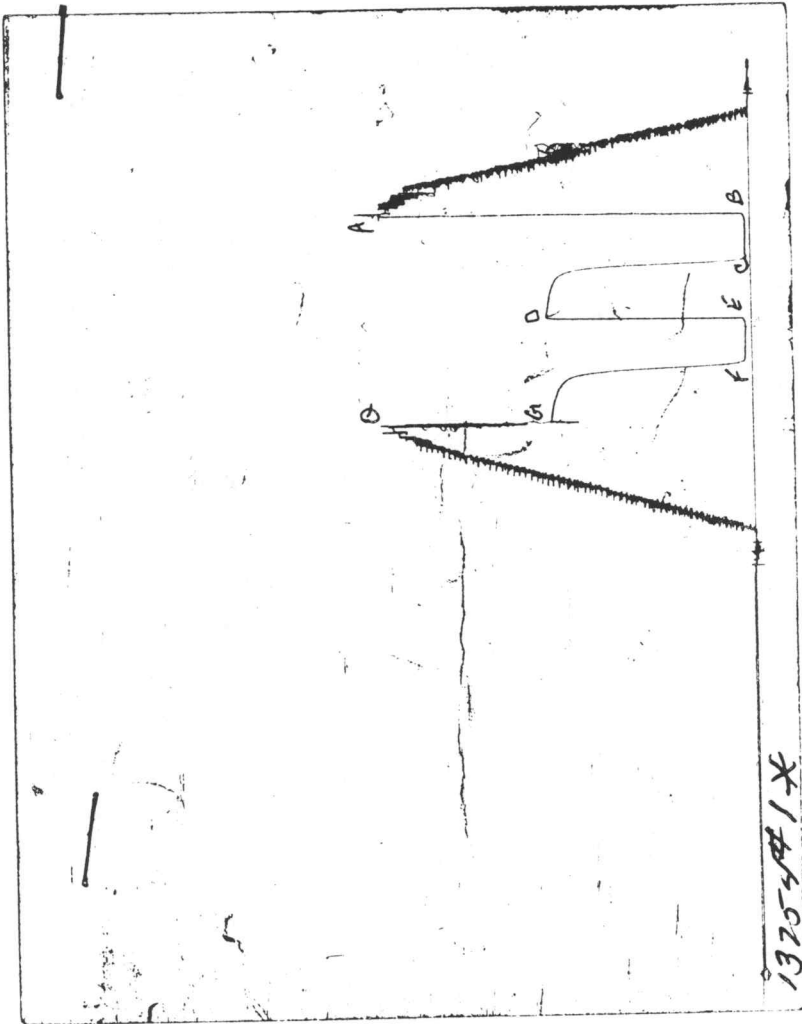


WELL NAME: Wahrman 22-25
COMPANY: Sovereign Energy
LOCATION: 25-1S-32W
Rawlins County Kansas
DATE: 3-20-97

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : Sovereign Energy DATE 3/19/97
 WELL NAME: Wahrman # 22-25 KB 2901.00 ft TICKET NO: 10109 DST #2
 LOCATION : 25-1S-32W Rawlins Cty KS GR 2896.00 ft FORMATION: Lansing KC 'J'
 INTERVAL : 4004.00 To 4050.00 ft TD 4050.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13754	13754	2346			PF Fr. 0010 to 0040 hr
SI 60 Range (Psi)	4000.0	4000.0	4995.0	0.0	0.0	IS Fr. 0040 to 0140 hr
SF 30 Clock (hrs)	12 hr	12 hr	12 hr			SF Fr. 0140 to 0210 hr
FS 60 Depth (ft)	4047.0	4047.0	4061.0	0.0	0.0	FS Fr. 0210 to 0310 hr

	Field	1	2	3	4	
A. Init Hydro	2036.0	2000.0	1983.0	0.0	0.0	T STARTED 2243 hr
B. First Flow	29.0	49.0	23.0	0.0	0.0	T ON BOTM 0000 hr
B1. Final Flow	29.0	49.0	24.0	0.0	0.0	T OPEN 0010 hr
C. In Shut-in	88.0	98.0	78.0	0.0	0.0	T PULLED 0310 hr
D. Init Flow	39.0	51.0	24.0	0.0	0.0	T OUT 0500 hr
E. Final Flow	39.0	52.0	25.0	0.0	0.0	
F. Fl Shut-in	59.0	69.0	43.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	1746.0	1973.0	1935.0	0.0	0.0	Tool Wt. 1500.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 55000.00 lbs
						Initial Str Wt 54000.00 lbs
						Unseated Str Wt 54000.00 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 0.00 ft
						D.P. Length 3993.00 ft
						H.W. I.D 2.70 in
						H.W. Length 631.00 ft

RECOVERY

Tot Fluid 5.00 ft of 5.00 ft in DC and 0.00 ft in DP
 0.00 ft of
 5.00 ft of Drilling Mud with Show Oil in tool
 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

Initial Flow:
 Weak blow, died in 15 min

Initial Shut In:

Final Flow:

No blow

Final Shut In:

SAMPLES:

SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 9.10 lb/c
 Vis. 45.00 S/L
 W.L. 9.60 in3
 F.C. 0.00 in
 Mud Drop
 Amt. of fill 0.00 ft
 Btm. H. Temp. 107.00 F
 Hole Condition
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out
 Tool Chased
 Tester Dan Bangle
 Co. Rep. Ben Landes
 Contr. Abercrombie
 Rig # 8
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Wahrman # 22-25

LOCATION : 25-1S-32W Rawlins Cty KS

TICKET No. 10109 D.S.T. No. 2 DATE 3/19/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 25

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 15

TOTAL TOOL 40

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single 1 Total 31

TOTAL ASSEMBLY 71

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands9 Single 1 Total 3993

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4064

TOTAL DEPTH 4050

TOTAL DRILL PIPE ABOVE K.B. 14

REMARKS:

P.O. SUB	
C.O. SUB	3979
S.I. TOOL	3980
HMV	3985
JARS	3990
SAFETY JOINT	3995
PACKER	3999
PACKER	4004
DEPTH 4004	
STUBB 1'	4005
ANCHOR	
Elect. Rec 4011	
11' perfs	4016
AK-1 Rec. 4047	
1 std. Drill Pipe	4047
T.C. DEPTH	
BULLNOSE 3' bullplug	
T.D.	4050

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk #10109 DST #2 Wahrman#22-25 Sovereign Energy

DATE: 03/18/97

TIME: 22:44:23

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	90.00	1983.2	0.0	100.82		
***** Start Flow 1	0.00	22.7	0.0	102.06		
	1.00	22.9	0.3	102.39		
	2.00	23.1	0.4	102.66		
	3.00	23.3	0.6	102.86		
	4.00	23.4	0.7	103.02		
	5.00	23.5	0.8	103.14		
	6.00	23.5	0.8	103.25		
	7.00	23.6	0.9	103.32		
	8.00	23.6	0.9	103.38		
	9.00	23.7	1.0	103.44		
	10.00	23.7	1.0	103.48		
	11.00	23.7	1.0	103.50		
	12.00	23.7	1.1	103.53		
	13.00	23.8	1.1	103.55		
	14.00	23.8	1.1	103.57		
	15.00	23.8	1.1	103.58		
	16.00	23.9	1.3	103.59		
	17.00	23.9	1.2	103.59		
	18.00	23.9	1.2	103.61		
	19.00	23.9	1.3	103.61		
	20.00	24.1	1.4	103.62		
	21.00	24.0	1.3	103.63		
	22.00	24.0	1.4	103.63		
	23.00	24.0	1.4	103.64		
	24.00	24.0	1.4	103.65		
	25.00	24.0	1.4	103.66		
	26.00	24.0	1.4	103.67		
	27.00	24.0	1.4	103.69		
	28.00	24.1	1.4	103.70		
***** End Flow 1	29.00	24.1	1.4	103.70		
***** Start Shutin 1	0.00	24.1	0.0	103.70	0.0000	0.001
	1.00	23.8	-0.3	103.72	30.0000	0.001
	2.00	24.5	0.4	103.73	15.5000	0.001
	3.00	25.3	1.2	103.75	10.6667	0.001
	4.00	26.0	1.9	103.76	8.2500	0.001
	5.00	26.7	2.6	103.78	6.8000	0.001
	6.00	27.3	3.2	103.79	5.8333	0.001
	7.00	28.1	4.0	103.82	5.1429	0.001
	8.00	28.9	4.8	103.84	4.6250	0.001
	9.00	29.5	5.4	103.84	4.2222	0.001
	10.00	30.3	6.2	103.87	3.9000	0.001
	11.00	31.1	7.0	103.89	3.6364	0.001
	12.00	31.8	7.7	103.90	3.4167	0.001
	13.00	32.5	8.4	103.90	3.2308	0.001
	14.00	33.3	9.2	103.94	3.0714	0.001
	15.00	34.0	9.9	103.96	2.9333	0.001
	16.00	34.8	10.7	103.98	2.8125	0.001
	17.00	35.6	11.5	104.00	2.7059	0.001
	18.00	36.3	12.2	104.02	2.6111	0.001
	19.00	37.1	13.0	104.05	2.5263	0.001

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk #10109 DST #2 Wahrman#22-25 Sovereign Energy

DATE: 03/18/97

TIME: 22:44:23

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶	
20.00	37.9	13.8	104.07	2.4500	0.001	
21.00	38.7	14.6	104.09	2.3810	0.002	
22.00	39.5	15.3	104.11	2.3182	0.002	
23.00	40.3	16.2	104.14	2.2609	0.002	
24.00	41.1	17.0	104.17	2.2083	0.002	
25.00	42.0	17.9	104.19	2.1600	0.002	
26.00	42.8	18.7	104.21	2.1154	0.002	
27.00	43.7	19.6	104.24	2.0741	0.002	
28.00	44.5	20.4	104.27	2.0357	0.002	
29.00	45.4	21.3	104.29	2.0000	0.002	
30.00	46.3	22.2	104.31	1.9667	0.002	
31.00	47.2	23.1	104.34	1.9355	0.002	
32.00	48.1	24.0	104.37	1.9062	0.002	
33.00	49.1	25.0	104.39	1.8788	0.002	
34.00	50.0	25.8	104.41	1.8529	0.002	
35.00	50.9	26.8	104.43	1.8286	0.003	
36.00	51.9	27.8	104.46	1.8056	0.003	
37.00	52.8	28.7	104.49	1.7838	0.003	
38.00	53.8	29.7	104.52	1.7632	0.003	
39.00	54.8	30.7	104.54	1.7436	0.003	
40.00	55.8	31.7	104.57	1.7250	0.003	
41.00	56.8	32.7	104.60	1.7073	0.003	
42.00	57.8	33.7	104.62	1.6905	0.003	
43.00	58.9	34.8	104.65	1.6744	0.003	
44.00	59.9	35.7	104.68	1.6591	0.004	
45.00	60.8	36.7	104.70	1.6444	0.004	
46.00	62.0	37.9	104.73	1.6304	0.004	
47.00	63.0	38.9	104.75	1.6170	0.004	
48.00	64.2	40.1	104.78	1.6042	0.004	
49.00	65.3	41.2	104.81	1.5918	0.004	
50.00	66.4	42.3	104.84	1.5800	0.004	
51.00	67.6	43.5	104.86	1.5686	0.005	
52.00	68.9	44.7	104.89	1.5577	0.005	
53.00	70.1	46.0	104.91	1.5472	0.005	
54.00	71.4	47.3	104.94	1.5370	0.005	
55.00	72.6	48.4	104.97	1.5273	0.005	
56.00	73.8	49.7	105.00	1.5179	0.005	
57.00	75.1	51.0	105.03	1.5088	0.006	
58.00	76.4	52.3	105.05	1.5000	0.006	
***** End Shut-in 1	59.00	77.6	53.5	105.08	1.4915	0.006
***** Start Flow 2	0.00	24.3	0.0	105.10		
	1.00	24.3	0.1	105.13		
	2.00	24.4	0.2	105.15		
	3.00	24.4	0.2	105.18		
	4.00	24.5	0.2	105.20		
	5.00	24.5	0.3	105.23		
	6.00	24.6	0.4	105.26		
	7.00	24.5	0.2	105.28		
	8.00	24.5	0.2	105.31		
	9.00	24.5	0.2	105.33		
	10.00	24.5	0.2	105.36		

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk #10109 DST #2 Wahrman#22-25 Sovereign Energy

DATE: 03/18/97

TIME: 22:44:23

	Time	Pressure PSI _g	delta P PSI _g	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	11.00	24.5	0.2	105.38		
	12.00	24.4	0.1	105.41		
	13.00	24.4	0.1	105.43		
	14.00	24.6	0.3	105.47		
	15.00	24.6	0.3	105.49		
	16.00	24.6	0.4	105.52		
	17.00	24.6	0.3	105.54		
	18.00	24.6	0.3	105.56		
	19.00	24.6	0.3	105.59		
	20.00	24.6	0.3	105.62		
	21.00	24.5	0.3	105.64		
	22.00	24.6	0.4	105.68		
	23.00	24.6	0.4	105.70		
	24.00	24.7	0.5	105.72		
	25.00	24.7	0.4	105.75		
	26.00	24.7	0.4	105.77		
	27.00	24.7	0.4	105.80		
	28.00	24.8	0.5	105.83		
***** End Flow 2	29.00	24.8	0.5	105.86		
***** Start Shutin 2	0.00	24.8	0.0	105.86	0.0000	0.001
	1.00	24.8	0.0	105.88	59.0000	0.001
	2.00	24.7	-0.1	105.91	30.0000	0.001
	3.00	24.8	0.0	105.93	20.3333	0.001
	4.00	24.5	-0.3	105.96	15.5000	0.001
	5.00	23.6	-1.2	105.98	12.6000	0.001
	6.00	23.9	-0.9	106.01	10.6667	0.001
	7.00	24.3	-0.5	106.03	9.2857	0.001
	8.00	24.7	-0.1	106.06	8.2500	0.001
	9.00	25.0	0.2	106.08	7.4444	0.001
	10.00	25.3	0.5	106.11	6.8000	0.001
	11.00	25.8	1	106.14	6.2727	0.001
	12.00	25.9	1.1	106.16	5.8333	0.001
	13.00	26.4	1.6	106.19	5.4615	0.001
	14.00	26.7	1.9	106.21	5.1429	0.001
	15.00	26.9	2.1	106.24	4.8667	0.001
	16.00	27.3	2.5	106.26	4.6250	0.001
	17.00	27.7	2.9	106.29	4.4118	0.001
	18.00	28.0	3.2	106.31	4.2222	0.001
	19.00	28.2	3.4	106.34	4.0526	0.001
	20.00	28.6	3.8	106.37	3.9000	0.001
	21.00	28.9	4.1	106.39	3.7619	0.001
	22.00	29.2	4.4	106.41	3.6364	0.001
	23.00	29.5	4.7	106.43	3.5217	0.001
	24.00	29.8	5.0	106.46	3.4167	0.001
	25.00	30.1	5.3	106.48	3.3200	0.001
	26.00	30.4	5.6	106.51	3.2308	0.001
	27.00	30.8	6.0	106.53	3.1481	0.001
	28.00	31.1	6.3	106.56	3.0714	0.001
	29.00	31.4	6.6	106.58	3.0000	0.001
	30.00	31.8	7.0	106.61	2.9333	0.001
	31.00	32.1	7.3	106.63	2.8710	0.001

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk #10109 DST #2 Wahrman#22-25 Sovereign Energy

DATE: 03/18/97

TIME: 22:44:23

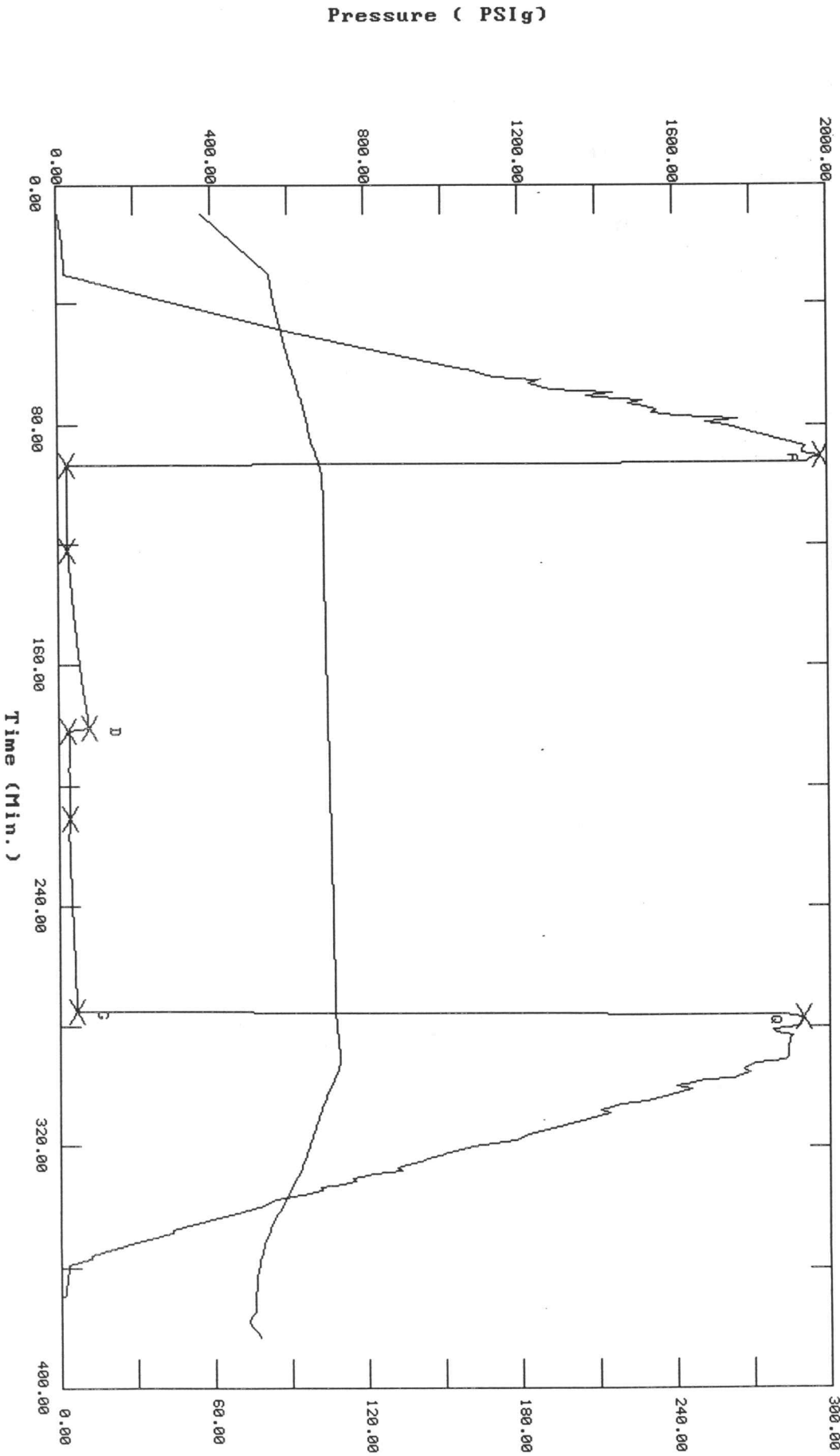
	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	32.00	32.4	7.6	106.66	2.8125	0.001
	33.00	32.8	8.0	106.68	2.7576	0.001
	34.00	33.2	8.4	106.71	2.7059	0.001
	35.00	33.5	8.7	106.73	2.6571	0.001
	36.00	33.9	9.1	106.75	2.6111	0.001
	37.00	34.2	9.4	106.77	2.5676	0.001
	38.00	34.5	9.7	106.80	2.5263	0.001
	39.00	34.9	10.1	106.83	2.4872	0.001
	40.00	35.2	10.4	106.84	2.4500	0.001
	41.00	35.6	10.8	106.87	2.4146	0.001
	42.00	35.9	11.1	106.89	2.3810	0.001
	43.00	36.2	11.4	106.92	2.3488	0.001
	44.00	36.6	11.8	106.94	2.3182	0.001
	45.00	36.8	12.0	106.96	2.2889	0.001
	46.00	37.2	12.4	106.99	2.2609	0.001
	47.00	37.6	12.8	107.01	2.2340	0.001
	48.00	37.9	13.1	107.04	2.2083	0.001
	49.00	38.3	13.5	107.06	2.1837	0.001
	50.00	38.6	13.8	107.08	2.1600	0.001
	51.00	38.9	14.1	107.11	2.1373	0.002
	52.00	38.9	14.1	107.13	2.1154	0.002
	53.00	39.4	14.6	107.15	2.0943	0.002
	54.00	39.8	15.0	107.17	2.0741	0.002
	55.00	40.2	15.4	107.20	2.0545	0.002
	56.00	40.4	15.6	107.22	2.0357	0.002
	57.00	40.7	15.9	107.24	2.0175	0.002
	58.00	41.2	16.4	107.27	2.0000	0.002
	59.00	41.5	16.7	107.29	1.9831	0.002
	60.00	41.9	17.1	107.31	1.9667	0.002
	61.00	42.2	17.4	107.33	1.9508	0.002
	62.00	42.5	17.7	107.35	1.9355	0.002
	63.00	42.9	18.1	107.38	1.9206	0.002
***** End Shut-in 2	64.00	43.3	18.5	107.40	1.9062	0.002
***** Final Hydro.	277.00	1934.9	0.0	107.54		

TEST HISTORY

TK #10109 DST #2 Wahrman#22-25 Sovereign Energy

Flag Points

	t (Min.)	P (PSIG)
A:	0.00	1983.20
B:	0.00	22.67
C:	29.00	24.12
D:	59.00	77.65
E:	0.00	24.26
F:	29.00	24.80
G:	64.00	43.28
Q:	0.00	1934.86

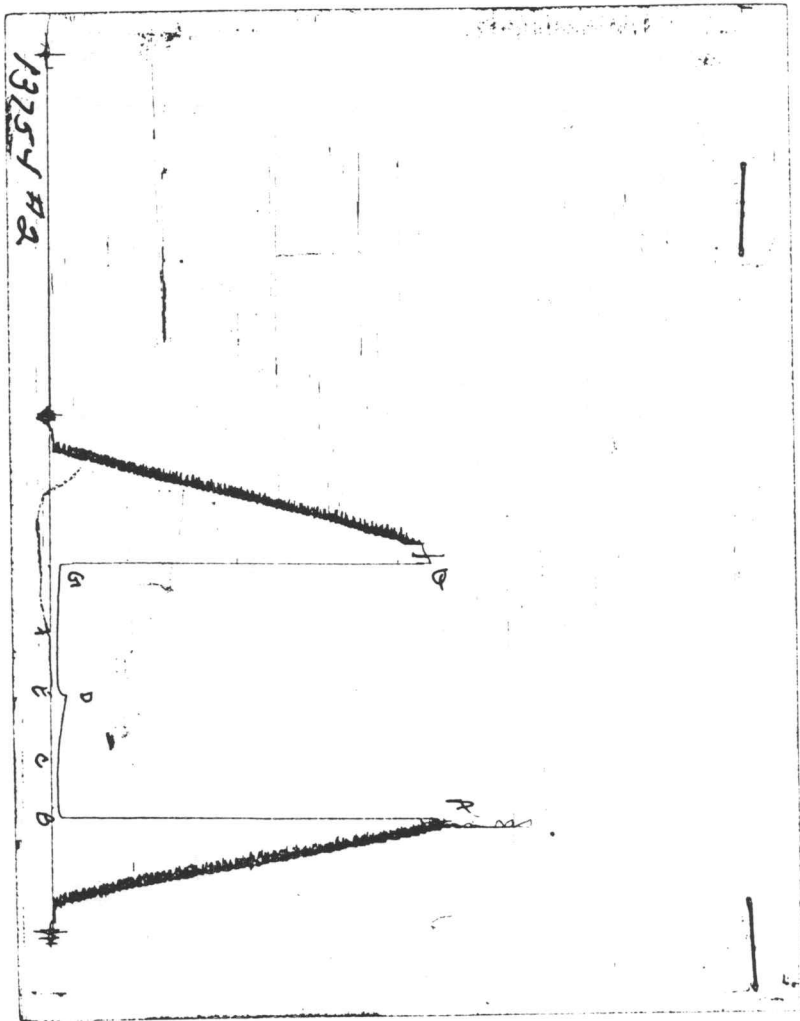


Pressure (PSIG)

Temperature (DEG F)

Time (Min.)

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart