

15-175-21496

20-31s-32w

ORIGINAL

TRILOBITE TESTING L.L.C.

Computer Inventoried

OPERATOR : Amoco Production Company
 WELL NAME: Tessa Katrine #1-20
 LOCATION : 20-31S-32W, Seward Cty KS
 INTERVAL : 4260.00 To 4300.00 ft

DATE 10-2-95
 KB 2865.00 ft TICKET NO: 7959 DST #1
 GR 2857.00 ft FORMATION: Lansing
 TD 4470.00 ft TEST TYPE: CONV. STRADDLE

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 10 Rec.	2351	11057				PF Fr. 1908 to 1918 hr
SI 60 Range(Psi)	4995.0	4500.0	0.0	0.0	0.0	IS Fr. 1918 to 2018 hr
SF 120 Clock(hrs)	Alpin	AK-1				SF Fr. 2018 to 2218 hr
FS 120 Depth(ft)	4261.0	4465.0	0.0	0.0	0.0	FS Fr. 2218 to 1218 hr

	Field	1	2	3	4	
A. Init Hydro	2059.0	0.0	0.0	0.0	0.0	T STARTED 1655 hr
B. First Flow	23.0	0.0	0.0	0.0	0.0	T ON BOTM 1905 hr
Bl. Final Flow	47.0	0.0	0.0	0.0	0.0	T OPEN 1908 hr
C. In Shut-in	1188.0	0.0	0.0	0.0	0.0	T PULLED 1218 hr
D. Init Flow	57.0	0.0	0.0	0.0	0.0	T OUT hr
E. Final Flow	186.0	0.0	0.0	0.0	0.0	
F. Fl Shut-in	1124.0	0.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2144.0	0.0	0.0	0.0	0.0	Tool Wt. 7000.00 lbs
Inside/Outside	I	O				Wt Set On Packer 25000.00 lbs
						Wt Pulled Loose 100000.00 lbs
						Initial Str Wt 80000.00 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 669.00 ft
						D.P. Length 3680.00 ft

RECOVERY

Tot Fluid 180.00 ft of 180.00 ft in DC and 0.00 ft in DP
 120.00 ft of Gas in pipe
 60.00 ft of Drilling mud w/ trace of water
 60.00 ft of Mud cut water - 60% water, 40% mud
 60.00 ft of Salt water - 100% water, trace of mud

RW .21 @ 65 F

SALINITY 35000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Blow -
 Surface blow built to 1"

Initial Shutin -
 Bled off blow, no return blow

Final Blow -
 Surface blow built to 1.25", died back
 to .75"

Final Shutin -
 No return blow

SAMPLES:
 SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 9.00 lb/cf
 Vis. 46.00 S/L
 W.L. 11.40 in3
 F.C. 0.00 in
 Mud Drop N

Amt. of fill 0.00 ft
 Btm. H. Temp. 110.00 F
 Hole Condition good
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 4
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out N
 Tool Chased N
 Tester Shane McBride
 Co. Rep. Austin Gardner
 Contr. Cheyenne
 Rig # 4
 Unit #
 Pump T.

Test Successful:

TEST HISTORY

7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.

Flag Points

t (Min.) P (PSig)

A	0.00	2059.16
B	0.00	23.24
C	0.00	46.74
D	62.00	1188.33
E	0.00	56.98
F	120.00	186.31
G	118.00	1123.95
Q	0.00	2144.10

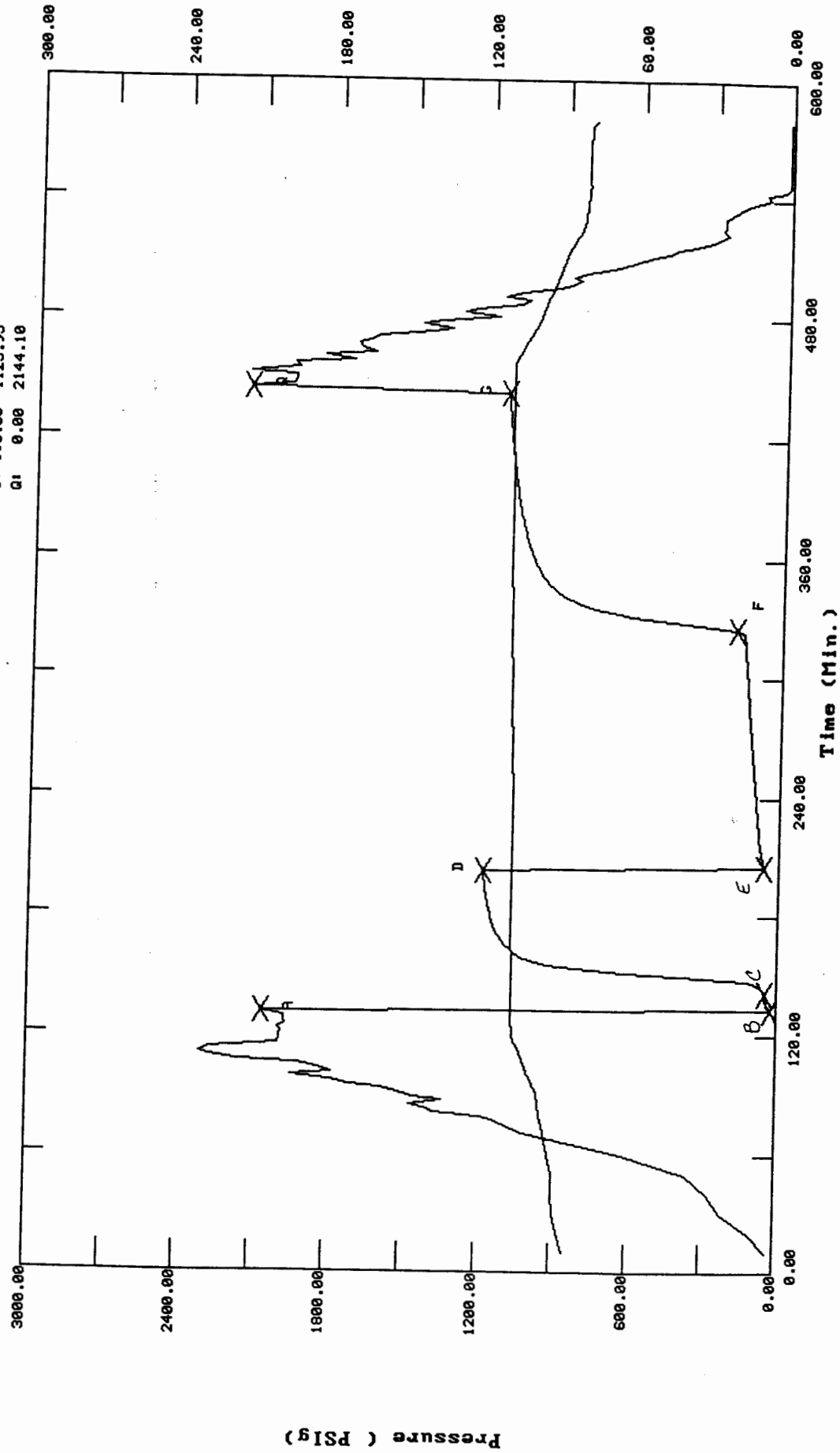
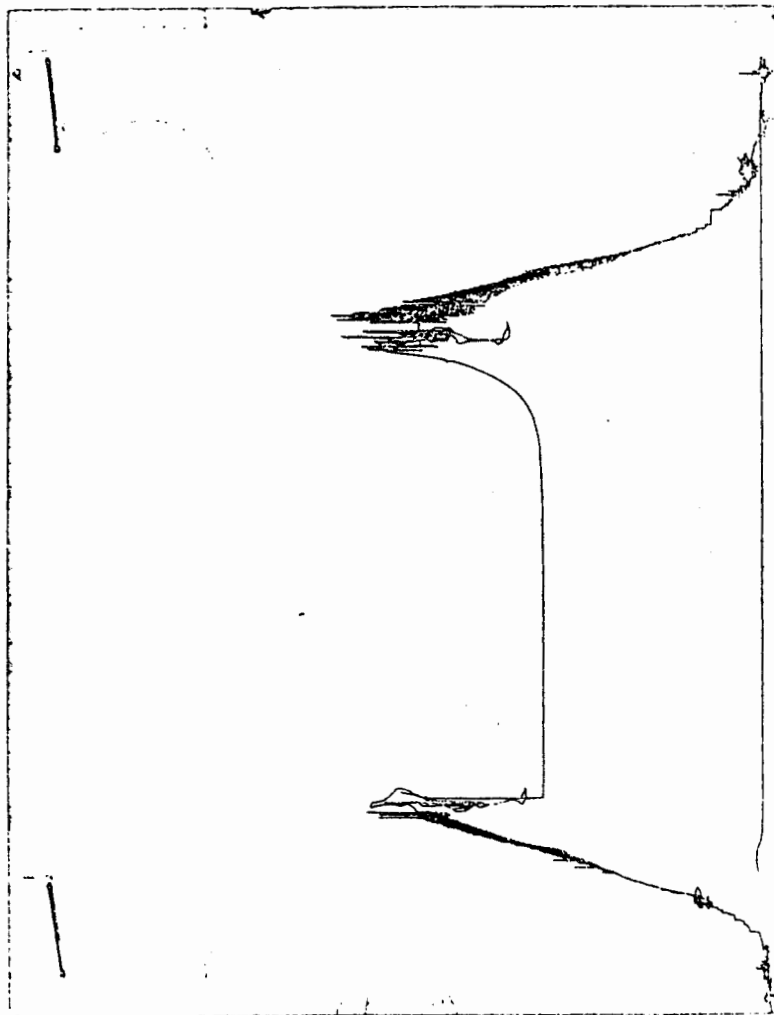


CHART PAGE



This is an actual photograph of recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.

DATE: 10/02/95 TIME: 17:10:52

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	131.00	2059.2	0.0	106.77		
***** Start Flow 1	0.00	23.2	0.0	106.73		
	2.00	37.3	14.1	106.67		
	4.00	40.3	17.0	106.55		
	6.00	43.6	20.4	106.48		
***** End Flow 1	8.00	46.7	23.5	106.48		
***** Start Shutin 1	0.00	46.7	0.0	106.48	0.0000	0.002
	2.00	50.9	4.2	106.48	5.0000	0.003
	4.00	68.3	21.6	106.49	3.0000	0.005
	6.00	115.1	68.3	106.53	2.3333	0.013
	8.00	300.0	253.3	106.57	2.0000	0.090
	10.00	614.1	567.4	106.64	1.8000	0.377
	12.00	813.8	767.0	106.71	1.6667	0.662
	14.00	929.8	883.1	106.78	1.5714	0.865
	16.00	993.8	947.0	106.86	1.5000	0.988
	18.00	1035.1	988.3	106.93	1.4444	1.071
	20.00	1061.3	1014.5	106.96	1.4000	1.126
	22.00	1081.8	1035.1	107.02	1.3636	1.170
	24.00	1098.3	1051.5	107.05	1.3333	1.206
	26.00	1110.7	1064.0	107.09	1.3077	1.234
	28.00	1121.4	1074.6	107.12	1.2857	1.257
	30.00	1130.7	1083.9	107.15	1.2667	1.278
	32.00	1138.6	1091.8	107.19	1.2500	1.296
	34.00	1144.8	1098.0	107.22	1.2353	1.310
	36.00	1150.5	1103.7	107.25	1.2222	1.324
	38.00	1155.6	1108.9	107.25	1.2105	1.335
	40.00	1159.6	1112.9	107.28	1.2000	1.345
	42.00	1163.6	1116.8	107.29	1.1905	1.354
	44.00	1167.6	1120.9	107.30	1.1818	1.363
	46.00	1170.9	1124.1	107.30	1.1739	1.371
	48.00	1173.8	1127.1	107.31	1.1667	1.378
	50.00	1176.0	1129.2	107.31	1.1600	1.383
	52.00	1178.8	1132.0	107.31	1.1538	1.389
	54.00	1181.3	1134.5	107.32	1.1481	1.395
	56.00	1182.9	1136.1	107.32	1.1429	1.399
	58.00	1185.2	1138.5	107.34	1.1379	1.405
	60.00	1187.0	1140.2	107.36	1.1333	1.409
***** End Shut-in 1	62.00	1188.3	1141.6	107.39	1.1290	1.412
***** Start Flow 2	0.00	57.0	0.0	107.32		
	2.00	61.3	4.3	107.30		
	4.00	65.4	8.4	107.30		
	6.00	68.3	11.3	107.29		
	8.00	70.6	13.6	107.28		
	10.00	73.8	16.9	107.28		
	12.00	76.1	19.1	107.29		
	14.00	79.1	22.2	107.30		
	16.00	81.1	24.1	107.30		
	18.00	82.7	25.7	107.30		
	20.00	84.0	27.0	107.30		
	22.00	85.4	28.5	107.31		
	24.00	87.4	30.5	107.31		

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.

DATE: 10/02/95 TIME: 17:10:52

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
26.00	89.0	32.1	107.33		
28.00	90.0	33.1	107.33		
30.00	91.6	34.6	107.33		
32.00	93.1	36.1	107.36		
34.00	95.0	38.0	107.40		
36.00	96.5	39.5	107.45		
38.00	97.5	40.5	107.47		
40.00	98.9	42.0	107.51		
42.00	101.0	44.0	107.53		
44.00	102.1	45.2	107.56		
46.00	104.0	47.0	107.58		
48.00	105.4	48.4	107.61		
50.00	106.9	49.9	107.63		
52.00	108.4	51.4	107.67		
54.00	110.1	53.1	107.68		
56.00	111.7	54.7	107.72		
58.00	113.0	56.0	107.78		
60.00	114.3	57.3	107.85		
62.00	115.7	58.7	107.93		
64.00	117.5	60.5	108.00		
66.00	118.3	61.4	108.06		
68.00	120.1	63.1	108.11		
70.00	121.1	64.1	108.18		
72.00	123.0	66.1	108.21		
74.00	123.7	66.7	108.25		
76.00	125.4	68.4	108.30		
78.00	126.8	69.8	108.35		
80.00	128.1	71.2	108.35		
82.00	129.6	72.6	108.38		
84.00	131.0	74.0	108.44		
86.00	132.3	75.3	108.47		
88.00	133.4	76.4	108.51		
90.00	134.7	77.7	108.55		
92.00	136.0	79.1	108.59		
94.00	137.5	80.6	108.63		
96.00	138.7	81.7	108.66		
98.00	140.0	83.0	108.70		
100.00	140.9	83.9	108.73		
102.00	142.5	85.5	108.76		
104.00	143.7	86.7	108.79		
106.00	145.1	88.1	108.82		
108.00	146.3	89.3	108.84		
110.00	148.0	91.0	108.87		
112.00	148.7	91.7	108.89		
114.00	149.9	92.9	108.91		
116.00	151.1	94.1	108.93		
118.00	152.7	95.8	108.96		
120.00	186.3	129.3	108.98		

***** End Flow 2

***** Start Shutin 2

0.00	186.3	0.0	108.98	0.0000	0.035
2.00	342.8	156.4	109.01	65.0000	0.117
4.00	500.3	314.0	109.07	33.0000	0.250

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7959 DST #1 Tessa Katrinae # 1-20 Amoco Prod.

DATE: 10/02/95 TIME: 17:10:52

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
6.00	610.1	423.8	109.12	22.3333	0.372
8.00	694.6	508.3	109.15	17.0000	0.482
10.00	762.1	575.8	109.20	13.8000	0.581
12.00	814.2	627.9	109.25	11.6667	0.663
14.00	854.5	668.1	109.30	10.1429	0.730
16.00	884.6	698.3	109.34	9.0000	0.783
18.00	908.5	722.2	109.37	8.1111	0.825
20.00	928.0	741.7	109.40	7.4000	0.861
22.00	944.3	758.0	109.43	6.8182	0.892
24.00	957.9	771.6	109.45	6.3333	0.918
26.00	970.4	784.1	109.47	5.9231	0.942
28.00	980.9	794.5	109.49	5.5714	0.962
30.00	989.3	803.0	109.51	5.2667	0.979
32.00	998.1	811.8	109.54	5.0000	0.996
34.00	1005.9	819.6	109.54	4.7647	1.012
36.00	1013.3	826.9	109.57	4.5556	1.027
38.00	1019.6	833.3	109.59	4.3684	1.040
40.00	1025.0	838.7	109.61	4.2000	1.051
42.00	1030.5	844.2	109.63	4.0476	1.062
44.00	1036.2	849.9	109.64	3.9091	1.074
46.00	1041.1	854.8	109.67	3.7826	1.084
48.00	1045.6	859.3	109.67	3.6667	1.093
50.00	1049.8	863.5	109.69	3.5600	1.102
52.00	1053.5	867.1	109.69	3.4615	1.110
54.00	1057.2	870.9	109.71	3.3704	1.118
56.00	1061.3	874.9	109.68	3.2857	1.126
58.00	1064.2	877.9	109.69	3.2069	1.133
60.00	1068.0	881.7	109.66	3.1333	1.141
62.00	1070.7	884.3	109.69	3.0645	1.146
64.00	1073.7	887.4	109.45	3.0000	1.153
66.00	1076.4	890.1	109.52	2.9394	1.159
68.00	1079.1	892.8	109.55	2.8824	1.165
70.00	1081.8	895.5	109.57	2.8286	1.170
72.00	1084.8	898.4	109.62	2.7778	1.177
74.00	1087.2	900.9	109.61	2.7297	1.182
76.00	1089.5	903.1	109.72	2.6842	1.187
78.00	1091.6	905.3	109.84	2.6410	1.192
80.00	1093.7	907.4	109.86	2.6000	1.196
82.00	1095.9	909.6	109.86	2.5610	1.201
84.00	1097.4	911.1	109.89	2.5238	1.204
86.00	1099.4	913.1	109.96	2.4884	1.209
88.00	1101.8	915.5	109.99	2.4545	1.214
90.00	1103.1	916.7	110.08	2.4222	1.217
92.00	1104.8	918.5	110.06	2.3913	1.221
94.00	1107.0	920.7	110.12	2.3617	1.225
96.00	1108.1	921.8	110.17	2.3333	1.228
98.00	1110.2	923.9	110.20	2.3061	1.233
100.00	1111.3	925.0	110.33	2.2800	1.235
102.00	1113.3	927.0	110.41	2.2549	1.239
104.00	1114.2	927.9	110.39	2.2308	1.241
106.00	1116.1	929.8	110.18	2.2075	1.246

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.

DATE: 10/02/95 TIME: 17:10:52

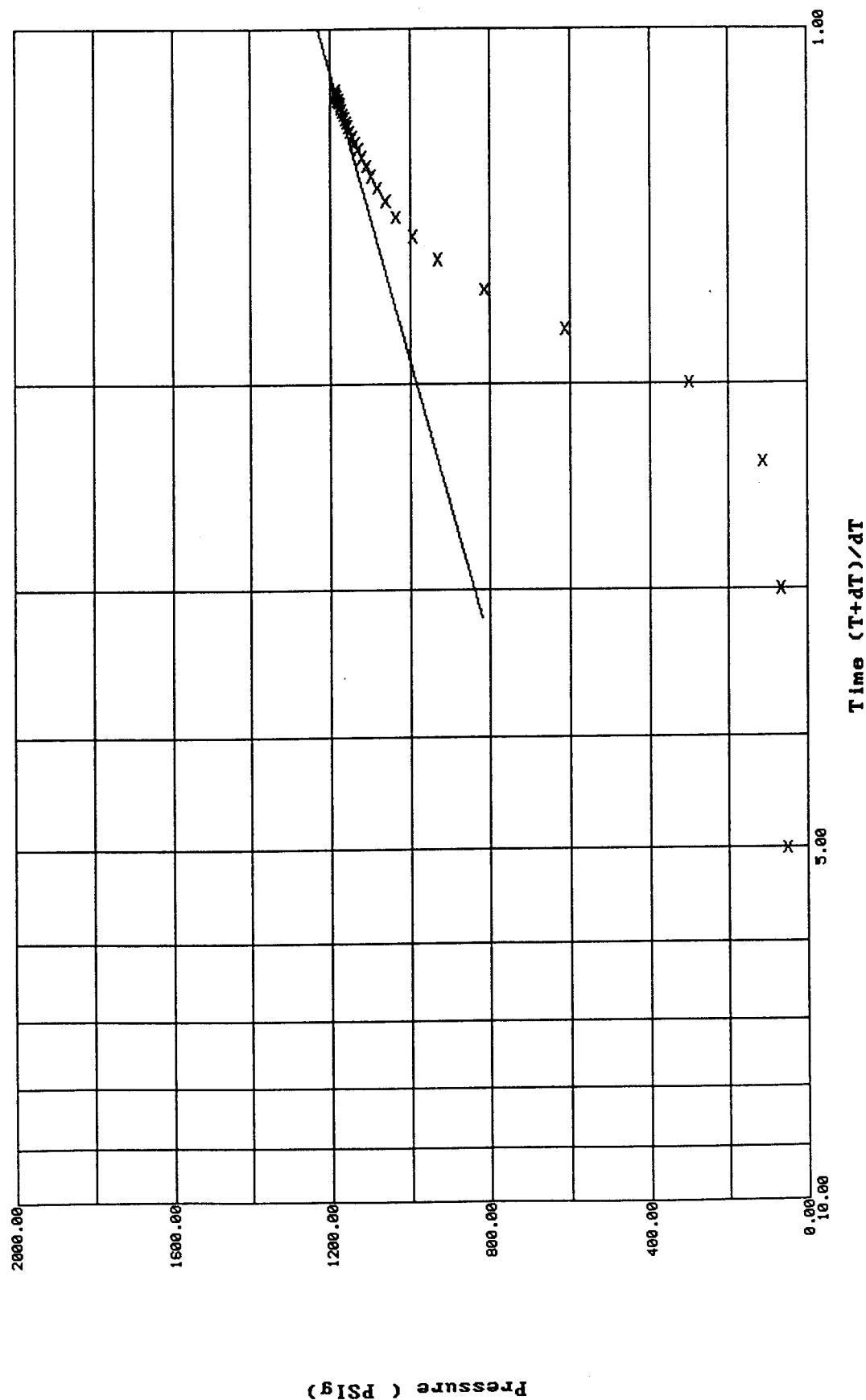
	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	108.00	1117.1	930.8	110.25	2.1852	1.248
	110.00	1118.4	932.1	110.07	2.1636	1.251
	112.00	1119.8	933.4	110.08	2.1429	1.254
	114.00	1121.5	935.2	110.09	2.1228	1.258
	116.00	1122.3	936.0	110.10	2.1034	1.259
***** End Shut-in 2	118.00	1124.0	937.6	110.10	2.0847	1.263
***** Final Hydro.	445.00	2144.1	0.0	110.15		

Horner Plot: shut-in #1

7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.

Slope: 820.5439 PSig/cycle

Ext. Pressure: 1231.5795 PSig

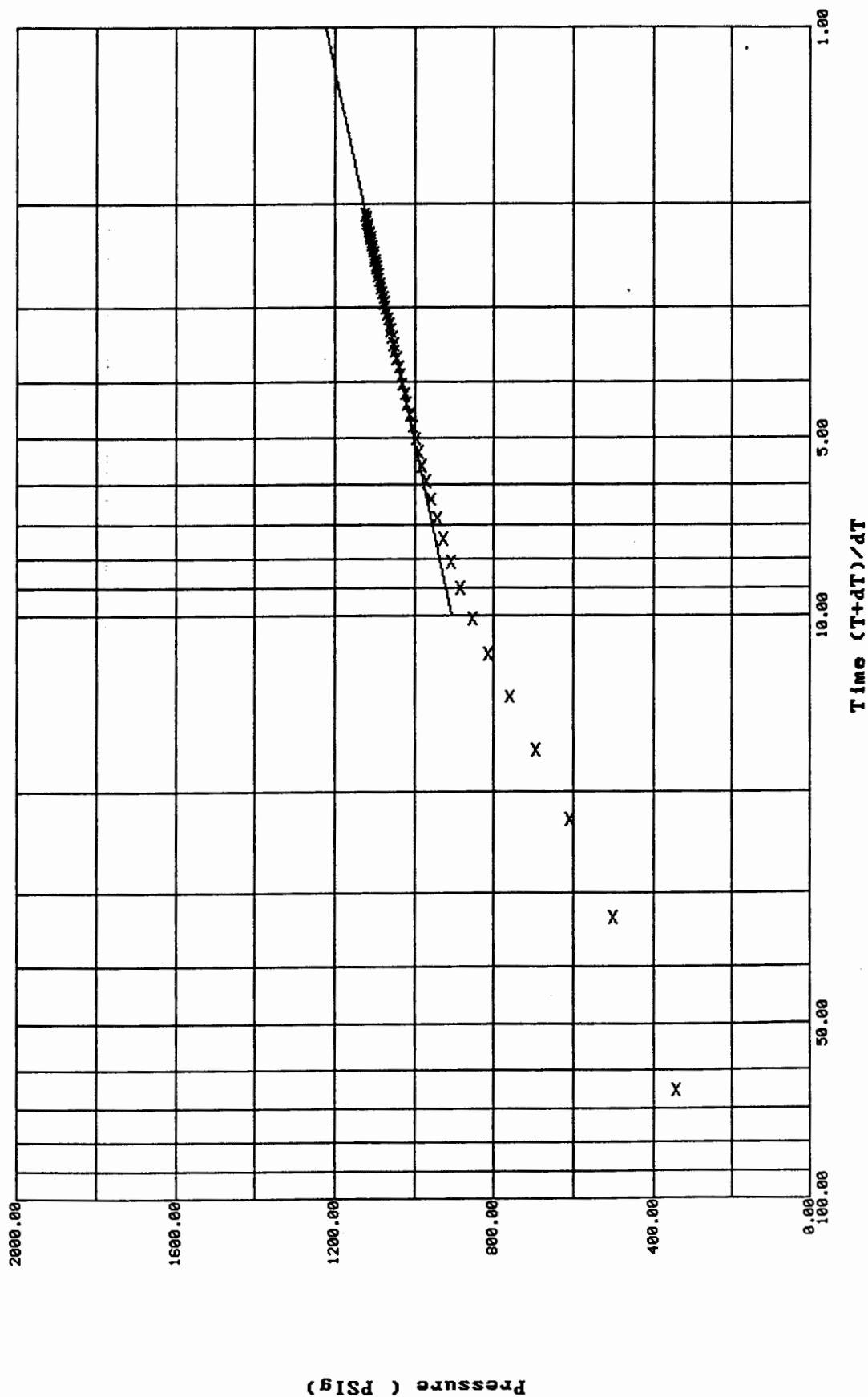


Horner Plot: shut-in #2

7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.

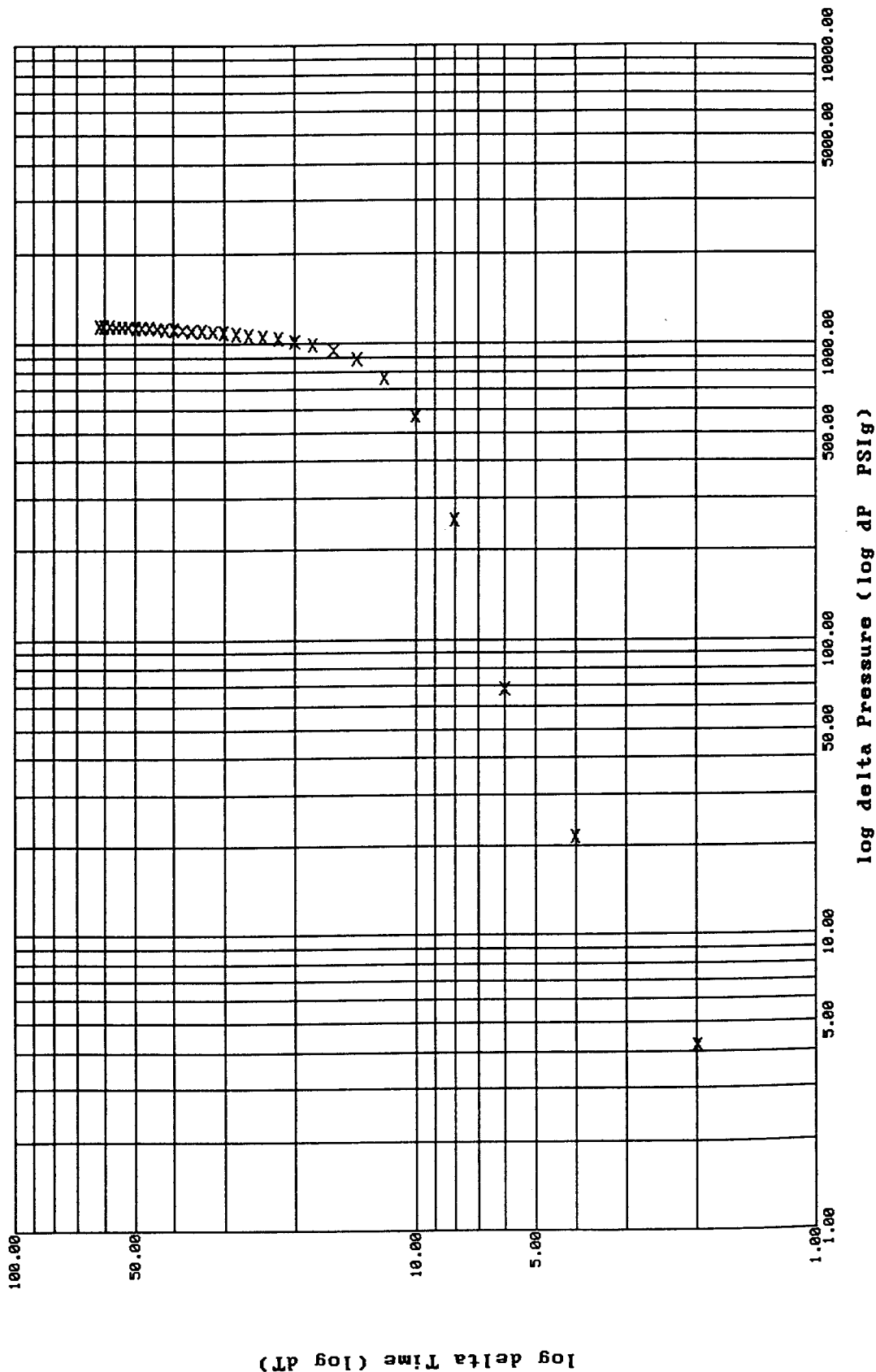
Slope: 317.0516 PSig/cycle

Ext. Pressure: 1224.8922 PSig

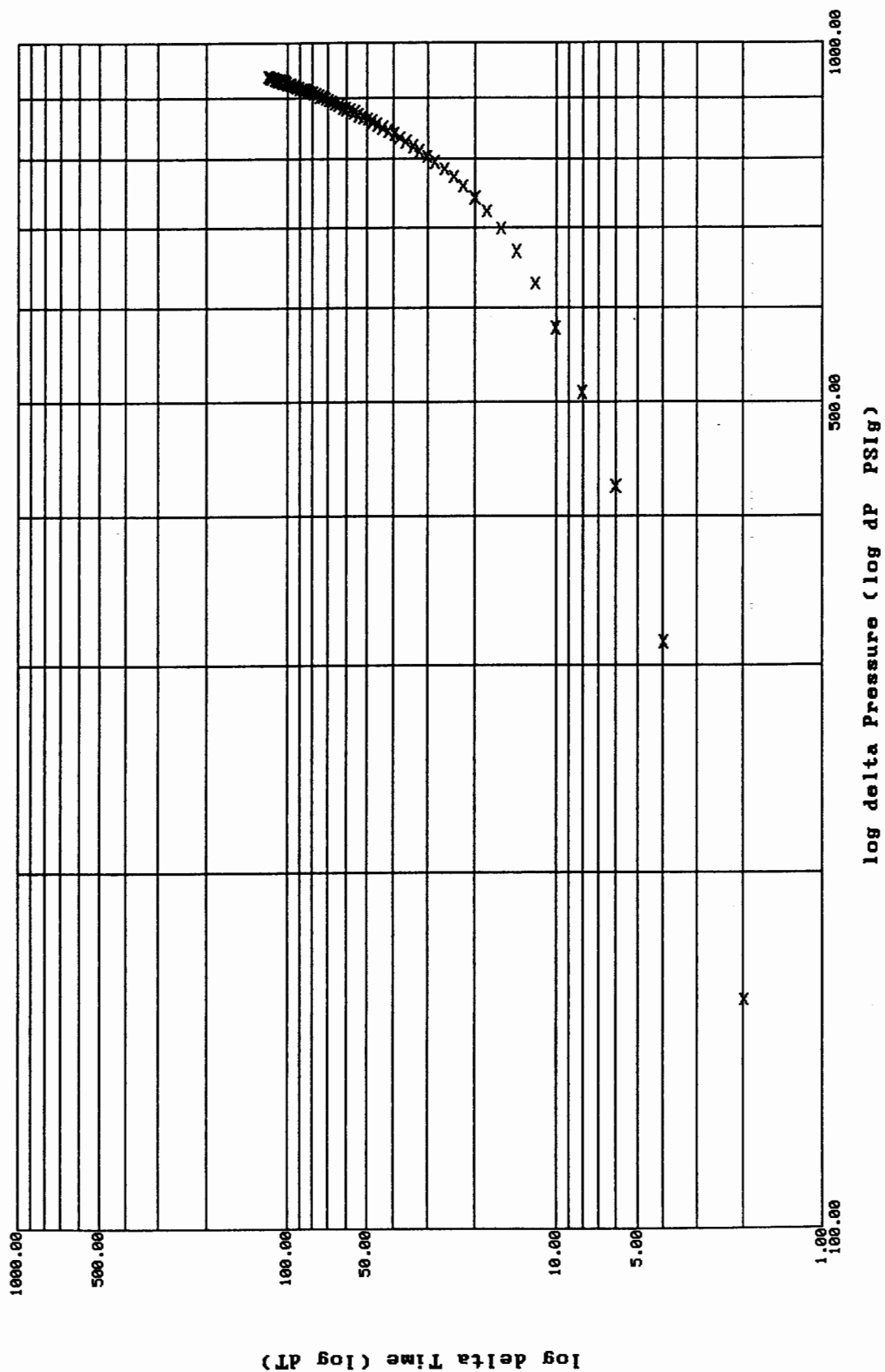


McKinley Plot: shut-in #1

7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.

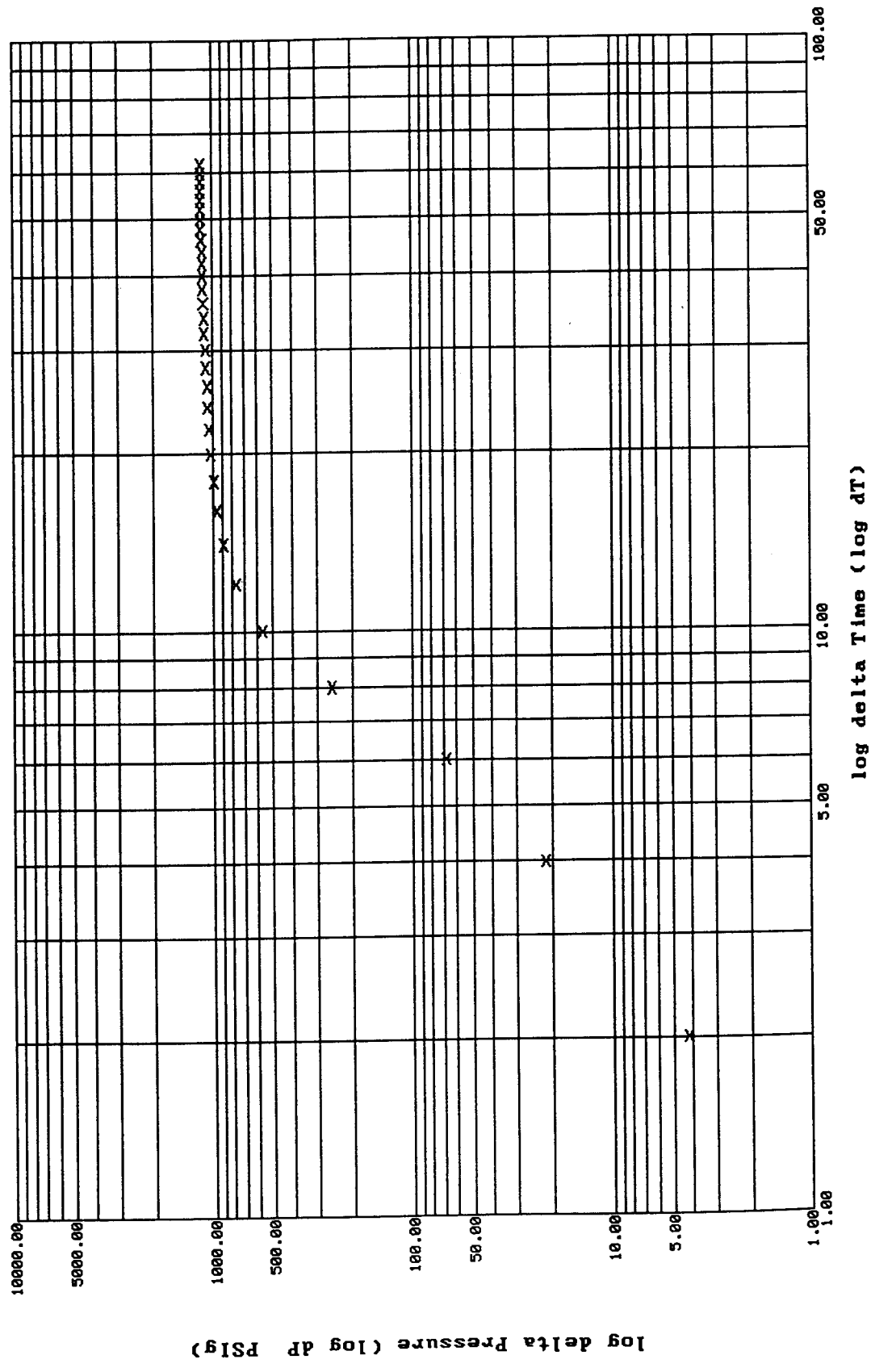


7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.



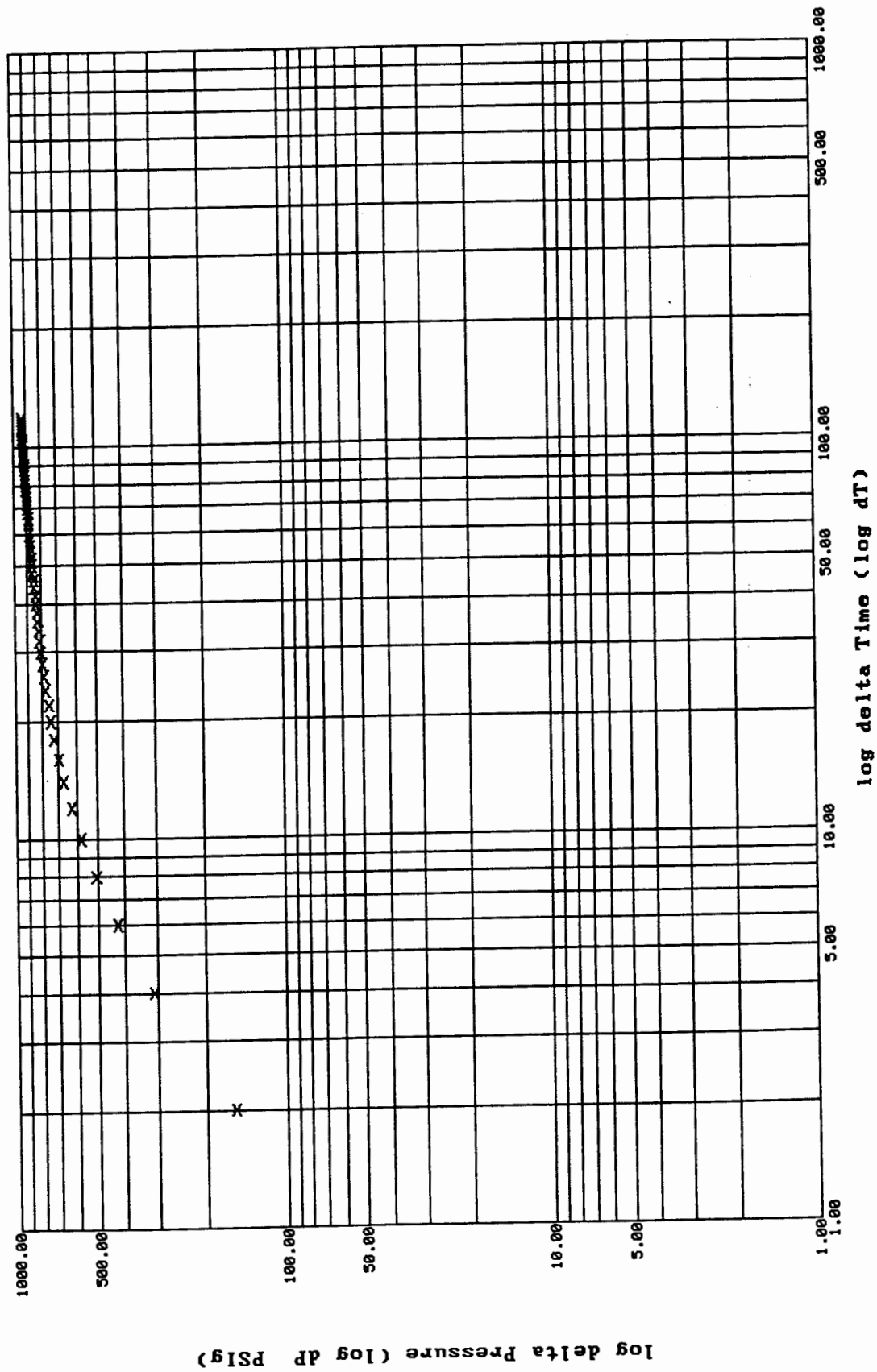
Ramey Plot: shut-in #1

7959 DST #1 Tessa Katrine # 1-20 Amoco Prod.



Ramey Plot: shut-in #2

7959 DST #1 Tessa Katrine # 1-28 Amoco Prod.



*** TOOL DIAGRAM *** CONV. STRADDLE

WELL NAME: Tessa Katrine #1-20

LOCATION : 20-31S-32W, Seward Cty KS

WELL No. 7959 D.S.T. No. 1 DATE 10-2-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 31

INTERVAL TOOL 31

BOTTOM PACKERS AND ANCHOR 46

TOTAL TOOL 77

WELL COLLAR ANCHOR IN INTERVAL 148

C. ANCHOR STAND.Stands2 Single 1 Total 148

P. ANCHOR STAND.Stands 0 Single 0 Total 0

TOTAL ASSEMBLY 148

C. ABOVE TOOLS.Stands8 Single 1 Total 521

P. ABOVE TOOLS.Stands60 Single 0 Total 3711

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4502

TOTAL DEPTH 4470

TOTAL DRILL PIPE ABOVE K.B. 32

REMARKS:

FLUID SAMPLER DATA

SAMPLER RECOVERY -

Gas 500 ml, Mud 500 ml, Water 3000 ml,
Pressure 380 PSI, Total 4000 ml

SAMPLER ANALYSIS -

Resistivity .21 ohms @ 65 F;
Chlorides 35000 ppm

IT MUD ANALYSIS -

Chlorides 2900 ppm; Resist 1.9 ohms @ 75 F,
Viscosity 46, Mud Wt 9, Filtrate 11.4

PIPE RECOVERY -

Middle - Resistivity .21 ohms @ 65 F;
Chlorides 35000 ppm

P.O. SUB	
C.O. SUB 1'	4234
S.I. TOOL 5'	4235
sampler 3'	4240
HMV 5'	4243
JARS 5'	4248
SAFETY JOINT 2'	4253
PACKER 5'	4255
PACKER	4260
DEPTH 4260	
STUBB 1'	4260
ANCHOR	
5'	4261
5'	4266
5'	4271
2'	4276
3'	4278
5'	4281
	4286
5'	4291
4'top of packer	4296
T.C.	
DEPTH 4300	
PACKER	4300
PACKER	4305
1'	4306
148	4307
5'	4455
4'	4460
BULLNOSE 1'	4464
T.D.	4465

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 7959 Date 10-2-95
Company Name Amoco
Lease Tessa Katriva #1-20 Test No. 1
County Seward Sec. 20 Twp. 31 Rng. 32

SAMPLER RECOVERY

Gas 500 ML
Oil ML
Mud 500 ML
Water 3,000 ML
Other ML
Pressure 380 PSI
Total 4,000 ML

PIT MUD ANALYSIS

Chlorides 2,800 ppm.
Resistivity 1.9 ohms @ 75 F
Viscosity 46
Mud Weight 9.0
Filtrate 11.4
Other

SAMPLER ANALYSIS

Resistivity 1.21 ohms @ 65 F
Chlorides 35,000 ppm.
Gravity corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity ohms @ F
Chlorides ppm.

MIDDLE
Resistivity 1.21 ohms @ 65 F
Chlorides 35,000 ppm.

BOTTOM
Resistivity ohms @ F
Chlorides ppm.

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

NE 7959

Well Name & No. Tessa Katrine 1-20 Test No. 1 Date 10-2-95
 Company Amoco Pro. Co. Zone Tested Lawsoning
 Address P.O. Box 800 Room 924 Denver Colo 80201 Elevation 2857 (GI) 2865 (KB)
 Co. Rep./Geo. Austin Cont. Cheyenne #4 Est. Ft. of Pay _____
 Location: Sec. 20 Twp. 31 Rge. 32 Co. Seward State KS
 No. of Copies Normal Distribution Sheet _____ Yes _____ No Turnkey _____ Yes X No _____ Evaluation _____

Interval Tested 4255' 4260' - 4300' 4305' Drill Pipe Size 4 1/2 FH
 Anchor Length 40' Top Choke — 1" _____ Bottom Choke — 1/4" ✓
 Top Packer Depth 4255' 4260' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
 Bottom Packer Depth 4300' 4305' Wt. Pipe I.D. — 2.7 Ft. Run _____
 Total Depth 4470 Drill Collar — 2.25 Ft. Run 668'
 Mud Wt. 9.0 lb/gal. Viscosity 46 Filtrate 11.4

Tool Open @ 7:08 pm Initial Blow Surface Blow built to 1 1/4"
I.S.I - Bleed off Blow - No return Blow
 Final Blow Surface Blow built to 1 1/4" in. Disd Back to 3/4"
F.S.I - Bleed off Blow - No return Blow
 Recovery — Total Feet 180' Feet of Gas In Pipe 120' Flush Tool? NO

Rec.	Feet Of	%gas	%oil	%water	%mud
<u>60'</u>	<u>Drill mud</u>			<u>100%</u>	<u>0%</u>
<u>60'</u>	<u>mud cutwater</u>			<u>60%</u>	<u>40%</u>
<u>60'</u>	<u>salt water</u>			<u>100%</u>	<u>0%</u>

BHT 110 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
 RW .21 @ 65 °F Chlorides 35,000 ppm Recovery Chlorides 2,900 ppm System

(A) Initial Hydrostatic Mud 2059 PSI AK1 Recorder No. 2351 Range 4995
 (B) First Initial Flow Pressure 23 PSI @ (depth) 4261' W/Clock No. ELC.
 (C) First Final Flow Pressure 46 PSI AK1 Recorder No. 11057 Range 4500
 (D) Initial Shut-In Pressure 1188 PSI @ (depth) 4465' W/Clock No. 21048
 (E) Second Initial Flow Pressure 56 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 186 PSI @ (depth) _____ W/Clock No. _____
 (G) Final Shut-In Pressure 1123 PSI Initial Opening 10 Test X 1000
 (H) Final Hydrostatic Mud 2144 PSI Initial Shut-In 60 Jars X 200

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Austin P. Gorman
 Our Representative Shane M. Gorman
 Final Flow 120 Safety Joint X 50
 Final Shut-In 120 Straddle X 250
 Circ. Sub X N/C
 Sampler X 200
 Extra Packer X 150
 Other X Electronic Recorder 150
 TOTAL PRICE \$ 1600

Computer Inventory TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Company
 WELL NAME: Tessa Katrine #1-20
 LOCATION : 20-31S-32W, Seward Cty KS
 INTERVAL : 4870.00 To 4918.00 ft

DATE 10-4-95
 KB 2865.00 ft TICKET NO: 7960 DST #2
 GR 2857.00 ft FORMATION: Marmaton
 TD 4918.00 ft TEST TYPE: CONVENTIONAL

RECORDED DATA

mins	Field	1	2	3	4	TIME DATA-----
10 Rec.	11057	11057	2351			PF Fr. 1207 to 1217 hr
60 Range(Psi)	4500.0	4500.0	4995.0	0.0	0.0	IS Fr. 1217 to 1317 hr
120 Clock(hrs)	AK-1	AK-1	Alpin			SF Fr. 1317 to 1517 hr
120 Depth(ft)	4913.0	4913.0	4871.0	0.0	0.0	FS Fr. 1517 to 1717 hr

	Field	1	2	3	4	
Init Hydro	2519.0	2508.0	2411.0	0.0	0.0	T STARTED 1005 hr
First Flow	554.0	561.0	567.0	0.0	0.0	T ON BOTM 1204 hr
Final Flow	537.0	540.0	529.0	0.0	0.0	T OPEN 1207 hr
In Shut-in	1421.0	1420.0	1458.0	0.0	0.0	T PULLED 1717 hr
Init Flow	487.0	488.0	459.0	0.0	0.0	T OUT 1917 hr
Final Flow	252.0	253.0	268.0	0.0	0.0	
Fl Shut-in	1331.0	1346.0	1380.0	0.0	0.0	
Final Hydro	2479.0	2481.0	2270.0	0.0	0.0	
Inside/Outside	0	0	I			

RECOVERY

Total Fluid 600.00 ft of 600.00 ft in DC and 0.00 ft in DP
 90.00 ft of Gassy mud - 10% gas, 90% mud
 200.00 ft of Gassy water cut mud-20% gas 20% water 60% mud
 210.00 ft of Gassy muddy water - 25% gas 65% water 10% mud
 100.00 ft of Slightly gassy mud cut water - 10% gas
 85% water 5% mud

TOOL DATA-----
 Tool Wt. 6000.00 lbs
 Wt Set On Packer 25000.00 lbs
 Wt Pulled Loose 160000.00 lbs
 Initial Str Wt 94000.00 lbs
 Unseated Str Wt 101000.00 lbs
 Bot Choke 0.75 in
 Hole Size 7.88 in
 D Col. ID 0.00 in
 D. Pipe ID 0.00 in
 D.C. Length 669.00 ft
 D.P. Length 4193.75 ft

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

BLOW DESCRIPTION

Initial Blow -
 Bottom of bucket at open, gas to surface in 5 min, burnt bright orange flame, flared to 40'
 Initial Shutin -
 Bled off blow for 23 min, no return blow

Final Blow -
 Gauging gas throughout open

Final Shutin -
 Bled off blow for 55 min, return blow in 65 min, built to 1.25"

SAMPLES:

SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 9.00 lb/cf
 Vis. 53.00 S/L
 W.L. 10.80 in3
 F.C. 0.00 in
 Mud Drop Y 4.0 ft

Amt. of fill 0.00 ft
 Btm. H. Temp. 124.00 F
 Hole Condition good
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out
 Tool Chased N
 Tester Shane McBride
 Co. Rep. Austin Gardner
 Contr. Cheyenne
 Rig # 4
 Unit #
 Pump T.

Test Successful:

7960 DST #2 Tessa Katrine 1-20 Amoco Prod TEST HISTORY

Flag Points

t(Min.) P(PSig)

A:	0.00	2411.24
B:	0.00	566.92
C:	10.00	529.07
D:	60.00	1457.73
E:	0.00	548.63
F:	116.00	267.72
G:	124.00	1379.93
Q:	0.00	2269.65

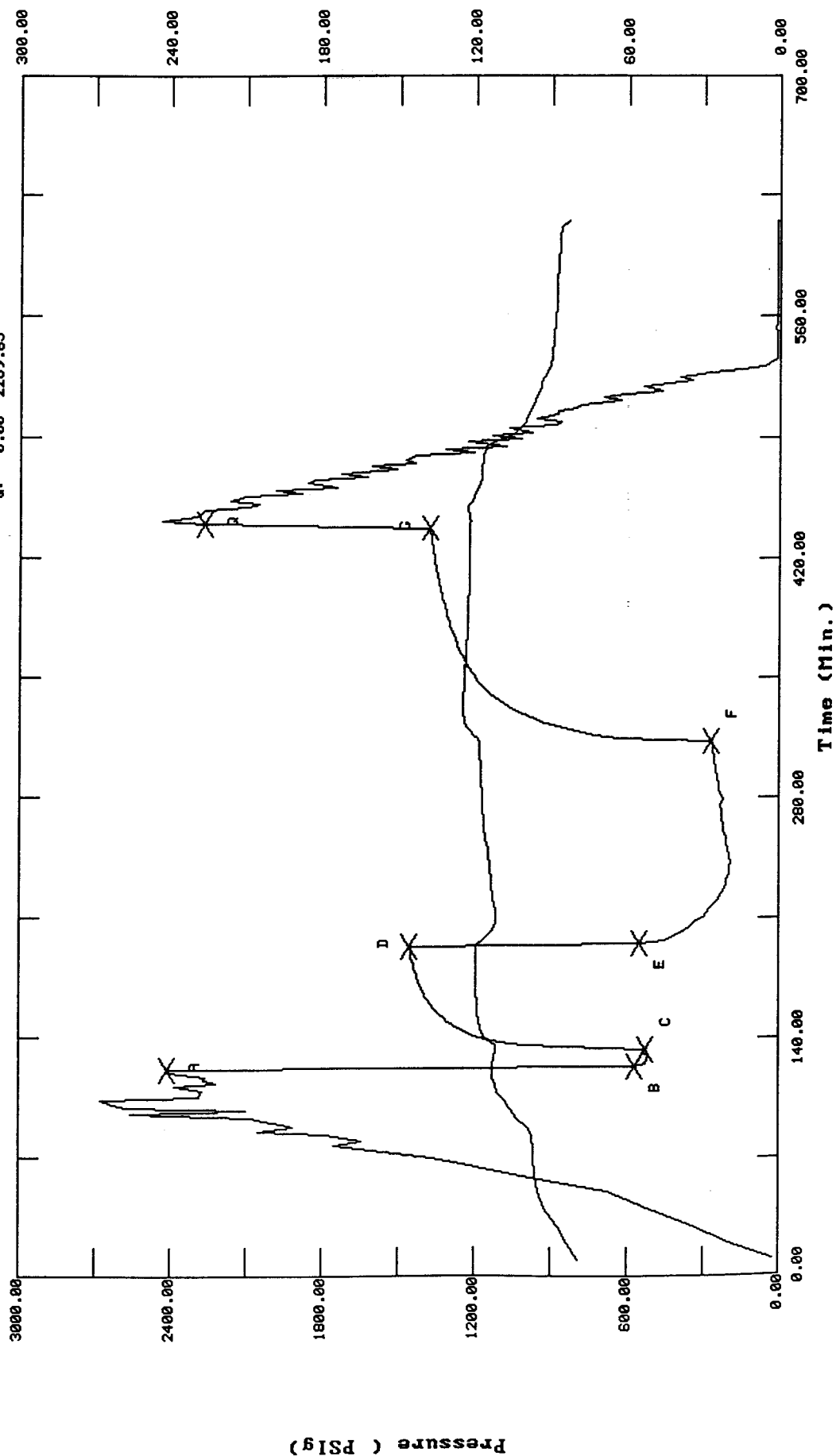
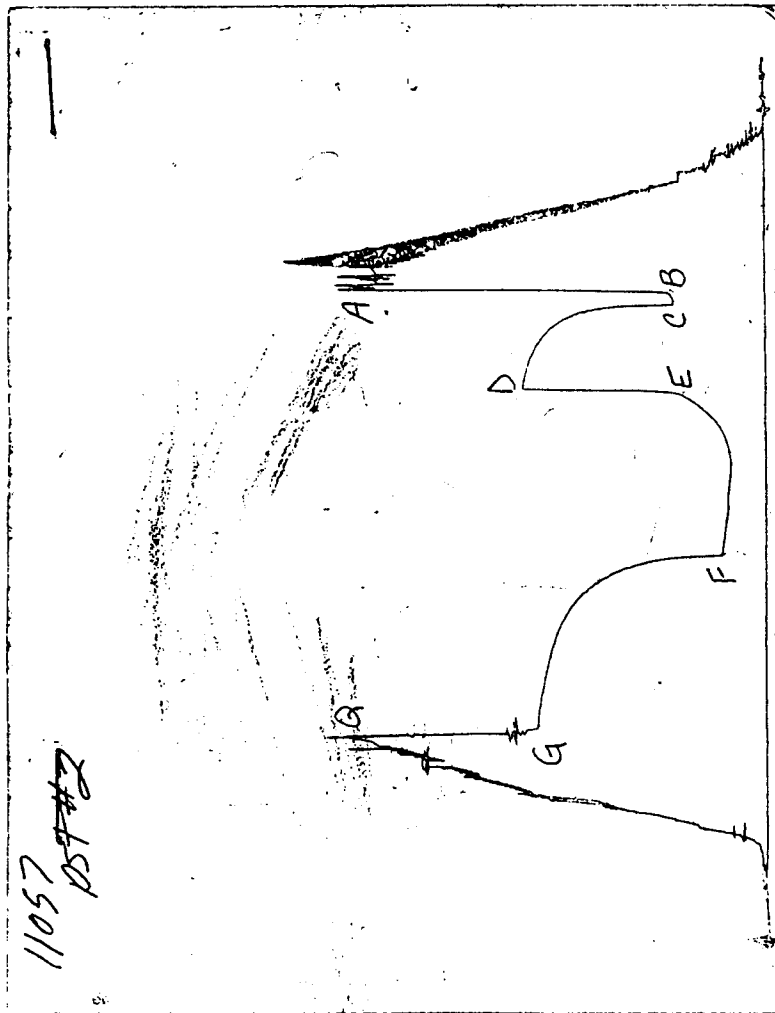


CHART PAGE



This is an actual photograph of recorder chart

Operator.....: Amoco Production Company
Well Name.....: Tessa Katrine #1-20
DST Number.....: 2

Location.: 20-31s-32w Recorder No...: 2351
Test Type: Conventional Recorder Depth: 4871
Formation: Marmation Test Interval.: 4870-4918

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

RESERVOIR PARAMETERS USED:

Net Pay.....: 5.00 ft
Porosity.....: 12.80 %
Bottom Hole Temp.....: 124.00 F
Specific Gravity.....: 0.737
Z factor.....: $\gamma_{g,f} \gamma_{g,s}$
Compressibility.....: 0.013815 /psi
Viscosity.....: 0.0149 cp
Total Flowing Time.....: 130.00 min.
Flow Rate.....: 709000.00 bbls/d
Final Flowing Pressure.....: 269.00 psi
Horner Slope.....: $526.1721 \times 10^6 \text{ psi}^2/\text{cycle}$
Extrapolated Pressure.....: 1542.02 psi
Assumed Drainage Radius.....: 1500.00 ft
Well Bore Radius.....: 3.94 in

RESULTS:

Effective Permeability.....: 3.826970 md
Flow Capacity.....: 19.1349 md.ft
Transmissibility.....: 1284.2182 md.ft/cp
Skin Factor.....: -1.2373
Pressure Drop Across Skin.....: -269.0000 psi
Radius of Investigation.....: 16.2685 ft
Damage Ratio.....: 0.0015
Absolute Open Flow.....: 772773.7771 bbls/d
Absolute Open Flow W/O Damage.: 772773.7771 bbls/d
Estimated Stabilized AOF.....: 305.9160 bbls/d

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7960 DST #2 Tessa Katrine 1-20 Amoco Prod

DATE: 10/04/95

TIME: 10:20:55

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	121.00	2411.2	0.0	112.69		
***** Start Flow 1	0.00	566.9	0.0	112.68		
	2.00	524.8	-42.1	112.63		
	4.00	522.8	-44.1	112.33		
	6.00	513.0	-53.9	111.82		
	8.00	540.2	-26.7	111.45		
***** End Flow 1	10.00	529.1	-37.9	111.23		
***** Start Shutin 1	0.00	529.1	0.0	111.23	0.0000	0.280
	2.00	1004.0	474.9	111.71	6.0000	1.008
	4.00	1096.2	567.1	113.48	3.5000	1.202
	6.00	1157.4	628.4	114.96	2.6667	1.340
	8.00	1202.9	673.9	116.10	2.2500	1.447
	10.00	1236.2	707.2	116.83	2.0000	1.528
	12.00	1263.6	734.5	117.38	1.8333	1.597
	14.00	1285.6	756.5	117.78	1.7143	1.653
	16.00	1305.0	775.9	118.08	1.6250	1.703
	18.00	1322.3	793.2	118.34	1.5556	1.748
	20.00	1336.6	807.6	118.48	1.5000	1.787
	22.00	1349.6	820.6	118.64	1.4545	1.822
	24.00	1361.6	832.6	118.76	1.4167	1.854
	26.00	1371.5	842.5	118.86	1.3846	1.881
	28.00	1381.3	852.2	118.95	1.3571	1.908
	30.00	1389.6	860.5	119.01	1.3333	1.931
	32.00	1396.9	867.8	119.05	1.3125	1.951
	34.00	1403.4	874.4	119.09	1.2941	1.970
	36.00	1409.6	880.5	119.12	1.2778	1.987
	38.00	1415.2	886.1	119.14	1.2632	2.003
	40.00	1420.9	891.8	119.15	1.2500	2.019
	42.00	1425.8	896.7	119.17	1.2381	2.033
	44.00	1430.3	901.2	119.18	1.2273	2.046
	46.00	1434.5	905.4	119.21	1.2174	2.058
	48.00	1438.4	909.4	119.21	1.2083	2.069
	50.00	1441.7	912.6	119.21	1.2000	2.079
	52.00	1445.2	916.2	119.22	1.1923	2.089
	54.00	1448.9	919.8	119.22	1.1852	2.099
	56.00	1451.6	922.5	119.22	1.1786	2.107
	58.00	1454.5	925.4	119.23	1.1724	2.115
***** End Shut-in 1	60.00	1457.7	928.7	119.22	1.1667	2.125
***** Start Flow 2	0.00	548.6	0.0	118.46		
	2.00	446.0	-102.6	116.72		
	4.00	419.6	-129.0	115.09		
	6.00	389.1	-159.5	113.81		
	8.00	371.3	-177.3	112.73		
	10.00	353.1	-195.6	111.94		
	12.00	334.0	-214.6	111.56		
	14.00	315.7	-232.9	111.39		
	16.00	294.7	-254.0	111.45		
	18.00	286.6	-262.0	111.63		
	20.00	272.3	-276.3	111.71		
	22.00	260.2	-288.5	112.01		
	24.00	250.8	-297.9	112.26		

ORIGINAL

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

EST: 7960 DST #2 Tessa Katrine 1-20 Amoco Prod

ATE: 10/04/95 TIME: 10:20:55

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	26.00	237.1	-311.5	112.48		
	28.00	230.8	-317.8	112.71		
	30.00	221.7	-326.9	112.88		
	32.00	216.5	-332.1	113.05		
	34.00	209.8	-338.8	113.21		
	36.00	205.2	-343.4	113.35		
	38.00	200.2	-348.4	113.48		
	40.00	195.9	-352.7	113.60		
	42.00	193.3	-355.4	113.73		
	44.00	193.6	-355.0	113.84		
	46.00	192.8	-355.9	113.97		
	48.00	192.0	-356.6	114.09		
	50.00	193.5	-355.1	114.24		
	52.00	196.9	-351.7	114.42		
	54.00	204.1	-344.5	114.65		
	56.00	204.6	-344.0	114.72		
	58.00	206.1	-342.5	115.21		
	60.00	207.7	-340.9	115.56		
	62.00	209.7	-338.9	115.80		
	64.00	213.5	-335.1	116.00		
	66.00	218.5	-330.2	116.16		
	68.00	221.1	-327.5	116.29		
	70.00	221.6	-327.0	116.42		
	72.00	224.9	-323.7	116.50		
	74.00	224.6	-324.0	116.60		
	76.00	226.9	-321.7	116.71		
	78.00	227.8	-320.9	116.80		
	80.00	229.9	-318.8	116.89		
	82.00	223.2	-325.4	116.96		
	84.00	220.1	-328.6	117.02		
	86.00	223.6	-325.1	117.07		
	88.00	232.1	-316.5	117.10		
	90.00	240.0	-308.6	117.16		
	92.00	235.7	-313.0	117.24		
	94.00	238.2	-310.4	117.32		
	96.00	242.0	-306.7	117.40		
	98.00	246.5	-302.1	117.47		
	100.00	248.6	-300.0	117.56		
	102.00	249.7	-299.0	117.62		
	104.00	251.4	-297.2	117.70		
	106.00	255.4	-293.2	117.76		
	108.00	256.3	-292.3	117.83		
	110.00	256.5	-292.2	117.88		
	112.00	259.7	-288.9	117.94		
	114.00	261.5	-287.1	118.01		
	116.00	264.1	-284.5	118.06		
**** End Flow 2	118.00	267.7	-280.9	118.12		
**** Start Shutin 2	0.00	267.7	0.0	118.12	0.0000	0.072
	2.00	633.6	365.8	118.69	65.0000	0.401
	4.00	730.7	462.9	120.45	33.0000	0.534
	6.00	797.8	530.1	122.02	22.3333	0.636

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7960 DST #2 Tessa Katrine 1-20 Amoco Prod
DATE: 10/04/95 TIME: 10:20:55

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
8.00	853.3	585.6	123.01	17.0000	0.728
10.00	900.0	632.3	123.68	13.8000	0.810
12.00	941.2	673.4	124.11	11.6667	0.886
14.00	977.8	710.0	124.38	10.1429	0.956
16.00	1009.3	741.6	124.53	9.0000	1.019
18.00	1037.6	769.9	124.60	8.1111	1.077
20.00	1062.8	795.0	124.62	7.4000	1.129
22.00	1085.7	818.0	124.61	6.8182	1.179
24.00	1105.7	838.0	124.57	6.3333	1.223
26.00	1123.7	856.0	124.52	5.9231	1.263
28.00	1139.5	871.8	124.46	5.5714	1.298
30.00	1154.6	886.9	124.39	5.2667	1.333
32.00	1168.0	900.3	124.31	5.0000	1.364
34.00	1179.8	912.0	124.23	4.7647	1.392
36.00	1191.0	923.3	124.15	4.5556	1.419
38.00	1201.7	933.9	124.09	4.3684	1.444
40.00	1211.3	943.6	123.99	4.2000	1.467
42.00	1220.1	952.4	123.90	4.0476	1.489
44.00	1227.9	960.2	123.84	3.9091	1.508
46.00	1235.7	967.9	123.74	3.7826	1.527
48.00	1243.0	975.2	123.66	3.6667	1.545
50.00	1250.2	982.5	123.56	3.5600	1.563
52.00	1256.6	988.9	123.49	3.4615	1.579
54.00	1262.3	994.6	123.40	3.3704	1.594
56.00	1268.6	1000.9	123.35	3.2857	1.609
58.00	1273.8	1006.1	123.27	3.2069	1.623
60.00	1279.1	1011.3	123.20	3.1333	1.636
62.00	1284.6	1016.9	123.14	3.0645	1.650
64.00	1289.4	1021.7	123.09	3.0000	1.662
66.00	1294.2	1026.4	123.03	2.9394	1.675
68.00	1298.6	1030.9	122.98	2.8824	1.686
70.00	1302.6	1034.8	122.93	2.8286	1.697
72.00	1307.1	1039.4	122.87	2.7778	1.708
74.00	1311.0	1043.3	122.82	2.7297	1.719
76.00	1314.6	1046.8	122.77	2.6842	1.728
78.00	1318.7	1051.0	122.73	2.6410	1.739
80.00	1321.9	1054.2	122.71	2.6000	1.748
82.00	1325.9	1058.2	122.68	2.5610	1.758
84.00	1329.3	1061.6	122.64	2.5238	1.767
86.00	1332.2	1064.5	122.58	2.4884	1.775
88.00	1335.7	1068.0	122.55	2.4545	1.784
90.00	1338.5	1070.8	122.52	2.4222	1.792
92.00	1341.5	1073.8	122.49	2.3913	1.800
94.00	1344.5	1076.8	122.44	2.3617	1.808
96.00	1347.4	1079.6	122.44	2.3333	1.815
98.00	1350.1	1082.4	122.41	2.3061	1.823
100.00	1353.3	1085.6	122.39	2.2800	1.831
102.00	1355.5	1087.8	122.36	2.2549	1.837
104.00	1358.4	1090.7	122.33	2.2308	1.845
106.00	1360.9	1093.2	122.31	2.2075	1.852
108.00	1362.8	1095.1	122.28	2.1852	1.857

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

EST: 7960 DST #2 Tessa Katrine 1-20 Amoco Prod

ATE: 10/04/95 TIME: 10:20:55

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	110.00	1365.2	1097.5	122.26	2.1636	1.864
	112.00	1367.9	1100.2	122.23	2.1429	1.871
	114.00	1370.1	1102.4	122.23	2.1228	1.877
	116.00	1372.3	1104.6	122.19	2.1034	1.883
	118.00	1374.0	1106.3	122.18	2.0847	1.888
	120.00	1375.9	1108.2	122.16	2.0667	1.893
	122.00	1378.3	1110.6	122.13	2.0492	1.900
**** End Shut-in 2	124.00	1379.9	1112.2	122.12	2.0323	1.904
**** Final Hydro.	439.00	2269.7	0.0	122.02		

GAS RECOVERY -----

COMPANY: Amoco Production Company

DATE: 10-4-95

WELL NAME: Tessa Katrine #1-20

KB Elev: 2865.00 ft TICKET #7960 DST #2

WELL LOCATION: 20-31S-32W, Seward Cty KS

GR Elev: 2857.00 ft FORMATION: Marmaton

INTERVAL Fr.: 4870.00 To 4918.00 T.D.: 4918.00 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	0.75	80	0	1104000.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	1.50	39	0	3095000.0
15	1.50	28	0	2441000.0
25	1.50	17	0	1760000.0
35	1.50	10	0	1274000.0
45	1.50	7	0	1036000.0
55	1.50	6	0	908000.0
60	1.50	5	0	836000.0
70	1.50	4	0	814000.0
80	1.50	4	0	764000.0
90	1.50	4	0	764000.0
100	1.50	4	0	709000.0
110	1.50	4	0	709000.0
120	1.50	4	0	709000.0

CALCULATED RECOVERY ANALYSIS - DRILL COLLARS

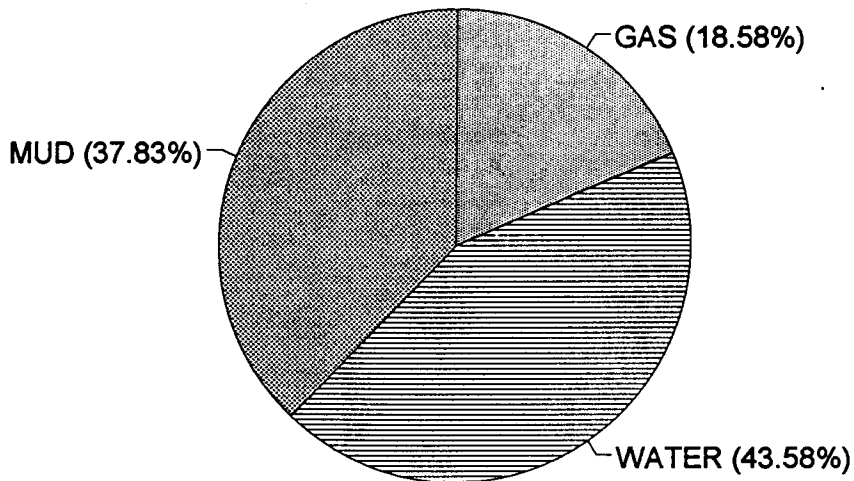
DST # 2

TICKET # 7960

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
1	90	10	9		0		0	90	81
2	200	20	40		0	20	40	60	120
3	210	25	52.5		0	65	136.5	10	21
4	100	10	10		0	85	85	5	5
5			0		0		0		0
TOTAL	600	18.58	111.5	0.00	0	43.58	261.5	37.83333	227

HRS OPE BBL/DAY

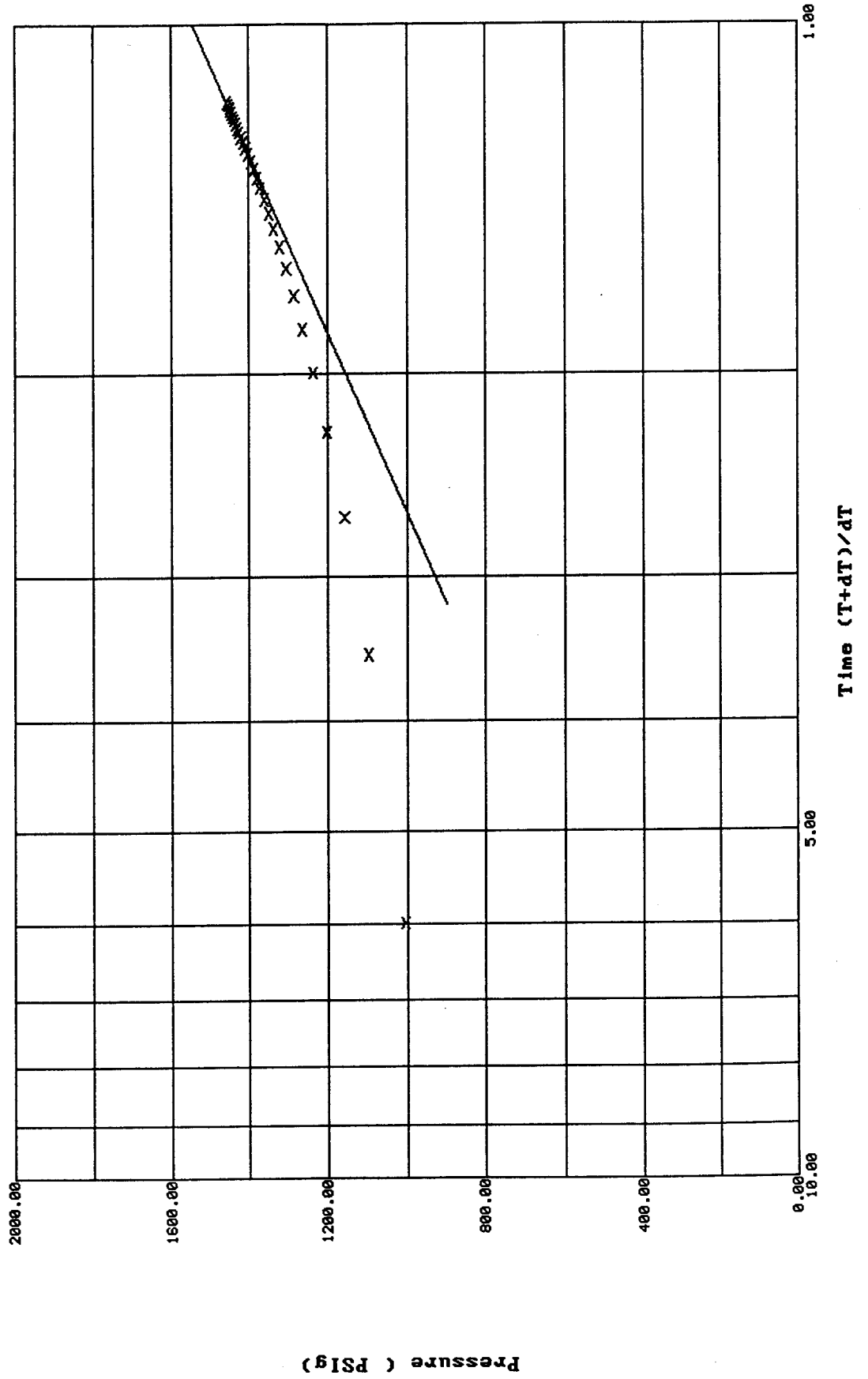
BBL OIL= 0 * 2.17 0
 BBL WAT 1.278735 * 14.16443
 BBL MUD 1.11003
 BBL GAS 0.545235



Horner Plot: shut-in #1

7960 DST #2 Tessa Katrine 1-20 Amoco Prod

Slope: 1293.9066 PSig/cycle
Ext. Pressure: 1544.1196 PSig

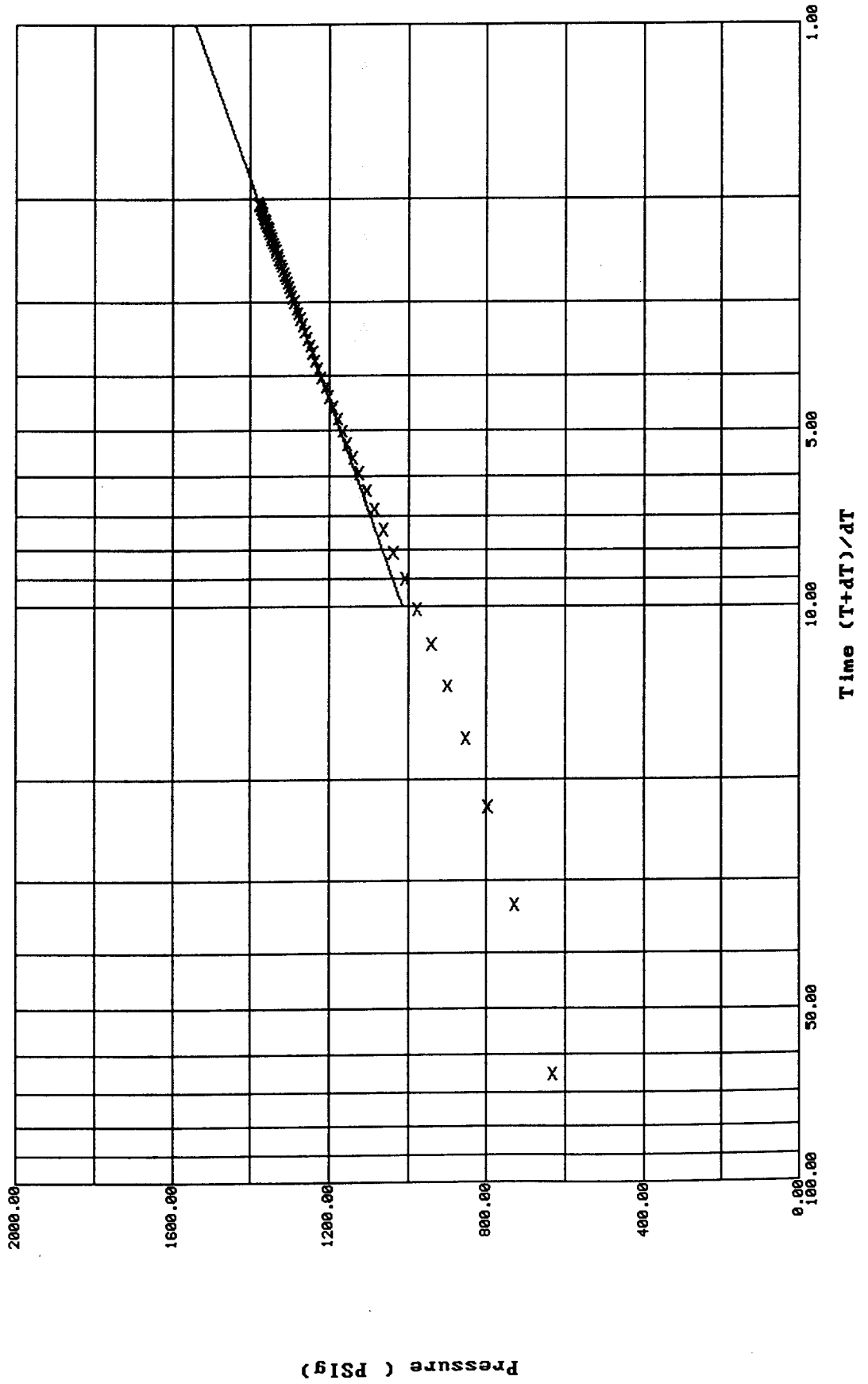


Horner Plot: shut-in #2

7960 DST #2 Tessa Katrine 1-20 Amoco Prod

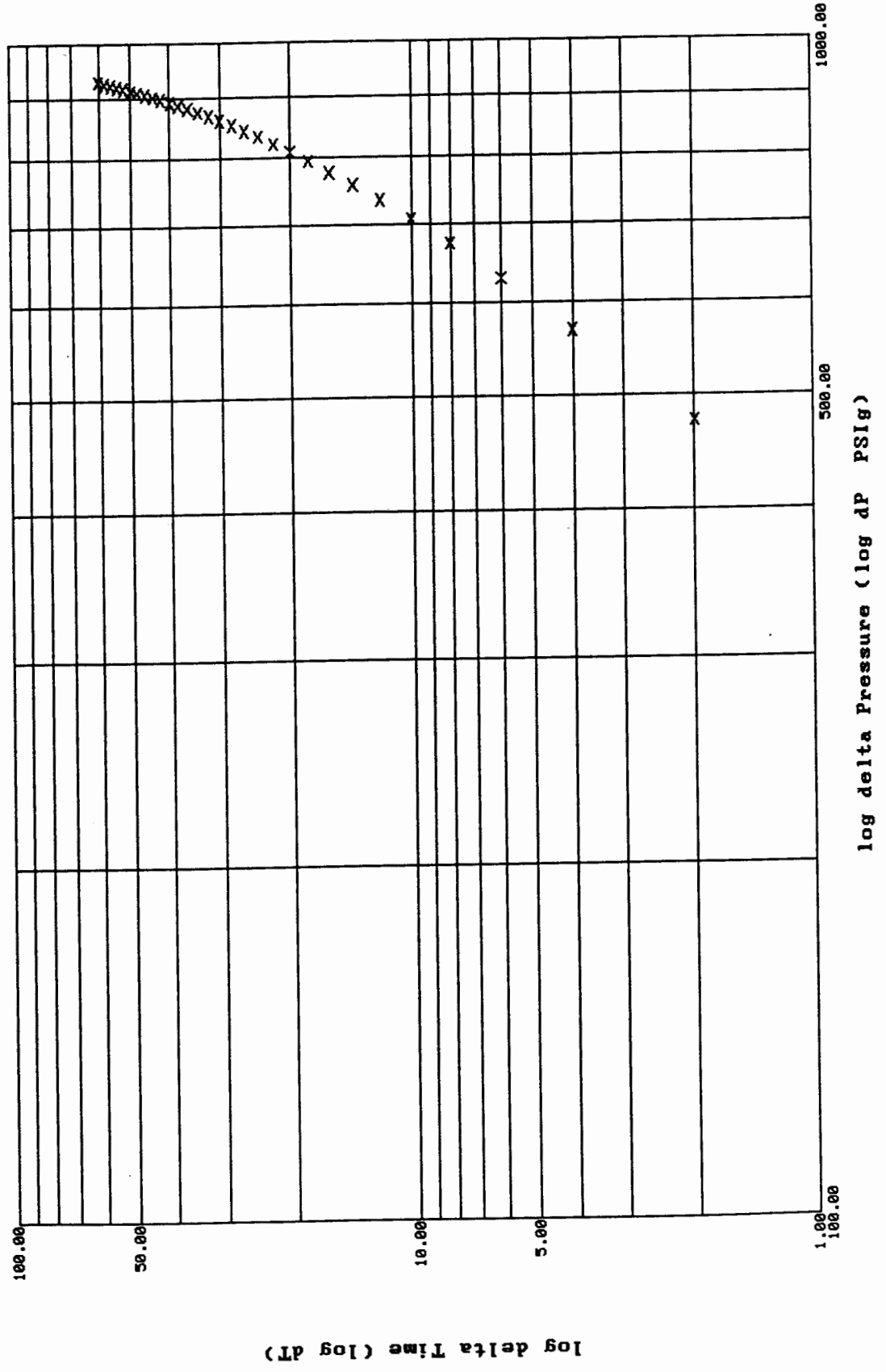
Slope: 526.1721 PSig/cycle

Ext. Pressure: 1542.0238 PSig



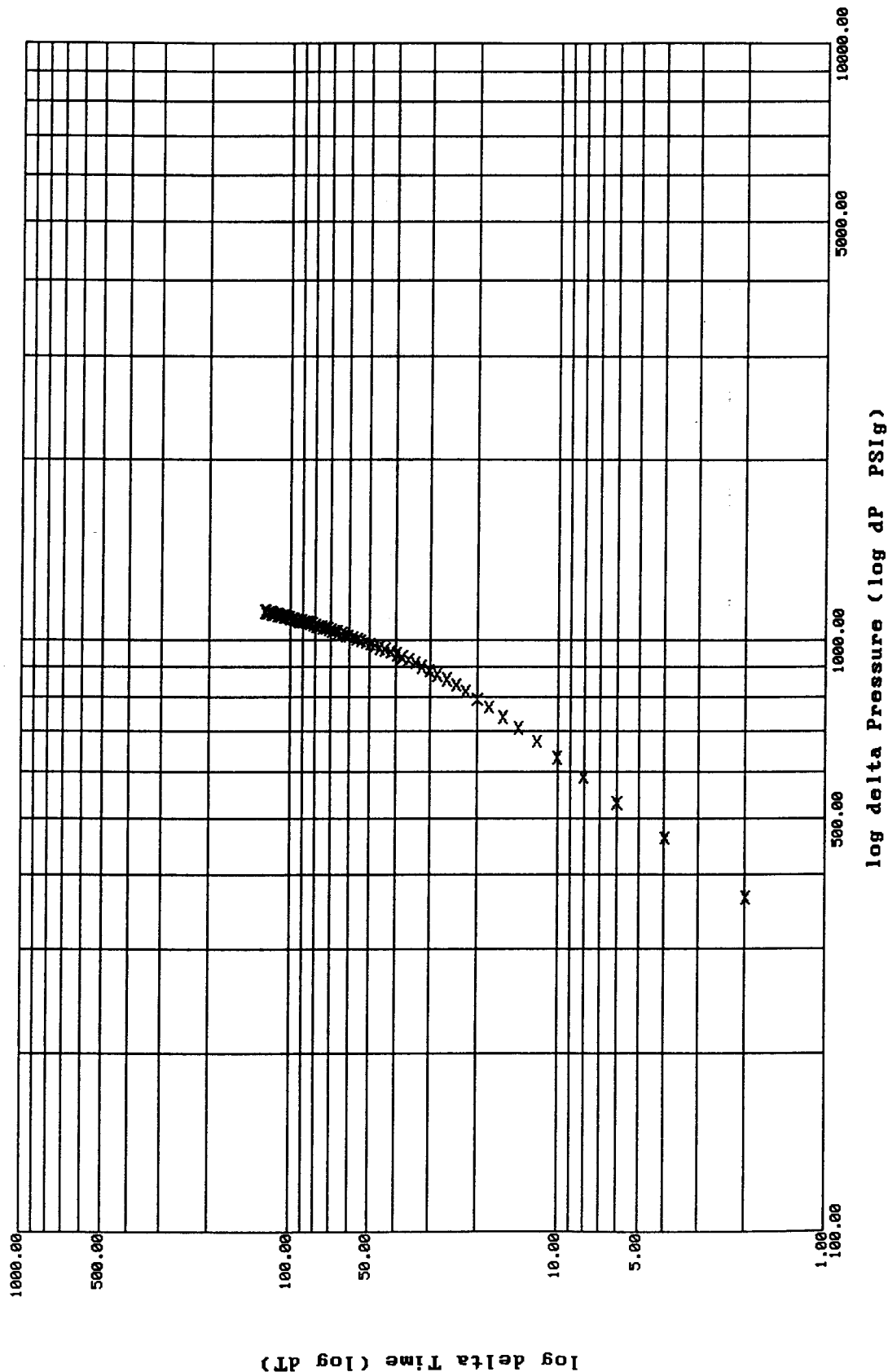
McKinley Plot: shut-in #1

7960 DST #2 Tessa Katrine 1-28 Amoco Prod



McKinley Plot: shut-in #2

7968 DST #2 Tessa Katrine 1-28 Amoco Prod



*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Tessa Katrine #1-20

LOCATION : 20-31S-32W, Seward Cty KS

TICKET No. 7960 D.S.T. No. 2 DATE 10-4-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 28

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 17

TOTAL TOOL 45

DRILL COLLAR ANCHOR IN INTERVAL 0

D.C. ANCHOR STND.Stands0 Single 0 Total 0

D.P. ANCHOR STND.Stands 0 Single 1 Total 31

TOTAL ASSEMBLY 76

D.C. ABOVE TOOLS.Stands11 Single 0 Total 669

D.P. ABOVE TOOLS.Stands78 Single 1 Total 4193

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4938

TOTAL DEPTH 4918

TOTAL DRILL PIPE ABOVE K.B. 20

REMARKS:

P.O. SUB

C.O. SUB 1'

4847

S.I. TOOL 5'

4848

HMV 5'

4853

JARS 5'

4858

SAFETY JOINT 2'

4863

PACKER top

4865

PACKER bottom

4870

DEPTH 4870

STUBB 1'-perf

4870

ANCHOR

5'-perf

4871

5'-perf

4876

T.C.
DEPTH

drill pipe 31'

4881

1'-perf
BULLNOSE

4912

T.D. 5'

4913

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: 950542
Sample From: Tessia Katrine #1-20
Producer: Amoco Production Co.
Date:
Time:
Sampler:
Source:

Analyzed: 10/08/95
Pressure:
Temperature:
Location:
County:
State:
Formation: Marmaton

	Mole %	GPM
Helium	He: 0.318	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 17.595	0.000
Carbon Dioxide	CO2: 0.112	0.000
Methane	C1: 70.337	0.000
Ethane	C2: 5.531	1.479
Propane	C3: 3.512	0.968
Iso Butane	iC4: 0.461	0.151
Normal Butane	nC4: 0.994	0.313
Iso Pentane	iC5: 0.247	0.090
Normal Pentane	nC5: 0.243	0.088
Hexanes Plus	C6+: 0.650	0.284

TOTAL: 100.000 3.373
Z Fact: 0.9976
SP.GR.: 0.7369
BTU (SAT): 984.3 @ 14.73 psia
BTU (DRY): 1001.7 @ 14.73 psia
OCTANE RATING: 102.3

COMMENTS:

0.016



ORIGINAL

#7960

G.T.S. 05min.

GAS VOLUME REPORT

Amoco Prod. Co.
OPERATOR

Tessa Katrine

WELL NAME AND NO.

DST NO.

meriton

Remarks: Gas burnt a Bright Orange Flame.

El... ..

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7960

Well Name & No. Tessa Katrine #1-20 Test No. 2 Date 10-4-95
 Company Amoco Pro. Co. Zone Tested _____
 Address P.O. Box 800 Room 921 Denver Colo. 80201 Elevation 2857(G) 2865(KB)
 Co. Rep./Geo. Austin Gardner Cont. Cheyenne #4 Est. Ft. of Pay _____
 Location: Sec. 20 Twp. 31 Rge. 32 Co. Seward State KS
 No. of Copies Normal Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ X No _____ Evaluation _____

Interval Tested 4870' - 4918' Drill Pipe Size 4 1/2 FH
 Anchor Length 48' Top Choke — 1" Bottom Choke — 3/4" ✓
 Top Packer Depth 4865' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
 Bottom Packer Depth 4870' Wt. Pipe I.D. — 2.7 Ft. Run —
 Total Depth 4918' Drill Collar — 2.25 Ft. Run 669
 Mud Wt. 9.0 lb/gal. Viscosity 53 Filtrate 10.8

Tool Open @ 12:07pm Initial Blow B.O.B @ open G.T.S. in 5min. Gauging Gas
F.S.I - Bleed off Blow 23min. - NO return Blow
 Final Blow B.O.B. @ open - Gauging Gas - Burning off gas.
F.S.I - Bleed off Blow For 55min. - return Blow in 65min Boil to 1 1/4"
 Recovery — Total Feet 600' Feet of Gas in Pipe G.T.S. Flush Tool? NO

Rec. <u>90'</u>	Feet Of	<u>Gassy mud</u>	<u>10%</u> gas	%oil	%water	<u>90%</u> mud
Rec. <u>200'</u>	Feet Of	<u>Gassy water cut mud</u>	<u>20%</u> gas	%oil	<u>20%</u> water	<u>60%</u> mud
Rec. <u>210'</u>	Feet Of	<u>Gassy muddy water</u>	<u>25%</u> gas	%oil	<u>65%</u> water	<u>10%</u> mud
Rec. <u>100'</u>	Feet Of	<u>Slt, Gassy mud cut water</u>	<u>10%</u> gas	%oil	<u>85%</u> water	<u>5%</u> mud
Rec. _____	Feet Of	_____	%gas	%oil	%water	%mud

BHT 124 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW .13 @ 55 °F Chlorides 89,000 ppm Recovery Chlorides 6,000 ppm System

(A) Initial Hydrostatic Mud 2519 2411 PSI AK1 Recorder No. 2351 Range 4995
 (B) First Initial Flow Pressure 554 566 PSI @ (depth) 4871' w/Clock No. Elec.
 (C) First Final Flow Pressure 537 540 PSI AK1 Recorder No. 11057 Range 4500
 (D) Initial Shut-In Pressure 1421 1457 PSI @ (depth) 4913' w/Clock No. 21048
 (E) Second Initial Flow Pressure 487 548 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 252 267 PSI @ (depth) _____ w/Clock No. _____
 (G) Final Shut-In Pressure 1331 1379 PSI Initial Opening 10 Test X 600
 (H) Final Hydrostatic Mud 2479 2269 PSI Initial Shut-In 60 Jars X 200

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Austin Gardner

Our Representative Steve McF...

Final Flow 120 Safety Joint X 50
 Final Shut-In 120 Straddle _____
 Circ. Sub X N/C
 Sampler _____

Extra Packer _____
 Other Electric Recorder X 150
 TOTAL PRICE 1000

Computer Inventoried

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Company

DATE 10-6-95

WELL NAME: Tessa Katrine # 1-20

KB 2865.00 ft

TICKET NO: 7961

DST #3

LOCATION : 20-31S-32W, Seward Cty KS

GR 2857.00 ft

FORMATION: Upper Marrow

INTERVAL : 5360.00 To 5424.00 ft

TD 5424.00 ft

TEST TYPE: CONV.

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 10 Rec.	11057	11057	2351			PF Fr. 1525 to 1535 hr
SI 60 Range(Psi)	4500.0	4500.0	4995.0	0.0	0.0	IS Fr. 1535 to 1705 hr
SF 120 Clock(hrs)	AK-1	AK-1	Alpin			SF Fr. to hr
FS 120 Depth(ft)	5419.0	5419.0	5361.0	0.0	0.0	FS Fr. to hr

	Field	1	2	3	4	
A. Init Hydro	2671.0	2661.0	2656.0	0.0	0.0	T STARTED 1309 hr
B. First Flow	134.0	179.0	270.0	0.0	0.0	T ON BOTM 1520 hr
Bl. Final Flow	716.0	186.0	217.0	0.0	0.0	T OPEN 1525 hr
C. In Shut-in	1628.0	1651.0	1696.0	0.0	0.0	T PULLED 1705 hr
D. Init Flow	0.0	0.0	0.0	0.0	0.0	T OUT 2000 hr
E. Final Flow	0.0	0.0	0.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2626.0	2602.0	2578.0	0.0	0.0	Tool Wt. 6000.00 lbs
Inside/Outside	O	O	I			Wt Set On Packer 25000.00 lbs
						Wt Pulled Loose 130000.00 lbs
						Initial Str Wt 100000.00 lbs
						Unseated Str Wt 100000.00 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 669.00 ft
						D.P. Length 4673.00 ft

RECOVERY

Tot Fluid 60.00 ft of 60.00 ft in DC and 0.00 ft in DP
 300.00 ft of Gas in pipe
 60.00 ft of Drilling mud w/ trace of gas

RW 1.39 @ 71 F

SALINITY 4500.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Blow -

Surface blow, built to bottom of bucket in 9 min

Initial Shutin -

Had trouble turning tool to close - acted like collars were stuck to side of wall; bled off blow, no return blow

Final Blow -

Couldn't turn pipe to open, no flow; pulled 130,000 coming off bottom, tried to reset & turn, wouldn't turn

Final Shutin -

No shutin, pulled tool after first shutin

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	52.00 S/L
W.L.	8.20 in3
F.C.	0.00 in
Mud Drop N	

Amt. of fill	0.00 ft
Btm. H. Temp.	121.00 F
Hole Condition	poor-sticky
% 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	Shane McBride
Co. Rep.	Austin Garner
Contr.	Cheyenne
Rig #	4
Unit #	
Pump T.	

Test Successful: Y

TEST HISTORY

7961 DST #3 Tessa Katrine #1-20 Amoco Prod. Co.

Flag Points

t(Min.) P(PSig)

A:	0.00	2656.39
B:	0.00	270.07
C:	8.00	217.28
D:	92.00	1696.42
Q:	0.00	2578.25

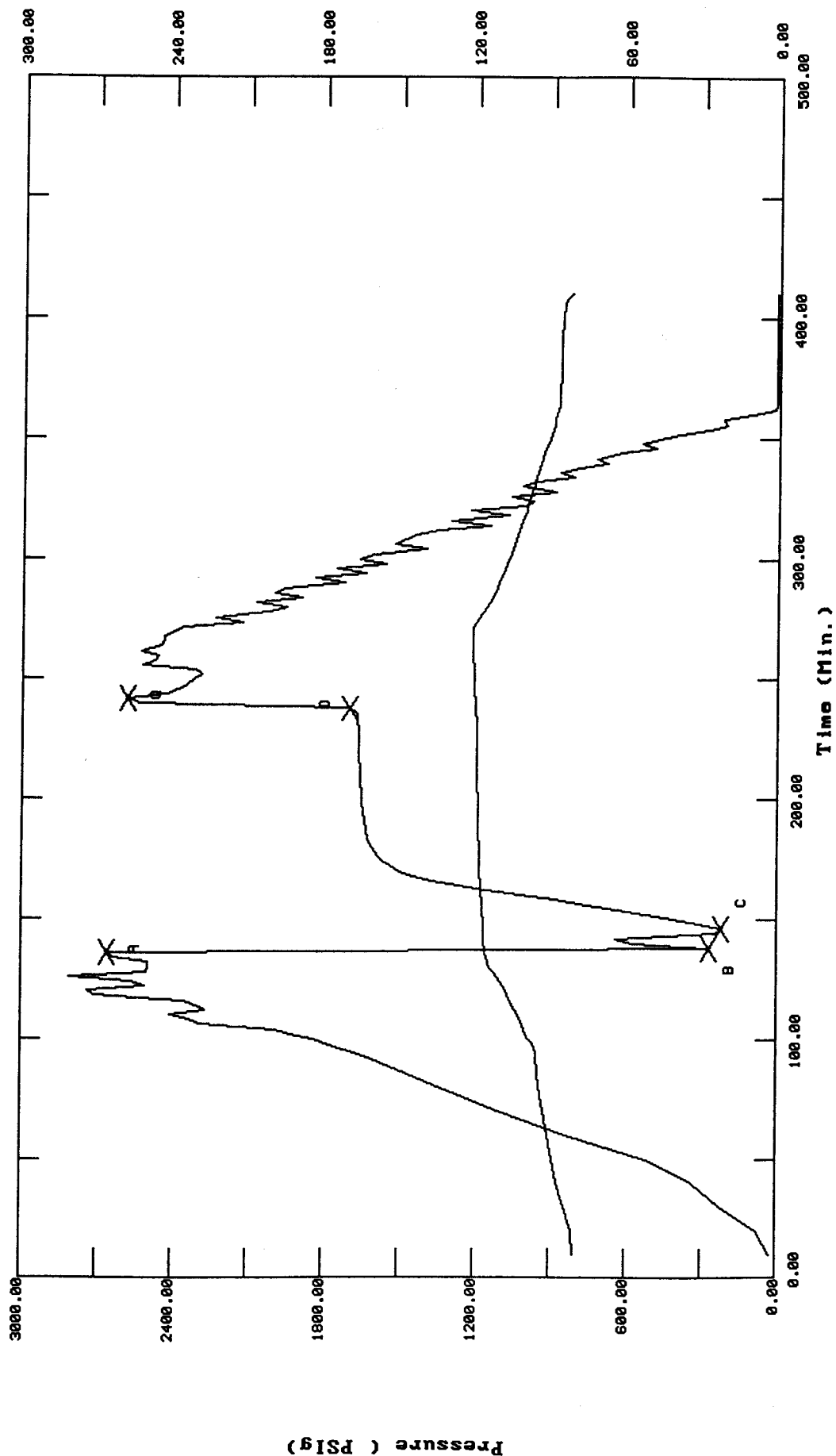
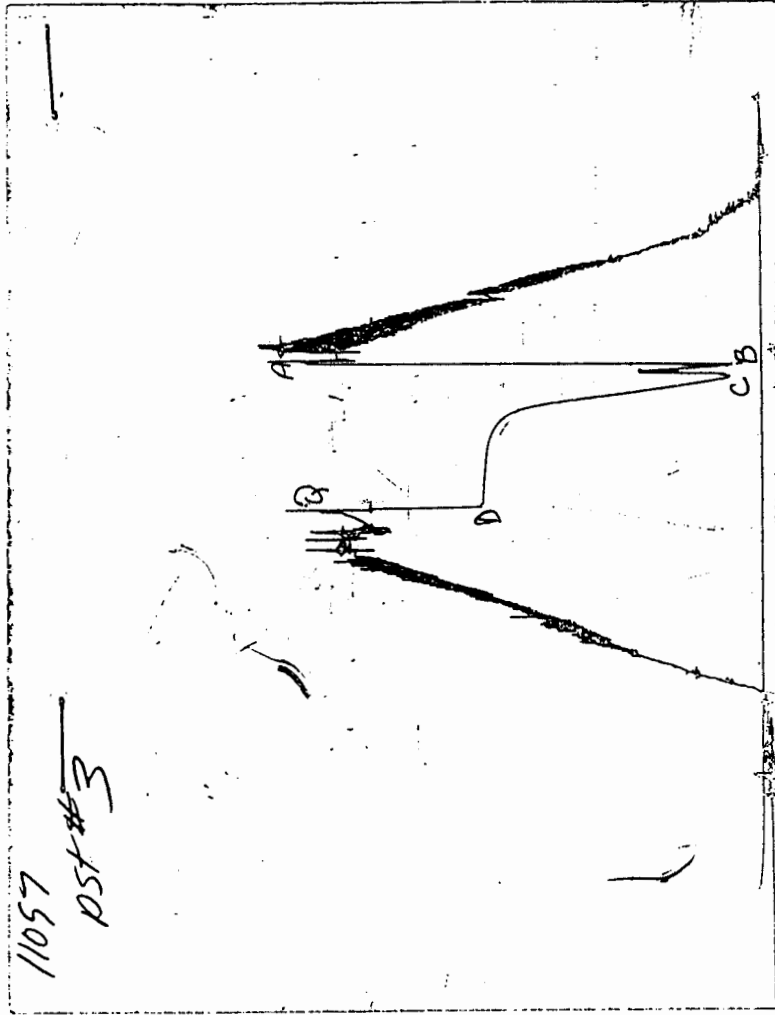


CHART PAGE



This is an actual photograph of recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7961 DST #3 Tessa Katrine #1-20 Amoco Prod. Co.

DATE: 10/06/95

TIME: 13:25:30

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	136.00	2656.4	0.0	115.70		
***** Start Flow 1	0.00	270.1	0.0	115.89		
	2.00	575.8	305.7	116.08		
	4.00	640.0	370.0	116.17		
	6.00	242.3	-27.8	116.24		
***** End Flow 1	8.00	217.3	-52.8	116.26		
***** Start Shutin 1	0.00	217.3	0.0	116.26	0.0000	0.047
	2.00	308.4	91.1	116.36	5.0000	0.095
	4.00	413.8	196.6	116.49	3.0000	0.171
	6.00	520.8	303.6	116.65	2.3333	0.271
	8.00	633.4	416.1	116.82	2.0000	0.401
	10.00	752.0	534.7	117.00	1.8000	0.565
	12.00	881.9	664.6	117.15	1.6667	0.778
	14.00	1016.3	799.0	117.30	1.5714	1.033
	16.00	1148.4	931.1	117.46	1.5000	1.319
	18.00	1268.1	1050.8	117.61	1.4444	1.608
	20.00	1367.9	1150.7	117.73	1.4000	1.871
	22.00	1445.1	1227.9	117.87	1.3636	2.088
	24.00	1500.0	1282.8	117.96	1.3333	2.250
	26.00	1538.6	1321.4	118.07	1.3077	2.367
	28.00	1565.4	1348.1	118.17	1.2857	2.451
	30.00	1584.8	1367.5	118.25	1.2667	2.512
	32.00	1598.4	1381.1	118.32	1.2500	2.555
	34.00	1609.2	1391.9	118.37	1.2353	2.590
	36.00	1616.9	1399.7	118.41	1.2222	2.615
	38.00	1623.8	1406.5	118.48	1.2105	2.637
	40.00	1629.0	1411.7	118.55	1.2000	2.654
	42.00	1633.1	1415.8	118.61	1.1905	2.667
	44.00	1636.6	1419.3	118.64	1.1818	2.678
	46.00	1639.9	1422.6	118.71	1.1739	2.689
	48.00	1642.5	1425.2	118.75	1.1667	2.698
	50.00	1645.3	1428.0	118.81	1.1600	2.707
	52.00	1647.6	1430.3	118.87	1.1538	2.715
	54.00	1649.4	1432.1	118.92	1.1481	2.721
	56.00	1650.8	1433.5	118.97	1.1429	2.725
	58.00	1652.7	1435.4	119.02	1.1379	2.731
	60.00	1653.7	1436.4	119.07	1.1333	2.735
	62.00	1655.0	1437.7	119.11	1.1290	2.739
	64.00	1656.6	1439.3	119.17	1.1250	2.744
	66.00	1657.3	1440.0	119.22	1.1212	2.747
	68.00	1658.7	1441.4	119.25	1.1176	2.751
	70.00	1659.6	1442.3	119.31	1.1143	2.754
	72.00	1660.1	1442.8	119.36	1.1111	2.756
	74.00	1660.9	1443.6	119.41	1.1081	2.759
	76.00	1662.1	1444.8	119.48	1.1053	2.763
	78.00	1662.4	1445.2	119.56	1.1026	2.764
	80.00	1663.1	1445.8	119.56	1.1000	2.766
	82.00	1664.2	1446.9	119.56	1.0976	2.770
	84.00	1664.7	1447.4	119.56	1.0952	2.771
	86.00	1665.3	1448.0	119.56	1.0930	2.773
	88.00	1666.0	1448.7	119.61	1.0909	2.775

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7961 DST #3 Tessa Katrine #1-20 Amoco Prod. Co.

DATE: 10/06/95 TIME: 13:25:30

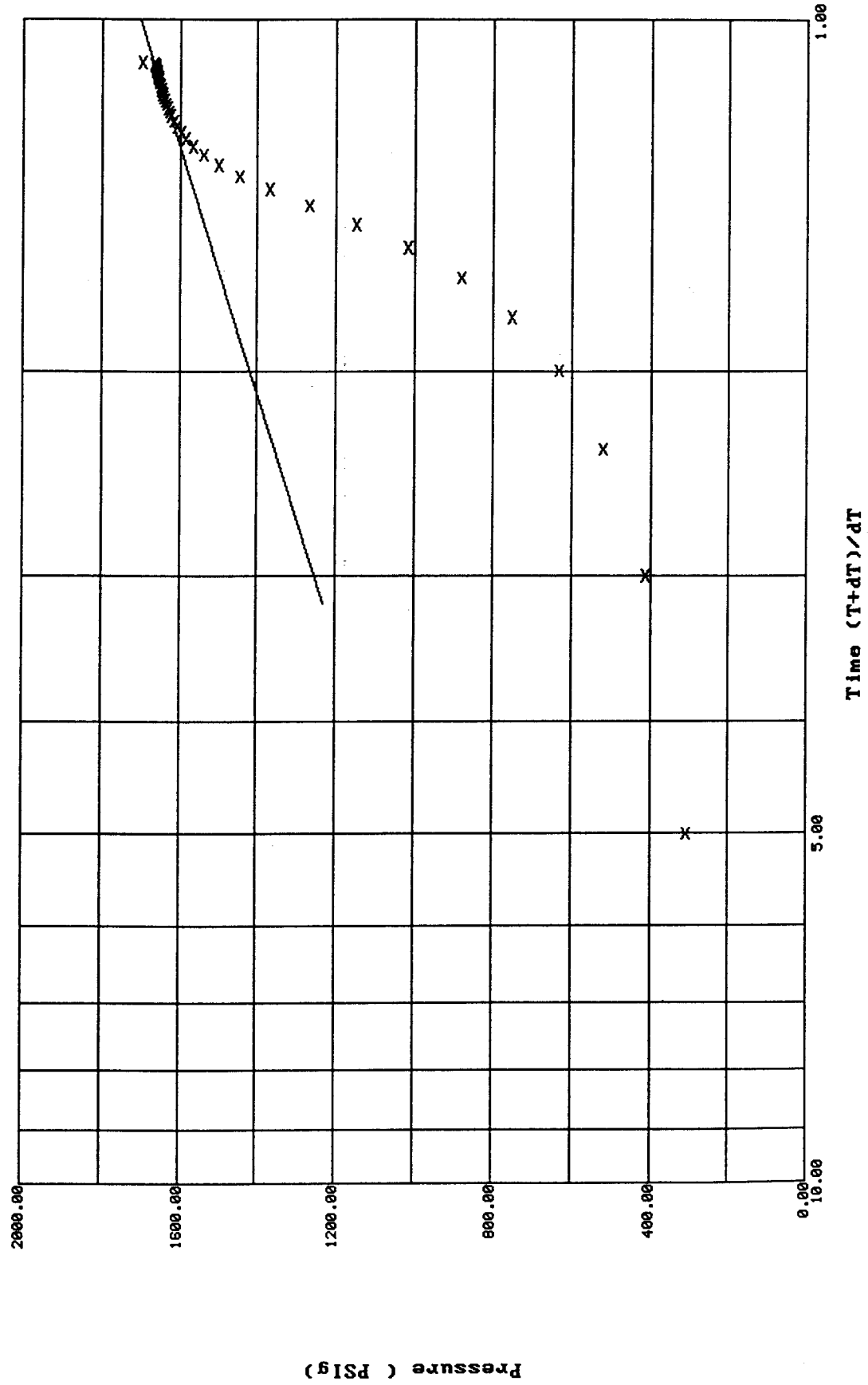
	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	90.00	1666.0	1448.8	119.66	1.0889	2.776
***** End Shut-in 1	92.00	1696.4	1479.1	119.73	1.0870	2.878
***** Final Hydro.	242.00	2578.3	0.0	120.04		

Horner Plot: shut-in #1

7961 DST #3 Tessa Matrine #1-20 Amoco Prod. Co.

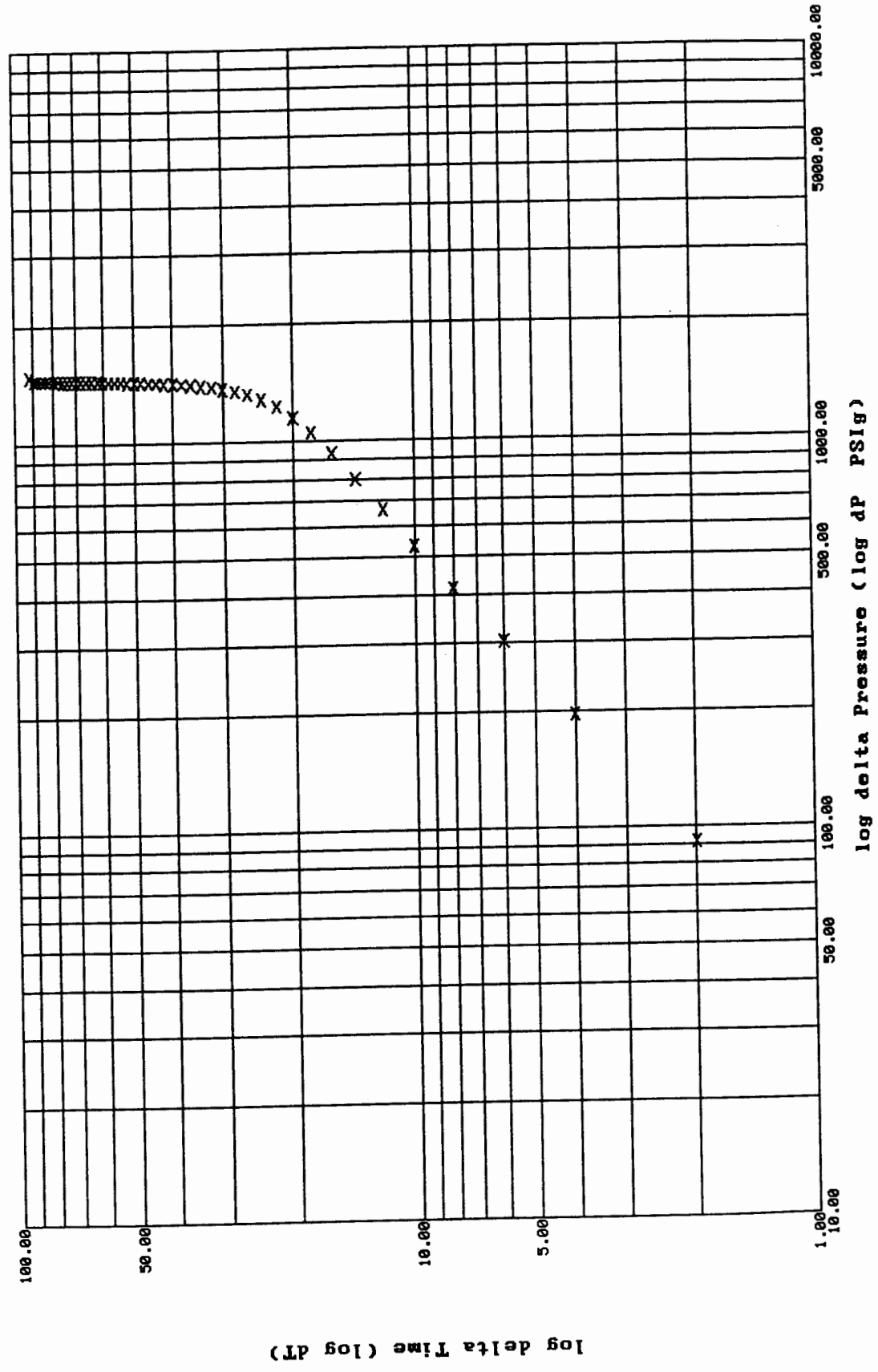
Slope: 948.8552 PSig/cycle

Ext. Pressure: 1705.2987 PSig



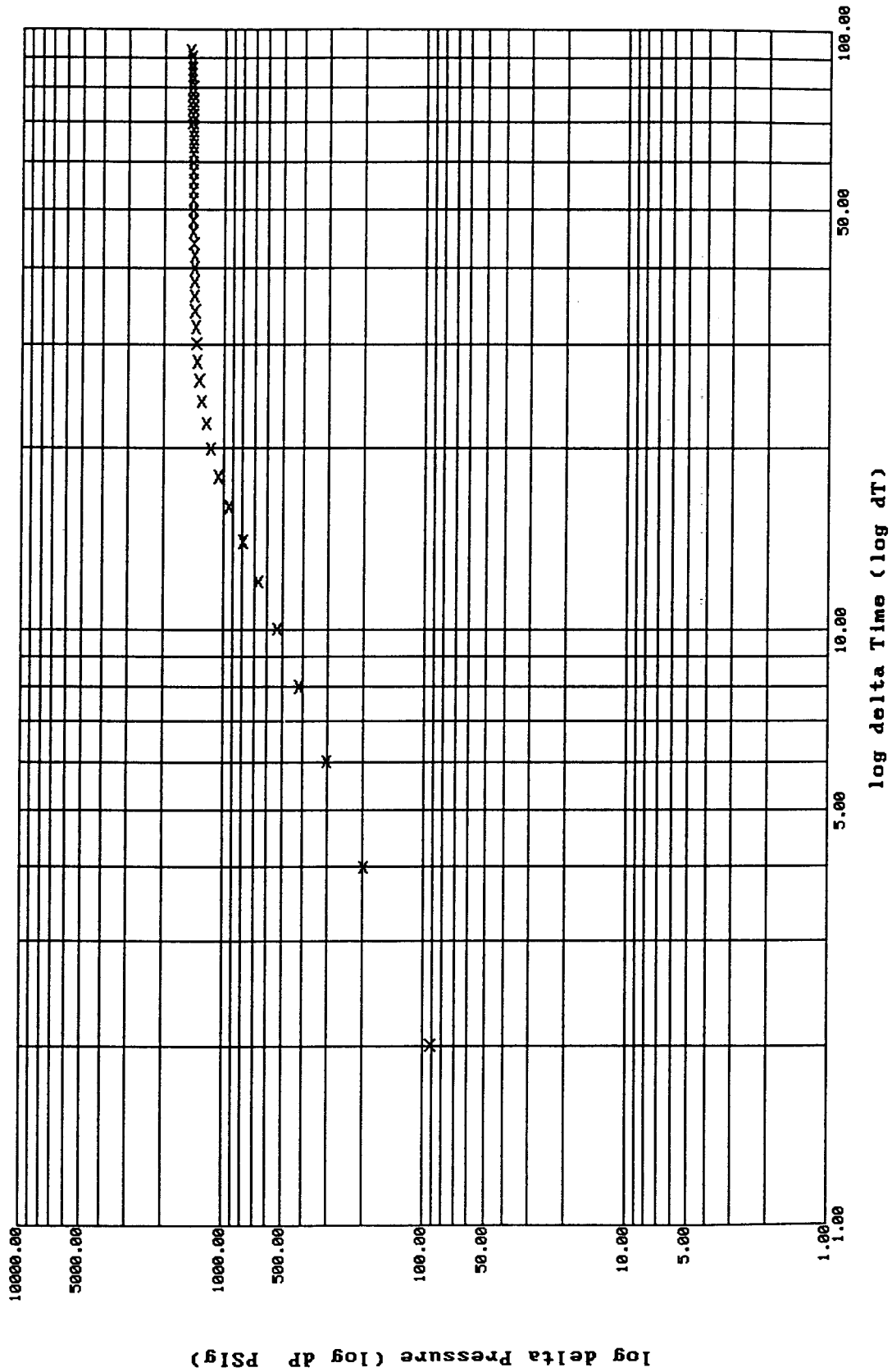
McKinley Plot: shut-in #1

7961 DST #3 Tessa Katrine #1-28 Amoco Prod. Co.



Ramey Plot: shut-in #1

7961 DST #3 Tessa Katrine #1-20 Amoco Prod. Co.



*** TOOL DIAGRAM *** CONV.

ELL NAME: Tessa Katrine # 1-20

LOCATION : 20-31S-32W, Seward Cty KS

TICKET No. 7961 D.S.T. No. 3 DATE 10-6-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 28

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 33

TOTAL TOOL 61

DRILL COLLAR ANCHOR IN INTERVAL 0

D.C. ANCHOR STND.Stands0 Single 0 Total 0

D.P. ANCHOR STND.Stands 0 Single 1 Total 31

TOTAL ASSEMBLY 92

D.C. ABOVE TOOLS.Stands11 Single 0 Total 669

D.P. ABOVE TOOLS.Stands75 Single 0 Total 4673

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5434

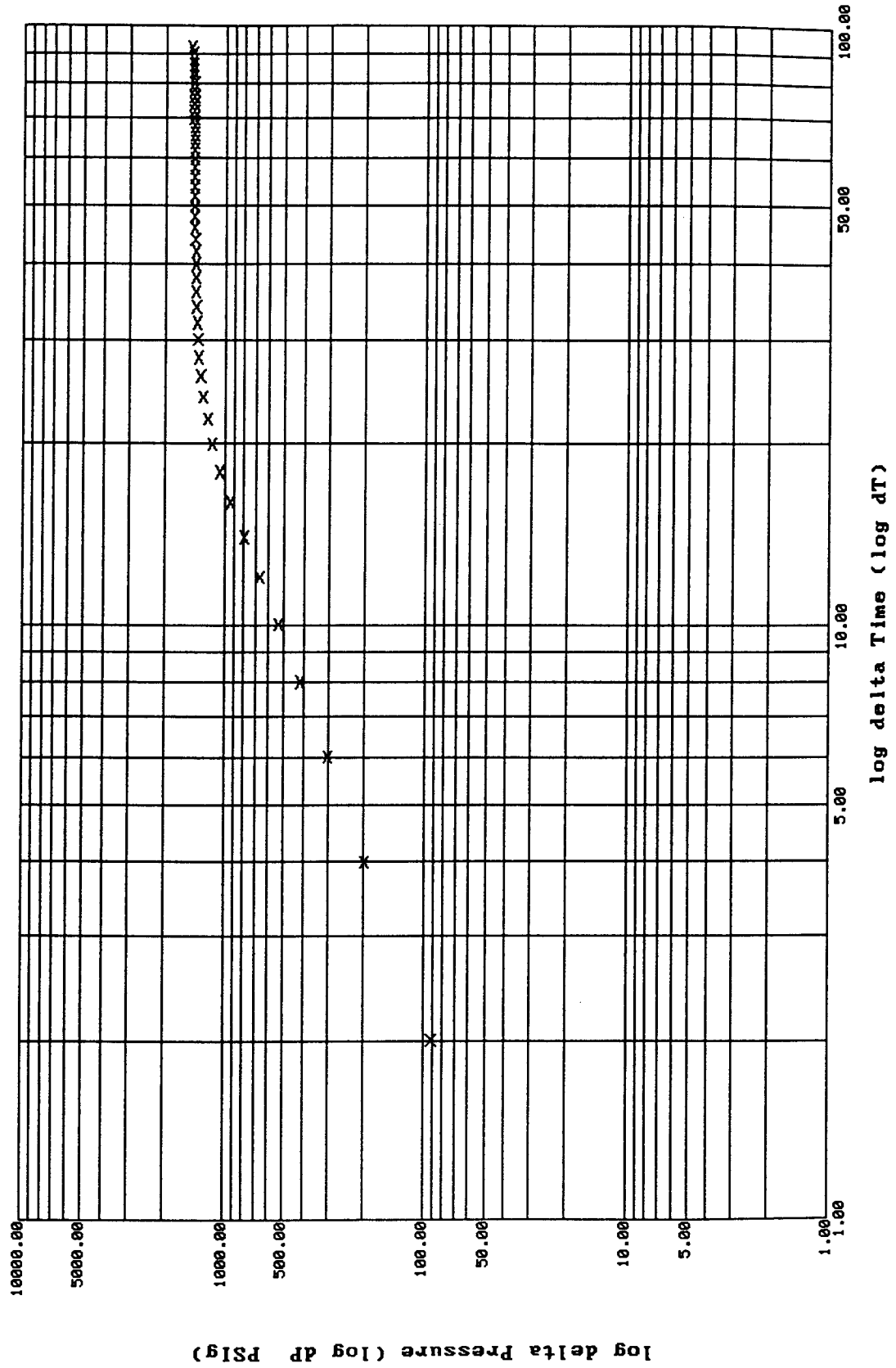
TOTAL DEPTH 5424

TOTAL DRILL PIPE ABOVE K.B. 10

REMARKS:

P.O. SUB	
C.O. SUB double pin 1'	5337
S.I. TOOL 5'	5338
HMV 5'	5343
JARS 5'	5348
SAFETY JOINT 2'	5353
PACKER 5' -top	5355
PACKER 5'-bottom	5360
DEPTH 5360	
STUBB 5360	
ANCHOR 5'	5361
5'	5366
5'	5371
T.C.	
DEPTH	
5'	5376
5'	5381
2'	5386
drillpipe-31'	5388
BULLNOSE	
T.D. 5'	5419

Ramey Plot: shut-in #1 7961 DST #3 Tessa Matrine #1-28 Amoco Prod. Co.



*** TOOL DIAGRAM *** CONV.

WELL NAME: Tessa Katrine # 1-20

LOCATION : 20-31S-32W, Seward Cty KS

TICKET No. 7961 D.S.T. No. 3 DATE 10-6-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 28

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 33

TOTAL TOOL 61

DRILL COLLAR ANCHOR IN INTERVAL 0

D.C. ANCHOR STND.Stands0 Single 0 Total 0

D.P. ANCHOR STND.Stands 0 Single 1 Total 31

TOTAL ASSEMBLY 92

D.C. ABOVE TOOLS.Stands11 Single 0 Total 669

D.P. ABOVE TOOLS.Stands75 Single 0 Total 4673

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5434

TOTAL DEPTH 5424

TOTAL DRILL PIPE ABOVE K.B. 10

REMARKS:

P.O. SUB
C.O. SUB double pin 1' 5337

S.I. TOOL 5' 5338

HMV 5' 5343

JARS 5' 5348

SAFETY JOINT 2' 5353

PACKER 5' -top 5355

PACKER 5'-bottom 5360

DEPTH 5360

STUBB 5360

ANCHOR 5' 5361

5' 5366

5' 5371

T.C.
DEPTH

5' 5376

5' 5381

2' 5386

drillpipe-31' 5388

BULLNOSE
T.D. 5'

5419

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7961

Well Name & No. Tessa Kattive #1-20 Test No. 3 Date 10-6-95
 Company Amoco Prod. Co. Zone Tested upper main
 Address P.O. Box 800 Room 924 Denver, Colo 80201 Elevation 2857 (G) 2865 (KB)
 Co. Rep./Geo. Austin Garner Cont. Cheyenne #4 Est. Ft. of Pay _____
 Location: Sec. 20 Twp. 31 Rge. 32 Co. Seward State KS
 No. of Copies Normal Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No Evaluation _____

Interval Tested 5360' - 5424' Drill Pipe Size 4 1/2 FH
 Anchor Length 64' Top Choke — 1" _____ Bottom Choke — 1/4" ☒
 Top Packer Depth 5355' Hole Size — 7 7/8" ☒ Rubber Size — 6 3/4" ☒
 Bottom Packer Depth 5360' Wt. Pipe I.D. — 2.7 Ft. Run _____
 Total Depth 5424' Drill Collar — 2.25 Ft. Run 669'
 Mud Wt. 9.0 lb/gal. Viscosity 52 Filtrate 8.2

Tool Open @ 3:25 pm Initial Blow Surface Blow built to B.O.B in 9 min. *(Tool added 1.1 hr. + was trying to plug first 5 min)*
I.S.T. - Had trouble turning tool, string stuck to wall, Bleedoff Blow - No return Blow
 Final Blow Pull tool, couldn't turn pipe to open tool.

F.S.T.
 Recovery — Total Feet 60' Feet of Gas in Pipe 300' Flush Tool? NO

Rec.	Feet Of	Drilg mud Trace gas	TH% gas	% Oil	% water	% mud
Rec.	60'				100%	
Rec.			% gas	% Oil	% water	% mud
Rec.			% gas	% Oil	% water	% mud
Rec.			% gas	% Oil	% water	% mud
Rec.			% gas	% Oil	% water	% mud

BHT 121 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
 RW 1.39 @ 71 °F Chlorides 4,500 ppm Recovery Chlorides 4,300 ppm System
 (A) Initial Hydrostatic Mud 2671 2656 PSI AK1 Recorder No. 2351 Range 4995
 (B) First Initial Flow Pressure 134 270 PSI @ (depth) 5361' w/Clock No. E/EC
 (C) First Final Flow Pressure 716 640 PSI AK1 Recorder No. 11057 Range 4500
 (D) Initial Shut-In Pressure 1628 1696 PSI @ (depth) 5419' w/Clock No. 21048
 (E) Second Initial Flow Pressure — 2578 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure — PSI @ (depth) _____ w/Clock No. _____
 (G) Final Shut-In Pressure — PSI Initial Opening 10 Test X?
 (H) Final Hydrostatic Mud 2626 2578 PSI Initial Shut-In 90 Jars X 200

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow — Safety Joins X 50
 Final Shut-In — Straddle _____
 Circ. Sub X N/C
 Sampler _____

Approved By [Signature]
 Our Representative [Signature]

Extra Packer _____
 Other Electric Recorder 150

Computer Inventory

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Company
 WELL NAME: Tessa Katrine # 1-20
 LOCATION : 20-31S-32W, Seward Cty KS
 INTERVAL : 5446.00 To 5537.00 ft

DATE 10-7-95
 KB 2865.00 ft TICKET NO: 7962 DST #4
 GR 2857.00 ft FORMATION: Marrow
 TD 5537.00 ft TEST TYPE: CONV.

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 10 Rec.	11057	11057	2351			PF Fr. 1806 to 1816 hr
SI 60 Range(Psi)	4500.0	4500.0	4995.0	0.0	0.0	IS Fr. 1816 to 1916 hr
SF 120 Clock(hrs)	AK-1	AK-1	Alpin			SF Fr. 1916 to 2116 hr
FS 120 Depth(ft)	5532.0	5532.0	5447.0	0.0	0.0	FS Fr. 2116 to 2316 hr

	Field	1	2	3	4	
A. Init Hydro	0.0	2757.0	2740.0	0.0	0.0	T STARTED 1541 hr
B. First Flow	0.0	136.0	128.0	0.0	0.0	T ON BOTM 1802 hr
B1. Final Flow	0.0	215.0	212.0	0.0	0.0	T OPEN 1806 hr
C. In Shut-in	0.0	460.0	456.0	0.0	0.0	T PULLED 2316 hr
D. Init Flow	0.0	67.0	37.0	0.0	0.0	T OUT 0030 hr
E. Final Flow	0.0	58.0	34.0	0.0	0.0	
F. Fl Shut-in	0.0	396.0	403.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	0.0	2529.0	2533.0	0.0	0.0	Tool Wt. 6000.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 25000.00 lbs
						Wt Pulled Loose 125000.00 lbs
						Initial Str Wt 101000.00 lbs
						Unseated Str Wt 101000.00 lbs

RECOVERY

Tot Fluid 25.00 ft of 25.00 ft in DC and 0.00 ft in DP
 540.00 ft of Gas - weak smelling
 25.00 ft of Drilling mud

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 669.00 ft
 D.P. Length 4806.00 ft

RW 1.2 @ 74 F

SALINITY 4750.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Blow -
 .125" blow at tool open, died in 8 min

Initial Shutin -
 No return blow

Final Blow -
 .125" surface blow built to 3.5"

Final Shutin -
 Bled off blow, no return blow

SAMPLES:
 SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 8.90 lb/cf
 Vis. 63.00 S/L
 W.L. 7.60 in3
 F.C. 0.00 in
 Mud Drop N
 Amt. of fill 0.00 ft
 Btm. H. Temp. 125.00 F
 Hole Condition fair
 % 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 Shane McBride
 Co. Rep. Austin Garner
 Contr. Cheyenne
 Rig # 4
 Unit #
 Pump T.

Test Successful: Y

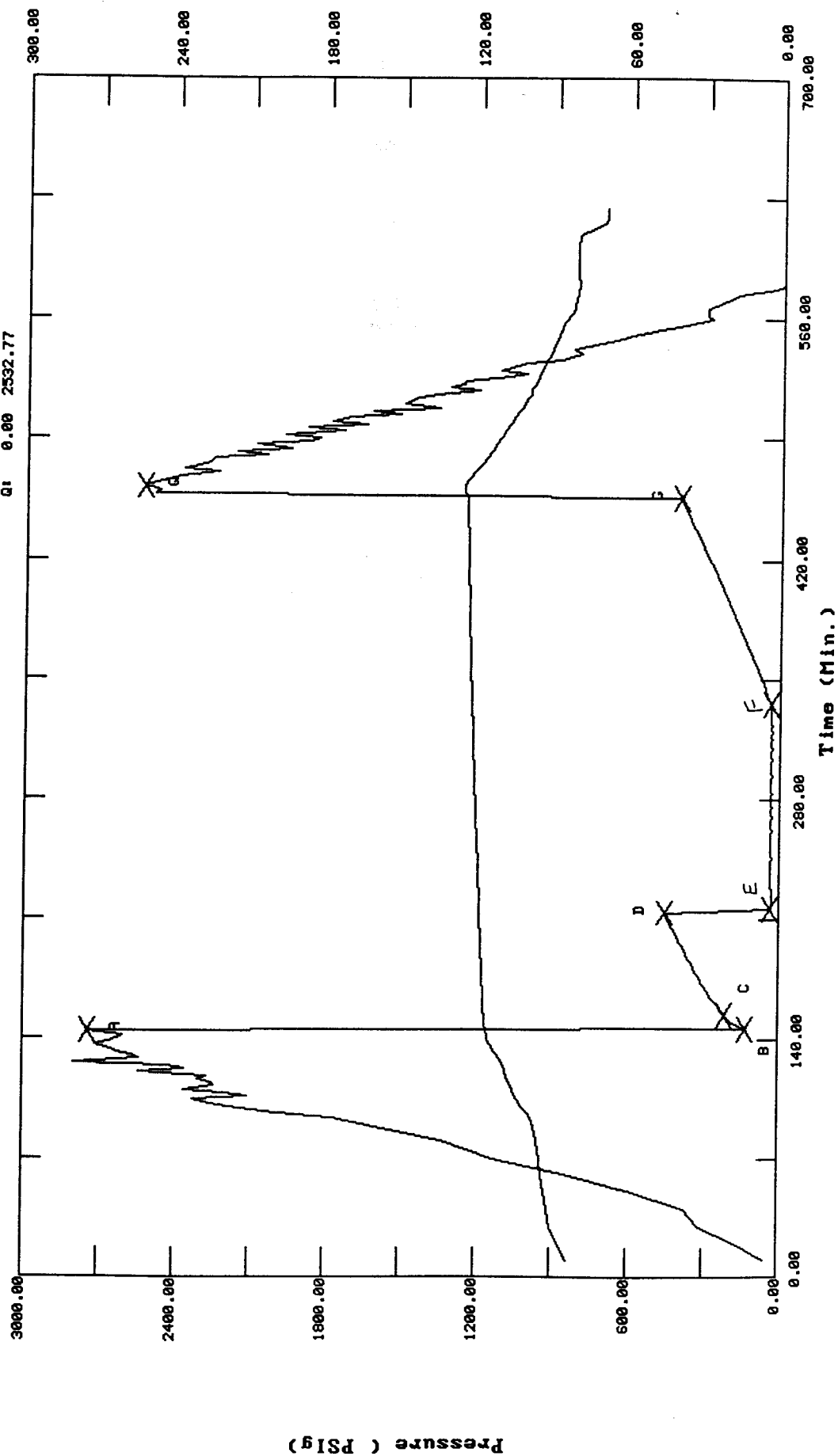
TEST HISTORY

7962 DST #4 Tessa Katrine # 1-20 Amoco Prod. Co.

Flag Points

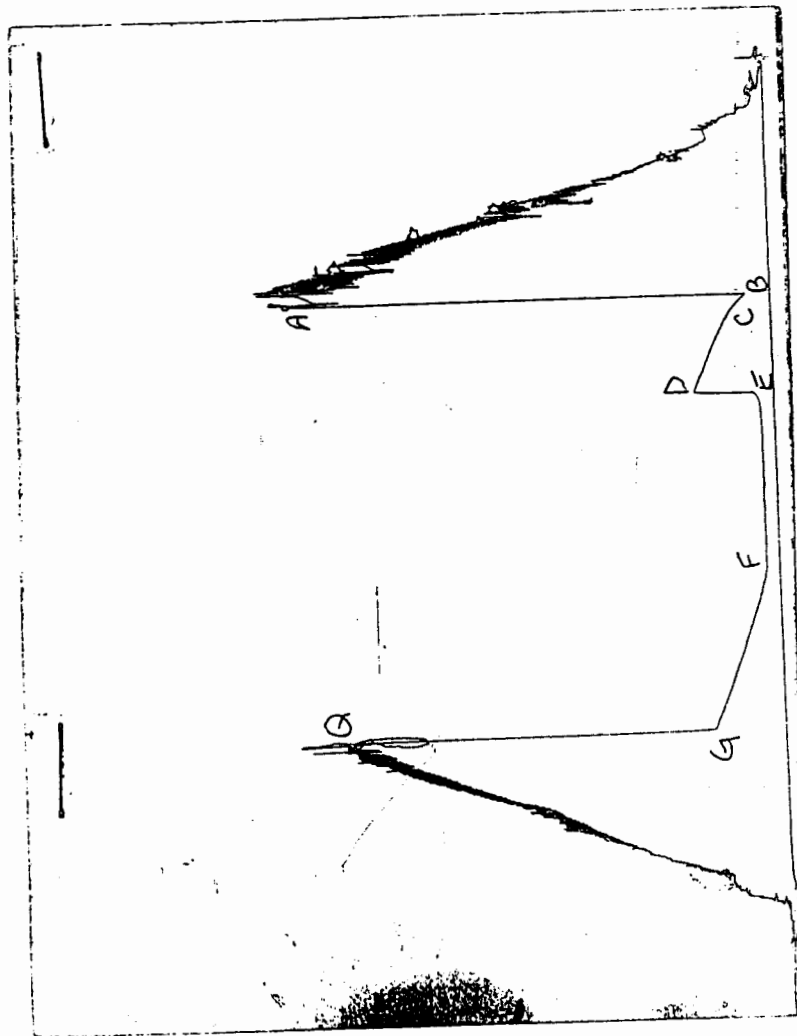
t(Min.) PC PSig)

A:	0.00	2740.40
B:	0.00	127.56
C:	0.00	212.00
D:	60.00	455.00
E:	0.00	36.50
F:	120.00	33.81
G:	120.00	403.10
Q:	0.00	2532.77



ORIGINAL

CHART PAGE



This is an actual photograph of recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

EST: 7962 DST #4 Tessa Katrine # 1-20 Amoco Prod. Co.

ATE: 10/07/95 TIME: 15:58:00

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
**** Initial Hydro.	144.00	2740.4	0.0	115.71		
**** Start Flow 1	0.00	127.6	0.0	115.81		
	2.00	160.0	32.4	116.05		
	4.00	183.3	55.7	116.23		
	6.00	201.3	73.7	116.45		
**** End Flow 1	8.00	212.1	84.5	116.61		
**** Start Shutin 1	0.00	212.1	0.0	116.61	0.0000	0.045
	2.00	223.6	11.5	116.67	5.0000	0.050
	4.00	234.7	22.6	116.75	3.0000	0.055
	6.00	245.5	33.4	116.82	2.3333	0.060
	8.00	255.4	43.3	116.90	2.0000	0.065
	10.00	265.8	53.7	116.97	1.8000	0.071
	12.00	274.9	62.9	117.04	1.6667	0.076
	14.00	284.2	72.1	117.12	1.5714	0.081
	16.00	292.7	80.7	117.18	1.5000	0.086
	18.00	301.1	89.0	117.24	1.4444	0.091
	20.00	309.3	97.2	117.31	1.4000	0.096
	22.00	317.2	105.2	117.40	1.3636	0.101
	24.00	325.1	113.1	117.47	1.3333	0.106
	26.00	332.5	120.4	117.54	1.3077	0.111
	28.00	340.4	128.3	117.61	1.2857	0.116
	30.00	348.6	136.6	117.67	1.2667	0.122
	32.00	356.0	143.9	117.75	1.2500	0.127
	34.00	363.7	151.6	117.83	1.2353	0.132
	36.00	370.5	158.5	117.89	1.2222	0.137
	38.00	377.7	165.6	117.96	1.2105	0.143
	40.00	385.1	173.0	118.04	1.2000	0.148
	42.00	392.2	180.1	118.11	1.1905	0.154
	44.00	399.7	187.7	118.19	1.1818	0.160
	46.00	406.5	194.5	118.25	1.1739	0.165
	48.00	413.6	201.5	118.32	1.1667	0.171
	50.00	420.6	208.6	118.35	1.1600	0.177
	52.00	427.6	215.5	118.43	1.1538	0.183
	54.00	435.1	223.0	118.49	1.1481	0.189
	56.00	441.5	229.5	118.56	1.1429	0.195
	58.00	448.8	236.8	118.61	1.1379	0.201
**** End Shut-in 1	60.00	455.8	243.7	118.68	1.1333	0.208
**** Start Flow 2	0.00	36.6	0.0	118.73		
	2.00	28.9	-7.7	118.76		
	4.00	27.2	-9.4	118.79		
	6.00	30.6	-6.0	118.83		
	8.00	30.1	-6.5	118.88		
	10.00	28.4	-8.1	118.93		
	12.00	30.2	-6.4	119.00		
	14.00	30.7	-5.9	119.06		
	16.00	31.2	-5.4	119.12		
	18.00	31.2	-5.4	119.20		
	20.00	31.3	-5.3	119.26		
	22.00	31.8	-4.8	119.35		
	24.00	31.4	-5.2	119.44		
	26.00	31.0	-5.6	119.56		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7962 DST #4 Tessa Katrine # 1-20 Amoco Prod. Co.

DATE: 10/07/95

TIME: 15:58:00

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	28.00	31.1	-5.5	119.56		
	30.00	30.2	-6.4	119.56		
	32.00	32.4	-4.2	119.60		
	34.00	31.8	-4.8	119.73		
	36.00	32.2	-4.4	119.80		
	38.00	30.8	-5.8	119.89		
	40.00	33.1	-3.5	119.95		
	42.00	32.1	-4.5	120.03		
	44.00	31.5	-5.1	120.10		
	46.00	30.5	-6.1	120.17		
	48.00	32.5	-4.1	120.23		
	50.00	32.1	-4.4	120.30		
	52.00	31.2	-5.4	120.36		
	54.00	29.9	-6.7	120.43		
	56.00	32.6	-3.9	120.50		
	58.00	31.4	-5.2	120.56		
	60.00	30.5	-6.0	120.63		
	62.00	33.1	-3.5	120.68		
	64.00	32.3	-4.3	120.74		
	66.00	31.9	-4.7	120.80		
	68.00	30.6	-6.0	120.87		
	70.00	32.9	-3.7	120.92		
	72.00	32.1	-4.5	120.99		
	74.00	31.8	-4.8	121.05		
	76.00	31.0	-5.5	121.10		
	78.00	30.4	-6.2	121.18		
	80.00	33.1	-3.5	121.23		
	82.00	33.1	-3.4	121.30		
	84.00	31.9	-4.7	121.33		
	86.00	31.9	-4.7	121.39		
	88.00	30.2	-6.4	121.45		
	90.00	31.6	-5.0	121.51		
	92.00	33.5	-3.1	121.56		
	94.00	29.5	-7.0	121.62		
	96.00	33.6	-3.0	121.68		
	98.00	33.8	-2.8	121.74		
	100.00	30.1	-6.5	121.79		
	102.00	34.0	-2.6	121.86		
	104.00	29.9	-6.7	121.91		
	106.00	33.8	-2.8	121.99		
	108.00	29.8	-6.8	122.02		
	110.00	31.2	-5.4	122.02		
	112.00	32.4	-4.2	122.02		
	114.00	32.7	-3.9	122.04		
	116.00	31.0	-5.6	122.09		
	118.00	33.1	-3.5	122.18		
***** End Flow 2	120.00	33.8	-2.8	122.25		
***** Start Shutin 2	0.00	33.8	0.0	122.25	0.0000	0.001
	2.00	39.3	5.5	122.30	65.0000	0.002
	4.00	45.1	11.3	122.36	33.0000	0.002
	6.00	50.3	16.4	122.42	22.3333	0.003

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING
 TEST: 7962 DST #4 Tessa Katrine # 1-20 Amoco Prod. Co.
 DATE: 10/07/95 TIME: 15:58:00

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
8.00	55.5	21.7	122.47	17.0000	0.003
10.00	60.6	26.8	122.53	13.8000	0.004
12.00	65.9	32.1	122.58	11.6667	0.004
14.00	71.7	37.9	122.64	10.1429	0.005
16.00	76.8	43.0	122.71	9.0000	0.006
18.00	82.2	48.3	122.72	8.1111	0.007
20.00	88.2	54.4	122.79	7.4000	0.008
22.00	93.4	59.6	122.84	6.8182	0.009
24.00	99.3	65.5	122.88	6.3333	0.01
26.00	104.6	70.8	122.93	5.9231	0.011
28.00	110.9	77.0	122.99	5.5714	0.012
30.00	116.6	82.8	123.03	5.2667	0.014
32.00	122.4	88.5	123.08	5.0000	0.015
34.00	128.0	94.2	123.12	4.7647	0.016
36.00	134.2	100.4	123.17	4.5556	0.018
38.00	139.6	105.8	123.21	4.3684	0.020
40.00	145.8	112.0	123.26	4.2000	0.021
42.00	151.3	117.5	123.31	4.0476	0.023
44.00	157.8	124.0	123.34	3.9091	0.025
46.00	163.3	129.5	123.39	3.7826	0.027
48.00	169.6	135.8	123.41	3.6667	0.029
50.00	175.3	141.5	123.45	3.5600	0.031
52.00	181.8	148.0	123.50	3.4615	0.033
54.00	187.7	153.8	123.52	3.3704	0.035
56.00	194.1	160.3	123.58	3.2857	0.038
58.00	199.9	166.1	123.61	3.2069	0.040
60.00	206.6	172.8	123.64	3.1333	0.043
62.00	212.8	179.0	123.70	3.0645	0.045
64.00	219.0	185.1	123.72	3.0000	0.048
66.00	225.3	191.4	123.76	2.9394	0.051
68.00	231.8	198.0	123.80	2.8824	0.054
70.00	238.1	204.3	123.83	2.8286	0.057
72.00	244.6	210.7	123.87	2.7778	0.060
74.00	250.6	216.8	123.89	2.7297	0.063
76.00	257.5	223.7	123.93	2.6842	0.066
78.00	263.7	229.9	123.98	2.6410	0.070
80.00	270.2	236.4	124.03	2.6000	0.073
82.00	276.9	243.1	124.06	2.5610	0.077
84.00	283.4	249.6	124.09	2.5238	0.080
86.00	290.0	256.1	124.09	2.4884	0.084
88.00	296.7	262.9	124.13	2.4545	0.088
90.00	303.6	269.7	124.17	2.4222	0.092
92.00	310.3	276.5	124.19	2.3913	0.096
94.00	316.7	282.8	124.24	2.3617	0.100
96.00	323.9	290.1	124.29	2.3333	0.105
98.00	330.4	296.6	124.31	2.3061	0.109
100.00	336.8	303.0	124.35	2.2800	0.113
102.00	343.8	310.0	124.38	2.2549	0.118
104.00	350.6	316.8	124.44	2.2308	0.123
106.00	357.0	323.2	124.47	2.2075	0.127
108.00	363.7	329.9	124.49	2.1852	0.132

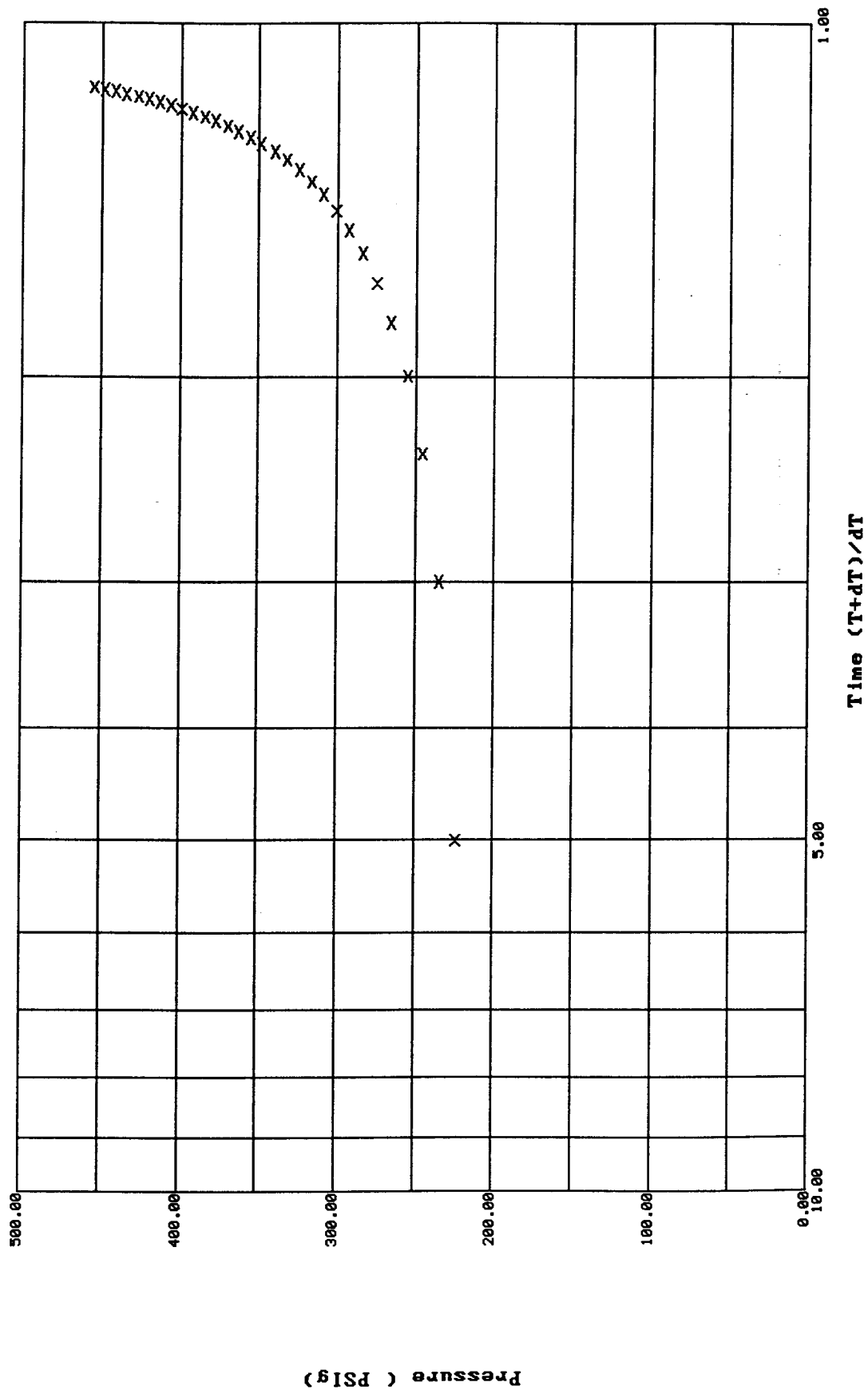
 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7962 DST #4 Tessa Katrine # 1-20 Amoco Prod. Co.

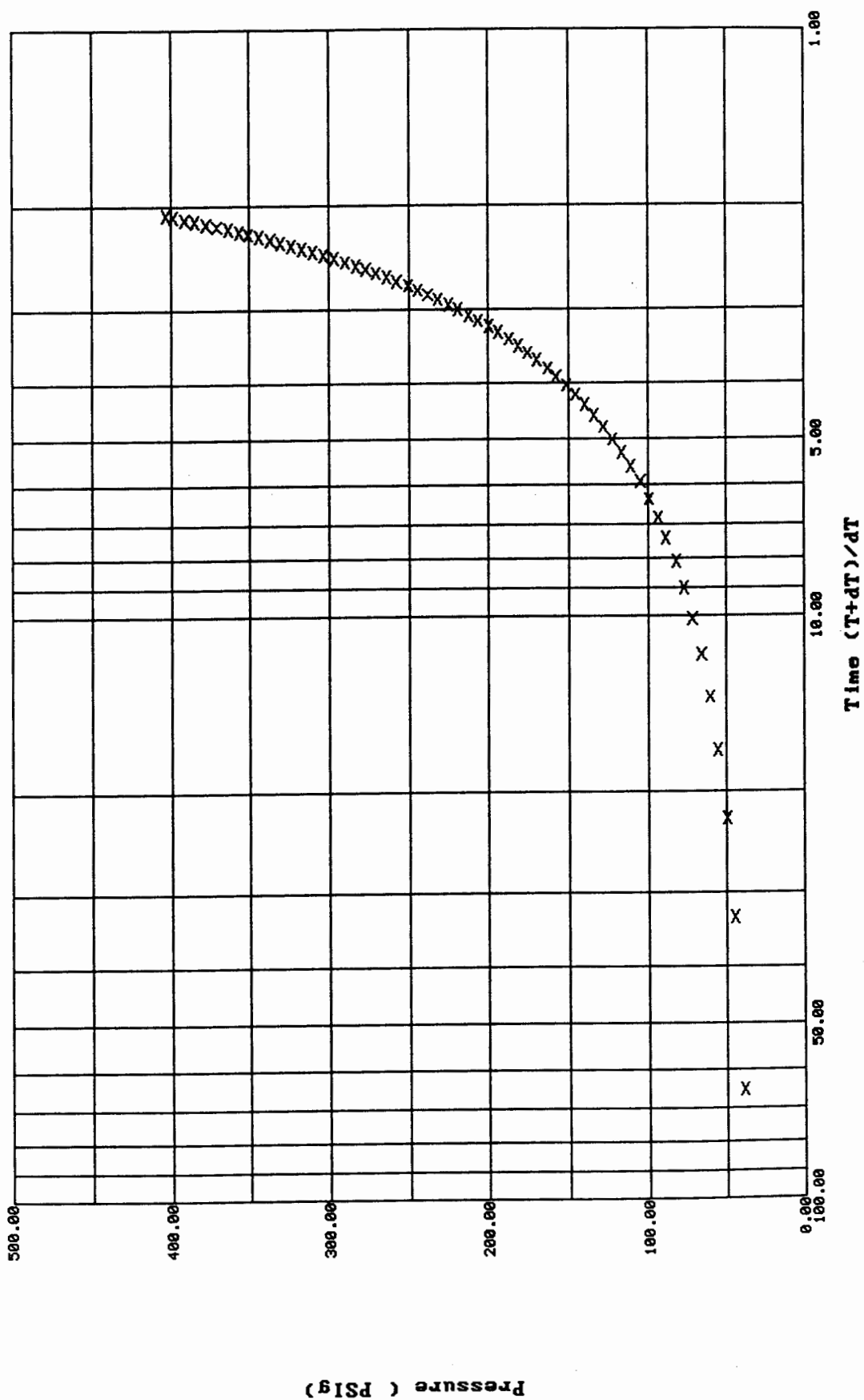
DATE: 10/07/95 TIME: 15:58:00

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	110.00	370.7	336.9	124.50	2.1636	0.137
	112.00	377.5	343.7	124.54	2.1429	0.143
	114.00	384.6	350.8	124.58	2.1228	0.148
	116.00	391.0	357.2	124.62	2.1034	0.153
	118.00	398.2	364.4	124.64	2.0847	0.159
***** End Shut-in 2	120.00	403.1	369.3	124.66	2.0667	0.162
***** Final Hydro.	462.00	2532.8	0.0	125.85		

Horner Plot: shut-in #1 7962 DST #4 Tessa Katrine # 1-20 Amoco Prod. Co.

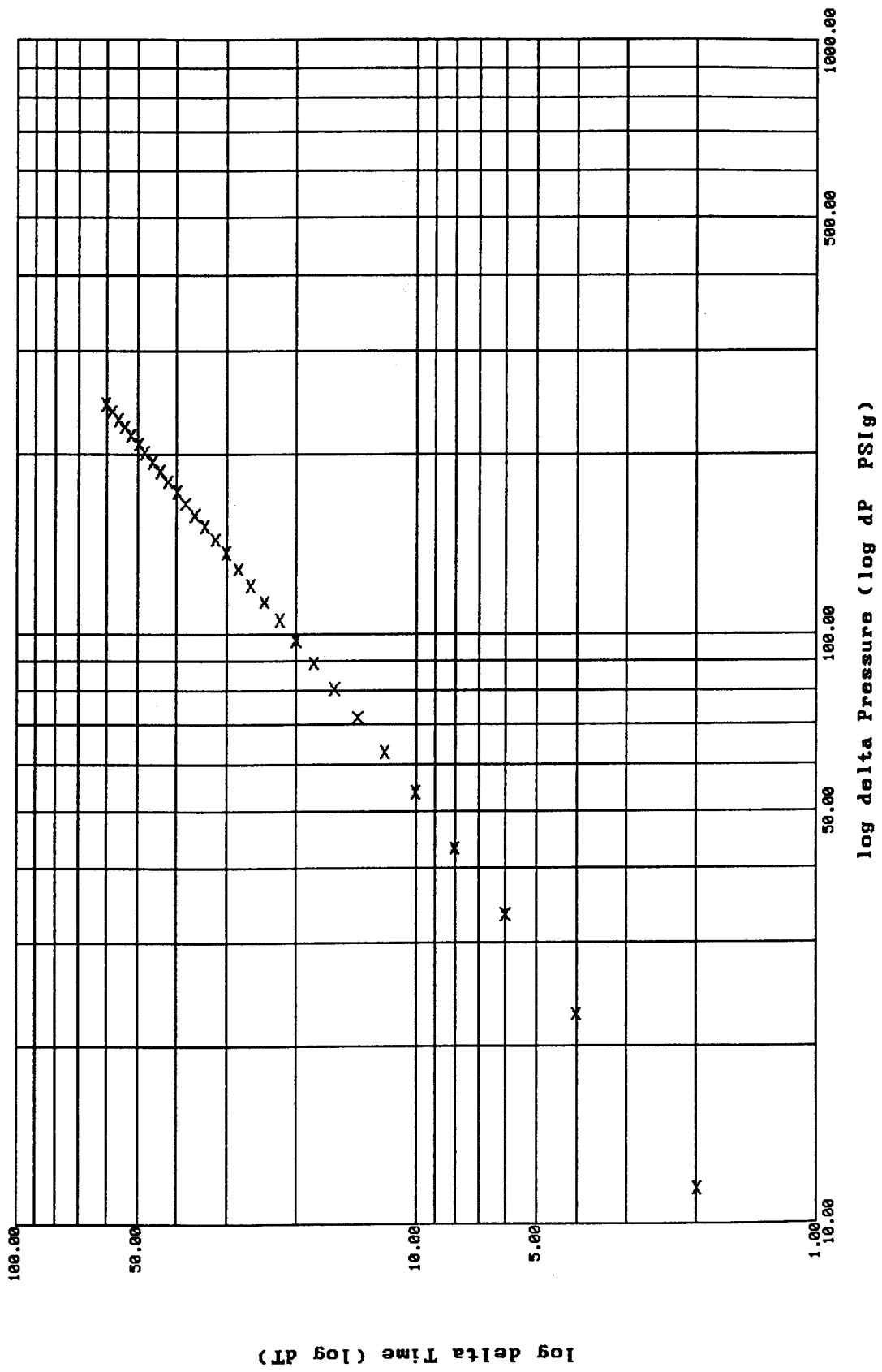


Horner Plot: shut-in #2 7962 DST #4 Tessa Katrine # 1-28 Amoco Prod. Co.



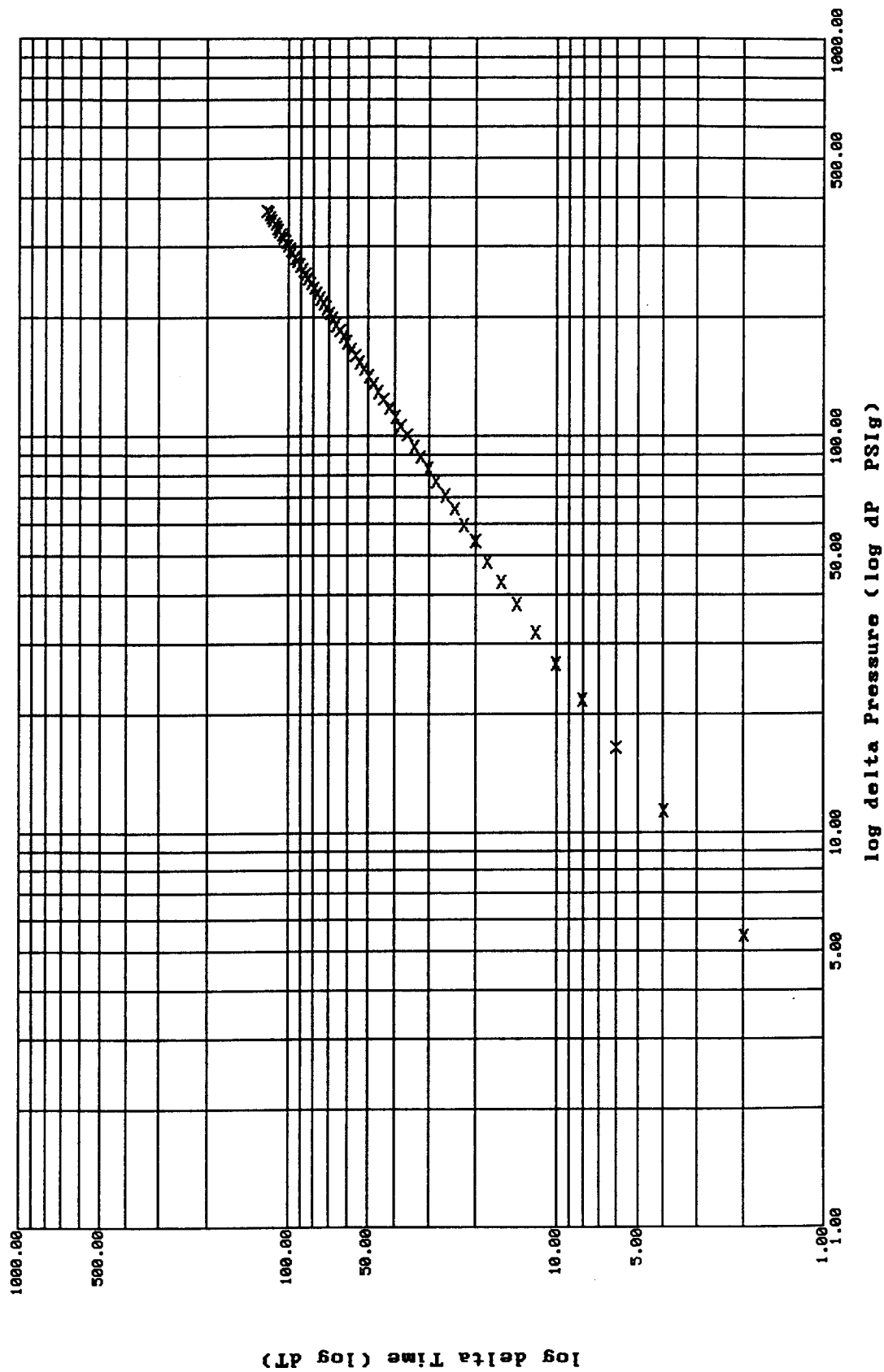
McKinley Plot: shut-in #1

7962 DST #4 Tessa Katrine # 1-20 Amoco Prod. Co.

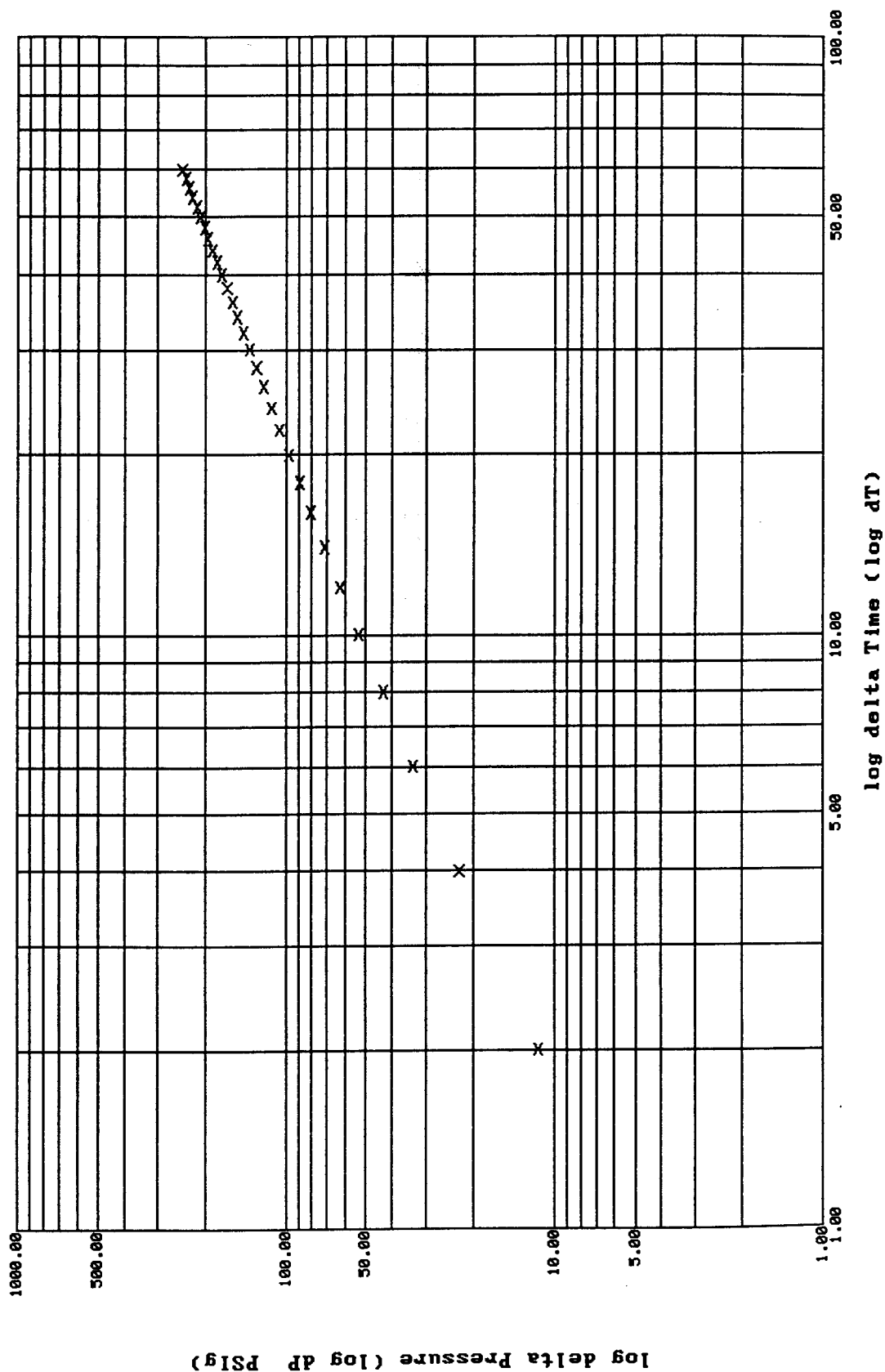


McKinley Plot: shut-in #2

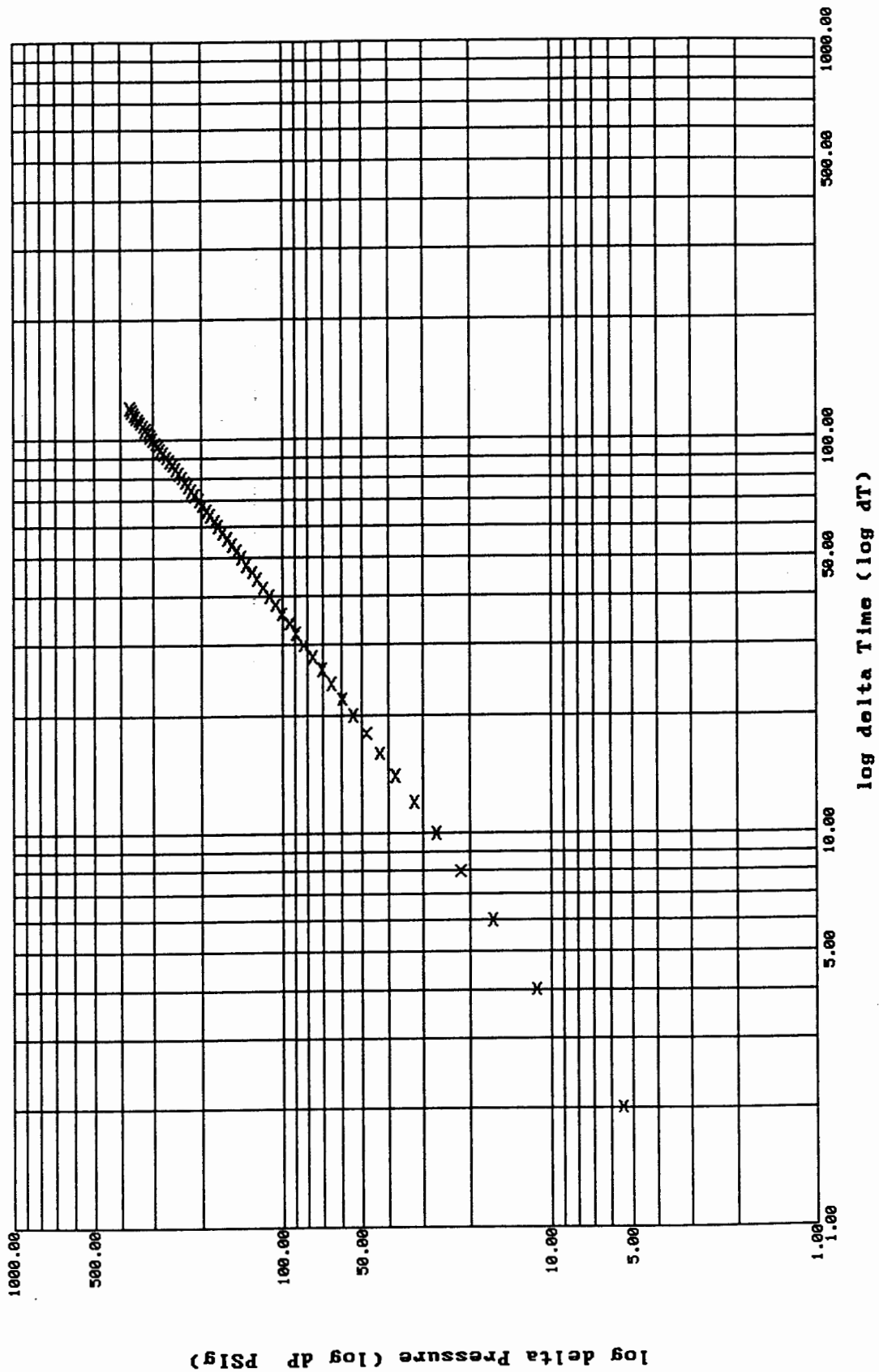
7962 DST #4 Tessa Katrine # 1-28 Amoco Prod. Co.



Ramey Plot: shut-in #1 7962 DST #4 Tessa Katrine # 1-28 Amoco Prod. Co.



Ramey Plot: shut-in #2 7962 DST #4 Tessa Katrine # 1-20 Amoco Prod. Co.



*** TOOL DIAGRAM *** CONV.

WELL NAME: Tessa Katrine # 1-20

LOCATION : 20-31S-32W, Seward Cty KS

TICKET No. 7962 D.S.T. No. 4 DATE 10-7-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 32

TOTAL TOOL 62

DRILL COLLAR ANCHOR IN INTERVAL y

D.C. ANCHOR STND.Stands1 Single Total 59'

D.P. ANCHOR STND.Stands 0 Single 0 Total 0

TOTAL ASSEMBLY 121

D.C. ABOVE TOOLS.Stands10 Single 0 Total 610

D.P. ABOVE TOOLS.Stands77 Single 1 Total 4827

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5558

TOTAL DEPTH 5537

TOTAL DRILL PIPE ABOVE K.B. 21

REMARKS:

FLUID SAMPLER DATA

SAMPLER RECOVERY -

Gas 4000 ml, Pressure 350 PSI, Total 4000ml

PIT MUD ANALYSIS -

Chlorides 4600 ppm; Resist 1.35 ohms @ 70 F

Viscosity 59, Mud Wt 9, Filtrate 7.6

PIPE RECOVERY -

Top - Resistivity 1.2 ohms @ 74 F;

Chlorides 4750 ppm

Bottom - Resistivity 1.2 ohms @ 74 F;

Chlorides 4750 ppm

P.O. SUB

C.O. SUB 1' 5420

S.I. TOOL 5' 5421

sampler- 3' 5426

HMV 5' 5429

JARS 5' 5434

SAFETY JOINT 2' 5439

PACKER top 5441

PACKER bottom 5446

DEPTH 5446

STUBB 1'-perf 5446

ANCHOR 5'-perf 5447

5'-perf 5452

5'-perf 5457

5'-perf 5462

T.C.
DEPTH

4'-perf 5467

1' c.o. sub 5471

59'-collars 5472

1'doubble pin 5531

BULLNOSE

T.D. 5532

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 7962 Date 10-7-95
Company Name Amoco. Prod. Co.
Lease Tessa Katrine #1-20 Test No. 4
County Seward Sec. 20 Twp. 31 Rng. 32

SAMPLER RECOVERY

Gas 4000 ML
Oil _____ ML
Mud _____ ML
Water _____ ML
Other _____ ML
Pressure 350 PSI
Total 4000 ML

SAMPLER ANALYSIS

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

PIT MUD ANALYSIS

Chlorides 4,600 ppm.
Resistivity 1.35 ohms @ 70 F
Viscosity 59
Mud Weight 9.0
Filtrate 7.6
Other _____

PIPE RECOVERY

TOP
Resistivity 1.2 ohms @ 74 F
Chlorides 4,750 ppm.

MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

BOTTOM
Resistivity 1.2 ohms @ 74 F
Chlorides 4,750 ppm.

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7962

Well Name & No. <u>Tessie KATRINE #1-20</u>	Test No. <u>4</u>	Date <u>10-7-95</u>
Company <u>Ameco Prod. Co.</u>	Zone Tested <u>MARLOW</u>	
Address <u>P.O. Box 800 Room 924 Denver, Colo. 80201</u>	Elevation <u>2857 (G)</u> <u>2865 (KB)</u>	
Co. Rep. / Geo. <u>Austin Garner</u>	Cont. <u>Cheyenne #4</u>	Est. Ft. of Pay _____
Location: Sec. <u>20</u> Twp. <u>31</u> Rge. <u>32</u>	Co. <u>SEWARD</u>	State <u>KS</u>
No. of Copies <u>Normal</u>	Distribution Sheet _____ Yes _____ No _____	Turnkey _____ Yes <u>X</u> No _____
Evaluation _____		

Interval Tested 5446' - 5537' Drill Pipe Size 4 1/2 F.H.
 Anchor Length 91' Top Choke — 1" Bottom Choke — 3/4" ✓
 Top Packer Depth 5441' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
 Bottom Packer Depth 5446' Wt. Pipe I.D. — 2.7 Ft. Run _____
 Total Depth 5537' Drill Collar — 2.25 Ft. Run 669'
 Mud Wt. 9.0 lb/gal. Viscosity 59 Filtrate 7.6

Tool Open @ 6:06pm Initial Blow 1/8" in. @ Tool open, Dried in 8 min. - Tool playing
I.S.I. - No Blow

Final Blow Surface Blow 1/8" in. built to 3 1/2" in. Blew throughout
E.S.I. Bleed off Blow - No return Blow

Recovery — Total Feet 25' Feet of Gas in Pipe 540' Flush Tool? NO

Rec.	Feet Of	Drills mud	Trace % gas	% Oil	% water	100% mud
Rec. <u>25'</u>	Feet Of		% gas	% Oil	% water	% mud
Rec. _____	Feet Of		% gas	% Oil	% water	% mud
Rec. _____	Feet Of		% gas	% Oil	% water	% mud
Rec. _____	Feet Of		% gas	% Oil	% water	% mud
Rec. _____	Feet Of		% gas	% Oil	% water	% mud

BHT 125 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 1.2 @ 74 °F Chlorides 4,750 ppm Recovery Chlorides 4,600 ppm System

(A) Initial Hydrostatic Mud 2740 PSI Ak1 Recorder No. 2351 Range 4995

(B) First Initial Flow Pressure 127 PSI @ (depth) 5447' w/Clock No. ELC

(C) First Final Flow Pressure 212 PSI AK1 Recorder No. 11057 Range 4500

(D) Initial Shut-In Pressure 455 PSI @ (depth) 5532 w/Clock No. 21048

(E) Second Initial Flow Pressure 36 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 33 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 403 PSI Initial Opening 10 Test X 700

(H) Final Hydrostatic Mud 2532 PSI Initial Shut-In 60 Jars X 200

Final Flow 120 Safety Joint X 50

Final Shut-In 120 Straddle _____

Circ. Sub X N/C

Sampler X 200

Extra Packer _____

Other X Electric Recorder 150

Approved By Austin Garner

Our Representative Steve T. [Signature]

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Computer Inventoried

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Company
 WELL NAME: Tessa Katrine
 LOCATION : 20-31S-32W, Seward Cty KS
 INTERVAL : 5760.00 To 5816.00 ft

DATE 10-9-95
 KB 2865.00 ft TICKET NO: 7963 DST #5
 GR 2857.00 ft FORMATION: St. Louis
 TD 5816.00 ft TEST TYPE: CONV.

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 10 Rec.	11057	11057	2341			PF Fr. 0952 to 1002 hr
SI 60 Range(Psi)	4500.0	4500.0	4995.0	0.0	0.0	IS Fr. 1002 to 1102 hr
SF 120 Clock(hrs)	AK-1	AK-1	Alpin			SF Fr. 1102 to 1302 hr
FS 120 Depth(ft)	5821.0	5821.0	5762.0	0.0	0.0	FS Fr. 1302 to 1502 hr

	Field	1	2	3	4	
A. Init Hydro	0.0	2860.0	2889.0	0.0	0.0	T STARTED 0737 hr
B. First Flow	0.0	62.0	32.0	0.0	0.0	T ON BOTM 0949 hr
B1. Final Flow	0.0	56.0	39.0	0.0	0.0	T OPEN 0952 hr
C. In Shut-in	0.0	1668.0	1690.0	0.0	0.0	T PULLED 1502 hr
D. Init Flow	0.0	59.0	42.0	0.0	0.0	T OUT 1730 hr
E. Final Flow	0.0	117.0	111.0	0.0	0.0	
F. Fl Shut-in	0.0	1591.0	1628.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	0.0	2630.0	2642.0	0.0	0.0	Tool Wt. 6000.00 lbs
Inside/Outside	O	O	I			Wt Set On Packer 25000.00 lbs
						Wt Pulled Loose 132000.00 lbs
						Initial Str Wt 102000.00 lbs
						Unseated Str Wt 106000.00 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 669.00 ft
						D.P. Length 5076.00 ft

RECOVERY

Tot Fluid 120.00 ft of 120.00 ft in DC and 0.00 ft in DP
 120.00 ft of Water cut mud - 90% mud, 10% water

RW .91 @ 75 F

SALINITY 6200.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Blow -
 .125" blow @ open built to .75"

Initial Shutin -
 Bled off blow, no return blow

Final Blow -
 Bubble to open tool, no blow

Final Shutin -
 No blow

SAMPLES:
 SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	8.90 lb/cf
Vis.	67.00 S/L
W.L.	9.20 in3
F.C.	0.00 in
Mud Drop Y	5.0 ft

Amt. of fill	5.00 ft
Btm. H. Temp.	131.00 F
Hole Condition	fair
% 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	Shane McBride
Co. Rep.	Austin Garner
Contr.	Cheyenne
Rig #	4
Unit #	
Pump T.	

Test Successful: Y

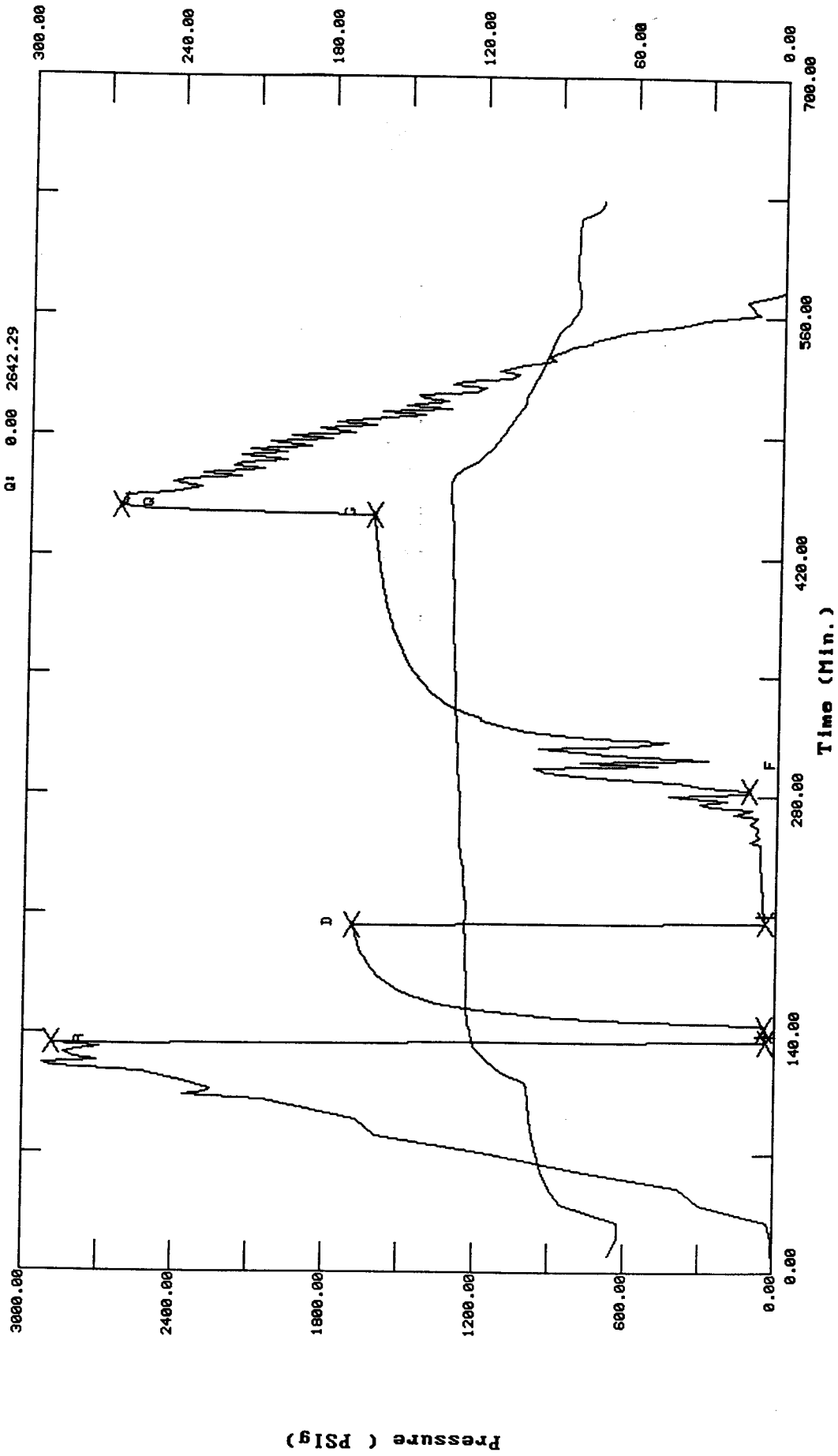
TEST HISTORY

7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.

Flag Points

t(Min.) PK PSig

A:	0.00	2889.04
B:	0.00	32.14
C:	8.00	38.51
D:	68.00	1889.54
E:	0.00	41.96
F:	78.00	110.86
G:	160.00	1627.52
Q:	0.00	2642.29

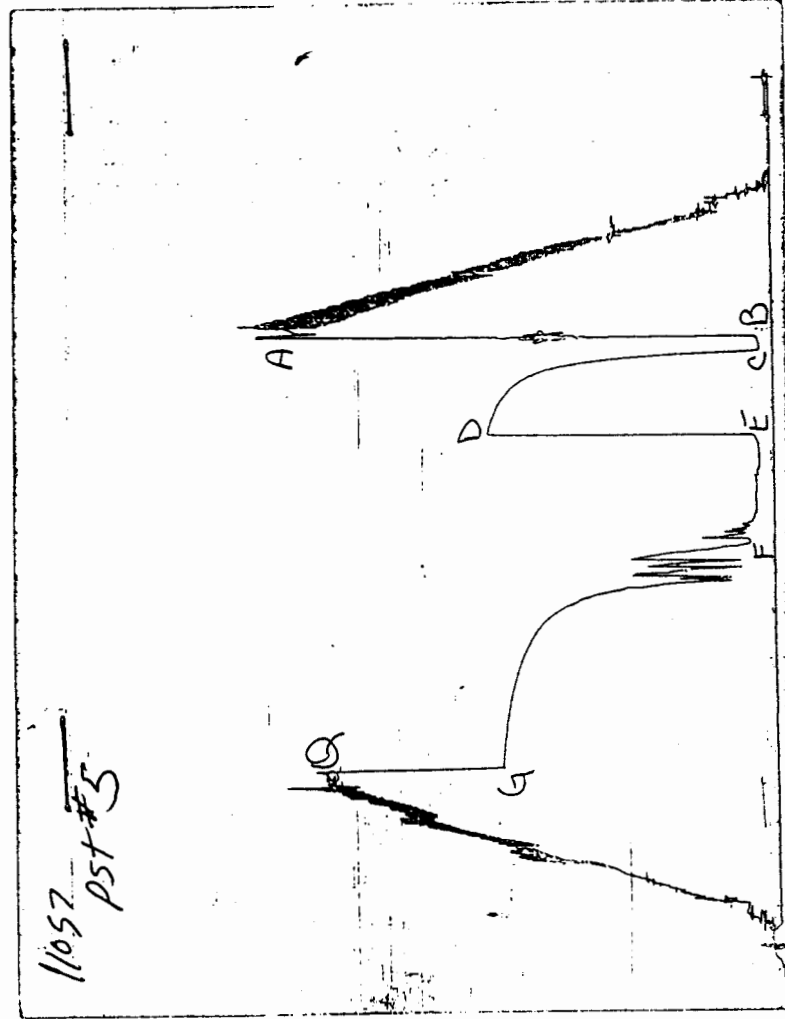


Pressure (PSig)

Temperature (DEG F)

Time (Min.)

CHART PAGE



This is an actual photograph of recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.

DATE: 10/09/95

TIME: 06:39:31

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	134.00	2889.0	0.0	120.58		
***** Start Flow 1	0.00	32.1	0.0	120.99		
	2.00	34.4	2.3	121.39		
	4.00	36.8	4.7	121.65		
	6.00	36.2	4.0	121.89		
***** End Flow 1	8.00	38.5	6.4	122.19		
***** Start Shutin 1	0.00	38.5	0.0	122.19	0.0000	0.001
	2.00	63.9	25.4	122.77	5.0000	0.004
	4.00	544.1	505.6	123.10	3.0000	0.296
	6.00	861.7	823.2	123.22	2.3333	0.742
	8.00	1059.7	1021.2	123.28	2.0000	1.123
	10.00	1191.7	1153.2	123.29	1.8000	1.420
	12.00	1276.0	1237.5	123.35	1.6667	1.628
	14.00	1354.0	1315.5	123.38	1.5714	1.833
	16.00	1407.6	1369.1	123.43	1.5000	1.981
	18.00	1449.9	1411.4	123.47	1.4444	2.102
	20.00	1484.2	1445.7	123.52	1.4000	2.203
	22.00	1512.3	1473.8	123.56	1.3636	2.287
	24.00	1536.0	1497.4	123.61	1.3333	2.359
	26.00	1555.9	1517.4	123.65	1.3077	2.421
	28.00	1573.1	1534.6	123.69	1.2857	2.475
	30.00	1588.0	1549.5	123.74	1.2667	2.522
	32.00	1600.8	1562.3	123.80	1.2500	2.563
	34.00	1612.3	1573.8	123.85	1.2353	2.600
	36.00	1622.6	1584.1	123.89	1.2222	2.633
	38.00	1631.6	1593.1	123.94	1.2105	2.662
	40.00	1639.8	1601.3	124.00	1.2000	2.689
	42.00	1647.0	1608.5	124.05	1.1905	2.713
	44.00	1653.5	1615.0	124.12	1.1818	2.734
	46.00	1659.8	1621.3	124.15	1.1739	2.755
	48.00	1665.7	1627.2	124.22	1.1667	2.775
	50.00	1669.9	1631.4	124.29	1.1600	2.789
	52.00	1674.5	1636.0	124.35	1.1538	2.804
	54.00	1678.8	1640.3	124.42	1.1481	2.818
	56.00	1682.6	1644.1	124.48	1.1429	2.831
	58.00	1686.3	1647.8	124.50	1.1379	2.844
***** End Shut-in 1	60.00	1689.5	1651.0	124.60	1.1333	2.855
***** Start Flow 2	0.00	42.0	0.0	124.54		
	2.00	46.1	4.1	124.42		
	4.00	44.9	2.9	124.29		
	6.00	45.6	3.7	124.18		
	8.00	49.0	7.0	124.21		
	10.00	50.7	8.7	124.31		
	12.00	50.8	8.8	124.36		
	14.00	51.4	9.5	124.46		
	16.00	52.7	10.7	124.63		
	18.00	54.5	12.6	124.79		
	20.00	56.7	14.8	124.93		
	22.00	56.6	14.7	125.06		
	24.00	57.1	15.1	125.17		
	26.00	59.2	17.2	125.14		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.

DATE: 10/09/95

TIME: 06:39:31

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
28.00	59.7	17.7	125.08		
30.00	59.7	17.7	125.12		
32.00	60.8	18.8	125.39		
34.00	61.8	19.8	125.72		
36.00	64.4	22.5	126.07		
38.00	63.4	21.5	126.35		
40.00	65.4	23.4	126.54		
42.00	65.9	23.9	126.82		
44.00	66.2	24.3	127.07		
46.00	66.1	24.2	127.20		
48.00	105.2	63.2	127.17		
50.00	71.2	29.3	127.02		
52.00	81.5	39.5	126.90		
54.00	73.8	31.9	126.89		
56.00	73.2	31.2	126.94		
58.00	106.7	64.8	126.99		
60.00	90.0	48.0	127.01		
62.00	75.4	33.4	126.92		
64.00	170.2	128.2	126.91		
66.00	101.7	59.8	126.99		
68.00	270.6	228.6	127.11		
70.00	312.4	270.4	127.17		
72.00	204.0	162.1	127.20		
74.00	437.1	395.1	127.28		
76.00	115.0	73.0	127.36		
78.00	110.9	68.9	127.46		

***** End Flow 2

***** Start Shutin 2

0.00	110.9	0.0	127.46	0.0000	0.012
2.00	301.2	190.3	127.58	44.0000	0.091
4.00	397.3	286.4	127.71	22.5000	0.158
6.00	648.2	537.3	127.85	15.3333	0.420
8.00	809.6	698.7	127.99	11.7500	0.655
10.00	927.7	816.9	128.10	9.6000	0.861
12.00	975.8	865.0	128.20	8.1667	0.952
14.00	486.8	375.9	128.23	7.1429	0.237
16.00	789.8	678.9	128.32	6.3750	0.624
18.00	282.8	172.0	128.37	5.7778	0.080
20.00	678.6	567.8	128.46	5.3000	0.461
22.00	803.3	692.5	128.54	4.9091	0.645
24.00	958.4	847.5	128.62	4.5833	0.918
26.00	586.3	475.5	128.62	4.3077	0.344
28.00	444.3	333.4	128.65	4.0714	0.197
30.00	748.3	637.4	128.74	3.8667	0.560
32.00	886.1	775.2	128.83	3.6875	0.785
34.00	1008.0	897.1	128.91	3.5294	1.016
36.00	1089.4	978.5	129.00	3.3889	1.187
38.00	1147.0	1036.2	129.07	3.2632	1.316
40.00	1195.0	1084.1	129.13	3.1500	1.428
42.00	1192.5	1081.7	129.19	3.0476	1.422
44.00	1250.3	1139.5	129.24	2.9545	1.563
46.00	1284.9	1174.1	129.29	2.8696	1.651
48.00	1312.0	1201.1	129.34	2.7917	1.721

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.

DATE: 10/09/95

TIME: 06:39:31

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
50.00	1334.8	1223.9	129.38	2.7200	1.782
52.00	1354.8	1244.0	129.42	2.6538	1.836
54.00	1372.8	1261.9	129.48	2.5926	1.885
56.00	1388.9	1278.1	129.52	2.5357	1.929
58.00	1403.7	1292.8	129.57	2.4828	1.970
60.00	1417.1	1306.3	129.60	2.4333	2.008
62.00	1429.5	1318.7	129.66	2.3871	2.044
64.00	1440.9	1330.1	129.70	2.3438	2.076
66.00	1451.5	1340.7	129.74	2.3030	2.107
68.00	1461.3	1350.5	129.78	2.2647	2.136
70.00	1470.6	1359.7	129.85	2.2286	2.163
72.00	1479.1	1368.2	129.90	2.1944	2.188
74.00	1487.1	1376.2	129.97	2.1622	2.211
76.00	1494.6	1383.7	130.04	2.1316	2.234
78.00	1501.6	1390.8	130.15	2.1026	2.255
80.00	1508.3	1397.4	130.27	2.0750	2.275
82.00	1514.5	1403.6	130.35	2.0488	2.294
84.00	1520.5	1409.7	130.40	2.0238	2.312
86.00	1526.1	1415.2	130.43	2.0000	2.329
88.00	1531.4	1420.6	130.46	1.9773	2.345
90.00	1536.4	1425.5	130.49	1.9556	2.360
92.00	1541.2	1430.3	130.51	1.9348	2.375
94.00	1545.7	1434.8	130.55	1.9149	2.389
96.00	1550.1	1439.3	130.58	1.8958	2.403
98.00	1554.3	1443.4	130.62	1.8776	2.416
100.00	1558.2	1447.3	130.64	1.8600	2.428
102.00	1562.1	1451.2	130.67	1.8431	2.440
104.00	1565.6	1454.7	130.70	1.8269	2.451
106.00	1569.1	1458.2	130.74	1.8113	2.462
108.00	1572.4	1461.5	130.77	1.7963	2.472
110.00	1575.7	1464.8	130.81	1.7818	2.483
112.00	1578.7	1467.8	130.84	1.7679	2.492
114.00	1581.5	1470.7	130.88	1.7544	2.501
116.00	1584.4	1473.5	130.92	1.7414	2.510
118.00	1587.2	1476.4	130.95	1.7288	2.519
120.00	1589.8	1479.0	130.98	1.7167	2.528
122.00	1592.3	1481.4	131.03	1.7049	2.535
124.00	1594.7	1483.8	131.06	1.6935	2.543
126.00	1597.1	1486.3	131.10	1.6825	2.551
128.00	1599.4	1488.5	131.15	1.6719	2.558
130.00	1601.6	1490.7	131.17	1.6615	2.565
132.00	1603.7	1492.8	131.20	1.6515	2.572
134.00	1605.7	1494.8	131.24	1.6418	2.578
136.00	1607.8	1496.9	131.27	1.6324	2.585
138.00	1609.6	1498.8	131.31	1.6232	2.591
140.00	1611.5	1500.6	131.34	1.6143	2.597
142.00	1613.3	1502.5	131.37	1.6056	2.603
144.00	1615.1	1504.2	131.40	1.5972	2.609
146.00	1616.8	1505.9	131.44	1.5890	2.614
148.00	1618.4	1507.5	131.48	1.5811	2.619
150.00	1620.1	1509.2	131.51	1.5733	2.625

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.

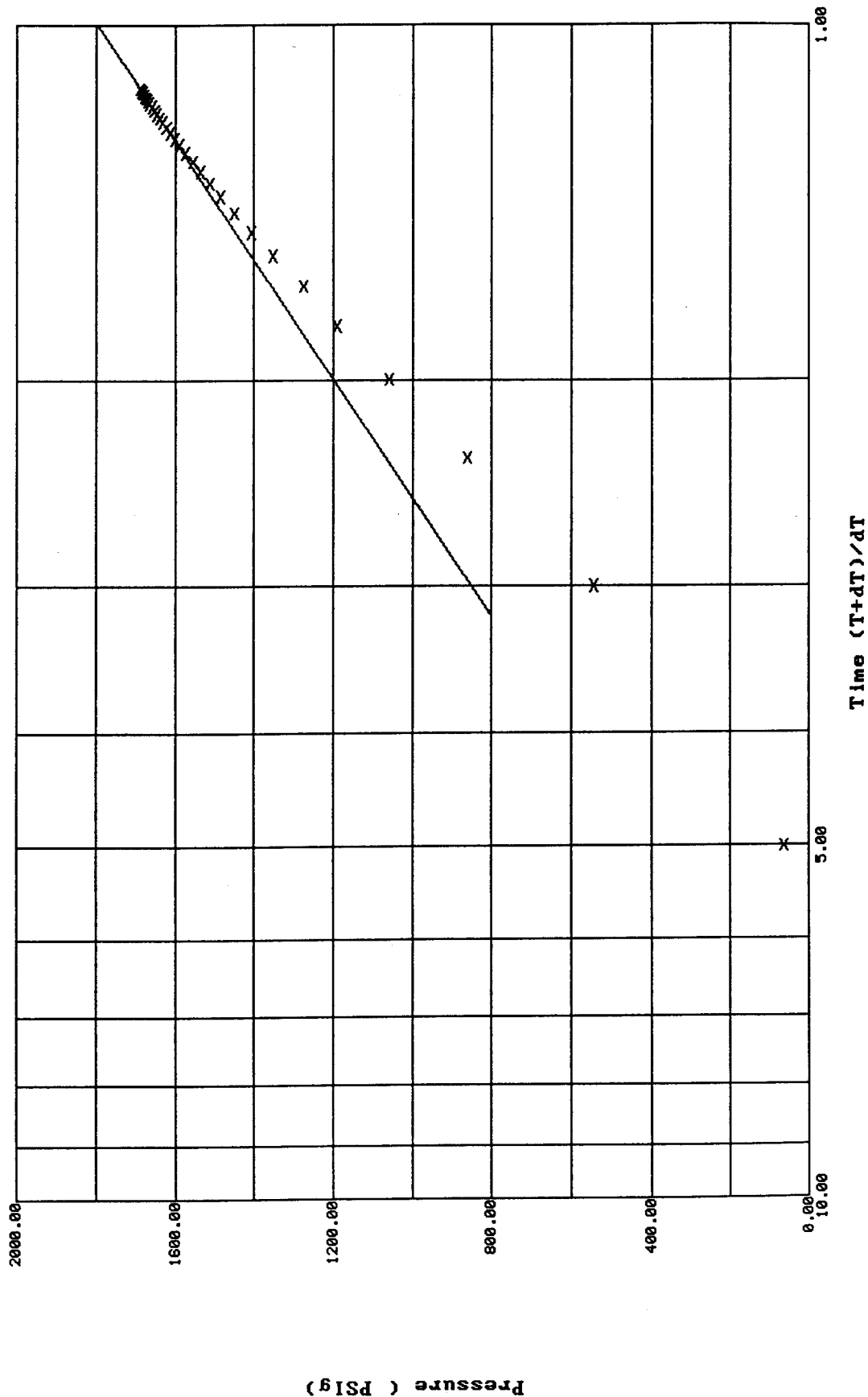
DATE: 10/09/95 TIME: 06:39:31

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	152.00	1621.6	1510.7	131.54	1.5658	2.629
	154.00	1623.2	1512.3	131.58	1.5584	2.635
	156.00	1624.6	1513.7	131.61	1.5513	2.639
	158.00	1626.0	1515.1	131.65	1.5443	2.644
***** End Shut-in 2	160.00	1627.5	1516.7	131.67	1.5375	2.649
***** Final Hydro.	448.00	2642.3	0.0	132.01		

7963 DST # 5 Tessa Katrine # 1-28 Amoco Prod. Co.

Slope: 1984.1055 PSig/cycle

Ext. Pressure: 1797.7354 PSig

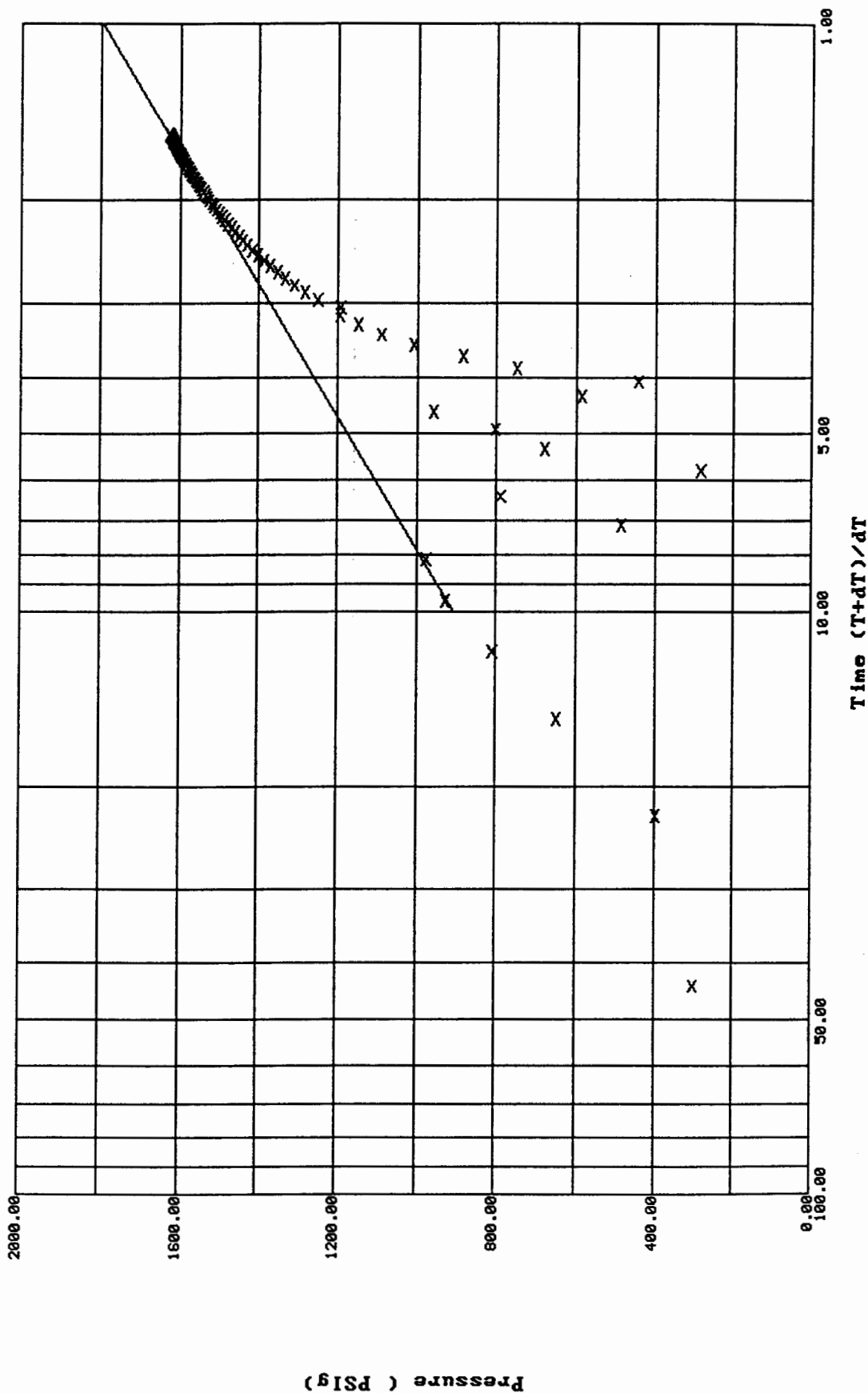


Horner Plot: shut-in #2

7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.

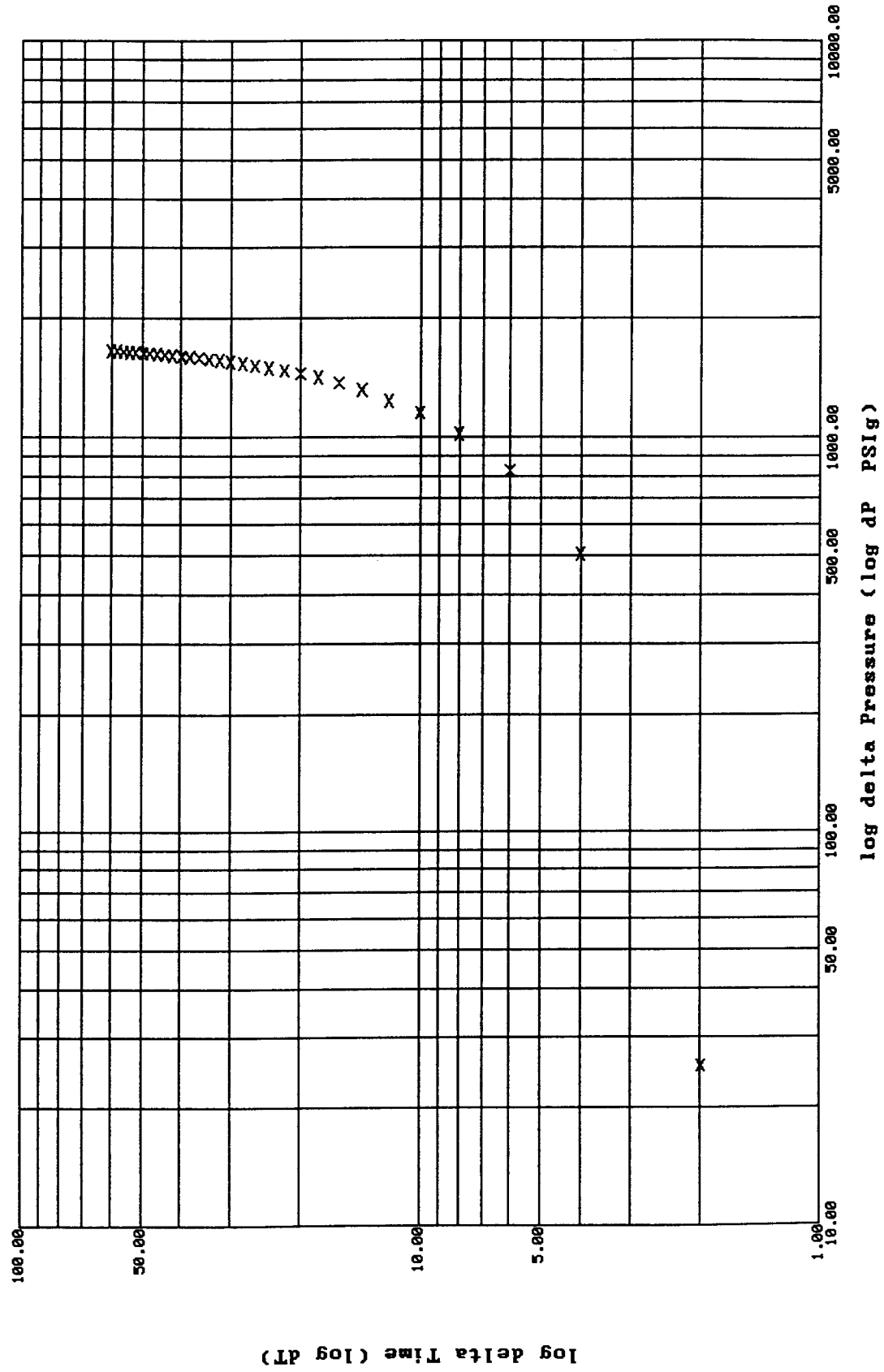
Slope: 890.5511 PSig/cycle

Ext. Pressure: 1796.8776 PSig



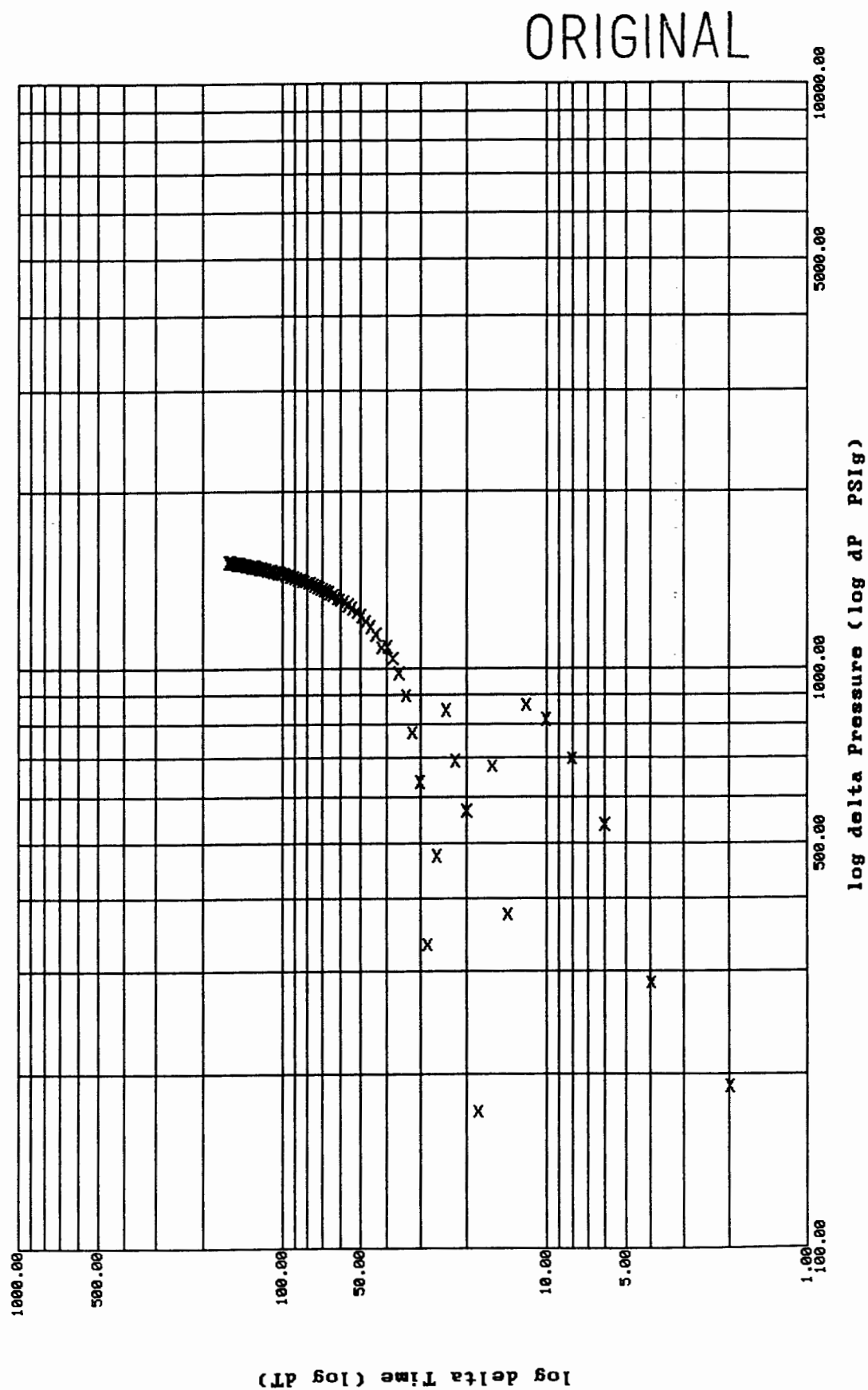
McKinley Plot: shut-in #1

7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.

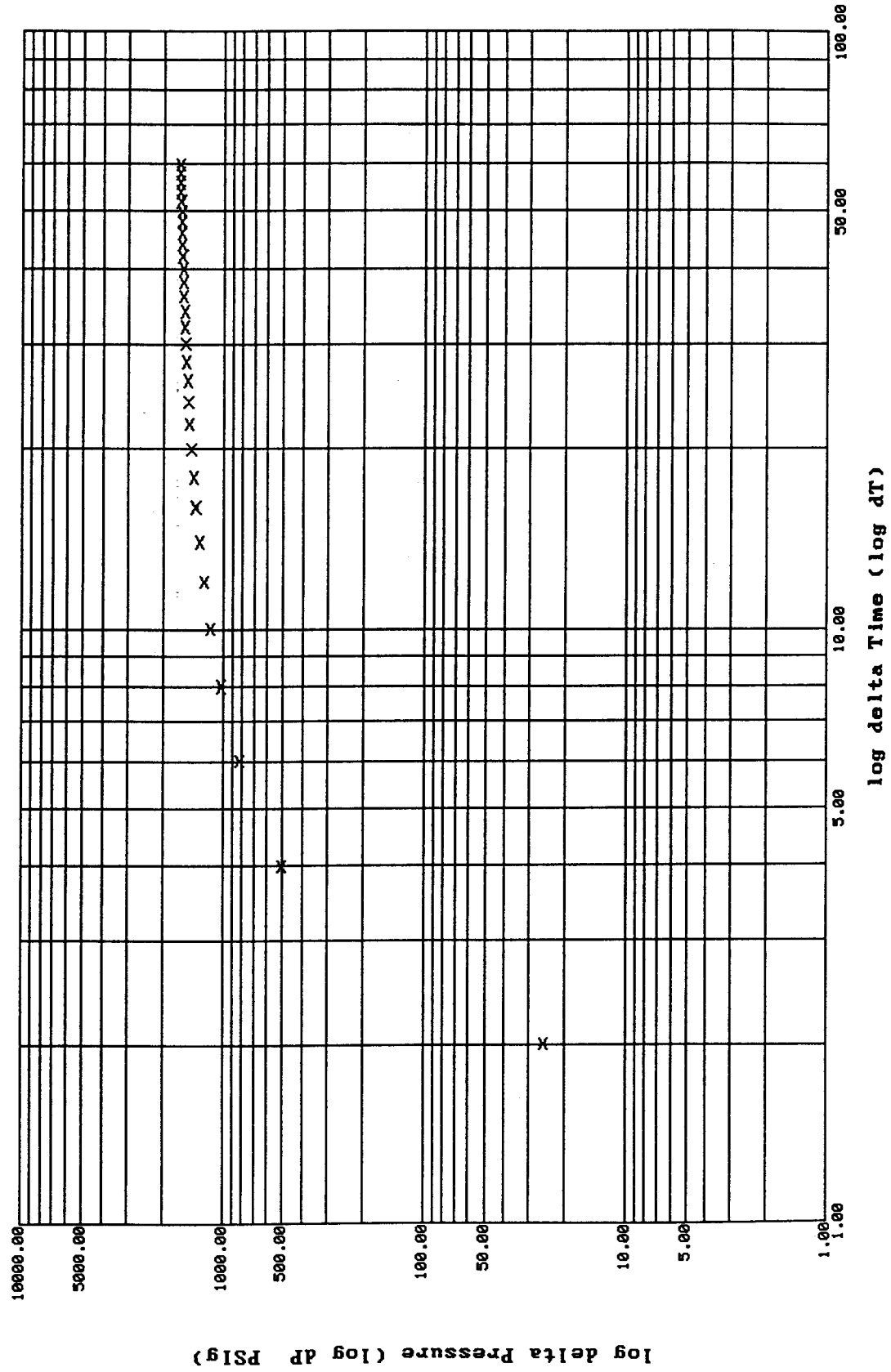


McKinley Plot: shut-in #2

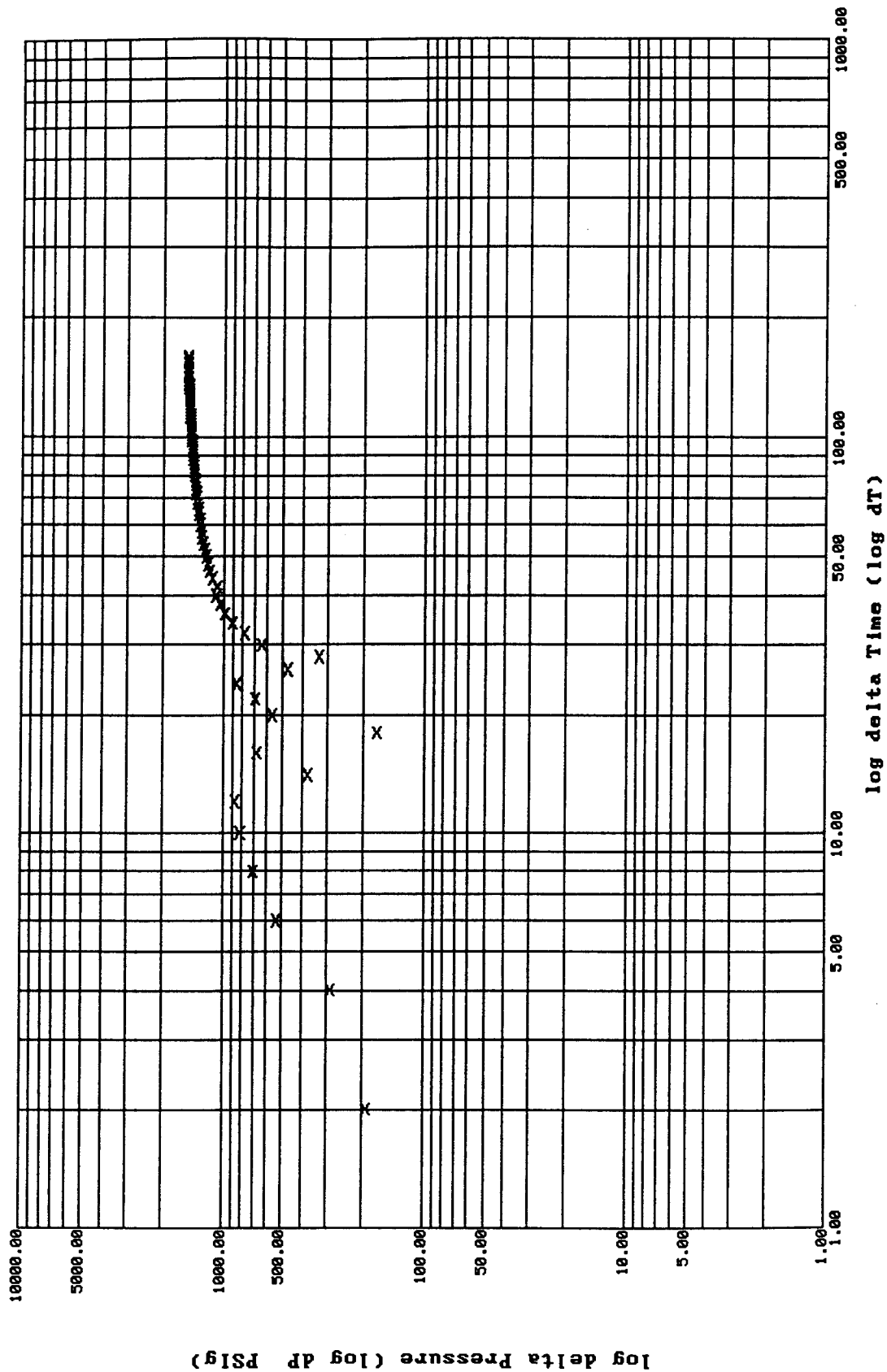
7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.



Ramey Plot: shut-in #1 7963 DST # 5 Tessa Katrine # 1-20 Amoco Prod. Co.



Ramey Plot: shut-in #2 7963 DST # 5 Tessa Katrine # 1-28 Amoco Prod. Co.



*** TOOL DIAGRAM *** CONV.

ELL NAME: Tessa Katrine

LOCATION : 20-31S-32W, Seward Cty KS

CKET No. 7963 D.S.T. No. 5 DATE 10-9-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 25

TOTAL TOOL 55

DRILL COLLAR ANCHOR IN INTERVAL

.C. ANCHOR STND.Stands0 Single 0 Total 0

.P. ANCHOR STND.Stands 0 Single 1 Total 31

TOTAL ASSEMBLY 86

.C. ABOVE TOOLS.Stands11 Single 0 Total 669

.P. ABOVE TOOLS.Stands80 Single 1 Total 5076

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5831

TOTAL DEPTH 5816

TOTAL DRILL PIPE ABOVE K.B. 15

REMARKS:

FLUID SAMPLER DATA

SAMPLER RECOVERY -

Mud 3500 ml, Water 500 ml, Pressure 10 PSI,
Total 4000 ml

SAMPLER ANALYSIS -

Resist .91 ohms @ 75 F; Chlor 4000 ml

BIT MUD ANALYSIS -

Chlorides 4400 ppm, Viscosity 67,

Mud Wt 8.9, Filtrate 9.2, LCM 3#

PIPE RECOVERY -

Top - Resistivity .91 ohms @ 75 F;
Chlorides 6200 ppm

Bottom - Resistivity .91 ohms @ 75 F;
Chlorides 6200 ppm

P.O. SUB

C.O. SUB 1'

5734

S.I. TOOL 5'

5735

sampler 3'

5740

HMV 5'

5743

JARS 5'

5748

SAFETY JOINT 2'

5753

PACKER 5'-top

5755

PACKER 4'-bottom

5760

DEPTH 5760

STUBB 1'-perf

5760

ANCHOR 5'-perf

5761

5'-perf

5766

T.C.
DEPTH

5'-perf

5771

4'-perf

5776

drillpipe 31'

5780

BULLNOSE

T.D.

5811

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

N₂ 7963

Well Name & No. Tessa Katrine #1-20 Test No. 5 Date 10-9-95
 Company Amoco Prod. Co. Zone Tested St. Louis
 Address P.O. Box 800 Room 924 Denver Colo. 80201 Elevation 2857 61 - 2865 KB
 Co. Rep./Geo. Austin Garner Cont. Cheyenne #4 Est. Ft. of Pay _____
 Location: Sec. 20 Twp. 31 Rge. 32 Co. Seward State KS
 No. of Copies Normal Distribution Sheet _____ Yes _____ No Turnkey _____ Yes X No _____ Evaluation _____

Interval Tested 5760 - 5816' Drill Pipe Size 4 1/2 FH
 Anchor Length 56' Top Choke — 1" _____ Bottom Choke — 3/4" ✓
 Top Packer Depth 5755' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
 Bottom Packer Depth 5760' Wt. Pipe I.D. — 2.7 Ft. Run _____
 Total Depth 5816' Drill Collar — 2.25 Ft. Run 669'

Mud Wt. 8.9 lb / gal. Viscosity 67 Filtrate 9.2

Tool Open @ 9:52 am Initial Blow Surface Blow 1/8" @ open Built to 3/4"

I.S.I - Bleed off Blow - No return Blow

Final Blow Bubble to open tool - No Blow

F.S.I - No Blow

Recovery — Total Feet 120' Feet of Gas in Pipe _____ Flush Tool? NO

Rec.	Feet Of	%gas	%oil	%water	%mud
<u>120'</u>	<u>watery mud</u>			<u>10%</u>	<u>90%</u>
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

BHT 131° °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW .91 @ 75 °F Chlorides 6,200 ppm Recovery Chlorides 4,400 ppm System

(A) Initial Hydrostatic Mud 2889 PSI AK1 Recorder No. 23 Range 4995

(B) First Initial Flow Pressure 32 PSI @ (depth) 5762' w/Clock No. Elec

(C) First Final Flow Pressure 38 PSI AK1 Recorder No. 11057 Range 4500

(D) Initial Shut-In Pressure 1689 PSI @ (depth) 5821' w/Clock No. 21048

(E) Second Initial Flow Pressure 41 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 110 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 1627 PSI Initial Opening 10 Test X 7.00

(H) Final Hydrostatic Mud 2642 PSI Initial Shut-In 60 Jars X 2.00

Final Flow 120 Safety Joint X 5.00

Final Shut-In 120 Straddle _____

Circ. Sub X N/C

Sampler X 2.00

Extra Packer _____

Other X Electronic Recorder 1.50

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Austin Garner

Our Representative Steve McNamee

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 7963 Date 10-9-95
Company Name Amoco Prod. Co.
Lease Tessa Katrine #1-20 Test No. 5
County SEWARD Sec. 20 Twp. 31 Rng. 32

SAMPLER RECOVERY

Gas _____ ML
Oil _____ ML
Mud 3,500 ML
Water 500 ML
Other _____ ML
Pressure 10[#] PSI
Total 4000 ML

SAMPLER ANALYSIS

Resistivity .91 ohms @ 75 F
Chlorides 6,200 ppm.
Gravity _____ corrected @ 60 F

PIT MUD ANALYSIS

Chlorides 4,400 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 67
Mud Weight 8.9
Filtrate 9.2
Other LCM #3

PIPE RECOVERY

TOP
Resistivity .91 ohms @ 75 F
Chlorides 6,200 ppm.

MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

BOTTOM
Resistivity .91 ohms @ 75 F
Chlorides 6,200 ppm.