

Computer printout

CONFIDENTIAL

WELL NAME: Grant Maurice # 1-30
COMPANY: Amoco Production Co.
LOCATION: Sec. 30 Twp.30S Rge.33W
Haskell County Kansas
DATE: 03/24/97
15-081-21106

ORIGINAL

CONFIDENTIAL

RELEASED

OCT 6 1998

FROM CONFIDENTIAL

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Co
 WELL NAME: Grant Maurice #1-30
 LOCATION : 30-30S-33W
 INTERVAL : 4100.00 To 4125.00 ft

DATE 3-12-97

KB 2967.00 ft TICKET NO: 9113 DST #1
 GR 2955.00 ft FORMATION: Lansing A
 TD 4125.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	1055	1055	2346			PF Fr. 1748 to 1818 hr
SI 60 Range(Psi)	3500.0	3500.0	4995.0	0.0	0.0	IS Fr. 1818 to 1918 hr
SF 30 Clock(hrs)	12 hr	12 hr	Elec			SF Fr. 1918 to 1948 hr
FS 60 Depth(ft)	4122.0	4122.0	4104.0	0.0	0.0	FS Fr. 1948 to 2048 hr

	Field	1	2	3	4	
A. Init Hydro	1789.0	2060.0	1926.0	0.0	0.0	T STARTED 1600 hr
B. First Flow	42.0	33.0	20.0	0.0	0.0	T ON BOTM 1746 hr
B1. Final Flow	51.0	39.0	33.0	0.0	0.0	T OPEN 1748 hr
C. In Shut-in	59.0	61.0	42.0	0.0	0.0	T PULLED 2048 hr
D. Init Flow	42.0	49.0	31.0	0.0	0.0	T OUT 2230 hr
E. Final Flow	51.0	47.0	37.0	0.0	0.0	
F. Fl Shut-in	51.0	48.0	51.0	0.0	0.0	
G. Final Hydro	1772.0	2014.0	1917.0	0.0	0.0	TOOL DATA-----
Inside/Outside	0	0	I			Tool Wt. 1800.00 lbs
						Wt Set On Packer 30000.00 lbs
						Wt Pulled Loose 55000.00 lbs
						Initial Str Wt 50000.00 lbs
						Unseated Str Wt 50000.00 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 87.00 ft
						D.P. Length 4005.00 ft

RECOVERY

Tot Fluid 10.00 ft of 10.00 ft in DC and 0.00 ft in DP
 10.00 ft of 100% Drilling Mud
 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 surface blow

Initial Shut In:

Final Flow:
 Weak surface blow

Final Shut In:

SAMPLES: NO

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/c
Vis.	45.00 S/L
W.L.	9.80 in3
F.C.	0.00 in
Mud Drop Y	25.0 ft

Amt. of fill	2.00 ft
Btm. H. Temp.	111.00 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 Mike Colantonio
 Co. Rep. Ken LeBlanc
 Contr. Cheyenne
 Rig # 3
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Grant Maurice #1-30

LOCATION : 30-30S-33W

TICKET No. 9113 D.S.T. No. 1 DATE 3-12-97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 30

TOTAL TOOL 57

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY

D.C. ABOVE TOOLS.Stands1 Single 1 Total 87

D.P. ABOVE TOOLS.Stands66 Single Total 4005

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4149

TOTAL DEPTH 4125

TOTAL DRILL PIPE ABOVE K.B. 24

REMARKS:
SAMPLER DATA

4000ml 100% Drlg mud

4000ml total

50PSI.

P.O. SUB top tool	4068
C.O. SUB 1ft	4069
S.I. TOOL 5ft	4074
3ft sampler	4077
HMV 5ft	4082
JARS 7ft	4089
SAFETY JOINT 2ft	4091
PACKER Top 5ft	4095
PACKER Bottom 5ft	4100
DEPTH STUBB 1ft	4101
ANCHOR 2ft perf	4103
Alpine Rec. @ 4104	
6ft pick up sub	4109
T.C. DEPTH	
10ft perf	4119
3ft perf	4122
BULLNOSE AK-1 Rec. @ 4122	
T.D. 3ft Bullplug	4122

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9113 DST#1 Grant Maurice #1-30 Amoco Prod Comp.

DATE: 03/12/97 TIME: 17:26:50

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	113.00	1926.1	0.0	101.62		
***** Start Flow 1	0.00	19.6	0.0	101.71		
	1.00	19.8	0.2	101.79		
	2.00	20.2	0.6	101.84		
	3.00	21.1	1.5	101.88		
	4.00	22.4	2.8	101.92		
	5.00	22.4	2.8	101.94		
	6.00	22.7	3.1	101.96		
	7.00	22.8	3.3	101.98		
	8.00	23.0	3.4	102.01		
	9.00	23.2	3.7	102.06		
	10.00	23.6	4.0	102.10		
	11.00	23.9	4.3	102.15		
	12.00	24.3	4.7	102.20		
	13.00	24.8	5.2	102.24		
	14.00	25.3	5.8	102.28		
	15.00	25.8	6.2	102.30		
	16.00	26.1	6.5	102.32		
	17.00	26.5	6.9	102.34		
	18.00	26.8	7.2	102.36		
	19.00	27.1	7.6	102.37		
	20.00	27.5	8.0	102.40		
	21.00	27.9	8.4	102.40		
	22.00	28.3	8.7	102.41		
	23.00	28.7	9.2	102.43		
	24.00	29.1	9.5	102.43		
	25.00	29.4	9.9	102.44		
	26.00	29.7	10.2	102.45		
	27.00	30.1	10.5	102.46		
	28.00	30.4	10.8	102.47		
***** End Flow 1	29.00	33.5	14.0	102.47		
***** Start Shutin 1	0.00	33.5	0.0	102.47	0.0000	0.001
	1.00	38.1	4.6	102.48	30.0000	0.001
	2.00	41.5	8.0	102.49	15.5000	0.002
	3.00	43.9	10.3	102.50	10.6667	0.002
	4.00	45.5	12.0	102.52	8.2500	0.002
	5.00	46.7	13.2	102.54	6.8000	0.002
	6.00	47.4	13.8	102.56	5.8333	0.002
	7.00	47.9	14.3	102.59	5.1429	0.002
	8.00	48.2	14.7	102.61	4.6250	0.002
	9.00	48.6	15.0	102.63	4.2222	0.002
	10.00	48.7	15.2	102.64	3.9000	0.002
	11.00	49.0	15.4	102.65	3.6364	0.002
	12.00	49.1	15.6	102.68	3.4167	0.002
	13.00	49.3	15.7	102.70	3.2308	0.002
	14.00	49.4	15.8	102.73	3.0714	0.002
	15.00	49.5	15.9	102.76	2.9333	0.002
	16.00	49.6	16.0	102.78	2.8125	0.002
	17.00	49.7	16.1	102.81	2.7059	0.002
	18.00	49.9	16.3	102.84	2.6111	0.002
	19.00	50.0	16.4	102.86	2.5263	0.002

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9113 DST#1 Grant Maurice #1-30 Amoco Prod Comp.
 DATE: 03/12/97 TIME: 17:26:50

Time	Pressure PSIg	delta P PSIg	P	Temp. DEG F	(T+dT)/dT	P^2/10^6
20.00	50.2	16.6	102.88	102.88	2.4500	0.003
21.00	50.2	16.7	102.90	102.90	2.3810	0.003
22.00	50.3	16.8	102.92	102.92	2.3182	0.003
23.00	50.4	16.9	102.93	102.93	2.2609	0.003
24.00	50.6	17.0	102.95	102.95	2.2083	0.003
25.00	50.6	17.1	102.96	102.96	2.1600	0.003
26.00	50.8	17.2	102.98	102.98	2.1154	0.003
27.00	50.8	17.2	102.99	102.99	2.0741	0.003
28.00	50.9	17.3	103.01	103.01	2.0357	0.003
29.00	50.9	17.4	103.03	103.03	2.0000	0.003
30.00	50.9	17.3	103.04	103.04	1.9667	0.003
31.00	51.0	17.4	103.06	103.06	1.9355	0.003
32.00	51.1	17.6	103.07	103.07	1.9062	0.003
33.00	51.1	17.6	103.09	103.09	1.8788	0.003
34.00	51.2	17.6	103.11	103.11	1.8529	0.003
35.00	51.2	17.7	103.12	103.12	1.8286	0.003
36.00	51.3	17.7	103.15	103.15	1.8056	0.003
37.00	51.4	17.8	103.16	103.16	1.7838	0.003
38.00	51.4	17.9	103.18	103.18	1.7632	0.003
39.00	51.5	17.9	103.20	103.20	1.7436	0.003
40.00	51.6	18.0	103.21	103.21	1.7250	0.003
41.00	51.7	18.1	103.23	103.23	1.7073	0.003
42.00	51.8	18.2	103.25	103.25	1.6905	0.003
43.00	51.8	18.3	103.27	103.27	1.6744	0.003
44.00	51.9	18.3	103.29	103.29	1.6591	0.003
45.00	52.0	18.5	103.32	103.32	1.6444	0.003
46.00	52.0	18.4	103.33	103.33	1.6304	0.003
47.00	52.1	18.5	103.35	103.35	1.6170	0.003
48.00	52.1	18.6	103.38	103.38	1.6042	0.003
49.00	52.1	18.6	103.40	103.40	1.5918	0.003
50.00	52.1	18.6	103.42	103.42	1.5800	0.003
51.00	52.1	18.5	103.44	103.44	1.5686	0.003
52.00	52.2	18.6	103.46	103.46	1.5577	0.003
53.00	52.1	18.6	103.48	103.48	1.5472	0.003
54.00	52.2	18.7	103.50	103.50	1.5370	0.003
55.00	52.3	18.7	103.52	103.52	1.5273	0.003
56.00	52.3	18.8	103.53	103.53	1.5179	0.003
57.00	52.4	18.8	103.56	103.56	1.5088	0.003
58.00	52.4	18.9	103.58	103.58	1.5000	0.003
59.00	52.4	18.9	103.59	103.59	1.4915	0.003
0.00	31.4	0.0	103.61	103.61		
1.00	31.0	-0.4	103.63	103.63		
2.00	31.5	0.0	103.65	103.65		
3.00	31.7	0.3	103.67	103.67		
4.00	31.6	0.2	103.69	103.69		
5.00	31.9	0.5	103.71	103.71		
6.00	32.0	0.5	103.74	103.74		
7.00	32.1	0.7	103.76	103.76		
8.00	32.0	0.6	103.78	103.78		
9.00	32.5	1.1	103.79	103.79		
10.00	32.4	0.9	103.83	103.83		

***** End Shut-in 1

***** Start Flow 2

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9113 DST#1 Grant Maurice #1-30 Amoco Prod Comp.

DATE: 03/12/97 TIME: 17:26:50

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	11.00	32.2	0.8	103.85		
	12.00	33.0	1.6	103.87		
	13.00	32.7	1.3	103.89		
	14.00	33.3	1.9	103.90		
	15.00	33.2	1.7	103.92		
	16.00	33.4	2.0	103.95		
	17.00	33.8	2.4	103.97		
	18.00	33.6	2.2	104.01		
	19.00	33.4	2.0	104.02		
	20.00	34.1	2.7	104.05		
	21.00	34.1	2.7	104.08		
	22.00	34.2	2.8	104.10		
	23.00	34.2	2.8	104.12		
	24.00	34.5	3.1	104.14		
	25.00	34.6	3.2	104.17		
	26.00	34.9	3.4	104.19		
	27.00	34.4	3.0	104.21		
	28.00	34.6	3.2	104.24		
	29.00	34.8	3.4	104.26		
	30.00	35.3	3.8	104.28		
***** End Flow 2	31.00	37.3	5.8	104.31		
***** Start Shutin 2	0.00	37.3	0.0	104.31	0.0000	0.001
	1.00	40.5	3.2	104.34	61.0000	0.002
	2.00	42.8	5.5	104.38	31.0000	0.002
	3.00	44.6	7.3	104.41	21.0000	0.002
	4.00	45.7	8.5	104.44	16.0000	0.002
	5.00	46.6	9.4	104.47	13.0000	0.002
	6.00	47.3	10.0	104.50	11.0000	0.002
	7.00	47.8	10.5	104.53	9.5714	0.002
	8.00	48.2	10.9	104.55	8.5000	0.002
	9.00	48.4	11.1	104.58	7.6667	0.002
	10.00	48.6	11.4	104.61	7.0000	0.002
	11.00	48.9	11.6	104.65	6.4545	0.002
	12.00	49.0	11.7	104.68	6.0000	0.002
	13.00	49.2	11.9	104.72	5.6154	0.002
	14.00	49.2	11.9	104.74	5.2857	0.002
	15.00	49.2	12.0	104.77	5.0000	0.002
	16.00	49.4	12.1	104.79	4.7500	0.002
	17.00	49.5	12.2	104.81	4.5294	0.002
	18.00	49.5	12.3	104.83	4.3333	0.002
	19.00	49.6	12.3	104.84	4.1579	0.002
	20.00	49.7	12.4	104.86	4.0000	0.002
	21.00	49.7	12.4	104.88	3.8571	0.002
	22.00	49.8	12.5	104.89	3.7273	0.002
	23.00	49.8	12.5	104.91	3.6087	0.002
	24.00	49.9	12.6	104.93	3.5000	0.002
	25.00	49.9	12.7	104.94	3.4000	0.002
	26.00	50.0	12.7	104.95	3.3077	0.002
	27.00	50.1	12.8	104.97	3.2222	0.003
	28.00	50.0	12.7	104.98	3.1429	0.003
	29.00	50.1	12.8	104.99	3.0690	0.003

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9113 DST#1 Grant Maurice #1-30 Amoco Prod Comp.
 DATE: 03/12/97 TIME: 17:26:50

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	30.00	50.1	12.9	105.01	3.0000	0.003
	31.00	50.2	12.9	105.03	2.9355	0.003
	32.00	50.2	12.9	105.04	2.8750	0.003
	33.00	50.2	12.9	105.06	2.8182	0.003
	34.00	50.3	13.0	105.07	2.7647	0.003
	35.00	50.3	13.0	105.09	2.7143	0.003
	36.00	50.3	13.0	105.10	2.6667	0.003
	37.00	50.4	13.2	105.12	2.6216	0.003
	38.00	50.4	13.1	105.13	2.5789	0.003
	39.00	50.3	13.1	105.15	2.5385	0.003
	40.00	50.4	13.1	105.17	2.5000	0.003
	41.00	50.4	13.1	105.19	2.4634	0.003
	42.00	50.5	13.2	105.19	2.4286	0.003
	43.00	50.4	13.2	105.21	2.3953	0.003
	44.00	50.5	13.2	105.23	2.3636	0.003
	45.00	50.4	13.2	105.25	2.3333	0.003
	46.00	50.4	13.1	105.25	2.3043	0.003
	47.00	50.5	13.2	105.26	2.2766	0.003
	48.00	50.5	13.2	105.29	2.2500	0.003
	49.00	50.5	13.3	105.30	2.2245	0.003
	50.00	50.6	13.3	105.31	2.2000	0.003
	51.00	50.6	13.3	105.33	2.1765	0.003
	52.00	50.6	13.3	105.34	2.1538	0.003
	53.00	50.5	13.3	105.35	2.1321	0.003
	54.00	50.6	13.3	105.37	2.1111	0.003
	55.00	50.6	13.3	105.38	2.0909	0.003
	56.00	50.7	13.4	105.40	2.0714	0.003
	57.00	50.7	13.4	105.41	2.0526	0.003
	58.00	50.8	13.5	105.43	2.0345	0.003
	59.00	50.8	13.5	105.45	2.0169	0.003
	60.00	50.9	13.6	105.46	2.0000	0.003
	61.00	50.9	13.6	105.47	1.9836	0.003
	62.00	50.9	13.7	105.49	1.9677	0.003
***** End Shut-in 2	63.00	50.6	13.3	105.51	1.9524	0.003
***** Final Hydro.	298.00	1917.3	0.0	105.58		

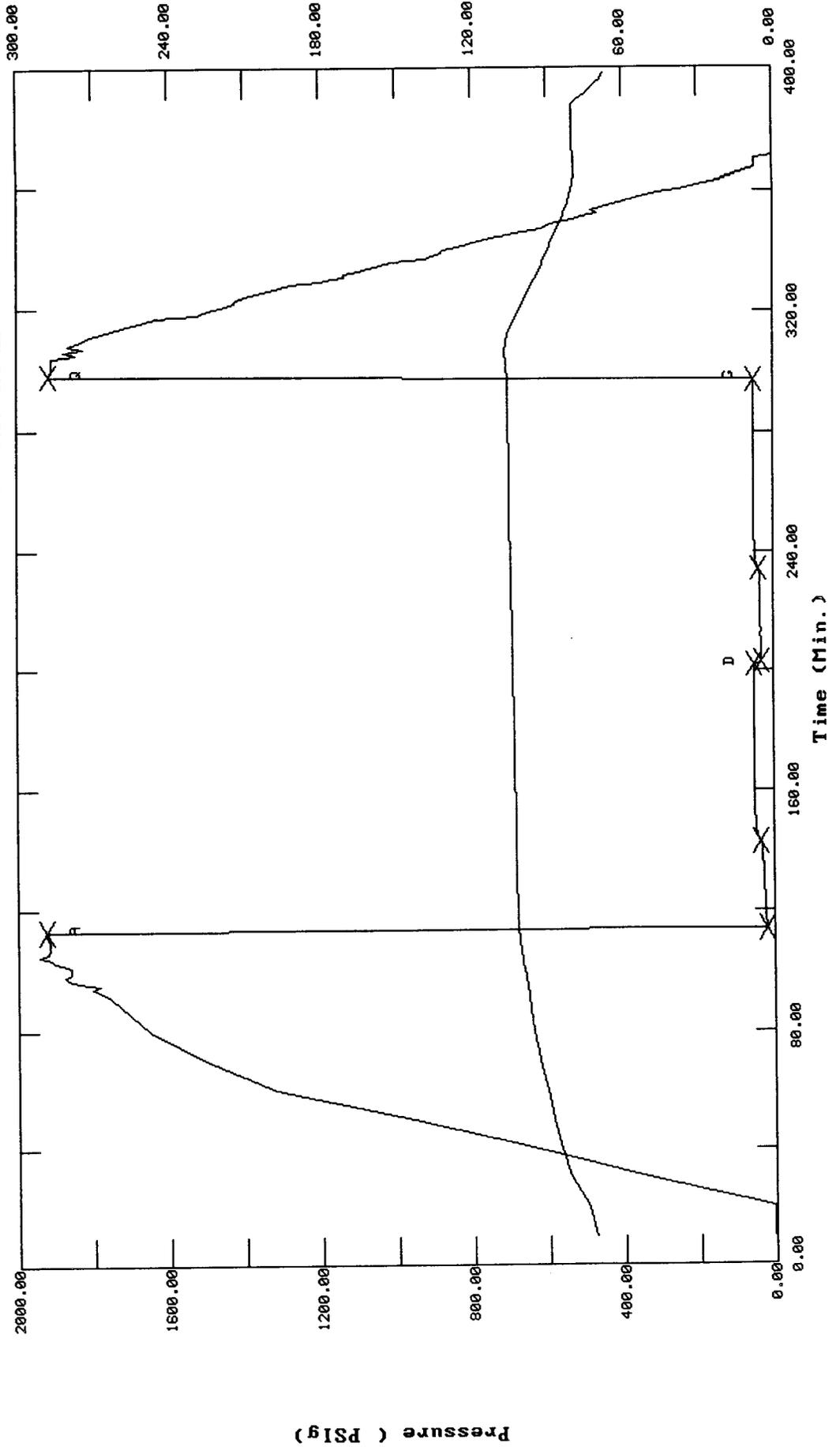
TEST HISTORY

9113 DST#1 Grant Maurice #1-30 Amoco Prod Comp.

Flag Points

t(Min.) PK PSig

A:	0.00	1926.12
B:	0.00	19.57
C:	29.00	33.55
D:	59.00	52.42
E:	0.00	31.43
F:	31.00	37.27
G:	63.00	50.55
Q:	0.00	1917.29



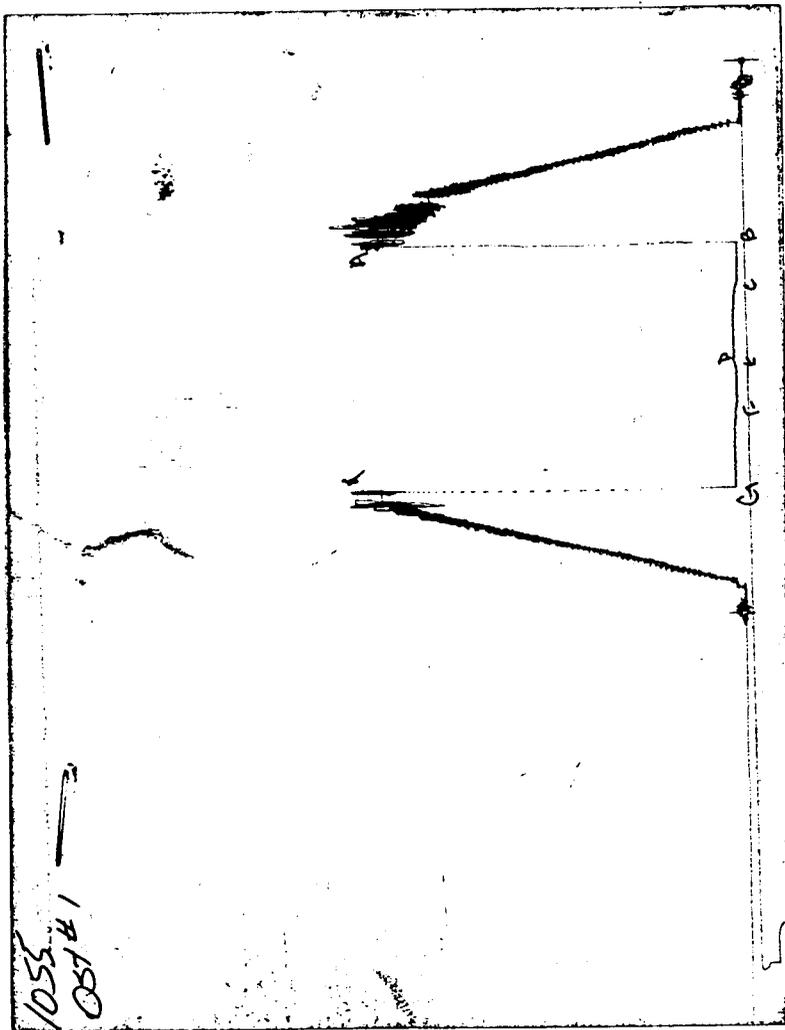
CONFIDENTIAL

Temperature (DEG F)

Pressure (PSig)

Time (Min.)

CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

N^o 9113

Well Name & No. Grant Maurice # 1-30 Test No. 1 Date 3-12-97
 Company Amoco Prod. Comp. Zone Tested Leasing "A"
 Address Denver Colo. 80201 Elevation 2767 KB 2955 GL
 Co. Rep / Geo. Ken LeBlanc Cont. Cheyenne Rig # 3 Est. Ft. of Pay 11 Por. %
 Location: Sec. 30 Twp. 30S Rge. 33W Co. Haskell State KS.
 No. of Copies Distribution Sheet (Y, N) Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 4100 - 4125 Initial Str Wt./Lbs. 5000 Unseated Str Wt./Lbs. 5000
 Anchor Length 2.5' Wt. Set Lbs. 30000 Wt. Pulled Loose/Lbs. 55000
 Top Packer Depth 4095 Hole Size — 7 7/8" X Rubber Size — 6 3/4" X
 Bottom Packer Depth 4100 Wt. Pipe I.D. — 2.7 Ft. Run
 Total Depth 4125 Drill Collar — 2.25 Ft. Run 87'
 Mud Wt. 9.0 LCM 4 Vis. 4.5 WL 9.8 Drill Pipe Size 4 1/2 X-0 Ft. Run 4005
 Blow Description Weak Surface Blow.

2nd. opening Weak Surface Blow

Recovery — Total Feet	Ft. in DC	Ft. in WP	Ft. in DP
Rec. <u>10</u> Feet Of <u>Drly mud</u>	%gas	%oil	%water <u>100</u> %mud
Rec. <u> </u> Feet Of <u> </u>	%gas	%oil	%water %mud
Rec. <u> </u> Feet Of <u> </u>	%gas	%oil	%water %mud
Rec. <u> </u> Feet Of <u> </u>	%gas	%oil	%water %mud
Rec. <u> </u> Feet Of <u> </u>	%gas	%oil	%water %mud

BHT 111 °F Gravity °API D@ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides 900 ppm System

(A) Initial Hydrostatic Mud <u>1943</u> <u>1789</u> PSI	Recorder No. <u>2346</u>	T-Started <u>4:00pm</u>
(B) First Initial Flow Pressure <u>19</u> <u>42</u> PSI	@ (depth) <u>4104</u>	T-Open <u>5:48pm</u>
(C) First Final Flow Pressure <u>43</u> <u>51</u> PSI	Recorder No. <u>1055</u>	T-Pulled <u>8:48pm</u>
(D) Initial Shut-in Pressure <u>52</u> <u>59</u> PSI	@ (depth) <u>4122</u>	T-Out <u>10:30pm</u>
(E) Second Initial Flow Pressure <u>31</u> <u>42</u> PSI	Recorder No. <u> </u>	
(F) Second Final Flow Pressure <u>34</u> <u>51</u> PSI	@ (depth) <u> </u>	
(G) Final Shut-in Pressure <u>50</u> <u>51</u> PSI	Initial Opening <u>30min</u>	Test <input checked="" type="checkbox"/> <u>Conventional</u>
(H) Final Hydrostatic Mud <u>1910</u> <u>1772</u> PSI	Initial Shut-in <u>60min</u>	Jars <input checked="" type="checkbox"/>

Final Flow 30min Safety Joint

Final Shut-in 60min Straddle

Circ. Sub

Sampler

Extra Packer

Elect. Rec.

Other

TOTAL PRICE \$

Approved By

Our Representative M. L. Hartman

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.

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 9113 Date 3-12-97
Company Name Amoco Prod. Comp.
Lease Grant Maurice #1-30 Test No. DST #1
County Haskell Sec. 30 Twp. 30S Rng. 33W

SAMPLER RECOVERY

Gas _____ ML
Oil _____ ML
Mud 4,000 ML
Water _____ ML
Other _____ ML
Pressure 50 PSI
Total 4,000 ML

PIT MUD ANALYSIS

Chlorides 900 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 45
Mud Weight 9.0⁺
Filtrate 9.8
Other hcm 4#

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.

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Co
 WELL NAME: Grant Maurice #1-30
 LOCATION : 30-30S-33W Haskell KS
 INTERVAL : 4130.00 To 4150.00 ft

DATE 3/13/97
 KB 2967.00 ft TICKET NO: 9114 DST #2
 GR 2955.00 ft FORMATION: Lansing A
 TD 4150.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	1055	1055	2346			PF Fr. 0831 to 0901 hr
SI 60 Range (Psi)	4050.0	4050.0	3500.0	0.0	0.0	IS Fr. 0901 to 1001 hr
SF 45 Clock (hrs)	12 HR	12 HR	12 Hr			SF Fr. 1001 to 1046 hr
FS 90 Depth (ft)	4147.0	4147.0	4134.0	0.0	0.0	FS Fr. 1046 to 1216 hr

	Field	1	2	3	4	
A. Init Hydro	2065.0	2005.0	0.0	0.0	0.0	T STARTED 0645 hr
B. First Flow	76.0	66.0	0.0	0.0	0.0	T ON BOTM 0825 hr
B1. Final Flow	140.0	127.0	0.0	0.0	0.0	T OPEN 0831 hr
C. In Shut-in	286.0	283.0	0.0	0.0	0.0	T PULLED 1216 hr
D. Init Flow	171.0	172.0	0.0	0.0	0.0	T OUT 1500 hr
E. Final Flow	245.0	216.0	0.0	0.0	0.0	
F. Fl Shut-in	297.0	291.0	0.0	0.0	0.0	
G. Final Hydro	2034.0	1943.0	0.0	0.0	0.0	

TOOL DATA-----
 Tool Wt. 0.00 lbs
 Wt Set On Packer 30000.00 lbs
 Wt Pulled Loose 60000.00 lbs
 Initial Str Wt 50000.00 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 87.00 ft
 D.P. Length 4037.00 ft

RECOVERY

Tot Fluid 380.00 ft of 87.00 ft in DC and 293.00 ft in DP
 600.00 ft of Gas In Pipe
 0.00 ft of
 20.00 ft of Muddy Water
 0.00 ft of 60%water 40%mud
 60.00 ft of Muddy Water with Oil Film
 0.00 ft of 70%water 30%mud
 300.00 ft of Water
 0.00 ft of 100% water
 SALINITY 62000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type Chemical
 Weight 9.00 lb/c
 Vis. 45.00 S/L
 W.L. 9.70 in3
 F.C. 0.00 in
 Mud Drop

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of bucket in 2 min

Initial Shut In:

Final Flow:

Fair blow, built to 7"

Final Shut In:

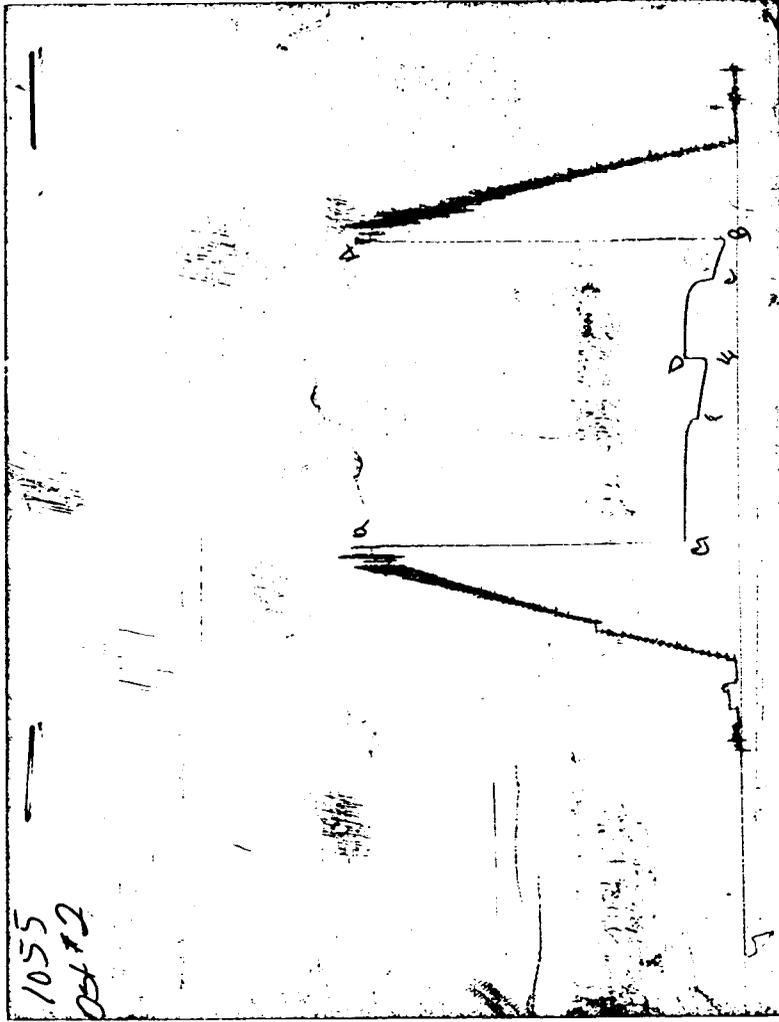
Amt. of fill 0.00 ft
 Btm. H. Temp. 111.00 F
 Hole Condition
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out
 Tool Chased
 Tester Mike Colantonio
 Co. Rep. Ken LeBlanc
 Contr. Cheyenne
 Rig # 3
 Unit #
 Pump T.

SAMPLES:

SENT TO:

Test Successful: Y

CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL

Test Ticket

No 9114

Well Name & No. Grant Maurice #1-30 Test No. #2 Date 3-13-97
 Company Ameca Prod. Comp Zone Tested Kansas "A"
 Address Denver Colo 80201 Elevation 2967 KB 2933 GL
 Co. Rep / Geo. Ken LeBlanc Cont. Cheyenne Ry #3 Est. Ft. of Pay 10 Por. %
 Location: Sec. 30 Twp. 30S Rge. 33W Co. Haskell State Ks.
 No. of Copies Distribution Sheet (Y, N) Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 4130-4150
 Anchor Length 26'
 Top Packer Depth 4125
 Bottom Packer Depth 4130
 Total Depth 4150
 Mud Wt. 9.0+ LCM 4 Vis. 45 WL 9.7
 Blow Description Strong Blow B.O.B. in 2 min.

Initial Str Wt./Lbs. 50,000 Unseated Str Wt./Lbs. 54,000
 Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 69,000
 Hole Size — 7 7/8" X Rubber Size — 6 3/4" X
 Wt. Pipe I.D. — 2.7 Ft. Run
 Drill Collar — 2.25 Ft. Run 87'
 Drill Pipe Size 4 1/2 F-0 Ft. Run 4037'

2nd string Fair Blow Built to 7 in Blow.

Recovery — Total Feet	Ft. in DC	Ft. in WP	Ft. in DP	%gas	%oil	%water	%mud
600	87		293				
20							
60							
300							

BHT 111 °F Gravity °API D@ °F Corrected Gravity °API
 RW -15Z @ 60 °F Chlorides 62,000 ppm Recovery Chlorides 900 ppm System
 (A) Initial Hydrostatic Mud 2065 PSI Recorder No. 1055 T-Started 6:45 AM
 (B) First Initial Flow Pressure 76 PSI @ (depth) 4147 T-Open 8:31 AM
 (C) First Final Flow Pressure 140 PSI Recorder No. 2346 T-Pulled 12:16 PM
 (D) Initial Shut-in Pressure 286 PSI @ (depth) 4134 T-Out 3:00 PM
 (E) Second Initial Flow Pressure 171 PSI Recorder No.
 (F) Second Final Flow Pressure 245 PSI @ (depth)
 (G) Final Shut-in Pressure 297 PSI Initial Opening 30 min Test Conventional
 (H) Final Hydrostatic Mud 2034 PSI Initial Shut-in 60 min Jars
 Final Flow 45 min Safety Joint
 Final Shut-in 90 min Straddle
 Circ. Sub N/C
 Sampler
 Extra Packer
 Elect. Rec.
 Other

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Approved By

Mike Carter

Other

TOTAL PRICE \$ Est 1350

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 9114 Date 3-13-97
Company Name Amoco Prod. Comp.
Lease Grant Maurice #1-30 Test No. DS#2
County Haskell Sec. 30 Twp. 30S Rng. 33W

SAMPLER RECOVERY

Gas 6/10 cubic ft ML
Oil _____ ML
Mud _____ ML
Water 3600 ML
Other _____ ML
Pressure _____ PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 900 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 45
Mud Weight 9.0
Filtrate 9.7
Other LCM 4#

SAMPLER ANALYSIS

Resistivity .152 ohms @ 60.0 F
Chlorides 62,000 ppm.
Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity .225 ohms @ 59.6 F
Chlorides 40,000 ppm.
MIDDLE
Resistivity .185 ohms @ 60.5 F
Chlorides 46,000 ppm.
BOTTOM
Resistivity .158 ohms @ 60.2 F
Chlorides 58,000 ppm.

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Co
 WELL NAME: Grant Maurice #1-30
 LOCATION : 30-30S-33W
 INTERVAL : 4150.00 To 4163.00 ft

DATE 3-13-97

KB 2967.00 ft TICKET NO: 9115 DST #3
 GR 2955.00 ft FORMATION: Lansing B
 TD 4163.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	1055	1055	2346			PF Fr. 2345 to 0015 hr
SI 60 Range(Psi)	4150.0	4150.0	4995.0	0.0	0.0	IS Fr. 0015 to 0115 hr
SF 45 Clock(hrs)	12 Hr	12 Hr	Elec			SF Fr. 0115 to 0200 hr
FS 90 Depth(ft)	4160.0	4160.0	4153.0	0.0	0.0	FS Fr. 0200 to 0330 hr

	Field	1	2	3	4	
A. Init Hydro	2105.0	2042.0	2016.0	0.0	0.0	T STARTED 2200 hr
B. First Flow	54.0	63.0	49.0	0.0	0.0	T ON BOTM 2343 hr
Bl. Final Flow	108.0	111.0	123.0	0.0	0.0	T OPEN 2345 hr
C. In Shut-in	865.0	867.0	889.0	0.0	0.0	T PULLED 0330 hr
D. Init Flow	140.0	153.0	135.0	0.0	0.0	T OUT 0545 hr
E. Final Flow	203.0	207.0	214.0	0.0	0.0	
F. Fl Shut-in	875.0	869.0	884.0	0.0	0.0	
G. Final Hydro	2095.0	2038.0	1943.0	0.0	0.0	TOOL DATA-----
Inside/Outside	0	0	I			Tool Wt. 1800.00 lbs
						Wt Set On Packer 30000.00 lbs
						Wt Pulled Loose 60000.00 lbs
						Initial Str Wt 52000.00 lbs
						Unseated Str Wt 52000.00 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 87.00 ft
						D.P. Length 4037.00 ft

RECOVERY

Tot Fluid 460.00 ft of 87.00 ft in DC and 373.00 ft in DP
 100.00 ft of Frothy Oil Watery Mud
 0.00 ft of 15%Frothy oil 15%water 70%mud
 120.00 ft of Slightly Muddy Water
 0.00 ft of 10%mud 90%water with Oil flim
 240.00 ft of 100% Water
 0.00 ft of
 0.00 ft of
 0.00 ft of
 SALINITY 65000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of bucket in 30sec

Initial Shut In:
 Bled off 2", had surface blow back.

Fianl Flow:
 Strong blow, bottom of bucket in 8 min

Final Shut In:
 Bled off 2", had surface blow back

SAMPLES: NO
 SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/c
Vis.	42.00 S/L
W.L.	9.60 in3
F.C.	0.00 in
Mud Drop Y	15.0 ft
Amt. of fill	0.00 ft
Btm. H. Temp.	112.00 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	Mike Colantonio
Co. Rep.	Ken LeBlanc
Contr.	Cheyenne
Rig #	3
Unit #	
Pump T.	

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Grant Maurice #1-30

LOCATION : 30-30S-33W

TICKET No. 9115 D.S.T. No. 3 DATE 3-13-97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 32

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 13

TOTAL TOOL 45

DRILL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 45

C. ABOVE TOOLS.Stands1 Single 1 Total 87

P. ABOVE TOOLS.Stands45 Single 1 Total 4037

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4169

TOTAL DEPTH 4163

TOTAL DRILL PIPE ABOVE K.B. 6

REMARKS:

SAMPLER DATA

1.8 Cubic Ft. Gas

Film Oil

2900 Ml Water

575PSI.

4000Ml Total

P.O. SUB Top Tool	4118
C.O. SUB 1ft	4119
S.I. TOOL 5ft	4124
3ft Sampler	4127
HMV 5ft	4132
JARS 7ft	4139
SAFETY JOINT 2ft	4141
PACKER Top 5ft	4145
PACKER Bottom 5ft	4150
DEPTH STUBB 1ft	4151
ANCHOR 1ft perf	4152
T.C. DEPTH	
Alpine Rec. @	4153
6ft P.U.Sub	4158
2ft perf	4160
BULLNOSE AK-1 Rec. @	4160
T.D. 3ft Bullplug	4163

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9115 DST#3 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/13/97 TIME: 23:31:10

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	105.00	2016.5	0.0	98.72		
***** Start Flow 1	0.00	49.3	0.0	99.32		
	1.00	54.1	4.8	99.57		
	2.00	59.5	10.2	99.80		
	3.00	63.1	13.9	100.01		
	4.00	67.4	18.1	100.25		
	5.00	71.6	22.3	100.49		
	6.00	75.0	25.8	100.74		
	7.00	77.9	28.6	100.97		
	8.00	80.4	31.1	101.18		
	9.00	82.8	33.5	101.35		
	10.00	85.8	36.5	101.49		
	11.00	88.0	38.7	101.61		
	12.00	91.1	41.8	101.71		
	13.00	92.8	43.5	101.81		
	14.00	95.2	45.9	101.89		
	15.00	97.2	47.9	101.97		
	16.00	99.8	50.5	102.05		
	17.00	102.5	53.2	102.11		
	18.00	104.0	54.7	102.16		
	19.00	106.3	57.0	102.23		
	20.00	108.0	58.7	102.29		
	21.00	109.8	60.5	102.35		
	22.00	112.1	62.8	102.40		
	23.00	114.1	64.8	102.45		
	24.00	116.1	66.8	102.50		
	25.00	117.4	68.1	102.57		
	26.00	119.6	70.3	102.62		
	27.00	121.5	72.2	102.66		
***** End Flow 1	28.00	123.4	74.1	102.72		
***** Start Shutin 1	0.00	123.4	0.0	102.72	0.0000	0.015
	1.00	167.0	43.7	102.76	29.0000	0.028
	2.00	290.0	166.6	102.86	15.0000	0.084
	3.00	417.9	294.5	103.28	10.3333	0.175
	4.00	514.3	391.0	104.23	8.0000	0.265
	5.00	586.7	463.4	105.44	6.6000	0.344
	6.00	639.8	516.5	106.66	5.6667	0.409
	7.00	678.3	555.0	107.77	5.0000	0.460
	8.00	708.1	584.7	108.70	4.5000	0.501
	9.00	731.6	608.2	109.49	4.1111	0.535
	10.00	750.7	627.3	110.14	3.8000	0.563
	11.00	766.2	642.9	110.69	3.5455	0.587
	12.00	779.3	656.0	111.15	3.3333	0.607
	13.00	790.4	667.0	111.53	3.1538	0.625
	14.00	799.8	676.4	111.85	3.0000	0.640
	15.00	807.8	684.5	112.12	2.8667	0.653
	16.00	815.0	691.7	112.35	2.7500	0.664
	17.00	821.3	697.9	112.54	2.6471	0.675
	18.00	826.9	703.5	112.71	2.5556	0.684
	19.00	831.8	708.4	112.86	2.4737	0.692
	20.00	836.3	712.9	112.97	2.4000	0.699

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9115 DST#3 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/13/97

TIME: 23:31:10

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
21.00	838.3	714.9	113.10	2.3333	0.703
22.00	841.9	718.6	113.21	2.2727	0.709
23.00	845.2	721.9	113.32	2.2174	0.714
24.00	848.3	724.9	113.40	2.1667	0.720
25.00	851.0	727.6	113.49	2.1200	0.724
26.00	853.6	730.2	113.55	2.0769	0.729
27.00	855.9	732.5	113.63	2.0370	0.733
28.00	858.1	734.7	113.69	2.0000	0.736
29.00	860.1	736.8	113.73	1.9655	0.740
30.00	862.0	738.7	113.78	1.9333	0.743
31.00	863.7	740.4	113.82	1.9032	0.746
32.00	865.5	742.1	113.84	1.8750	0.749
33.00	867.0	743.6	113.87	1.8485	0.752
34.00	868.5	745.1	113.88	1.8235	0.754
35.00	869.9	746.5	113.89	1.8000	0.757
36.00	871.2	747.8	113.89	1.7778	0.759
37.00	872.3	749.0	113.88	1.7568	0.761
38.00	873.5	750.1	113.88	1.7368	0.763
39.00	874.6	751.2	113.88	1.7179	0.765
40.00	875.7	752.3	113.88	1.7000	0.767
41.00	876.7	753.3	113.87	1.6829	0.769
42.00	877.6	754.2	113.87	1.6667	0.770
43.00	878.5	755.2	113.85	1.6512	0.772
44.00	879.4	756.0	113.85	1.6364	0.773
45.00	880.2	756.8	113.87	1.6222	0.775
46.00	881.0	757.6	113.85	1.6087	0.776
47.00	881.7	758.4	113.86	1.5957	0.777
48.00	882.4	759.0	113.86	1.5833	0.779
49.00	883.1	759.8	113.87	1.5714	0.780
50.00	883.8	760.4	113.84	1.5600	0.781
51.00	884.5	761.1	113.83	1.5490	0.782
52.00	885.1	761.7	113.78	1.5385	0.783
53.00	885.7	762.3	113.74	1.5283	0.784
54.00	886.2	762.9	113.69	1.5185	0.785
55.00	886.8	763.4	113.64	1.5091	0.786
56.00	887.3	763.9	113.61	1.5000	0.787
57.00	887.8	764.4	113.58	1.4912	0.788
58.00	888.3	764.9	113.55	1.4828	0.789
59.00	888.7	765.3	113.52	1.4746	0.790
***** End Shut-in 1					
***** Start Flow 2	0.00	134.6	0.0	113.48	
	1.00	135.0	0.4	113.26	
	2.00	140.9	6.2	112.84	
	3.00	143.2	8.6	112.37	
	4.00	145.2	10.6	111.95	
	5.00	147.7	13.1	111.58	
	6.00	149.2	14.6	111.28	
	7.00	151.1	16.5	111.05	
	8.00	153.1	18.5	110.85	
	9.00	155.3	20.6	110.65	
	10.00	156.9	22.3	110.49	
	11.00	159.3	24.7	110.35	

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9115 DST#3 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/13/97 TIME: 23:31:10

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	12.00	160.3	25.7	110.25		
	13.00	162.2	27.6	110.17		
	14.00	164.3	29.7	110.10		
	15.00	166.0	31.4	110.06		
	16.00	167.7	33.0	110.02		
	17.00	168.7	34.0	110.01		
	18.00	170.5	35.9	110.01		
	19.00	172.7	38.1	110.02		
	20.00	173.3	38.7	110.03		
	21.00	175.1	40.5	110.05		
	22.00	176.8	42.2	110.09		
	23.00	178.3	43.7	110.13		
	24.00	180.4	45.7	110.18		
	25.00	181.0	46.4	110.23		
	26.00	182.7	48.1	110.29		
	27.00	184.6	50.0	110.35		
	28.00	185.6	51.0	110.41		
	29.00	187.6	53.0	110.48		
	30.00	188.4	53.8	110.56		
	31.00	189.8	55.2	110.63		
	32.00	191.3	56.7	110.71		
	33.00	193.2	58.6	110.80		
	34.00	194.3	59.7	110.87		
	35.00	195.6	61.0	110.98		
	36.00	196.9	62.3	111.07		
	37.00	198.1	63.4	111.15		
	38.00	199.1	64.5	111.22		
	39.00	200.5	65.8	111.28		
	40.00	202.1	67.5	111.34		
	41.00	204.2	69.6	111.40		
	42.00	205.1	70.5	111.45		
	43.00	206.0	71.4	111.51		
	44.00	207.8	73.1	111.55		
	45.00	209.2	74.6	111.60		
	46.00	210.8	76.2	111.66		
	47.00	212.4	77.8	111.73		
	48.00	213.3	78.7	111.81		
***** End Flow 2	49.00	213.8	79.2	111.89		
***** Start Shutin 2	0.00	213.8	0.0	111.89	0.0000	0.046
	1.00	304.2	90.4	111.98	78.0000	0.093
	2.00	415.0	201.2	112.19	39.5000	0.172
	3.00	501.7	287.9	112.57	26.6667	0.252
	4.00	562.2	348.5	113.02	20.2500	0.316
	5.00	608.8	395.0	113.45	16.4000	0.371
	6.00	644.6	430.8	113.83	13.8333	0.415
	7.00	673.1	459.3	114.14	12.0000	0.453
	8.00	696.3	482.5	114.41	10.6250	0.485
	9.00	715.5	501.7	114.66	9.5556	0.512
	10.00	731.7	517.9	114.81	8.7000	0.535
	11.00	745.5	531.7	114.97	8.0000	0.556
	12.00	757.2	543.4	115.09	7.4167	0.573

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9115 DST#3 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/13/97

TIME: 23:31:10

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
13.00	767.3	553.5	115.20	6.9231	0.589
14.00	776.3	562.5	115.28	6.5000	0.603
15.00	784.2	570.4	115.35	6.1333	0.615
16.00	791.0	577.2	115.41	5.8125	0.626
17.00	797.1	583.3	115.47	5.5294	0.635
18.00	802.7	588.9	115.51	5.2778	0.644
19.00	807.7	593.9	115.54	5.0526	0.652
20.00	812.2	598.4	115.57	4.8500	0.660
21.00	816.3	602.5	115.60	4.6667	0.666
22.00	820.1	606.3	115.62	4.5000	0.673
23.00	823.6	609.8	115.65	4.3478	0.678
24.00	826.7	612.9	115.66	4.2083	0.683
25.00	829.7	615.9	115.68	4.0800	0.688
26.00	832.4	618.6	115.68	3.9615	0.693
27.00	834.9	621.1	115.71	3.8519	0.697
28.00	837.3	623.5	115.72	3.7500	0.701
29.00	839.5	625.8	115.71	3.6552	0.705
30.00	841.7	627.9	115.73	3.5667	0.708
31.00	843.6	629.8	115.74	3.4839	0.712
32.00	845.5	631.7	115.75	3.4062	0.715
33.00	847.1	633.3	115.76	3.3333	0.718
34.00	848.8	635.0	115.77	3.2647	0.720
35.00	850.4	636.6	115.77	3.2000	0.723
36.00	851.9	638.1	115.78	3.1389	0.726
37.00	853.3	639.5	115.80	3.0811	0.728
38.00	854.6	640.9	115.81	3.0263	0.730
39.00	855.9	642.2	115.82	2.9744	0.733
40.00	857.1	643.3	115.84	2.9250	0.735
41.00	858.4	644.6	115.87	2.8780	0.737
42.00	859.4	645.6	115.90	2.8333	0.739
43.00	860.5	646.7	115.91	2.7907	0.740
44.00	861.5	647.7	115.92	2.7500	0.742
45.00	862.5	648.7	115.94	2.7111	0.744
46.00	863.4	649.6	115.95	2.6739	0.746
47.00	864.4	650.6	115.95	2.6383	0.747
48.00	865.2	651.4	115.95	2.6042	0.749
49.00	866.0	652.2	115.95	2.5714	0.750
50.00	866.8	653.0	115.94	2.5400	0.751
51.00	867.6	653.8	115.95	2.5098	0.753
52.00	868.4	654.6	115.94	2.4808	0.754
53.00	869.1	655.3	115.94	2.4528	0.755
54.00	869.8	656.0	115.94	2.4259	0.757
55.00	870.5	656.7	115.92	2.4000	0.758
56.00	871.1	657.3	115.92	2.3750	0.759
57.00	871.8	658.0	115.92	2.3509	0.760
58.00	872.3	658.5	115.91	2.3276	0.761
59.00	873.0	659.2	115.93	2.3051	0.762
60.00	873.6	659.8	115.94	2.2833	0.763
61.00	874.2	660.4	115.95	2.2623	0.764
62.00	874.7	660.9	115.96	2.2419	0.765
63.00	875.2	661.4	115.96	2.2222	0.766

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9115 DST#3 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/13/97 TIME: 23:31:10

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	64.00	875.7	661.9	115.97	2.2031	0.767
	65.00	876.2	662.4	115.96	2.1846	0.768
	66.00	876.7	662.9	115.97	2.1667	0.769
	67.00	877.2	663.4	115.95	2.1493	0.769
	68.00	877.6	663.8	115.96	2.1324	0.770
	69.00	878.1	664.3	115.94	2.1159	0.771
	70.00	878.5	664.7	115.94	2.1000	0.772
	71.00	879.0	665.2	115.94	2.0845	0.773
	72.00	879.4	665.6	115.94	2.0694	0.773
	73.00	879.8	666.0	115.94	2.0548	0.774
	74.00	880.2	666.4	115.94	2.0405	0.775
	75.00	880.6	666.8	115.94	2.0267	0.775
	76.00	881.1	667.3	115.94	2.0132	0.776
	77.00	881.4	667.6	115.94	2.0000	0.777
	78.00	881.8	668.0	115.94	1.9872	0.778
	79.00	882.1	668.3	115.93	1.9747	0.778
	80.00	882.5	668.7	115.94	1.9625	0.779
	81.00	882.8	669.0	115.93	1.9506	0.779
	82.00	883.2	669.4	115.95	1.9390	0.780
	83.00	883.5	669.7	115.93	1.9277	0.781
	84.00	883.7	670.0	115.92	1.9167	0.781
***** End Shut-in 2	85.00	884.2	670.4	115.92	1.9059	0.782
***** Final Hydro.	333.00	1943.5	0.0	115.66		

TEST HISTORY

9115 DST#3 Grant Maurice #1-30 Amoco Prod. Comp.

Flag Points

t (Min.) P (PSig)

A:	0.00	2016.53
B:	0.00	49.29
C:	28.00	123.37
D:	59.00	888.71
E:	0.00	134.63
F:	49.00	213.79

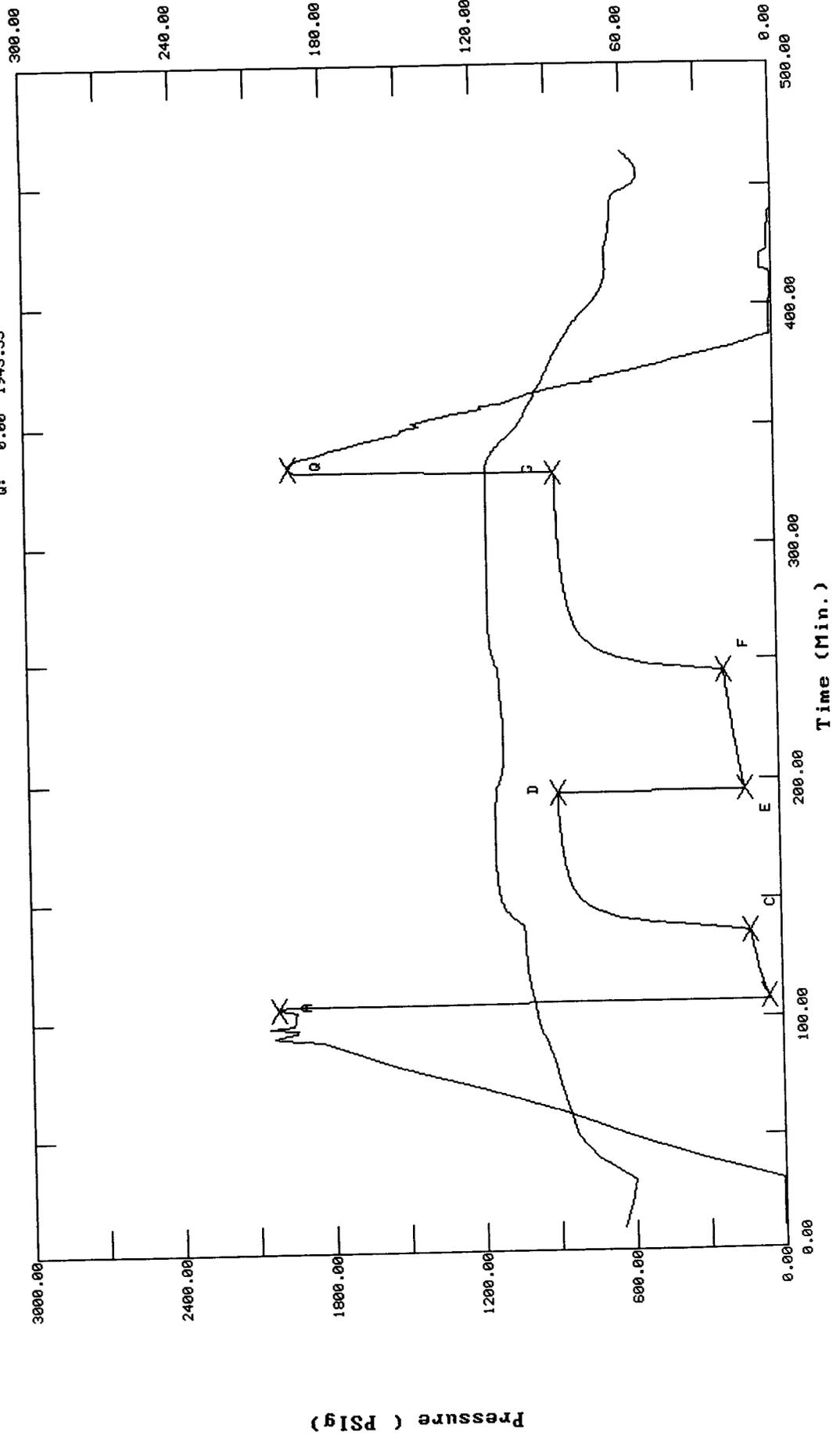
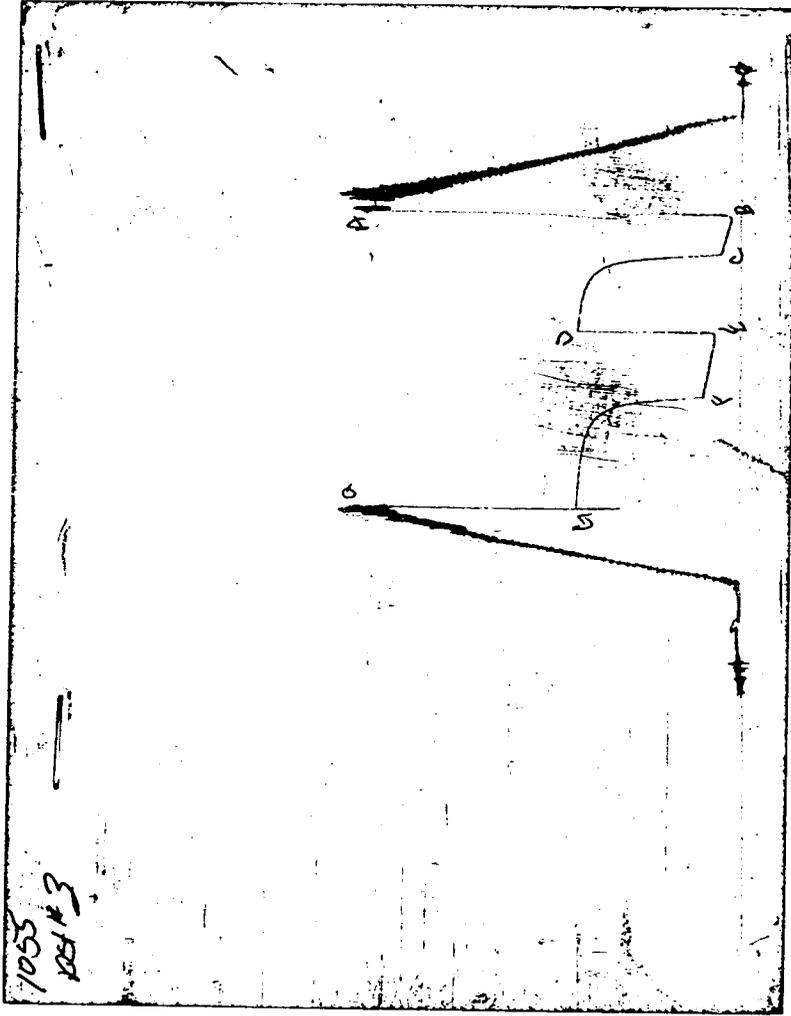


CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No. 9115

Well Name & No. Grant Maurice #1-30 Test No. #3 Date 3-13-97
 Company Amaco Prod. Comp Zone Tested Kansing "B"
 Address Denver Colo. Elevation 2967 KB 2955 GL
 Co. Rep / Geo. Ken LeBlanc Cont. Cheyenne Ris #3 Est. Ft. of Pay 13 Por. %
 Location: Sec. 30 Twp. 30S Rge. 33W Co. Haskell State KS
 No. of Copies Distribution Sheet (Y, N) Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 4150 - 4163 Initial Str Wt./Lbs. 52000 Unseated Str Wt./Lbs. 54000
 Anchor Length 13 Wt. Set Lbs. 30000 Wt. Pulled Loose/Lbs. 60000
 Top Packer Depth 4145 Hole Size — 7 7/8" X Rubber Size — 6 3/4" X
 Bottom Packer Depth 4150 Wt. Pipe I.D. — 2.7 Ft. Run
 Total Depth 4163 Drill Collar — 2.25 Ft. Run 87'
 Mud Wt. 90 LCM 3 Vis. 42 WL 9.6 Drill Pipe Size 4 1/2 F.O. Ft. Run 4037

Blow Description Strong Blow B.O.B. in 30 sec.
F.S.I. Bled off 2in. Had surface Blow Back.
2nd opening Strong Blow B.O.B. in 8 min.
F.S.I. Bled off 2in. Had surface Blow Back

Recovery — Total Feet	Ft. in DC	Ft. in WP	Ft. in DP	%gas	%oil	%water	%mud
Rec. <u>1740</u>	Feet Of <u>Gas in Pipe</u>		<u>373</u>				
Rec. <u>100</u>	Feet Of <u>S-W-Fokey Mud</u>			<u>15</u>	<u>15</u>	<u>70</u>	
Rec. <u>120</u>	Feet Of <u>S Muddy W Film oil</u>				<u>90</u>	<u>10</u>	
Rec. <u>240</u>	Feet Of <u>Water</u>			<u>100</u>			

BHT 112 °F Gravity °API D@ °F Corrected Gravity °API
 RW 112 @ 67.2 °F Chlorides 65,000 ppm Recovery Chlorides 900 ppm System

(A) Initial Hydrostatic Mud	<u>2016</u>	<u>2105</u>	PSI	Recorder No. <u>2346</u>	T-Started <u>10:00 pm</u>
(B) First Initial Flow Pressure	<u>49</u>	<u>54</u>	PSI	@ (depth) <u>4153</u>	T-Open <u>11:45 pm</u>
(C) First Final Flow Pressure	<u>123</u>	<u>108</u>	PSI	Recorder No. <u>1055</u>	T-Pulled <u>3:30 AM</u>
(D) Initial Shut-in Pressure	<u>888</u>	<u>865</u>	PSI	@ (depth) <u>4160</u>	T-Out <u>5:45</u>
(E) Second Initial Flow Pressure	<u>134</u>	<u>140</u>	PSI	Recorder No. <u> </u>	
(F) Second Final Flow Pressure	<u>213</u>	<u>203</u>	PSI	@ (depth) <u> </u>	
(G) Final Shut-in Pressure	<u>884</u>	<u>875</u>	PSI	Initial Opening <u>30 min</u>	Test <u>Conventional</u>
(H) Final Hydrostatic Mud	<u>1943</u>	<u>2095</u>	PSI	Initial Shut-in <u>60 min</u>	Jars <u> </u>
				Final Flow <u>45 min</u>	Safety Joint <u> </u>
				Final Shut-in <u>90 min</u>	Straddle <u> </u>

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

TOTAL PRICE \$

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 9115 Date 3-13-97
Company Name Amoco Prod. Comp.
Lease _____ Test No. DST #3
County _____ Sec. _____ Twp. _____ Rng. _____

SAMPLER RECOVERY

Gas 1.8 cubic Ft. ML
Oil Film ML
Mud _____ ML
Water 2900 ML
Other _____ ML
Pressure 675 PSI
Total 4000 ML

SAMPLER ANALYSIS

Resistivity .113 ohms @ 66.9 F
Chlorides 65,000 ppm.
Gravity _____ corrected @ 60 F

PIT MUD ANALYSIS

Chlorides 900 ppm.
Resistivity 9 ohms @ _____ F
Viscosity 42
Mud Weight 9.0
Filtrate 9.6
Other LCM 3

PIPE RECOVERY

TOP
Resistivity .118 ohms @ 67.0 F
Chlorides 58,000 ppm.
MIDDLE
Resistivity .113 ohms @ 66.9 F
Chlorides 67,000 ppm.
BOTTOM
Resistivity .112 ohms @ 67.0 F
Chlorides 65,000 ppm.

*** TOOL DIAGRAM *** CONV

WELL NAME: Grant Maurice #1-30
 LOCATION : 30-30S-33W
 TICKET No. 9116 D.S.T. No. 4 DATE 3-14-97
 TOTAL TOOL TO BOTTOM OF TOP PACKERS 27
 INTERVAL TOOL
 BOTTOM PACKERS AND ANCHOR 37
 TOTAL TOOL 64
 DRILL COLLAR ANCHOR IN INTERVAL
 D.C. ANCHOR STND.Stands Single Total
 D.P. ANCHOR STND.Stands Single Total
 TOTAL ASSEMBLY
 D.C. ABOVE TOOLS.Stands1 Single 1 Total 87
 D.P. ABOVE TOOLS.Stands70 Single Total 4285
 TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4436
 TOTAL DEPTH 4412
 TOTAL DRILL PIPE ABOVE K.B. 24
 REMARKS:

P.O. SUB Top tool	4346
C.O. SUB 1ft	4347
S.I. TOOL 5ft	4352
3ft Sampler	4355
HMV 5ft	4360
JARS 7ft	4367
SAFETY JOINT 2ft	4371
PACKER Top 5ft	4375
PACKER Bottom 5ft	4380
DEPTH	
STUBB 1ft	4381
ANCHOR 2ft	4383
T.C. DEPTH	
Alpine Rec. @ 4384	
20ft perf	4409
AK-1 Rec @ 4409	
BULLNOSE	
T.D. 3ft Bullplug	4412

GAS RECOVERY

COMPANY: Amoco Production Co
WELL NAME: Grant Maurice #1-30
WELL LOCATION: 30-30S-33W
INTERVAL Fr.: 4380.00 To 4412.00

DATE: 3-14-97
KB Elev: 2967.00 ft TICKET #9116 DST #4
GR Elev: 2955.00 ft FORMATION: Lansing "G"

T.D.: 4412.00 ft TEST TYPE: CONV

GAS RECOVERY MEASURED WITH Merla Gauge

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
		4	0	156000.0
10	0.75	4	0	166000.0
15	0.75	4	0	166000.0
20	0.75	5	0	175000.0
25	0.75	5	0	175000.0
30	0.75	5	0	175000.0

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.
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number: 970400
Sample From: Grant Maurice 1-30 DST 4
Producer: Amoco Production Co.
Date:
Time:
Sampler:
Source:

Analyzed: 03/19/97
Pressure:
Temperature:
Location:
County: Haskell
State: Kansas
Formation: Lans G

	Mole %	GPM
Helium	He: 0.296	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 15.979	0.000
Carbon Dioxide	CO2: 0.689	0.000
Methane	C1: 71.087	0.000
Ethane	C2: 5.806	1.553
Propane	C3: 3.314	0.913
Iso Butane	iC4: 0.629	0.206
Normal Butane	nC4: 1.138	0.359
Iso Pentane	iC5: 0.349	0.128
Normal Pentane	nC5: 0.367	0.133
Hexanes Plus	C6+: 0.346	0.151
TOTAL:	100.000	3.442
Z Fact:	0.9975	
SP.GR.:	0.7344	
BTU (SAT):	995.3 @	14.73 psia
BTU (DRY):	1012.9 @	14.73 psia
OCTANE RATING:	103.8	

COMMENTS:

0.000

Test: AK-1 Recorder Increments Listings
 Date: Amoco Production Company - Grand Maurice 1-30
 3-14-97

	Time	Pressure PSIg	<> Pressure	(T+dT)/dT
***Start Flow 1	0	80	80	
	3	82	1	
	6	83	1	
	9	86	3	
	12	90	4	
	15	93	3	
	18	98	4	
	21	102	4	
	24	106	4	
	27	108	2	
***Start Shutin 1	3	709	1.041	709
	6	859	0.778	151
	9	909	0.637	49
	12	929	0.544	20
	15	941	0.477	12
	18	951	0.426	10
	21	955	0.385	4
	24	960	0.352	5
	27	964	0.325	4
	30	966	0.301	2
	33	967	0.281	1
	36	967	0.263	0
	39	970	0.248	3
	42	972	0.234	2
	45	973	0.222	1
48	974	0.211	1	
51	974	0.201	0	
54	975	0.192	1	
57	975	0.184	0	
60	976	0.176	1	
63	977	0.169	1	
***Start Flow 2	0	87	87	
	6	89	2	
	12	93	4	
	18	100	6	
	24	103	3	
	30	104	1	
	36	106	2	
	42	107	1	
	48	111	4	
	54	122	11	
	60	122	0	
	66	122	0	
	72	122	0	
78	122	0		
84	122	0		

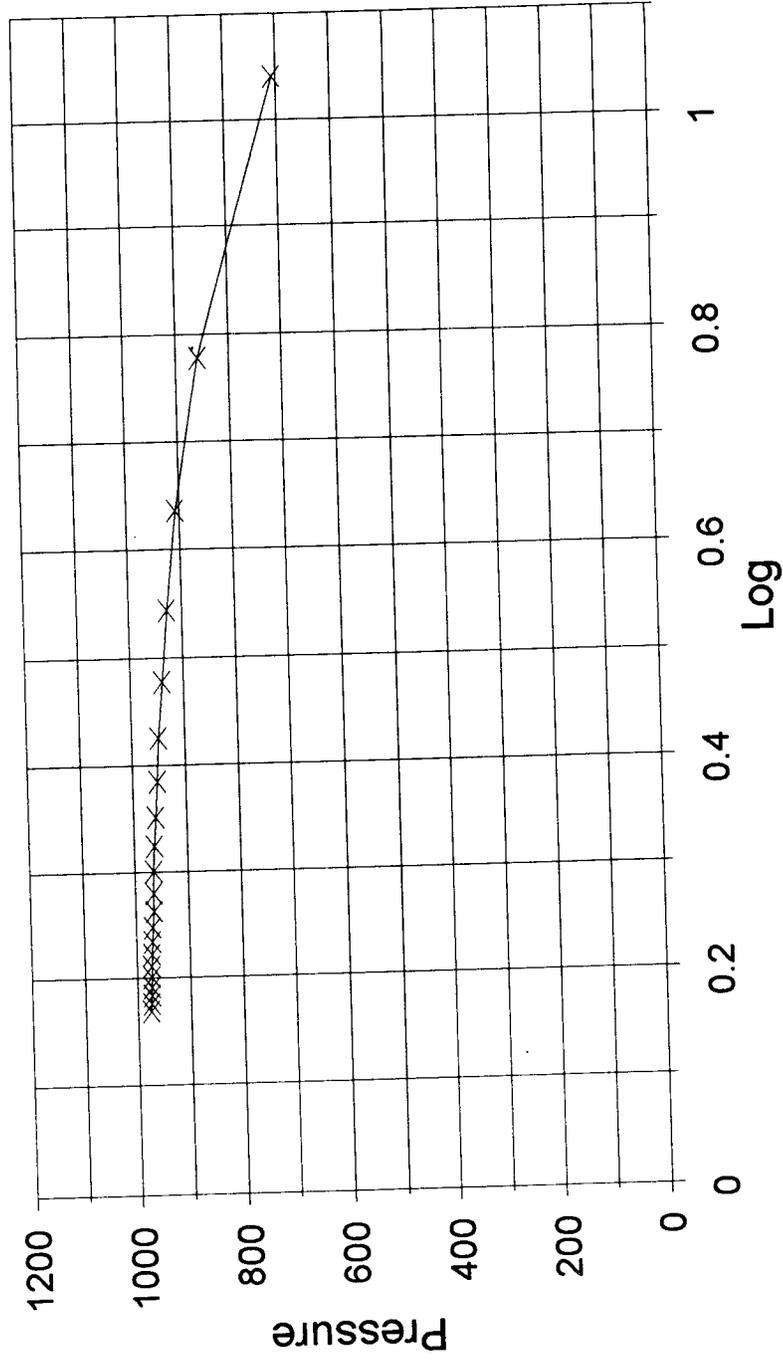
90	122		0
96	122		0
102	122		0
108	122		0
114	122		0
120	122		0

***Start Shutin 2

6	515	1.415	515	26.0
12	755	1.130	240	13.5
18	836	0.970	81	9.3
24	868	0.860	31	7.3
30	890	0.778	22	6.0
36	901	0.713	11	5.2
42	912	0.660	11	4.6
48	915	0.615	3	4.1
54	922	0.577	7	3.8
60	925	0.544	3	3.5
66	929	0.515	4	3.3
72	931	0.489	2	3.1
78	933	0.466	2	2.9
84	936	0.445	3	2.8
90	937	0.426	1	2.7
96	939	0.409	2	2.6
102	940	0.393	1	2.5
108	941	0.378	1	2.4
114	941	0.365	0	2.3
120	943	0.352	2	2.3
126	944	0.341	1	2.2
132	945	0.330	1	2.1
138	947	0.320	2	2.1

Horner Plot: Shut-in #1

P * 994.26 Slope 102.231



Horner Plot: Shut-in #2

P* 981.53 Slope 108.651

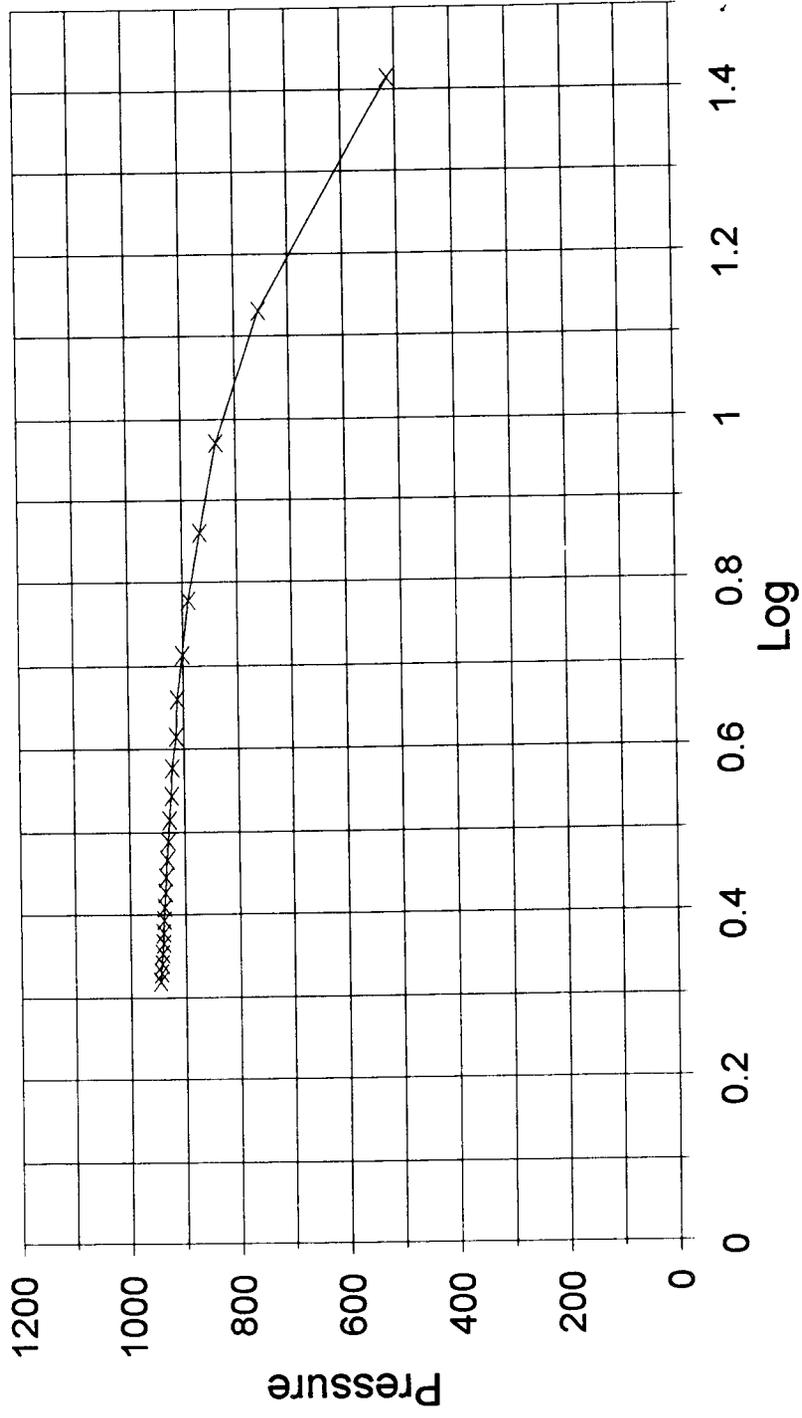
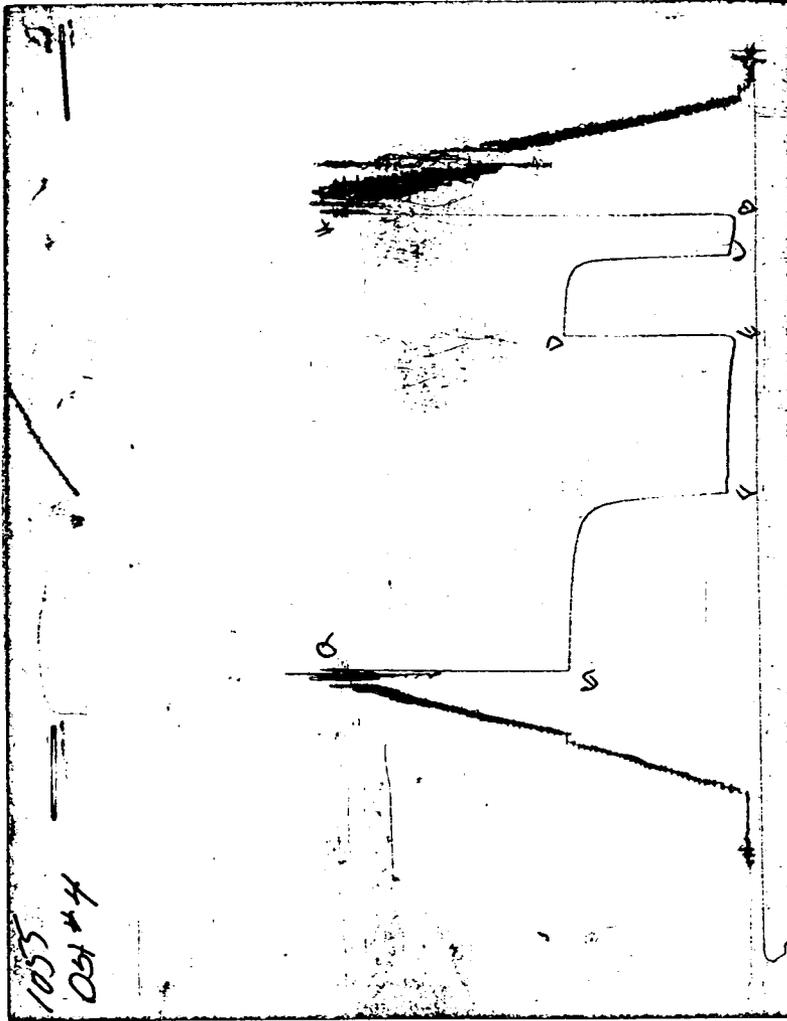


CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 9116

Well Name & No.	<u>Grant Maurice #1-30</u>	Test No.	<u>#4</u>	Date	<u>3-14-97</u>
Company	<u>Amoco Prod. Comp.</u>	Zone Tested	<u>Lansing "G"</u>		
Address	<u>Denver Colo</u>	Elevation	<u>2967</u>	KB	<u>2955</u> GL
Co. Rep / Geo.	<u>Ken LeBlanc</u>	Cont.	<u>Chycasee Rig #3</u>	Est. Ft. of Pay	<u>18</u> Por. <u> </u> %
Location: Sec.	<u>30</u>	Twp.	<u>30 S</u>	Rge.	<u>33 W</u> Co. <u>Haskell</u> State <u>KS.</u>
No. of Copies	<u> </u>	Distribution Sheet (Y, N)	<u> </u>	Turnkey (Y, N)	<u> </u> Evaluation (Y, N) <u> </u>

Interval Tested	<u>4380 - 4412</u>	Initial Str Wt./Lbs.	<u>55,000</u>	Unseated Str Wt./Lbs.	<u>55,000</u>
Anchor Length	<u>32'</u>	Wt. Set Lbs.	<u>30,000</u>	Wt. Pulled Loose/Lbs.	<u>60,000</u>
Top Packer Depth	<u>4375</u>	Hole Size — 7 7/8"	<u>X</u>	Rubber Size — 6 3/4"	<u>X</u>
Bottom Packer Depth	<u>4380</u>	Wt. Pipe I.D. — 2.7 Ft. Run	<u> </u>		
Total Depth	<u>4412</u>	Drill Collar — 2.25 Ft. Run	<u>87'</u>		
Mud Wt.	<u>9.1</u> LCM <u>2</u> Vis. <u>45</u> WL <u>11.2</u>	Drill Pipe Size	<u>4 1/2 F.O</u>	Ft. Run	<u>4285</u>
Blow Description	<u>Strong Blow B.O.B soon as open tool. (6758 min. MCF @ 175,000)</u>				
	<u>Incl. opening Strong Blow B.O.B soon as open tool (MCF @ 175,000)</u>				

Recovery — Total Feet	<u>200</u>	Ft. in DC	<u>87</u>	Ft. in WP	<u> </u>	Ft. in DP	<u>113</u>				
Rec.	<u>80</u>	Feet Of	<u>Mud Film oil</u>	%gas	<u> </u>	%oil	<u> </u>	%water	<u>100</u>	%mud	<u> </u>
Rec.	<u>60</u>	Feet Of	<u>G-W-M Film oil</u>	%gas	<u>70</u>	%oil	<u>30</u>	%water	<u>50</u>	%mud	<u> </u>
Rec.	<u>120</u>	Feet Of	<u>M-W Film oil</u>	%gas	<u> </u>	%oil	<u>60</u>	%water	<u>40</u>	%mud	<u> </u>
BHT	<u>114</u>	°F Gravity	<u> </u>	°API D@	<u> </u>	°F Corrected Gravity	<u> </u>	°API	<u> </u>		
RW	<u>.179</u>	@	<u>66.7</u>	°F Chlorides	<u>68,000</u>	ppm Recovery	<u> </u>	Chlorides	<u>1,400</u>	ppm System	<u> </u>
(A) Initial Hydrostatic Mud	<u>2309</u>	PSI	Recorder No.	<u>2346</u>	T-Started	<u>10:30 AM</u>					
(B) First Initial Flow Pressure	<u>118</u>	PSI	@ (depth)	<u>4384</u>	T-Open	<u>12:10 AM</u>					
(C) First Final Flow Pressure	<u>140</u>	PSI	Recorder No.	<u>1055</u>	T-Pulled	<u>5:40 AM</u>					
(D) Initial Shut-in Pressure	<u>1016</u>	PSI	@ (depth)	<u>4409</u>	T-Out	<u>8:15 AM</u>					
(E) Second Initial Flow Pressure	<u>118</u>	PSI	Recorder No.	<u> </u>							
(F) Second Final Flow Pressure	<u>161</u>	PSI	@ (depth)	<u> </u>							
(G) Final Shut-in Pressure	<u>1006</u>	PSI	Initial Opening	<u>30 min.</u>	Test	<u>Conventional</u>					
(H) Final Hydrostatic Mud	<u>2288</u>	PSI	Initial Shut-in	<u>60 min.</u>	Jars	<u> </u>					
	<u>AK-1</u>		Final Flow	<u>120 min.</u>	Safety Joint	<u> </u>					
			Final Shut-in	<u>120 min.</u>	Straddle	<u> </u>					

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 _____

Our Representative Mick Lambert

Extra Packer _____
Elect. Rec.
Other _____
TOTAL PRICE \$ _____

316-772-6874

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 9116 Date 3-14-97
Company Name Amoco Prod. Comp
Lease Grant Maurice #1-30 Test No. DST #4
County Haskell Sec. 30 Twp. 30S Rng. 33W

SAMPLER RECOVERY

Gas 7.3 cubic Ft. ML
Oil _____ ML
Mud 100 ML
Water 500 ML
Other _____ ML
Pressure 750 PSI
Total _____ ML

PIT MUD ANALYSIS

Chlorides 1,400 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 45
Mud Weight 9.1
Filtrate 112
Other LCM 2#

SAMPLER ANALYSIS

Resistivity .159 ohms @ 66.7 F
Chlorides 68,000 ppm.
Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity .138 ohms @ 66.0 F
Chlorides 62,000 ppm.
MIDDLE
Resistivity .135 ohms @ 66.2 F
Chlorides 65,000 ppm.
BOTTOM
Resistivity .129 ohms @ 66.7 F
Chlorides 68,000 ppm.

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Co
 WELL NAME: Grant Maurice #1-30
 LOCATION : 30-30S-33W
 INTERVAL : 4565.00 To 4610.00 ft

DATE 3-16-97
 KB 2967.00 ft
 GR 2955.00 ft
 TD 4610.00 ft

TICKET NO: 9117
 FORMATION: Kansas City "A"
 TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	1055	1055	2357		PF Fr. 0210 to 0240 hr
SI 60	Range(Psi)	4150.0	4150.0	4995.0	0.0	0.0 IS Fr. 0240 to 0340 hr
SF 90	Clock(hrs)	12hr.	12hr.	Elec		SF Fr. 0340 to 0510 hr
FS 180	Depth(ft)	4607.0	4607.0	4569.0	0.0	0.0 FS Fr. 0510 to 0810 hr

	Field	1	2	3	4	
A. Init Hydro	2492.0	2311.0	1320.0	0.0	0.0	T STARTED 0015 hr
B. First Flow	32.0	20.0	39.0	0.0	0.0	T ON BOTM 0208 hr
Bl. Final Flow	32.0	28.0	39.0	0.0	0.0	T OPEN 0210 hr
C. In Shut-in	855.0	845.0	604.0	0.0	0.0	T PULLED 0810 hr
D. Init Flow	54.0	32.0	35.0	0.0	0.0	T OUT 1100 hr
E. Final Flow	65.0	43.0	45.0	0.0	0.0	
F. Fl Shut-in	855.0	849.0	586.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2288.0	2267.0	1272.0	0.0	0.0	Tool Wt. 1800.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 30000.00 lbs
						Wt Pulled Loose 75000.00 lbs
						Initial Str Wt 55000.00 lbs
						Unseated Str Wt 55000.00 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 87.00 ft
						D.P. Length 4474.00 ft

RECOVERY

Tot Fluid 140.00 ft of 87.00 ft in DC and 53.00 ft in DP
 140.00 ft of Drilling Mud 100%
 0.00 ft of
 SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of bucket in 15sec
 Gas To Surface in 10 min MCF @ 44002

Final Flow
 Strong blow, bottom of bucket as soon
 as tool opened MCF @ 48008

SAMPLES: yes 1
 SENT TO:Caraway Lab Liberal.

Test Successful: Y

MUD DATA-----

Mud Type	Chemical
Weight	9.10 lb/c
Vis.	42.00 S/L
W.L.	10.80 in3
F.C.	0.00 in
Mud Drop Y	30.0 ft
Amt. of fill	2.00 ft
Btm. H. Temp.	116.00 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	Mike Colantonio
Co. Rep.	Ken LeBlanc
Contr.	Cheyenne
Rig #	3
Unit #	
Pump T.	

*** TOOL DIAGRAM *** CONV

WELL NAME: Grant Maurice #1-30

LOCATION : 30-30S-33W

TICKET No. 9117 D.S.T. No. 5 DATE 3-16-97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 50

TOTAL TOOL 77

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 77

D.C. ABOVE TOOLS.Stands1 Single 1 Total 87

D.P. ABOVE TOOLS.Stands71 Single 1 Total 4474

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4638

TOTAL DEPTH 4610

TOTAL DRILL PIPE ABOVE K.B. 28

REMARKS:

SAMPLER DATA

3.8 Cubic ft Gas

1500ml Mud

450PSI

4000ml Total

P.O. SUB Top Tool	4533
C.O. SUB 1ft	4534
S.I. TOOL 5ft	4539
3ft SAMPLER	4542
HMV 5ft	4547
JARS 7ft	4554
SAFETY JOINT 2ft	4556
PACKER Top 5ft	4560
PACKER Bottom 5ft	4565
DEPTH	
STUBB 1ft	
ANCHOR	
2ft Perf	4568
T.C.	
DEPTH	
Alpine Rec. @ 4569	
6ft PUSub	4574
25ft Perf	4599
8FT Perf	4607
AK-1 Rec. @ 4607	
BULLNOSE	
T.D. 3ft Bullplug	4610

GAS RECOVERY

COMPANY: Amoco Production Co	DATE: 3-16-97
WELL NAME: Grant Maurice #1-30	KB Elev: 2967.00 ft TICKET #9117 DST #5
WELL LOCATION: 30-30S-33W	GR Elev: 2955.00 ft FORMATION: Kansas City "A"
INTERVAL Fr.: 4565.00 To 4610.00 T.D.: 4610.00 ft	TEST TYPE: CONV

GAS RECOVERY MEASURED WITH Merla Data

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.38	4	0	39000.0
15	0.38	5	0	44200.0
20	0.38	5	0	44200.0
25	0.38	5	0	44200.0
30	0.38	5	0	44200.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.38	10	0	65300.0
10	0.38	8	0	57300.0
15	0.38	6	0	48800.0
20	0.38	5	0	44200.0
25	0.38	5	0	44200.0
30	0.38	4	0	39000.0
35	0.38	4	0	39000.0
40	0.25	4	0	18500.0
45	0.25	4	0	18500.0
50	0.25	5	0	20700.0
60	0.25	6	0	21800.0
70	0.25	6	0	21800.0
80	0.25	6	0	21800.0
90	0.25	6	0	21800.0

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.
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number:	970401	Analyzed:	03/19/97
Sample From:	Grant Maurice 1-30 DST 5	Pressure:	
Producer:	Amoco Production Co.	Temperature:	
Date:		Location:	
Time:		County:	Haskell
Sampler:		State:	Kansas
Source:		Formation:	KC A

	Mole %	GPM
Helium	He: 0.510	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 21.497	0.000
Carbon Dioxide	CO2: 0.140	0.000
Methane	C1: 65.294	0.000
Ethane	C2: 6.189	1.655
Propane	C3: 3.937	1.085
Iso Butane	iC4: 0.506	0.166
Normal Butane	nC4: 1.063	0.335
Iso Pentane	iC5: 0.240	0.088
Normal Pentane	nC5: 0.246	0.089
Hexanes Plus	C6+: 0.378	0.165

TOTAL:	100.000	3.583
Z Fact:	0.9977	
SP.GR.:	0.7524	
BTU (SAT):	945.7 @ 14.73 psia	
BTU (DRY):	962.4 @ 14.73 psia	
OCTANE RATING:	96.9	

COMMENTS:

0.000

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/16/97

TIME: 00:24:07

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	70.00	1320.8	0.0	94.84		
***** Start Flow 1	0.00	39.7	0.0	133.02		
	1.00	39.3	-0.4	133.24		
	2.00	38.4	-1.3	133.45		
	3.00	37.6	-2.1	133.64		
	4.00	37.2	-2.5	133.79		
	5.00	36.8	-2.9	133.92		
	6.00	35.9	-3.8	134.01		
	7.00	35.7	-3.9	134.09		
	8.00	35.7	-3.9	134.14		
	9.00	36.2	-3.5	134.19		
	10.00	36.2	-3.5	134.24		
	11.00	36.8	-2.9	134.27		
	12.00	36.8	-2.9	134.30		
	13.00	36.9	-2.8	134.34		
	14.00	37.5	-2.2	134.36		
	15.00	37.4	-2.3	134.39		
	16.00	38.1	-1.6	134.40		
	17.00	39.4	-0.3	134.43		
	18.00	38.1	-1.6	134.45		
	19.00	37.8	-1.8	134.46		
	20.00	38.2	-1.5	134.49		
	21.00	38.3	-1.3	134.50		
	22.00	38.9	-0.8	134.52		
	23.00	38.7	-1.0	134.54		
	24.00	38.9	-0.8	134.56		
	25.00	38.9	-0.8	134.58		
	26.00	38.8	-0.8	134.60		
	27.00	38.5	-1.2	134.61		
	28.00	39.9	0.2	134.62		
***** End Flow 1	29.00	39.8	0.1	134.64		
***** Start Shutin 1	0.00	39.8	0.0	134.64	0.0000	0.002
	1.00	88.9	49.1	134.66	30.0000	0.008
	2.00	172.6	132.9	134.68	15.5000	0.030
	3.00	244.2	204.4	134.72	10.6667	0.060
	4.00	305.0	265.2	134.75	8.2500	0.093
	5.00	355.6	315.8	134.79	6.8000	0.126
	6.00	396.6	356.9	134.81	5.8333	0.157
	7.00	429.6	389.8	134.85	5.1429	0.185
	8.00	455.6	415.9	134.87	4.6250	0.208
	9.00	476.0	436.3	134.89	4.2222	0.227
	10.00	492.2	452.5	134.90	3.9000	0.242
	11.00	505.2	465.5	134.91	3.6364	0.255
	12.00	515.6	475.9	134.93	3.4167	0.266
	13.00	524.4	484.6	134.94	3.2308	0.275
	14.00	531.7	491.9	134.93	3.0714	0.283
	15.00	537.8	498.0	134.94	2.9333	0.289
	16.00	542.6	502.8	134.95	2.8125	0.294
	17.00	547.4	507.6	134.96	2.7059	0.300
	18.00	551.7	512.0	134.96	2.6111	0.304
	19.00	555.6	515.8	134.97	2.5263	0.309

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/16/97

TIME: 00:24:07

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
20.00	559.2	519.4	134.96	2.4500	0.313
21.00	562.4	522.6	134.96	2.3810	0.316
22.00	565.2	525.4	134.96	2.3182	0.319
23.00	567.8	528.0	134.97	2.2609	0.322
24.00	570.3	530.5	134.97	2.2083	0.325
25.00	572.5	532.7	134.97	2.1600	0.328
26.00	574.6	534.8	134.96	2.1154	0.330
27.00	576.6	536.8	134.97	2.0741	0.332
28.00	578.3	538.5	134.96	2.0357	0.334
29.00	579.9	540.2	134.97	2.0000	0.336
30.00	581.5	541.8	134.97	1.9667	0.338
31.00	583.0	543.2	134.97	1.9355	0.340
32.00	584.4	544.6	134.98	1.9062	0.342
33.00	585.7	546.0	134.98	1.8788	0.343
34.00	587.0	547.2	134.98	1.8529	0.345
35.00	588.1	548.3	134.98	1.8286	0.346
36.00	589.2	549.4	134.98	1.8056	0.347
37.00	590.5	550.7	134.98	1.7838	0.349
38.00	591.3	551.6	134.98	1.7632	0.350
39.00	592.2	552.4	134.99	1.7436	0.351
40.00	593.2	553.4	134.99	1.7250	0.352
41.00	594.0	554.3	134.99	1.7073	0.353
42.00	594.9	555.1	134.99	1.6905	0.354
43.00	595.5	555.8	134.99	1.6744	0.355
44.00	596.4	556.6	135.00	1.6591	0.356
45.00	597.1	557.3	135.00	1.6444	0.356
46.00	597.7	558.0	135.01	1.6304	0.357
47.00	598.4	558.6	135.00	1.6170	0.358
48.00	599.1	559.3	135.01	1.6042	0.359
49.00	599.7	560.0	135.01	1.5918	0.360
50.00	600.2	560.5	135.02	1.5800	0.360
51.00	600.8	561.1	135.02	1.5686	0.361
52.00	601.4	561.6	135.03	1.5577	0.362
53.00	601.9	562.1	135.03	1.5472	0.362
54.00	602.4	562.7	135.04	1.5370	0.363
55.00	602.9	563.2	135.04	1.5273	0.364
56.00	603.3	563.6	135.04	1.5179	0.364
57.00	603.9	564.2	135.04	1.5088	0.365
58.00	604.3	564.5	135.05	1.5000	0.365
59.00	604.6	564.8	135.06	1.4915	0.366
60.00	604.5	564.8	135.06	1.4833	0.365
***** End Shut-in 1					
***** Start Flow 2					
0.00	35.8	0.0	135.19		
1.00	36.8	1.0	135.31		
2.00	38.9	3.1	135.44		
3.00	39.6	3.8	135.53		
4.00	39.9	4.1	135.61		
5.00	39.9	4.1	135.67		
6.00	39.5	3.7	135.71		
7.00	39.1	3.3	135.74		
8.00	38.8	3.0	135.77		
9.00	38.5	2.7	135.78		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/16/97 TIME: 00:24:07

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
10.00	38.6	2.8	135.79		
11.00	38.1	2.3	135.81		
12.00	36.8	1.0	135.83		
13.00	37.8	1.9	135.83		
14.00	37.5	1.7	135.84		
15.00	37.5	1.7	135.85		
16.00	37.5	1.7	135.86		
17.00	37.5	1.7	135.88		
18.00	38.3	2.5	135.89		
19.00	37.8	1.9	135.90		
20.00	38.6	2.8	135.92		
21.00	38.3	2.4	135.94		
22.00	38.7	2.9	135.95		
23.00	37.8	2.0	135.96		
24.00	38.2	2.3	135.98		
25.00	37.3	1.4	135.99		
26.00	36.0	0.2	136.00		
27.00	36.9	1.1	136.01		
28.00	37.1	1.3	136.02		
29.00	35.7	-0.2	136.03		
30.00	37.2	1.3	136.05		
31.00	36.7	0.8	136.07		
32.00	37.7	1.8	136.07		
33.00	36.2	0.4	136.09		
34.00	38.7	2.9	136.10		
35.00	37.6	1.8	136.11		
36.00	37.8	1.9	136.13		
37.00	36.3	0.5	136.13		
38.00	35.8	0.0	136.14		
39.00	37.8	2.0	136.16		
40.00	37.3	1.4	136.17		
41.00	38.8	2.9	136.18		
42.00	36.3	0.5	136.20		
43.00	37.7	1.8	136.20		
44.00	39.9	4.0	136.21		
45.00	37.3	1.4	136.22		
46.00	38.7	2.9	136.24		
47.00	40.3	4.4	136.24		
48.00	38.9	3.1	136.25		
49.00	38.3	2.4	136.26		
50.00	40.5	4.7	136.28		
51.00	40.5	4.7	136.29		
52.00	39.8	3.9	136.30		
53.00	40.1	4.3	136.32		
54.00	40.3	4.4	136.33		
55.00	40.1	4.3	136.34		
56.00	41.0	5.2	136.35		
57.00	40.6	4.8	136.37		
58.00	40.3	4.4	136.38		
59.00	42.0	6.2	136.39		
60.00	39.6	3.8	136.40		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/16/97

TIME: 00:24:07

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	61.00	41.2	5.4	136.42		
	62.00	42.0	6.1	136.44		
	63.00	41.3	5.5	136.44		
	64.00	42.1	6.3	136.45		
	65.00	40.5	4.7	136.46		
	66.00	41.7	5.9	136.47		
	67.00	39.6	3.8	136.49		
	68.00	42.3	6.5	136.50		
	69.00	43.0	7.1	136.51		
	70.00	42.0	6.2	136.52		
	71.00	40.9	5.0	136.54		
	72.00	41.4	5.5	136.55		
	73.00	42.8	7.0	136.56		
	74.00	43.6	7.8	136.57		
	75.00	43.6	7.8	136.59		
	76.00	42.2	6.4	136.60		
	77.00	43.6	7.8	136.61		
	78.00	42.9	7.0	136.62		
	79.00	42.0	6.2	136.63		
	80.00	43.9	8.1	136.65		
	81.00	43.1	7.3	136.66		
	82.00	43.5	7.6	136.67		
	83.00	42.8	7.0	136.69		
	84.00	45.4	9.6	136.69		
	85.00	43.5	7.6	136.71		
	86.00	43.0	7.1	136.73		
	87.00	43.1	7.3	136.73		
***** End Flow 2	88.00	45.9	10.1	136.75		
***** Start Shutin 2	0.00	45.9	0.0	136.75	0.0000	0.002
	1.00	54.5	8.6	136.75	118.0000	0.003
	2.00	109.0	63.1	136.77	59.5000	0.012
	3.00	158.0	112.1	136.82	40.0000	0.025
	4.00	202.3	156.4	136.82	30.2500	0.041
	5.00	241.7	195.8	136.85	24.4000	0.058
	6.00	276.5	230.6	136.87	20.5000	0.076
	7.00	307.2	261.3	136.89	17.7143	0.094
	8.00	333.7	287.8	136.92	15.6250	0.111
	9.00	356.3	310.4	136.93	14.0000	0.127
	10.00	375.7	329.8	136.95	12.7000	0.141
	11.00	392.1	346.2	136.97	11.6364	0.154
	12.00	406.1	360.2	136.98	10.7500	0.165
	13.00	418.4	372.5	136.99	10.0000	0.175
	14.00	428.8	382.9	137.00	9.3571	0.184
	15.00	437.9	392.0	137.01	8.8000	0.192
	16.00	446.1	400.2	137.01	8.3125	0.199
	17.00	453.2	407.3	137.02	7.8824	0.205
	18.00	459.7	413.8	137.03	7.5000	0.211
	19.00	465.5	419.6	137.04	7.1579	0.217
	20.00	471.0	425.1	137.05	6.8500	0.222
	21.00	475.9	430.0	137.01	6.5714	0.226
	22.00	480.5	434.6	137.06	6.3182	0.231

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING
 TEST: 9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.
 DATE: 03/16/97 TIME: 00:24:07

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
23.00	484.6	438.7	137.05	6.0870	0.235
24.00	488.7	442.8	137.07	5.8750	0.239
25.00	492.2	446.3	137.07	5.6800	0.242
26.00	495.7	449.8	137.06	5.5000	0.246
27.00	498.9	453.0	137.06	5.3333	0.249
28.00	502.0	456.1	137.07	5.1786	0.252
29.00	504.8	458.9	137.07	5.0345	0.255
30.00	507.4	461.5	137.08	4.9000	0.257
31.00	509.9	464.0	137.08	4.7742	0.260
32.00	512.4	466.5	137.08	4.6562	0.263
33.00	514.6	468.7	137.08	4.5455	0.265
34.00	516.7	470.8	137.09	4.4412	0.267
35.00	518.8	472.9	137.10	4.3429	0.269
36.00	520.8	474.9	137.09	4.2500	0.271
37.00	522.6	476.7	137.09	4.1622	0.273
38.00	524.3	478.4	137.09	4.0789	0.275
39.00	526.1	480.2	137.10	4.0000	0.277
40.00	527.7	481.8	137.10	3.9250	0.278
41.00	529.2	483.3	137.10	3.8537	0.280
42.00	530.7	484.8	137.10	3.7857	0.282
43.00	532.1	486.2	137.11	3.7209	0.283
44.00	533.5	487.6	137.12	3.6591	0.285
45.00	534.8	488.9	137.11	3.6000	0.286
46.00	536.0	490.1	137.12	3.5435	0.287
47.00	537.2	491.3	137.13	3.4894	0.289
48.00	538.5	492.6	137.13	3.4375	0.290
49.00	539.5	493.6	137.13	3.3878	0.291
50.00	540.6	494.7	137.13	3.3400	0.292
51.00	541.5	495.6	137.13	3.2941	0.293
52.00	542.6	496.7	137.14	3.2500	0.294
53.00	543.6	497.7	137.14	3.2075	0.295
54.00	544.5	498.6	137.14	3.1667	0.296
55.00	545.5	499.6	137.15	3.1273	0.298
56.00	546.4	500.5	137.15	3.0893	0.299
57.00	547.3	501.4	137.16	3.0526	0.300
58.00	548.1	502.2	137.16	3.0172	0.300
59.00	549.0	503.1	137.16	2.9831	0.301
60.00	549.7	503.8	137.17	2.9500	0.302
61.00	550.6	504.7	137.17	2.9180	0.303
62.00	551.3	505.4	137.17	2.8871	0.304
63.00	552.1	506.2	137.19	2.8571	0.305
64.00	552.7	506.8	137.15	2.8281	0.306
65.00	553.5	507.6	137.18	2.8000	0.306
66.00	554.1	508.2	137.19	2.7727	0.307
67.00	554.8	508.9	137.20	2.7463	0.308
68.00	555.5	509.6	137.20	2.7206	0.309
69.00	556.2	510.3	137.21	2.6957	0.309
70.00	556.8	510.9	137.21	2.6714	0.310
71.00	557.4	511.5	137.21	2.6479	0.311
72.00	558.0	512.1	137.21	2.6250	0.311
73.00	558.6	512.7	137.23	2.6027	0.312

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/16/97

TIME: 00:24:07

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
74.00	559.2	513.3	137.23	2.5811	0.313
75.00	559.8	513.9	137.23	2.5600	0.313
76.00	560.3	514.4	137.24	2.5395	0.314
77.00	560.9	515.0	137.24	2.5195	0.315
78.00	561.4	515.5	137.25	2.5000	0.315
79.00	561.9	516.0	137.26	2.4810	0.316
80.00	562.4	516.5	137.26	2.4625	0.316
81.00	562.9	517.0	137.26	2.4444	0.317
82.00	563.3	517.4	137.27	2.4268	0.317
83.00	563.9	518.0	137.27	2.4096	0.318
84.00	564.3	518.4	137.28	2.3929	0.318
85.00	564.7	518.8	137.28	2.3765	0.319
86.00	565.2	519.3	137.30	2.3605	0.320
87.00	565.7	519.8	137.29	2.3448	0.320
88.00	566.1	520.2	137.29	2.3295	0.320
89.00	566.6	520.7	137.31	2.3146	0.321
90.00	567.0	521.1	137.31	2.3000	0.321
91.00	567.3	521.4	137.32	2.2857	0.322
92.00	567.8	521.9	137.32	2.2717	0.322
93.00	568.1	522.2	137.33	2.2581	0.323
94.00	568.5	522.6	137.33	2.2447	0.323
95.00	568.9	523.0	137.35	2.2316	0.324
96.00	569.3	523.4	137.35	2.2188	0.324
97.00	569.7	523.8	137.35	2.2062	0.325
98.00	570.0	524.1	137.37	2.1939	0.325
99.00	570.4	524.5	137.37	2.1818	0.325
100.00	570.7	524.8	137.37	2.1700	0.326
101.00	571.1	525.2	137.40	2.1584	0.326
102.00	571.5	525.6	137.40	2.1471	0.327
103.00	571.7	525.8	137.40	2.1359	0.327
104.00	572.0	526.1	137.40	2.1250	0.327
105.00	572.4	526.5	137.41	2.1143	0.328
106.00	572.7	526.8	137.41	2.1038	0.328
107.00	573.0	527.1	137.42	2.0935	0.328
108.00	573.2	527.3	137.42	2.0833	0.329
109.00	573.6	527.7	137.43	2.0734	0.329
110.00	573.9	528.0	137.44	2.0636	0.329
111.00	574.1	528.2	137.44	2.0541	0.330
112.00	574.5	528.6	137.46	2.0446	0.330
113.00	574.7	528.8	137.46	2.0354	0.330
114.00	575.0	529.1	137.47	2.0263	0.331
115.00	575.2	529.3	137.48	2.0174	0.331
116.00	575.6	529.7	137.49	2.0086	0.331
117.00	575.8	529.9	137.49	2.0000	0.332
118.00	576.0	530.1	137.49	1.9915	0.332
119.00	576.3	530.4	137.50	1.9832	0.332
120.00	576.5	530.6	137.51	1.9750	0.332
121.00	576.8	530.9	137.52	1.9669	0.333
122.00	577.2	531.3	137.52	1.9590	0.333
123.00	577.3	531.4	137.52	1.9512	0.333
124.00	577.6	531.7	137.53	1.9435	0.334

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/16/97 TIME: 00:24:07

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
125.00	577.8	531.9	137.55	1.9360	0.334
126.00	578.1	532.2	137.55	1.9286	0.334
127.00	578.3	532.4	137.56	1.9213	0.334
128.00	578.5	532.6	137.56	1.9141	0.335
129.00	578.7	532.8	137.57	1.9070	0.335
130.00	578.9	533.0	137.58	1.9000	0.335
131.00	579.1	533.2	137.59	1.8931	0.335
132.00	579.3	533.4	137.59	1.8864	0.336
133.00	579.5	533.6	137.60	1.8797	0.336
134.00	579.7	533.8	137.60	1.8731	0.336
135.00	579.9	534.0	137.61	1.8667	0.336
136.00	580.2	534.3	137.63	1.8603	0.337
137.00	580.4	534.5	137.64	1.8540	0.337
138.00	580.5	534.6	137.64	1.8478	0.337
139.00	580.7	534.8	137.65	1.8417	0.337
140.00	580.9	535.0	137.65	1.8357	0.337
141.00	581.1	535.2	137.66	1.8298	0.338
142.00	581.2	535.3	137.66	1.8239	0.338
143.00	581.4	535.5	137.68	1.8182	0.338
144.00	581.6	535.7	137.68	1.8125	0.338
145.00	581.7	535.8	137.69	1.8069	0.338
146.00	581.9	536.0	137.70	1.8014	0.339
147.00	581.9	536.0	137.71	1.7959	0.339
148.00	582.2	536.3	137.72	1.7905	0.339
149.00	582.3	536.4	137.72	1.7852	0.339
150.00	582.5	536.6	137.73	1.7800	0.339
151.00	582.7	536.8	137.75	1.7748	0.340
152.00	582.9	537.0	137.75	1.7697	0.340
153.00	583.0	537.1	137.76	1.7647	0.340
154.00	583.1	537.2	137.77	1.7597	0.340
155.00	583.3	537.4	137.78	1.7548	0.340
156.00	583.5	537.6	137.77	1.7500	0.340
157.00	583.5	537.6	137.79	1.7452	0.341
158.00	583.7	537.8	137.81	1.7405	0.341
159.00	583.8	537.9	137.81	1.7358	0.341
160.00	584.0	538.1	137.81	1.7312	0.341
161.00	584.2	538.3	137.82	1.7267	0.341
162.00	584.3	538.4	137.82	1.7222	0.341
163.00	584.4	538.5	137.83	1.7178	0.342
164.00	584.5	538.6	137.84	1.7134	0.342
165.00	584.6	538.7	137.85	1.7091	0.342
166.00	584.8	538.9	137.86	1.7048	0.342
167.00	584.9	539.0	137.86	1.7006	0.342
168.00	585.1	539.2	137.87	1.6964	0.342
169.00	585.1	539.2	137.87	1.6923	0.342
170.00	585.2	539.3	137.88	1.6882	0.342
171.00	585.3	539.4	137.89	1.6842	0.343
172.00	585.5	539.6	137.90	1.6802	0.343
173.00	585.6	539.7	137.90	1.6763	0.343
174.00	585.8	539.9	137.91	1.6724	0.343
175.00	586.0	540.1	137.92	1.6686	0.343

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.

DATE: 03/16/97

TIME: 00:24:07

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	176.00	586.1	540.2	137.93	1.6648	0.343
	177.00	586.3	540.4	137.94	1.6610	0.344
	178.00	586.4	540.5	137.94	1.6573	0.344
	179.00	586.6	540.7	137.95	1.6536	0.344
***** End Shut-in 2	180.00	586.6	540.7	137.95	1.6500	0.344
***** Final Hydro.	469.00	1270.0	0.0	138.83		

TEST HISTORY

9117 DST#5 Grant Maurice #1-30 Amoco Prod. Comp.

Flag Points

t (Min.) P (PSig)

A: 0.00 1320.85
 B: 0.00 39.69
 C: 29.00 39.77
 D: 60.00 604.52
 E: 0.00 35.83
 F: 88.00 45.90
 G: 180.00 586.65
 Q: 0.00 1269.99

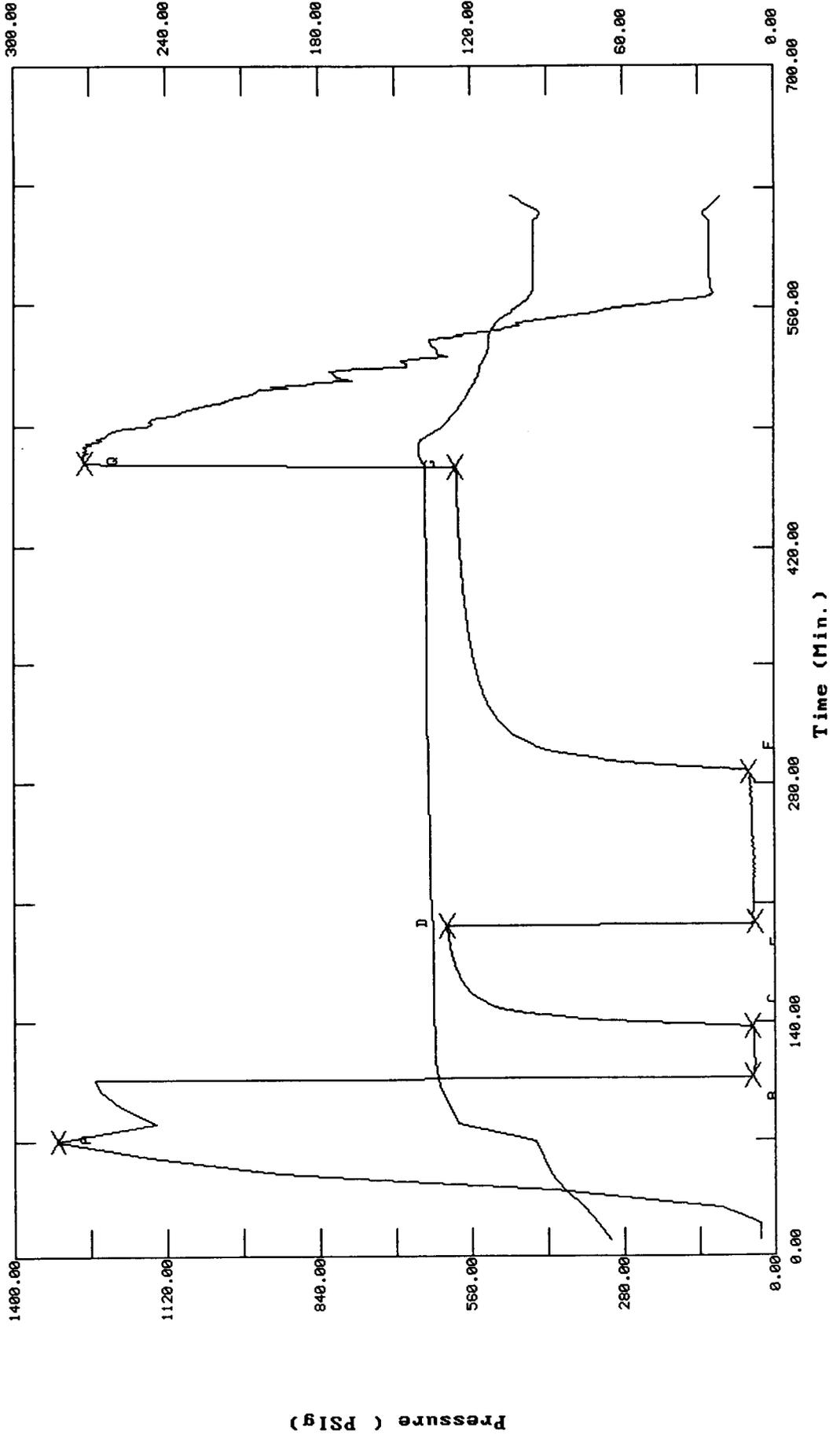
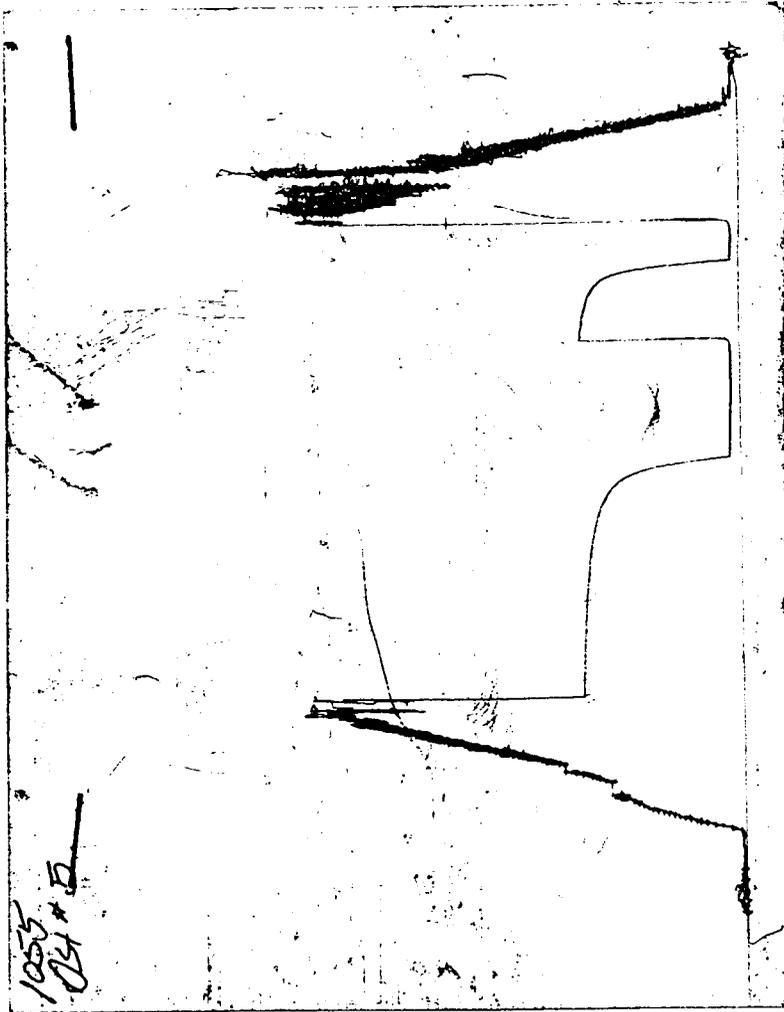


CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

N^o 9117

Well Name & No. <u>Grant Maurice #1-30</u>	Test No. <u>#5</u>	Date <u>3-16-97</u>
Company <u>Amoco Prod. Comp.</u>	Zone Tested <u>Kansas City A</u>	
Address <u>Deer Creek</u>	Elevation <u>2967</u>	KBO <u>2953</u> GL
Co. Rep / Geo. <u>Ker LeBlanc</u>	Cont. <u>Cheyenne Rig #3</u>	Est. Ft. of Pay <u>18</u> Por. <u> </u> %
Location: Sec. <u>30</u>	Twp. <u>30S</u>	Rge. <u>33W</u> Co. <u>Haskell</u> State <u>KS</u>
No. of Copies <u> </u>	Distribution Sheet (Y, N) <u> </u>	Turnkey (Y, N) <u> </u> Evaluation (Y, N) <u> </u>

Interval Tested <u>4565-4610</u>	Initial Str Wt./Lbs. <u>55,000</u>	Unseated Str Wt./Lbs. <u>55,000</u>
Anchor Length <u>45'</u>	Wt. Set Lbs. <u>39,000</u>	Wt. Pulled Loose/Lbs. <u>75,000</u>
Top Packer Depth <u>4560</u>	Hole Size — 7 7/8" <u>X</u>	Rubber Size — 6 3/4" <u>X</u>
Bottom Packer Depth <u>4565</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u> </u>	
Total Depth <u>4610</u>	Drill Collar — 2.25 Ft. Run <u>87'</u>	
Mud Wt. <u>9.1</u> LCM <u>3</u> Vis. <u>42</u> WL <u>10.8</u>	Drill Pipe Size <u>4 1/2 F-0</u>	Ft. Run <u>4474'</u>
Blow Description <u>Strong Blow B.O.B. in 15 sec. CTS 10 min MCF @ 44.2</u>		

2nd opening strong Blow B.O.B. soon as open tool MCF @ 48.8

Recovery — Total Feet <u>140</u>	Ft. in DC <u>87</u>	Ft. in WP <u> </u>	Ft. in DP <u>5.3</u>
Rec. <u>140</u> Feet Of <u>Only Mud</u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
Rec. <u> </u> Feet Of <u> </u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
Rec. <u> </u> Feet Of <u> </u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
Rec. <u> </u> Feet Of <u> </u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
Rec. <u> </u> Feet Of <u> </u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>

BHT 116 °F Gravity °API D@ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides 4,200 ppm System

(A) Initial Hydrostatic Mud <u>1320</u> <u>2492</u> PSI	Recorder No. <u>2357</u>	T-Started <u>12:15 AM</u>
(B) First Initial Flow Pressure <u>39</u> <u>32</u> PSI	@ (depth) <u>4569</u>	T-Open <u>2:10 AM</u>
(C) First Final Flow Pressure <u>39</u> <u>32</u> PSI	Recorder No. <u>1055</u>	T-Pulled <u>8:10 AM</u>
(D) Initial Shut-in Pressure <u>604</u> <u>855</u> PSI	@ (depth) <u>4607</u>	T-Out <u>11:00 AM</u>
(E) Second Initial Flow Pressure <u>35</u> <u>54</u> PSI	Recorder No. <u> </u>	
(F) Second Final Flow Pressure <u>45</u> <u>65</u> PSI	@ (depth) <u> </u>	
(G) Final Shut-in Pressure <u>586</u> <u>855</u> PSI	Initial Opening <u>30 min</u>	Test <u>Conventional</u> ✓
(H) Final Hydrostatic Mud <u>1272</u> <u>2288</u> PSI	Initial Shut-in <u>60 min.</u>	Jars <u> </u>

Alpine AK-1

Final Flow <u>90 min.</u>	Safety Joint <u> </u>
Final Shut-in <u>180 min.</u>	Straddle <u> </u>
	Circ. Sub <u> </u> <u>n/c</u>
	Sampler <u> </u>
	Extra Packer <u> </u>
	Elect. Rec. <u> </u>
	Other <u> </u>

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

Our Representative

TOTAL PRICE \$



TRILOBITE TESTING

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

Amoco Prod. Corp.
OPERATOR

Grant Maurice #1-30
WELL NAME AND NO.

5
DST NO.

1st. opening GTS 10 min.

2nd. opening

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
0	4	3/8	39.0	5	10	3/8	65.3
5	5	3/8	44.2	10	8	3/8	57.3
10	5	3/8	44.2	15	6	3/8	48.8
15	5	3/8	44.2	20	5	3/8	44.2
20	5	3/8	44.2	25	5	3/8	44.2
				30	4	3/8	39.0
				35	4	3/8	39.0
				40	4	1/4	18.5
				45	4	1/4	18.5
				50	5	1/4	20.7
				60	5.5	1/4	21.8
				70	5.5	1/4	21.8
				80	5.5	1/4	21.8
				90	5.5	1/4	21.8

Remarks: *Gas Will Burn.*

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. # 9117 Date 3-16-97
Company Name Amoco Prod. Comp.
Lease Grant Maurice #1-30 Test No. DST #5
County HASKELL Sec. 30 Twp. 30S Rng. 33W

SAMPLER RECOVERY

Gas 3.8 cubic FT ML
Oil _____ ML
Mud 1500 ML
Water _____ ML
Other _____ ML
Pressure 450 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 1200 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 42
Mud Weight 9.1
Filtrate 10.8
Other 4cm 3#

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.

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Co. DATE 03-18-97
 WELL NAME: Grant Maurice #1-30 KB 2967.00 ft TICKET NO: 9702 DST #6
 LOCATION : 30-30s-33w GR 2954.00 ft FORMATION: Atoka
 INTERVAL : 5070.00 To 5150.00 ft TD 5150.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	3024			PF Fr. 0334 to 0404 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0404 to 0504 hr
SF 90 Clock(hrs)	12 HR	12 HR	Elec			SF Fr. 0504 to 0634 hr
FS 180 Depth(ft)	5147.0	5147.0	5080.0	0.0	0.0	FS Fr. 0634 to 0934 hr

	Field	1	2	3	4	
A. Init Hydro	2547.0	2634.0	2444.0	0.0	0.0	T STARTED 0122 hr
B. First Flow	100.0	125.0	70.0	0.0	0.0	T ON BOTM 0330 hr
B1. Final Flow	155.0	169.0	133.0	0.0	0.0	T OPEN 0334 hr
C. In Shut-in	395.0	399.0	364.0	0.0	0.0	T PULLED 0936 hr
D. Init Flow	171.0	175.0	142.0	0.0	0.0	T OUT 1305 hr
E. Final Flow	285.0	303.0	269.0	0.0	0.0	
F. Fl Shut-in	375.0	391.0	362.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2492.0	2478.0	2352.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 105000.00 lbs
						Initial Str Wt 61000.00 lbs
						Unseated Str Wt 61000.00 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 87.00 ft
						D.P. Length 4972.00 ft

RECOVERY

Tot Fluid 545.00 ft of 87.00 ft in DC and 458.00 ft in DP
 85.00 ft of Gassy Mud with Oil Specs
 125.00 ft of Slight Oil and Gas Cut Watery Mud
 0.00 ft of 2%oil 5%gas 13%water 80%mud
 185.00 ft of Slight Oil Cut Muddy Water
 0.00 ft of 1%oil 25%mud 74%water
 150.00 ft of Muddy Water with Oil Specs
 0.00 ft of 25%mud 75%water
 0.00 ft of EST. FT. OF PAY-----5
 SALINITY 33000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type Chemical
 Weight 9.10 lb/c
 Vis. 50.00 S/L
 W.L. 9.00 in3
 F.C. 0.20 in
 Mud Drop N

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of bucket in 30sec
 Gas to Surface in 26 mins, to small
 to measure

Initial Shut In:
 Weak to fair blow, 1-4"

Final Flow:
 Strong blow, see gas volume report

Final Shut In:
 Fair blow, 2-9"

SAMPLES: gas sample
 SENT TO:Caraway / Liberal Ks

Amt. of fill 1.00 ft
 Btm. H. Temp. 129.00 F
 Hole Condition fair
 % Porosity 12.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00 N
 Cushion Type None
 Reversed Out N
 Tool Chased N
 Tester Gary Pevoteaux
 Co. Rep. Ken LeBlanc
 Contr. Cheyenne Drlg.
 Rig # 3
 Unit #
 Pump T.

Test Successful: Y

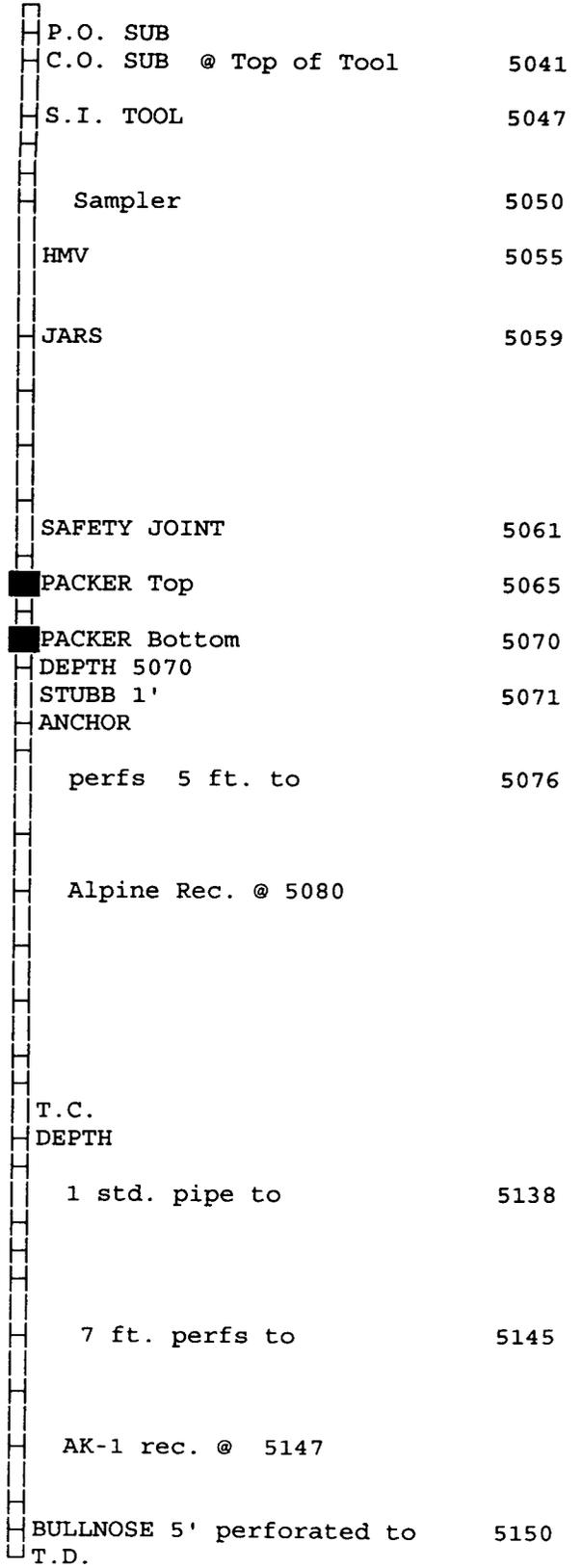
*** TOOL DIAGRAM *** CONV

WELL NAME: Grant Maurice #1-30
 LOCATION : 30-30s-33w
 TICKET No. 9702 D.S.T. No. 6 DATE 03-18-97
 TOTAL TOOL TO BOTTOM OF TOP PACKERS 29
 INTERVAL TOOL
 BOTTOM PACKERS AND ANCHOR 18
 TOTAL TOOL 47
 DRILL COLLAR ANCHOR IN INTERVAL
 D.C. ANCHOR STND.Stands Single Total
 D.P. ANCHOR STND.Stands 1 Single Total 62
 TOTAL ASSEMBLY 109
 D.C. ABOVE TOOLS.Stands1 Single 1 Total 87
 D.P. ABOVE TOOLS.Stands80 Single Total 4972
 TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5168
 TOTAL DEPTH 5150
 TOTAL DRILL PIPE ABOVE K.B. 18

REMARKS:

FLUID SAMPLER DATA

GAS-----0.3 CUBIC FT.
 OIL-----100 ML.
 MUD-----1900 ML.
 WATER-----2000 ML.
 OTHER-----LCM
 PRESSURE-----90 PSI
 Rw-----0.17 ohms @
 64 degrees F
 CHLORIDES-----44000 ppm



ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9702 DST#6 GRANT MAURICE #1-30 AMOCO PROD. CO.

DATE: 03/18/97 TIME: 01:22:57

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	129.00	2443.9	0.0	115.32		
***** Start Flow 1	0.00	69.6	0.0	115.86		
	1.00	59.3	-10.3	116.06		
	2.00	60.8	-8.9	116.61		
	3.00	56.2	-13.4	117.34		
	4.00	56.5	-13.1	118.06		
	5.00	63.1	-6.5	118.76		
	6.00	67.2	-2.5	119.45		
	7.00	66.5	-3.1	120.08		
	8.00	71.4	1.7	120.65		
	9.00	73.3	3.7	121.14		
	10.00	75.0	5.4	121.57		
	11.00	79.4	9.8	121.96		
	12.00	84.8	15.2	122.30		
	13.00	87.3	17.6	122.63		
	14.00	90.2	20.6	122.93		
	15.00	94.0	24.3	123.21		
	16.00	96.3	26.7	123.47		
	17.00	99.1	29.5	123.70		
	18.00	101.9	32.3	123.90		
	19.00	104.0	34.4	124.08		
	20.00	107.4	37.8	124.23		
	21.00	110.4	40.8	124.37		
	22.00	113.0	43.4	124.51		
	23.00	116.1	46.4	124.62		
	24.00	118.2	48.6	124.73		
	25.00	121.8	52.2	124.83		
	26.00	123.5	53.9	124.92		
	27.00	126.5	56.9	125.04		
	28.00	128.4	58.8	125.15		
	29.00	130.6	61.0	125.29		
***** End Flow 1	30.00	133.1	63.5	125.45		
***** Start Shutin 1	0.00	133.1	0.0	125.45	0.0000	0.018
	1.00	194.8	61.7	125.60	31.0000	0.038
	2.00	242.9	109.8	125.75	16.0000	0.059
	3.00	265.2	132.1	125.94	11.0000	0.070
	4.00	278.7	145.6	126.10	8.5000	0.078
	5.00	288.4	155.3	126.25	7.0000	0.083
	6.00	296.0	162.9	126.36	6.0000	0.088
	7.00	302.5	169.4	126.47	5.2857	0.091
	8.00	308.0	174.9	126.55	4.7500	0.095
	9.00	312.8	179.7	126.62	4.3333	0.098
	10.00	317.0	183.9	126.69	4.0000	0.100
	11.00	320.6	187.5	126.73	3.7273	0.103
	12.00	323.7	190.6	126.78	3.5000	0.105
	13.00	326.5	193.4	126.83	3.3077	0.107
	14.00	329.0	195.9	126.87	3.1429	0.108
	15.00	331.2	198.1	126.90	3.0000	0.110
	16.00	333.2	200.1	126.93	2.8750	0.111
	17.00	335.1	202.0	126.96	2.7647	0.112
	18.00	336.8	203.7	126.98	2.6667	0.113

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9702 DST#6 GRANT MAURICE #1-30 AMOCO PROD. CO.

DATE: 03/18/97

TIME: 01:22:57

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
19.00	338.5	205.4	127.01	2.5789	0.115
20.00	340.1	207.0	127.03	2.5000	0.116
21.00	341.6	208.5	127.06	2.4286	0.117
22.00	343.0	209.9	127.07	2.3636	0.118
23.00	344.4	211.3	127.09	2.3043	0.119
24.00	345.7	212.6	127.11	2.2500	0.120
25.00	346.9	213.8	127.13	2.2000	0.120
26.00	348.0	214.9	127.14	2.1538	0.121
27.00	349.1	216.0	127.14	2.1111	0.122
28.00	350.1	217.0	127.14	2.0714	0.123
29.00	351.0	217.9	127.15	2.0345	0.123
30.00	351.9	218.8	127.17	2.0000	0.124
31.00	352.7	219.6	127.18	1.9677	0.124
32.00	353.5	220.4	127.18	1.9375	0.125
33.00	354.3	221.2	127.19	1.9091	0.126
34.00	355.0	221.9	127.19	1.8824	0.126
35.00	355.7	222.6	127.19	1.8571	0.127
36.00	356.4	223.3	127.20	1.8333	0.127
37.00	357.0	223.9	127.19	1.8108	0.127
38.00	357.6	224.5	127.19	1.7895	0.128
39.00	358.2	225.1	127.20	1.7692	0.128
40.00	358.7	225.6	127.21	1.7500	0.129
41.00	359.2	226.1	127.20	1.7317	0.129
42.00	359.7	226.6	127.20	1.7143	0.129
43.00	360.2	227.1	127.20	1.6977	0.130
44.00	360.6	227.5	127.20	1.6818	0.130
45.00	361.1	228.0	127.20	1.6667	0.130
46.00	361.5	228.4	127.20	1.6522	0.131
47.00	361.9	228.8	127.20	1.6383	0.131
48.00	362.3	229.2	127.21	1.6250	0.131
49.00	362.7	229.6	127.21	1.6122	0.132
50.00	363.1	230.0	127.20	1.6000	0.132
51.00	363.4	230.3	127.20	1.5882	0.132
52.00	363.8	230.7	127.21	1.5769	0.132
53.00	364.1	231.0	127.20	1.5660	0.133
54.00	364.4	231.3	127.20	1.5556	0.133
55.00	364.8	231.7	127.19	1.5455	0.133
56.00	365.1	232.0	127.19	1.5357	0.133
57.00	365.5	232.4	127.18	1.5263	0.134
58.00	365.8	232.7	127.19	1.5172	0.134
59.00	366.1	233.0	127.19	1.5085	0.134
60.00	366.4	233.3	127.18	1.5000	0.134
61.00	366.7	233.6	127.17	1.4918	0.134
62.00	364.4	231.3	127.17	1.4839	0.133
***** End Shut-in 1					
***** Start Flow 2					
0.00	142.1	0.0	127.17		
1.00	146.5	4.4	127.14		
2.00	144.8	2.7	127.11		
3.00	151.8	9.6	127.08		
4.00	155.7	13.6	127.07		
5.00	157.5	15.4	127.05		
6.00	160.3	18.2	127.06		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING
TEST: 9702 DST#6 GRANT MAURICE #1-30 AMOCO PROD. CO.
DATE: 03/18/97 TIME: 01:22:57

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
7.00	162.6	20.5	127.08		
8.00	164.2	22.1	127.13		
9.00	167.3	25.1	127.20		
10.00	169.7	27.5	127.28		
11.00	173.0	30.8	127.36		
12.00	174.8	32.7	127.44		
13.00	177.9	35.8	127.53		
14.00	178.3	36.2	127.61		
15.00	181.4	39.2	127.67		
16.00	182.8	40.7	127.72		
17.00	185.2	43.1	127.76		
18.00	186.8	44.7	127.80		
19.00	189.5	47.3	127.84		
20.00	190.1	48.0	127.90		
21.00	193.6	51.5	127.97		
22.00	195.3	53.2	128.02		
23.00	196.9	54.8	128.06		
24.00	198.2	56.1	128.11		
25.00	200.5	58.4	128.14		
26.00	201.1	58.9	128.19		
27.00	203.4	61.2	128.22		
28.00	206.3	64.1	128.25		
29.00	207.0	64.9	128.30		
30.00	208.1	65.9	128.33		
31.00	210.1	68.0	128.36		
32.00	211.8	69.7	128.39		
33.00	213.0	70.9	128.42		
34.00	213.8	71.6	128.44		
35.00	215.4	73.3	128.46		
36.00	217.2	75.1	128.47		
37.00	217.6	75.4	128.49		
38.00	219.2	77.1	128.52		
39.00	221.6	79.5	128.52		
40.00	223.4	81.3	128.52		
41.00	224.3	82.1	128.54		
42.00	225.1	83.0	128.55		
43.00	226.8	84.7	128.57		
44.00	228.4	86.2	128.57		
45.00	227.9	85.8	128.57		
46.00	229.5	87.4	128.59		
47.00	231.6	89.5	128.58		
48.00	233.0	90.8	128.59		
49.00	234.7	92.6	128.60		
50.00	234.9	92.8	128.60		
51.00	235.8	93.7	128.60		
52.00	237.0	94.9	128.61		
53.00	238.5	96.4	128.61		
54.00	239.7	97.6	128.62		
55.00	241.0	98.8	128.62		
56.00	242.7	100.6	128.62		
57.00	241.8	99.7	128.63		

ORIGINAL

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9702 DST#6 GRANT MAURICE #1-30 AMOCO PROD. CO.

DATE: 03/18/97 TIME: 01:22:57

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	58.00	243.2	101.0	128.63		
	59.00	245.1	103.0	128.64		
	60.00	246.0	103.9	128.65		
	61.00	246.9	104.8	128.65		
	62.00	247.2	105.0	128.65		
	63.00	248.7	106.5	128.66		
	64.00	249.5	107.4	128.66		
	65.00	250.4	108.2	128.66		
	66.00	251.4	109.2	128.66		
	67.00	252.9	110.8	128.67		
	68.00	253.8	111.7	128.68		
	69.00	254.8	112.7	128.68		
	70.00	255.3	113.2	128.68		
	71.00	256.4	114.3	128.68		
	72.00	257.0	114.8	128.69		
	73.00	258.4	116.3	128.69		
	74.00	258.8	116.7	128.71		
	75.00	259.3	117.2	128.70		
	76.00	260.8	118.7	128.70		
	77.00	262.1	119.9	128.70		
	78.00	261.5	119.3	128.70		
	79.00	262.1	119.9	128.71		
	80.00	263.0	120.8	128.72		
	81.00	264.8	122.7	128.73		
	82.00	264.5	122.3	128.74		
	83.00	265.5	123.4	128.74		
	84.00	266.8	124.6	128.75		
	85.00	267.8	125.7	128.75		
	86.00	268.9	126.7	128.76		
***** End Flow 2	87.00	268.7	126.6	128.76		
***** Start Shutin 2	0.00	268.7	0.0	128.76	0.0000	0.072
	1.00	287.4	18.7	128.77	118.0000	0.083
	2.00	317.9	49.2	128.77	59.5000	0.101
	3.00	331.7	63.0	128.79	40.0000	0.110
	4.00	340.0	71.3	128.80	30.2500	0.116
	5.00	346.0	77.3	128.81	24.4000	0.120
	6.00	350.2	81.5	128.82	20.5000	0.123
	7.00	353.6	84.9	128.84	17.7143	0.125
	8.00	356.3	87.6	128.85	15.6250	0.127
	9.00	358.5	89.8	128.86	14.0000	0.129
	10.00	360.3	91.6	128.86	12.7000	0.130
	11.00	361.9	93.1	128.87	11.6364	0.131
	12.00	363.1	94.4	128.88	10.7500	0.132
	13.00	364.2	95.5	128.89	10.0000	0.133
	14.00	365.2	96.5	128.88	9.3571	0.133
	15.00	366.1	97.4	128.90	8.8000	0.134
	16.00	366.9	98.2	128.90	8.3125	0.135
	17.00	367.6	98.9	128.90	7.8824	0.135
	18.00	368.3	99.6	128.91	7.5000	0.136
	19.00	368.9	100.2	128.91	7.1579	0.136
	20.00	369.4	100.7	128.91	6.8500	0.136

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9702 DST#6 GRANT MAURICE #1-30 AMOCO PROD. CO.

DATE: 03/18/97

TIME: 01:22:57

Time	Pressure PSIG	delta P PSIG	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
21.00	369.9	101.2	128.91	6.5714	0.137
22.00	370.2	101.5	128.91	6.3182	0.137
23.00	370.7	102.0	128.91	6.0870	0.137
24.00	371.2	102.5	128.92	5.8750	0.138
25.00	371.7	103.0	128.91	5.6800	0.138
26.00	372.0	103.3	128.92	5.5000	0.138
27.00	372.4	103.7	128.90	5.3333	0.139
28.00	372.8	104.1	128.91	5.1786	0.139
29.00	373.2	104.4	128.90	5.0345	0.139
30.00	373.4	104.7	128.91	4.9000	0.139
31.00	373.7	105.0	128.90	4.7742	0.140
32.00	374.0	105.3	128.91	4.6562	0.140
33.00	374.3	105.6	128.89	4.5455	0.140
34.00	374.5	105.8	128.91	4.4412	0.140
35.00	374.8	106.1	128.90	4.3429	0.140
36.00	375.0	106.3	128.90	4.2500	0.141
37.00	375.3	106.6	128.90	4.1622	0.141
38.00	375.5	106.8	128.90	4.0789	0.141
39.00	375.7	107.0	128.91	4.0000	0.141
40.00	375.9	107.2	128.90	3.9250	0.141
41.00	376.1	107.4	128.89	3.8537	0.141
42.00	376.3	107.6	128.90	3.7857	0.142
43.00	376.5	107.8	128.89	3.7209	0.142
44.00	376.7	107.9	128.89	3.6591	0.142
45.00	376.8	108.1	128.88	3.6000	0.142
46.00	377.0	108.3	128.88	3.5435	0.142
47.00	377.2	108.4	128.88	3.4894	0.142
48.00	377.3	108.6	128.88	3.4375	0.142
49.00	377.5	108.8	128.88	3.3878	0.142
50.00	377.6	108.9	128.89	3.3400	0.143
51.00	377.7	109.0	128.88	3.2941	0.143
52.00	377.9	109.2	128.88	3.2500	0.143
53.00	378.0	109.3	128.87	3.2075	0.143
54.00	378.1	109.4	128.87	3.1667	0.143
55.00	378.3	109.5	128.88	3.1273	0.143
56.00	378.4	109.7	128.88	3.0893	0.143
57.00	378.5	109.8	128.88	3.0526	0.143
58.00	378.6	109.9	128.88	3.0172	0.143
59.00	378.8	110.0	128.88	2.9831	0.143
60.00	378.9	110.2	128.88	2.9500	0.144
61.00	379.1	110.4	128.87	2.9180	0.144
62.00	379.2	110.5	128.87	2.8871	0.144
63.00	379.3	110.6	128.87	2.8571	0.144
64.00	379.5	110.8	128.87	2.8281	0.144
65.00	379.6	110.9	128.87	2.8000	0.144
66.00	379.8	111.1	128.87	2.7727	0.144
67.00	379.9	111.2	128.87	2.7463	0.144
68.00	380.1	111.4	128.87	2.7206	0.144
69.00	380.2	111.5	128.87	2.6957	0.145
70.00	380.3	111.6	128.86	2.6714	0.145
71.00	380.5	111.8	128.87	2.6479	0.145

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9702 DST#6 GRANT MAURICE #1-30 AMOCO PROD. CO.

DATE: 03/18/97 TIME: 01:22:57

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
72.00	380.6	111.9	128.87	2.6250	0.145
73.00	380.7	112.0	128.86	2.6027	0.145
74.00	380.9	112.2	128.87	2.5811	0.145
75.00	381.0	112.3	128.87	2.5600	0.145
76.00	381.1	112.4	128.86	2.5395	0.145
77.00	381.2	112.5	128.86	2.5195	0.145
78.00	381.3	112.6	128.86	2.5000	0.145
79.00	381.4	112.7	128.87	2.4810	0.145
80.00	381.5	112.8	128.88	2.4625	0.146
81.00	381.6	112.9	128.86	2.4444	0.146
82.00	381.6	112.9	128.87	2.4268	0.146
83.00	381.7	113.0	128.87	2.4096	0.146
84.00	381.7	113.0	128.87	2.3929	0.146
85.00	381.8	113.1	128.87	2.3765	0.146
86.00	381.8	113.1	128.87	2.3605	0.146
87.00	381.9	113.2	128.88	2.3448	0.146
88.00	381.9	113.2	128.87	2.3295	0.146
89.00	382.0	113.3	128.87	2.3146	0.146
90.00	382.1	113.4	128.87	2.3000	0.146
91.00	382.1	113.4	128.87	2.2857	0.146
92.00	382.1	113.4	128.87	2.2717	0.146
93.00	382.2	113.5	128.87	2.2581	0.146
94.00	382.2	113.5	128.88	2.2447	0.146
95.00	382.3	113.6	128.88	2.2316	0.146
96.00	382.3	113.6	128.88	2.2188	0.146
97.00	382.3	113.6	128.88	2.2062	0.146
98.00	382.2	113.5	128.88	2.1939	0.146
99.00	382.1	113.4	128.88	2.1818	0.146
100.00	382.0	113.3	128.89	2.1700	0.146
101.00	381.8	113.1	128.89	2.1584	0.146
102.00	381.4	112.7	128.89	2.1471	0.145
103.00	380.8	112.1	128.89	2.1359	0.145
104.00	380.2	111.5	128.89	2.1250	0.145
105.00	379.4	110.7	128.88	2.1143	0.144
106.00	378.7	110.0	128.90	2.1038	0.143
107.00	378.0	109.3	128.89	2.0935	0.143
108.00	377.4	108.7	128.90	2.0833	0.142
109.00	376.9	108.1	128.91	2.0734	0.142
110.00	376.4	107.6	128.91	2.0636	0.142
111.00	375.9	107.2	128.91	2.0541	0.141
112.00	375.5	106.7	128.91	2.0446	0.141
113.00	375.0	106.3	128.91	2.0354	0.141
114.00	374.5	105.8	128.91	2.0263	0.140
115.00	374.1	105.3	128.92	2.0174	0.140
116.00	373.7	104.9	128.92	2.0086	0.140
117.00	373.2	104.5	128.92	2.0000	0.139
118.00	372.8	104.1	128.93	1.9915	0.139
119.00	372.3	103.6	128.93	1.9832	0.139
120.00	371.7	103.0	128.93	1.9750	0.138
121.00	371.0	102.3	128.93	1.9669	0.138
122.00	370.2	101.5	128.93	1.9590	0.137

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9702 DST#6 GRANT MAURICE #1-30 AMOCO PROD. CO.

DATE: 03/18/97 TIME: 01:22:57

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
123.00	369.4	100.7	128.94	1.9512	0.136
124.00	368.6	99.9	128.94	1.9435	0.136
125.00	367.8	99.1	128.94	1.9360	0.135
126.00	367.1	98.4	128.94	1.9286	0.135
127.00	366.4	97.7	128.95	1.9213	0.134
128.00	365.7	97.0	128.95	1.9141	0.134
129.00	365.2	96.5	128.95	1.9070	0.133
130.00	364.7	96.0	128.96	1.9000	0.133
131.00	364.2	95.5	128.96	1.8931	0.133
132.00	363.9	95.1	128.96	1.8864	0.132
133.00	363.6	94.8	128.96	1.8797	0.132
134.00	363.3	94.5	128.97	1.8731	0.132
135.00	363.0	94.3	128.97	1.8667	0.132
136.00	362.9	94.1	128.96	1.8603	0.132
137.00	362.7	94.0	128.97	1.8540	0.132
138.00	362.6	93.9	128.98	1.8478	0.131
139.00	362.5	93.8	128.97	1.8417	0.131
140.00	362.4	93.7	128.98	1.8357	0.131
141.00	362.3	93.6	128.98	1.8298	0.131
142.00	362.2	93.5	128.98	1.8239	0.131
143.00	362.1	93.4	128.98	1.8182	0.131
144.00	362.1	93.3	128.98	1.8125	0.131
145.00	362.0	93.3	128.98	1.8069	0.131
146.00	362.0	93.3	128.99	1.8014	0.131
147.00	362.0	93.2	128.98	1.7959	0.131
148.00	361.9	93.2	128.99	1.7905	0.131
149.00	361.9	93.2	129.00	1.7852	0.131
150.00	361.9	93.2	129.00	1.7800	0.131
151.00	361.9	93.2	129.00	1.7748	0.131
152.00	361.9	93.1	128.99	1.7697	0.131
153.00	361.9	93.1	129.00	1.7647	0.131
154.00	361.8	93.1	129.01	1.7597	0.131
155.00	361.8	93.1	129.01	1.7548	0.131
156.00	361.8	93.1	129.00	1.7500	0.131
157.00	361.8	93.1	129.01	1.7452	0.131
158.00	361.8	93.1	129.01	1.7405	0.131
159.00	361.8	93.1	129.00	1.7358	0.131
160.00	361.8	93.1	129.01	1.7312	0.131
161.00	361.8	93.1	129.01	1.7267	0.131
162.00	361.8	93.1	129.01	1.7222	0.131
163.00	361.8	93.1	129.01	1.7178	0.131
164.00	361.8	93.1	129.01	1.7134	0.131
165.00	361.8	93.1	129.02	1.7091	0.131
166.00	361.8	93.1	129.03	1.7048	0.131
167.00	361.8	93.1	129.01	1.7006	0.131
168.00	361.8	93.1	129.02	1.6964	0.131
169.00	361.7	93.0	129.03	1.6923	0.131
170.00	361.7	93.0	129.03	1.6882	0.131
171.00	361.8	93.1	129.02	1.6842	0.131
172.00	361.7	93.0	129.03	1.6802	0.131
173.00	361.7	93.0	129.04	1.6763	0.131

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9702 DST#6 GRANT MAURICE #1-30 AMOCO PROD. CO.

DATE: 03/18/97 TIME: 01:22:57

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	174.00	361.7	93.0	129.04	1.6724	0.131
	175.00	361.7	93.0	129.04	1.6686	0.131
	176.00	361.7	93.0	129.05	1.6648	0.131
	177.00	361.7	93.0	129.05	1.6610	0.131
	178.00	361.7	93.0	129.05	1.6573	0.131
	179.00	361.7	93.0	129.05	1.6536	0.131
	180.00	361.6	92.9	129.05	1.6500	0.131
	181.00	361.6	92.9	129.06	1.6464	0.131
***** End Shut-in 2	182.00	361.6	92.9	129.05	1.6429	0.131
***** Final Hydro.	495.00	2351.8	0.0	129.42		

TEST HISTORY

9702 DST#6 GRANT MAURICE #1-38 AMOCO PROD. CO.

Flag Points

t (Min.) P (PSIg)

- A: 0.00 2443.93
- B: 0.00 69.62
- C: 30.00 133.11
- D: 62.00 364.38
- E: 0.00 142.14
- F: 87.00 268.71
- G: 182.00 361.64
- H: 0.00 2351.80

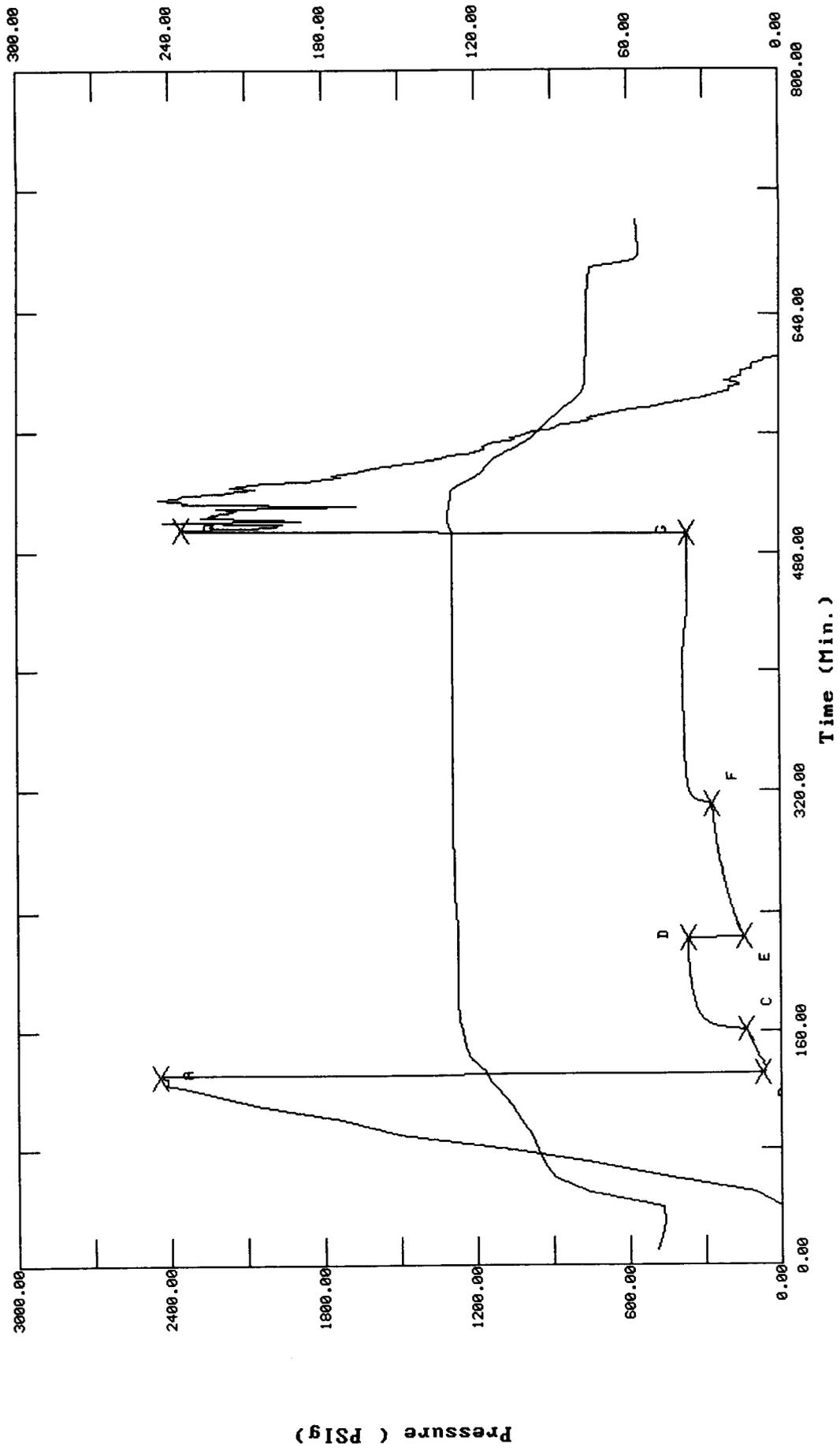
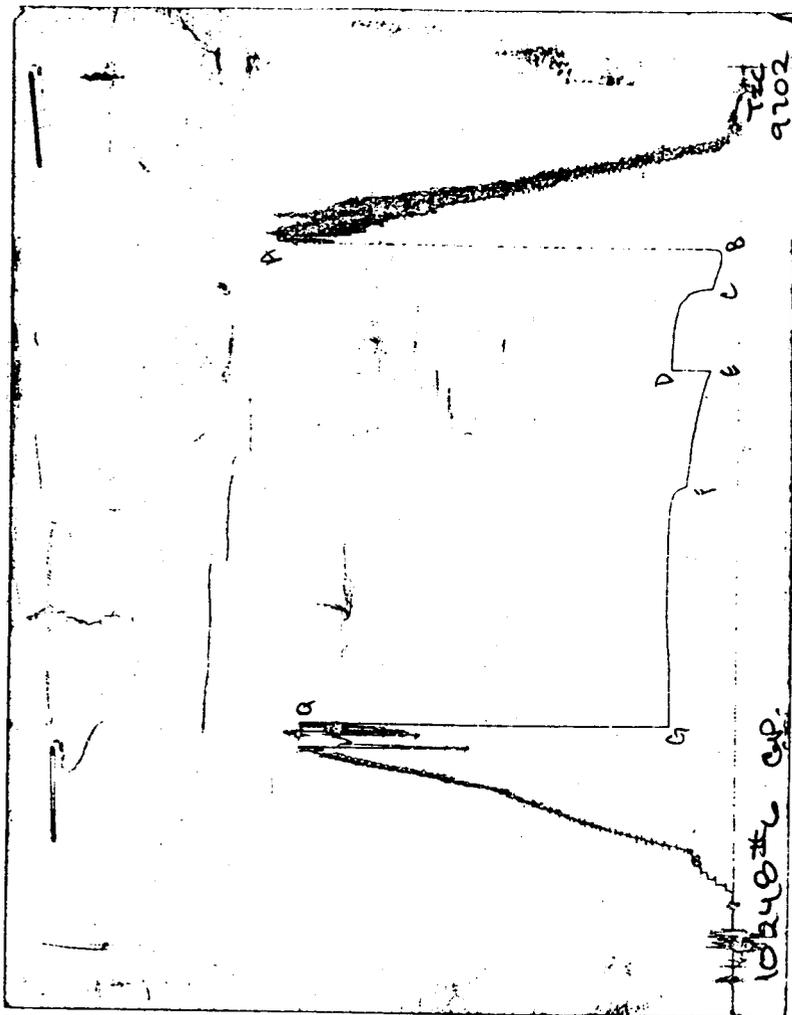


CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 9702

Well Name & No. GRANT MAURICE #1-30 Test No. 6 Date 3-18-97
 Company AMOCO PRODUCTION CO. Zone Tested ATOKA
 Address P.O. Box 800 Room 924, DENVER Co. 80201 Elevation 2967^{est} KB 2954 GL
 Co. Rep / Geo. KEN LEIBLANC Cont. CHEYENNE WILG.#3 Est. Ft. of Pay Por. 12 %
 Location: Sec. 30 Twp. 30^S Rge. 33^W Co. HASKELL State KS.
 No. of Copies ? Distribution Sheet (Y, N) ? Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 5070 - 5150' Initial Str Wt./Lbs. 6,000 Unseated Str Wt./Lbs. 6,000
 Anchor Length 80' Wt. Set Lbs. 29,000 Wt. Pulled Loose/Lbs. 105,000
 Top Packer Depth 5065' Tool Weight 2,100[#]
 Bottom Packer Depth 5070' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
 Total Depth 5150' Wt. Pipe Run NONE Drill Collar Run 87'
 Mud Wt. 9.1 LCM 2[#] Vis. 50 WL 9.0cc. Drill Pipe Size 4 1/2" F.H. Ft. Run 4972'

Blow Description IF: Strong blow. Btm. of bucket in 30 secs. G.T.S. in 26 mins. T.S.T.M. ISI: Water to fair below. (1-4")
FF: Strong blow. (see gas volume report)
FST: Fair blow. (2-9")

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP
<u>545 fluid</u>	<u>yes</u>	<u>87</u>	<u>458</u>
Rec. <u>85</u> Feet Of <u>Curry Mud @ oil spec</u>	<u>10%</u> gas	<u>2%</u> oil	<u>90%</u> mud
Rec. <u>125</u> Feet Of <u>S.O.C.M.</u>	<u>5%</u> gas	<u>2%</u> oil	<u>13%</u> water <u>80%</u> mud
Rec. <u>185</u> Feet Of <u>S.O.C.M.W.</u>	<u>1%</u> gas	<u>1%</u> oil	<u>74%</u> water <u>25%</u> mud
Rec. <u>150</u> Feet Of <u>M.W @ oil spec.</u>	<u>1%</u> gas	<u>1%</u> oil	<u>75%</u> water <u>25%</u> mud
Rec. <u>45</u> Feet Of <u> </u>	<u> </u> gas	<u> </u> oil	<u> </u> water <u> </u> mud

BHT 129 °F Gravity N/A. °API @ °F Corrected Gravity N/A °API
 RW 0.23 @ L3 °F Chlorides 33,000 ppm Recovery Chlorides 2,000 ppm System

(A) Initial Hydrostatic Mud	<u>2547</u>	<u>2444</u> PSI	Recorder No. <u>10248</u>	T-Started <u>0122</u>
(B) First Initial Flow Pressure	<u>100</u>	<u>70</u> PSI	(depth) <u>5147'</u>	T-Open <u>0334</u>
(C) First Final Flow Pressure	<u>155</u>	<u>133</u> PSI	Recorder No. <u>3024</u>	T-Pulled <u>0936</u>
(D) Initial Shut-in Pressure	<u>395</u>	<u>364</u> PSI	(depth) <u>5080'</u>	T-Out <u>1305</u>
(E) Second Initial Flow Pressure	<u>171</u>	<u>142</u> PSI	Recorder No. <u> </u>	
(F) Second Final Flow Pressure	<u>285</u>	<u>269</u> PSI	(depth) <u> </u>	
(G) Final Shut-in Pressure	<u>375</u>	<u>362</u> PSI	Initial Opening <u>30</u>	Test <u>✓ 800</u>
(H) Final Hydrostatic Mud	<u>2442</u>	<u>2352</u> PSI	Initial Shut-in <u>40</u>	Jars <u>✓ 200</u>
	<u>AK-1</u>	<u>alpine</u>	Final Flow <u>90</u>	Safety Joint <u>✓ 50</u>
			Final Shut-in <u>180</u>	Straddle <u> </u>
			<u>5</u>	Circ. Sub <u> </u>
				Sampler <u>✓ 200</u>
				Extra Packer <u> </u>
				Elect. Rec. <u>✓ 150⁰⁰</u>
				Other <u> </u>

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
 Our Representative Cary Prothman

TOTAL PRICE \$ 1400⁰⁰

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 9202 Date 3-18-96
Company Name Amoco Production Co.
Lease GRANT MAURICE # 1-30 Test No. 6
County HASKELL Ks. Sec. 30 Twp. 30S Rng. 33W

SAMPLER RECOVERY

Gas 0.3 Cubic Ft. #
Oil 100 ML
Mud 1900 ML
Water 2000 ML
Other L.C.M. ? #
Pressure 90 PSI
Total 4,000 ML

PIT MUD ANALYSIS

Chlorides 2,000 ppm.
Resistivity 4.04 ohms @ 50 F
Viscosity 50
Mud Weight 9.1
Filtrate 9.0 cc.
Other L.C.M. 2#/3L

SAMPLER ANALYSIS

Resistivity 0.17 ohms @ 64 F
Chlorides 44,000 ppm.
Gravity N/A. corrected @ 60 F

PIPE RECOVERY

TOP 210 S.O.E.G.E.M.
Resistivity N/C ohms @ ~ F
Chlorides 2,000 ppm.
MIDDLE 185 S.O.C.M.W.
Resistivity 0.29 ohms @ 63 F
Chlorides 30,000 ppm.
BOTTOM 150
Resistivity 0.23 ohms @ 63 F
Chlorides 33,000 ppm.

TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Co.
 WELL NAME: Grant Maurice #1-30
 LOCATION : Sec.30 Twp.30s Rge.33w Ks
 INTERVAL : 5240.00 To 5370.00 ft

DATE 03-20-97
 KB 2967.00 ft TICKET NO: 9797 DST #7
 GR 2954.00 ft FORMATION: Morrow
 TD 5500.00 ft TEST TYPE: CONV.

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	24174	24174	2351		PF Fr. 0605 to 0635 hr
SI 60	Range(Psi)	3050.0	3050.0	4995.0	0.0	IS Fr. 0635 to 0735 hr
SF 90	Clock(hrs)	12 HR	12 HR	Elec.		SF Fr. 0735 to 0905 hr
FS 180	Depth(ft)	5242.0	5242.0	5337.0	0.0	FS Fr. 0905 to 1205 hr

	Field	1	2	3	4
A. Init Hydro	2672.0	2659.0	2614.0	0.0	0.0
B. First Flow	948.0	1127.0	960.0	0.0	0.0
31. Final Flow	323.0	307.0	351.0	0.0	0.0
C. In Shut-in	797.0	794.0	870.0	0.0	0.0
D. Init Flow	369.0	368.0	393.0	0.0	0.0
E. Final Flow	675.0	670.0	738.0	0.0	0.0
F. Fl Shut-in	782.0	860.0	912.0	0.0	0.0
G. Final Hydro	2450.0	2388.0	2535.0	0.0	0.0
Inside/Outside	0	0	I		

T STARTED 0404 hr
 T ON BOTM 0603 hr
 T OPEN 0605 hr
 T PULLED 1205 hr
 T OUT 1705 hr

TOOL DATA-----
 Tool Wt. 4200.00 lbs
 Wt Set On Packer 25000.00 lbs
 Wt Pulled Loose 190000.00 lbs
 Initial Str Wt 65000.00 lbs
 Unseated Str Wt 70000.00 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 89.00 ft
 D.P. Length 4972.00 ft

RECOVERY

Tot Fluid 2060.00 ft of 89.00 ft in DC and 1971.00 ft in DP
 200.00 ft of Mud Cut Oil 30% oil 70% mud
 1860.00 ft of Clean Gassy Oil
 0.00 ft of 30% gas 70% oil
 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 36.00

MUD DATA-----
 Mud Type Chemical
 Weight 9.20 lb/c
 Vis. 58.00 S/L
 W.L. 7.70 in3
 F.C. 0.20 in
 Mud Drop N

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of bucket in 15sec
 Gas to Surface in 3 min

Initial Shut In:
 Blow built to 7"

Final Flow:
 Strong blow, See gas volume report

Final Shut In:
 Strong blow, built to bottom of bucket

Amt. of fill 0.00 ft
 Btm. H. Temp. 132.00 F
 Hole Condition fair
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 3
 Cushion Amt. 0.00 N
 Cushion Type None
 Reversed Out N
 Tool Chased N
 Tester Paul Simpson
 Co. Rep. Ken LeBlanc
 Contr. Cheyenne Drlg.
 Rig # 3
 Unit #
 Pump T.

SAMPLES: gas sample
 SENT TO:Caraway / Liberal Ks

Test Successful: Y

*** TOOL DIAGRAM *** CONV.

WELL NAME: Grant Maurice #1-30

LOCATION : Sec.30 Twp.30s Rge.33w Ks

TICKET No. 9797 D.S.T. No. 7 DATE 03-20-97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 29

INTERVAL TOOL 130 tail

BOTTOM PACKERS AND ANCHOR 37

TOTAL TOOL 196

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single 1 Total 93

TOTAL ASSEMBLY 289

D.C. ABOVE TOOLS.Stands1 Single 1 Total 89

D.P. ABOVE TOOLS.Stands80 Single Total 5129

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5507

TOTAL DEPTH 5500

TOTAL DRILL PIPE ABOVE K.B. 07

REMARKS:

FLUID SAMPLER DATA

GAS-----10.9 CUBIC FT.

OIL-----2400 ML.

MUD-----0000 ML.

WATER-----0000 ML.

OTHER-----LCM

PRESSURE-----700 PSI

Rw-----n/a

CHLORIDES----- degrees F
ppm

P.O. SUB	
C.O. SUB Top of tool @	5210
S.I. TOOL H & T	5216
Sampler	5219
HMV Sterling	5224
JARS Bowen	5229
SAFETY JOINT Bowen	5231
PACKER Top	5235
PACKER Bottom	5240
DEPTH 5240	
STUBB 1'	5241
ANCHOR	
perfs 1 ft. to	5242
AK-1 rec @	5242
1 stand & joint of	
pipe to	5337
Alpine Rec. @	5337
5' perf	5342
5' perf	5347
5' perf	5352
5' perf	5357
5' perf	5362
T.C. 3' perf & b.o.subto	5365
DEPTH	
PACKER Straddle	5370
Stubb	5371
2 stands of pipe	
to	5497
AK-1 rec. @	5495
BULLNOSE	
T.D. 3' plug to	5500

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.
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number:	970420	Analyzed:	03/20/97
Sample From:	Grant Maurice 1-30 DST 7	Pressure:	
Producer:	Amoco Production Co.	Temperature:	
Date:		Location:	
Time:		County:	Haskell
Sampler:		State:	Kansas
Source:		Formation:	Morrow

	Mole %	GPM
Helium	He: 1.196	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 13.998	0.000
Carbon Dioxide	CO2: 0.271	0.000
Methane	C1: 69.786	0.000
Ethane	C2: 6.184	1.654
Propane	C3: 4.856	1.338
Iso Butane	iC4: 0.785	0.257
Normal Butane	nC4: 1.715	0.541
Iso Pentane	iC5: 0.359	0.131
Normal Pentane	nC5: 0.416	0.151
Hexanes Plus	C6+: 0.434	0.189

TOTAL: 100.000 4.261
Z Fact: 0.9972
SP.GR.: 0.7493
BTU (SAT): 1057.9 @ 14.73 psia
BTU (DRY): 1076.7 @ 14.73 psia
OCTANE RATING: 104.8

COMMENTS:

0.000

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9797 Amoco Production Company Grant Maurice 1-30 DST #7

DATE: 03/20/97

TIME: 03:35:31

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	142.00	2613.8	0.0	123.01		
***** Start Flow 1	0.00	959.6	0.0	127.35		
	1.00	917.0	-42.6	127.49		
	2.00	883.4	-76.2	127.54		
	3.00	856.2	-103.4	127.57		
	4.00	830.5	-129.1	127.56		
	5.00	804.1	-155.5	127.54		
	6.00	777.2	-182.5	127.51		
	7.00	749.2	-210.4	127.48		
	8.00	720.5	-239.1	127.45		
	9.00	691.6	-268.0	127.42		
	10.00	661.8	-297.8	127.38		
	11.00	632.0	-327.7	127.35		
	12.00	602.3	-357.4	127.31		
	13.00	572.9	-386.7	127.28		
	14.00	535.7	-423.9	127.24		
	15.00	504.0	-455.6	127.21		
	16.00	474.5	-485.1	127.17		
	17.00	447.2	-512.4	127.13		
	18.00	421.1	-538.6	127.08		
	19.00	396.4	-563.2	127.04		
	20.00	375.7	-583.9	126.99		
	21.00	359.7	-599.9	126.97		
	22.00	342.0	-617.6	126.96		
	23.00	320.2	-639.4	126.97		
	24.00	332.2	-627.4	127.00		
	25.00	340.5	-619.1	127.09		
	26.00	344.0	-615.6	127.23		
***** End Flow 1	27.00	351.4	-608.2	127.40		
***** Start Shutin 1	0.00	351.4	0.0	127.40	0.0000	0.123
	1.00	447.2	95.8	127.65	28.0000	0.200
	2.00	494.2	142.8	128.04	14.5000	0.244
	3.00	532.8	181.5	128.41	10.0000	0.284
	4.00	563.5	212.1	128.70	7.7500	0.318
	5.00	588.2	236.8	128.92	6.4000	0.346
	6.00	608.6	257.2	129.08	5.5000	0.370
	7.00	626.0	274.6	129.21	4.8571	0.392
	8.00	641.7	290.3	129.30	4.3750	0.412
	9.00	655.5	304.1	129.39	4.0000	0.430
	10.00	666.9	315.5	129.46	3.7000	0.445
	11.00	676.6	325.2	129.51	3.4545	0.458
	12.00	685.0	333.6	129.56	3.2500	0.469
	13.00	692.3	340.9	129.59	3.0769	0.479
	14.00	699.0	347.6	129.62	2.9286	0.489
	15.00	705.2	353.8	129.64	2.8000	0.497
	16.00	710.9	359.5	129.65	2.6875	0.505
	17.00	716.5	365.1	129.65	2.5882	0.513
	18.00	721.4	370.0	129.66	2.5000	0.520
	19.00	726.2	374.8	129.66	2.4211	0.527
	20.00	731.0	379.6	129.67	2.3500	0.534
	21.00	735.6	384.2	129.66	2.2857	0.541

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9797 Amoco Production Company Grant Maurice 1-30 DST #7

DATE: 03/20/97

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	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	22.00	740.1	388.7	129.65	2.2273	0.548
	23.00	744.5	393.1	129.65	2.1739	0.554
	24.00	748.9	397.5	129.65	2.1250	0.561
	25.00	753.2	401.8	129.65	2.0800	0.567
	26.00	757.4	406.0	129.67	2.0385	0.574
	27.00	761.7	410.3	129.68	2.0000	0.580
	28.00	765.9	414.5	129.70	1.9643	0.587
	29.00	769.9	418.5	129.72	1.9310	0.593
	30.00	774.1	422.7	129.75	1.9000	0.599
	31.00	778.1	426.7	129.77	1.8710	0.605
	32.00	782.1	430.7	129.80	1.8438	0.612
	33.00	786.1	434.7	129.82	1.8182	0.618
	34.00	790.0	438.6	129.85	1.7941	0.624
	35.00	793.7	442.3	129.88	1.7714	0.630
	36.00	797.5	446.1	129.89	1.7500	0.636
	37.00	801.2	449.8	129.92	1.7297	0.642
	38.00	804.8	453.4	129.95	1.7105	0.648
	39.00	808.5	457.1	129.96	1.6923	0.654
	40.00	811.9	460.5	129.98	1.6750	0.659
	41.00	815.5	464.1	129.99	1.6585	0.665
	42.00	819.0	467.6	129.99	1.6429	0.671
	43.00	822.1	470.8	129.99	1.6279	0.676
	44.00	825.5	474.1	129.99	1.6136	0.681
	45.00	828.7	477.3	129.99	1.6000	0.687
	46.00	831.8	480.4	129.98	1.5870	0.692
	47.00	834.9	483.5	129.98	1.5745	0.697
	48.00	837.9	486.5	129.97	1.5625	0.702
	49.00	840.9	489.6	129.97	1.5510	0.707
	50.00	843.5	492.2	129.97	1.5400	0.712
	51.00	846.4	495.0	129.96	1.5294	0.716
	52.00	849.2	497.8	129.97	1.5192	0.721
	53.00	851.9	500.5	129.97	1.5094	0.726
	54.00	854.5	503.1	129.98	1.5000	0.730
	55.00	857.2	505.8	129.99	1.4909	0.735
	56.00	859.8	508.4	129.98	1.4821	0.739
	57.00	862.5	511.1	129.99	1.4737	0.744
	58.00	864.8	513.4	129.98	1.4655	0.748
	59.00	867.3	515.9	129.99	1.4576	0.752
***** End Shut-in 1	60.00	869.7	518.3	129.99	1.4500	0.756
***** Start Flow 2	0.00	393.4	0.0	129.79		
	1.00	401.5	8.1	129.74		
	2.00	413.3	19.9	129.70		
	3.00	428.4	34.9	129.66		
	4.00	442.0	48.5	129.64		
	5.00	450.7	57.2	129.62		
	6.00	458.4	65.0	129.61		
	7.00	466.2	72.8	129.61		
	8.00	474.4	81.0	129.61		
	9.00	483.4	90.0	129.61		
	10.00	492.5	99.0	129.62		
	11.00	500.9	107.4	129.64		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9797 Amoco Production Company Grant Maurice 1-30 DST #7

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Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
12.00	508.3	114.8	129.67		
13.00	514.4	120.9	129.71		
14.00	519.4	126.0	129.93		
15.00	525.0	131.5	130.24		
16.00	530.3	136.9	130.61		
17.00	535.4	141.9	130.96		
18.00	540.4	147.0	131.26		
19.00	545.4	151.9	131.51		
20.00	550.1	156.6	131.70		
21.00	554.8	161.3	131.84		
22.00	559.2	165.8	131.93		
23.00	563.5	170.0	132.00		
24.00	567.8	174.4	132.05		
25.00	572.5	179.1	132.08		
26.00	576.7	183.3	132.10		
27.00	581.4	188.0	132.11		
28.00	585.7	192.3	132.13		
29.00	590.1	196.6	132.14		
30.00	594.2	200.8	132.13		
31.00	597.8	204.4	132.13		
32.00	601.7	208.2	132.12		
33.00	605.7	212.3	132.10		
34.00	610.1	216.7	132.08		
35.00	614.3	220.9	132.07		
36.00	618.5	225.0	132.05		
37.00	622.2	228.8	132.03		
38.00	626.7	233.2	132.00		
39.00	630.5	237.1	131.99		
40.00	634.7	241.2	131.97		
41.00	638.2	244.7	131.95		
42.00	642.2	248.8	131.93		
43.00	645.6	252.2	131.91		
44.00	649.3	255.8	131.89		
45.00	652.4	259.0	131.88		
46.00	655.6	262.2	131.86		
47.00	658.7	265.2	131.83		
48.00	661.8	268.3	131.82		
49.00	665.0	271.5	131.80		
50.00	667.8	274.4	131.79		
51.00	670.2	276.8	131.77		
52.00	672.9	279.5	131.75		
53.00	675.7	282.2	131.74		
54.00	678.1	284.7	131.73		
55.00	681.1	287.6	131.71		
56.00	683.5	290.1	131.69		
57.00	685.8	292.3	131.68		
58.00	688.3	294.8	131.66		
59.00	691.0	297.5	131.65		
60.00	693.3	299.9	131.64		
61.00	695.7	302.2	131.63		
62.00	697.8	304.3	131.62		

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9797 Amoco Production Company Grant Maurice 1-30 DST #7

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	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	63.00	700.2	306.8	131.61		
	64.00	702.3	308.9	131.61		
	65.00	704.2	310.8	131.62		
	66.00	706.1	312.6	131.63		
	67.00	708.1	314.6	131.62		
	68.00	710.0	316.6	131.63		
	69.00	712.2	318.8	131.62		
	70.00	714.0	320.6	131.63		
	71.00	715.8	322.4	131.63		
	72.00	717.7	324.2	131.64		
	73.00	719.6	326.1	131.63		
	74.00	721.0	327.6	131.63		
	75.00	722.9	329.4	131.64		
	76.00	724.4	330.9	131.64		
	77.00	726.5	333.0	131.64		
	78.00	727.6	334.1	131.64		
	79.00	729.4	336.0	131.64		
	80.00	730.8	337.3	131.64		
	81.00	732.6	339.2	131.64		
	82.00	733.9	340.4	131.63		
	83.00	735.5	342.0	131.63		
	84.00	737.0	343.6	131.64		
***** End Flow 2	85.00	738.4	344.9	131.64		
***** Start Shutin 2	0.00	738.4	0.0	131.64	0.0000	0.545
	1.00	761.0	22.7	131.64	113.0000	0.579
	2.00	779.1	40.7	131.64	57.0000	0.607
	3.00	789.4	51.0	131.65	38.3333	0.623
	4.00	795.8	57.4	131.67	29.0000	0.633
	5.00	799.7	61.3	131.70	23.4000	0.639
	6.00	802.6	64.2	131.72	19.6667	0.644
	7.00	805.1	66.7	131.74	17.0000	0.648
	8.00	807.4	69.0	131.76	15.0000	0.652
	9.00	809.5	71.1	131.77	13.4444	0.655
	10.00	811.5	73.1	131.78	12.2000	0.659
	11.00	813.3	74.9	131.79	11.1818	0.661
	12.00	815.1	76.7	131.80	10.3333	0.664
	13.00	816.9	78.5	131.80	9.6154	0.667
	14.00	818.5	80.1	131.80	9.0000	0.670
	15.00	820.0	81.6	131.80	8.4667	0.672
	16.00	821.4	83.0	131.81	8.0000	0.675
	17.00	822.8	84.4	131.81	7.5882	0.677
	18.00	824.2	85.9	131.80	7.2222	0.679
	19.00	825.6	87.2	131.81	6.8947	0.682
	20.00	826.8	88.5	131.81	6.6000	0.684
	21.00	828.1	89.7	131.81	6.3333	0.686
	22.00	829.4	91.0	131.81	6.0909	0.688
	23.00	830.7	92.3	131.81	5.8696	0.690
	24.00	831.8	93.4	131.80	5.6667	0.692
	25.00	833.1	94.8	131.80	5.4800	0.694
	26.00	834.2	95.8	131.80	5.3077	0.696
	27.00	835.4	97.0	131.80	5.1481	0.698

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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28.00	836.7	98.3	131.80	5.0000	0.700
29.00	837.8	99.4	131.80	4.8621	0.702
30.00	838.9	100.5	131.79	4.7333	0.704
31.00	839.9	101.6	131.79	4.6129	0.706
32.00	841.0	102.6	131.78	4.5000	0.707
33.00	842.0	103.7	131.79	4.3939	0.709
34.00	843.0	104.7	131.78	4.2941	0.711
35.00	844.1	105.7	131.78	4.2000	0.712
36.00	845.0	106.6	131.79	4.1111	0.714
37.00	846.1	107.7	131.79	4.0270	0.716
38.00	847.2	108.8	131.78	3.9474	0.718
39.00	848.2	109.8	131.78	3.8718	0.719
40.00	849.1	110.7	131.78	3.8000	0.721
41.00	850.1	111.7	131.78	3.7317	0.723
42.00	851.0	112.6	131.78	3.6667	0.724
43.00	851.9	113.6	131.78	3.6047	0.726
44.00	852.9	114.5	131.78	3.5455	0.727
45.00	853.6	115.2	131.78	3.4889	0.729
46.00	854.6	116.2	131.78	3.4348	0.730
47.00	855.5	117.1	131.78	3.3830	0.732
48.00	856.3	117.9	131.78	3.3333	0.733
49.00	857.1	118.8	131.78	3.2857	0.735
50.00	858.0	119.6	131.79	3.2400	0.736
51.00	858.8	120.4	131.78	3.1961	0.738
52.00	859.6	121.2	131.79	3.1538	0.739
53.00	860.3	121.9	131.78	3.1132	0.740
54.00	861.1	122.7	131.78	3.0741	0.741
55.00	861.8	123.5	131.79	3.0364	0.743
56.00	862.7	124.3	131.79	3.0000	0.744
57.00	863.4	125.0	131.79	2.9649	0.745
58.00	864.2	125.8	131.80	2.9310	0.747
59.00	864.8	126.4	131.79	2.8983	0.748
60.00	865.6	127.2	131.79	2.8667	0.749
61.00	866.3	127.9	131.80	2.8361	0.750
62.00	867.0	128.6	131.80	2.8065	0.752
63.00	867.7	129.3	131.80	2.7778	0.753
64.00	868.4	130.0	131.80	2.7500	0.754
65.00	869.1	130.8	131.81	2.7231	0.755
66.00	869.7	131.3	131.80	2.6970	0.756
67.00	870.3	131.9	131.81	2.6716	0.757
68.00	871.0	132.6	131.80	2.6471	0.759
69.00	871.6	133.2	131.81	2.6232	0.760
70.00	872.3	133.9	131.81	2.6000	0.761
71.00	872.8	134.5	131.82	2.5775	0.762
72.00	873.5	135.1	131.80	2.5556	0.763
73.00	874.1	135.7	131.82	2.5342	0.764
74.00	874.6	136.2	131.83	2.5135	0.765
75.00	875.2	136.8	131.83	2.4933	0.766
76.00	875.9	137.5	131.83	2.4737	0.767
77.00	876.4	138.1	131.83	2.4545	0.768
78.00	877.0	138.6	131.83	2.4359	0.769

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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79.00	877.5	139.2	131.84	2.4177	0.770
80.00	878.1	139.7	131.84	2.4000	0.771
81.00	878.6	140.2	131.85	2.3827	0.772
82.00	879.1	140.7	131.85	2.3659	0.773
83.00	879.7	141.3	131.84	2.3494	0.774
84.00	880.1	141.8	131.85	2.3333	0.775
85.00	880.6	142.3	131.85	2.3176	0.776
86.00	881.3	142.9	131.86	2.3023	0.777
87.00	881.7	143.3	131.86	2.2874	0.777
88.00	882.3	143.9	131.86	2.2727	0.778
89.00	882.8	144.4	131.86	2.2584	0.779
90.00	883.3	144.9	131.88	2.2444	0.780
91.00	883.8	145.4	131.87	2.2308	0.781
92.00	884.2	145.8	131.88	2.2174	0.782
93.00	884.6	146.2	131.89	2.2043	0.783
94.00	885.0	146.6	131.87	2.1915	0.783
95.00	885.6	147.2	131.88	2.1789	0.784
96.00	886.1	147.7	131.88	2.1667	0.785
97.00	886.4	148.0	131.89	2.1546	0.786
98.00	886.9	148.5	131.89	2.1429	0.787
99.00	887.4	149.0	131.90	2.1313	0.787
100.00	887.8	149.4	131.90	2.1200	0.788
101.00	888.3	149.9	131.90	2.1089	0.789
102.00	888.6	150.2	131.91	2.0980	0.790
103.00	889.1	150.7	131.91	2.0874	0.791
104.00	889.5	151.1	131.92	2.0769	0.791
105.00	890.0	151.6	131.92	2.0667	0.792
106.00	890.4	152.0	131.92	2.0566	0.793
107.00	890.7	152.3	131.92	2.0467	0.793
108.00	891.1	152.7	131.93	2.0370	0.794
109.00	891.5	153.1	131.93	2.0275	0.795
110.00	891.9	153.5	131.94	2.0182	0.795
111.00	892.2	153.8	131.93	2.0090	0.796
112.00	892.6	154.3	131.93	2.0000	0.797
113.00	893.1	154.7	131.94	1.9912	0.798
114.00	893.3	154.9	131.95	1.9825	0.798
115.00	893.7	155.4	131.95	1.9739	0.799
116.00	894.2	155.8	131.95	1.9655	0.800
117.00	894.4	156.0	131.95	1.9573	0.800
118.00	894.8	156.4	131.95	1.9492	0.801
119.00	895.2	156.9	131.96	1.9412	0.801
120.00	895.6	157.2	131.97	1.9333	0.802
121.00	895.9	157.5	131.97	1.9256	0.803
122.00	896.3	157.9	131.98	1.9180	0.803
123.00	896.7	158.3	131.98	1.9106	0.804
124.00	897.0	158.6	131.98	1.9032	0.805
125.00	897.3	159.0	131.98	1.8960	0.805
126.00	897.7	159.3	131.99	1.8889	0.806
127.00	898.0	159.6	131.99	1.8819	0.806
128.00	898.4	160.0	131.99	1.8750	0.807
129.00	898.7	160.3	132.00	1.8682	0.808

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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130.00	898.9	160.6	132.00	1.8615	0.808
131.00	899.3	160.9	132.00	1.8550	0.809
132.00	899.6	161.2	132.01	1.8485	0.809
133.00	899.9	161.6	132.01	1.8421	0.810
134.00	900.3	161.9	132.01	1.8358	0.811
135.00	900.5	162.1	132.02	1.8296	0.811
136.00	900.9	162.5	132.02	1.8235	0.812
137.00	901.2	162.8	132.03	1.8175	0.812
138.00	901.5	163.2	132.03	1.8116	0.813
139.00	901.8	163.4	132.02	1.8058	0.813
140.00	902.0	163.7	132.04	1.8000	0.814
141.00	902.4	164.0	132.04	1.7943	0.814
142.00	902.7	164.3	132.04	1.7887	0.815
143.00	903.1	164.7	132.05	1.7832	0.816
144.00	903.3	164.9	132.05	1.7778	0.816
145.00	903.5	165.1	132.05	1.7724	0.816
146.00	903.8	165.4	132.05	1.7671	0.817
147.00	904.1	165.8	132.06	1.7619	0.817
148.00	904.4	166.0	132.06	1.7568	0.818
149.00	904.7	166.3	132.08	1.7517	0.819
150.00	905.0	166.6	132.07	1.7467	0.819
151.00	905.3	166.9	132.08	1.7417	0.820
152.00	905.6	167.2	132.08	1.7368	0.820
153.00	905.8	167.4	132.08	1.7320	0.821
154.00	906.1	167.7	132.09	1.7273	0.821
155.00	906.3	167.9	132.08	1.7226	0.821
156.00	906.6	168.2	132.10	1.7179	0.822
157.00	906.8	168.4	132.10	1.7134	0.822
158.00	907.0	168.6	132.10	1.7089	0.823
159.00	907.3	168.9	132.11	1.7044	0.823
160.00	907.6	169.2	132.10	1.7000	0.824
161.00	907.9	169.5	132.11	1.6957	0.824
162.00	908.1	169.7	132.12	1.6914	0.825
163.00	908.3	170.0	132.12	1.6871	0.825
164.00	908.7	170.3	132.13	1.6829	0.826
165.00	908.8	170.5	132.13	1.6788	0.826
166.00	909.1	170.7	132.13	1.6747	0.826
167.00	909.3	171.0	132.14	1.6707	0.827
168.00	909.6	171.2	132.15	1.6667	0.827
169.00	909.9	171.5	132.14	1.6627	0.828
170.00	910.2	171.8	132.15	1.6588	0.828
171.00	910.4	172.0	132.15	1.6550	0.829
172.00	910.6	172.2	132.15	1.6512	0.829
173.00	910.9	172.5	132.16	1.6474	0.830
174.00	911.1	172.7	132.16	1.6437	0.830
175.00	911.3	172.9	132.16	1.6400	0.830
176.00	911.5	173.1	132.17	1.6364	0.831
177.00	911.8	173.4	132.17	1.6328	0.831
178.00	912.0	173.6	132.18	1.6292	0.832
179.00	912.3	173.9	132.18	1.6257	0.832
180.00	912.5	174.2	132.18	1.6222	0.833

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9797 Amoco Production Company Grant Maurice 1-30 DST #7

DATE: 03/20/97 TIME: 03:35:31

	Time	Pressure	delta P	Temp.	(T+dT)/dT	P ² /10 ⁶
		PSig	PSig	DEG F		
***** End Shut-in 2	181.00	912.7	174.3	132.19	1.6188	0.833
***** Start Flow 3	0.00	2534.9	0.0	132.23		
***** End Flow 3	1.00	2537.0	2.1	132.36		
***** End Shut-in 3	1.00	2537.0	0.0	132.36	113.0000	6.436
***** Final Hydro.	513.00	2537.0	0.0	132.36		

TEST HISTORY

9797 Amoco Production Company Grant Maurice 1-30 DST #7

Flag Points

	t (Min.)	P (PSig)	t (Min.)	P (PSig)
A:	0.00	2613.76	Q:	0.00 2534.86
B:	0.00	959.62		
C:	27.00	351.40		
D:	60.00	869.65		
E:	0.00	393.45		
F:	85.00	738.39		
G:	181.00	912.71		
H:	0.00	2534.86		

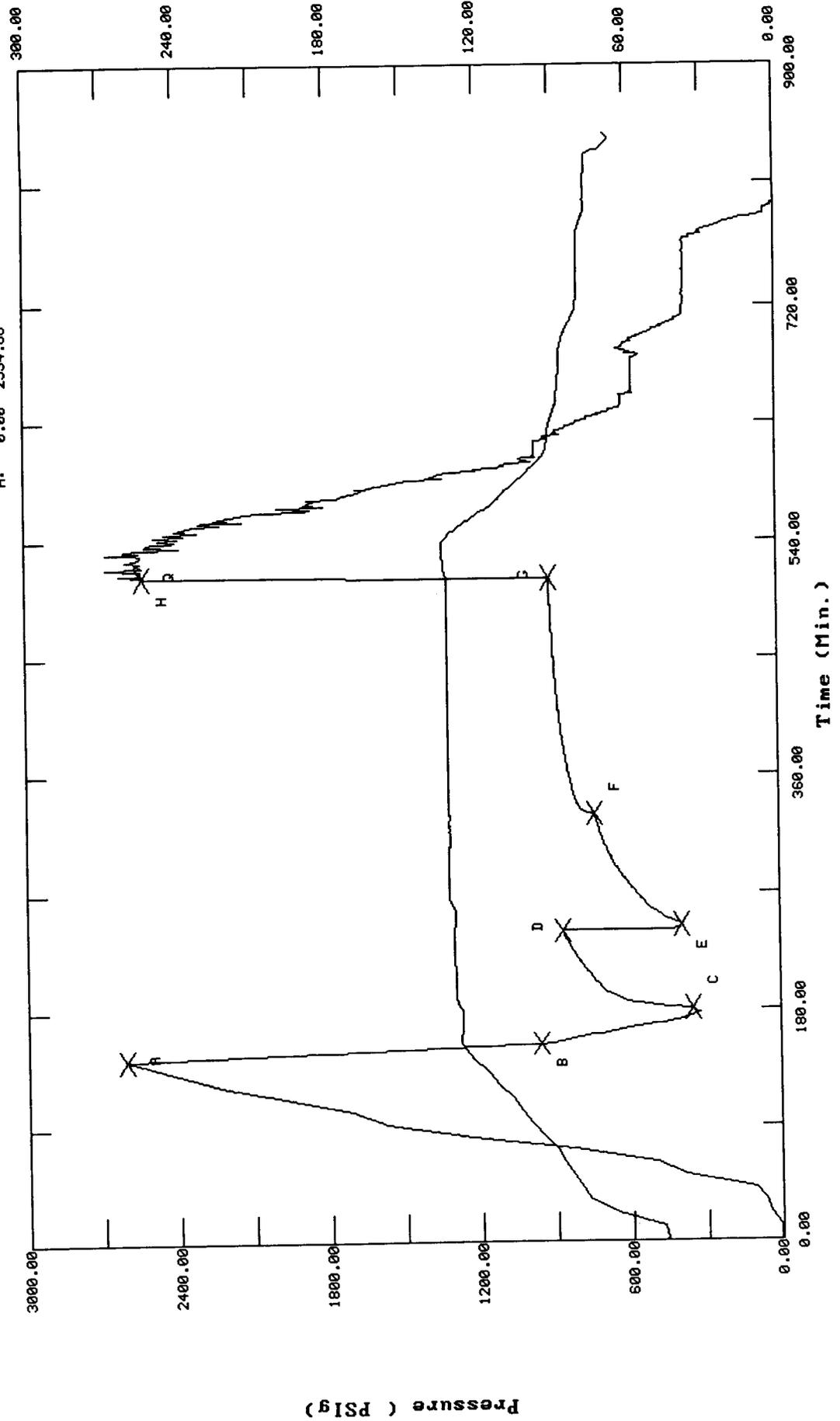
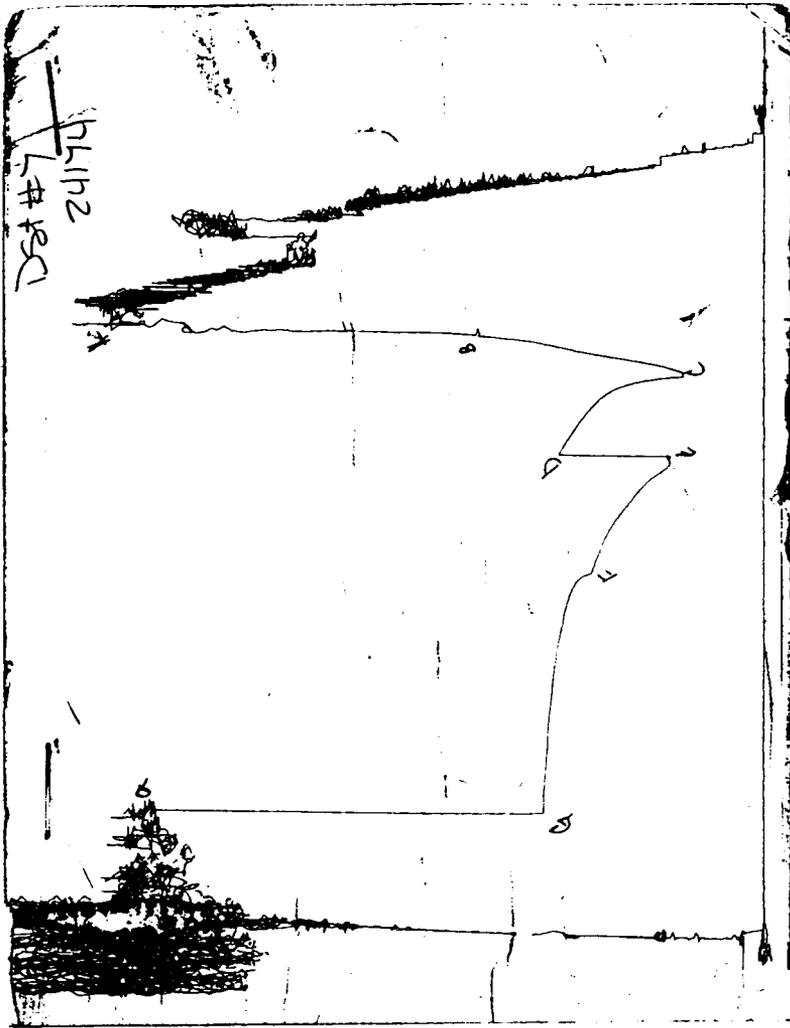


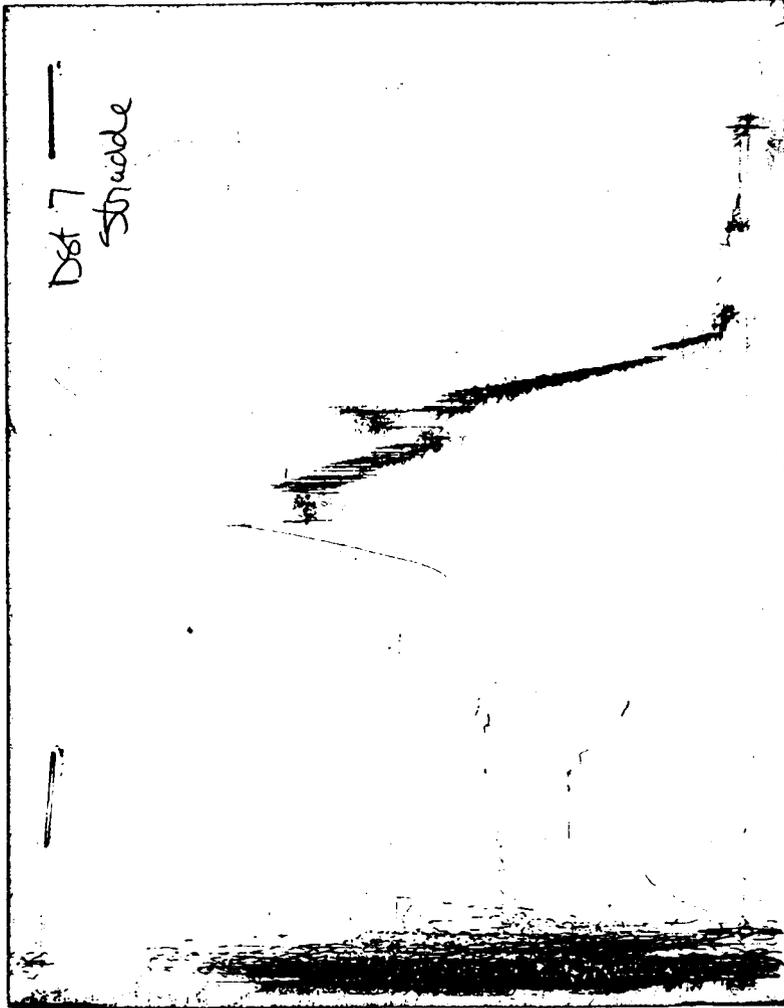
CHART PAGE



ORIGINAL

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

CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No. 9797

Well Name & No. Grant Maurice #1-30 Test No. 7 Date 3-20-97
 Company Amoco Production Company Zone Tested Morrow
 Address _____ Elevation 2967 KB 2954 GL
 Co. Rep / Geo. Ken LeBlanc Cont. Cheyenne #3 Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 30 Twp. 30s Rge. 33w Co. Haskell State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

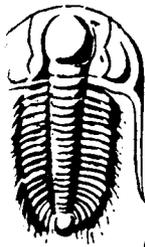
Interval Tested 5240-5370 Initial Str Wt./Lbs. 65,000 Unseated Str Wt./Lbs. 70,000
 Anchor Length 130 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 190,000
 Top Packer Depth 5235-5240 Tool Weight 4200
 Bottom Packer Depth 5370 Hole Size — 7 7/8" Rubber Size — 6 3/4"
 Total Depth 5500 Wt. Pipe Run _____ Drill Collar Run 89
 Mud Wt. 9.2 LCM 4 Vis. 58 WL 7.7 Drill Pipe Size 4 1/2 FT Ft. Run 5218
 Blow Description Strong - bottom of bucket in 15 seconds GTS 3min
see report 1st - bkoff blow - then built back to 7"
ff - gauging gas - see report

Recovery — Total Feet 2060 GIP _____ Ft. in DC 89 Ft. in DP 1971
 Rec. 200 Feet Of MUD %gas 30 %oil _____ %water 70 %mud _____
 Rec. _____ Feet Of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. 1860 Feet Of gassy oil %gas 70 %oil _____ %water _____ %mud _____
 Rec. _____ Feet Of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet Of _____ %gas _____ %oil _____ %water _____ %mud _____
 BHT _____ °F Gravity 39 °API D@ 80 °F Corrected Gravity 36 °API _____
 RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System _____

(A) Initial Hydrostatic Mud 2672 2614 PSI Recorder No. 24174 T-Started 0404
 (B) First Initial Flow Pressure 948 960 PSI (depth) 5242 T-Open 0605
 (C) First Final Flow Pressure 323 351 PSI Recorder No. 2351 T-Pulled 1205
 (D) Initial Shut-in Pressure 797 870 PSI (depth) 5337 T-Out 1005
 (E) Second Initial Flow Pressure 369 393 PSI Recorder No. 13308
 (F) Second Final Flow Pressure 675 738 PSI (depth) 5495
 (G) Final Shut-in Pressure 782 912 PSI Initial Opening 30 Test 800
 (H) Final Hydrostatic Mud 2450 2535 PSI Initial Shut-in 60 Jars X 200
 Final Flow 960 Safety Joint X 50
 Final Shut-in 180 Straddle X 250
 Circ. Sub X 35
 Sampler X 200
 Extra Packer X 150
 Elect. Rec. X 150
 Other _____
 TOTAL PRICE \$ 1835

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 _____
 Our Representative Paul Simpson



TRILOBITE TESTING

5528

P.O. Box 362 • Hays, Kansas 67801 • (913) 625-4778

GAS VOLUME REPORT

Amoco Prod Co

Maurice

OPERATOR

WELL NAME AND NO.

DST NO.

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
10	42	1.5	3274	10	~	1.25	TSTM
15	38	}	3036	20	20	.5	28
20	30		2558	30	10	.5	19.9
5	14		1559	40	5#	.25	20.7
0	7		1036	50	7#	.25	25 25
				60	9	.25	29
				70	9	.25	29
				80	8.5	.25	28
				90	8	.25	28.7

Remarks:

Will burn