

**WELL NAME:** Ross #1  
**COMPANY:** Maxwell Operating Company  
**LOCATION:** 4-16S-12W  
*Barter* ~~Ellis~~ County Kansas  
**DATE:** 07/30/97

TRILOBITE TESTING L.L.C.

OPERATOR : Maxwell Operating Co.  
 WELL NAME: Ross #1  
 LOCATION : Sec04 T16s R12w Ellis  
 INTERVAL : 2892.00 To 2931.00 ft

DATE 07/27/97

KB 1878.00 ft TICKET NO: 10195 DST #1  
 GR 1869.00 ft FORMATION: Topeka  
 TD 2931.00 ft TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	24174	24174	2346			PF Fr. 1950 to 2020 hr
SI 45	Range(Psi )	3050.0	3050.0	4995.0	0.0	0.0	IS Fr. 2020 to 2105 hr
SF 30	Clock(hrs)	12hr.	12hr.	Elec			SF Fr. 2105 to 2135 hr
FS 45	Depth(ft )	2926.0	2926.0	2895.0	0.0	0.0	FS Fr. 2135 to 2220 hr

	Field	1	2	3	4	
A. Init Hydro	0.0	1373.0	1386.0	0.0	0.0	T STARTED 1847 hr
B. First Flow	0.0	62.0	22.0	0.0	0.0	T ON BOTM 1948 hr
B1. Final Flow	0.0	45.0	38.0	0.0	0.0	T OPEN 1950 hr
C. In Shut-in	0.0	299.0	323.0	0.0	0.0	T PULLED 2220 hr
D. Init Flow	0.0	80.0	42.0	0.0	0.0	T OUT 2328 hr
E. Final Flow	0.0	71.0	50.0	0.0	0.0	
F. Fl Shut-in	0.0	262.0	208.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	0.0	1361.0	1376.0	0.0	0.0	Tool Wt. 2200.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 45000.00 lbs
						Initial Str Wt 28000.00 lbs
						Unseated Str Wt 28000.00 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 30.00 ft
						D.P. Length 2855.00 ft

RECOVERY

Tot Fluid 100.00 ft of 30.00 ft in DC and 70.00 ft in DP  
 600.00 ft of Gas in pipe  
 0.00 ft of  
 30.00 ft of Gassy Mud & Water Cut Oil  
 0.00 ft of 5% gas 40% oil 25% water 30% mud  
 70.00 ft of Gassy Mud & Water Cut Oil  
 0.00 ft of 10% gas 40% oil 35% water 15% mud  
 0.00 ft of  
 0.00 ft of Rw .25@76  
 SALINITY 26000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow-  
 strong blow--bottom of bucket in  
 45 seconds --- then decreased to  
 fair blow at end of flow  
 Initial Shutin-  
 surface blow---died in 2 minutes  
 Final Flow-  
 strong blow --bottom of bucket in  
 45 seconds----then decreased to  
 fair blow at end (same as initial)  
 Final Shutin-  
 no blow

SAMPLES:  
 SENT TO:

MUD DATA-----  
 Mud Type Chemical  
 Weight 9.00 lb/c  
 Vis. 45.00 S/L  
 W.L. 9.60 in3  
 F.C. 0.00 in  
 Mud Drop  
 Amt. of fill 0.00 ft  
 Btm. H. Temp. 103.00 F  
 Hole Condition good  
 % Porosity 0.00  
 Packer Size 6.75 in  
 No. of Packers 2  
 Cushion Amt. 0.00  
 Cushion Type  
 Reversed Out  
 Tool Chased  
 Tester Paul Simpson  
 Co. Rep. Ron Nelson  
 Contr. Discovery  
 Rig # 1  
 Unit #  
 Pump T.

Test Successful: Y



ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	110.00	1386.0	0.0	100.67		
***** Start Flow 1	0.00	21.6	0.0	100.75		
	0.50	24.0	2.4	100.79		
	1.00	26.3	4.7	100.83		
	1.50	25.5	4.0	100.88		
	2.00	26.6	5.0	100.93		
	2.50	28.0	6.4	100.98		
	3.00	27.9	6.3	101.02		
	3.50	28.6	7.0	101.07		
	4.00	28.4	6.9	101.12		
	4.50	42.3	20.7	101.17		
	5.00	26.2	4.6	101.22		
	5.50	25.7	4.1	101.28		
	6.00	24.7	3.1	101.31		
	6.50	25.9	4.3	101.36		
	7.00	25.2	3.6	101.41		
	7.50	23.9	2.3	101.44		
	8.00	27.6	6.0	101.48		
	8.50	27.3	5.8	101.51		
	9.00	26.8	5.2	101.54		
	9.50	27.5	5.9	101.57		
	10.00	27.5	5.9	101.59		
	10.50	29.6	8.0	101.62		
	11.00	30.0	8.5	101.64		
	11.50	31.8	10.3	101.66		
	12.00	32.1	10.6	101.68		
	12.50	31.6	10.1	101.70		
	13.00	35.8	14.2	101.71		
	13.50	27.1	5.5	101.73		
	14.00	27.7	6.1	101.75		
	14.50	27.9	6.4	101.76		
	15.00	26.7	5.1	101.77		
	15.50	27.5	5.9	101.79		
	16.00	27.6	6.1	101.80		
	16.50	28.0	6.4	101.82		
	17.00	28.4	6.8	101.83		
	17.50	29.6	8.1	101.84		
	18.00	37.9	16.3	101.85		
	18.50	27.4	5.9	101.86		
	19.00	29.6	8.1	101.87		
	19.50	28.8	7.3	101.88		
	20.00	30.1	8.6	101.89		
	20.50	31.1	9.6	101.90		
	21.00	31.3	9.7	101.91		
	21.50	31.8	10.3	101.91		
	22.00	31.9	10.4	101.93		
	22.50	32.4	10.9	101.94		
	23.00	32.9	11.3	101.94		
	23.50	33.7	12.2	101.96		
	24.00	31.0	9.4	101.95		
	24.50	29.0	7.5	101.96		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

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	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	25.00	31.1	9.6	101.97		
	25.50	32.2	10.7	101.98		
	26.00	32.6	11.1	101.98		
	26.50	33.0	11.4	101.99		
	27.00	33.9	12.3	102.00		
	27.50	34.3	12.7	102.01		
	28.00	36.7	15.2	102.02		
	28.50	33.7	12.2	102.02		
	29.00	34.1	12.5	102.03		
***** End Flow 1	29.50	38.3	16.8	102.04		
***** Start Shutin 1	0.00	38.3	0.0	102.04	0.0000	0.001
	0.50	75.5	37.2	102.05	60.0000	0.006
	1.00	88.5	50.2	102.06	30.5000	0.008
	1.50	101.5	63.2	102.07	20.6667	0.010
	2.00	109.1	70.7	102.08	15.7500	0.012
	2.50	114.8	76.5	102.09	12.8000	0.013
	3.00	120.0	81.7	102.10	10.8333	0.014
	3.50	125.1	86.8	102.10	9.4286	0.016
	4.00	130.1	91.7	102.12	8.3750	0.017
	4.50	134.9	96.6	102.13	7.5556	0.018
	5.00	140.2	101.9	102.14	6.9000	0.020
	5.50	145.2	106.9	102.15	6.3636	0.021
	6.00	150.2	111.9	102.16	5.9167	0.023
	6.50	154.9	116.6	102.17	5.5385	0.024
	7.00	160.0	121.7	102.19	5.2143	0.026
	7.50	164.9	126.6	102.21	4.9333	0.027
	8.00	169.9	131.6	102.22	4.6875	0.029
	8.50	174.3	136.0	102.22	4.4706	0.030
	9.00	178.3	140.0	102.24	4.2778	0.032
	9.50	182.1	143.8	102.25	4.1053	0.033
	10.00	185.8	147.5	102.26	3.9500	0.035
	10.50	189.4	151.1	102.28	3.8095	0.036
	11.00	193.1	154.8	102.29	3.6818	0.037
	11.50	196.8	158.5	102.30	3.5652	0.039
	12.00	200.5	162.2	102.31	3.4583	0.040
	12.50	203.9	165.6	102.33	3.3600	0.042
	13.00	207.3	168.9	102.34	3.2692	0.043
	13.50	210.5	172.2	102.35	3.1852	0.044
	14.00	213.6	175.3	102.36	3.1071	0.046
	14.50	216.9	178.6	102.38	3.0345	0.047
	15.00	220.0	181.7	102.39	2.9667	0.048
	15.50	223.0	184.7	102.40	2.9032	0.050
	16.00	226.0	187.7	102.41	2.8438	0.051
	16.50	228.9	190.5	102.42	2.7879	0.052
	17.00	231.6	193.3	102.44	2.7353	0.054
	17.50	234.5	196.1	102.45	2.6857	0.055
	18.00	237.1	198.8	102.46	2.6389	0.056
	18.50	239.8	201.5	102.48	2.5946	0.057
	19.00	242.3	204.0	102.48	2.5526	0.059
	19.50	244.8	206.5	102.50	2.5128	0.060
	20.00	247.2	208.9	102.51	2.4750	0.061

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Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>	
20.50	249.5	211.2	102.52	2.4390	0.062	
21.00	251.9	213.6	102.54	2.4048	0.063	
21.50	254.2	215.9	102.54	2.3721	0.065	
22.00	256.6	218.2	102.55	2.3409	0.066	
22.50	258.8	220.5	102.57	2.3111	0.067	
23.00	261.0	222.7	102.58	2.2826	0.068	
23.50	263.1	224.8	102.59	2.2553	0.069	
24.00	265.1	226.8	102.60	2.2292	0.070	
24.50	267.2	228.9	102.61	2.2041	0.071	
25.00	269.2	230.9	102.62	2.1800	0.072	
25.50	271.1	232.7	102.63	2.1569	0.073	
26.00	272.9	234.6	102.64	2.1346	0.074	
26.50	274.7	236.4	102.66	2.1132	0.075	
27.00	276.4	238.1	102.67	2.0926	0.076	
27.50	278.1	239.8	102.68	2.0727	0.077	
28.00	279.8	241.5	102.69	2.0536	0.078	
28.50	281.4	243.1	102.70	2.0351	0.079	
29.00	283.1	244.8	102.71	2.0172	0.080	
29.50	284.7	246.4	102.72	2.0000	0.081	
30.00	286.1	247.8	102.72	1.9833	0.082	
30.50	287.8	249.4	102.74	1.9672	0.083	
31.00	289.2	250.9	102.75	1.9516	0.084	
31.50	290.7	252.4	102.76	1.9365	0.084	
32.00	292.0	253.7	102.77	1.9219	0.085	
32.50	293.4	255.1	102.79	1.9077	0.086	
33.00	294.8	256.5	102.80	1.8939	0.087	
33.50	296.2	257.9	102.80	1.8806	0.088	
34.00	297.6	259.3	102.81	1.8676	0.089	
34.50	299.0	260.7	102.83	1.8551	0.089	
35.00	300.1	261.8	102.84	1.8429	0.090	
35.50	301.3	263.0	102.84	1.8310	0.091	
36.00	302.4	264.1	102.85	1.8194	0.091	
36.50	303.7	265.3	102.86	1.8082	0.092	
37.00	305.7	267.4	102.87	1.7973	0.093	
37.50	307.5	269.2	102.88	1.7867	0.095	
38.00	309.6	271.3	102.89	1.7763	0.096	
38.50	311.4	273.1	102.90	1.7662	0.097	
39.00	313.5	275.1	102.91	1.7564	0.098	
39.50	315.0	276.7	102.92	1.7468	0.099	
40.00	316.2	277.8	102.92	1.7375	0.10	
40.50	317.1	278.8	102.93	1.7284	0.101	
41.00	318.0	279.7	102.94	1.7195	0.101	
41.50	318.8	280.5	102.95	1.7108	0.102	
42.00	319.6	281.2	102.96	1.7024	0.102	
42.50	320.4	282.0	102.97	1.6941	0.103	
43.00	321.0	282.7	102.98	1.6860	0.103	
43.50	321.6	283.3	102.99	1.6782	0.103	
44.00	322.3	284.0	103.00	1.6705	0.104	
44.50	322.8	284.5	102.96	1.6629	0.104	
***** End Shut-in 1	45.00	323.1	284.8	103.00	1.6556	0.104

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***** Start Flow 2	0.00	41.9	0.0	103.02		
	0.50	41.6	-0.3	103.02		
	1.00	38.9	-3.0	103.03		
	1.50	39.6	-2.3	103.04		
	2.00	40.9	-1.0	103.03		
	2.50	41.3	-0.6	103.04		
	3.00	41.5	-0.4	103.04		
	3.50	42.0	0.0	103.04		
	4.00	42.0	0.1	103.04		
	4.50	42.7	0.8	103.05		
	5.00	43.4	1.5	103.05		
	5.50	43.2	1.3	103.06		
	6.00	44.0	2.1	103.06		
	6.50	43.4	1.5	103.06		
	7.00	43.9	2.0	103.06		
	7.50	45.0	3.1	103.07		
	8.00	44.8	2.9	103.08		
	8.50	45.2	3.3	103.08		
	9.00	45.4	3.5	103.08		
	9.50	45.2	3.3	103.09		
	10.00	45.3	3.4	103.09		
	10.50	45.1	3.2	103.10		
	11.00	45.2	3.3	103.10		
	11.50	45.5	3.6	103.11		
	12.00	45.5	3.6	103.11		
	12.50	45.9	4.0	103.12		
	13.00	46.2	4.3	103.13		
	13.50	45.9	4.0	103.13		
	14.00	45.9	4.0	103.14		
	14.50	46.5	4.6	103.14		
	15.00	46.7	4.8	103.15		
	15.50	47.0	5.1	103.15		
	16.00	47.3	5.3	103.16		
	16.50	47.4	5.5	103.16		
	17.00	47.4	5.5	103.16		
	17.50	47.7	5.8	103.18		
	18.00	48.0	6.1	103.18		
	18.50	48.1	6.2	103.19		
	19.00	48.2	6.3	103.19		
	19.50	48.4	6.4	103.20		
	20.00	48.6	6.6	103.20		
	20.50	48.7	6.8	103.21		
	21.00	48.6	6.7	103.22		
	21.50	48.8	6.9	103.23		
	22.00	49.1	7.2	103.23		
	22.50	49.4	7.5	103.24		
	23.00	49.5	7.6	103.25		
	23.50	49.6	7.7	103.25		
	24.00	49.5	7.6	103.25		
	24.50	49.9	8.0	103.27		
	25.00	50.1	8.2	103.27		
	25.50	49.9	8.0	103.27		

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	26.00	50.0	8.1	103.28		
	26.50	50.2	8.3	103.28		
	27.00	50.0	8.1	103.28		
	27.50	50.4	8.4	103.30		
	28.00	50.7	8.8	103.29		
	28.50	50.8	8.9	103.30		
***** End Flow 2	29.00	50.1	8.1	103.30		
***** Start Shutin 2	0.00	50.1	0.0	103.30	0.0000	0.003
	0.50	54.7	4.6	103.31	118.0000	0.003
	1.00	60.1	10.1	103.32	59.5000	0.004
	1.50	65.4	15.3	103.32	40.0000	0.004
	2.00	70.4	20.4	103.33	30.2500	0.005
	2.50	75.7	25.7	103.34	24.4000	0.006
	3.00	80.7	30.7	103.34	20.5000	0.007
	3.50	85.7	35.6	103.35	17.7143	0.007
	4.00	90.7	40.6	103.35	15.6250	0.008
	4.50	95.5	45.5	103.36	14.0000	0.009
	5.00	100.0	50.0	103.36	12.7000	0.010
	5.50	104.8	54.7	103.37	11.6364	0.011
	6.00	109.2	59.1	103.38	10.7500	0.012
	6.50	113.6	63.5	103.38	10.0000	0.013
	7.00	118.1	68.0	103.39	9.3571	0.014
	7.50	122.2	72.1	103.40	8.8000	0.015
	8.00	126.1	76.1	103.41	8.3125	0.016
	8.50	130.2	80.2	103.41	7.8824	0.017
	9.00	134.9	84.9	103.42	7.5000	0.018
	9.50	139.4	89.4	103.42	7.1579	0.019
	10.00	143.6	93.5	103.43	6.8500	0.021
	10.50	147.8	97.8	103.44	6.5714	0.022
	11.00	152.2	102.1	103.44	6.3182	0.023
	11.50	156.6	106.5	103.45	6.0870	0.025
	12.00	160.8	110.8	103.46	5.8750	0.026
	12.50	165.0	114.9	103.46	5.6800	0.027
	13.00	169.2	119.1	103.47	5.5000	0.029
	13.50	173.3	123.2	103.48	5.3333	0.030
	14.00	177.3	127.3	103.48	5.1786	0.031
	14.50	180.9	130.8	103.49	5.0345	0.033
	15.00	183.8	133.8	103.50	4.9000	0.034
	15.50	187.1	137.0	103.50	4.7742	0.035
	16.00	190.0	140.0	103.51	4.6562	0.036
	16.50	192.9	142.9	103.51	4.5455	0.037
	17.00	195.5	145.5	103.51	4.4412	0.038
	17.50	198.1	148.1	103.53	4.3429	0.039
	18.00	200.8	150.7	103.53	4.2500	0.040
	18.50	203.4	153.4	103.54	4.1622	0.041
	19.00	206.0	156.0	103.54	4.0789	0.042
	19.50	208.5	158.5	103.56	4.0000	0.043
	20.00	210.9	160.9	103.56	3.9250	0.044
	20.50	213.1	163.1	103.57	3.8537	0.045
	21.00	215.4	165.4	103.57	3.7857	0.046
	21.50	218.0	167.9	103.58	3.7209	0.048

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22.00	220.6	170.6		103.58	3.6591	0.049
22.50	223.3	173.3		103.60	3.6000	0.050
23.00	225.8	175.7		103.60	3.5435	0.051
23.50	228.2	178.1		103.60	3.4894	0.052
24.00	230.6	180.5		103.61	3.4375	0.053
24.50	232.9	182.8		103.61	3.3878	0.054
25.00	234.9	184.9		103.62	3.3400	0.055
25.50	237.0	186.9		103.63	3.2941	0.056
26.00	238.9	188.9		103.63	3.2500	0.057
26.50	240.9	190.8		103.64	3.2075	0.058
27.00	242.6	192.5		103.64	3.1667	0.059
27.50	244.2	194.2		103.65	3.1273	0.060
28.00	245.9	195.8		103.66	3.0893	0.060
28.50	247.4	197.3		103.66	3.0526	0.061
29.00	248.9	198.9		103.67	3.0172	0.062
29.50	250.4	200.4		103.67	2.9831	0.063
30.00	251.9	201.8		103.67	2.9500	0.063
30.50	253.3	203.2		103.68	2.9180	0.064
31.00	254.6	204.6		103.69	2.8871	0.065
31.50	256.0	205.9		103.69	2.8571	0.066
32.00	257.3	207.2		103.70	2.8281	0.066
32.50	258.6	208.5		103.71	2.8000	0.067
33.00	259.8	209.8		103.71	2.7727	0.068
33.50	260.9	210.9		103.71	2.7463	0.068
34.00	262.1	212.0		103.72	2.7206	0.069
34.50	263.3	213.2		103.73	2.6957	0.069
35.00	264.5	214.4		103.73	2.6714	0.070
35.50	265.7	215.6		103.74	2.6479	0.071
36.00	266.9	216.9		103.75	2.6250	0.071
36.50	268.0	217.9		103.75	2.6027	0.072
37.00	269.1	219.1		103.76	2.5811	0.072
37.50	270.2	220.1		103.76	2.5600	0.073
38.00	271.2	221.1		103.76	2.5395	0.074
38.50	272.3	222.2		103.77	2.5195	0.074
39.00	273.4	223.4		103.77	2.5000	0.075
39.50	274.4	224.4		103.79	2.4810	0.075
40.00	275.5	225.4		103.78	2.4625	0.076
40.50	276.5	226.5		103.80	2.4444	0.076
41.00	277.6	227.5		103.80	2.4268	0.077
41.50	278.6	228.5		103.81	2.4096	0.078
42.00	279.6	229.6		103.81	2.3929	0.078
42.50	280.8	230.7		103.81	2.3765	0.079
43.00	281.7	231.7		103.82	2.3605	0.079
43.50	282.7	232.7		103.83	2.3448	0.080
44.00	283.8	233.7		103.83	2.3295	0.081
44.50	284.8	234.8		103.84	2.3146	0.081
45.00	285.9	235.9		103.84	2.3000	0.082
45.50	286.9	236.8		103.85	2.2857	0.082
***** End Shut-in 2	46.00	287.7	237.7	103.85	2.2717	0.083
***** Final Hydro.	264.00	1376.6	0.0	104.07		

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06  
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	Time	Pressure PSI <sub>g</sub>	delta P PSI <sub>g</sub>	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	110.00	1386.0	0.0	100.67		
***** Start Flow 1	0.00	21.6	0.0	100.75		
	0.50	24.0	2.4	100.79		
	1.00	26.3	4.7	100.83		
	1.50	25.5	4.0	100.88		
	2.00	26.6	5.0	100.93		
	2.50	28.0	6.4	100.98		
	3.00	27.9	6.3	101.02		
	3.50	28.6	7.0	101.07		
	4.00	28.4	6.9	101.12		
	4.50	42.3	20.7	101.17		
	5.00	26.2	4.6	101.22		
	5.50	25.7	4.1	101.28		
	6.00	24.7	3.1	101.31		
	6.50	25.9	4.3	101.36		
	7.00	25.2	3.6	101.41		
	7.50	23.9	2.3	101.44		
	8.00	27.6	6.0	101.48		
	8.50	27.3	5.8	101.51		
	9.00	26.8	5.2	101.54		
	9.50	27.5	5.9	101.57		
	10.00	27.5	5.9	101.59		
	10.50	29.6	8.0	101.62		
	11.00	30.0	8.5	101.64		
	11.50	31.8	10.3	101.66		
	12.00	32.1	10.6	101.68		
	12.50	31.6	10.1	101.70		
	13.00	35.8	14.2	101.71		
	13.50	27.1	5.5	101.73		
	14.00	27.7	6.1	101.75		
	14.50	27.9	6.4	101.76		
	15.00	26.7	5.1	101.77		
	15.50	27.5	5.9	101.79		
	16.00	27.6	6.1	101.80		
	16.50	28.0	6.4	101.82		
	17.00	28.4	6.8	101.83		
	17.50	29.6	8.1	101.84		
	18.00	37.9	16.3	101.85		
	18.50	27.4	5.9	101.86		
	19.00	29.6	8.1	101.87		
	19.50	28.8	7.3	101.88		
	20.00	30.1	8.6	101.89		
	20.50	31.1	9.6	101.90		
	21.00	31.3	9.7	101.91		
	21.50	31.8	10.3	101.91		
	22.00	31.9	10.4	101.93		
	22.50	32.4	10.9	101.94		
	23.00	32.9	11.3	101.94		
	23.50	33.7	12.2	101.96		
	24.00	31.0	9.4	101.95		
	24.50	29.0	7.5	101.96		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	25.00	31.1	9.6	101.97		
	25.50	32.2	10.7	101.98		
	26.00	32.6	11.1	101.98		
	26.50	33.0	11.4	101.99		
	27.00	33.9	12.3	102.00		
	27.50	34.3	12.7	102.01		
	28.00	36.7	15.2	102.02		
	28.50	33.7	12.2	102.02		
	29.00	34.1	12.5	102.03		
***** End Flow 1	29.50	38.3	16.8	102.04		
***** Start Shutin 1	0.00	38.3	0.0	102.04	0.0000	0.001
	0.50	75.5	37.2	102.05	60.0000	0.006
	1.00	88.5	50.2	102.06	30.5000	0.008
	1.50	101.5	63.2	102.07	20.6667	0.010
	2.00	109.1	70.7	102.08	15.7500	0.012
	2.50	114.8	76.5	102.09	12.8000	0.013
	3.00	120.0	81.7	102.10	10.8333	0.014
	3.50	125.1	86.8	102.10	9.4286	0.016
	4.00	130.1	91.7	102.12	8.3750	0.017
	4.50	134.9	96.6	102.13	7.5556	0.018
	5.00	140.2	101.9	102.14	6.9000	0.020
	5.50	145.2	106.9	102.15	6.3636	0.021
	6.00	150.2	111.9	102.16	5.9167	0.023
	6.50	154.9	116.6	102.17	5.5385	0.024
	7.00	160.0	121.7	102.19	5.2143	0.026
	7.50	164.9	126.6	102.21	4.9333	0.027
	8.00	169.9	131.6	102.22	4.6875	0.029
	8.50	174.3	136.0	102.22	4.4706	0.030
	9.00	178.3	140.0	102.24	4.2778	0.032
	9.50	182.1	143.8	102.25	4.1053	0.033
	10.00	185.8	147.5	102.26	3.9500	0.035
	10.50	189.4	151.1	102.28	3.8095	0.036
	11.00	193.1	154.8	102.29	3.6818	0.037
	11.50	196.8	158.5	102.30	3.5652	0.039
	12.00	200.5	162.2	102.31	3.4583	0.040
	12.50	203.9	165.6	102.33	3.3600	0.042
	13.00	207.3	168.9	102.34	3.2692	0.043
	13.50	210.5	172.2	102.35	3.1852	0.044
	14.00	213.6	175.3	102.36	3.1071	0.046
	14.50	216.9	178.6	102.38	3.0345	0.047
	15.00	220.0	181.7	102.39	2.9667	0.048
	15.50	223.0	184.7	102.40	2.9032	0.050
	16.00	226.0	187.7	102.41	2.8438	0.051
	16.50	228.9	190.5	102.42	2.7879	0.052
	17.00	231.6	193.3	102.44	2.7353	0.054
	17.50	234.5	196.1	102.45	2.6857	0.055
	18.00	237.1	198.8	102.46	2.6389	0.056
	18.50	239.8	201.5	102.48	2.5946	0.057
	19.00	242.3	204.0	102.48	2.5526	0.059
	19.50	244.8	206.5	102.50	2.5128	0.060
	20.00	247.2	208.9	102.51	2.4750	0.061

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
20.50	249.5	211.2	102.52	2.4390	0.062
21.00	251.9	213.6	102.54	2.4048	0.063
21.50	254.2	215.9	102.54	2.3721	0.065
22.00	256.6	218.2	102.55	2.3409	0.066
22.50	258.8	220.5	102.57	2.3111	0.067
23.00	261.0	222.7	102.58	2.2826	0.068
23.50	263.1	224.8	102.59	2.2553	0.069
24.00	265.1	226.8	102.60	2.2292	0.070
24.50	267.2	228.9	102.61	2.2041	0.071
25.00	269.2	230.9	102.62	2.1800	0.072
25.50	271.1	232.7	102.63	2.1569	0.073
26.00	272.9	234.6	102.64	2.1346	0.074
26.50	274.7	236.4	102.66	2.1132	0.075
27.00	276.4	238.1	102.67	2.0926	0.076
27.50	278.1	239.8	102.68	2.0727	0.077
28.00	279.8	241.5	102.69	2.0536	0.078
28.50	281.4	243.1	102.70	2.0351	0.079
29.00	283.1	244.8	102.71	2.0172	0.080
29.50	284.7	246.4	102.72	2.0000	0.081
30.00	286.1	247.8	102.72	1.9833	0.082
30.50	287.8	249.4	102.74	1.9672	0.083
31.00	289.2	250.9	102.75	1.9516	0.084
31.50	290.7	252.4	102.76	1.9365	0.084
32.00	292.0	253.7	102.77	1.9219	0.085
32.50	293.4	255.1	102.79	1.9077	0.086
33.00	294.8	256.5	102.80	1.8939	0.087
33.50	296.2	257.9	102.80	1.8806	0.088
34.00	297.6	259.3	102.81	1.8676	0.089
34.50	299.0	260.7	102.83	1.8551	0.089
35.00	300.1	261.8	102.84	1.8429	0.090
35.50	301.3	263.0	102.84	1.8310	0.091
36.00	302.4	264.1	102.85	1.8194	0.091
36.50	303.7	265.3	102.86	1.8082	0.092
37.00	305.7	267.4	102.87	1.7973	0.093
37.50	307.5	269.2	102.88	1.7867	0.095
38.00	309.6	271.3	102.89	1.7763	0.096
38.50	311.4	273.1	102.90	1.7662	0.097
39.00	313.5	275.1	102.91	1.7564	0.098
39.50	315.0	276.7	102.92	1.7468	0.099
40.00	316.2	277.8	102.92	1.7375	0.10
40.50	317.1	278.8	102.93	1.7284	0.101
41.00	318.0	279.7	102.94	1.7195	0.101
41.50	318.8	280.5	102.95	1.7108	0.102
42.00	319.6	281.2	102.96	1.7024	0.102
42.50	320.4	282.0	102.97	1.6941	0.103
43.00	321.0	282.7	102.98	1.6860	0.103
43.50	321.6	283.3	102.99	1.6782	0.103
44.00	322.3	284.0	103.00	1.6705	0.104
44.50	322.8	284.5	102.96	1.6629	0.104
45.00	323.1	284.8	103.00	1.6556	0.104

\*\*\*\*\* End Shut-in 1

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Start Flow 2	0.00	41.9	0.0	103.02		
	0.50	41.6	-0.3	103.02		
	1.00	38.9	-3.0	103.03		
	1.50	39.6	-2.3	103.04		
	2.00	40.9	-1.0	103.03		
	2.50	41.3	-0.6	103.04		
	3.00	41.5	-0.4	103.04		
	3.50	42.0	0.0	103.04		
	4.00	42.0	0.1	103.04		
	4.50	42.7	0.8	103.05		
	5.00	43.4	1.5	103.05		
	5.50	43.2	1.3	103.06		
	6.00	44.0	2.1	103.06		
	6.50	43.4	1.5	103.06		
	7.00	43.9	2.0	103.06		
	7.50	45.0	3.1	103.07		
	8.00	44.8	2.9	103.08		
	8.50	45.2	3.3	103.08		
	9.00	45.4	3.5	103.08		
	9.50	45.2	3.3	103.09		
	10.00	45.3	3.4	103.09		
	10.50	45.1	3.2	103.10		
	11.00	45.2	3.3	103.10		
	11.50	45.5	3.6	103.11		
	12.00	45.5	3.6	103.11		
	12.50	45.9	4.0	103.12		
	13.00	46.2	4.3	103.13		
	13.50	45.9	4.0	103.13		
	14.00	45.9	4.0	103.14		
	14.50	46.5	4.6	103.14		
	15.00	46.7	4.8	103.15		
	15.50	47.0	5.1	103.15		
	16.00	47.3	5.3	103.16		
	16.50	47.4	5.5	103.16		
	17.00	47.4	5.5	103.16		
	17.50	47.7	5.8	103.18		
	18.00	48.0	6.1	103.18		
	18.50	48.1	6.2	103.19		
	19.00	48.2	6.3	103.19		
	19.50	48.4	6.4	103.20		
	20.00	48.6	6.6	103.20		
	20.50	48.7	6.8	103.21		
	21.00	48.6	6.7	103.22		
	21.50	48.8	6.9	103.23		
	22.00	49.1	7.2	103.23		
	22.50	49.4	7.5	103.24		
	23.00	49.5	7.6	103.25		
	23.50	49.6	7.7	103.25		
	24.00	49.5	7.6	103.25		
	24.50	49.9	8.0	103.27		
	25.00	50.1	8.2	103.27		
	25.50	49.9	8.0	103.27		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	26.00	50.0	8.1	103.28		
	26.50	50.2	8.3	103.28		
	27.00	50.0	8.1	103.28		
	27.50	50.4	8.4	103.30		
	28.00	50.7	8.8	103.29		
	28.50	50.8	8.9	103.30		
***** End Flow 2	29.00	50.1	8.1	103.30		
***** Start Shutin 2	0.00	50.1	0.0	103.30	0.0000	0.003
	0.50	54.7	4.6	103.31	118.0000	0.003
	1.00	60.1	10.1	103.32	59.5000	0.004
	1.50	65.4	15.3	103.32	40.0000	0.004
	2.00	70.4	20.4	103.33	30.2500	0.005
	2.50	75.7	25.7	103.34	24.4000	0.006
	3.00	80.7	30.7	103.34	20.5000	0.007
	3.50	85.7	35.6	103.35	17.7143	0.007
	4.00	90.7	40.6	103.35	15.6250	0.008
	4.50	95.5	45.5	103.36	14.0000	0.009
	5.00	100.0	50.0	103.36	12.7000	0.010
	5.50	104.8	54.7	103.37	11.6364	0.011
	6.00	109.2	59.1	103.38	10.7500	0.012
	6.50	113.6	63.5	103.38	10.0000	0.013
	7.00	118.1	68.0	103.39	9.3571	0.014
	7.50	122.2	72.1	103.40	8.8000	0.015
	8.00	126.1	76.1	103.41	8.3125	0.016
	8.50	130.2	80.2	103.41	7.8824	0.017
	9.00	134.9	84.9	103.42	7.5000	0.018
	9.50	139.4	89.4	103.42	7.1579	0.019
	10.00	143.6	93.5	103.43	6.8500	0.021
	10.50	147.8	97.8	103.44	6.5714	0.022
	11.00	152.2	102.1	103.44	6.3182	0.023
	11.50	156.6	106.5	103.45	6.0870	0.025
	12.00	160.8	110.8	103.46	5.8750	0.026
	12.50	165.0	114.9	103.46	5.6800	0.027
	13.00	169.2	119.1	103.47	5.5000	0.029
	13.50	173.3	123.2	103.48	5.3333	0.030
	14.00	177.3	127.3	103.48	5.1786	0.031
	14.50	180.9	130.8	103.49	5.0345	0.033
	15.00	183.8	133.8	103.50	4.9000	0.034
	15.50	187.1	137.0	103.50	4.7742	0.035
	16.00	190.0	140.0	103.51	4.6562	0.036
	16.50	192.9	142.9	103.51	4.5455	0.037
	17.00	195.5	145.5	103.51	4.4412	0.038
	17.50	198.1	148.1	103.53	4.3429	0.039
	18.00	200.8	150.7	103.53	4.2500	0.040
	18.50	203.4	153.4	103.54	4.1622	0.041
	19.00	206.0	156.0	103.54	4.0789	0.042
	19.50	208.5	158.5	103.56	4.0000	0.043
	20.00	210.9	160.9	103.56	3.9250	0.044
	20.50	213.1	163.1	103.57	3.8537	0.045
	21.00	215.4	165.4	103.57	3.7857	0.046
	21.50	218.0	167.9	103.58	3.7209	0.048

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06

Time	Pressure PSig	delta P PSig	P	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
22.00	220.6	170.6		103.58	3.6591	0.049
22.50	223.3	173.3		103.60	3.6000	0.050
23.00	225.8	175.7		103.60	3.5435	0.051
23.50	228.2	178.1		103.60	3.4894	0.052
24.00	230.6	180.5		103.61	3.4375	0.053
24.50	232.9	182.8		103.61	3.3878	0.054
25.00	234.9	184.9		103.62	3.3400	0.055
25.50	237.0	186.9		103.63	3.2941	0.056
26.00	238.9	188.9		103.63	3.2500	0.057
26.50	240.9	190.8		103.64	3.2075	0.058
27.00	242.6	192.5		103.64	3.1667	0.059
27.50	244.2	194.2		103.65	3.1273	0.060
28.00	245.9	195.8		103.66	3.0893	0.060
28.50	247.4	197.3		103.66	3.0526	0.061
29.00	248.9	198.9		103.67	3.0172	0.062
29.50	250.4	200.4		103.67	2.9831	0.063
30.00	251.9	201.8		103.67	2.9500	0.063
30.50	253.3	203.2		103.68	2.9180	0.064
31.00	254.6	204.6		103.69	2.8871	0.065
31.50	256.0	205.9		103.69	2.8571	0.066
32.00	257.3	207.2		103.70	2.8281	0.066
32.50	258.6	208.5		103.71	2.8000	0.067
33.00	259.8	209.8		103.71	2.7727	0.068
33.50	260.9	210.9		103.71	2.7463	0.068
34.00	262.1	212.0		103.72	2.7206	0.069
34.50	263.3	213.2		103.73	2.6957	0.069
35.00	264.5	214.4		103.73	2.6714	0.070
35.50	265.7	215.6		103.74	2.6479	0.071
36.00	266.9	216.9		103.75	2.6250	0.071
36.50	268.0	217.9		103.75	2.6027	0.072
37.00	269.1	219.1		103.76	2.5811	0.072
37.50	270.2	220.1		103.76	2.5600	0.073
38.00	271.2	221.1		103.76	2.5395	0.074
38.50	272.3	222.2		103.77	2.5195	0.074
39.00	273.4	223.4		103.77	2.5000	0.075
39.50	274.4	224.4		103.79	2.4810	0.075
40.00	275.5	225.4		103.78	2.4625	0.076
40.50	276.5	226.5		103.80	2.4444	0.076
41.00	277.6	227.5		103.80	2.4268	0.077
41.50	278.6	228.5		103.81	2.4096	0.078
42.00	279.6	229.6		103.81	2.3929	0.078
42.50	280.8	230.7		103.81	2.3765	0.079
43.00	281.7	231.7		103.82	2.3605	0.079
43.50	282.7	232.7		103.83	2.3448	0.080
44.00	283.8	233.7		103.83	2.3295	0.081
44.50	284.8	234.8		103.84	2.3146	0.081
45.00	285.9	235.9		103.84	2.3000	0.082
45.50	286.9	236.8		103.85	2.2857	0.082
***** End Shut-in 2	46.00	287.7	237.7	103.85	2.2717	0.083
***** Final Hydro.	264.00	1376.6	0.0	104.07		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97 TIME: 18:06:06

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	110.00	1386.0	0.0	100.67		
***** Start Flow 1	0.00	21.6	0.0	100.75		
	0.50	24.0	2.4	100.79		
	1.00	26.3	4.7	100.83		
	1.50	25.5	4.0	100.88		
	2.00	26.6	5.0	100.93		
	2.50	28.0	6.4	100.98		
	3.00	27.9	6.3	101.02		
	3.50	28.6	7.0	101.07		
	4.00	28.4	6.9	101.12		
	4.50	42.3	20.7	101.17		
	5.00	26.2	4.6	101.22		
	5.50	25.7	4.1	101.28		
	6.00	24.7	3.1	101.31		
	6.50	25.9	4.3	101.36		
	7.00	25.2	3.6	101.41		
	7.50	23.9	2.3	101.44		
	8.00	27.6	6.0	101.48		
	8.50	27.3	5.8	101.51		
	9.00	26.8	5.2	101.54		
	9.50	27.5	5.9	101.57		
	10.00	27.5	5.9	101.59		
	10.50	29.6	8.0	101.62		
	11.00	30.0	8.5	101.64		
	11.50	31.8	10.3	101.66		
	12.00	32.1	10.6	101.68		
	12.50	31.6	10.1	101.70		
	13.00	35.8	14.2	101.71		
	13.50	27.1	5.5	101.73		
	14.00	27.7	6.1	101.75		
	14.50	27.9	6.4	101.76		
	15.00	26.7	5.1	101.77		
	15.50	27.5	5.9	101.79		
	16.00	27.6	6.1	101.80		
	16.50	28.0	6.4	101.82		
	17.00	28.4	6.8	101.83		
	17.50	29.6	8.1	101.84		
	18.00	37.9	16.3	101.85		
	18.50	27.4	5.9	101.86		
	19.00	29.6	8.1	101.87		
	19.50	28.8	7.3	101.88		
	20.00	30.1	8.6	101.89		
	20.50	31.1	9.6	101.90		
	21.00	31.3	9.7	101.91		
	21.50	31.8	10.3	101.91		
	22.00	31.9	10.4	101.93		
	22.50	32.4	10.9	101.94		
	23.00	32.9	11.3	101.94		
	23.50	33.7	12.2	101.96		
	24.00	31.0	9.4	101.95		
	24.50	29.0	7.5	101.96		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	25.00	31.1	9.6	101.97		
	25.50	32.2	10.7	101.98		
	26.00	32.6	11.1	101.98		
	26.50	33.0	11.4	101.99		
	27.00	33.9	12.3	102.00		
	27.50	34.3	12.7	102.01		
	28.00	36.7	15.2	102.02		
	28.50	33.7	12.2	102.02		
	29.00	34.1	12.5	102.03		
***** End Flow 1	29.50	38.3	16.8	102.04		
***** Start Shutin 1	0.00	38.3	0.0	102.04	0.0000	0.001
	0.50	75.5	37.2	102.05	60.0000	0.006
	1.00	88.5	50.2	102.06	30.5000	0.008
	1.50	101.5	63.2	102.07	20.6667	0.010
	2.00	109.1	70.7	102.08	15.7500	0.012
	2.50	114.8	76.5	102.09	12.8000	0.013
	3.00	120.0	81.7	102.10	10.8333	0.014
	3.50	125.1	86.8	102.10	9.4286	0.016
	4.00	130.1	91.7	102.12	8.3750	0.017
	4.50	134.9	96.6	102.13	7.5556	0.018
	5.00	140.2	101.9	102.14	6.9000	0.020
	5.50	145.2	106.9	102.15	6.3636	0.021
	6.00	150.2	111.9	102.16	5.9167	0.023
	6.50	154.9	116.6	102.17	5.5385	0.024
	7.00	160.0	121.7	102.19	5.2143	0.026
	7.50	164.9	126.6	102.21	4.9333	0.027
	8.00	169.9	131.6	102.22	4.6875	0.029
	8.50	174.3	136.0	102.22	4.4706	0.030
	9.00	178.3	140.0	102.24	4.2778	0.032
	9.50	182.1	143.8	102.25	4.1053	0.033
	10.00	185.8	147.5	102.26	3.9500	0.035
	10.50	189.4	151.1	102.28	3.8095	0.036
	11.00	193.1	154.8	102.29	3.6818	0.037
	11.50	196.8	158.5	102.30	3.5652	0.039
	12.00	200.5	162.2	102.31	3.4583	0.040
	12.50	203.9	165.6	102.33	3.3600	0.042
	13.00	207.3	168.9	102.34	3.2692	0.043
	13.50	210.5	172.2	102.35	3.1852	0.044
	14.00	213.6	175.3	102.36	3.1071	0.046
	14.50	216.9	178.6	102.38	3.0345	0.047
	15.00	220.0	181.7	102.39	2.9667	0.048
	15.50	223.0	184.7	102.40	2.9032	0.050
	16.00	226.0	187.7	102.41	2.8438	0.051
	16.50	228.9	190.5	102.42	2.7879	0.052
	17.00	231.6	193.3	102.44	2.7353	0.054
	17.50	234.5	196.1	102.45	2.6857	0.055
	18.00	237.1	198.8	102.46	2.6389	0.056
	18.50	239.8	201.5	102.48	2.5946	0.057
	19.00	242.3	204.0	102.48	2.5526	0.059
	19.50	244.8	206.5	102.50	2.5128	0.060
	20.00	247.2	208.9	102.51	2.4750	0.061

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06  
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Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
20.50	249.5	211.2	102.52	2.4390	0.062
21.00	251.9	213.6	102.54	2.4048	0.063
21.50	254.2	215.9	102.54	2.3721	0.065
22.00	256.6	218.2	102.55	2.3409	0.066
22.50	258.8	220.5	102.57	2.3111	0.067
23.00	261.0	222.7	102.58	2.2826	0.068
23.50	263.1	224.8	102.59	2.2553	0.069
24.00	265.1	226.8	102.60	2.2292	0.070
24.50	267.2	228.9	102.61	2.2041	0.071
25.00	269.2	230.9	102.62	2.1800	0.072
25.50	271.1	232.7	102.63	2.1569	0.073
26.00	272.9	234.6	102.64	2.1346	0.074
26.50	274.7	236.4	102.66	2.1132	0.075
27.00	276.4	238.1	102.67	2.0926	0.076
27.50	278.1	239.8	102.68	2.0727	0.077
28.00	279.8	241.5	102.69	2.0536	0.078
28.50	281.4	243.1	102.70	2.0351	0.079
29.00	283.1	244.8	102.71	2.0172	0.080
29.50	284.7	246.4	102.72	2.0000	0.081
30.00	286.1	247.8	102.72	1.9833	0.082
30.50	287.8	249.4	102.74	1.9672	0.083
31.00	289.2	250.9	102.75	1.9516	0.084
31.50	290.7	252.4	102.76	1.9365	0.084
32.00	292.0	253.7	102.77	1.9219	0.085
32.50	293.4	255.1	102.79	1.9077	0.086
33.00	294.8	256.5	102.80	1.8939	0.087
33.50	296.2	257.9	102.80	1.8806	0.088
34.00	297.6	259.3	102.81	1.8676	0.089
34.50	299.0	260.7	102.83	1.8551	0.089
35.00	300.1	261.8	102.84	1.8429	0.090
35.50	301.3	263.0	102.84	1.8310	0.091
36.00	302.4	264.1	102.85	1.8194	0.091
36.50	303.7	265.3	102.86	1.8082	0.092
37.00	305.7	267.4	102.87	1.7973	0.093
37.50	307.5	269.2	102.88	1.7867	0.095
38.00	309.6	271.3	102.89	1.7763	0.096
38.50	311.4	273.1	102.90	1.7662	0.097
39.00	313.5	275.1	102.91	1.7564	0.098
39.50	315.0	276.7	102.92	1.7468	0.099
40.00	316.2	277.8	102.92	1.7375	0.10
40.50	317.1	278.8	102.93	1.7284	0.101
41.00	318.0	279.7	102.94	1.7195	0.101
41.50	318.8	280.5	102.95	1.7108	0.102
42.00	319.6	281.2	102.96	1.7024	0.102
42.50	320.4	282.0	102.97	1.6941	0.103
43.00	321.0	282.7	102.98	1.6860	0.103
43.50	321.6	283.3	102.99	1.6782	0.103
44.00	322.3	284.0	103.00	1.6705	0.104
44.50	322.8	284.5	102.96	1.6629	0.104
45.00	323.1	284.8	103.00	1.6556	0.104

\*\*\*\*\* End Shut-in 1

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97 TIME: 18:06:06

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Start Flow 2	0.00	41.9	0.0	103.02		
	0.50	41.6	-0.3	103.02		
	1.00	38.9	-3.0	103.03		
	1.50	39.6	-2.3	103.04		
	2.00	40.9	-1.0	103.03		
	2.50	41.3	-0.6	103.04		
	3.00	41.5	-0.4	103.04		
	3.50	42.0	0.0	103.04		
	4.00	42.0	0.1	103.04		
	4.50	42.7	0.8	103.05		
	5.00	43.4	1.5	103.05		
	5.50	43.2	1.3	103.06		
	6.00	44.0	2.1	103.06		
	6.50	43.4	1.5	103.06		
	7.00	43.9	2.0	103.06		
	7.50	45.0	3.1	103.07		
	8.00	44.8	2.9	103.08		
	8.50	45.2	3.3	103.08		
	9.00	45.4	3.5	103.08		
	9.50	45.2	3.3	103.09		
	10.00	45.3	3.4	103.09		
	10.50	45.1	3.2	103.10		
	11.00	45.2	3.3	103.10		
	11.50	45.5	3.6	103.11		
	12.00	45.5	3.6	103.11		
	12.50	45.9	4.0	103.12		
	13.00	46.2	4.3	103.13		
	13.50	45.9	4.0	103.13		
	14.00	45.9	4.0	103.14		
	14.50	46.5	4.6	103.14		
	15.00	46.7	4.8	103.15		
	15.50	47.0	5.1	103.15		
	16.00	47.3	5.3	103.16		
	16.50	47.4	5.5	103.16		
	17.00	47.4	5.5	103.16		
	17.50	47.7	5.8	103.18		
	18.00	48.0	6.1	103.18		
	18.50	48.1	6.2	103.19		
	19.00	48.2	6.3	103.19		
	19.50	48.4	6.4	103.20		
	20.00	48.6	6.6	103.20		
	20.50	48.7	6.8	103.21		
	21.00	48.6	6.7	103.22		
	21.50	48.8	6.9	103.23		
	22.00	49.1	7.2	103.23		
	22.50	49.4	7.5	103.24		
	23.00	49.5	7.6	103.25		
	23.50	49.6	7.7	103.25		
	24.00	49.5	7.6	103.25		
	24.50	49.9	8.0	103.27		
	25.00	50.1	8.2	103.27		
	25.50	49.9	8.0	103.27		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97 TIME: 18:06:06

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	26.00	50.0	8.1	103.28		
	26.50	50.2	8.3	103.28		
	27.00	50.0	8.1	103.28		
	27.50	50.4	8.4	103.30		
	28.00	50.7	8.8	103.29		
	28.50	50.8	8.9	103.30		
***** End Flow 2	29.00	50.1	8.1	103.30		
***** Start Shutin 2	0.00	50.1	0.0	103.30	0.0000	0.003
	0.50	54.7	4.6	103.31	118.0000	0.003
	1.00	60.1	10.1	103.32	59.5000	0.004
	1.50	65.4	15.3	103.32	40.0000	0.004
	2.00	70.4	20.4	103.33	30.2500	0.005
	2.50	75.7	25.7	103.34	24.4000	0.006
	3.00	80.7	30.7	103.34	20.5000	0.007
	3.50	85.7	35.6	103.35	17.7143	0.007
	4.00	90.7	40.6	103.35	15.6250	0.008
	4.50	95.5	45.5	103.36	14.0000	0.009
	5.00	100.0	50.0	103.36	12.7000	0.010
	5.50	104.8	54.7	103.37	11.6364	0.011
	6.00	109.2	59.1	103.38	10.7500	0.012
	6.50	113.6	63.5	103.38	10.0000	0.013
	7.00	118.1	68.0	103.39	9.3571	0.014
	7.50	122.2	72.1	103.40	8.8000	0.015
	8.00	126.1	76.1	103.41	8.3125	0.016
	8.50	130.2	80.2	103.41	7.8824	0.017
	9.00	134.9	84.9	103.42	7.5000	0.018
	9.50	139.4	89.4	103.42	7.1579	0.019
	10.00	143.6	93.5	103.43	6.8500	0.021
	10.50	147.8	97.8	103.44	6.5714	0.022
	11.00	152.2	102.1	103.44	6.3182	0.023
	11.50	156.6	106.5	103.45	6.0870	0.025
	12.00	160.8	110.8	103.46	5.8750	0.026
	12.50	165.0	114.9	103.46	5.6800	0.027
	13.00	169.2	119.1	103.47	5.5000	0.029
	13.50	173.3	123.2	103.48	5.3333	0.030
	14.00	177.3	127.3	103.48	5.1786	0.031
	14.50	180.9	130.8	103.49	5.0345	0.033
	15.00	183.8	133.8	103.50	4.9000	0.034
	15.50	187.1	137.0	103.50	4.7742	0.035
	16.00	190.0	140.0	103.51	4.6562	0.036
	16.50	192.9	142.9	103.51	4.5455	0.037
	17.00	195.5	145.5	103.51	4.4412	0.038
	17.50	198.1	148.1	103.53	4.3429	0.039
	18.00	200.8	150.7	103.53	4.2500	0.040
	18.50	203.4	153.4	103.54	4.1622	0.041
	19.00	206.0	156.0	103.54	4.0789	0.042
	19.50	208.5	158.5	103.56	4.0000	0.043
	20.00	210.9	160.9	103.56	3.9250	0.044
	20.50	213.1	163.1	103.57	3.8537	0.045
	21.00	215.4	165.4	103.57	3.7857	0.046
	21.50	218.0	167.9	103.58	3.7209	0.048

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10195 Maxwell Operating Co. Ross #1 DST #1

DATE: 07/27/97

TIME: 18:06:06

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	22.00	220.6	170.6	103.58	3.6591	0.049
	22.50	223.3	173.3	103.60	3.6000	0.050
	23.00	225.8	175.7	103.60	3.5435	0.051
	23.50	228.2	178.1	103.60	3.4894	0.052
	24.00	230.6	180.5	103.61	3.4375	0.053
	24.50	232.9	182.8	103.61	3.3878	0.054
	25.00	234.9	184.9	103.62	3.3400	0.055
	25.50	237.0	186.9	103.63	3.2941	0.056
	26.00	238.9	188.9	103.63	3.2500	0.057
	26.50	240.9	190.8	103.64	3.2075	0.058
	27.00	242.6	192.5	103.64	3.1667	0.059
	27.50	244.2	194.2	103.65	3.1273	0.060
	28.00	245.9	195.8	103.66	3.0893	0.060
	28.50	247.4	197.3	103.66	3.0526	0.061
	29.00	248.9	198.9	103.67	3.0172	0.062
	29.50	250.4	200.4	103.67	2.9831	0.063
	30.00	251.9	201.8	103.67	2.9500	0.063
	30.50	253.3	203.2	103.68	2.9180	0.064
	31.00	254.6	204.6	103.69	2.8871	0.065
	31.50	256.0	205.9	103.69	2.8571	0.066
	32.00	257.3	207.2	103.70	2.8281	0.066
	32.50	258.6	208.5	103.71	2.8000	0.067
	33.00	259.8	209.8	103.71	2.7727	0.068
	33.50	260.9	210.9	103.71	2.7463	0.068
	34.00	262.1	212.0	103.72	2.7206	0.069
	34.50	263.3	213.2	103.73	2.6957	0.069
	35.00	264.5	214.4	103.73	2.6714	0.070
	35.50	265.7	215.6	103.74	2.6479	0.071
	36.00	266.9	216.9	103.75	2.6250	0.071
	36.50	268.0	217.9	103.75	2.6027	0.072
	37.00	269.1	219.1	103.76	2.5811	0.072
	37.50	270.2	220.1	103.76	2.5600	0.073
	38.00	271.2	221.1	103.76	2.5395	0.074
	38.50	272.3	222.2	103.77	2.5195	0.074
	39.00	273.4	223.4	103.77	2.5000	0.075
	39.50	274.4	224.4	103.79	2.4810	0.075
	40.00	275.5	225.4	103.78	2.4625	0.076
	40.50	276.5	226.5	103.80	2.4444	0.076
	41.00	277.6	227.5	103.80	2.4268	0.077
	41.50	278.6	228.5	103.81	2.4096	0.078
	42.00	279.6	229.6	103.81	2.3929	0.078
	42.50	280.8	230.7	103.81	2.3765	0.079
	43.00	281.7	231.7	103.82	2.3605	0.079
	43.50	282.7	232.7	103.83	2.3448	0.080
	44.00	283.8	233.7	103.83	2.3295	0.081
	44.50	284.8	234.8	103.84	2.3146	0.081
	45.00	285.9	235.9	103.84	2.3000	0.082
	45.50	286.9	236.8	103.85	2.2857	0.082
***** End Shut-in 2	46.00	287.7	237.7	103.85	2.2717	0.083
***** Final Hydro.	264.00	1376.6	0.0	104.07		

# TEST HISTORY

10195 Maxwell Operating Co. Ross #1 DST #1

## Flag Points

t (Min.) P (PSig)

A:	0.00	1386.03
B:	0.00	21.55
C:	29.50	38.32
D:	45.00	323.08
E:	0.00	41.92
F:	29.00	50.05
G:	46.00	287.74
Q:	0.00	1376.58

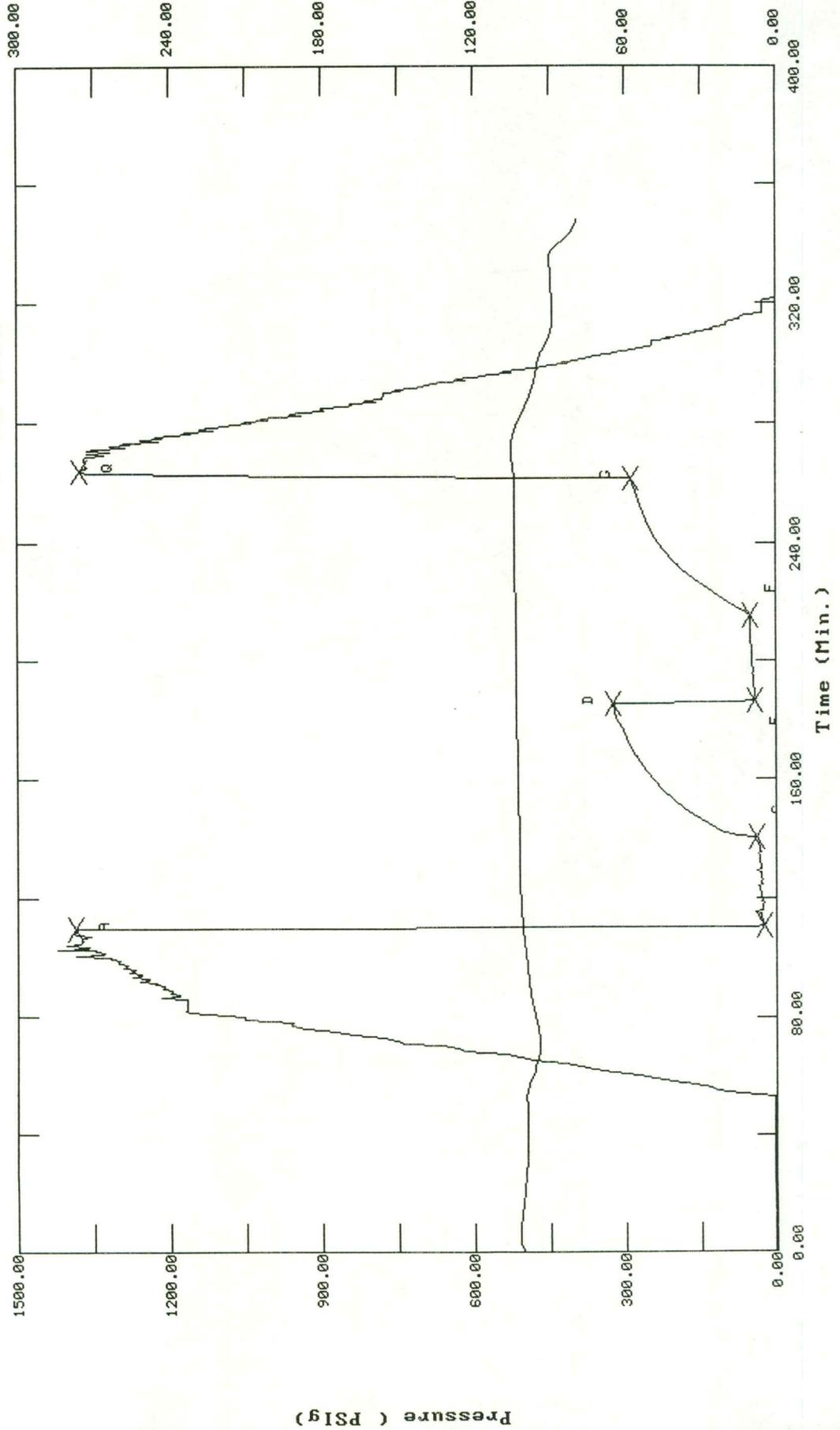
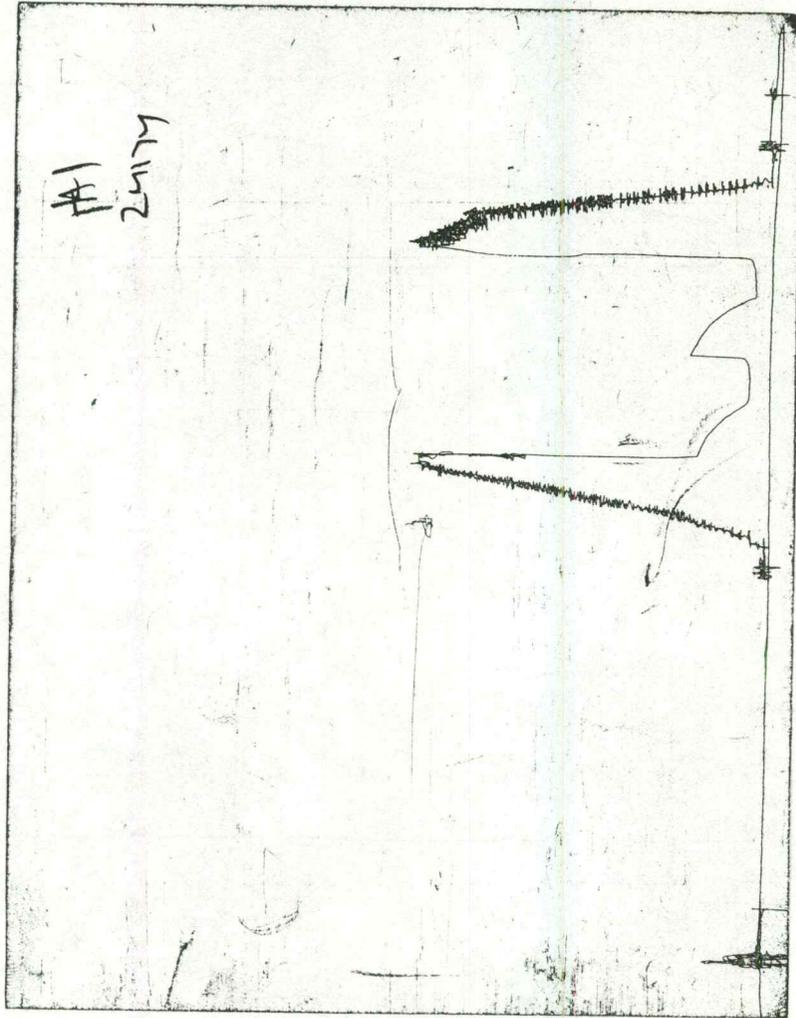


CHART PAGE



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. 10195

Well Name & No. <u>Ross #1</u>	Test No. <u>1</u>	Date <u>7-27-90</u>
Company <u>Maxwell Operating Company</u>	Zone Tested <u>Topella</u>	
Address _____	Elevation <u>1878</u> KB <u>1869</u> GL	
Co. Rep / Geo. <u>Ron Nelson</u>	Cont. <u>Discovery #1</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>4</u> Twp. <u>16s</u> Rge. <u>12w</u> Co. <u>Barton</u> State <u>Ks</u>		
No. of Copies _____	Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested <u>2892-2931</u>	Initial Str Wt./Lbs. <u>28,000</u>	Unseated Str Wt./Lbs. <u>28,000</u>
Anchor Length <u>39</u>	Wt. Set Lbs. <u>20,000</u>	Wt. Pulled Loose/Lbs. <u>45,000</u>
Top Packer Depth <u>2887</u>	Tool Weight <u>2200</u>	
Bottom Packer Depth <u>2892</u>	Hole Size — 7 7/8" _____	Rubber Size — 6 3/4" _____
Total Depth <u>2931</u>	Wt. Pipe Run _____	Drill Collar Run _____
Mud Wt. <u>9.0</u> LCM _____ Vis. <u>45</u> WL <u>9.6</u>	Drill Pipe Size <u>4 1/2 ID</u>	Ft. Run <u>2855</u>
Blow Description <u>strong blow - bottom of bucket in 45 seconds</u>		
<u>FST - surface blow died in 2 minutes</u>		
<u>FF - strong blow - bottom of bucket in 45 seconds</u>		
<u>FST - surface blow died in 2 minutes</u>		

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP
Rec. <u>30</u>	Feet Of <u>gassy m &amp; w co</u>	<u>5</u> %gas <u>40</u> %oil <u>25</u> %water <u>30</u> %mud	
Rec. <u>20</u>	Feet Of <u>gassy m &amp; w co</u>	<u>10</u> %gas <u>40</u> %oil <u>35</u> %water <u>15</u> %mud	
Rec. _____	Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____	Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____	Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	

BHT <u>103</u>	°F Gravity _____	°API D@ _____	°F Corrected Gravity _____	°API _____
RW <u>25</u>	@ <u>76</u>	°F Chlorides <u>26,000</u>	ppm Recovery Chlorides <u>5,000</u>	ppm System _____
(A) Initial Hydrostatic Mud <u>1386</u>	PSI Recorder No. <u>28174</u>	T-Started <u>1843</u>		
(B) First Initial Flow Pressure <u>22</u>	PSI (depth) <u>2926</u>	T-Open <u>1950</u>		
(C) First Final Flow Pressure <u>38</u>	PSI Recorder No. <u>2346</u>	T-Pulled <u>2220</u>		
(D) Initial Shut-in Pressure <u>323</u>	PSI (depth) <u>2895</u>	T-Out <u>2328</u>		
(E) Second Initial Flow Pressure <u>42</u>	PSI Recorder No. _____			
(F) Second Final Flow Pressure <u>50</u>	PSI (depth) _____			
(G) Final Shut-in Pressure <u>208</u> <u>280?</u>	PSI Initial Opening <u>30</u>	Test _____	<u>600</u>	
(H) Final Hydrostatic Mud <u>1376</u>	PSI Initial Shut-in <u>45</u>	Jars _____		

Final Flow <u>30</u>	Safety Joint _____
Final Shut-in <u>45</u>	Straddle _____
<u>46 stands</u>	Circ. Sub _____
	Sampler _____
	Extra Packer _____
	Elect. Rec. <u>X</u> <u>150</u>
	Other _____
	TOTAL PRICE \$ <u>750</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 Paul Simpson  
 Job Representative \_\_\_\_\_

TRILOBITE TESTING L.L.C.

OPERATOR : Maxwell Operating Co.  
 WELL NAME: Ross #1  
 LOCATION : Sec04 T16s R12w Ellis  
 INTERVAL : 3068.00 To 3090.00 ft

DATE 07/28/97

KB 1878.00 ft TICKET NO: 10196 DST #2  
 GR 1869.00 ft FORMATION: Kansas City 'C'  
 TD 3090.00 ft TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	24174	24174	2346			PF Fr. 1700 to 1730 hr
SI 30	Range(Psi )	3050.0	3050.0	4995.0	0.0	0.0	IS Fr. 1730 to 1800 hr
SF 10	Clock(hrs)	12hr.	12hr.	Elec			SF Fr. 1800 to 1810 hr
FS 0	Depth(ft )	3085.0	3085.0	3072.0	0.0	0.0	FS Fr. to hr

	Field	1	2	3	4	
A. Init Hydro	0.0	1489.0	1486.0	0.0	0.0	T STARTED 1610 hr
B. First Flow	0.0	15.0	15.0	0.0	0.0	T ON BOTM 1658 hr
B1. Final Flow	0.0	17.0	21.0	0.0	0.0	T OPEN 1700 hr
C. In Shut-in	0.0	64.0	81.0	0.0	0.0	T PULLED 1810 hr
D. Init Flow	0.0	52.0	17.0	0.0	0.0	T OUT 1858 hr
E. Final Flow	0.0	40.0	20.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	0.0	1471.0	1476.0	0.0	0.0	Tool Wt. 2000.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 32000.00 lbs
						Initial Str Wt 30000.00 lbs
						Unseated Str Wt 30000.00 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 30.00 ft
						D.P. Length 3036.00 ft

RECOVERY

Tot Fluid 20.00 ft of 20.00 ft in DC and 0.00 ft in DP  
 30.00 ft of Gas in Pipe  
 0.00 ft of  
 20.00 ft of Slightly Oil specked Mud  
 0.00 ft of 3%oil 97%mud  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of

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

BLOW DESCRIPTION

Initial Flow-  
 weak 1/4" blow decreasing to  
 surface blow.

Initial Shutin-  
 no blow

Final Flow-  
 1" blow decreasing to 1/4" in  
 10 minutes

Final Shutin-  
 none taken

SAMPLES:  
 SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/c
Vis.	47.00 S/L
W.L.	10.40 in3
F.C.	0.00 in
Mud Drop	

Amt. of fill	0.00 ft
Btm. H. Temp.	102.00 F
Hole Condition	good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Paul Simpson
Co. Rep.	Ron Nelson
Contr.	Discovery
Rig #	1
Unit #	
Pump T.	

Test Successful: Y

\*\*\* TOOL DIAGRAM \*\*\* CONV

WELL NAME: Ross #1

LOCATION : Sec04 T16s R12w Ellis

TICKET No. 10196 D.S.T. No. 2 DATE 07/28/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 20

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 22 perf

TOTAL TOOL ..... 42

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY ..... 42

D.C. ABOVE TOOLS.Stands Single 1 Total 30

D.P. ABOVE TOOLS.Stands51 Single Total 3036

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 3108

TOTAL DEPTH ..... 3090

TOTAL DRILL PIPE ABOVE K.B. .... 18

REMARKS:

P.O. SUB		
C.O. SUB Top of tool @		3048
S.I. TOOL H & T		3054
HMV Sterling		3059
JARS Sterling		n/a
SAFETY JOINT Bowen		n/a
PACKER Top		3063
PACKER Bottom		3068
DEPTH	3068	
STUBB 1'		3069
ANCHOR		
3' perf		3072
Alpine rec. @3072		
5' perf		3077
5' perf		3082
T.C. DEPTH		
5' perf		3087
Ak-1 rec @ 3085		
BULLNOSE 3' bullplug		
T.D. to		3090

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10196 Maxwell Operating Ross #1 DST #2

DATE: 07/28/97 TIME: 15:41:36

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	85.00	1485.6	0.0	100.35		
***** Start Flow 1	0.00	14.7	0.0	100.43		
	0.50	16.2	1.4	100.51		
	1.00	16.6	1.9	100.58		
	1.50	16.6	1.9	100.63		
	2.00	17.0	2.3	100.67		
	2.50	17.2	2.5	100.71		
	3.00	17.5	2.8	100.73		
	3.50	17.7	3.0	100.77		
	4.00	17.9	3.2	100.79		
	4.50	18.0	3.3	100.80		
	5.00	18.2	3.5	100.82		
	5.50	18.4	3.6	100.84		
	6.00	18.6	3.9	100.85		
	6.50	18.8	4.1	100.86		
	7.00	19.0	4.3	100.87		
	7.50	19.1	4.4	100.87		
	8.00	19.2	4.5	100.89		
	8.50	19.4	4.6	100.90		
	9.00	19.6	4.9	100.90		
	9.50	19.7	5.0	100.90		
	10.00	19.9	5.2	100.91		
	10.50	20.1	5.3	100.92		
	11.00	20.2	5.5	100.93		
	11.50	20.3	5.6	100.93		
	12.00	20.5	5.8	100.94		
	12.50	20.6	5.9	100.95		
	13.00	20.8	6.0	100.95		
	13.50	20.9	6.2	100.96		
	14.00	21.0	6.3	100.96		
	14.50	21.2	6.5	100.97		
	15.00	21.4	6.7	100.97		
	15.50	21.6	6.8	100.98		
	16.00	21.6	6.9	100.99		
	16.50	19.0	4.3	100.99		
	17.00	20.3	5.5	101.00		
	17.50	18.1	3.4	101.00		
	18.00	19.8	5.0	101.01		
	18.50	19.2	4.4	101.01		
	19.00	19.8	5.1	101.02		
	19.50	21.0	6.3	101.03		
	20.00	19.4	4.6	101.04		
	20.50	20.7	5.9	101.05		
	21.00	19.5	4.8	101.05		
	21.50	20.3	5.6	101.06		
	22.00	20.0	5.3	101.08		
	22.50	21.2	6.4	101.09		
	23.00	19.8	5.0	101.09		
	23.50	21.1	6.3	101.10		
	24.00	19.4	4.7	101.12		
	24.50	20.5	5.7	101.12		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10196 Maxwell Operating Ross #1 DST #2

DATE: 07/28/97

TIME: 15:41:36

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	25.00	20.2	5.5	101.13		
	25.50	20.9	6.2	101.14		
	26.00	21.7	7.0	101.16		
	26.50	20.2	5.5	101.17		
	27.00	21.4	6.6	101.18		
	27.50	19.9	5.1	101.18		
	28.00	21.0	6.3	101.20		
	28.50	21.9	7.2	101.22		
	29.00	20.2	5.4	101.23		
	29.50	20.6	5.9	101.24		
	30.00	21.5	6.8	101.25		
	30.50	20.0	5.3	101.26		
	31.00	21.0	6.3	101.27		
	31.50	21.6	6.8	101.29		
	32.00	20.3	5.6	101.30		
***** End Flow 1	32.50	21.0	6.3	101.32		
***** Start Shutin 1	0.00	21.0	0.0	101.32	0.0000	0.000
	0.50	21.8	0.8	101.33	66.0000	0.000
	1.00	22.5	1.5	101.34	33.5000	0.001
	1.50	23.4	2.3	101.35	22.6667	0.001
	2.00	24.1	3.1	101.36	17.2500	0.001
	2.50	25.0	4.0	101.38	14.0000	0.001
	3.00	26.1	5.1	101.39	11.8333	0.001
	3.50	27.0	6.0	101.40	10.2857	0.001
	4.00	28.0	6.9	101.41	9.1250	0.001
	4.50	28.7	7.7	101.43	8.2222	0.001
	5.00	29.4	8.4	101.45	7.5000	0.001
	5.50	30.1	9.1	101.47	6.9091	0.001
	6.00	31.0	10	101.47	6.4167	0.001
	6.50	31.8	10.8	101.49	6.0000	0.001
	7.00	32.6	11.5	101.51	5.6429	0.001
	7.50	33.3	12.3	101.51	5.3333	0.001
	8.00	34.2	13.1	101.54	5.0625	0.001
	8.50	35.0	14.0	101.55	4.8235	0.001
	9.00	36.0	15.0	101.56	4.6111	0.001
	9.50	37.2	16.1	101.58	4.4211	0.001
	10.00	38.0	17.0	101.59	4.2500	0.001
	10.50	38.9	17.9	101.61	4.0952	0.002
	11.00	39.8	18.7	101.63	3.9545	0.002
	11.50	40.6	19.6	101.64	3.8261	0.002
	12.00	41.6	20.5	101.66	3.7083	0.002
	12.50	42.6	21.6	101.67	3.6000	0.002
	13.00	43.4	22.4	101.68	3.5000	0.002
	13.50	44.4	23.4	101.70	3.4074	0.002
	14.00	45.4	24.3	101.71	3.3214	0.002
	14.50	46.4	25.4	101.73	3.2414	0.002
	15.00	47.4	26.4	101.75	3.1667	0.002
	15.50	48.4	27.4	101.76	3.0968	0.002
	16.00	49.5	28.5	101.78	3.0312	0.002
	16.50	50.5	29.5	101.80	2.9697	0.003
	17.00	51.6	30.5	101.81	2.9118	0.003

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10196 Maxwell Operating Ross #1 DST #2

DATE: 07/28/97

TIME: 15:41:36  
 -----

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	17.50	52.7	31.6	101.83	2.8571	0.003
	18.00	53.7	32.7	101.84	2.8056	0.003
	18.50	54.8	33.8	101.86	2.7568	0.003
	19.00	56.0	34.9	101.87	2.7105	0.003
	19.50	57.1	36.1	101.88	2.6667	0.003
	20.00	58.3	37.2	101.90	2.6250	0.003
	20.50	59.4	38.4	101.92	2.5854	0.004
	21.00	60.7	39.7	101.93	2.5476	0.004
	21.50	61.9	40.8	101.95	2.5116	0.004
	22.00	63.1	42.1	101.97	2.4773	0.004
	22.50	64.4	43.3	101.99	2.4444	0.004
	23.00	65.6	44.6	102.00	2.4130	0.004
	23.50	66.9	45.9	102.01	2.3830	0.004
	24.00	68.3	47.3	102.03	2.3542	0.005
	24.50	69.6	48.6	102.04	2.3265	0.005
	25.00	71.0	49.9	102.06	2.3000	0.005
	25.50	72.4	51.3	102.08	2.2745	0.005
	26.00	73.8	52.8	102.09	2.2500	0.005
	26.50	75.3	54.2	102.10	2.2264	0.006
	27.00	76.8	55.8	102.12	2.2037	0.006
	27.50	78.3	57.3	102.14	2.1818	0.006
	28.00	79.8	58.8	102.16	2.1607	0.006
***** End Shut-in 1	28.50	81.4	60.3	102.18	2.1404	0.007
***** Start Flow 2	0.00	17.5	0.0	102.19		
	0.50	18.8	1.3	102.20		
	1.00	18.4	0.9	102.23		
	1.50	19.4	2.0	102.24		
	2.00	18.7	1.2	102.26		
	2.50	19.6	2.1	102.27		
	3.00	19.2	1.7	102.29		
	3.50	20.1	2.6	102.30		
	4.00	20.9	3.4	102.32		
	4.50	19.3	1.9	102.33		
	5.00	20.2	2.7	102.36		
	5.50	21.0	3.5	102.36		
	6.00	21.9	4.4	102.39		
	6.50	20.7	3.2	102.40		
	7.00	21.2	3.7	102.42		
	7.50	21.9	4.4	102.43		
***** End Flow 2	8.00	20.2	2.7	102.45		
***** Start Shutin 2	0.00	20.2	0.0	102.45	0.0000	0.000
	0.50	1431.3	1411.1	102.49	82.0000	2.048
***** End Shut-in 2	1.00	1475.9	1455.7	102.52	41.5000	2.178
***** Final Hydro.	156.00	1475.9	0.0	102.52		

# TEST HISTORY

10196 Maxwell Operating Ross #1 DST #2

## Flag Points

t (Min.)	P (PSig)
A: 0.00	1485.56
B: 0.00	14.72
C: 32.50	21.03
D: 28.50	81.35
E: 0.00	17.47
F: 8.00	20.15
Q: 0.00	1475.87

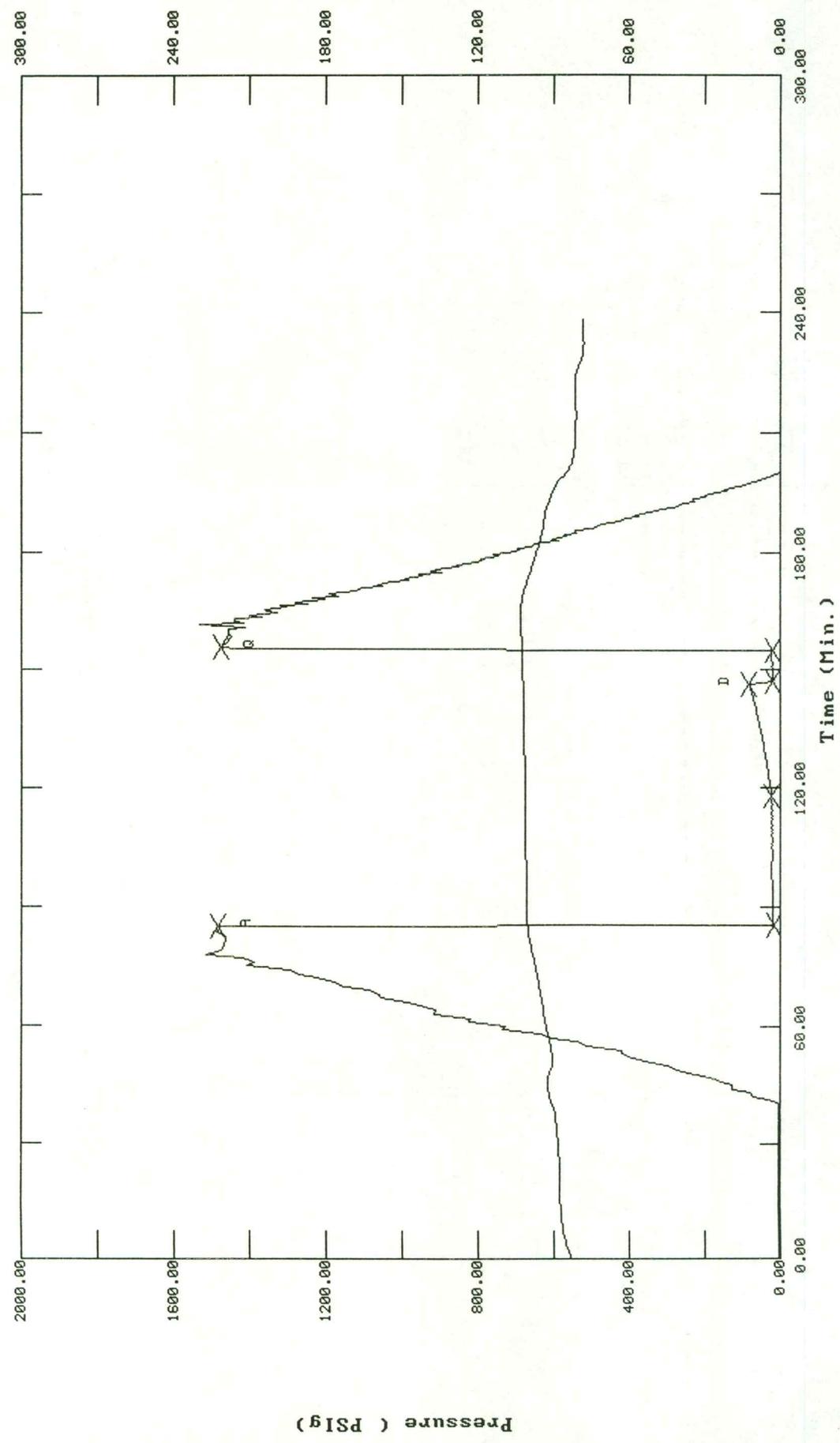
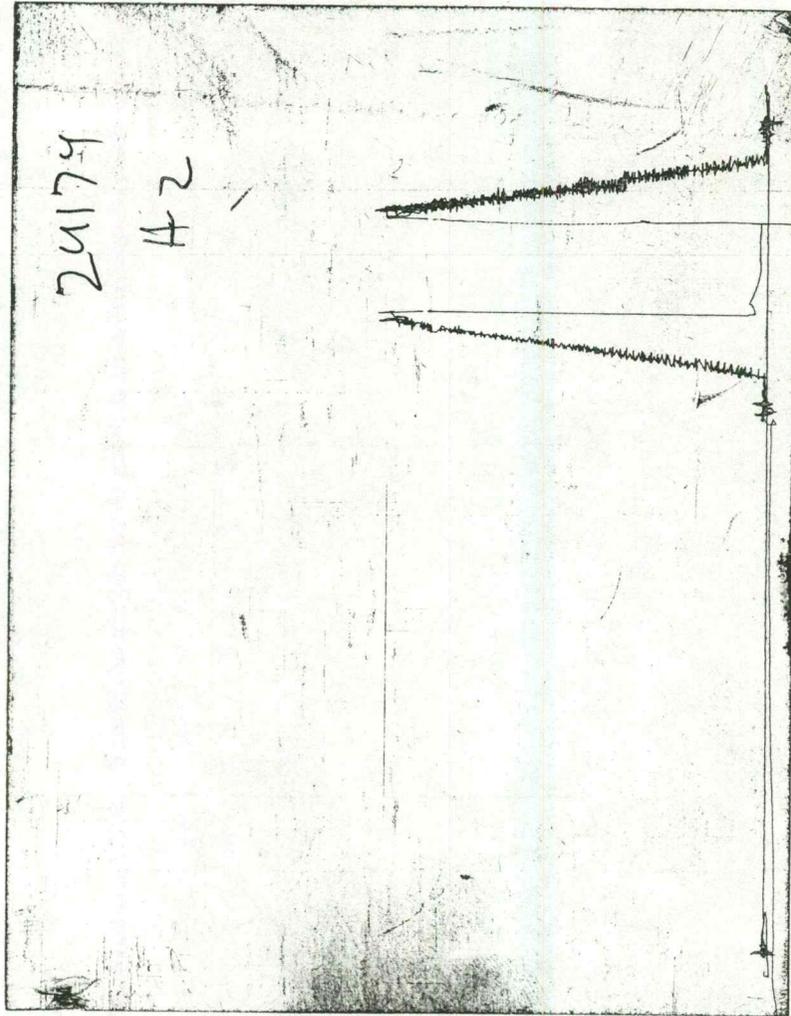


CHART PAGE



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<sup>o</sup> 10196

Well Name & No. <u>Ross #1</u>		Test No. <u>2</u>	Date <u>5-28-97</u>
Company <u>Maxwell Operating</u>		Zone Tested <u>KC C</u>	
Address _____		Elevation <u>1878</u> KB <u>1869</u> GL	
Co. Rep / Geo. <u>Ron Nelson</u>	Cont. <u>Discovery #1</u>	Est. Ft. of Pay _____ Por. _____ %	
Location: Sec. <u>4</u>	Twp. <u>16s</u>	Rge. <u>12w</u>	Co. <u>Barton</u> State <u>Ky</u>
No. of Copies _____	Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____	Evaluation (Y, N) _____

Interval Tested <u>3068-3090</u>	Initial Str Wt./Lbs. _____	Unseated Str Wt./Lbs. _____
Anchor Length <u>22</u>	Wt. Set Lbs. _____	Wt. Pulled Loose/Lbs. _____
Top Packer Depth <u>3063</u>	Tool Weight <u>2600</u>	
Bottom Packer Depth <u>3068</u>	Hole Size — <u>7 7/8"</u>	Rubber Size — <u>6 3/4"</u>
Total Depth <u>3090</u>	Wt. Pipe Run _____	Drill Collar Run <u>30</u>
Mud Wt. <u>9.0</u> LCM _____ Vis. <u>47</u> WL <u>10.4</u>	Drill Pipe Size <u>4 1/2 x 1 1/2</u>	Ft. Run <u>3036</u>
Blow Description <u>weak 1/4" blow decreasing to surface</u>		

88- 1" blow decreasing to 1/2"

Recovery — Total Feet <u>20</u>	GIP <u>30</u>	Ft. in DC _____	Ft. in DP _____
Rec. <u>20</u> Feet Of <u>sl OSM</u>	%gas <u>3</u>	%oil _____	%water <u>97</u> %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____

BHT 102 °F Gravity \_\_\_\_\_ °API D@ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides \_\_\_\_\_ ppm System

(A) Initial Hydrostatic Mud <u>1486</u>	PSI Recorder No. <u>24174</u>	T-Started <u>1610</u>
(B) First Initial Flow Pressure <u>15</u>	PSI (depth) <u>3085</u>	T-Open <u>1500</u>
(C) First Final Flow Pressure <u>21</u>	PSI Recorder No. <u>2846</u>	T-Pulled <u>1810</u>
(D) Initial Shut-in Pressure <u>81</u>	PSI (depth) <u>3072</u>	T-Out <u>1858</u>
(E) Second Initial Flow Pressure <u>17</u>	PSI Recorder No. _____	
(F) Second Final Flow Pressure <u>20</u>	PSI (depth) _____	
(G) Final Shut-in Pressure _____	PSI Initial Opening <u>30</u>	Test <u>6000</u>
(H) Final Hydrostatic Mud <u>1426</u>	PSI Initial Shut-in <u>30</u>	Jars _____
	Final Flow <u>10</u>	Safety Joint _____
	Final Shut-in _____	Straddle _____

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 A

Elect. Rec. A 150  
 Other \_\_\_\_\_

TRILOBITE TESTING L.L.C.

OPERATOR : Maxwell Operating Co.  
 WELL NAME: Ross #1  
 LOCATION : Sec04 T16s R12w Ellis  
 INTERVAL : 3091.00 To 3142.00 ft

DATE 07/29/97

KB 1878.00 ft TICKET NO: 10197 DST #3  
 GR 1869.00 ft FORMATION: Kansas City  
 TD 3142.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	24174	24174	2346			PF Fr. 0452 to 0522 hr
SI 45 Range(Psi )	3050.0	3050.0	4995.0	0.0	0.0	IS Fr. 0522 to 0607 hr
SF 30 Clock(hrs)	12hr.	12hr.	Elec			SF Fr. 0607 to 0637 hr
FS 45 Depth(ft )	3137.0	3137.0	3105.0	0.0	0.0	FS Fr. 0637 to 0722 hr

	Field	1	2	3	4	
A. Init Hydro	0.0	1537.0	1517.0	0.0	0.0	T STARTED 0400 hr
B. First Flow	0.0	181.0	136.0	0.0	0.0	T ON BOTM 0450 hr
B1. Final Flow	0.0	265.0	287.0	0.0	0.0	T OPEN 0452 hr
C. In Shut-in	0.0	460.0	467.0	0.0	0.0	T PULLED 0722 hr
D. Init Flow	0.0	342.0	297.0	0.0	0.0	T OUT 0854 hr
E. Final Flow	0.0	369.0	384.0	0.0	0.0	
F. Fl Shut-in	0.0	465.0	470.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	0.0	1534.0	1485.0	0.0	0.0	Tool Wt. 2000.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 36000.00 lbs
						Initial Str Wt 30000.00 lbs
						Unseated Str Wt 34000.00 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 30.00 ft
						D.P. Length 3067.00 ft

RECOVERY

Tot Fluid 960.00 ft of 30.00 ft in DC and 930.00 ft in DP  
 0.00 ft of Gas to Surface  
 150.00 ft of Gassy Mud 10%gas 90%mud  
 150.00 ft of Gassy Oil & Mud Cut Water  
 0.00 ft of 10%gas 15%oil 65%water 10%mud  
 180.00 ft of Gassy Oil & Mud Cut Water  
 0.00 ft of 10%gas 10%oil 60%water 20%mud  
 180.00 ft of Salt Water  
 0.00 ft of Rw .15 @ 75  
 SALINITY 47000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/c
Vis.	50.00 S/L
W.L.	10.00 in3
F.C.	0.00 in
Mud Drop	

BLOW DESCRIPTION

Initial Flow-  
 strong blow building to bottom of  
 bucket in 1 minute

Initial Shutin-  
 blow built to 7"

Final Flow-  
 1" blow decreasing to 1/4" in  
 10 minutes

Final Shutin-  
 gas to surface at beginning of  
 shutin blow built to bottom in 5 min

SAMPLES:

SENT TO:

Amt. of fill	0.00 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	
Tool Chased	
Tester	Paul Simpson
Co. Rep.	Ron Nelson
Contr.	Discovery
Rig #	1
Unit #	
Pump T.	

Test Successful: Y



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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10197 Maxwell Operating Ross #1 DST #3

DATE: 07/29/97 TIME: 03:41:51  
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	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	76.00	1516.9	0.0	98.30		
***** Start Flow 1	0.00	135.6	0.0	98.42		
	1.00	186.6	50.9	98.51		
	2.00	177.8	42.1	98.58		
	3.00	166.6	30.9	98.62		
	4.50	164.8	29.1	98.69		
	5.00	167.0	31.3	98.70		
	5.50	169.3	33.6	98.72		
	6.00	171.2	35.5	98.73		
	6.50	174.2	38.5	98.82		
	7.00	176.6	40.9	99.05		
	7.50	179.0	43.3	99.44		
	8.00	180.9	45.2	99.98		
	8.50	183.3	47.6	100.61		
	9.00	185.6	49.9	101.29		
	9.50	187.8	52.2	101.99		
	10.00	190.1	54.4	102.68		
	10.50	193.1	57.5	103.34		
	11.00	196.3	60.6	103.97		
	11.50	199.2	63.5	104.55		
	12.00	202.0	66.3	105.08		
	12.50	204.9	69.2	105.57		
	13.00	207.6	72.0	106.01		
	13.50	210.5	74.8	106.41		
	14.00	213.0	77.3	106.76		
	14.50	215.5	79.8	107.08		
	15.00	218.4	82.8	107.37		
	15.50	221.3	85.7	107.62		
	16.00	224.0	88.3	107.85		
	16.50	226.3	90.6	108.07		
	17.00	229.0	93.4	108.25		
	17.50	231.8	96.2	108.42		
	18.00	234.3	98.7	108.57		
	18.50	236.9	101.3	108.73		
	19.00	239.2	103.6	108.84		
	19.50	242.0	106.3	108.95		
	20.00	244.0	108.3	109.06		
	20.50	246.5	110.8	109.16		
	21.00	248.8	113.1	109.25		
	21.50	251.0	115.3	109.33		
	22.00	253.3	117.7	109.42		
	22.50	255.4	119.7	109.49		
	23.00	257.6	122.0	109.56		
	23.50	259.6	123.9	109.63		
	24.00	262.0	126.4	109.69		
	24.50	263.9	128.2	109.76		
	25.00	266.3	130.7	109.82		
	25.50	268.2	132.5	109.88		
	26.00	270.3	134.6	109.93		
	26.50	273.2	137.5	109.99		
	27.00	275.3	139.6	110.03		

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	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	27.50	277.0	141.3	110.09		
	28.00	278.9	143.3	110.13		
	28.50	280.8	145.1	110.18		
	29.00	282.8	147.2	110.24		
	29.50	285.2	149.5	110.27		
***** End Flow 1	30.00	286.9	151.3	110.31		
***** Start Shutin 1	0.00	286.9	0.0	110.31	0.0000	0.082
	0.50	288.2	1.3	110.36	61.0000	0.083
	1.00	349.7	62.8	110.40	31.0000	0.122
	1.50	368.0	81.1	110.43	21.0000	0.135
	2.00	378.4	91.5	110.47	16.0000	0.143
	2.50	385.8	98.9	110.51	13.0000	0.149
	3.00	391.3	104.4	110.54	11.0000	0.153
	3.50	395.9	108.9	110.58	9.5714	0.157
	4.00	399.9	113.0	110.61	8.5000	0.160
	4.50	403.3	116.4	110.64	7.6667	0.163
	5.00	406.3	119.4	110.67	7.0000	0.165
	5.50	409.1	122.2	110.70	6.4545	0.167
	6.00	411.6	124.7	110.72	6.0000	0.169
	6.50	414.0	127.1	110.74	5.6154	0.171
	7.00	416.1	129.2	110.76	5.2857	0.173
	7.50	418.1	131.2	110.78	5.0000	0.175
	8.00	420.0	133.1	110.80	4.7500	0.176
	8.50	421.7	134.8	110.81	4.5294	0.178
	9.00	423.4	136.5	110.83	4.3333	0.179
	9.50	424.8	137.9	110.85	4.1579	0.180
	10.00	426.3	139.4	110.85	4.0000	0.182
	10.50	427.7	140.8	110.85	3.8571	0.183
	11.00	429.0	142.1	110.87	3.7273	0.184
	11.50	430.3	143.4	110.88	3.6087	0.185
	12.00	431.5	144.6	110.87	3.5000	0.186
	12.50	432.7	145.7	110.88	3.4000	0.187
	13.00	433.8	146.8	110.88	3.3077	0.188
	13.50	434.8	147.9	110.88	3.2222	0.189
	14.00	435.9	149.0	110.87	3.1429	0.190
	14.50	436.8	149.9	110.88	3.0690	0.191
	15.00	437.8	150.9	110.87	3.0000	0.192
	15.50	438.7	151.8	110.87	2.9355	0.192
	16.00	439.6	152.7	110.87	2.8750	0.193
	16.50	440.3	153.4	110.86	2.8182	0.194
	17.00	441.2	154.3	110.86	2.7647	0.195
	17.50	442.0	155.1	110.85	2.7143	0.195
	18.00	442.9	156.0	110.84	2.6667	0.196
	18.50	443.6	156.7	110.83	2.6216	0.197
	19.00	444.3	157.4	110.83	2.5789	0.197
	19.50	445.1	158.2	110.82	2.5385	0.198
	20.00	445.8	158.9	110.81	2.5000	0.199
	20.50	446.5	159.6	110.81	2.4634	0.199
	21.00	447.1	160.2	110.80	2.4286	0.200
	21.50	447.8	160.9	110.78	2.3953	0.201
	22.00	448.5	161.6	110.78	2.3636	0.201

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10197 Maxwell Operating Ross #1 DST #3

DATE: 07/29/97

TIME: 03:41:51  
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Time	Pressure PSIg	delta P PSIg	P	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
22.50	449.1	162.2		110.77	2.3333	0.202
23.00	449.7	162.8		110.76	2.3043	0.202
23.50	450.2	163.2		110.74	2.2766	0.203
24.00	450.8	163.8		110.75	2.2500	0.203
24.50	451.3	164.4		110.72	2.2245	0.204
25.00	451.8	164.9		110.71	2.2000	0.204
25.50	452.4	165.5		110.71	2.1765	0.205
26.00	452.9	166.0		110.69	2.1538	0.205
26.50	453.4	166.5		110.69	2.1321	0.206
27.00	453.9	167.0		110.68	2.1111	0.206
27.50	454.4	167.5		110.67	2.0909	0.206
28.00	454.8	167.9		110.66	2.0714	0.207
28.50	455.3	168.4		110.65	2.0526	0.207
29.00	455.8	168.9		110.64	2.0345	0.208
29.50	456.3	169.4		110.63	2.0169	0.208
30.00	456.7	169.8		110.62	2.0000	0.209
30.50	457.1	170.2		110.61	1.9836	0.209
31.00	457.6	170.7		110.60	1.9677	0.209
31.50	458.0	171.1		110.60	1.9524	0.210
32.00	458.4	171.5		110.59	1.9375	0.210
32.50	458.8	171.9		110.58	1.9231	0.211
33.00	459.2	172.3		110.56	1.9091	0.211
33.50	459.6	172.7		110.56	1.8955	0.211
34.00	460.1	173.2		110.55	1.8824	0.212
34.50	460.4	173.5		110.54	1.8696	0.212
35.00	460.7	173.8		110.51	1.8571	0.212
35.50	461.2	174.3		110.52	1.8451	0.213
36.00	461.5	174.6		110.51	1.8333	0.213
36.50	461.9	174.9		110.50	1.8219	0.213
37.00	462.2	175.3		110.49	1.8108	0.214
37.50	462.5	175.6		110.47	1.8000	0.214
38.00	462.8	175.9		110.47	1.7895	0.214
38.50	463.2	176.3		110.47	1.7792	0.215
39.00	463.5	176.6		110.45	1.7692	0.215
39.50	463.9	177.0		110.44	1.7595	0.215
40.00	464.3	177.3		110.44	1.7500	0.216
40.50	464.5	177.6		110.43	1.7407	0.216
41.00	464.8	177.9		110.42	1.7317	0.216
41.50	465.1	178.2		110.41	1.7229	0.216
42.00	465.4	178.5		110.40	1.7143	0.217
42.50	465.7	178.7		110.39	1.7059	0.217
43.00	466.0	179.1		110.38	1.6977	0.217
43.50	466.3	179.3		110.37	1.6897	0.217
44.00	466.6	179.7		110.36	1.6818	0.218
***** End Shut-in 1	44.50	466.8	179.9	110.36	1.6742	0.218
***** Start Flow 2	0.00	297.0	0.0	110.33		
	0.50	301.5	4.4	110.33		
	1.00	302.6	5.6	110.31		
	1.50	305.4	8.4	110.30		
	2.00	307.8	10.8	110.29		
	2.50	310.6	13.6	110.28		

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
3.00	312.1	15.1	110.26		
3.50	314.9	17.8	110.25		
4.00	316.3	19.3	110.24		
4.50	319.0	21.9	110.23		
5.00	321.0	24.0	110.22		
5.50	323.7	26.7	110.22		
6.00	325.2	28.2	110.22		
6.50	328.1	31.1	110.22		
7.00	329.5	32.5	110.22		
7.50	331.2	34.1	110.22		
8.00	333.2	36.2	110.24		
8.50	335.2	38.2	110.24		
9.00	336.1	39.1	110.26		
9.50	338.9	41.9	110.27		
10.00	340.3	43.3	110.29		
10.50	342.1	45.1	110.31		
11.00	343.6	46.5	110.33		
11.50	345.3	48.2	110.35		
12.00	347.3	50.3	110.37		
12.50	348.7	51.7	110.39		
13.00	349.9	52.9	110.41		
13.50	351.6	54.6	110.44		
14.00	353.2	56.2	110.47		
14.50	354.5	57.5	110.49		
15.00	355.9	58.9	110.50		
15.50	357.0	60.0	110.54		
16.00	358.5	61.5	110.56		
16.50	359.9	62.9	110.58		
17.00	360.6	63.6	110.60		
17.50	361.4	64.3	110.63		
18.00	362.6	65.6	110.65		
18.50	363.7	66.7	110.67		
19.00	364.6	67.6	110.69		
19.50	366.0	69.0	110.72		
20.00	367.2	70.2	110.74		
20.50	368.2	71.2	110.76		
21.00	369.1	72.1	110.78		
21.50	370.2	73.2	110.80		
22.00	371.1	74.1	110.82		
22.50	372.1	75.1	110.84		
23.00	373.2	76.1	110.86		
23.50	373.9	76.9	110.87		
24.00	374.8	77.8	110.89		
24.50	375.7	78.7	110.90		
25.00	376.6	79.6	110.92		
25.50	377.9	80.9	110.93		
26.00	378.5	81.5	110.95		
26.50	379.4	82.4	110.96		
27.00	380.2	83.2	110.98		
27.50	380.8	83.8	110.99		
28.00	381.7	84.7	111.00		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10197 Maxwell Operating Ross #1 DST #3

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	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	28.50	382.4	85.4	111.01		
	29.00	383.3	86.3	111.03		
***** End Flow 2	29.50	383.9	86.9	111.04		
***** Start Shutin 2	0.00	383.9	0.0	111.04	0.0000	0.147
	0.50	410.6	26.7	111.05	120.0000	0.169
	1.00	418.7	34.8	111.06	60.5000	0.175
	1.50	423.1	39.2	111.07	40.6667	0.179
	2.00	426.2	42.4	111.08	30.7500	0.182
	2.50	428.7	44.8	111.09	24.8000	0.184
	3.00	430.7	46.8	111.11	20.8333	0.186
	3.50	432.5	48.6	111.11	18.0000	0.187
	4.00	434.1	50.2	111.13	15.8750	0.188
	4.50	435.5	51.6	111.14	14.2222	0.190
	5.00	436.7	52.9	111.14	12.9000	0.191
	5.50	438.0	54.1	111.14	11.8182	0.192
	6.00	439.0	55.2	111.15	10.9167	0.193
	6.50	440.1	56.2	111.15	10.1538	0.194
	7.00	441.1	57.2	111.16	9.5000	0.195
	7.50	442.0	58.2	111.17	8.9333	0.195
	8.00	442.9	59.1	111.17	8.4375	0.196
	8.50	443.7	59.8	111.18	8.0000	0.197
	9.00	444.4	60.6	111.18	7.6111	0.198
	9.50	445.2	61.3	111.20	7.2632	0.198
	10.00	446.0	62.1	111.19	6.9500	0.199
	10.50	446.7	62.8	111.19	6.6667	0.200
	11.00	447.3	63.4	111.20	6.4091	0.200
	11.50	448.0	64.1	111.20	6.1739	0.201
	12.00	448.7	64.8	111.20	5.9583	0.201
	12.50	449.4	65.5	111.21	5.7600	0.202
	13.00	449.8	65.9	111.20	5.5769	0.202
	13.50	450.4	66.5	111.20	5.4074	0.203
	14.00	450.9	67.0	111.20	5.2500	0.203
	14.50	451.5	67.6	111.20	5.1034	0.204
	15.00	452.0	68.1	111.21	4.9667	0.204
	15.50	452.5	68.6	111.20	4.8387	0.205
	16.00	452.9	69.1	111.21	4.7188	0.205
	16.50	453.5	69.6	111.21	4.6061	0.206
	17.00	453.9	70.0	111.21	4.5000	0.206
	17.50	454.4	70.5	111.21	4.4000	0.206
	18.00	454.8	70.9	111.21	4.3056	0.207
	18.50	455.2	71.3	111.21	4.2162	0.207
	19.00	455.6	71.7	111.21	4.1316	0.208
	19.50	456.0	72.2	111.21	4.0513	0.208
	20.00	456.5	72.6	111.20	3.9750	0.208
	20.50	456.9	73.0	111.20	3.9024	0.209
	21.00	457.3	73.4	111.20	3.8333	0.209
	21.50	457.6	73.7	111.20	3.7674	0.209
	22.00	457.9	74.0	111.20	3.7045	0.210
	22.50	458.3	74.4	111.20	3.6444	0.210
	23.00	458.7	74.8	111.19	3.5870	0.210
	23.50	459.1	75.2	111.19	3.5319	0.211

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10197 Maxwell Operating Ross #1 DST #3

DATE: 07/29/97 TIME: 03:41:51

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>	
24.00	459.3	75.4	111.18	3.4792	0.211	
24.50	459.6	75.8	111.19	3.4286	0.211	
25.00	460.0	76.1	111.18	3.3800	0.212	
25.50	460.3	76.4	111.18	3.3333	0.212	
26.00	460.6	76.7	111.18	3.2885	0.212	
26.50	460.9	77.0	111.17	3.2453	0.212	
27.00	461.3	77.4	111.18	3.2037	0.213	
27.50	461.6	77.7	111.17	3.1636	0.213	
28.00	461.9	78.0	111.18	3.1250	0.213	
28.50	462.1	78.2	111.17	3.0877	0.214	
29.00	462.5	78.6	111.16	3.0517	0.214	
29.50	462.7	78.8	111.16	3.0169	0.214	
30.00	463.0	79.1	111.16	2.9833	0.214	
30.50	463.2	79.3	111.16	2.9508	0.215	
31.00	463.5	79.6	111.15	2.9194	0.215	
31.50	463.8	79.9	111.15	2.8889	0.215	
32.00	464.0	80.1	111.15	2.8594	0.215	
32.50	464.2	80.3	111.15	2.8308	0.215	
33.00	464.5	80.6	111.15	2.8030	0.216	
33.50	464.8	81.0	111.14	2.7761	0.216	
34.00	465.0	81.2	111.15	2.7500	0.216	
34.50	465.3	81.4	111.14	2.7246	0.217	
35.00	465.5	81.6	111.14	2.7000	0.217	
35.50	465.7	81.8	111.14	2.6761	0.217	
36.00	466.0	82.1	111.14	2.6528	0.217	
36.50	466.2	82.3	111.14	2.6301	0.217	
37.00	466.4	82.5	111.14	2.6081	0.217	
37.50	466.7	82.8	111.13	2.5867	0.218	
38.00	466.9	83.0	111.13	2.5658	0.218	
38.50	467.1	83.2	111.12	2.5455	0.218	
39.00	467.3	83.4	111.12	2.5256	0.218	
39.50	467.4	83.6	111.12	2.5063	0.218	
40.00	467.7	83.9	111.12	2.4875	0.219	
40.50	467.9	84.1	111.11	2.4691	0.219	
41.00	468.2	84.3	111.11	2.4512	0.219	
41.50	468.3	84.4	111.09	2.4337	0.219	
42.00	468.6	84.7	111.10	2.4167	0.220	
42.50	468.8	84.9	111.09	2.4000	0.220	
43.00	469.0	85.1	111.09	2.3837	0.220	
43.50	469.1	85.3	111.09	2.3678	0.220	
44.00	469.4	85.5	111.09	2.3523	0.220	
44.50	469.5	85.6	111.09	2.3371	0.220	
45.00	469.8	85.9	111.07	2.3222	0.221	
45.50	469.9	86.0	111.08	2.3077	0.221	
***** End Shut-in 2	46.00	470.1	86.2	111.07	2.2935	0.221
***** Final Hydro.	229.00	1485.3	0.0	111.08		

# TEST HISTORY

10197 Maxwell Operating Ross #1 DST #3

## Flag Points

	t (Min.)	P (PSIG)
A:	0.00	1516.87
B:	0.00	135.65
C:	30.00	286.91
D:	44.50	466.84
E:	0.00	297.01
F:	29.50	383.89
G:	46.00	470.12
Q:	0.00	1485.26

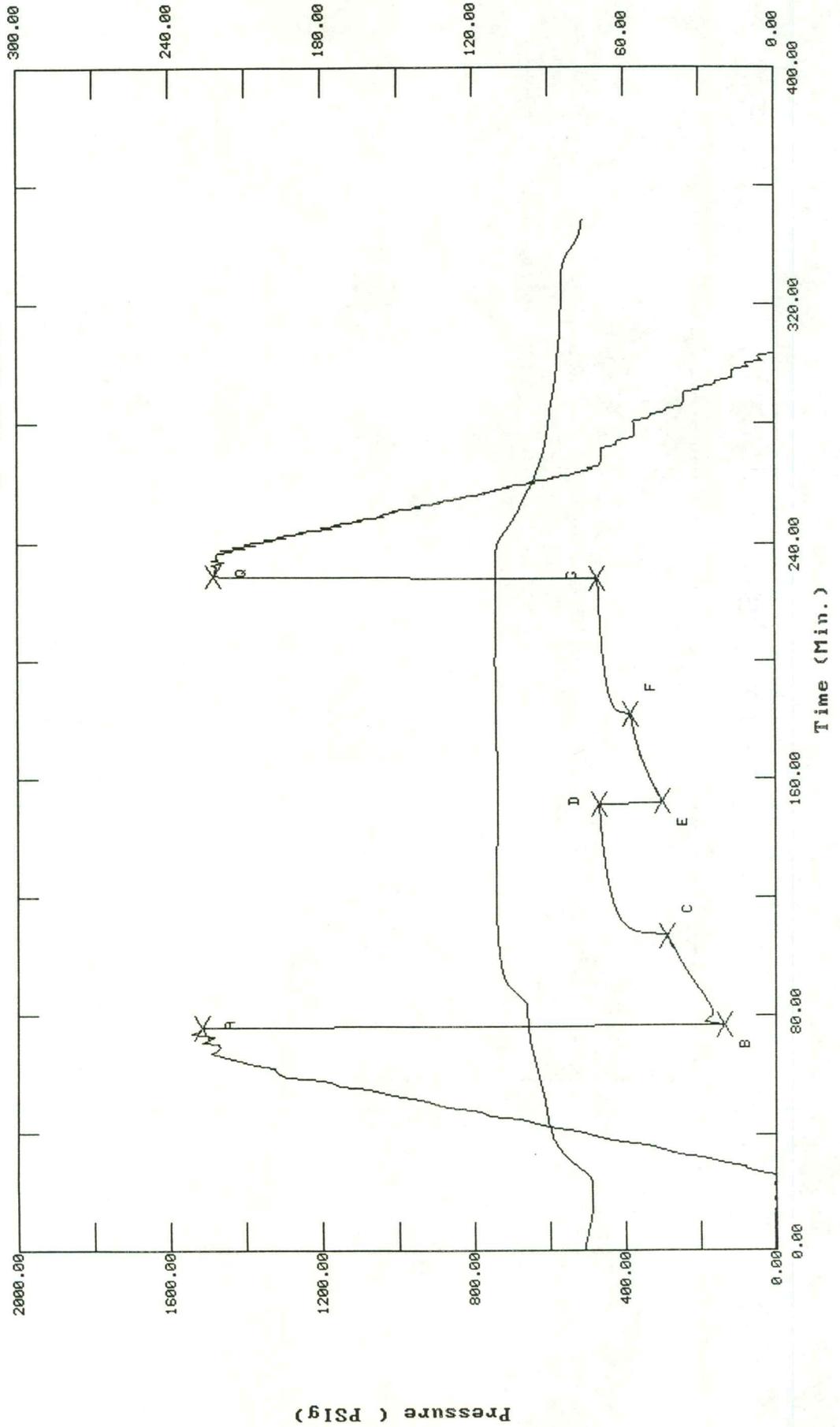
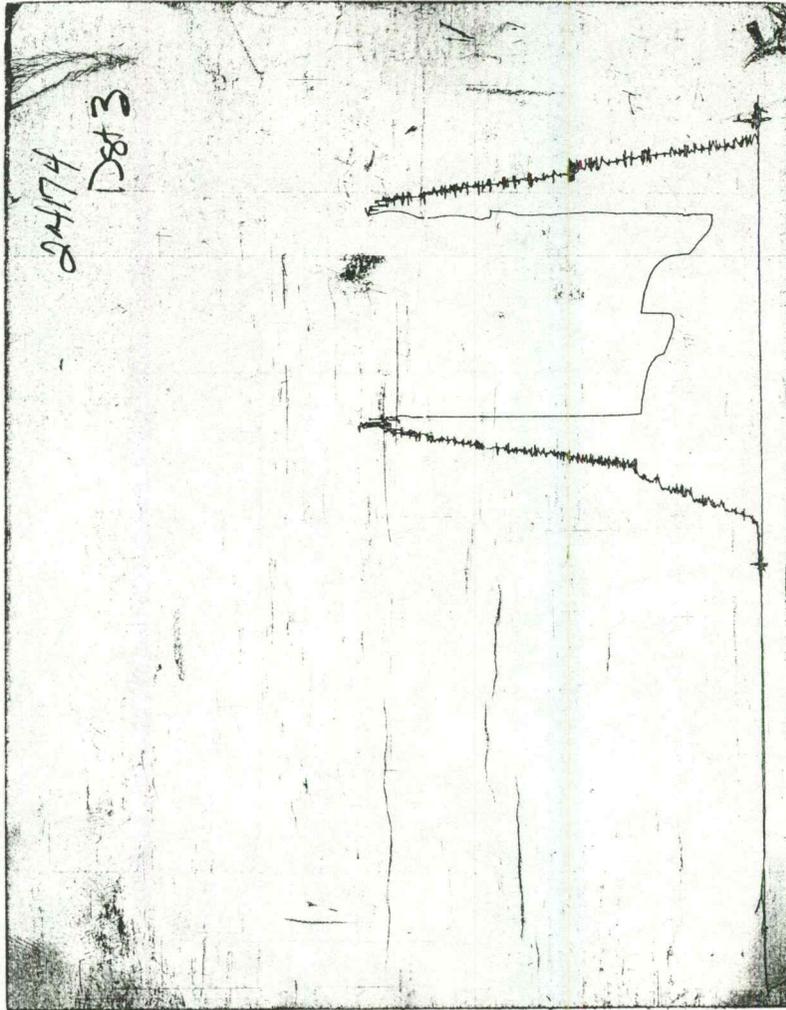


CHART PAGE



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 10197

Well Name & No. <u>Ross #1</u>	Test No. <u>3</u>	Date <u>7-29-97</u>
Company <u>Maxwell Operating</u>	Zone Tested <u>LKC D-F</u>	
Address _____	Elevation <u>1878</u> KB <u>1869</u> GL	
Co. Rep / Geo. <u>Ron Nelson</u>	Cont. <u>Discovery #1</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>4</u> Twp. <u>16s</u> Rge. <u>12w</u> Co. <u>Barren</u> State <u>Ks</u>		
No. of Copies _____	Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested <u>3091-3142</u>	Initial Str Wt./Lbs. <u>30,000</u>	Unseated Str Wt./Lbs. <u>34,000</u>
Anchor Length <u>51</u>	Wt. Set Lbs. <u>20,000</u>	Wt. Pulled Loose/Lbs. <u>36,000</u>
Top Packer Depth <u>3086</u>	Tool Weight <u>2000</u>	
Bottom Packer Depth <u>3091</u>	Hole Size — <u>7 7/8"</u>	Rubber Size — <u>6 3/4"</u>
Total Depth <u>3142</u>	Wt. Pipe Run _____	Drill Collar Run <u>30</u>
Mud Wt. <u>11.2</u> LCM _____ Vis. <u>50</u> WL <u>10.0</u>	Drill Pipe Size <u>4 1/2 x 11</u>	Ft. Run <u>3067</u>

Blow Description strong blow - bottom of bucket in 1 minute  
SSI - surface blow building to 9"  
CC - 1" blow building to bottom of bucket in 3 minutes  
SSI GTS at beginning of SSI - blow built to bottom of bucket in 5 minutes

Recovery — Total Feet <u>960</u>	GIP <u>to surface</u>	Ft. in DC <u>30</u>	Ft. in DP <u>930</u>
Rec. <u>150</u> Feet Of <u>gassy mud</u>	<u>10</u> %gas	%oil	%water <u>90</u> %mud
Rec. <u>150</u> Feet Of <u>gassy O+MCW</u>	<u>10</u> %gas <u>15</u> %oil	<u>65</u> %water	<u>10</u> %mud
Rec. <u>480</u> Feet Of <u>gassy O+MCW</u>	<u>10</u> %gas <u>10</u> %oil	<u>60</u> %water	<u>20</u> %mud
Rec. <u>180</u> Feet Of <u>still water</u>	%gas	%oil	%water %mud
Rec. _____ Feet Of _____	%gas	%oil	%water %mud

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

RW 15 @ 75 °F Chlorides 47,000 ppm Recovery Chlorides \_\_\_\_\_ ppm System

(A) Initial Hydrostatic Mud <u>1517</u>	PSI Recorder No. <u>2346</u>	T-Started <u>0400</u>
(B) First Initial Flow Pressure <u>136</u>	PSI (depth) <u>3105</u>	T-Open <u>0452</u>
(C) First Final Flow Pressure <u>287</u>	PSI Recorder No. <u>24174</u>	T-Pulled <u>0722</u>
(D) Initial Shut-in Pressure <u>467</u>	PSI (depth) <u>3137</u>	T-Out <u>0854</u>
(E) Second Initial Flow Pressure <u>297</u>	PSI Recorder No. _____	
(F) Second Final Flow Pressure <u>383</u>	PSI (depth) _____	
(G) Final Shut-in Pressure <u>470</u>	PSI Initial Opening <u>30</u>	Test <u>6000</u>
(H) Final Hydrostatic Mud <u>1485</u>	PSI Initial Shut-in <u>45</u>	Jars _____

Final Flow 30 Safety Joint \_\_\_\_\_  
 Final Shut-in 45 Straddle \_\_\_\_\_  
49.5 DP Circ. Sub \_\_\_\_\_  
 Sampler \_\_\_\_\_

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Approved By R. Nelson

Extra Packer \_\_\_\_\_  
 Elect. Rec. 150  
 Other 750