



01095913

WELL NAME: Avalanche #1-14
OPERATOR: Amoco Production Company
LOCATION: Sec 14 Twp 15S Rge 43W
Cheyenne County Colorado
DATE: 05/09/96



TRILOBITE TESTING L.L.C.

OPERATOR : Amoco Production Company
WELL NAME: Avalanche #1-14
LOCATION : 14-15S-43W, Cheyenne CO
INTERVAL : 5199.00 To 5340.00 ft

DATE 5-09-96

KB 4124.00 ft TICKET NO: 9170 DST #1
GR 4112.00 ft FORMATION: MORROW
TD 5710.00 ft TEST TYPE: CONV. STRADDLE

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 15 Rec.	AK-1	AK-1	Alpine	AK-1		PF Fr. 0106 to 0121 hr
SI 30 Range(Psi)	4000.0	4000.0	4995.0	4025.0	0.0	IS Fr. 0121 to 0151 hr
SF 60 Clock(hrs)	12	12	Elect	12		SF Fr. 0151 to 0251 hr
FS 120 Depth(ft)	5201.0	5201.0	5333.0	5705.0	0.0	FS Fr. 0251 to 0451 hr

	Field	1	2	3	4	
A. Init Hydro	2618.0	261.0	2557.0	0.0	0.0	T STARTED 2300 hr
B. First Flow	298.0	316.0	370.0	0.0	0.0	T ON BOTM 0103 hr
B1. Final Flow	622.0	646.0	634.0	0.0	0.0	T OPEN 0106 hr
C. In Shut-in	990.0	990.0	950.0	0.0	0.0	T PULLED 0451 hr
D. Init Flow	711.0	719.0	646.0	0.0	0.0	T OUT 0830 hr
E. Final Flow	970.0	974.0	937.0	0.0	0.0	
F. Fl Shut-in	990.0	992.0	955.0	0.0	0.0	
G. Final Hydro	2530.0	2517.0	2523.0	0.0	0.0	TOOL DATA-----
Inside/Outside	O	O	I	T		Tool Wt. 2000.00 lbs

RECOVERY

Tot Fluid 1820.00 ft of 560.00 ft in DC and 1260.00 ft in DP
920.00 ft of Drilling mud
900.00 ft of Water

Wt Set On Packer 35000.00 lbs
Wt Pulled Loose 140000.00 lb
Initial Str Wt 110000.00 lb
Unseated Str Wt 120000.00 lb
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 560.00 ft
D.P. Length 4625.00 ft

SALINITY 30000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow -
Fair to strong blow off bottom in
2 min

Initial Shutin -
Bled off blow, no return

Final Flow -
Fair to strong blow off bottom in
3 min

Final Shutin -
Bled off blow, no return

SAMPLES:
SENT TO:

MUD DATA-----

Mud Type	CHEMICAL
Weight	9.10 lb/
Vis.	60.00 S/L
W.L.	5.60 in3
F.C.	0.00 in
Mud Drop N	

Amt. of fill 0.00 ft
Btm. H. Temp. 147.00 F
Hole Condition GOOD
% Porosity 0.00
Packer Size 6.75 in
No. of Packers 4
Cushion Amt. 0.00
Cushion Type
Reversed Out N
Tool Chased N
Tester ROD STEINBRINK
Co. Rep. RON PULLIAM
Contr. KUDU
Rig # 1
Unit #
Pump T.

Test Successful: Y

TEST HISTORY

9170 DST #1 AVALANCHE #1-14 AMOCO PROD

Flag Points
t(Min.) P(PSig)

A: 0.00 2557.45
B: 0.00 370.44
C: 17.00 634.50
D: 29.00 950.47
E: 0.00 646.81
F: 63.00 937.78
G: 119.00 955.13
Q: 0.00 2523.22

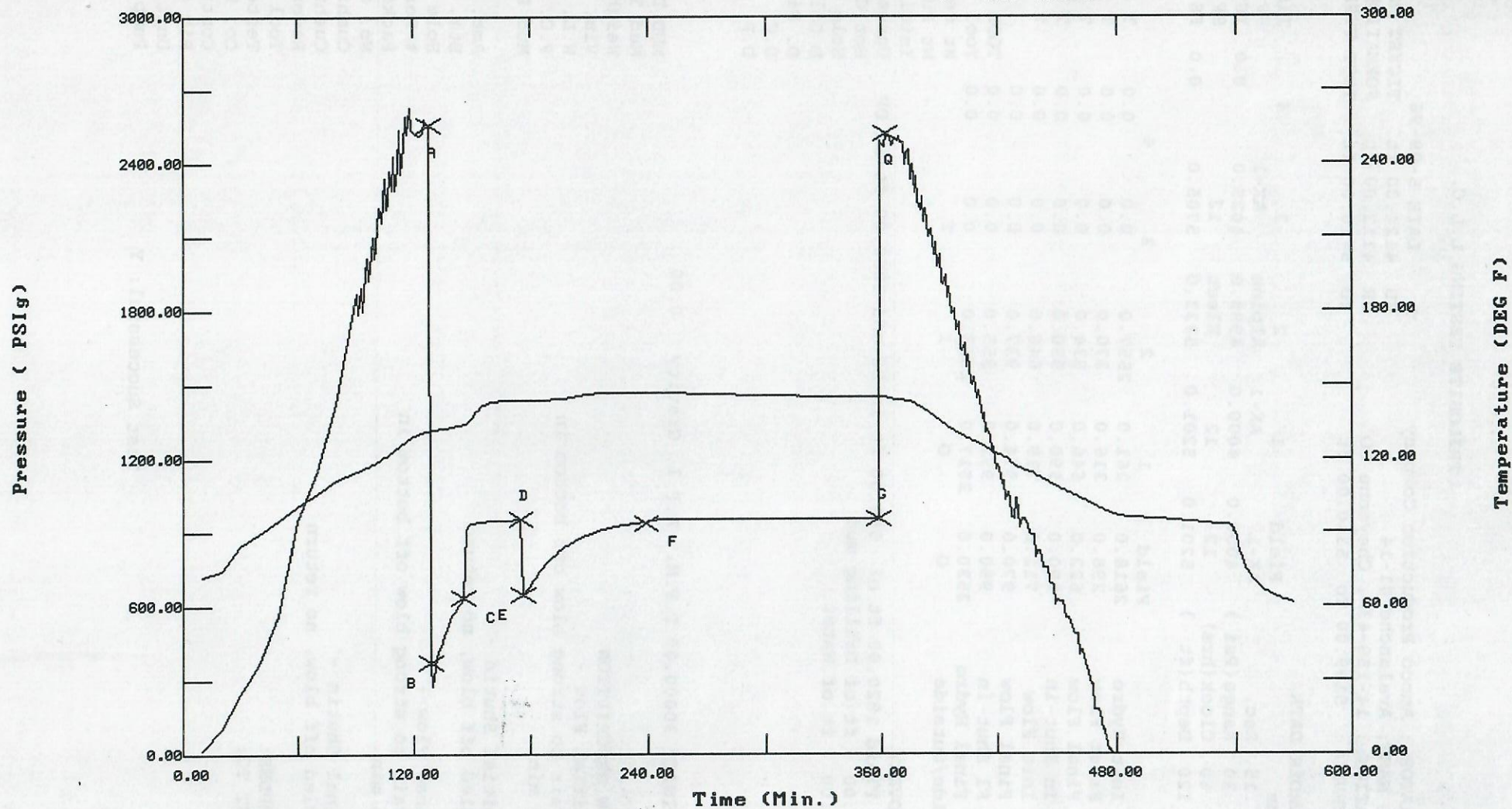
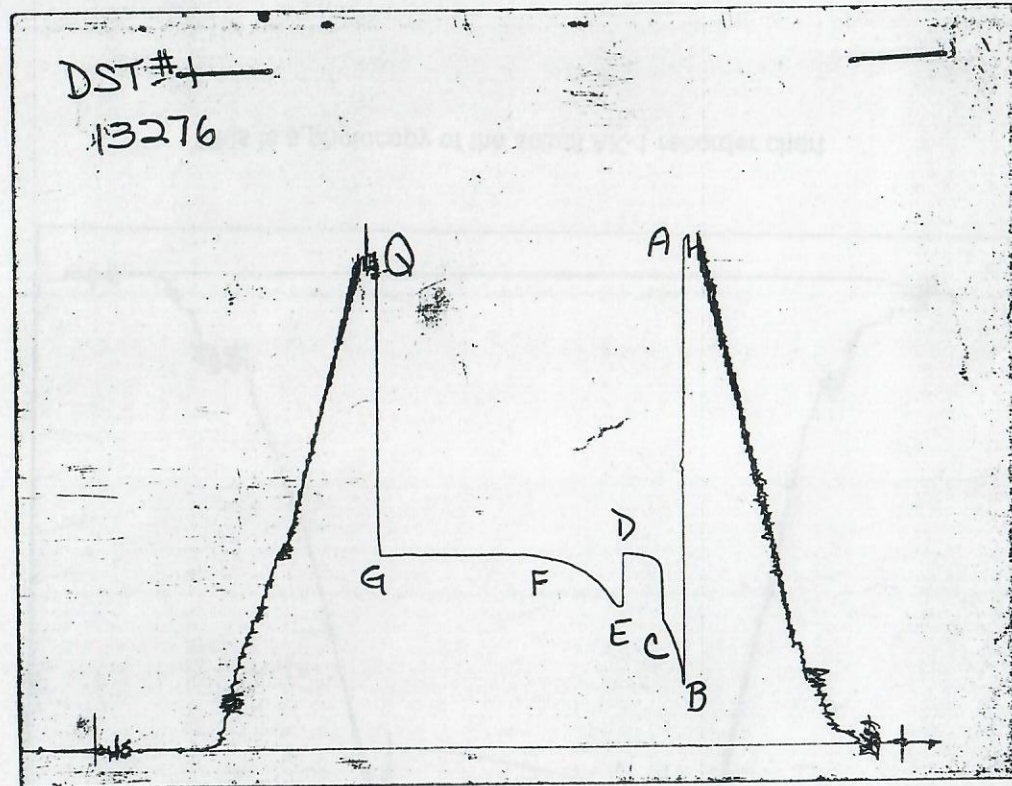
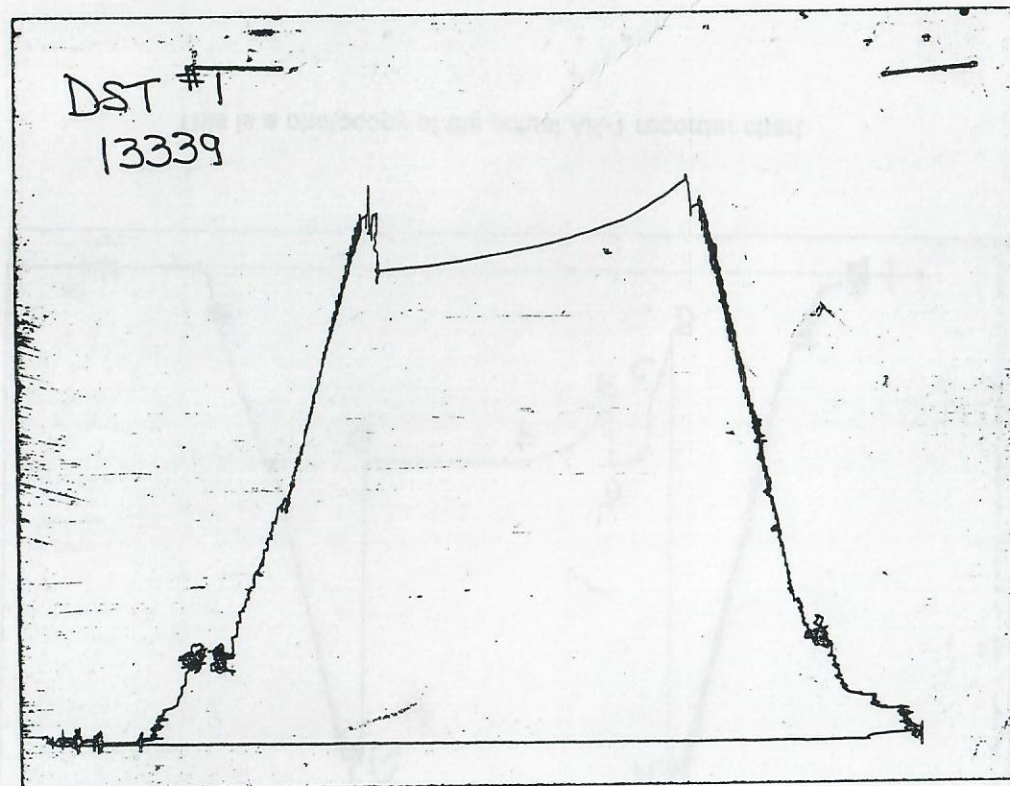


CHART PAGE



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

CHART PAGE



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

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING
 TEST: 9170 DST #1 AVALANCHE #1-14 AMOCO PROD
 DATE: 05/08/96 TIME: 22:59:39

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	128.00	2557.4	0.0	131.59		
***** Start Flow 1	0.00	370.4	0.0	131.71		
	1.00	275.4	-95.1	131.83		
	2.00	350.9	-19.5	131.94		
	3.00	395.9	25.4	132.07		
	4.00	415.8	45.4	132.17		
	5.00	439.0	68.5	132.28		
	6.00	462.7	92.3	132.40		
	7.00	481.5	111.0	132.53		
	8.00	505.4	135.0	132.67		
	9.00	525.4	155.0	132.80		
	10.00	544.3	173.8	132.96		
	11.00	560.3	189.8	133.12		
	12.00	575.5	205.1	133.31		
	13.00	587.3	216.8	133.47		
	14.00	599.8	229.3	133.62		
	15.00	611.0	240.5	133.79		
	16.00	623.1	252.6	133.95		
***** End Flow 1	17.00	634.5	264.1	134.10		
***** Start Shutin 1	0.00	634.5	0.0	134.10	0.0000	0.403
	1.00	908.4	273.9	134.33	18.0000	0.825
	2.00	922.7	288.2	134.90	9.5000	0.851
	3.00	928.6	294.1	135.73	6.6667	0.862
	4.00	932.2	297.7	136.81	5.2500	0.869
	5.00	934.8	300.3	137.91	4.4000	0.874
	6.00	936.9	302.4	138.95	3.8333	0.878
	7.00	938.8	304.3	139.88	3.4286	0.881
	8.00	940.3	305.8	140.67	3.1250	0.884
	9.00	941.6	307.1	141.35	2.8889	0.887
	10.00	942.7	308.2	141.87	2.7000	0.889
	11.00	943.7	309.2	142.27	2.5455	0.891
	12.00	944.4	309.9	142.64	2.4167	0.892
	13.00	945.2	310.7	142.94	2.3077	0.893
	14.00	945.8	311.3	143.16	2.2143	0.895
	15.00	946.4	311.9	143.37	2.1333	0.896
	16.00	946.9	312.4	143.53	2.0625	0.897
	17.00	947.2	312.7	143.65	2.0000	0.897
	18.00	947.6	313.1	143.73	1.9444	0.898
	19.00	948.0	313.5	143.83	1.8947	0.899
	20.00	948.4	313.9	143.88	1.8500	0.899
	21.00	948.6	314.1	143.94	1.8095	0.900
	22.00	948.9	314.4	143.97	1.7727	0.900
	23.00	949.2	314.7	144.00	1.7391	0.901
	24.00	949.4	314.9	144.04	1.7083	0.901
	25.00	949.6	315.1	144.05	1.6800	0.902
	26.00	949.9	315.4	144.06	1.6538	0.902
	27.00	950.1	315.6	144.07	1.6296	0.903
	28.00	950.3	315.8	144.08	1.6071	0.903
***** End Shut-in 1	29.00	950.5	316.0	144.08	1.5862	0.903
***** Start Flow 2	0.00	646.8	0.0	144.07		
	1.00	654.5	7.7	144.07		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
2.00	666.2	19.3	144.06		
3.00	678.7	31.9	144.03		
4.00	690.7	43.9	144.00		
5.00	702.5	55.7	143.98		
6.00	713.8	67.0	143.98		
7.00	725.0	78.2	143.96		
8.00	735.9	89.1	143.96		
9.00	746.0	99.2	143.99		
10.00	755.8	109.0	144.01		
11.00	764.9	118.1	144.06		
12.00	773.4	126.5	144.10		
13.00	781.7	134.9	144.16		
14.00	789.6	142.7	144.23		
15.00	797.0	150.2	144.27		
16.00	804.5	157.7	144.34		
17.00	811.3	164.4	144.41		
18.00	818.2	171.3	144.48		
19.00	824.5	177.7	144.55		
20.00	830.8	184.0	144.56		
21.00	836.6	189.7	144.72		
22.00	842.3	195.5	144.83		
23.00	847.6	200.8	144.91		
24.00	852.5	205.6	145.08		
25.00	857.5	210.7	145.24		
26.00	862.2	215.3	145.38		
27.00	866.5	219.6	145.53		
28.00	871.1	224.3	145.65		
29.00	875.0	228.2	145.80		
30.00	878.6	231.8	145.92		
31.00	882.4	235.6	146.10		
32.00	886.0	239.2	146.21		
33.00	889.3	242.5	146.34		
34.00	892.5	245.7	146.41		
35.00	895.3	248.5	146.53		
36.00	898.5	251.7	146.62		
37.00	901.2	254.4	146.69		
38.00	903.9	257.0	146.76		
39.00	906.1	259.3	146.83		
40.00	908.5	261.7	146.87		
41.00	910.8	264.0	146.91		
42.00	913.0	266.2	146.95		
43.00	915.0	268.1	147.00		
44.00	916.9	270.0	147.03		
45.00	918.6	271.7	147.01		
46.00	920.3	273.5	147.06		
47.00	922.0	275.2	147.10		
48.00	923.6	276.8	147.10		
49.00	925.4	278.6	147.09		
50.00	926.8	280.0	147.13		
51.00	928.2	281.4	147.13		
52.00	929.4	282.6	147.10		

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	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	53.00	930.6	283.8	147.16		
	54.00	931.6	284.8	147.19		
	55.00	932.8	286.0	147.20		
	56.00	933.7	286.9	147.17		
	57.00	934.7	287.9	147.17		
	58.00	935.5	288.7	147.19		
	59.00	936.3	289.5	147.16		
	60.00	937.1	290.3	147.16		
	61.00	937.9	291.1	147.16		
	62.00	938.6	291.8	147.14		
***** End Flow 2	63.00	937.8	291.0	147.12		
***** Start Shutin 2	0.00	937.8	0.0	147.12	0.0000	0.879
	1.00	947.6	9.8	147.11	81.0000	0.898
	2.00	948.5	10.7	147.08	41.0000	0.900
	3.00	949.0	11.2	147.08	27.6667	0.901
	4.00	949.4	11.6	147.03	21.0000	0.901
	5.00	949.6	11.8	147.03	17.0000	0.902
	6.00	949.9	12.1	147.01	14.3333	0.902
	7.00	950.1	12.3	146.97	12.4286	0.903
	8.00	950.3	12.6	146.97	11.0000	0.903
	9.00	950.5	12.7	146.93	9.8889	0.904
	10.00	950.7	13.0	146.92	9.0000	0.904
	11.00	950.9	13.1	146.88	8.2727	0.904
	12.00	950.9	13.2	146.86	7.6667	0.904
	13.00	951.1	13.3	146.85	7.1538	0.905
	14.00	951.3	13.5	146.82	6.7143	0.905
	15.00	951.3	13.5	146.81	6.3333	0.905
	16.00	951.4	13.6	146.77	6.0000	0.905
	17.00	951.5	13.7	146.74	5.7059	0.905
	18.00	951.5	13.7	146.72	5.4444	0.905
	19.00	951.7	13.9	146.69	5.2105	0.906
	20.00	951.8	14.0	146.67	5.0000	0.906
	21.00	951.9	14.1	146.64	4.8095	0.906
	22.00	952.0	14.2	146.61	4.6364	0.906
	23.00	952.1	14.3	146.59	4.4783	0.906
	24.00	952.1	14.3	146.57	4.3333	0.907
	25.00	952.2	14.5	146.57	4.2000	0.907
	26.00	952.3	14.5	146.51	4.0769	0.907
	27.00	952.3	14.6	146.50	3.9630	0.907
	28.00	952.4	14.6	146.47	3.8571	0.907
	29.00	952.5	14.7	146.44	3.7586	0.907
	30.00	952.6	14.8	146.42	3.6667	0.907
	31.00	952.6	14.8	146.40	3.5806	0.907
	32.00	952.7	14.9	146.37	3.5000	0.908
	33.00	952.7	14.9	146.34	3.4242	0.908
	34.00	952.7	15.0	146.31	3.3529	0.908
	35.00	952.8	15.0	146.29	3.2857	0.908
	36.00	952.9	15.1	146.27	3.2222	0.908
	37.00	952.9	15.1	146.24	3.1622	0.908
	38.00	953.0	15.2	146.23	3.1053	0.908
	39.00	953.0	15.2	146.19	3.0513	0.908

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
40.00	953.0	15.2	146.17	3.0000	0.908
41.00	953.1	15.3	146.14	2.9512	0.908
42.00	953.2	15.4	146.11	2.9048	0.909
43.00	953.2	15.4	146.11	2.8605	0.909
44.00	953.2	15.4	146.08	2.8182	0.909
45.00	953.3	15.5	146.06	2.7778	0.909
46.00	953.3	15.6	146.05	2.7391	0.909
47.00	953.4	15.6	146.01	2.7021	0.909
48.00	953.4	15.7	145.98	2.6667	0.909
49.00	953.5	15.7	145.98	2.6327	0.909
50.00	953.5	15.7	145.96	2.6000	0.909
51.00	953.5	15.7	145.95	2.5686	0.909
52.00	953.6	15.8	145.92	2.5385	0.909
53.00	953.6	15.8	145.89	2.5094	0.909
54.00	953.7	15.9	145.88	2.4815	0.910
55.00	953.7	15.9	145.84	2.4545	0.909
56.00	953.7	16.0	145.86	2.4286	0.910
57.00	953.8	16.0	145.80	2.4035	0.910
58.00	953.8	16.0	145.77	2.3793	0.910
59.00	953.7	15.9	145.79	2.3559	0.910
60.00	953.8	16.1	145.76	2.3333	0.910
61.00	953.9	16.1	145.77	2.3115	0.910
62.00	953.9	16.1	145.71	2.2903	0.910
63.00	954.0	16.2	145.71	2.2698	0.910
64.00	954.0	16.3	145.68	2.2500	0.910
65.00	954.1	16.3	145.62	2.2308	0.910
66.00	954.1	16.3	145.65	2.2121	0.910
67.00	954.1	16.4	145.63	2.1940	0.910
68.00	954.1	16.4	145.62	2.1765	0.910
69.00	954.2	16.4	145.60	2.1594	0.910
70.00	954.2	16.4	145.54	2.1429	0.911
71.00	954.3	16.5	145.53	2.1268	0.911
72.00	954.3	16.5	145.55	2.1111	0.911
73.00	954.3	16.5	145.54	2.0959	0.911
74.00	954.4	16.6	145.52	2.0811	0.911
75.00	954.4	16.6	145.48	2.0667	0.911
76.00	954.4	16.6	145.45	2.0526	0.911
77.00	954.5	16.7	145.43	2.0390	0.911
78.00	954.5	16.7	145.46	2.0256	0.911
79.00	954.5	16.7	145.44	2.0127	0.911
80.00	954.5	16.8	145.40	2.0000	0.911
81.00	954.5	16.8	145.41	1.9877	0.911
82.00	954.6	16.8	145.39	1.9756	0.911
83.00	954.7	16.9	145.38	1.9639	0.911
84.00	954.7	16.9	145.37	1.9524	0.911
85.00	954.5	16.7	145.36	1.9412	0.911
86.00	954.7	16.9	145.34	1.9302	0.911
87.00	954.8	17.0	145.33	1.9195	0.912
88.00	954.7	16.9	145.31	1.9091	0.911
89.00	954.8	17.0	145.31	1.8989	0.912
90.00	954.8	17.0	145.28	1.8889	0.912

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	91.00	954.7	16.9	145.27	1.8791	0.911
	92.00	954.8	17.0	145.26	1.8696	0.912
	93.00	954.8	17.1	145.25	1.8602	0.912
	94.00	954.9	17.1	145.26	1.8511	0.912
	95.00	954.7	17.0	145.22	1.8421	0.912
	96.00	954.8	17.1	145.19	1.8333	0.912
	97.00	954.9	17.1	145.18	1.8247	0.912
	98.00	954.8	17.0	145.17	1.8163	0.912
	99.00	954.8	17.1	145.19	1.8081	0.912
	100.00	954.8	17.1	145.15	1.8000	0.912
	101.00	954.9	17.1	145.13	1.7921	0.912
	102.00	954.8	17.0	145.16	1.7843	0.912
	103.00	954.9	17.2	145.16	1.7767	0.912
	104.00	955.0	17.2	145.16	1.7692	0.912
	105.00	955.0	17.2	145.12	1.7619	0.912
	106.00	955.0	17.2	145.10	1.7547	0.912
	107.00	954.9	17.2	145.10	1.7477	0.912
	108.00	955.0	17.2	145.11	1.7407	0.912
	109.00	954.9	17.2	145.05	1.7339	0.912
	110.00	955.0	17.2	145.07	1.7273	0.912
	111.00	955.1	17.3	145.04	1.7207	0.912
	112.00	955.1	17.3	145.03	1.7143	0.912
	113.00	955.0	17.3	145.04	1.7080	0.912
	114.00	955.0	17.3	145.02	1.7018	0.912
	115.00	955.0	17.3	145.03	1.6957	0.912
	116.00	955.1	17.3	144.99	1.6897	0.912
	117.00	955.1	17.3	144.98	1.6838	0.912
	118.00	955.1	17.3	145.01	1.6780	0.912
***** End Shut-in 2	119.00	955.1	17.3	145.00	1.6723	0.912
***** Final Hydro.	362.00	2523.2	0.0	144.89		

*** TOOL DIAGRAM *** CONV. STRADDLE

ELL NAME: Avalanche #1-14

LOCATION : 14-15S-43W, Cheyenne CO

TICKET No. 9170 D.S.T. No. 1 DATE 5-09-96

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL 17

TOTAL PACKERS AND ANCHOR 370

TOTAL TOOL 417

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STAND.Stands Single Total

D.P. ANCHOR STAND.Stands 1 Single Total 124

TOTAL ASSEMBLY 541

D.C. ABOVE TOOLS.Stands 6 Single Total 560

D.P. ABOVE TOOLS.Stands 49 Single 2 Total 4625

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5726

TOTAL DEPTH 5710

TOTAL DRILL PIPE ABOVE K.B. 16

REMARKS:

FLUID SAMPLER DATA

SAMPLER RECOVERY -

Water 4000 ml, Press 300 PSI, Total 4000 ml

SAMPLER ANALYSIS -

Resist .26 ohms @ 60 F, Chlorides 30000 ppm

PIT MUD ANALYSIS -

Chlorides 3800 ppm, Viscosity 60,
Mud Wt 9.1, Filtrate 5.6, LCM 6#/bbl

PIPE RECOVERY - Top & Bottom -

Resist .26 ohms @ 60 F, Chlorides 30000 ppm

P.O. SUB 90' ABOVE DC	5079
C.O. SUB 1'	5169
S.I. TOOL 5'	5175
SAMPLER 3'	5178
HMV 5'	5183
JARS 5'	5188
SAFETY JOINT 2'	5190
PACKER 5'	5194
PACKER 5'	5199
DEPTH 5199	
STUBB 1'	5200
ANCHOR	
AK-1 Recorder	5201
3'	5203
124' DP	5327
1' CO SUB	5328
5'	5333
ALP. REC. #2	5333
1' BLANK OFF SUB	5334
T.C. 5'	5339
DEPTH	
PACKER 1'	5340
PACKER 5'	5345
1'	5346
16'	5362
1' CO SUB	5363
341' DP	5704
1'	5705
AK-1 REC. @	5705
BULLNOSE 5'	
T.D.	5710

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 9170

Well Name & No.	<u>Avalanche #1-14</u>	Test No.	<u>1</u>	Date	<u>5-9-96</u>
Company	<u>Amoco Production Company</u>	Zone Tested	<u>Morrow</u>		
Address		Elevation	<u>4124</u>	KB	<u>4112</u> GL
Co. Rep / Geo.	<u>Ron Pulliam</u>	Cont.	<u>Kudu #1</u>	Est. Ft. of Pay	<u> </u> Por. <u> </u> %
Location: Sec.	<u>14</u>	Twp.	<u>15^S</u>	Rge.	<u>43^W</u> Co. <u>Wyoming</u> State <u>WY</u>
No. of Copies	<u> </u>	Distribution Sheet (Y, N)	<u>N</u>	Turnkey (Y, N)	<u>N</u> Evaluation (Y, N) <u> </u>

Interval Tested	<u>5199 - 5340</u>	Initial Str Wt./Lbs.	<u>110,000</u>	Unseated Str Wt./Lbs.	<u>120,000</u>
Anchor Length	<u>139'</u>	Wt. Set Lbs.	<u>35,000</u>	Wt. Pulled Loose/Lbs.	<u>140,000</u>
Top Packer Depth	<u>5194 - 5199</u>	Hole Size — 7 7/8"	<u> </u>	Rubber Size — 6 3/4"	<u> </u>
Bottom Packer Depth	<u>5340 - 5345</u>	Wt. Pipe I.D. — 2.7 Ft. Run	<u> </u>		
Total Depth	<u>(RTD) 5710</u>	Drill Collar — 2.25 Ft. Run	<u>560'</u>		
Mud Wt. <u>9.1</u> LCM <u>6[#]</u> Vis. <u>60</u> WL <u>5.6</u>		Drill Pipe Size <u>4 1/2" XH</u>	Ft. Run <u>46525'</u>		

Blow Description IF: Fair to strong blow off bttm in 2 mins.
ISI: Bled off blow - no return.
FF: Fair to strong return off bttm in 3 mins.
FSI: Bled off blow -

Recovery — Total Feet	<u>1820'</u>	Ft. in DC	<u>560'</u>	Ft. in WP	<u> </u>	Ft. in DP	<u>1260'</u>
Rec. <u> </u> Feet Of <u> </u>		%gas	<u> </u>	%oil	<u> </u>	%water	<u> </u>
Rec. <u>920'</u> Feet Of <u>Drilg. Mud</u>		%gas	<u> </u>	%oil	<u> </u>	%water	<u> </u>
Rec. <u> </u> Feet Of <u> </u>		%gas	<u> </u>	%oil	<u> </u>	%water	<u> </u>
Rec. <u>900'</u> Feet Of <u>Water</u>		%gas	<u> </u>	%oil	<u> </u>	%water	<u> </u>
Rec. <u> </u> Feet Of <u> </u>		%gas	<u> </u>	%oil	<u> </u>	%water	<u> </u>

BHT 147° °F Gravity °API D@ °F Corrected Gravity °API

RW .26 @ 60° °F Chlorides 30,000 ppm Recovery Chlorides 3,800 ppm System

(A) Initial Hydrostatic Mud	<u>2557</u>	<u>2618</u> PSI	Recorder No.	<u>2341</u>	T-Started	<u>2300</u>
(B) First Initial Flow Pressure	<u>370</u>	<u>298</u> PSI	@ (depth)	<u>5333</u>	T-Open	<u>0106</u>
(C) First Final Flow Pressure	<u>634</u>	<u>622</u> PSI	Recorder No.	<u>1333276</u>	T-Pulled	<u>0451</u>
(D) Initial Shut-in Pressure	<u>950</u>	<u>990</u> PSI	@ (depth)	<u>5201</u>	T-Out	<u>0830</u>
(E) Second Initial Flow Pressure	<u>646</u>	<u>711</u> PSI	Recorder No.	<u>13339</u>		
(F) Second Final Flow Pressure	<u>937</u>	<u>970</u> PSI	@ (depth)	<u>5705</u>		
(G) Final Shut-in Pressure	<u>955</u>	<u>990</u> PSI	Initial Opening	<u>15</u>	Test	<u> </u>
(H) Final Hydrostatic Mud	<u>2523</u>	<u>2530</u> PSI	Initial Shut-in	<u>30</u>	Jars	<u>X</u>
Alp. Elec.	<u>AK-1</u>		Final Flow	<u>60</u>	Safety Joint	<u>X</u>
			Final Shut-in	<u>120</u>	Straddle	<u>X</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.

		Circ. Sub	<u>X</u>	<u>N/C</u>
		Sampler	<u>X</u>	
		2 Extra Packers	<u>X</u>	
		Elect. Rec.	<u>X</u>	
		Other	<u> </u>	
		TOTAL PRICE \$	<u> </u>	

Approved By

Our Representative

Dad Steinbock

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 9170 Date 5-9-96
Company Name Amoco Prod. Co. Cont. Kudu #1
Lease Avalanche #1-14 Test No. #1 Morrow
County Cheyenne CO. Sec. 14 Twp. 15^S Rng. 43^W

SAMPLER RECOVERY

Gas — ML
Oil — ML
Mud — ML
Water 4,000 ML
Other — ML
Pressure 300[#] PSI
Total 4,000 ML

PIT MUD ANALYSIS

Chlorides 3,800 ppm.
Resistivity — ohms @ — F
Viscosity 60
Mud Weight 9.1
Filtrate 5.6
Other L.C.M. 6[#] / bbl.

SAMPLER ANALYSIS

Resistivity .26 ohms @ 60° F
Chlorides 30,000 ppm.
Gravity — corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity .26 ohms @ 60° F
Chlorides 30,000 ppm.

MIDDLE
Resistivity — ohms @ — F
Chlorides — ppm.

BOTTOM
Resistivity .26 ohms @ 60° F
Chlorides 30,000 ppm.