

WELL NAME: McDaniels - Johnson B-1
COMPANY: Hayer Oil & Gas
LOCATION: Sec. 13 Twp. 32S Rge. 10W
Barber County Kansas
DATE: 1-7-97

TRILOBITE TESTING L.L.C.

OPERATOR : HAYES OIL & GAS DATE 1/2/97
 WELL NAME: McDaniels/Johnson #B-1 KB 1455.00 ft TICKET NO: 9676 DST #1
 LOCATION : 13-32s-10w GR 1444.00 ft FORMATION: Mississippi
 INTERVAL : 4304.00 To 4348.00 ft TD 4348.00 ft TEST TYPE: CONV.

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13849	13849	2350			PF Fr. 1457 to 1527 hr
SI 60 Range(Psi)	4375.0	4375.0	4995.0	0.0	0.0	IS Fr. 1527 to 1627 hr
SF 60 Clock(hrs)	12hr.	12hr.	Elec.			SF Fr. 1627 to 1727 hr
FS 90 Depth(ft)	4345.0	4345.0	4312.0	0.0	0.0	FS Fr. 1727 to 1857 hr

	Field	1	2	3	4	
A. Init Hydro	2137.0	2120.0	2100.0	0.0	0.0	T STARTED 1310 hr
B. First Flow	167.0	170.0	28.0	0.0	0.0	T ON BOTM 1455 hr
B1. Final Flow	122.0	104.0	37.0	0.0	0.0	T OPEN 1457 hr
C. In Shut-in	400.0	402.0	454.0	0.0	0.0	T PULLED 1857 hr
D. Init Flow	122.0	168.0	36.0	0.0	0.0	T OUT 2100 hr
E. Final Flow	89.0	70.0	32.0	0.0	0.0	
F. Fl Shut-in	830.0	824.0	879.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2137.0	1940.0	2094.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	o	o	i			Wt Set On Packer 24000.00 lbs
						Wt Pulled Loose 100000.00 lbs
						Initial Str Wt 94000.00 lbs
						Unseated Str Wt 94000.00 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 484.00 ft
						D.P. Length 3793.00 ft

RECOVERY

Tot Fluid 45.00 ft of 45.00 ft in DC and 0.00 ft in DP
 45.00 ft of Drilling Mud
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

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

BLOW DESCRIPTION

Initial Flow:
 Fair blow. Built to approx. 9 ins.

Initial Shut In:

Final Flow:
 Strong blow, Bottom of bucket in 30 seconds

Final Shut In:

SAMPLES:
 SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 9.30 lb/c
 Vis. 50.00 S/L
 W.L. 9.20 in3
 F.C. 0.00 in
 Mud Drop
 Amt. of fill 0.00 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
 Tool Chased N
 Tester Darren Amerine
 Co. Rep. John Hastings
 Contr. Duke
 Rig # 5
 Unit #
 Pump T.

Test Successful: Y

TEST HISTORY

#9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

Flag Points

t (Min.) P (PSIg)

A:	0.00	2100.20
B:	0.00	27.86
C:	29.25	37.26
D:	59.75	453.71
E:	0.00	35.74
F:	59.00	32.39
G:	90.25	878.72
Q:	0.00	2138.98

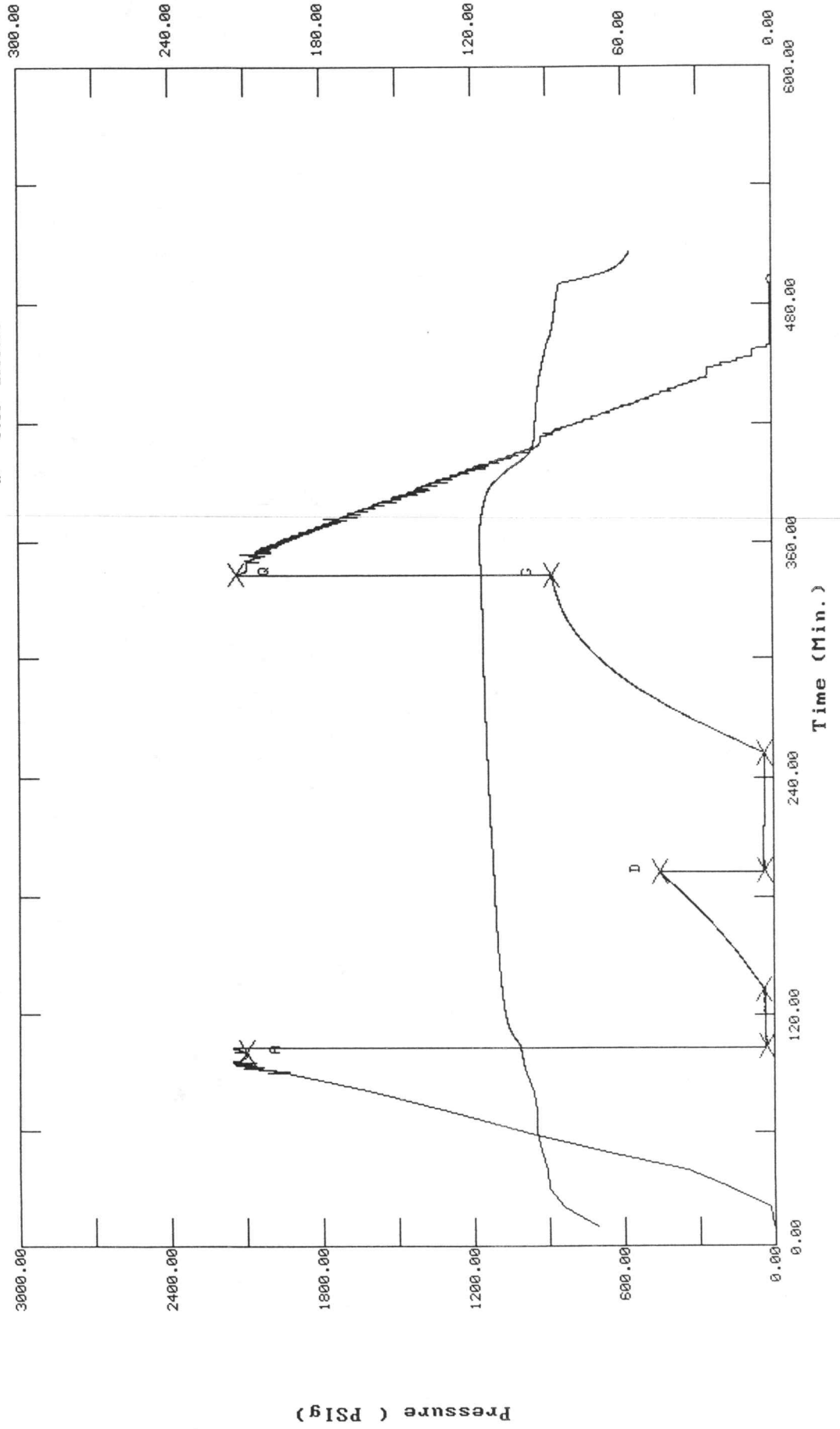
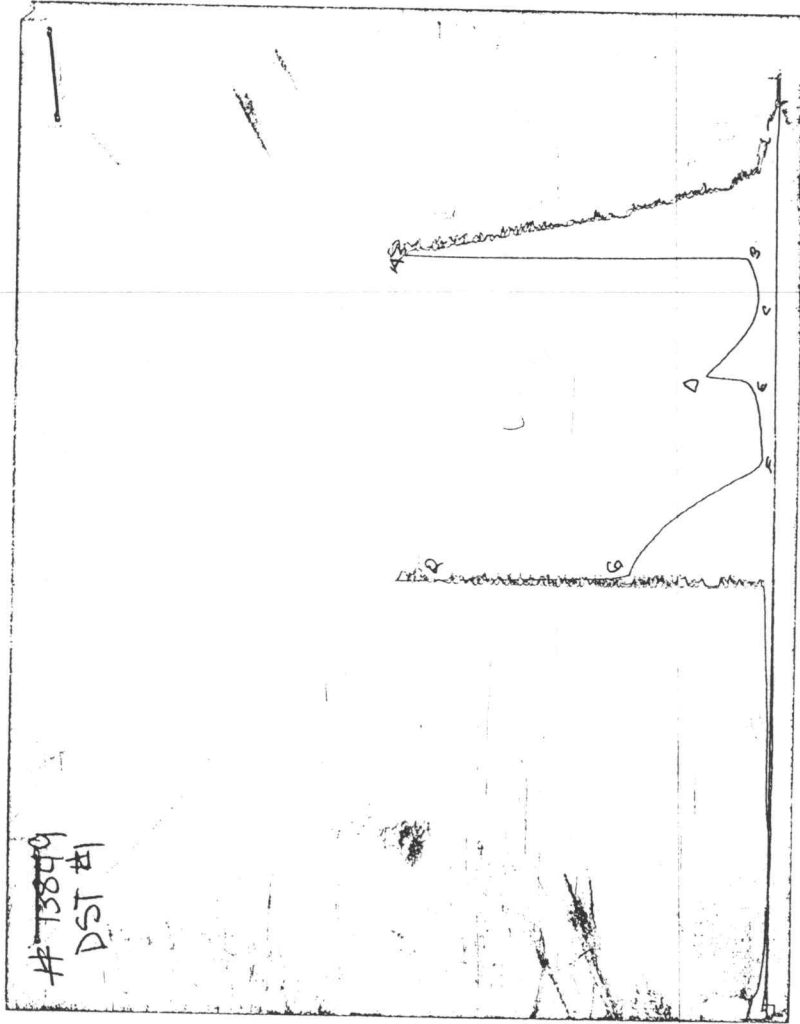


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This is a photocopy of the actual AK-1 recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	100.75	2100.2	0.0	100.90		
***** Start Flow 1	0.00	27.9	0.0	101.40		
	0.25	27.9	0.0	101.44		
	0.50	28.4	0.5	101.48		
	0.75	28.3	0.4	101.55		
	1.00	29.4	1.5	101.63		
	1.25	28.6	0.8	101.71		
	1.50	28.4	0.6	101.82		
	1.75	29.1	1.3	101.94		
	2.00	29.5	1.7	102.07		
	2.25	27.9	0.1	102.21		
	2.50	29.5	1.6	102.35		
	2.75	29.9	2.0	102.50		
	3.00	29.4	1.5	102.67		
	3.25	30.9	3.0	102.82		
	3.50	29.5	1.7	102.98		
	3.75	31.7	3.9	103.15		
	4.00	31.2	3.4	103.30		
	4.25	31.0	3.2	103.47		
	4.50	31.0	3.2	103.62		
	4.75	29.7	1.8	103.78		
	5.00	29.8	1.9	103.93		
	5.25	31.0	3.1	104.07		
	5.50	31.8	3.9	104.21		
	5.75	31.2	3.4	104.35		
	6.00	31.3	3.4	104.48		
	6.25	31.7	3.9	104.60		
	6.50	32.4	4.5	104.72		
	6.75	31.2	3.4	104.85		
	7.00	33.1	5.2	104.96		
	7.25	33.4	5.5	105.07		
	7.50	33.1	5.3	105.18		
	7.75	33.3	5.5	105.29		
	8.00	33.7	5.9	105.38		
	8.25	33.7	5.9	105.47		
	8.50	33.7	5.9	105.57		
	8.75	33.6	5.8	105.65		
	9.00	33.6	5.8	105.75		
	9.25	33.6	5.8	105.82		
	9.50	33.6	5.8	105.89		
	9.75	32.6	4.8	105.98		
	10.00	34.2	6.4	106.04		
	10.25	34.1	6.2	106.12		
	10.50	33.9	6.0	106.18		
	10.75	34.1	6.2	106.26		
	11.00	33.7	5.9	106.32		
	11.25	33.1	5.2	106.38		
	11.50	35.8	8.0	106.44		
	11.75	34.3	6.5	106.50		
	12.00	33.0	5.1	106.56		
	12.25	32.3	4.4	106.61		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

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Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
12.50	35.3	7.5	106.67		
12.75	35.3	7.5	106.72		
13.00	34.5	6.6	106.77		
13.25	34.2	6.3	106.81		
13.50	33.8	6.0	106.87		
13.75	33.3	5.5	106.91		
14.00	35.7	7.9	106.95		
14.25	35.7	7.9	106.99		
14.50	35.3	7.5	107.04		
14.75	34.9	7.0	107.08		
15.00	33.8	6.0	107.12		
15.25	36.6	8.7	107.16		
15.50	35.6	7.7	107.20		
15.75	33.6	5.8	107.24		
16.00	36.6	8.7	107.27		
16.25	35.2	7.4	107.32		
16.50	33.6	5.8	107.36		
16.75	35.8	8.0	107.39		
17.00	36.0	8.1	107.43		
17.25	35.1	7.2	107.46		
17.50	34.2	6.4	107.49		
17.75	36.8	8.9	107.52		
18.00	36.2	8.3	107.56		
18.25	34.7	6.8	107.59		
18.50	37.3	9.4	107.62		
18.75	35.7	7.9	107.65		
19.00	34.1	6.2	107.69		
19.25	36.6	8.7	107.72		
19.50	35.2	7.4	107.75		
19.75	37.3	9.5	107.77		
20.00	36.3	8.5	107.80		
20.25	34.5	6.6	107.84		
20.50	36.5	8.6	107.87		
20.75	36.2	8.4	107.89		
21.00	35.9	8.1	107.92		
21.25	36.2	8.4	107.94		
21.50	35.8	8.0	107.98		
21.75	34.9	7.0	108.00		
22.00	37.4	9.6	108.03		
22.25	36.2	8.3	108.05		
22.50	34.7	6.8	108.08		
22.75	37.0	9.1	108.11		
23.00	35.7	7.9	108.13		
23.25	35.9	8.1	108.15		
23.50	36.8	9.0	108.18		
23.75	35.4	7.6	108.21		
24.00	37.7	9.8	108.24		
24.25	36.7	8.8	108.25		
24.50	34.8	7.0	108.28		
24.75	37.3	9.5	108.30		
25.00	35.8	8.0	108.32		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	25.25	34.6	6.7	108.35		
	25.50	35.2	7.4	108.36		
	25.75	36.8	8.9	108.40		
	26.00	36.2	8.4	108.41		
	26.25	34.8	7.0	108.44		
	26.50	37.6	9.7	108.47		
	26.75	36.3	8.5	108.48		
	27.00	38.0	10.2	108.50		
	27.25	37.1	9.2	108.53		
	27.50	35.0	7.1	108.55		
	27.75	37.6	9.7	108.57		
	28.00	36.2	8.4	108.59		
	28.25	35.2	7.3	108.62		
	28.50	37.4	9.6	108.63		
	28.75	36.4	8.6	108.66		
	29.00	37.3	9.4	108.67		
***** End Flow 1	29.25	37.3	9.4	108.70		
***** Start Shutin 1	0.00	37.3	0.0	108.70	0.0000	0.001
	0.25	38.6	1.3	108.72	118.0000	0.001
	0.50	40.4	3.1	108.74	59.5000	0.002
	0.75	41.9	4.6	108.76	40.0000	0.002
	1.00	43.4	6.1	108.78	30.2500	0.002
	1.25	44.9	7.6	108.80	24.4000	0.002
	1.50	46.5	9.2	108.82	20.5000	0.002
	1.75	47.9	10.7	108.84	17.7143	0.002
	2.00	49.4	12.2	108.86	15.6250	0.002
	2.25	50.9	13.7	108.88	14.0000	0.003
	2.50	52.3	15.0	108.90	12.7000	0.003
	2.75	53.8	16.5	108.92	11.6364	0.003
	3.00	55.1	17.9	108.94	10.7500	0.003
	3.25	56.6	19.3	108.96	10.0000	0.003
	3.50	58.1	20.8	108.98	9.3571	0.003
	3.75	59.6	22.3	109.00	8.8000	0.004
	4.00	60.9	23.7	109.02	8.3125	0.004
	4.25	62.2	24.9	109.04	7.8824	0.004
	4.50	63.7	26.4	109.06	7.5000	0.004
	4.75	65.0	27.8	109.08	7.1579	0.004
	5.00	66.5	29.3	109.09	6.8500	0.004
	5.25	67.8	30.5	109.11	6.5714	0.005
	5.50	69.3	32.1	109.13	6.3182	0.005
	5.75	70.8	33.6	109.16	6.0870	0.005
	6.00	72.3	35.0	109.17	5.8750	0.005
	6.25	73.8	36.5	109.18	5.6800	0.005
	6.50	75.1	37.9	109.21	5.5000	0.006
	6.75	76.4	39.2	109.23	5.3333	0.006
	7.00	77.7	40.5	109.25	5.1786	0.006
	7.25	79.2	42.0	109.26	5.0345	0.006
	7.50	80.6	43.3	109.28	4.9000	0.006
	7.75	82.0	44.7	109.30	4.7742	0.007
	8.00	83.3	46.1	109.32	4.6562	0.007
	8.25	84.8	47.5	109.33	4.5455	0.007

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

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Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
8.50	86.0	48.8	109.36	4.4412	0.007
8.75	87.5	50.3	109.37	4.3429	0.008
9.00	88.9	51.6	109.38	4.2500	0.008
9.25	90.2	53.0	109.40	4.1622	0.008
9.50	91.8	54.6	109.42	4.0789	0.008
9.75	93.1	55.8	109.44	4.0000	0.009
10.00	94.6	57.3	109.46	3.9250	0.009
10.25	96.0	58.7	109.48	3.8537	0.009
10.50	97.5	60.3	109.50	3.7857	0.01
10.75	98.9	61.7	109.50	3.7209	0.01
11.00	100.5	63.2	109.53	3.6591	0.010
11.25	101.7	64.5	109.54	3.6000	0.010
11.50	103.1	65.9	109.56	3.5435	0.011
11.75	104.6	67.3	109.58	3.4894	0.011
12.00	106.0	68.7	109.60	3.4375	0.011
12.25	107.4	70.2	109.61	3.3878	0.012
12.50	108.8	71.6	109.63	3.3400	0.012
12.75	110.3	73.0	109.65	3.2941	0.012
13.00	111.7	74.4	109.66	3.2500	0.012
13.25	113.0	75.8	109.67	3.2075	0.013
13.50	114.6	77.4	109.69	3.1667	0.013
13.75	116.1	78.8	109.71	3.1273	0.013
14.00	117.5	80.2	109.73	3.0893	0.014
14.25	119.0	81.7	109.74	3.0526	0.014
14.50	120.4	83.2	109.76	3.0172	0.015
14.75	121.9	84.6	109.78	2.9831	0.015
15.00	123.3	86.0	109.79	2.9500	0.015
15.25	124.7	87.5	109.81	2.9180	0.016
15.50	126.3	89.0	109.83	2.8871	0.016
15.75	127.7	90.5	109.83	2.8571	0.016
16.00	129.2	91.9	109.86	2.8281	0.017
16.25	130.6	93.3	109.87	2.8000	0.017
16.50	132.1	94.8	109.89	2.7727	0.017
16.75	133.6	96.3	109.91	2.7463	0.018
17.00	135.0	97.8	109.91	2.7206	0.018
17.25	136.6	99.4	109.94	2.6957	0.019
17.50	138.1	100.8	109.95	2.6714	0.019
17.75	139.6	102.4	109.97	2.6479	0.020
18.00	141.1	103.8	109.98	2.6250	0.020
18.25	142.6	105.3	110.00	2.6027	0.020
18.50	144.1	106.8	110.02	2.5811	0.021
18.75	145.7	108.4	110.03	2.5600	0.021
19.00	147.1	109.9	110.04	2.5395	0.022
19.25	148.6	111.4	110.06	2.5195	0.022
19.50	150.3	113.1	110.08	2.5000	0.023
19.75	151.8	114.6	110.09	2.4810	0.023
20.00	153.5	116.2	110.10	2.4625	0.024
20.25	155.1	117.8	110.12	2.4444	0.024
20.50	156.6	119.3	110.14	2.4268	0.025
20.75	158.0	120.8	110.15	2.4096	0.025
21.00	159.6	122.4	110.15	2.3929	0.025

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
21.25	161.1	123.9	110.18	2.3765	0.026
21.50	162.6	125.4	110.19	2.3605	0.026
21.75	164.3	127.1	110.20	2.3448	0.027
22.00	165.9	128.7	110.22	2.3295	0.028
22.25	167.5	130.3	110.23	2.3146	0.028
22.50	169.1	131.9	110.24	2.3000	0.029
22.75	170.9	133.6	110.27	2.2857	0.029
23.00	172.5	135.2	110.28	2.2717	0.030
23.25	174.1	136.9	110.28	2.2581	0.030
23.50	175.7	138.5	110.30	2.2447	0.031
23.75	177.4	140.2	110.31	2.2316	0.031
24.00	179.0	141.8	110.33	2.2188	0.032
24.25	180.7	143.4	110.35	2.2062	0.033
24.50	182.4	145.1	110.35	2.1939	0.033
24.75	184.0	146.7	110.37	2.1818	0.034
25.00	185.7	148.5	110.38	2.1700	0.034
25.25	187.3	150.1	110.39	2.1584	0.035
25.50	188.9	151.7	110.41	2.1471	0.036
25.75	190.6	153.3	110.42	2.1359	0.036
26.00	192.3	155.0	110.43	2.1250	0.037
26.25	193.9	156.7	110.45	2.1143	0.038
26.50	195.8	158.5	110.46	2.1038	0.038
26.75	197.3	160.1	110.47	2.0935	0.039
27.00	199.1	161.8	110.49	2.0833	0.040
27.25	200.7	163.5	110.50	2.0734	0.040
27.50	202.5	165.3	110.51	2.0636	0.041
27.75	204.1	166.8	110.53	2.0541	0.042
28.00	206.0	168.8	110.54	2.0446	0.042
28.25	207.7	170.5	110.55	2.0354	0.043
28.50	209.4	172.1	110.57	2.0263	0.044
28.75	211.2	173.9	110.58	2.0174	0.045
29.00	212.9	175.7	110.58	2.0086	0.045
29.25	214.6	177.3	110.60	2.0000	0.046
29.50	216.4	179.1	110.61	1.9915	0.047
29.75	218.2	180.9	110.63	1.9832	0.048
30.00	219.9	182.6	110.64	1.9750	0.048
30.25	221.6	184.4	110.65	1.9669	0.049
30.50	223.5	186.2	110.67	1.9590	0.050
30.75	225.3	188.0	110.68	1.9512	0.051
31.00	227.0	189.8	110.69	1.9435	0.052
31.25	228.9	191.6	110.71	1.9360	0.052
31.50	230.6	193.4	110.72	1.9286	0.053
31.75	232.5	195.2	110.72	1.9213	0.054
32.00	234.1	196.8	110.74	1.9141	0.055
32.25	236.0	198.7	110.74	1.9070	0.056
32.50	237.8	200.5	110.76	1.9000	0.057
32.75	239.5	202.3	110.77	1.8931	0.057
33.00	241.4	204.1	110.78	1.8864	0.058
33.25	243.3	206.0	110.79	1.8797	0.059
33.50	245.0	207.7	110.80	1.8731	0.060
33.75	246.7	209.5	110.82	1.8667	0.061

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34.00	248.6	211.3	110.83	1.8603	0.062
34.25	250.4	213.2	110.84	1.8540	0.063
34.50	252.4	215.1	110.86	1.8478	0.064
34.75	254.1	216.9	110.87	1.8417	0.065
35.00	256.0	218.7	110.87	1.8357	0.066
35.25	257.7	220.5	110.89	1.8298	0.066
35.50	259.7	222.4	110.90	1.8239	0.067
35.75	261.4	224.2	110.91	1.8182	0.068
36.00	263.3	226.0	110.92	1.8125	0.069
36.25	265.2	227.9	110.93	1.8069	0.070
36.50	267.1	229.9	110.95	1.8014	0.071
36.75	269.1	231.8	110.95	1.7959	0.072
37.00	270.9	233.7	110.97	1.7905	0.073
37.25	272.8	235.6	111.00	1.7852	0.074
37.50	274.5	237.3	110.99	1.7800	0.075
37.75	276.4	239.1	111.00	1.7748	0.076
38.00	278.4	241.1	111.02	1.7697	0.077
38.25	280.1	242.9	111.02	1.7647	0.078
38.50	282.1	244.8	111.03	1.7597	0.080
38.75	284.1	246.8	111.05	1.7548	0.081
39.00	285.9	248.7	111.05	1.7500	0.082
39.25	287.9	250.6	111.06	1.7452	0.083
39.50	289.8	252.5	111.07	1.7405	0.084
39.75	291.6	254.4	111.08	1.7358	0.085
40.00	293.7	256.5	111.09	1.7312	0.086
40.25	295.4	258.2	111.11	1.7267	0.087
40.50	297.5	260.3	111.11	1.7222	0.089
40.75	299.4	262.1	111.13	1.7178	0.090
41.00	301.5	264.2	111.14	1.7134	0.091
41.25	303.3	266.1	111.15	1.7091	0.092
41.50	305.2	268.0	111.17	1.7048	0.093
41.75	307.3	270.0	111.17	1.7006	0.094
42.00	309.3	272.0	111.18	1.6964	0.096
42.25	311.3	274.0	111.19	1.6923	0.097
42.50	313.3	276.0	111.20	1.6882	0.098
42.75	315.3	278.1	111.21	1.6842	0.099
43.00	317.3	280.1	111.22	1.6802	0.101
43.25	319.3	282.0	111.23	1.6763	0.102
43.50	321.1	283.8	111.24	1.6724	0.103
43.75	323.2	285.9	111.25	1.6686	0.104
44.00	325.1	287.9	111.26	1.6648	0.106
44.25	327.1	289.9	111.27	1.6610	0.107
44.50	329.2	292.0	111.28	1.6573	0.108
44.75	331.2	293.9	111.29	1.6536	0.110
45.00	333.2	295.9	111.30	1.6500	0.111
45.25	335.2	297.9	111.31	1.6464	0.112
45.50	337.3	300.0	111.32	1.6429	0.114
45.75	339.2	302.0	111.33	1.6393	0.115
46.00	341.2	304.0	111.35	1.6359	0.116
46.25	343.3	306.0	111.35	1.6324	0.118
46.50	345.3	308.0	111.36	1.6290	0.119

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
46.75	347.4	310.1	111.37	1.6257	0.121
47.00	349.4	312.1	111.38	1.6223	0.122
47.25	351.6	314.3	111.39	1.6190	0.124
47.50	353.6	316.3	111.38	1.6158	0.125
47.75	355.6	318.3	111.41	1.6126	0.126
48.00	357.7	320.4	111.42	1.6094	0.128
48.25	359.7	322.5	111.43	1.6062	0.129
48.50	361.8	324.5	111.43	1.6031	0.131
48.75	363.7	326.5	111.45	1.6000	0.132
49.00	365.8	328.6	111.46	1.5969	0.134
49.25	367.8	330.6	111.46	1.5939	0.135
49.50	369.9	332.7	111.48	1.5909	0.137
49.75	372.0	334.8	111.49	1.5879	0.138
50.00	374.1	336.8	111.50	1.5850	0.140
50.25	376.0	338.7	111.51	1.5821	0.141
50.50	378.1	340.8	111.52	1.5792	0.143
50.75	380.2	342.9	111.53	1.5764	0.145
51.00	382.3	345.0	111.54	1.5735	0.146
51.25	384.4	347.1	111.55	1.5707	0.148
51.50	386.5	349.2	111.56	1.5680	0.149
51.75	388.5	351.2	111.56	1.5652	0.151
52.00	390.5	353.3	111.58	1.5625	0.152
52.25	392.6	355.4	111.59	1.5598	0.154
52.50	394.6	357.4	111.60	1.5571	0.156
52.75	396.7	359.5	111.61	1.5545	0.157
53.00	398.8	361.6	111.62	1.5519	0.159
53.25	401.0	363.7	111.62	1.5493	0.161
53.50	402.9	365.7	111.63	1.5467	0.162
53.75	405.0	367.8	111.65	1.5442	0.164
54.00	407.0	369.7	111.65	1.5417	0.166
54.25	409.1	371.8	111.66	1.5392	0.167
54.50	411.2	374.0	111.68	1.5367	0.169
54.75	413.3	376.0	111.69	1.5342	0.171
55.00	415.3	378.0	111.69	1.5318	0.172
55.25	417.4	380.2	111.70	1.5294	0.174
55.50	419.4	382.1	111.71	1.5270	0.176
55.75	421.4	384.1	111.71	1.5247	0.178
56.00	423.5	386.2	111.72	1.5223	0.179
56.25	425.5	388.3	111.74	1.5200	0.181
56.50	427.5	390.3	111.75	1.5177	0.183
56.75	429.6	392.4	111.75	1.5154	0.185
57.00	431.8	394.5	111.76	1.5132	0.186
57.25	433.9	396.6	111.78	1.5109	0.188
57.50	436.0	398.7	111.78	1.5087	0.190
57.75	438.0	400.8	111.79	1.5065	0.192
58.00	440.0	402.8	111.81	1.5043	0.194
58.25	442.0	404.8	111.81	1.5021	0.195
58.50	444.1	406.9	111.82	1.5000	0.197
58.75	446.2	408.9	111.78	1.4979	0.199
59.00	448.2	411.0	111.84	1.4958	0.201
59.25	450.3	413.1	111.85	1.4937	0.203

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	59.50	452.3	415.0	111.85	1.4916	0.205
***** End Shut-in 1	59.75	453.7	416.4	111.87	1.4895	0.206
***** Start Flow 2	0.00	35.7	0.0	111.87		
	0.25	36.8	1.1	111.89		
	0.50	37.3	1.6	111.89		
	0.75	35.6	-0.2	111.90		
	1.00	35.2	-0.6	111.91		
	1.25	35.6	-0.2	111.91		
	1.50	35.7	0.0	111.92		
	1.75	35.7	0.0	111.93		
	2.00	37.3	1.5	111.94		
	2.25	38.2	2.4	111.94		
	2.50	35.4	-0.3	111.95		
	2.75	36.1	0.3	111.96		
	3.00	36.2	0.4	111.96		
	3.25	37.3	1.5	111.97		
	3.50	37.1	1.3	111.98		
	3.75	37.0	1.3	111.99		
	4.00	36.5	0.8	112.00		
	4.25	37.3	1.6	112.01		
	4.50	36.3	0.6	112.02		
	4.75	36.5	0.8	112.03		
	5.00	37.8	2.0	112.04		
	5.25	38.2	2.4	112.05		
	5.50	38.8	3.0	112.06		
	5.75	37.3	1.5	112.07		
	6.00	39.6	3.9	112.08		
	6.25	36.7	0.9	112.09		
	6.50	37.6	1.8	112.12		
	6.75	37.1	1.3	112.12		
	7.00	38.8	3.0	112.14		
	7.25	39.0	3.3	112.15		
	7.50	37.7	1.9	112.18		
	7.75	37.7	1.9	112.19		
	8.00	38.8	3.1	112.20		
	8.25	37.7	1.9	112.21		
	8.50	38.2	2.4	112.24		
	8.75	37.9	2.2	112.25		
	9.00	38.5	2.8	112.27		
	9.25	38.3	2.5	112.27		
	9.50	38.7	2.9	112.29		
	9.75	39.1	3.4	112.30		
	10.00	38.6	2.9	112.32		
	10.25	38.1	2.3	112.34		
	10.50	39.1	3.4	112.36		
	10.75	39.0	3.3	112.37		
	11.00	38.3	2.6	112.39		
	11.25	39.0	3.3	112.40		
	11.50	38.3	2.6	112.42		
	11.75	39.1	3.4	112.44		
	12.00	39.0	3.3	112.45		

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
12.25	38.5	2.8	112.47		
12.50	39.4	3.6	112.49		
12.75	38.8	3.1	112.49		
13.00	38.3	2.5	112.52		
13.25	38.7	2.9	112.53		
13.50	38.8	3.0	112.55		
13.75	38.8	3.0	112.56		
14.00	38.8	3.0	112.58		
14.25	38.9	3.2	112.59		
14.50	38.8	3.1	112.61		
14.75	39.0	3.3	112.62		
15.00	39.9	4.2	112.64		
15.25	38.8	3.1	112.65		
15.50	39.4	3.6	112.66		
15.75	39.0	3.3	112.68		
16.00	39.8	4.0	112.69		
16.25	38.9	3.2	112.70		
16.50	39.2	3.4	112.72		
16.75	38.7	2.9	112.74		
17.00	38.9	3.2	112.75		
17.25	39.0	3.3	112.76		
17.50	39.6	3.9	112.77		
17.75	39.7	3.9	112.78		
18.00	38.6	2.9	112.80		
18.25	38.8	3.1	112.81		
18.50	39.2	3.4	112.82		
18.75	39.0	3.3	112.83		
19.00	39.3	3.5	112.85		
19.25	39.0	3.3	112.85		
19.50	39.9	4.2	112.87		
19.75	39.5	3.8	112.88		
20.00	39.4	3.6	112.89		
20.25	39.6	3.9	112.91		
20.50	40.4	4.6	112.92		
20.75	39.2	3.4	112.93		
21.00	38.9	3.2	112.94		
21.25	40.2	4.4	112.96		
21.50	39.0	3.3	112.97		
21.75	39.7	3.9	112.98		
22.00	39.4	3.7	112.99		
22.25	39.4	3.6	113.00		
22.50	32.7	-3.0	113.01		
22.75	31.7	-4.0	113.02		
23.00	32.3	-3.4	113.03		
23.25	32.0	-3.7	113.05		
23.50	32.1	-3.6	113.06		
23.75	32.1	-3.6	113.06		
24.00	32.4	-3.4	113.08		
24.25	32.1	-3.6	113.08		
24.50	32.6	-3.1	113.10		
24.75	32.5	-3.3	113.10		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

Time	Pressure PSIG	delta P PSIG	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
25.00	32.2	-3.5	113.12		
25.25	32.1	-3.7	113.12		
25.50	32.4	-3.4	113.14		
25.75	32.3	-3.4	113.14		
26.00	31.9	-3.9	113.16		
26.25	32.5	-3.3	113.17		
26.50	31.9	-3.9	113.18		
26.75	32.5	-3.3	113.19		
27.00	32.0	-3.8	113.20		
27.25	32.3	-3.4	113.20		
27.50	33.1	-2.7	113.22		
27.75	32.5	-3.3	113.22		
28.00	32.2	-3.5	113.23		
28.25	31.8	-3.9	113.25		
28.50	32.6	-3.1	113.25		
28.75	33.3	-2.4	113.26		
29.00	32.1	-3.6	113.27		
29.25	32.1	-3.6	113.28		
29.50	32.2	-3.5	113.29		
29.75	32.6	-3.2	113.30		
30.00	32.6	-3.2	113.31		
30.25	32.7	-3.0	113.32		
30.50	32.1	-3.6	113.33		
30.75	31.9	-3.9	113.34		
31.00	33.1	-2.7	113.35		
31.25	32.4	-3.4	113.36		
31.50	32.2	-3.5	113.36		
31.75	31.9	-3.9	113.38		
32.00	32.7	-3.0	113.39		
32.25	33.0	-2.8	113.39		
32.50	32.0	-3.8	113.41		
32.75	32.2	-3.5	113.41		
33.00	32.2	-3.5	113.42		
33.25	32.2	-3.5	113.43		
33.50	32.6	-3.2	113.45		
33.75	33.2	-2.5	113.45		
34.00	32.5	-3.3	113.46		
34.25	32.1	-3.7	113.46		
34.50	32.1	-3.7	113.48		
34.75	32.8	-2.9	113.48		
35.00	32.7	-3.0	113.49		
35.25	32.1	-3.6	113.50		
35.50	32.5	-3.3	113.51		
35.75	32.8	-2.9	113.52		
36.00	32.2	-3.5	113.53		
36.25	32.4	-3.4	113.53		
36.50	32.4	-3.4	113.55		
36.75	32.3	-3.4	113.55		
37.00	31.9	-3.9	113.56		
37.25	32.6	-3.2	113.57		
37.50	33.1	-2.6	113.58		

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
37.75	32.2	-3.5	113.59		
38.00	32.0	-3.8	113.60		
38.25	32.9	-2.9	113.60		
38.50	32.2	-3.5	113.61		
38.75	32.6	-3.2	113.62		
39.00	32.1	-3.6	113.63		
39.25	33.1	-2.6	113.64		
39.50	32.3	-3.4	113.65		
39.75	32.1	-3.7	113.66		
40.00	32.4	-3.4	113.67		
40.25	32.2	-3.5	113.67		
40.50	32.6	-3.2	113.68		
40.75	32.1	-3.7	113.69		
41.00	32.1	-3.6	113.69		
41.25	33.1	-2.6	113.70		
41.50	33.0	-2.8	113.71		
41.75	32.1	-3.6	113.72		
42.00	32.0	-3.8	113.73		
42.25	33.1	-2.6	113.73		
42.50	32.2	-3.5	113.75		
42.75	32.2	-3.5	113.75		
43.00	32.1	-3.6	113.75		
43.25	32.6	-3.1	113.77		
43.50	32.4	-3.4	113.77		
43.75	33.1	-2.6	113.78		
44.00	32.3	-3.4	113.80		
44.25	32.9	-2.9	113.81		
44.50	32.8	-2.9	113.82		
44.75	31.8	-3.9	113.83		
45.00	32.1	-3.6	113.83		
45.25	33.4	-2.4	113.84		
45.50	32.1	-3.6	113.85		
45.75	32.1	-3.7	113.85		
46.00	32.0	-3.8	113.86		
46.25	33.7	-2.0	113.87		
46.50	32.8	-2.9	113.88		
46.75	32.4	-3.4	113.88		
47.00	34.2	-1.6	113.90		
47.25	32.5	-3.3	113.91		
47.50	32.5	-3.3	113.92		
47.75	32.1	-3.6	113.93		
48.00	32.9	-2.9	113.93		
48.25	33.3	-2.4	113.94		
48.50	32.1	-3.6	113.94		
48.75	32.5	-3.3	113.96		
49.00	32.4	-3.4	113.96		
49.25	31.8	-3.9	113.97		
49.50	32.2	-3.5	113.98		
49.75	32.7	-3.0	113.99		
50.00	32.0	-3.8	114.01		
50.25	32.9	-2.9	114.01		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	50.50	32.3	-3.4	114.02		
	50.75	32.2	-3.5	114.03		
	51.00	32.1	-3.7	114.04		
	51.25	32.2	-3.5	114.05		
	51.50	32.2	-3.5	114.06		
	51.75	32.6	-3.2	114.07		
	52.00	33.1	-2.7	114.08		
	52.25	32.4	-3.4	114.09		
	52.50	32.4	-3.4	114.09		
	52.75	32.4	-3.4	114.11		
	53.00	32.1	-3.6	114.11		
	53.25	32.9	-2.9	114.12		
	53.50	32.2	-3.5	114.13		
	53.75	32.6	-3.1	114.15		
	54.00	31.9	-3.9	114.15		
	54.25	32.7	-3.0	114.16		
	54.50	32.6	-3.1	114.16		
	54.75	33.1	-2.6	114.18		
	55.00	33.1	-2.7	114.18		
	55.25	32.4	-3.4	114.19		
	55.50	32.9	-2.9	114.20		
	55.75	32.0	-3.8	114.21		
	56.00	32.3	-3.4	114.22		
	56.25	33.6	-2.1	114.22		
	56.50	32.6	-3.2	114.23		
	56.75	32.4	-3.4	114.23		
	57.00	32.6	-3.2	114.25		
	57.25	32.4	-3.4	114.26		
	57.50	32.9	-2.9	114.26		
	57.75	32.1	-3.7	114.26		
	58.00	32.3	-3.4	114.28		
	58.25	32.7	-3.0	114.28		
	58.50	32.5	-3.3	114.29		
	58.75	32.4	-3.4	114.30		
***** End Flow 2	59.00	32.4	-3.4	114.30		
***** Start Shutin 2	0.00	32.4	0.0	114.30	0.0000	0.001
	0.25	35.6	3.2	114.31	354.0000	0.001
	0.50	40.9	8.6	114.32	177.5000	0.002
	0.75	46.2	13.8	114.33	118.6667	0.002
	1.00	51.2	18.8	114.34	89.2500	0.003
	1.25	56.1	23.7	114.34	71.6000	0.003
	1.50	60.8	28.5	114.35	59.8333	0.004
	1.75	65.5	33.2	114.36	51.4286	0.004
	2.00	70.3	37.9	114.37	45.1250	0.005
	2.25	74.9	42.5	114.38	40.2222	0.006
	2.50	79.4	47.0	114.38	36.3000	0.006
	2.75	83.7	51.3	114.40	33.0909	0.007
	3.00	87.9	55.6	114.41	30.4167	0.008
	3.25	92.4	60.0	114.41	28.1538	0.009
	3.50	96.8	64.4	114.41	26.2143	0.009
	3.75	101.1	68.7	114.42	24.5333	0.010

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
4.00	105.5	73.1	114.43	23.0625	0.011
4.25	109.9	77.5	114.44	21.7647	0.012
4.50	114.3	81.9	114.45	20.6111	0.013
4.75	118.6	86.2	114.46	19.5789	0.014
5.00	122.9	90.6	114.46	18.6500	0.015
5.25	127.3	94.9	114.47	17.8095	0.016
5.50	131.8	99.4	114.48	17.0455	0.017
5.75	136.0	103.7	114.49	16.3478	0.019
6.00	140.4	108.0	114.49	15.7083	0.020
6.25	144.7	112.3	114.50	15.1200	0.021
6.50	149.0	116.7	114.50	14.5769	0.022
6.75	153.3	120.9	114.52	14.0741	0.024
7.00	157.5	125.1	114.52	13.6071	0.025
7.25	161.8	129.4	114.53	13.1724	0.026
7.50	166.1	133.7	114.54	12.7667	0.028
7.75	170.5	138.1	114.55	12.3871	0.029
8.00	174.7	142.3	114.56	12.0312	0.031
8.25	179.1	146.7	114.57	11.6970	0.032
8.50	183.3	150.9	114.58	11.3824	0.034
8.75	187.5	155.1	114.57	11.0857	0.035
9.00	191.8	159.4	114.59	10.8056	0.037
9.25	196.1	163.7	114.59	10.5405	0.038
9.50	200.2	167.9	114.60	10.2895	0.040
9.75	204.4	172.1	114.61	10.0513	0.042
10.00	208.6	176.3	114.62	9.8250	0.044
10.25	212.8	180.4	114.63	9.6098	0.045
10.50	216.9	184.6	114.63	9.4048	0.047
10.75	221.1	188.7	114.65	9.2093	0.049
11.00	225.2	192.8	114.66	9.0227	0.051
11.25	229.3	196.9	114.66	8.8444	0.053
11.50	233.5	201.1	114.67	8.6739	0.055
11.75	237.6	205.2	114.68	8.5106	0.056
12.00	241.6	209.2	114.69	8.3542	0.058
12.25	245.6	213.3	114.70	8.2041	0.060
12.50	249.8	217.5	114.70	8.0600	0.062
12.75	253.7	221.3	114.71	7.9216	0.064
13.00	257.8	225.4	114.69	7.7885	0.066
13.25	261.8	229.5	114.73	7.6604	0.069
13.50	265.9	233.5	114.74	7.5370	0.071
13.75	270.0	237.6	114.75	7.4182	0.073
14.00	273.9	241.5	114.75	7.3036	0.075
14.25	278.0	245.6	114.76	7.1930	0.077
14.50	281.9	249.5	114.77	7.0862	0.079
14.75	286.0	253.6	114.78	6.9831	0.082
15.00	289.9	257.5	114.79	6.8833	0.084
15.25	294.0	261.6	114.79	6.7869	0.086
15.50	297.9	265.5	114.81	6.6935	0.089
15.75	301.8	269.4	114.81	6.6032	0.091
16.00	305.7	273.4	114.82	6.5156	0.093
16.25	309.7	277.3	114.83	6.4308	0.096
16.50	313.5	281.2	114.84	6.3485	0.098

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
16.75	317.4	285.0	114.85	6.2687	0.101
17.00	321.2	288.8	114.86	6.1912	0.103
17.25	325.1	292.7	114.86	6.1159	0.106
17.50	329.1	296.7	114.87	6.0429	0.108
17.75	332.8	300.4	114.88	5.9718	0.111
18.00	336.8	304.4	114.89	5.9028	0.113
18.25	340.5	308.1	114.90	5.8356	0.116
18.50	344.4	312.0	114.90	5.7703	0.119
18.75	348.2	315.8	114.91	5.7067	0.121
19.00	351.9	319.5	114.92	5.6447	0.124
19.25	355.7	323.3	114.92	5.5844	0.127
19.50	359.5	327.1	114.93	5.5256	0.129
19.75	363.2	330.8	114.94	5.4684	0.132
20.00	367.0	334.6	114.95	5.4125	0.135
20.25	370.7	338.3	114.95	5.3580	0.137
20.50	374.5	342.1	114.96	5.3049	0.140
20.75	378.2	345.8	114.97	5.2530	0.143
21.00	381.9	349.6	115.00	5.2024	0.146
21.25	385.5	353.1	114.99	5.1529	0.149
21.50	389.2	356.8	115.00	5.1047	0.151
21.75	392.9	360.5	115.00	5.0575	0.154
22.00	396.6	364.2	115.00	5.0114	0.157
22.25	400.2	367.9	115.01	4.9663	0.160
22.50	403.8	371.4	115.02	4.9222	0.163
22.75	407.3	374.9	115.03	4.8791	0.166
23.00	410.9	378.5	115.04	4.8370	0.169
23.25	414.6	382.2	115.04	4.7957	0.172
23.50	418.0	385.7	115.05	4.7553	0.175
23.75	421.7	389.3	115.05	4.7158	0.178
24.00	425.2	392.8	115.06	4.6771	0.181
24.25	428.7	396.3	115.07	4.6392	0.184
24.50	432.1	399.7	115.07	4.6020	0.187
24.75	435.5	403.1	115.09	4.5657	0.190
25.00	439.0	406.6	115.08	4.5300	0.193
25.25	442.6	410.2	115.10	4.4950	0.196
25.50	446.1	413.7	115.11	4.4608	0.199
25.75	449.6	417.2	115.10	4.4272	0.202
26.00	452.9	420.6	115.12	4.3942	0.205
26.25	456.4	424.0	115.12	4.3619	0.208
26.50	459.7	427.4	115.13	4.3302	0.211
26.75	463.1	430.7	115.13	4.2991	0.214
27.00	466.5	434.2	115.15	4.2685	0.218
27.25	469.8	437.4	115.15	4.2385	0.221
27.50	473.1	440.7	115.17	4.2091	0.224
27.75	476.4	444.1	115.17	4.1802	0.227
28.00	479.8	447.4	115.17	4.1518	0.230
28.25	483.1	450.7	115.18	4.1239	0.233
28.50	486.3	453.9	115.18	4.0965	0.236
28.75	489.6	457.2	115.18	4.0696	0.240
29.00	492.9	460.5	115.19	4.0431	0.243
29.25	496.0	463.6	115.19	4.0171	0.246

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
29.50	499.3	466.9	115.21	3.9915	0.249
29.75	502.5	470.1	115.21	3.9664	0.252
30.00	505.7	473.4	115.22	3.9417	0.256
30.25	508.9	476.5	115.22	3.9174	0.259
30.50	512.1	479.7	115.23	3.8934	0.262
30.75	515.1	482.8	115.24	3.8699	0.265
31.00	518.3	485.9	115.24	3.8468	0.269
31.25	521.3	488.9	115.24	3.8240	0.272
31.50	524.5	492.1	115.25	3.8016	0.275
31.75	527.5	495.1	115.26	3.7795	0.278
32.00	530.7	498.3	115.26	3.7578	0.282
32.25	533.6	501.2	115.27	3.7364	0.285
32.50	536.5	504.2	115.27	3.7154	0.288
32.75	539.6	507.2	115.28	3.6947	0.291
33.00	542.8	510.4	115.29	3.6742	0.295
33.25	545.6	513.2	115.29	3.6541	0.298
33.50	548.5	516.2	115.30	3.6343	0.301
33.75	551.6	519.2	115.31	3.6148	0.304
34.00	554.4	522.0	115.31	3.5956	0.307
34.25	557.4	525.0	115.32	3.5766	0.311
34.50	560.2	527.8	115.32	3.5580	0.314
34.75	563.2	530.8	115.33	3.5396	0.317
35.00	566.1	533.7	115.34	3.5214	0.320
35.25	569.0	536.6	115.34	3.5035	0.324
35.50	571.9	539.5	115.34	3.4859	0.327
35.75	574.7	542.3	115.35	3.4685	0.330
36.00	577.5	545.1	115.36	3.4514	0.334
36.25	580.4	548.0	115.36	3.4345	0.337
36.50	583.2	550.8	115.36	3.4178	0.340
36.75	586.0	553.6	115.37	3.4014	0.343
37.00	588.6	556.2	115.38	3.3851	0.346
37.25	591.4	559.0	115.38	3.3691	0.350
37.50	594.2	561.8	115.38	3.3533	0.353
37.75	596.9	564.5	115.39	3.3377	0.356
38.00	599.7	567.3	115.40	3.3224	0.360
38.25	602.3	570.0	115.40	3.3072	0.363
38.50	605.1	572.7	115.40	3.2922	0.366
38.75	607.7	575.3	115.42	3.2774	0.369
39.00	610.5	578.1	115.41	3.2628	0.373
39.25	613.0	580.6	115.42	3.2484	0.376
39.50	615.7	583.3	115.43	3.2342	0.379
39.75	618.3	585.9	115.42	3.2201	0.382
40.00	620.8	588.4	115.44	3.2062	0.385
40.25	623.4	591.0	115.44	3.1925	0.389
40.50	625.9	593.5	115.45	3.1790	0.392
40.75	628.6	596.2	115.46	3.1656	0.395
41.00	631.0	598.6	115.47	3.1524	0.398
41.25	633.6	601.2	115.47	3.1394	0.401
41.50	636.1	603.7	115.47	3.1265	0.405
41.75	638.5	606.1	115.48	3.1138	0.408
42.00	640.9	608.5	115.49	3.1012	0.411

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

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Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
42.25	643.4	611.0	115.49	3.0888	0.414
42.50	645.8	613.4	115.49	3.0765	0.417
42.75	648.2	615.8	115.49	3.0643	0.420
43.00	650.5	618.1	115.49	3.0523	0.423
43.25	652.9	620.6	115.51	3.0405	0.426
43.50	655.2	622.8	115.51	3.0287	0.429
43.75	657.6	625.2	115.51	3.0171	0.432
44.00	659.8	627.4	115.52	3.0057	0.435
44.25	662.2	629.8	115.52	2.9944	0.438
44.50	664.4	632.1	115.58	2.9831	0.441
44.75	666.7	634.3	115.53	2.9721	0.445
45.00	669.1	636.7	115.55	2.9611	0.448
45.25	671.2	638.8	115.55	2.9503	0.450
45.50	673.3	640.9	115.55	2.9396	0.453
45.75	675.5	643.1	115.55	2.9290	0.456
46.00	677.8	645.4	115.56	2.9185	0.459
46.25	680.1	647.7	115.57	2.9081	0.462
46.50	682.2	649.8	115.57	2.8978	0.465
46.75	684.3	651.9	115.57	2.8877	0.468
47.00	686.4	654.1	115.58	2.8777	0.471
47.25	688.6	656.2	115.57	2.8677	0.474
47.50	690.6	658.2	115.60	2.8579	0.477
47.75	692.7	660.3	115.59	2.8482	0.480
48.00	694.7	662.4	115.60	2.8385	0.483
48.25	696.8	664.5	115.61	2.8290	0.486
48.50	698.9	666.6	115.61	2.8196	0.489
48.75	700.9	668.5	115.60	2.8103	0.491
49.00	702.9	670.5	115.62	2.8010	0.494
49.25	704.9	672.5	115.62	2.7919	0.497
49.50	706.9	674.5	115.63	2.7828	0.500
49.75	708.9	676.5	115.62	2.7739	0.503
50.00	710.9	678.5	115.64	2.7650	0.505
50.25	713.0	680.6	115.64	2.7562	0.508
50.50	714.9	682.5	115.65	2.7475	0.511
50.75	716.7	684.3	115.65	2.7389	0.514
51.00	718.7	686.4	115.65	2.7304	0.517
51.25	720.6	688.2	115.67	2.7220	0.519
51.50	722.4	690.1	115.68	2.7136	0.522
51.75	724.4	692.0	115.67	2.7053	0.525
52.00	726.1	693.7	115.67	2.6971	0.527
52.25	727.9	695.5	115.69	2.6890	0.530
52.50	729.7	697.4	115.68	2.6810	0.533
52.75	731.5	699.1	115.70	2.6730	0.535
53.00	733.4	701.1	115.69	2.6651	0.538
53.25	735.1	702.7	115.69	2.6573	0.540
53.50	737.2	704.8	115.73	2.6495	0.543
53.75	739.2	706.8	115.71	2.6419	0.546
54.00	741.0	708.6	115.72	2.6343	0.549
54.25	742.8	710.5	115.71	2.6267	0.552
54.50	744.7	712.3	115.72	2.6193	0.555
54.75	746.5	714.1	115.73	2.6119	0.557

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

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Time	Pressure PSIg	delta P PSIg	P	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
55.00	748.3	715.9	115.74	115.74	2.6045	0.560
55.25	750.1	717.8	115.74	115.74	2.5973	0.563
55.50	751.9	719.5	115.74	115.74	2.5901	0.565
55.75	753.7	721.3	115.74	115.74	2.5830	0.568
56.00	755.4	723.0	115.75	115.75	2.5759	0.571
56.25	757.1	724.7	115.75	115.75	2.5689	0.573
56.50	758.9	726.5	115.75	115.75	2.5619	0.576
56.75	760.5	728.2	115.76	115.76	2.5551	0.578
57.00	762.2	729.8	115.76	115.76	2.5482	0.581
57.25	763.9	731.5	115.76	115.76	2.5415	0.584
57.50	765.5	733.1	115.77	115.77	2.5348	0.586
57.75	767.1	734.7	115.77	115.77	2.5281	0.588
58.00	768.8	736.4	115.77	115.77	2.5216	0.591
58.25	770.4	738.1	115.78	115.78	2.5150	0.594
58.50	771.9	739.5	115.79	115.79	2.5085	0.596
58.75	773.5	741.1	115.79	115.79	2.5021	0.598
59.00	775.1	742.7	115.79	115.79	2.4958	0.601
59.25	776.6	744.2	115.79	115.79	2.4895	0.603
59.50	778.2	745.8	115.80	115.80	2.4832	0.606
59.75	779.5	747.1	115.80	115.80	2.4770	0.608
60.00	781.1	748.7	115.81	115.81	2.4708	0.610
60.25	782.6	750.2	115.81	115.81	2.4647	0.612
60.50	784.1	751.7	115.82	115.82	2.4587	0.615
60.75	785.5	753.1	115.83	115.83	2.4527	0.617
61.00	786.9	754.5	115.82	115.82	2.4467	0.619
61.25	788.3	755.9	115.82	115.82	2.4408	0.621
61.50	789.8	757.4	115.83	115.83	2.4350	0.624
61.75	791.0	758.6	115.84	115.84	2.4291	0.626
62.00	792.4	760.1	115.85	115.85	2.4234	0.628
62.25	793.9	761.5	115.84	115.84	2.4177	0.630
62.50	795.1	762.7	115.84	115.84	2.4120	0.632
62.75	796.6	764.2	115.86	115.86	2.4064	0.634
63.00	797.8	765.4	115.86	115.86	2.4008	0.636
63.25	799.2	766.8	115.86	115.86	2.3953	0.639
63.50	800.3	767.9	115.86	115.86	2.3898	0.641
63.75	801.8	769.5	115.87	115.87	2.3843	0.643
64.00	803.0	770.6	115.87	115.87	2.3789	0.645
64.25	804.3	771.9	115.89	115.89	2.3735	0.647
64.50	805.4	773.0	115.89	115.89	2.3682	0.649
64.75	806.6	774.2	115.89	115.89	2.3629	0.651
65.00	807.8	775.4	115.89	115.89	2.3577	0.653
65.25	809.1	776.7	115.88	115.88	2.3525	0.655
65.50	810.2	777.8	115.89	115.89	2.3473	0.656
65.75	811.3	778.9	115.89	115.89	2.3422	0.658
66.00	812.6	780.2	115.89	115.89	2.3371	0.660
66.25	813.8	781.4	115.91	115.91	2.3321	0.662
66.50	814.8	782.5	115.91	115.91	2.3271	0.664
66.75	815.9	783.6	115.92	115.92	2.3221	0.666
67.00	817.1	784.7	115.94	115.94	2.3172	0.668
67.25	818.3	785.9	115.91	115.91	2.3123	0.670
67.50	819.3	786.9	115.92	115.92	2.3074	0.671

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

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Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
67.75	820.4	788.0	115.92	2.3026	0.673
68.00	821.4	789.0	115.93	2.2978	0.675
68.25	822.6	790.2	115.94	2.2930	0.677
68.50	823.6	791.2	115.94	2.2883	0.678
68.75	824.6	792.2	115.95	2.2836	0.680
69.00	825.6	793.2	115.95	2.2790	0.682
69.25	826.6	794.2	115.95	2.2744	0.683
69.50	827.7	795.3	115.96	2.2698	0.685
69.75	828.7	796.3	115.95	2.2652	0.687
70.00	829.5	797.1	115.96	2.2607	0.688
70.25	830.6	798.2	115.96	2.2562	0.690
70.50	831.5	799.2	115.97	2.2518	0.691
70.75	832.4	800.0	115.97	2.2473	0.693
71.00	833.3	800.9	115.98	2.2430	0.694
71.25	834.2	801.8	115.98	2.2386	0.696
71.50	835.2	802.8	115.98	2.2343	0.697
71.75	836.1	803.7	115.98	2.2300	0.699
72.00	836.9	804.5	116.00	2.2257	0.700
72.25	837.9	805.5	116.00	2.2215	0.702
72.50	838.8	806.4	116.00	2.2172	0.704
72.75	839.7	807.3	116.00	2.2131	0.705
73.00	840.4	808.1	116.02	2.2089	0.706
73.25	841.4	809.0	116.02	2.2048	0.708
73.50	842.1	809.7	116.02	2.2007	0.709
73.75	843.0	810.7	116.02	2.1966	0.711
74.00	843.7	811.3	116.03	2.1926	0.712
74.25	844.6	812.2	116.02	2.1886	0.713
74.50	845.5	813.1	116.05	2.1846	0.715
74.75	846.2	813.8	116.04	2.1806	0.716
75.00	847.0	814.6	116.04	2.1767	0.717
75.25	847.7	815.4	116.04	2.1728	0.719
75.50	848.6	816.2	116.05	2.1689	0.720
75.75	849.3	817.0	116.05	2.1650	0.721
76.00	849.9	817.5	116.05	2.1612	0.722
76.25	850.7	818.3	116.06	2.1574	0.724
76.50	851.4	819.1	116.05	2.1536	0.725
76.75	852.1	819.7	116.06	2.1498	0.726
77.00	852.9	820.6	116.08	2.1461	0.728
77.25	853.6	821.2	116.09	2.1424	0.729
77.50	854.3	821.9	116.07	2.1387	0.730
77.75	855.0	822.6	116.09	2.1350	0.731
78.00	855.6	823.3	116.09	2.1314	0.732
78.25	856.3	823.9	116.09	2.1278	0.733
78.50	857.0	824.6	116.10	2.1242	0.734
78.75	857.6	825.2	116.10	2.1206	0.735
79.00	858.2	825.9	116.10	2.1171	0.737
79.25	859.0	826.6	116.10	2.1136	0.738
79.50	859.5	827.1	116.11	2.1101	0.739
79.75	860.3	828.0	116.11	2.1066	0.740
80.00	860.8	828.5	116.12	2.1031	0.741
80.25	861.5	829.1	116.12	2.0997	0.742

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9676 Mcdaniels/Johnson-B-1 DST#1 Hayes Oil & Gas.

DATE: 01/02/97

TIME: 13:12:58

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶	
80.50	862.0	829.6	116.14	2.0963	0.743	
80.75	862.6	830.2	116.13	2.0929	0.744	
81.00	863.3	830.9	116.14	2.0895	0.745	
81.25	863.8	831.4	116.14	2.0862	0.746	
81.50	864.6	832.2	116.14	2.0828	0.748	
81.75	865.0	832.7	116.13	2.0795	0.748	
82.00	865.6	833.2	116.14	2.0762	0.749	
82.25	866.1	833.7	116.14	2.0729	0.750	
82.50	866.7	834.3	116.15	2.0697	0.751	
82.75	867.2	834.8	116.15	2.0665	0.752	
83.00	867.8	835.4	116.16	2.0633	0.753	
83.25	868.3	835.9	116.16	2.0601	0.754	
83.50	868.8	836.4	116.15	2.0569	0.755	
83.75	869.4	837.0	116.16	2.0537	0.756	
84.00	869.8	837.4	116.17	2.0506	0.757	
84.25	870.5	838.1	116.18	2.0475	0.758	
84.50	870.9	838.5	116.18	2.0444	0.758	
84.75	871.3	838.9	116.18	2.0413	0.759	
85.00	871.9	839.5	116.18	2.0382	0.760	
85.25	872.3	840.0	116.19	2.0352	0.761	
85.50	872.8	840.5	116.19	2.0322	0.762	
85.75	873.3	841.0	116.20	2.0292	0.763	
86.00	873.8	841.4	116.21	2.0262	0.763	
86.25	874.4	842.1	116.22	2.0232	0.765	
86.50	874.9	842.5	116.19	2.0202	0.765	
86.75	875.4	843.1	116.20	2.0173	0.766	
87.00	875.8	843.4	116.21	2.0144	0.767	
87.25	876.2	843.8	116.21	2.0115	0.768	
87.50	876.7	844.3	116.22	2.0086	0.769	
87.75	877.1	844.7	116.22	2.0057	0.769	
88.00	877.5	845.1	116.22	2.0028	0.770	
88.25	877.9	845.5	116.22	2.0000	0.771	
88.50	878.4	846.0	116.22	1.9972	0.772	
88.75	878.8	846.4	116.23	1.9944	0.772	
89.00	879.4	847.0	116.23	1.9916	0.773	
89.25	879.7	847.3	116.24	1.9888	0.774	
89.50	880.2	847.8	116.24	1.9860	0.775	
89.75	880.5	848.1	116.24	1.9833	0.775	
90.00	880.8	848.4	116.25	1.9806	0.776	
***** End Shut-in 2	90.25	878.7	846.3	116.25	1.9778	0.772
***** Final Hydro.	343.50	2139.0	0.0	116.30		

TRILOBITE TESTING L.L.C.

OPERATOR : HAYES OIL & GAS. DATE 1/3/97
 WELL NAME: McDaniels/Johnson #B-1 KB 1455.00 ft TICKET NO: 9677 DST #2
 LOCATION : 13-32S-10W GR 1444.00 ft FORMATION: Mississippi
 INTERVAL : 4347.00 To 4359.00 ft TD 4359.00 ft TEST TYPE: CONV.

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
30	Rec.	11084	11084	2350			PF Fr. 0813 to 0843 hr
60	Range(Psi)	4300.0	4300.0	4995.0	0.0	0.0	IS Fr. 0843 to 0943 hr
90	Clock(hrs)	12hr.	12hr.	12hr.			SF Fr. 0943 to 1113 hr
90	Depth(ft)	4356.0	4356.0	4351.0	0.0	0.0	FS Fr. 1113 to 1243 hr

	Field	1	2	3	4	
Init Hydro	2198.0	2175.0	2183.0	0.0	0.0	T STARTED 0613 hr
First Flow	44.0	53.0	22.0	0.0	0.0	T ON BOTM 0811 hr
Final Flow	44.0	24.0	28.0	0.0	0.0	T OPEN 0813 hr
In Shut-in	926.0	919.0	944.0	0.0	0.0	T PULLED 1243 hr
Init Flow	33.0	51.0	16.0	0.0	0.0	T OUT 1430 hr
Final Flow	44.0	32.0	31.0	0.0	0.0	
Fl Shut-in	937.0	918.0	928.0	0.0	0.0	
Final Hydro	2112.0	2123.0	2099.0	0.0	0.0	
Inside/Outside	0	0	I			

TOOL DATA-----
 Tool Wt. 2100.00 lbs
 Wt Set On Packer 24000.00 lbs
 Wt Pulled Loose 98000.00 lbs
 Initial Str Wt 94000.00 lbs
 Unseated Str Wt 94000.00 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 484.00 ft
 D.P. Length 3857.00 ft

RECOVERY

60.00 ft of 60.00 ft in DC and 0.00 ft in DP
 0.00 ft of Slight Oil Cut Watery Mud
 0.00 ft of 6% Gas 6% Oil 20% Water 68% Mud
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

ALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----
 Mud Type Chemical
 Weight 9.30 lb/cf
 Vis. 46.00 S/L
 W.L. 11.20 in3
 F.C. 0.00 in
 Mud Drop

LOW DESCRIPTION

Initial Flow:
 Strong blow. Bottom of bucket in 5 mins.

Initial Shut In:
 Weak Surface blow, Built to 1/2 in.

Final Flow:
 Strong blow, Bottom of bucket in 30 sec, Gas to surface in 47 mins.

Final Shut In:
 After 10 mins bleed down, Blow back of

SAMPLES:
 SENT TO:

Amt. of fill 0.00 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
 Tool Chased N
 Tester Darren Amerine
 Co. Rep. John Hastings
 Contr. Duke
 Rig # 5
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV.

WELL NAME: McDaniels/Johnson #B-1

LOCATION : 13-32S-10W

TICKET No. 9677 D.S.T. No. 2 DATE 1/3/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27'

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 12'

TOTAL TOOL 39'

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 39'

D.C. ABOVE TOOLS.Stands 8 Single Total 484'

D.P. ABOVE TOOLS.Stands62 Single Total 3857'

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4380'

TOTAL DEPTH 4359'

TOTAL DRILL PIPE ABOVE K.B. 21'

REMARKS:
Gas sample taken at 75-80 mins. into final
flow period.

H	P.O. SUB	4319'
H	C.O. SUB	4320'
H	S.I. TOOL	4325'
H		
H	HMV	4330'
H	JARS	4335'
H		
H	SAFETY JOINT	4337'
H	PACKER	4342'
H	PACKER	4347'
H	DEPTH 4347'	
H	STUBB 1'to 4348'	4348'
H	ANCHOR	
H	alpine rec @ 4351'	
H		
H	5' of perms.to	4353'
H		
H	T.C. DEPTH	
H		
H	Ak-1 rec. @ 4356'	4356'
H		
H	4'perms to	4357'
H		
H	BULLNOSE 2'bullnose to	4359'
H	T.D.	

GAS RECOVERY

COMPANY: HAYES OIL & GAS.

DATE: 1/3/97

WELL NAME: McDaniels/Johnson #B-1

KB Elev: 1455.00 ft TICKET #9677 DST #2

WELL LOCATION: 13-32S-10W

GR Elev: 1444.00 ft FORMATION: Mississippi

INTERVAL Fr.: 4347.00 To 4359.00 T.D.: 4359.00 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)
47	0.16	0	20	7500.0
50	0.16	0	14	6300.0
55	0.16	0	11	5600.0
60	0.16	0	10	5300.0
65	0.16	0	10	5300.0
70	0.16	0	10	5300.0
75	0.16	0	11	5300.0
80	0.16	0	12	5800.0
85	0.16	0	12	5800.0
90	0.16	0	11	5600.0

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:	970014	Analyzed:	01/07/97
Sample From:	McDaniels/Johnson B-1 DST 2	Pressure:	
Producer:	Hayes Oil & Gas	Temperature:	
Date:		Location:	13-32-10
Time:		County:	Barber
Sampler:		State:	Kansas
Source:		Formation:	Miss

	Mole %	GPM
Helium	He:	
Oxygen	O2:	
Nitrogen	N2: 4.352	0.000
Carbon Dioxide	CO2: 0.000	0.000
Methane	C1: 83.003	0.000
Ethane	C2: 6.606	1.767
Propane	C3: 2.988	0.823
Iso Butane	iC4: 0.445	0.146
Normal Butane	nC4: 1.155	0.364
Iso Pentane	iC5: 0.305	0.112
Normal Pentane	nC5: 0.414	0.150
Hexanes Plus	C6+: 0.732	0.319
TOTAL:	100.000	3.681
Z Fact:	0.9971	
SP.GR.:	0.6915	
BTU (SAT):	1134.8 @	14.73 psia
BTU (DRY):	1154.9 @	14.73 psia
OCTANE RATING:	119.7	

COMMENTS: No pressure in bottle

0.000

TEST HISTORY

9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

Flag Points

t (Min.) P (PSig)

A:	0.00	2183.21
B:	0.00	21.73
C:	28.50	28.02
D:	60.50	944.43
E:	0.00	16.11
F:	89.25	31.38
G:	90.75	927.98
Q:	0.00	2099.36

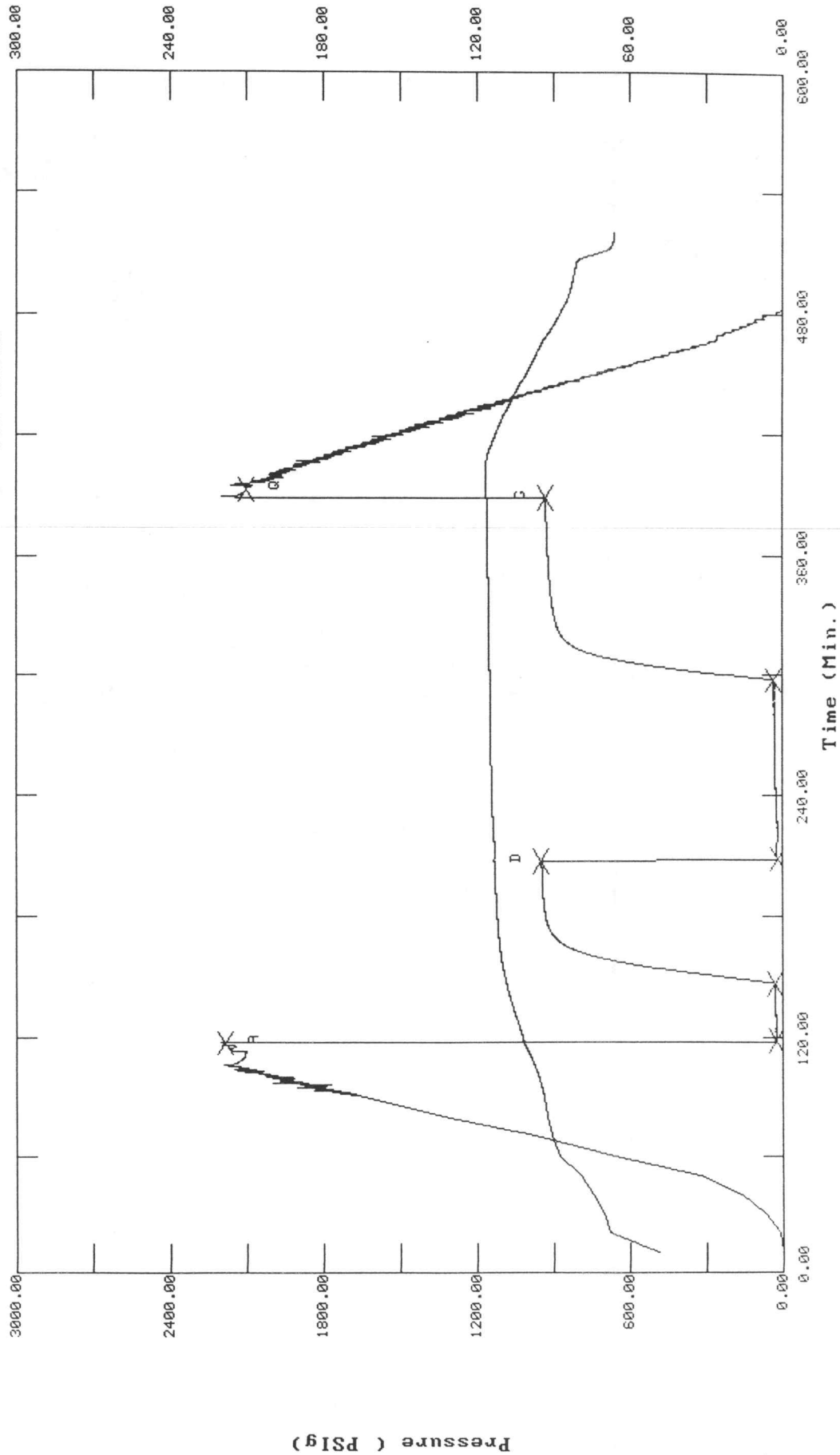
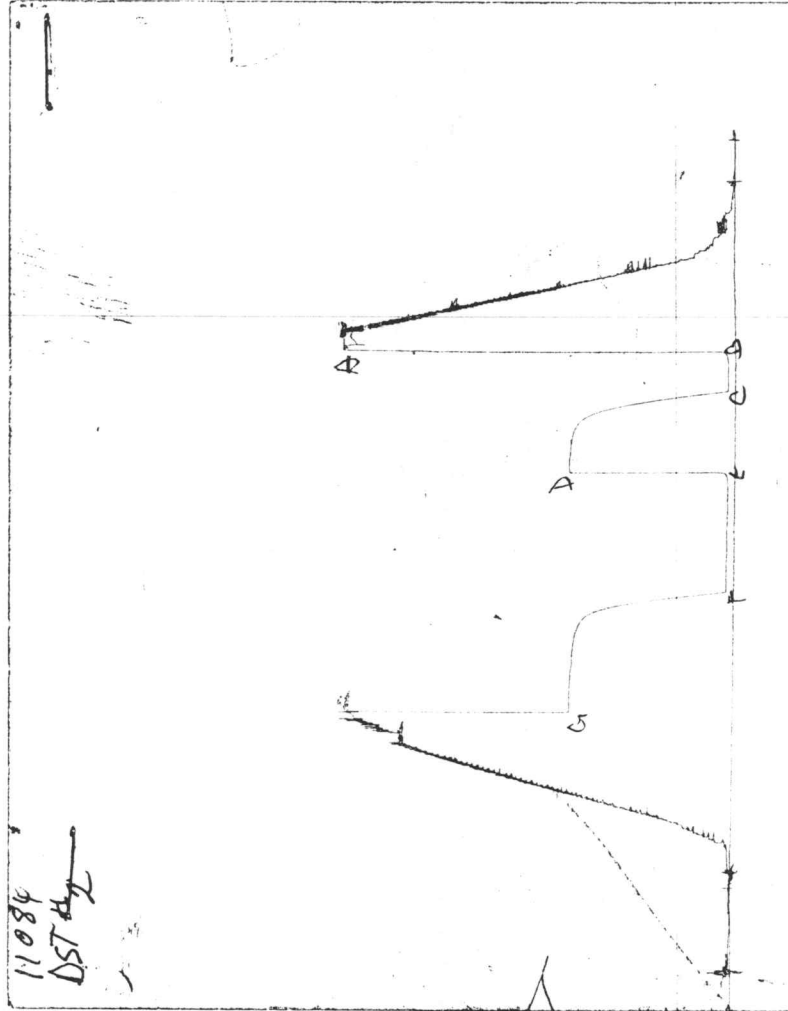


CHART PAGE



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

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	117.25	2183.2	0.0	101.35		
***** Start Flow 1	0.00	21.7	0.0	101.58		
	0.25	21.7	0.0	101.63		
	0.50	21.7	0.0	101.69		
	0.75	21.6	-0.1	101.74		
	1.00	22.1	0.4	101.79		
	1.25	22.0	0.3	101.84		
	1.50	22.7	0.9	101.89		
	1.75	22.6	0.8	101.94		
	2.00	22.8	1.1	101.99		
	2.25	22.7	1.0	102.03		
	2.50	23.1	1.3	102.08		
	2.75	22.6	0.8	102.13		
	3.00	23.3	1.6	102.18		
	3.25	23.0	1.3	102.23		
	3.50	22.8	1.1	102.29		
	3.75	22.9	1.2	102.34		
	4.00	23.0	1.3	102.39		
	4.25	23.2	1.5	102.45		
	4.50	24.9	3.2	102.51		
	4.75	23.1	1.3	102.57		
	5.00	23.1	1.3	102.63		
	5.25	23.2	1.4	102.68		
	5.50	23.2	1.5	102.75		
	5.75	23.3	1.6	102.81		
	6.00	23.6	1.8	102.87		
	6.25	25.0	3.3	102.93		
	6.50	23.4	1.7	102.99		
	6.75	23.8	2.1	103.06		
	7.00	23.5	1.8	103.13		
	7.25	23.7	1.9	103.19		
	7.50	23.9	2.2	103.26		
	7.75	23.3	1.6	103.33		
	8.00	23.5	1.8	103.39		
	8.25	24.4	2.7	103.46		
	8.50	24.0	2.3	103.52		
	8.75	23.7	2.0	103.59		
	9.00	23.8	2.1	103.66		
	9.25	24.0	2.3	103.72		
	9.50	23.9	2.2	103.79		
	9.75	23.6	1.8	103.85		
	10.00	23.9	2.2	103.93		
	10.25	23.7	2.0	103.99		
	10.50	23.9	2.2	104.06		
	10.75	23.7	2.0	104.13		
	11.00	23.8	2.1	104.19		
	11.25	23.7	1.9	104.27		
	11.50	24.0	2.3	104.33		
	11.75	24.2	2.4	104.40		
	12.00	24.2	2.5	104.47		
	12.25	24.7	2.9	104.53		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
12.50	24.2	2.5	104.60		
12.75	24.8	3.0	104.67		
13.00	24.6	2.9	104.73		
13.25	24.8	3.1	104.81		
13.50	24.7	2.9	104.87		
13.75	25.0	3.3	104.94		
14.00	25.0	3.3	105.00		
14.25	24.9	3.2	105.07		
14.50	25.2	3.4	105.13		
14.75	25.3	3.6	105.21		
15.00	25.3	3.5	105.27		
15.25	25.7	3.9	105.33		
15.50	25.2	3.4	105.40		
15.75	25.5	3.8	105.45		
16.00	25.3	3.5	105.52		
16.25	25.7	3.9	105.59		
16.50	25.5	3.8	105.65		
16.75	25.7	3.9	105.72		
17.00	25.8	4.0	105.78		
17.25	25.8	4.0	105.84		
17.50	26.0	4.3	105.91		
17.75	26.5	4.8	105.97		
18.00	26.0	4.3	106.03		
18.25	26.3	4.5	106.09		
18.50	26.2	4.4	106.16		
18.75	26.3	4.6	106.22		
19.00	26.7	5.0	106.28		
19.25	26.3	4.5	106.34		
19.50	26.3	4.5	106.40		
19.75	26.4	4.7	106.46		
20.00	26.3	4.5	106.51		
20.25	26.9	5.2	106.57		
20.50	26.8	5.1	106.63		
20.75	26.8	5.0	106.68		
21.00	27.0	5.3	106.75		
21.25	27.4	5.7	106.80		
21.50	27.0	5.3	106.85		
21.75	26.8	5.0	106.91		
22.00	27.2	5.5	106.96		
22.25	27.0	5.3	107.03		
22.50	26.9	5.2	107.07		
22.75	26.9	5.2	107.13		
23.00	27.1	5.4	107.18		
23.25	27.2	5.5	107.23		
23.50	27.3	5.5	107.29		
23.75	27.5	5.8	107.34		
24.00	27.4	5.6	107.40		
24.25	27.3	5.5	107.45		
24.50	27.5	5.8	107.50		
24.75	27.4	5.7	107.55		
25.00	27.7	6.0	107.61		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS
 DATE: 01/03/97 TIME: 06:14:15

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	25.25	27.4	5.7	107.66		
	25.50	27.6	5.9	107.70		
	25.75	28.1	6.4	107.75		
	26.00	27.9	6.2	107.80		
	26.25	28.0	6.3	107.84		
	26.50	27.9	6.1	107.89		
	26.75	27.9	6.1	107.94		
	27.00	28.2	6.5	107.99		
	27.25	28.5	6.8	108.03		
	27.50	28.7	7.0	108.08		
	27.75	28.4	6.6	108.13		
	28.00	27.9	6.2	108.18		
	28.25	28.2	6.5	108.22		
***** End Flow 1	28.50	28.0	6.3	108.27		
***** Start Shutin 1	0.00	28.0	0.0	108.27	0.0000	0.001
	0.25	38.0	10	108.31	115.0000	0.001
	0.50	54.2	26.2	108.36	58.0000	0.003
	0.75	70.9	42.9	108.41	39.0000	0.005
	1.00	87.7	59.7	108.46	29.5000	0.008
	1.25	104.4	76.4	108.49	23.8000	0.011
	1.50	121.1	93.1	108.54	20.0000	0.015
	1.75	137.9	109.9	108.58	17.2857	0.019
	2.00	154.8	126.7	108.62	15.2500	0.024
	2.25	171.5	143.4	108.66	13.6667	0.029
	2.50	188.3	160.3	108.71	12.4000	0.035
	2.75	205.1	177.1	108.76	11.3636	0.042
	3.00	221.7	193.7	108.80	10.5000	0.049
	3.25	238.3	210.3	108.84	9.7692	0.057
	3.50	255.0	226.9	108.89	9.1429	0.065
	3.75	271.2	243.1	108.93	8.6000	0.074
	4.00	287.1	259.1	108.97	8.1250	0.082
	4.25	303.1	275.1	109.02	7.7059	0.092
	4.50	319.1	291.1	109.06	7.3333	0.102
	4.75	334.9	306.8	109.10	7.0000	0.112
	5.00	350.1	322.1	109.14	6.7000	0.123
	5.25	365.6	337.6	109.18	6.4286	0.134
	5.50	380.7	352.7	109.22	6.1818	0.145
	5.75	395.5	367.4	109.27	5.9565	0.156
	6.00	410.5	382.5	109.31	5.7500	0.168
	6.25	424.8	396.8	109.35	5.5600	0.180
	6.50	439.0	411.0	109.39	5.3846	0.193
	6.75	453.2	425.2	109.42	5.2222	0.205
	7.00	466.6	438.6	109.47	5.0714	0.218
	7.25	480.5	452.5	109.51	4.9310	0.231
	7.50	493.7	465.7	109.54	4.8000	0.244
	7.75	506.6	478.6	109.59	4.6774	0.257
	8.00	519.3	491.3	109.63	4.5625	0.270
	8.25	531.8	503.8	109.65	4.4545	0.283
	8.50	544.3	516.3	109.70	4.3529	0.296
	8.75	556.4	528.4	109.73	4.2571	0.310
	9.00	568.2	540.2	109.77	4.1667	0.323

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
9.25	579.5	551.5	109.81	4.0811	0.336
9.50	590.9	562.9	109.84	4.0000	0.349
9.75	602.0	574.0	109.89	3.9231	0.362
10.00	612.7	584.7	109.92	3.8500	0.375
10.25	622.9	594.9	109.95	3.7805	0.388
10.50	633.5	605.5	109.98	3.7143	0.401
10.75	643.5	615.5	110.02	3.6512	0.414
11.00	653.3	625.3	110.05	3.5909	0.427
11.25	662.9	634.9	110.08	3.5333	0.439
11.50	672.4	644.4	110.13	3.4783	0.452
11.75	681.5	653.5	110.15	3.4255	0.464
12.00	690.5	662.4	110.18	3.3750	0.477
12.25	699.2	671.2	110.21	3.3265	0.489
12.50	707.7	679.6	110.25	3.2800	0.501
12.75	715.8	687.8	110.28	3.2353	0.512
13.00	724.0	695.9	110.32	3.1923	0.524
13.25	731.9	703.9	110.33	3.1509	0.536
13.50	739.5	711.5	110.36	3.1111	0.547
13.75	746.6	718.6	110.39	3.0727	0.557
14.00	753.8	725.8	110.43	3.0357	0.568
14.25	760.6	732.6	110.46	3.0000	0.579
14.50	767.3	739.3	110.49	2.9655	0.589
14.75	773.8	745.8	110.51	2.9322	0.599
15.00	780.0	752.0	110.54	2.9000	0.608
15.25	786.1	758.0	110.57	2.8689	0.618
15.50	792.1	764.1	110.59	2.8387	0.627
15.75	797.7	769.7	110.62	2.8095	0.636
16.00	803.3	775.2	110.64	2.7812	0.645
16.25	808.7	780.7	110.68	2.7538	0.654
16.50	813.6	785.6	110.70	2.7273	0.662
16.75	818.6	790.6	110.72	2.7015	0.670
17.00	823.4	795.4	110.75	2.6765	0.678
17.25	828.0	800.0	110.77	2.6522	0.686
17.50	832.6	804.5	110.79	2.6286	0.693
17.75	836.8	808.7	110.81	2.6056	0.700
18.00	840.9	812.8	110.86	2.5833	0.707
18.25	844.8	816.8	110.87	2.5616	0.714
18.50	848.8	820.7	110.90	2.5405	0.720
18.75	852.3	824.3	110.91	2.5200	0.726
19.00	855.8	827.8	110.93	2.5000	0.732
19.25	859.2	831.1	110.96	2.4805	0.738
19.50	862.4	834.4	110.98	2.4615	0.744
19.75	865.5	837.4	111.01	2.4430	0.749
20.00	868.4	840.4	111.02	2.4250	0.754
20.25	871.2	843.2	111.05	2.4074	0.759
20.50	873.9	845.9	111.08	2.3902	0.764
20.75	876.5	848.5	111.09	2.3735	0.768
21.00	878.9	850.9	111.11	2.3571	0.772
21.25	881.1	853.1	111.13	2.3412	0.776
21.50	883.4	855.4	111.15	2.3256	0.780
21.75	885.7	857.7	111.17	2.3103	0.784

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
22.00	887.5	859.5	111.19	2.2955	0.788
22.25	889.6	861.6	111.20	2.2809	0.791
22.50	891.5	863.4	111.23	2.2667	0.795
22.75	893.3	865.3	111.25	2.2527	0.798
23.00	895.0	867.0	111.28	2.2391	0.801
23.25	896.6	868.6	111.29	2.2258	0.804
23.50	898.3	870.2	111.31	2.2128	0.807
23.75	899.7	871.7	111.32	2.2000	0.809
24.00	901.0	873.0	111.34	2.1875	0.812
24.25	902.4	874.4	111.35	2.1753	0.814
24.50	903.6	875.6	111.38	2.1633	0.817
24.75	904.8	876.8	111.40	2.1515	0.819
25.00	906.0	878.0	111.43	2.1400	0.821
25.25	907.2	879.1	111.42	2.1287	0.823
25.50	908.4	880.4	111.45	2.1176	0.825
25.75	909.7	881.7	111.46	2.1068	0.828
26.00	910.7	882.7	111.47	2.0962	0.829
26.25	912.0	883.9	111.50	2.0857	0.832
26.50	912.9	884.9	111.50	2.0755	0.833
26.75	913.8	885.8	111.53	2.0654	0.835
27.00	914.8	886.8	111.53	2.0556	0.837
27.25	915.6	887.6	111.55	2.0459	0.838
27.50	916.6	888.5	111.58	2.0364	0.840
27.75	917.2	889.2	111.58	2.0270	0.841
28.00	918.2	890.1	111.61	2.0179	0.843
28.25	918.9	890.9	111.62	2.0088	0.844
28.50	919.5	891.5	111.63	2.0000	0.845
28.75	920.3	892.3	111.65	1.9913	0.847
29.00	920.8	892.8	111.66	1.9828	0.848
29.25	921.5	893.5	111.68	1.9744	0.849
29.50	922.2	894.2	111.68	1.9661	0.850
29.75	922.8	894.8	111.71	1.9580	0.852
30.00	923.4	895.4	111.74	1.9500	0.853
30.25	924.0	895.9	111.74	1.9421	0.854
30.50	924.4	896.3	111.74	1.9344	0.854
30.75	924.9	896.9	111.76	1.9268	0.855
31.00	925.4	897.4	111.77	1.9194	0.856
31.25	925.9	897.9	111.79	1.9120	0.857
31.50	926.4	898.4	111.80	1.9048	0.858
31.75	926.7	898.7	111.82	1.8976	0.859
32.00	927.2	899.2	111.84	1.8906	0.860
32.25	927.7	899.7	111.85	1.8837	0.861
32.50	928.1	900.0	111.83	1.8769	0.861
32.75	928.5	900.5	111.86	1.8702	0.862
33.00	928.9	900.9	111.88	1.8636	0.863
33.25	929.3	901.3	111.89	1.8571	0.864
33.50	929.7	901.6	111.91	1.8507	0.864
33.75	929.9	901.9	111.92	1.8444	0.865
34.00	930.2	902.2	111.94	1.8382	0.865
34.25	930.7	902.6	111.95	1.8321	0.866
34.50	930.9	902.9	111.96	1.8261	0.867

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

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TIME: 06:14:15

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
34.75	931.3	903.2	111.98	1.8201	0.867
35.00	931.6	903.6	111.99	1.8143	0.868
35.25	931.8	903.7	112.00	1.8085	0.868
35.50	932.1	904.1	112.01	1.8028	0.869
35.75	932.4	904.4	112.02	1.7972	0.869
36.00	932.5	904.5	112.04	1.7917	0.870
36.25	932.8	904.8	112.05	1.7862	0.870
36.50	933.0	905.0	112.06	1.7808	0.871
36.75	933.3	905.2	112.06	1.7755	0.871
37.00	933.5	905.5	112.08	1.7703	0.871
37.25	933.9	905.8	112.09	1.7651	0.872
37.50	934.1	906.1	112.11	1.7600	0.873
37.75	934.4	906.3	112.12	1.7550	0.873
38.00	934.5	906.5	112.13	1.7500	0.873
38.25	934.8	906.8	112.14	1.7451	0.874
38.50	934.9	906.8	112.15	1.7403	0.874
38.75	935.1	907.1	112.16	1.7355	0.874
39.00	935.3	907.3	112.17	1.7308	0.875
39.25	935.5	907.5	112.18	1.7261	0.875
39.50	935.7	907.7	112.20	1.7215	0.876
39.75	935.8	907.8	112.21	1.7170	0.876
40.00	936.0	908.0	112.22	1.7125	0.876
40.25	936.2	908.2	112.22	1.7081	0.876
40.50	936.3	908.3	112.23	1.7037	0.877
40.75	936.5	908.5	112.24	1.6994	0.877
41.00	936.7	908.7	112.25	1.6951	0.877
41.25	936.8	908.8	112.28	1.6909	0.878
41.50	937.0	909.0	112.28	1.6867	0.878
41.75	937.1	909.1	112.28	1.6826	0.878
42.00	937.3	909.3	112.30	1.6786	0.879
42.25	937.5	909.5	112.31	1.6746	0.879
42.50	937.7	909.7	112.33	1.6706	0.879
42.75	937.9	909.9	112.35	1.6667	0.880
43.00	938.0	909.9	112.36	1.6628	0.880
43.25	938.1	910.1	112.35	1.6590	0.880
43.50	938.3	910.3	112.37	1.6552	0.880
43.75	938.5	910.4	112.38	1.6514	0.881
44.00	938.6	910.5	112.39	1.6477	0.881
44.25	938.7	910.7	112.40	1.6441	0.881
44.50	938.9	910.9	112.40	1.6404	0.882
44.75	939.1	911.0	112.42	1.6369	0.882
45.00	939.1	911.1	112.43	1.6333	0.882
45.25	939.3	911.3	112.44	1.6298	0.882
45.50	939.4	911.4	112.45	1.6264	0.882
45.75	939.6	911.5	112.46	1.6230	0.883
46.00	939.6	911.6	112.47	1.6196	0.883
46.25	939.7	911.7	112.48	1.6162	0.883
46.50	939.8	911.8	112.49	1.6129	0.883
46.75	940.0	912.0	112.50	1.6096	0.884
47.00	940.1	912.0	112.51	1.6064	0.884
47.25	940.2	912.1	112.51	1.6032	0.884

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

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TIME: 06:14:15

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
47.50	940.2	912.2	112.53	1.6000	0.884
47.75	940.5	912.5	112.54	1.5969	0.885
48.00	940.7	912.7	112.56	1.5938	0.885
48.25	940.7	912.7	112.56	1.5907	0.885
48.50	940.8	912.7	112.56	1.5876	0.885
48.75	940.9	912.9	112.57	1.5846	0.885
49.00	941.0	913.0	112.58	1.5816	0.886
49.25	941.0	913.0	112.60	1.5787	0.886
49.50	941.2	913.2	112.61	1.5758	0.886
49.75	941.3	913.3	112.61	1.5729	0.886
50.00	941.4	913.4	112.62	1.5700	0.886
50.25	941.4	913.4	112.63	1.5672	0.886
50.50	941.6	913.6	112.64	1.5644	0.887
50.75	941.7	913.7	112.64	1.5616	0.887
51.00	941.7	913.7	112.66	1.5588	0.887
51.25	941.7	913.7	112.67	1.5561	0.887
51.50	941.8	913.8	112.69	1.5534	0.887
51.75	941.9	913.9	112.69	1.5507	0.887
52.00	942.0	914.0	112.70	1.5481	0.887
52.25	942.2	914.2	112.70	1.5455	0.888
52.50	942.3	914.3	112.71	1.5429	0.888
52.75	942.3	914.3	112.73	1.5403	0.888
53.00	942.4	914.4	112.73	1.5377	0.888
53.25	942.6	914.6	112.74	1.5352	0.888
53.50	942.5	914.5	112.75	1.5327	0.888
53.75	942.7	914.6	112.77	1.5302	0.889
54.00	942.8	914.7	112.76	1.5278	0.889
54.25	942.8	914.8	112.78	1.5253	0.889
54.50	942.9	914.9	112.78	1.5229	0.889
54.75	943.0	915.0	112.80	1.5205	0.889
55.00	943.0	915.0	112.81	1.5182	0.889
55.25	943.1	915.1	112.82	1.5158	0.889
55.50	943.2	915.1	112.83	1.5135	0.890
55.75	943.4	915.3	112.84	1.5112	0.890
56.00	943.4	915.3	112.85	1.5089	0.890
56.25	943.4	915.3	112.87	1.5067	0.890
56.50	943.5	915.4	112.86	1.5044	0.890
56.75	943.6	915.6	112.87	1.5022	0.890
57.00	943.7	915.7	112.85	1.5000	0.891
57.25	943.7	915.7	112.88	1.4978	0.891
57.50	943.8	915.7	112.88	1.4957	0.891
57.75	943.8	915.8	112.89	1.4935	0.891
58.00	944.0	915.9	112.90	1.4914	0.891
58.25	944.0	915.9	112.92	1.4893	0.891
58.50	944.0	915.9	112.92	1.4872	0.891
58.75	944.0	916.0	112.94	1.4851	0.891
59.00	944.1	916.1	112.95	1.4831	0.891
59.25	944.1	916.1	112.95	1.4810	0.891
59.50	944.2	916.2	112.96	1.4790	0.892
59.75	944.3	916.3	112.98	1.4770	0.892
60.00	944.4	916.4	112.98	1.4750	0.892

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
	60.25	944.4	916.4	113.00	1.4730	0.892
***** End Shut-in 1	60.50	944.4	916.4	113.00	1.4711	0.892
***** Start Flow 2	0.00	16.1	0.0	113.01		
	0.25	17.0	0.9	113.01		
	0.50	16.9	0.8	113.01		
	0.75	16.1	0.0	113.01		
	1.00	23.5	7.4	113.00		
	1.25	23.3	7.2	112.99		
	1.50	23.5	7.4	112.98		
	1.75	23.6	7.5	112.97		
	2.00	24.0	7.9	112.96		
	2.25	23.6	7.5	112.96		
	2.50	23.7	7.6	112.95		
	2.75	23.8	7.7	112.95		
	3.00	23.8	7.7	112.94		
	3.25	23.4	7.3	112.92		
	3.50	23.7	7.6	112.92		
	3.75	23.6	7.5	112.92		
	4.00	23.5	7.4	112.92		
	4.25	23.7	7.6	112.91		
	4.50	23.5	7.4	112.91		
	4.75	23.2	7.1	112.92		
	5.00	23.5	7.4	112.91		
	5.25	23.5	7.4	112.92		
	5.50	23.5	7.4	112.92		
	5.75	23.4	7.3	112.92		
	6.00	23.3	7.2	112.93		
	6.25	23.2	7.1	112.94		
	6.50	23.5	7.4	112.94		
	6.75	23.9	7.8	112.94		
	7.00	23.3	7.2	112.95		
	7.25	23.4	7.3	112.96		
	7.50	23.4	7.3	112.97		
	7.75	23.6	7.5	112.98		
	8.00	23.2	7.1	112.99		
	8.25	23.5	7.4	113.00		
	8.50	16.5	0.4	113.01		
	8.75	16.4	0.3	113.02		
	9.00	16.7	0.6	113.03		
	9.25	16.9	0.8	113.04		
	9.50	16.9	0.8	113.05		
	9.75	16.9	0.8	113.07		
	10.00	17.1	1.0	113.09		
	10.25	16.8	0.7	113.09		
	10.50	16.8	0.7	113.10		
	10.75	17.1	1.0	113.12		
	11.00	17.1	1.0	113.13		
	11.25	17.1	1.0	113.15		
	11.50	17.4	1.3	113.16		
	11.75	17.2	1.1	113.17		
	12.00	17.1	1.0	113.19		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

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Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
12.25	17.4	1.3	113.20		
12.50	17.4	1.3	113.21		
12.75	17.6	1.5	113.23		
13.00	17.3	1.2	113.23		
13.25	17.8	1.7	113.25		
13.50	17.8	1.7	113.26		
13.75	17.7	1.6	113.28		
14.00	17.4	1.3	113.29		
14.25	18.1	2.0	113.30		
14.50	17.9	1.8	113.31		
14.75	18.0	1.9	113.33		
15.00	17.7	1.6	113.34		
15.25	18.4	2.3	113.35		
15.50	18.0	1.8	113.37		
15.75	18.7	2.6	113.37		
16.00	18.6	2.5	113.39		
16.25	18.1	2.0	113.40		
16.50	18.3	2.2	113.42		
16.75	18.3	2.2	113.43		
17.00	18.5	2.4	113.44		
17.25	18.5	2.4	113.45		
17.50	18.4	2.3	113.47		
17.75	18.6	2.5	113.48		
18.00	18.9	2.8	113.49		
18.25	19.0	2.9	113.50		
18.50	18.6	2.5	113.52		
18.75	19.2	3.1	113.52		
19.00	18.6	2.5	113.54		
19.25	19.2	3.1	113.54		
19.50	19.6	3.5	113.55		
19.75	19.1	3.0	113.57		
20.00	19.5	3.4	113.58		
20.25	19.2	3.1	113.59		
20.50	19.3	3.2	113.60		
20.75	19.1	3.0	113.60		
21.00	19.8	3.7	113.62		
21.25	19.7	3.6	113.63		
21.50	20.1	4.0	113.64		
21.75	20.1	4.0	113.65		
22.00	20.0	3.9	113.66		
22.25	19.8	3.7	113.67		
22.50	20.1	4.0	113.67		
22.75	20.3	4.2	113.68		
23.00	20.3	4.2	113.69		
23.25	20.1	4.0	113.70		
23.50	21.1	5.0	113.71		
23.75	20.3	4.2	113.71		
24.00	20.3	4.2	113.73		
24.25	20.4	4.3	113.73		
24.50	20.6	4.4	113.75		
24.75	21.1	5.0	113.76		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
25.00	20.6	4.4	113.76		
25.25	20.6	4.5	113.77		
25.50	20.6	4.5	113.78		
25.75	20.8	4.7	113.79		
26.00	20.6	4.5	113.80		
26.25	20.9	4.8	113.81		
26.50	20.4	4.3	113.81		
26.75	20.5	4.4	113.82		
27.00	21.0	4.9	113.83		
27.25	21.2	5.1	113.84		
27.50	21.6	5.5	113.84		
27.75	21.3	5.2	113.85		
28.00	21.1	5.0	113.86		
28.25	21.8	5.7	113.87		
28.50	21.4	5.3	113.89		
28.75	21.8	5.7	113.88		
29.00	21.9	5.8	113.88		
29.25	22.1	6.0	113.89		
29.50	22.0	5.9	113.89		
29.75	22.1	6.0	113.90		
30.00	22.3	6.2	113.91		
30.25	23.0	6.9	113.92		
30.50	22.7	6.6	113.92		
30.75	22.7	6.5	113.93		
31.00	22.7	6.5	113.94		
31.25	23.2	7.0	113.95		
31.50	23.2	7.0	113.95		
31.75	22.9	6.8	113.96		
32.00	23.2	7.0	113.97		
32.25	23.2	7.0	113.97		
32.50	23.4	7.3	113.98		
32.75	23.7	7.6	113.98		
33.00	23.6	7.5	113.98		
33.25	23.7	7.6	113.99		
33.50	24.0	7.9	113.99		
33.75	24.2	8.1	114.01		
34.00	24.1	8.0	114.01		
34.25	24.4	8.3	114.01		
34.50	24.8	8.6	114.01		
34.75	24.1	8.0	114.02		
35.00	24.8	8.6	114.03		
35.25	24.8	8.6	114.03		
35.50	25.1	9.0	114.04		
35.75	24.6	8.5	114.04		
36.00	25.4	9.3	114.05		
36.25	25.0	8.9	114.05		
36.50	25.1	9.0	114.06		
36.75	25.2	9.1	114.06		
37.00	25.7	9.6	114.07		
37.25	25.4	9.3	114.07		
37.50	26.1	10	114.07		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
37.75	25.5	9.4	114.08		
38.00	26.5	10.4	114.09		
38.25	26.0	9.9	114.09		
38.50	25.8	9.7	114.09		
38.75	26.5	10.4	114.09		
39.00	25.9	9.8	114.10		
39.25	26.6	10.5	114.11		
39.50	26.5	10.4	114.11		
39.75	26.7	10.6	114.11		
40.00	26.7	10.6	114.11		
40.25	26.6	10.5	114.12		
40.50	26.3	10.2	114.12		
40.75	26.7	10.6	114.13		
41.00	26.8	10.7	114.14		
41.25	27.3	11.2	114.13		
41.50	27.1	11.0	114.13		
41.75	27.3	11.2	114.14		
42.00	26.3	10.2	114.14		
42.25	26.3	10.2	114.15		
42.50	26.7	10.6	114.15		
42.75	26.2	10.1	114.16		
43.00	26.4	10.3	114.16		
43.25	26.4	10.3	114.16		
43.50	27.2	11.1	114.17		
43.75	26.2	10.1	114.17		
44.00	26.4	10.3	114.17		
44.25	26.9	10.8	114.18		
44.50	26.8	10.7	114.18		
44.75	26.7	10.6	114.19		
45.00	26.6	10.5	114.19		
45.25	26.8	10.7	114.19		
45.50	27.0	10.9	114.20		
45.75	26.3	10.2	114.20		
46.00	26.0	9.9	114.20		
46.25	26.6	10.5	114.21		
46.50	26.3	10.2	114.21		
46.75	26.3	10.2	114.21		
47.00	26.5	10.4	114.22		
47.25	27.2	11.1	114.22		
47.50	26.6	10.5	114.22		
47.75	26.6	10.5	114.22		
48.00	27.1	11.0	114.23		
48.25	26.9	10.8	114.23		
48.50	26.7	10.6	114.23		
48.75	27.5	11.4	114.24		
49.00	27.6	11.5	114.25		
49.25	26.4	10.3	114.25		
49.50	26.1	10	114.25		
49.75	27.0	10.9	114.25		
50.00	26.5	10.4	114.26		
50.25	26.9	10.8	114.26		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
50.50	27.0	10.9	114.26		
50.75	26.8	10.7	114.27		
51.00	26.4	10.3	114.28		
51.25	26.8	10.7	114.28		
51.50	26.9	10.8	114.28		
51.75	27.3	11.2	114.29		
52.00	27.4	11.2	114.28		
52.25	26.2	10.1	114.29		
52.50	26.6	10.5	114.29		
52.75	27.0	10.9	114.29		
53.00	27.6	11.5	114.30		
53.25	27.2	11.1	114.30		
53.50	27.1	11.0	114.31		
53.75	27.3	11.2	114.31		
54.00	27.4	11.2	114.31		
54.25	27.1	11.0	114.31		
54.50	27.4	11.3	114.32		
54.75	27.7	11.6	114.32		
55.00	27.4	11.3	114.32		
55.25	28.0	11.9	114.32		
55.50	27.7	11.6	114.33		
55.75	27.7	11.6	114.33		
56.00	27.6	11.5	114.34		
56.25	27.9	11.8	114.34		
56.50	28.1	12.0	114.34		
56.75	27.6	11.5	114.34		
57.00	27.7	11.6	114.35		
57.25	27.9	11.8	114.35		
57.50	27.9	11.7	114.36		
57.75	27.4	11.3	114.36		
58.00	27.7	11.6	114.36		
58.25	27.9	11.8	114.36		
58.50	28.3	12.2	114.36		
58.75	27.9	11.8	114.38		
59.00	27.8	11.7	114.37		
59.25	27.2	11.1	114.38		
59.50	28.2	12.1	114.39		
59.75	27.9	11.8	114.39		
60.00	28.0	11.9	114.39		
60.25	28.8	12.7	114.39		
60.50	28.4	12.3	114.40		
60.75	28.6	12.5	114.39		
61.00	28.6	12.5	114.40		
61.25	28.7	12.6	114.40		
61.50	28.0	11.9	114.40		
61.75	28.6	12.5	114.42		
62.00	28.9	12.8	114.42		
62.25	28.3	12.2	114.42		
62.50	29.1	13.0	114.42		
62.75	28.2	12.1	114.43		
63.00	28.9	12.8	114.43		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
63.25	27.8	11.7	114.44		
63.50	29.0	12.9	114.42		
63.75	29.0	12.9	114.44		
64.00	29.5	13.3	114.44		
64.25	29.3	13.2	114.45		
64.50	29.7	13.6	114.45		
64.75	29.3	13.2	114.45		
65.00	28.0	11.9	114.46		
65.25	29.5	13.4	114.45		
65.50	29.0	12.9	114.46		
65.75	29.8	13.7	114.46		
66.00	29.0	12.9	114.47		
66.25	28.9	12.8	114.47		
66.50	29.1	13.0	114.48		
66.75	28.8	12.7	114.47		
67.00	29.7	13.6	114.48		
67.25	29.1	13.0	114.48		
67.50	28.7	12.6	114.48		
67.75	29.0	12.9	114.48		
68.00	28.8	12.7	114.49		
68.25	29.1	13.0	114.49		
68.50	29.4	13.3	114.50		
68.75	29.3	13.2	114.50		
69.00	30.0	13.8	114.50		
69.25	29.6	13.5	114.50		
69.50	30.0	13.9	114.51		
69.75	30.0	13.9	114.51		
70.00	29.2	13.1	114.51		
70.25	30.4	14.3	114.52		
70.50	29.8	13.7	114.53		
70.75	30.3	14.2	114.53		
71.00	30.4	14.3	114.52		
71.25	30.5	14.4	114.54		
71.50	29.5	13.4	114.54		
71.75	30.5	14.4	114.54		
72.00	29.5	13.4	114.54		
72.25	30.8	14.7	114.54		
72.50	30.5	14.4	114.54		
72.75	30.5	14.4	114.54		
73.00	30.6	14.5	114.55		
73.25	30.5	14.4	114.55		
73.50	30.0	13.8	114.56		
73.75	29.9	13.8	114.56		
74.00	30.5	14.4	114.56		
74.25	29.9	13.8	114.56		
74.50	30.2	14.1	114.56		
74.75	29.4	13.3	114.57		
75.00	30.6	14.5	114.58		
75.25	29.8	13.7	114.58		
75.50	30.5	14.4	114.58		
75.75	31.5	15.4	114.58		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
76.00	30.9	14.8	114.59		
76.25	29.8	13.7	114.59		
76.50	30.2	14.1	114.59		
76.75	31.7	15.6	114.59		
77.00	30.1	14.0	114.59		
77.25	30.8	14.7	114.60		
77.50	30.6	14.5	114.60		
77.75	30.2	14.1	114.60		
78.00	30.5	14.4	114.60		
78.25	30.5	14.4	114.61		
78.50	30.3	14.2	114.61		
78.75	30.8	14.7	114.62		
79.00	30.8	14.7	114.62		
79.25	30.7	14.6	114.62		
79.50	30.9	14.8	114.63		
79.75	30.5	14.4	114.62		
80.00	30.2	14.1	114.63		
80.25	30.2	14.1	114.64		
80.50	30.1	14.0	114.63		
80.75	31.1	15.0	114.63		
81.00	31.1	15.0	114.64		
81.25	30.4	14.3	114.65		
81.50	31.2	15.1	114.64		
81.75	31.6	15.5	114.65		
82.00	30.6	14.5	114.65		
82.25	30.9	14.8	114.66		
82.50	30.1	14.0	114.65		
82.75	31.0	14.9	114.66		
83.00	31.4	15.3	114.66		
83.25	30.8	14.7	114.67		
83.50	30.6	14.5	114.66		
83.75	31.0	14.9	114.67		
84.00	31.5	15.4	114.67		
84.25	31.1	15.0	114.68		
84.50	32.0	15.9	114.68		
84.75	31.4	15.3	114.68		
85.00	31.0	14.9	114.68		
85.25	30.6	14.5	114.68		
85.50	30.8	14.7	114.69		
85.75	30.6	14.5	114.69		
86.00	31.1	15.0	114.69		
86.25	30.2	14.1	114.69		
86.50	31.3	15.2	114.70		
86.75	31.2	15.1	114.70		
87.00	30.5	14.4	114.70		
87.25	31.4	15.3	114.70		
87.50	30.6	14.5	114.71		
87.75	31.7	15.6	114.71		
88.00	31.4	15.3	114.71		
88.25	31.2	15.1	114.72		
88.50	30.8	14.7	114.72		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	88.75	31.4	15.3	114.72		
	89.00	31.5	15.4	114.72		
***** End Flow 2	89.25	31.4	15.3	114.72		
***** Start Shutin 2	0.00	31.4	0.0	114.72	0.0000	0.001
	0.25	46.4	15.0	114.73	472.0000	0.002
	0.50	65.9	34.5	114.73	236.5000	0.004
	0.75	84.8	53.5	114.73	158.0000	0.007
	1.00	103.8	72.4	114.74	118.7500	0.011
	1.25	123.1	91.7	114.74	95.2000	0.015
	1.50	142.2	110.8	114.74	79.5000	0.020
	1.75	161.1	129.8	114.75	68.2857	0.026
	2.00	180.2	148.8	114.75	59.8750	0.032
	2.25	199.2	167.8	114.75	53.3333	0.040
	2.50	217.8	186.4	114.77	48.1000	0.047
	2.75	236.2	204.8	114.76	43.8182	0.056
	3.00	254.3	222.9	114.77	40.2500	0.065
	3.25	272.6	241.2	114.77	37.2308	0.074
	3.50	290.5	259.1	114.78	34.6429	0.084
	3.75	308.0	276.6	114.79	32.4000	0.095
	4.00	325.3	293.9	114.80	30.4375	0.106
	4.25	342.3	311.0	114.80	28.7059	0.117
	4.50	359.1	327.7	114.81	27.1667	0.129
	4.75	375.7	344.4	114.81	25.7895	0.141
	5.00	392.0	360.6	114.82	24.5500	0.154
	5.25	408.0	376.7	114.82	23.4286	0.167
	5.50	423.6	392.2	114.84	22.4091	0.179
	5.75	438.9	407.6	114.83	21.4783	0.193
	6.00	454.1	422.7	114.85	20.6250	0.206
	6.25	469.0	437.6	114.84	19.8400	0.220
	6.50	483.6	452.2	114.85	19.1154	0.234
	6.75	497.6	466.2	114.86	18.4444	0.248
	7.00	511.6	480.2	114.87	17.8214	0.262
	7.25	525.0	493.7	114.87	17.2414	0.276
	7.50	538.3	506.9	114.88	16.7000	0.290
	7.75	551.2	519.8	114.89	16.1935	0.304
	8.00	563.8	532.4	114.89	15.7188	0.318
	8.25	576.2	544.9	114.90	15.2727	0.332
	8.50	588.2	556.8	114.90	14.8529	0.346
	8.75	599.7	568.4	114.92	14.4571	0.360
	9.00	611.2	579.9	114.91	14.0833	0.374
	9.25	622.1	590.8	114.92	13.7297	0.387
	9.50	632.9	601.5	114.93	13.3947	0.401
	9.75	643.3	611.9	114.93	13.0769	0.414
	10.00	653.5	622.1	114.94	12.7750	0.427
	10.25	663.1	631.7	114.95	12.4878	0.440
	10.50	672.6	641.2	114.96	12.2143	0.452
	10.75	681.7	650.4	114.96	11.9535	0.465
	11.00	690.6	659.3	114.97	11.7045	0.477
	11.25	699.3	667.9	114.97	11.4667	0.489
	11.50	707.5	676.1	114.97	11.2391	0.501
	11.75	715.5	684.1	114.98	11.0213	0.512

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
12.00	723.2	691.8	114.99	10.8125	0.523
12.25	730.6	699.2	114.99	10.6122	0.534
12.50	737.8	706.4	115.00	10.4200	0.544
12.75	744.8	713.4	115.00	10.2353	0.555
13.00	751.4	720.0	115.00	10.0577	0.565
13.25	757.8	726.4	115.01	9.8868	0.574
13.50	764.0	732.6	115.01	9.7222	0.584
13.75	769.9	738.6	115.02	9.5636	0.593
14.00	775.6	744.2	115.03	9.4107	0.602
14.25	781.0	749.6	115.04	9.2632	0.610
14.50	786.1	754.8	115.03	9.1207	0.618
14.75	791.0	759.6	115.04	8.9831	0.626
15.00	795.7	764.3	115.05	8.8500	0.633
15.25	800.3	768.9	115.05	8.7213	0.641
15.50	804.5	773.1	115.05	8.5968	0.647
15.75	808.6	777.3	115.05	8.4762	0.654
16.00	812.4	781.0	115.05	8.3594	0.660
16.25	816.2	784.8	115.06	8.2462	0.666
16.50	819.7	788.3	115.21	8.1364	0.672
16.75	823.1	791.7	115.07	8.0299	0.677
17.00	826.3	794.9	115.08	7.9265	0.683
17.25	829.4	798.0	115.07	7.8261	0.688
17.50	832.3	800.9	115.08	7.7286	0.693
17.75	835.1	803.7	115.08	7.6338	0.697
18.00	837.8	806.5	115.09	7.5417	0.702
18.25	840.3	808.9	115.08	7.4521	0.706
18.50	842.7	811.3	115.09	7.3649	0.710
18.75	845.1	813.7	115.09	7.2800	0.714
19.00	847.2	815.8	115.11	7.1974	0.718
19.25	849.3	818.0	115.09	7.1169	0.721
19.50	851.4	820.0	115.10	7.0385	0.725
19.75	853.2	821.8	115.11	6.9620	0.728
20.00	855.0	823.7	115.11	6.8875	0.731
20.25	856.8	825.4	115.11	6.8148	0.734
20.50	858.5	827.1	115.11	6.7439	0.737
20.75	860.2	828.8	115.11	6.6747	0.740
21.00	861.7	830.3	115.12	6.6071	0.742
21.25	863.1	831.7	115.15	6.5412	0.745
21.50	864.4	833.1	115.12	6.4767	0.747
21.75	866.0	834.6	115.12	6.4138	0.750
22.00	867.2	835.8	115.13	6.3523	0.752
22.25	868.6	837.2	115.12	6.2921	0.754
22.50	869.7	838.4	115.13	6.2333	0.756
22.75	870.8	839.4	115.14	6.1758	0.758
23.00	871.9	840.5	115.14	6.1196	0.760
23.25	873.1	841.7	115.14	6.0645	0.762
23.50	874.1	842.7	115.15	6.0106	0.764
23.75	875.1	843.7	115.15	5.9579	0.766
24.00	876.0	844.6	115.15	5.9062	0.767
24.25	877.1	845.7	115.15	5.8557	0.769
24.50	878.0	846.7	115.15	5.8061	0.771

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
24.75	878.7	847.3	115.14	5.7576	0.772
25.00	879.6	848.3	115.15	5.7100	0.774
25.25	880.4	849.0	115.16	5.6634	0.775
25.50	881.2	849.9	115.16	5.6176	0.777
25.75	882.1	850.7	115.15	5.5728	0.778
26.00	882.7	851.4	115.16	5.5288	0.779
26.25	883.4	852.0	115.17	5.4857	0.780
26.50	884.3	852.9	115.17	5.4434	0.782
26.75	884.8	853.4	115.17	5.4019	0.783
27.00	885.5	854.1	115.17	5.3611	0.784
27.25	886.3	854.9	115.17	5.3211	0.785
27.50	886.9	855.6	115.18	5.2818	0.787
27.75	887.5	856.1	115.18	5.2432	0.788
28.00	888.1	856.7	115.19	5.2054	0.789
28.25	888.7	857.3	115.18	5.1681	0.790
28.50	889.2	857.8	115.17	5.1316	0.791
28.75	889.7	858.3	115.18	5.0957	0.792
29.00	890.2	858.8	115.19	5.0603	0.792
29.25	890.9	859.5	115.19	5.0256	0.794
29.50	891.3	859.9	115.20	4.9915	0.794
29.75	891.8	860.4	115.20	4.9580	0.795
30.00	892.4	861.0	115.19	4.9250	0.796
30.25	892.9	861.5	115.19	4.8926	0.797
30.50	893.2	861.9	115.21	4.8607	0.798
30.75	893.7	862.4	115.20	4.8293	0.799
31.00	894.2	862.8	115.20	4.7984	0.800
31.25	894.6	863.2	115.21	4.7680	0.800
31.50	895.0	863.6	115.21	4.7381	0.801
31.75	895.5	864.1	115.20	4.7087	0.802
32.00	895.8	864.5	115.22	4.6797	0.803
32.25	896.2	864.8	115.21	4.6512	0.803
32.50	896.7	865.3	115.21	4.6231	0.804
32.75	896.9	865.5	115.23	4.5954	0.804
33.00	897.4	866.1	115.23	4.5682	0.805
33.25	897.8	866.4	115.22	4.5414	0.806
33.50	898.2	866.8	115.22	4.5149	0.807
33.75	898.6	867.2	115.22	4.4889	0.807
34.00	898.9	867.6	115.23	4.4632	0.808
34.25	899.3	867.9	115.23	4.4380	0.809
34.50	899.6	868.2	115.23	4.4130	0.809
34.75	899.9	868.6	115.23	4.3885	0.810
35.00	900.3	868.9	115.23	4.3643	0.811
35.25	900.6	869.2	115.24	4.3404	0.811
35.50	901.0	869.6	115.23	4.3169	0.812
35.75	901.3	869.9	115.24	4.2937	0.812
36.00	901.6	870.2	115.25	4.2708	0.813
36.25	902.0	870.6	115.26	4.2483	0.814
36.50	902.1	870.8	115.25	4.2260	0.814
36.75	902.6	871.3	115.24	4.2041	0.815
37.00	902.8	871.4	115.25	4.1824	0.815
37.25	903.1	871.8	115.25	4.1611	0.816

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSig	delta P PSig	P DEG F	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
37.50	903.3	871.9	115.27	4.1400	0.816	
37.75	903.6	872.3	115.26	4.1192	0.817	
38.00	903.9	872.5	115.26	4.0987	0.817	
38.25	904.2	872.8	115.26	4.0784	0.818	
38.50	904.5	873.1	115.27	4.0584	0.818	
38.75	904.6	873.3	115.27	4.0387	0.818	
39.00	905.0	873.6	115.27	4.0192	0.819	
39.25	905.2	873.9	115.27	4.0000	0.819	
39.50	905.5	874.1	115.27	3.9810	0.820	
39.75	905.7	874.4	115.28	3.9623	0.820	
40.00	906.0	874.6	115.28	3.9438	0.821	
40.25	906.2	874.9	115.28	3.9255	0.821	
40.50	906.5	875.1	115.29	3.9074	0.822	
40.75	906.7	875.4	115.29	3.8896	0.822	
41.00	906.9	875.5	115.30	3.8720	0.822	
41.25	907.3	875.9	115.30	3.8545	0.823	
41.50	907.4	876.0	115.30	3.8373	0.823	
41.75	907.7	876.3	115.31	3.8204	0.824	
42.00	907.9	876.5	115.33	3.8036	0.824	
42.25	908.0	876.6	115.36	3.7870	0.824	
42.50	908.3	876.9	115.31	3.7706	0.825	
42.75	908.5	877.1	115.27	3.7544	0.825	
43.00	908.8	877.4	115.29	3.7384	0.826	
43.25	908.9	877.5	115.30	3.7225	0.826	
43.50	909.2	877.8	115.31	3.7069	0.827	
43.75	909.3	878.0	115.31	3.6914	0.827	
44.00	909.8	878.4	115.32	3.6761	0.828	
44.25	909.9	878.5	115.32	3.6610	0.828	
44.50	910.0	878.6	115.32	3.6461	0.828	
44.75	910.2	878.8	115.33	3.6313	0.828	
45.00	910.4	879.0	115.33	3.6167	0.829	
45.25	910.5	879.1	115.33	3.6022	0.829	
45.50	910.7	879.3	115.34	3.5879	0.829	
45.75	910.9	879.5	115.34	3.5738	0.830	
46.00	911.1	879.7	115.35	3.5598	0.830	
46.25	911.3	879.9	115.35	3.5459	0.830	
46.50	911.5	880.2	115.35	3.5323	0.831	
46.75	911.6	880.2	115.35	3.5187	0.831	
47.00	911.8	880.4	115.36	3.5053	0.831	
47.25	912.0	880.6	115.37	3.4921	0.832	
47.50	912.1	880.7	115.37	3.4789	0.832	
47.75	912.3	880.9	115.37	3.4660	0.832	
48.00	912.5	881.2	115.37	3.4531	0.833	
48.25	912.7	881.3	115.38	3.4404	0.833	
48.50	912.8	881.4	115.37	3.4278	0.833	
48.75	912.9	881.5	115.38	3.4154	0.833	
49.00	913.0	881.7	115.39	3.4031	0.834	
49.25	913.3	881.9	115.38	3.3909	0.834	
49.50	913.5	882.1	115.39	3.3788	0.834	
49.75	913.6	882.2	115.38	3.3668	0.835	
50.00	913.8	882.4	115.39	3.3550	0.835	

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
50.25	913.9	882.5	115.39	3.3433	0.835
50.50	914.0	882.7	115.40	3.3317	0.835
50.75	914.1	882.8	115.41	3.3202	0.836
51.00	914.3	882.9	115.40	3.3088	0.836
51.25	914.6	883.2	115.41	3.2976	0.836
51.50	914.6	883.2	115.41	3.2864	0.836
51.75	914.9	883.5	115.42	3.2754	0.837
52.00	915.0	883.6	115.42	3.2644	0.837
52.25	915.1	883.7	115.42	3.2536	0.837
52.50	915.1	883.8	115.42	3.2429	0.837
52.75	915.3	883.9	115.43	3.2322	0.838
53.00	915.6	884.2	115.43	3.2217	0.838
53.25	915.7	884.3	115.43	3.2113	0.839
53.50	915.9	884.5	115.43	3.2009	0.839
53.75	916.0	884.6	115.44	3.1907	0.839
54.00	916.1	884.8	115.44	3.1806	0.839
54.25	916.1	884.8	115.45	3.1705	0.839
54.50	916.3	884.9	115.46	3.1606	0.840
54.75	916.6	885.2	115.45	3.1507	0.840
55.00	916.6	885.2	115.46	3.1409	0.840
55.25	916.7	885.4	115.47	3.1312	0.840
55.50	917.0	885.6	115.47	3.1216	0.841
55.75	917.0	885.6	115.47	3.1121	0.841
56.00	917.2	885.8	115.47	3.1027	0.841
56.25	917.4	886.1	115.47	3.0933	0.842
56.50	917.5	886.1	115.48	3.0841	0.842
56.75	917.5	886.1	115.48	3.0749	0.842
57.00	917.6	886.2	115.48	3.0658	0.842
57.25	917.7	886.4	115.48	3.0568	0.842
57.50	917.8	886.4	115.49	3.0478	0.842
57.75	917.9	886.5	115.50	3.0390	0.843
58.00	918.1	886.7	115.50	3.0302	0.843
58.25	918.2	886.9	115.50	3.0215	0.843
58.50	918.2	886.9	115.50	3.0128	0.843
58.75	918.4	887.0	115.50	3.0043	0.843
59.00	918.6	887.2	115.51	2.9958	0.844
59.25	918.7	887.4	115.51	2.9873	0.844
59.50	918.7	887.4	115.51	2.9790	0.844
59.75	918.9	887.5	115.52	2.9707	0.844
60.00	919.1	887.7	115.52	2.9625	0.845
60.25	919.3	887.9	115.53	2.9544	0.845
60.50	919.4	888.0	115.54	2.9463	0.845
60.75	919.4	888.0	115.53	2.9383	0.845
61.00	919.6	888.2	115.52	2.9303	0.846
61.25	919.6	888.2	115.53	2.9224	0.846
61.50	919.7	888.3	115.54	2.9146	0.846
61.75	919.8	888.4	115.53	2.9069	0.846
62.00	919.9	888.5	115.55	2.8992	0.846
62.25	920.1	888.8	115.55	2.8916	0.847
62.50	920.2	888.8	115.55	2.8840	0.847
62.75	920.2	888.8	115.56	2.8765	0.847

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97 TIME: 06:14:15

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
63.00	920.4	889.0	115.57	2.8690	0.847
63.25	920.5	889.1	115.57	2.8617	0.847
63.50	920.5	889.1	115.57	2.8543	0.847
63.75	920.6	889.2	115.58	2.8471	0.847
64.00	920.8	889.4	115.58	2.8398	0.848
64.25	920.7	889.3	115.59	2.8327	0.848
64.50	921.0	889.6	115.58	2.8256	0.848
64.75	921.1	889.7	115.59	2.8185	0.848
65.00	921.1	889.7	115.59	2.8115	0.848
65.25	921.2	889.8	115.60	2.8046	0.849
65.50	921.3	889.9	115.60	2.7977	0.849
65.75	921.4	890.0	115.61	2.7909	0.849
66.00	921.6	890.2	115.62	2.7841	0.849
66.25	921.6	890.2	115.62	2.7774	0.849
66.50	921.6	890.3	115.62	2.7707	0.849
66.75	921.8	890.4	115.62	2.7640	0.850
67.00	921.9	890.5	115.64	2.7575	0.850
67.25	921.9	890.6	115.64	2.7509	0.850
67.50	922.0	890.6	115.64	2.7444	0.850
67.75	922.1	890.7	115.62	2.7380	0.850
68.00	922.2	890.8	115.63	2.7316	0.850
68.25	922.4	891.0	115.63	2.7253	0.851
68.50	922.4	891.0	115.64	2.7190	0.851
68.75	922.6	891.2	115.65	2.7127	0.851
69.00	922.6	891.2	115.66	2.7065	0.851
69.25	922.6	891.3	115.66	2.7004	0.851
69.50	922.7	891.3	115.67	2.6942	0.851
69.75	922.8	891.4	115.66	2.6882	0.852
70.00	922.9	891.5	115.67	2.6821	0.852
70.25	922.9	891.5	115.67	2.6762	0.852
70.50	923.0	891.6	115.67	2.6702	0.852
70.75	923.2	891.8	115.68	2.6643	0.852
71.00	923.2	891.9	115.68	2.6585	0.852
71.25	923.2	891.9	115.69	2.6526	0.852
71.50	923.3	891.9	115.69	2.6469	0.852
71.75	923.4	892.0	115.69	2.6411	0.853
72.00	923.6	892.2	115.71	2.6354	0.853
72.25	923.6	892.2	115.70	2.6298	0.853
72.50	923.7	892.3	115.71	2.6241	0.853
72.75	923.7	892.3	115.72	2.6186	0.853
73.00	923.9	892.5	115.72	2.6130	0.854
73.25	923.9	892.5	115.73	2.6075	0.854
73.50	924.0	892.6	115.73	2.6020	0.854
73.75	924.0	892.7	115.72	2.5966	0.854
74.00	924.0	892.7	115.73	2.5912	0.854
74.25	924.2	892.8	115.73	2.5859	0.854
74.50	924.3	892.9	115.74	2.5805	0.854
74.75	924.4	893.0	115.75	2.5753	0.854
75.00	924.5	893.1	115.75	2.5700	0.855
75.25	924.5	893.2	115.75	2.5648	0.855
75.50	924.6	893.2	115.75	2.5596	0.855

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 06:14:15

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
75.75	924.8	893.4	115.76	2.5545	0.855
76.00	924.7	893.3	115.76	2.5493	0.855
76.25	925.0	893.6	115.76	2.5443	0.856
76.50	925.0	893.6	115.78	2.5392	0.856
76.75	925.0	893.6	115.78	2.5342	0.856
77.00	925.1	893.7	115.78	2.5292	0.856
77.25	925.1	893.7	115.80	2.5243	0.856
77.50	925.3	893.9	115.79	2.5194	0.856
77.75	925.3	893.9	115.81	2.5145	0.856
78.00	925.5	894.1	115.79	2.5096	0.857
78.25	925.5	894.1	115.80	2.5048	0.857
78.50	925.6	894.2	115.79	2.5000	0.857
78.75	925.8	894.4	115.81	2.4952	0.857
79.00	925.8	894.4	115.81	2.4905	0.857
79.25	925.8	894.5	115.81	2.4858	0.857
79.50	925.8	894.5	115.81	2.4811	0.857
79.75	926.0	894.6	115.82	2.4765	0.857
80.00	926.0	894.6	115.83	2.4719	0.857
80.25	926.1	894.7	115.83	2.4673	0.858
80.50	926.1	894.7	115.83	2.4627	0.858
80.75	926.2	894.8	115.84	2.4582	0.858
81.00	926.2	894.8	115.84	2.4537	0.858
81.25	926.3	894.9	115.85	2.4492	0.858
81.50	926.3	894.9	115.85	2.4448	0.858
81.75	926.4	895.0	115.86	2.4404	0.858
82.00	926.5	895.1	115.86	2.4360	0.858
82.25	926.5	895.1	115.87	2.4316	0.858
82.50	926.6	895.2	115.88	2.4273	0.859
82.75	926.8	895.4	115.88	2.4230	0.859
83.00	926.8	895.4	115.88	2.4187	0.859
83.25	926.8	895.4	115.88	2.4144	0.859
83.50	926.8	895.5	115.89	2.4102	0.859
83.75	926.8	895.5	115.88	2.4060	0.859
84.00	927.0	895.6	115.90	2.4018	0.859
84.25	927.2	895.8	115.91	2.3976	0.860
84.50	927.2	895.8	115.92	2.3935	0.860
84.75	927.1	895.7	115.91	2.3894	0.860
85.00	927.3	895.9	115.92	2.3853	0.860
85.25	927.3	895.9	115.90	2.3812	0.860
85.50	927.3	896.0	115.90	2.3772	0.860
85.75	927.3	896.0	115.92	2.3732	0.860
86.00	927.4	896.1	115.92	2.3692	0.860
86.25	927.5	896.1	115.92	2.3652	0.860
86.50	927.5	896.1	115.93	2.3613	0.860
86.75	927.7	896.3	115.93	2.3573	0.861
87.00	927.7	896.3	115.95	2.3534	0.861
87.25	927.7	896.3	115.94	2.3496	0.861
87.50	927.6	896.2	115.95	2.3457	0.860
87.75	927.7	896.3	115.95	2.3419	0.861
88.00	927.8	896.4	115.96	2.3381	0.861
88.25	927.9	896.5	115.96	2.3343	0.861

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9677 Mcdaniels/Johnson B-1 DST#2 HAYES/OIL&GAS

DATE: 01/03/97 TIME: 06:14:15

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	88.50	927.8	896.4	115.96	2.3305	0.861
	88.75	928.0	896.6	115.96	2.3268	0.861
	89.00	928.1	896.7	115.98	2.3230	0.861
	89.25	928.3	896.9	115.98	2.3193	0.862
	89.50	928.3	896.9	115.98	2.3156	0.862
	89.75	928.3	896.9	115.99	2.3120	0.862
	90.00	928.3	896.9	116.00	2.3083	0.862
	90.25	928.4	897.0	116.00	2.3047	0.862
	90.50	928.3	896.9	116.00	2.3011	0.862
***** End Shut-in 2	90.75	928.0	896.6	116.01	2.2975	0.861
***** Final Hydro.	393.00	2099.4	0.0	116.31		

TRILOBITE TESTING L.L.C.

OPERATOR : HAYES OIL & GAS DATE 1/3/97
 WELL NAME: McDaniels/Johnson #B-1 KB 1455.00 ft TICKET NO: 9678 DST #3
 LOCATION : 13-32S-10W Barber KS GR 1444.00 ft FORMATION: Mississippi
 INTERVAL : 4354.00 To 4364.00 ft TD 4364.00 ft TEST TYPE: CONV.

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
30	Rec.	111084	11084	2350			PF Fr. 2355 to 0025 hr
60	Range(Psi)	4300.0	4300.0	4995.0	0.0	0.0	IS Fr. 0025 to 0125 hr
60	Clock(hrs)	12hr.	12hr.	Elec.			SF Fr. 0125 to 0225 hr
90	Depth(ft)	4361.0	4361.0	4358.0	0.0	0.0	FS Fr. 0225 to 0355 hr

	Field	1	2	3	4	
Init Hydro	2091.0	2158.0	2191.0	0.0	0.0	T STARTED 2136 hr
First Flow	33.0	49.0	28.0	0.0	0.0	T ON BOTM 2323 hr
Final Flow	44.0	36.0	52.0	0.0	0.0	T OPEN 2325 hr
In Shut-in	926.0	907.0	934.0	0.0	0.0	T PULLED 0355 hr
Init Flow	55.0	50.0	39.0	0.0	0.0	T OUT 0630 hr
Final Flow	88.0	88.0	112.0	0.0	0.0	
Fl Shut-in	926.0	916.0	935.0	0.0	0.0	
Final Hydro	2091.0	2080.0	2126.0	0.0	0.0	
Inside/Outside	0	0	I			

TOOL DATA-----
 Tool Wt. 2100.00 lbs
 Wt Set On Packer 24000.00 lbs
 Wt Pulled Loose 98000.00 lbs
 Initial Str Wt 94000.00 lbs
 Unseated Str Wt 94000.00 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 484.00 ft
 D.P. Length 3857.00 ft

RECOVERY

Net Fluid 185.00 ft of 185.00 ft in DC and 0.00 ft in DP
 5.00 ft of Slight Oil and Gas Cut Mud
 1.00 ft of 20% Gas 5% Oil 75% Mud
 1.00 ft of
 10.00 ft of Oil and Mud Cut Salty Water
 1.00 ft of 10% Oil 70% Water 20% Mud
 1.00 ft of
 10.00 ft of Very slight Oil Cut Salty Water
 1.00 ft of 2% Oil 98% Water Trace of Mud
 ALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----
 Mud Type Chemical
 Weight 9.30 lb/cf
 Vis. 46.00 S/L
 W.L. 11.20 in3
 F.C. 0.00 in
 Mud Drop

BLOW DESCRIPTION

Initial Flow:
 Strong blow, Gas to surface in 13 mins

Initial Shut In:

Bled off for 15 mins, Built back to
 1/4-1/2" blow.

Final Flow:

Strong blow, 42 ins. of water gauge.

Final Shut In:

Bled off for 15 mins, Weak blow back
 at end of shut in 1/4"

SAMPLES:

SENT TO:

Amt. of fill 0.00 ft
 Btm. H. Temp. 117.00 F
 Hole Condition good
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out
 Tool Chased N
 Tester Darren Amerine
 Co. Rep. John Hastings
 Contr. Duke
 Rig # 5
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV.

WELL NAME: McDaniels/Johnson #B-1	P.O. SUB	4327'
LOCATION : 13-32S-10W Barber KS	C.O. SUB	4328'
TICKET No. 9678 D.S.T. No. 3 DATE 1/3/97	S.I. TOOL	4333'
TOTAL TOOL TO BOTTOM OF TOP PACKERS 27'	HMV	4338'
INTERVAL TOOL	JARS	4343'
BOTTOM PACKERS AND ANCHOR 10'	SAFETY JOINT	4345'
TOTAL TOOL 37'	PACKER Top	4349'
DRILL COLLAR ANCHOR IN INTERVAL	PACKER Bottom	4354'
D.C. ANCHOR STND.Stands Single Total	DEPTH 4354'	
D.P. ANCHOR STND.Stands Single Total	STUBB 1'to 4355'	4355'
TOTAL ASSEMBLY 37'	ANCHOR	
D.C. ABOVE TOOLS.Stands 8 Single Total 484'	alpine rec @ 4358'	
D.P. ABOVE TOOLS.Stands62 Single Total 3857'		
TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4378'		
TOTAL DEPTH 4364'		
TOTAL DRILL PIPE ABOVE K.B. 14'		
REMARKS:	4' of perms.to	4359'
	T.C.	
	DEPTH	
	Ak-1 rec. @ 4361'	
	3'perms to	4362'
	BULLNOSE 2'bullnose to	4364'
	T.D.	

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:	970015	Analyzed:	01/07/97
Sample From:	McDaniels/Johnson B-1 DST 3	Pressure:	
Producer:	Hayes Oil & Gas	Temperature:	
Date:		Location:	13-32-10
Time:		County:	Barber
Sampler:		State:	Kansas
Source:		Formation:	Miss

	Mole %	GPM
Helium	He:	
Oxygen	O2:	
Nitrogen	N2:	2.447 0.000
Carbon Dioxide	CO2:	0.179 0.000
Methane	C1:	85.827 0.000
Ethane	C2:	6.448 1.725
Propane	C3:	2.833 0.781
Iso Butane	iC4:	0.489 0.160
Normal Butane	nC4:	0.885 0.279
Iso Pentane	iC5:	0.000 0.000
Normal Pentane	nC5:	0.248 0.090
Hexanes Plus	C6+:	0.644 0.281
TOTAL:	100.000	3.315
Z Fact:	0.9972	
SP.GR.:	0.6682	
BTU (SAT):	1125.8 @ 14.73 psia	
BTU (DRY):	1145.8 @ 14.73 psia	
OCTANE RATING:	122.5	

COMMENTS: No pressure in bottle

0.000

TEST HISTORY

#9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

Flag Points

t (Min.) P (PSIG)

A:	0.00	2190.59
B:	0.00	27.94
C:	30.25	51.52
D:	60.00	933.86
E:	0.00	38.68
F:	58.75	112.37
G:	90.50	934.98
Q:	0.00	2125.72

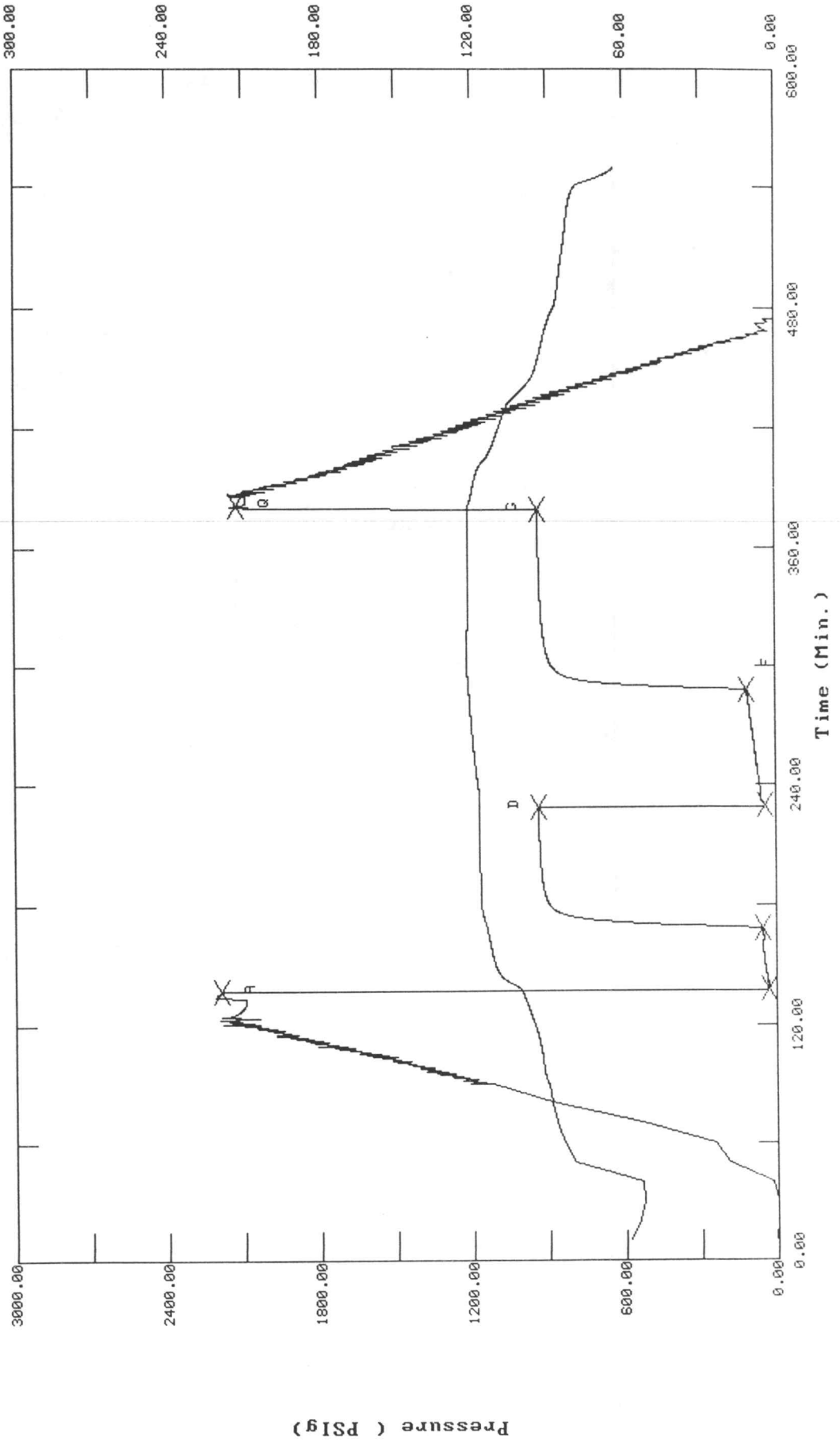
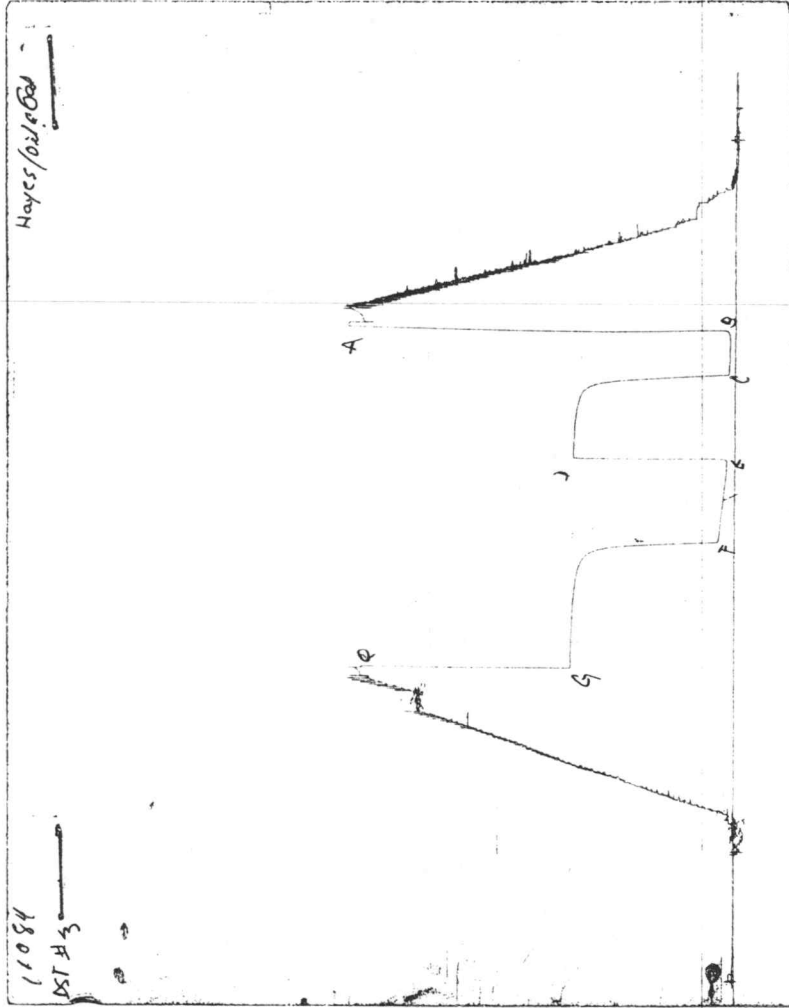


CHART PAGE



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

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	137.25	2190.6	0.0	100.35		
***** Start Flow 1	0.00	27.9	0.0	100.67		
	0.25	29.9	1.9	100.82		
	0.50	27.8	-0.2	101.03		
	0.75	26.8	-1.2	101.30		
	1.00	29.5	1.5	101.60		
	1.25	28.4	0.4	101.93		
	1.50	26.4	-1.5	102.29		
	1.75	27.3	-0.7	102.67		
	2.00	27.9	-0.1	103.06		
	2.25	27.9	0.0	103.46		
	2.50	28.9	0.9	103.85		
	2.75	30.8	2.9	104.25		
	3.00	29.1	1.2	104.63		
	3.25	31.6	3.7	104.99		
	3.50	30.5	2.5	105.35		
	3.75	31.4	3.4	105.69		
	4.00	31.4	3.4	106.02		
	4.25	31.5	3.6	106.33		
	4.50	31.6	3.7	106.63		
	4.75	32.1	4.2	106.91		
	5.00	32.4	4.4	107.16		
	5.25	32.5	4.5	107.41		
	5.50	34.3	6.4	107.65		
	5.75	34.1	6.1	107.88		
	6.00	34.0	6.0	108.08		
	6.25	34.3	6.4	108.28		
	6.50	35.9	8.0	108.45		
	6.75	35.3	7.4	108.63		
	7.00	36.6	8.6	108.79		
	7.25	36.2	8.3	108.95		
	7.50	36.5	8.6	109.09		
	7.75	37.4	9.5	109.23		
	8.00	37.9	10	109.36		
	8.25	38.2	10.2	109.48		
	8.50	38.4	10.5	109.59		
	8.75	38.4	10.5	109.70		
	9.00	39.6	11.7	109.81		
	9.25	39.8	11.8	109.91		
	9.50	40.4	12.5	110.00		
	9.75	40.2	12.3	110.09		
	10.00	40.5	12.6	110.18		
	10.25	40.2	12.3	110.26		
	10.50	41.7	13.8	110.34		
	10.75	41.3	13.3	110.42		
	11.00	41.5	13.5	110.50		
	11.25	42.4	14.4	110.57		
	11.50	42.5	14.5	110.63		
	11.75	42.5	14.5	110.71		
	12.00	42.6	14.7	110.77		
	12.25	43.3	15.4	110.84		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
12.50	43.2	15.3	110.89		
12.75	43.1	15.2	110.97		
13.00	43.0	15.1	111.02		
13.25	43.5	15.6	111.08		
13.50	43.2	15.3	111.14		
13.75	43.8	15.9	111.19		
14.00	44.4	16.4	111.24		
14.25	44.1	16.1	111.30		
14.50	44.0	16.0	111.35		
14.75	44.8	16.9	111.40		
15.00	45.1	17.1	111.44		
15.25	45.0	17.0	111.49		
15.50	45.2	17.3	111.54		
15.75	45.3	17.4	111.59		
16.00	45.9	18.0	111.64		
16.25	45.8	17.9	111.68		
16.50	46.2	18.3	111.72		
16.75	46.5	18.5	111.77		
17.00	46.9	19.0	111.81		
17.25	47.5	19.5	111.85		
17.50	47.5	19.5	111.90		
17.75	47.5	19.5	111.93		
18.00	48.3	20.4	111.97		
18.25	48.1	20.1	112.02		
18.50	48.9	21.0	112.06		
18.75	49.2	21.2	112.09		
19.00	49.0	21.1	112.13		
19.25	49.7	21.7	112.18		
19.50	49.8	21.9	112.21		
19.75	50.4	22.5	112.25		
20.00	50.1	22.2	112.29		
20.25	50.9	22.9	112.33		
20.50	50.4	22.5	112.37		
20.75	51.3	23.3	112.42		
21.00	51.2	23.2	112.45		
21.25	51.4	23.5	112.50		
21.50	51.9	23.9	112.54		
21.75	51.7	23.8	112.58		
22.00	52.2	24.3	112.62		
22.25	52.3	24.3	112.67		
22.50	53.0	25.1	112.70		
22.75	53.2	25.3	112.75		
23.00	53.1	25.2	112.80		
23.25	54.5	26.6	112.83		
23.50	53.8	25.8	112.88		
23.75	54.0	26.1	112.93		
24.00	54.2	26.3	112.97		
24.25	47.3	19.4	113.02		
24.50	47.6	19.6	113.07		
24.75	47.3	19.4	113.11		
25.00	47.9	20.0	113.14		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	25.25	47.9	20.0	113.19		
	25.50	47.7	19.8	113.23		
	25.75	48.4	20.5	113.28		
	26.00	47.7	19.7	113.31		
	26.25	48.0	20.1	113.37		
	26.50	48.3	20.4	113.41		
	26.75	48.8	20.9	113.46		
	27.00	48.8	20.8	113.50		
	27.25	49.3	21.4	113.54		
	27.50	49.3	21.3	113.58		
	27.75	49.5	21.6	113.62		
	28.00	49.8	21.8	113.66		
	28.25	50.1	22.1	113.70		
	28.50	50.1	22.1	113.75		
	28.75	50.1	22.1	113.79		
	29.00	50.5	22.6	113.83		
	29.25	50.9	23.0	113.87		
	29.50	50.8	22.8	113.91		
	29.75	50.4	22.5	113.95		
	30.00	51.4	23.4	114.00		
***** End Flow 1	30.25	51.5	23.6	114.04		
***** Start Shutin 1	0.00	51.5	0.0	114.04	0.0000	0.003
	0.25	82.5	31.0	114.08	122.0000	0.007
	0.50	140.0	88.5	114.12	61.5000	0.020
	0.75	195.6	144.1	114.16	41.3333	0.038
	1.00	249.3	197.7	114.21	31.2500	0.062
	1.25	301.1	249.6	114.25	25.2000	0.091
	1.50	350.3	298.8	114.31	21.1667	0.123
	1.75	396.6	345.0	114.35	18.2857	0.157
	2.00	440.0	388.5	114.41	16.1250	0.194
	2.25	480.5	429.0	114.47	14.4444	0.231
	2.50	517.9	466.4	114.51	13.1000	0.268
	2.75	552.6	501.0	114.57	12.0000	0.305
	3.00	584.4	532.9	114.64	11.0833	0.342
	3.25	613.9	562.4	114.71	10.3077	0.377
	3.50	641.3	589.8	114.77	9.6429	0.411
	3.75	666.5	614.9	114.84	9.0667	0.444
	4.00	689.3	637.8	114.90	8.5625	0.475
	4.25	709.7	658.2	114.96	8.1176	0.504
	4.50	727.8	676.3	115.02	7.7222	0.530
	4.75	744.7	693.2	115.08	7.3684	0.555
	5.00	759.3	707.8	115.15	7.0500	0.577
	5.25	772.5	721.0	115.21	6.7619	0.597
	5.50	784.7	733.2	115.27	6.5000	0.616
	5.75	795.5	743.9	115.33	6.2609	0.633
	6.00	805.0	753.5	115.39	6.0417	0.648
	6.25	813.8	762.3	115.43	5.8400	0.662
	6.50	821.6	770.0	115.50	5.6538	0.675
	6.75	828.7	777.2	115.55	5.4815	0.687
	7.00	835.2	783.6	115.59	5.3214	0.697
	7.25	840.8	789.3	115.64	5.1724	0.707

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
7.50	846.2	794.6	115.69	5.0333	0.716
7.75	851.1	799.6	115.74	4.9032	0.724
8.00	855.6	804.0	115.78	4.7812	0.732
8.25	859.6	808.1	115.82	4.6667	0.739
8.50	863.2	811.7	115.86	4.5588	0.745
8.75	866.9	815.4	115.90	4.4571	0.751
9.00	870.3	818.8	115.93	4.3611	0.757
9.25	873.4	821.9	115.97	4.2703	0.763
9.50	876.2	824.7	116.00	4.1842	0.768
9.75	878.6	827.1	116.03	4.1026	0.772
10.00	881.0	829.5	116.06	4.0250	0.776
10.25	883.0	831.5	116.08	3.9512	0.780
10.50	885.0	833.5	116.09	3.8810	0.783
10.75	886.8	835.2	116.14	3.8140	0.786
11.00	888.5	837.0	116.16	3.7500	0.789
11.25	890.0	838.5	116.17	3.6889	0.792
11.50	891.5	839.9	116.20	3.6304	0.795
11.75	892.8	841.3	116.22	3.5745	0.797
12.00	894.2	842.7	116.24	3.5208	0.800
12.25	895.4	843.9	116.27	3.4694	0.802
12.50	896.6	845.1	116.26	3.4200	0.804
12.75	897.7	846.2	116.29	3.3725	0.806
13.00	898.8	847.3	116.30	3.3269	0.808
13.25	899.9	848.3	116.32	3.2830	0.810
13.50	900.6	849.1	116.32	3.2407	0.811
13.75	901.5	850.0	116.34	3.2000	0.813
14.00	902.4	850.9	116.36	3.1607	0.814
14.25	903.3	851.8	116.37	3.1228	0.816
14.50	904.2	852.7	116.45	3.0862	0.818
14.75	904.9	853.4	116.33	3.0508	0.819
15.00	905.6	854.0	116.38	3.0167	0.820
15.25	906.2	854.7	116.41	2.9836	0.821
15.50	907.0	855.5	116.42	2.9516	0.823
15.75	907.6	856.1	116.42	2.9206	0.824
16.00	908.2	856.7	116.43	2.8906	0.825
16.25	908.8	857.2	116.44	2.8615	0.826
16.50	909.4	857.9	116.45	2.8333	0.827
16.75	909.9	858.4	116.44	2.8060	0.828
17.00	910.4	858.9	116.46	2.7794	0.829
17.25	911.0	859.5	116.46	2.7536	0.830
17.50	911.4	859.9	116.47	2.7286	0.831
17.75	912.0	860.4	116.48	2.7042	0.832
18.00	912.5	860.9	116.48	2.6806	0.833
18.25	913.0	861.4	116.49	2.6575	0.833
18.50	913.4	861.9	116.49	2.6351	0.834
18.75	913.8	862.3	116.50	2.6133	0.835
19.00	914.2	862.7	116.51	2.5921	0.836
19.25	914.6	863.1	116.50	2.5714	0.837
19.50	915.0	863.4	116.51	2.5513	0.837
19.75	915.3	863.8	116.52	2.5316	0.838
20.00	915.9	864.4	116.50	2.5125	0.839

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
20.25	916.2	864.7	116.52	2.4938	0.839
20.50	916.6	865.0	116.52	2.4756	0.840
20.75	917.0	865.5	116.53	2.4578	0.841
21.00	917.2	865.7	116.53	2.4405	0.841
21.25	917.7	866.1	116.53	2.4235	0.842
21.50	918.1	866.6	116.54	2.4070	0.843
21.75	918.3	866.8	116.54	2.3908	0.843
22.00	918.6	867.1	116.55	2.3750	0.844
22.25	918.9	867.4	116.54	2.3596	0.844
22.50	919.2	867.6	116.55	2.3444	0.845
22.75	919.5	868.0	116.56	2.3297	0.845
23.00	919.8	868.3	116.56	2.3152	0.846
23.25	920.1	868.6	116.56	2.3011	0.847
23.50	920.4	868.9	116.57	2.2872	0.847
23.75	920.5	869.0	116.57	2.2737	0.847
24.00	920.8	869.3	116.58	2.2604	0.848
24.25	921.0	869.5	116.57	2.2474	0.848
24.50	921.4	869.8	116.57	2.2347	0.849
24.75	921.8	870.2	116.57	2.2222	0.850
25.00	921.9	870.3	116.58	2.2100	0.850
25.25	922.1	870.6	116.58	2.1980	0.850
25.50	922.3	870.8	116.59	2.1863	0.851
25.75	922.6	871.1	116.60	2.1748	0.851
26.00	922.7	871.2	116.58	2.1635	0.851
26.25	922.9	871.4	116.58	2.1524	0.852
26.50	923.2	871.7	116.59	2.1415	0.852
26.75	923.3	871.8	116.59	2.1308	0.852
27.00	923.5	872.0	116.60	2.1204	0.853
27.25	923.7	872.2	116.60	2.1101	0.853
27.50	924.0	872.4	116.60	2.1000	0.854
27.75	924.1	872.6	116.61	2.0901	0.854
28.00	924.2	872.7	116.62	2.0804	0.854
28.25	924.5	872.9	116.62	2.0708	0.855
28.50	924.6	873.1	116.63	2.0614	0.855
28.75	924.8	873.3	116.62	2.0522	0.855
29.00	925.0	873.4	116.62	2.0431	0.856
29.25	925.2	873.7	116.62	2.0342	0.856
29.50	925.2	873.7	116.63	2.0254	0.856
29.75	925.5	874.0	116.63	2.0168	0.857
30.00	925.7	874.2	116.64	2.0083	0.857
30.25	925.9	874.4	116.64	2.0000	0.857
30.50	926.0	874.4	116.64	1.9918	0.857
30.75	926.1	874.5	116.64	1.9837	0.858
31.00	926.3	874.8	116.64	1.9758	0.858
31.25	926.5	874.9	116.65	1.9680	0.858
31.50	926.5	874.9	116.65	1.9603	0.858
31.75	926.8	875.3	116.67	1.9528	0.859
32.00	926.9	875.4	116.67	1.9453	0.859
32.25	927.0	875.5	116.66	1.9380	0.859
32.50	927.1	875.5	116.67	1.9308	0.859
32.75	927.1	875.6	116.66	1.9237	0.860

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
33.00	927.3	875.8	116.67	1.9167	0.860
33.25	927.6	876.0	116.68	1.9098	0.860
33.50	927.7	876.2	116.68	1.9030	0.861
33.75	927.8	876.3	116.69	1.8963	0.861
34.00	927.9	876.4	116.69	1.8897	0.861
34.25	928.1	876.5	116.68	1.8832	0.861
34.50	928.3	876.7	116.69	1.8768	0.862
34.75	928.4	876.8	116.69	1.8705	0.862
35.00	928.4	876.8	116.69	1.8643	0.862
35.25	928.4	876.9	116.70	1.8582	0.862
35.50	928.7	877.1	116.70	1.8521	0.862
35.75	928.7	877.2	116.71	1.8462	0.863
36.00	928.8	877.3	116.72	1.8403	0.863
36.25	929.0	877.5	116.72	1.8345	0.863
36.50	929.2	877.6	116.71	1.8288	0.863
36.75	929.2	877.7	116.72	1.8231	0.863
37.00	929.4	877.9	116.72	1.8176	0.864
37.25	929.6	878.1	116.72	1.8121	0.864
37.50	929.7	878.1	116.73	1.8067	0.864
37.75	929.9	878.3	116.73	1.8013	0.865
38.00	929.9	878.3	116.74	1.7961	0.865
38.25	929.9	878.4	116.75	1.7908	0.865
38.50	930.1	878.6	116.75	1.7857	0.865
38.75	930.1	878.6	116.75	1.7806	0.865
39.00	930.2	878.7	116.75	1.7756	0.865
39.25	930.3	878.8	116.75	1.7707	0.866
39.50	930.5	879.0	116.76	1.7658	0.866
39.75	930.5	879.0	116.76	1.7610	0.866
40.00	930.6	879.1	116.78	1.7563	0.866
40.25	930.8	879.3	116.79	1.7516	0.866
40.50	930.8	879.3	116.78	1.7469	0.866
40.75	930.9	879.3	116.77	1.7423	0.867
41.00	930.9	879.4	116.76	1.7378	0.867
41.25	931.1	879.6	116.78	1.7333	0.867
41.50	931.2	879.6	116.78	1.7289	0.867
41.75	931.3	879.7	116.79	1.7246	0.867
42.00	931.3	879.8	116.79	1.7202	0.867
42.25	931.4	879.9	116.79	1.7160	0.868
42.50	931.6	880.1	116.79	1.7118	0.868
42.75	931.7	880.2	116.80	1.7076	0.868
43.00	931.7	880.2	116.81	1.7035	0.868
43.25	931.7	880.2	116.82	1.6994	0.868
43.50	931.9	880.4	116.82	1.6954	0.868
43.75	932.0	880.5	116.81	1.6914	0.869
44.00	932.2	880.7	116.82	1.6875	0.869
44.25	932.2	880.7	116.82	1.6836	0.869
44.50	932.2	880.7	116.82	1.6798	0.869
44.75	932.1	880.6	116.82	1.6760	0.869
45.00	932.3	880.8	116.83	1.6722	0.869
45.25	932.4	880.9	116.84	1.6685	0.869
45.50	932.4	880.9	116.83	1.6648	0.869

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
45.75	932.5	881.0	116.84	1.6612	0.870
46.00	932.5	881.0	116.84	1.6576	0.870
46.25	932.6	881.1	116.85	1.6541	0.870
46.50	932.8	881.3	116.85	1.6505	0.870
46.75	932.8	881.3	116.85	1.6471	0.870
47.00	932.8	881.3	116.86	1.6436	0.870
47.25	932.9	881.4	116.86	1.6402	0.870
47.50	933.0	881.4	116.86	1.6368	0.870
47.75	933.0	881.4	116.87	1.6335	0.870
48.00	933.1	881.5	116.87	1.6302	0.871
48.25	933.2	881.7	116.88	1.6269	0.871
48.50	933.2	881.7	116.88	1.6237	0.871
48.75	933.4	881.9	116.89	1.6205	0.871
49.00	933.4	881.9	116.89	1.6173	0.871
49.25	933.4	881.9	116.89	1.6142	0.871
49.50	933.4	881.9	116.89	1.6111	0.871
49.75	933.4	881.9	116.90	1.6080	0.871
50.00	933.6	882.0	116.91	1.6050	0.872
50.25	933.6	882.0	116.91	1.6020	0.872
50.50	933.6	882.1	116.92	1.5990	0.872
50.75	933.7	882.2	116.91	1.5961	0.872
51.00	933.8	882.3	116.93	1.5931	0.872
51.25	933.8	882.3	116.92	1.5902	0.872
51.50	933.9	882.4	116.93	1.5874	0.872
51.75	933.9	882.4	116.95	1.5845	0.872
52.00	934.0	882.5	116.94	1.5817	0.872
52.25	934.1	882.5	116.95	1.5789	0.872
52.50	934.1	882.5	116.94	1.5762	0.872
52.75	934.1	882.5	116.95	1.5735	0.872
53.00	934.3	882.8	116.95	1.5708	0.873
53.25	934.3	882.8	116.95	1.5681	0.873
53.50	934.3	882.8	116.95	1.5654	0.873
53.75	934.2	882.7	116.94	1.5628	0.873
54.00	934.4	882.8	116.95	1.5602	0.873
54.25	934.4	882.9	116.96	1.5576	0.873
54.50	934.6	883.0	116.97	1.5550	0.873
54.75	934.6	883.1	116.97	1.5525	0.874
55.00	934.6	883.1	116.98	1.5500	0.874
55.25	934.7	883.2	116.98	1.5475	0.874
55.50	934.8	883.3	116.98	1.5450	0.874
55.75	934.8	883.3	116.98	1.5426	0.874
56.00	934.8	883.3	116.99	1.5402	0.874
56.25	934.9	883.4	117.00	1.5378	0.874
56.50	934.9	883.4	117.00	1.5354	0.874
56.75	934.9	883.4	117.00	1.5330	0.874
57.00	935.1	883.5	117.01	1.5307	0.874
57.25	935.1	883.5	117.01	1.5284	0.874
57.50	935.1	883.5	117.01	1.5261	0.874
57.75	935.1	883.5	117.01	1.5238	0.874
58.00	935.1	883.5	117.02	1.5216	0.874
58.25	935.3	883.8	117.03	1.5193	0.875

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	58.50	935.2	883.7	117.03	1.5171	0.875
	58.75	935.2	883.7	117.04	1.5149	0.875
	59.00	935.4	883.8	117.04	1.5127	0.875
	59.25	935.3	883.8	117.04	1.5105	0.875
	59.50	935.5	884.0	117.05	1.5084	0.875
	59.75	935.5	883.9	117.05	1.5063	0.875
***** End Shut-in 1	60.00	933.9	882.3	117.04	1.5042	0.872
***** Start Flow 2	0.00	38.7	0.0	117.02		
	0.25	41.6	2.9	117.01		
	0.50	42.9	4.2	116.98		
	0.75	45.2	6.5	116.97		
	1.00	47.2	8.6	116.95		
	1.25	48.7	10	116.93		
	1.50	50.5	11.8	116.91		
	1.75	52.9	14.3	116.90		
	2.00	55.5	16.8	116.88		
	2.25	55.6	16.9	116.87		
	2.50	56.0	17.3	116.87		
	2.75	55.6	17.0	116.86		
	3.00	56.0	17.3	116.86		
	3.25	56.2	17.5	116.86		
	3.50	54.8	16.1	116.86		
	3.75	56.6	18.0	116.87		
	4.00	55.5	16.8	116.88		
	4.25	55.7	17.0	116.88		
	4.50	56.8	18.1	116.89		
	4.75	56.7	18.0	116.90		
	5.00	57.6	18.9	116.91		
	5.25	57.1	18.5	116.93		
	5.50	56.9	18.2	116.95		
	5.75	57.7	19.1	116.97		
	6.00	57.9	19.2	116.99		
	6.25	58.1	19.4	117.00		
	6.50	58.1	19.4	117.03		
	6.75	58.0	19.3	117.05		
	7.00	57.8	19.1	117.07		
	7.25	57.6	19.0	117.09		
	7.50	58.8	20.1	117.12		
	7.75	58.1	19.4	117.15		
	8.00	59.3	20.6	117.16		
	8.25	60.2	21.5	117.20		
	8.50	60.2	21.5	117.22		
	8.75	60.4	21.7	117.25		
	9.00	59.7	21.1	117.28		
	9.25	60.3	21.7	117.30		
	9.50	60.7	22.0	117.34		
	9.75	61.1	22.4	117.36		
	10.00	61.1	22.4	117.39		
	10.25	62.1	23.4	117.41		
	10.50	62.7	24.0	117.44		
	10.75	62.3	23.6	117.47		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
11.00	62.9	24.2	117.50		
11.25	64.3	25.6	117.52		
11.50	62.9	24.2	117.56		
11.75	64.1	25.4	117.58		
12.00	63.6	24.9	117.61		
12.25	64.0	25.3	117.64		
12.50	64.3	25.6	117.66		
12.75	65.0	26.4	117.69		
13.00	65.0	26.4	117.72		
13.25	65.4	26.7	117.75		
13.50	65.2	26.5	117.77		
13.75	65.5	26.8	117.80		
14.00	65.9	27.2	117.83		
14.25	65.9	27.2	117.86		
14.50	65.9	27.3	117.88		
14.75	66.5	27.8	117.90		
15.00	67.1	28.4	117.93		
15.25	67.0	28.4	117.96		
15.50	67.0	28.4	117.98		
15.75	68.2	29.5	118.01		
16.00	67.0	28.4	118.03		
16.25	68.6	30.0	118.06		
16.50	68.8	30.1	118.08		
16.75	68.6	29.9	118.11		
17.00	69.0	30.3	118.13		
17.25	68.6	29.9	118.15		
17.50	68.4	29.7	118.18		
17.75	69.7	31.0	118.20		
18.00	70.2	31.6	118.22		
18.25	70.6	31.9	118.25		
18.50	70.0	31.3	118.27		
18.75	71.4	32.7	118.29		
19.00	69.7	31.0	118.31		
19.25	70.4	31.7	118.33		
19.50	71.7	33.1	118.36		
19.75	71.8	33.2	118.39		
20.00	72.9	34.2	118.41		
20.25	72.2	33.5	118.42		
20.50	72.3	33.7	118.45		
20.75	73.0	34.3	118.47		
21.00	72.8	34.2	118.49		
21.25	73.4	34.7	118.51		
21.50	73.1	34.4	118.54		
21.75	74.0	35.3	118.56		
22.00	73.6	34.9	118.58		
22.25	74.8	36.1	118.59		
22.50	74.4	35.7	118.62		
22.75	75.2	36.5	118.64		
23.00	75.1	36.4	118.67		
23.25	74.4	35.7	118.69		
23.50	75.2	36.5	118.70		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
23.75	76.2	37.5	118.73		
24.00	77.2	38.5	118.74		
24.25	76.4	37.8	118.76		
24.50	77.2	38.5	118.78		
24.75	78.4	39.7	118.80		
25.00	77.4	38.7	118.82		
25.25	78.4	39.7	118.84		
25.50	75.8	37.1	118.86		
25.75	78.1	39.4	118.88		
26.00	78.7	40.0	118.90		
26.25	78.5	39.8	118.92		
26.50	79.4	40.7	118.93		
26.75	78.5	39.8	118.95		
27.00	79.3	40.6	118.97		
27.25	79.1	40.4	119.00		
27.50	80.5	41.8	119.01		
27.75	80.4	41.7	119.03		
28.00	79.6	40.9	119.05		
28.25	78.7	40.0	119.07		
28.50	82.5	43.8	119.09		
28.75	80.2	41.5	119.10		
29.00	80.3	41.6	119.13		
29.25	82.4	43.7	119.14		
29.50	82.0	43.3	119.17		
29.75	82.3	43.6	119.18		
30.00	82.5	43.8	119.20		
30.25	83.0	44.3	119.22		
30.50	81.3	42.6	119.24		
30.75	82.8	44.1	119.26		
31.00	83.8	45.2	119.28		
31.25	83.6	44.9	119.29		
31.50	83.0	44.3	119.31		
31.75	84.2	45.5	119.32		
32.00	84.1	45.4	119.35		
32.25	84.5	45.8	119.36		
32.50	84.5	45.8	119.37		
32.75	84.2	45.5	119.39		
33.00	85.1	46.4	119.42		
33.25	85.5	46.8	119.43		
33.50	85.3	46.6	119.44		
33.75	86.9	48.2	119.47		
34.00	86.2	47.5	119.49		
34.25	86.9	48.2	119.50		
34.50	87.3	48.7	119.51		
34.75	87.3	48.7	119.54		
35.00	87.4	48.7	119.55		
35.25	87.8	49.1	119.57		
35.50	86.9	48.2	119.59		
35.75	89.0	50.4	119.61		
36.00	89.5	50.8	119.62		
36.25	89.6	50.9	119.63		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
36.50	89.5	50.9	119.65		
36.75	89.3	50.6	119.66		
37.00	88.7	50.0	119.68		
37.25	90.6	52.0	119.70		
37.50	89.3	50.6	119.72		
37.75	91.0	52.3	119.73		
38.00	90.0	51.4	119.75		
38.25	90.5	51.8	119.77		
38.50	91.6	53.0	119.78		
38.75	91.6	52.9	119.79		
39.00	90.7	52.0	119.81		
39.25	90.8	52.1	119.83		
39.50	92.8	54.1	119.84		
39.75	91.7	53.0	119.85		
40.00	92.9	54.2	119.87		
40.25	95.2	56.6	119.88		
40.50	95.2	56.5	119.90		
40.75	94.7	56.0	119.92		
41.00	93.9	55.2	119.94		
41.25	94.5	55.8	119.94		
41.50	94.2	55.5	119.96		
41.75	94.0	55.3	119.98		
42.00	94.7	56.1	120.00		
42.25	94.1	55.4	120.01		
42.50	95.4	56.7	120.03		
42.75	94.6	55.9	120.04		
43.00	95.3	56.7	120.06		
43.25	96.1	57.4	120.07		
43.50	96.7	58.0	120.09		
43.75	95.9	57.2	120.10		
44.00	96.1	57.4	120.12		
44.25	98.2	59.5	120.13		
44.50	97.0	58.3	120.15		
44.75	96.9	58.2	120.16		
45.00	98.4	59.7	120.18		
45.25	96.8	58.1	120.20		
45.50	98.4	59.7	120.21		
45.75	97.3	58.7	120.22		
46.00	99.2	60.5	120.23		
46.25	98.3	59.6	120.25		
46.50	97.8	59.1	120.26		
46.75	98.2	59.5	120.28		
47.00	99.3	60.6	120.29		
47.25	99.1	60.4	120.31		
47.50	100.5	61.8	120.32		
47.75	99.7	61.0	120.35		
48.00	100.8	62.1	120.35		
48.25	101.1	62.4	120.36		
48.50	100.4	61.7	120.39		
48.75	99.8	61.1	120.40		
49.00	101.1	62.4	120.42		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97 TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶	
49.25	101.1	62.4	120.42			
49.50	100.5	61.8	120.44			
49.75	100.6	61.9	120.45			
50.00	101.9	63.2	120.47			
50.25	101.6	62.9	120.49			
50.50	102.5	63.8	120.49			
50.75	102.0	63.4	120.51			
51.00	102.8	64.1	120.52			
51.25	103.6	64.9	120.54			
51.50	104.6	66.0	120.55			
51.75	104.6	66.0	120.57			
52.00	103.6	65.0	120.58			
52.25	104.2	65.5	120.59			
52.50	104.1	65.4	120.61			
52.75	105.0	66.3	120.62			
53.00	104.5	65.8	120.64			
53.25	104.2	65.5	120.64			
53.50	106.7	68.1	120.66			
53.75	105.7	67.1	120.67			
54.00	105.8	67.1	120.68			
54.25	106.5	67.8	120.70			
54.50	105.2	66.5	120.71			
54.75	106.6	67.9	120.72			
55.00	107.5	68.8	120.74			
55.25	106.2	67.6	120.75			
55.50	105.9	67.2	120.76			
55.75	107.7	69.0	120.78			
56.00	109.3	70.6	120.80			
56.25	107.2	68.5	120.81			
56.50	110.0	71.3	120.82			
56.75	109.9	71.3	120.83			
57.00	109.3	70.6	120.84			
57.25	110.4	71.8	120.86			
57.50	109.8	71.1	120.87			
57.75	110.6	71.9	120.89			
58.00	112.3	73.6	120.88			
58.25	110.2	71.5	120.91			
58.50	111.4	72.8	120.93			
58.75	112.4	73.7	120.93			
***** End Flow 2						
***** Start Shutin 2	0.00	112.4	0.0	120.93	0.0000	0.013
	0.25	154.7	42.3	120.95	357.0000	0.024
	0.50	216.3	103.9	120.95	179.0000	0.047
	0.75	275.9	163.6	120.98	119.6667	0.076
	1.00	332.6	220.2	120.99	90.0000	0.111
	1.25	385.6	273.2	121.01	72.2000	0.149
	1.50	435.1	322.7	121.02	60.3333	0.189
	1.75	480.1	367.7	121.04	51.8571	0.230
	2.00	522.2	409.8	121.02	45.5000	0.273
	2.25	559.6	447.3	121.08	40.5556	0.313
	2.50	593.4	481.0	121.10	36.6000	0.352
	2.75	624.1	511.7	121.11	33.3636	0.389

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
3.00	651.4	539.1	121.14	30.6667	0.424
3.25	675.8	563.4	121.16	28.3846	0.457
3.50	697.2	584.8	121.18	26.4286	0.486
3.75	716.1	603.7	121.20	24.7333	0.513
4.00	732.6	620.2	121.21	23.2500	0.537
4.25	747.2	634.8	121.24	21.9412	0.558
4.50	760.2	647.8	121.25	20.7778	0.578
4.75	771.7	659.3	121.28	19.7368	0.596
5.00	782.1	669.7	121.30	18.8000	0.612
5.25	791.3	679.0	121.31	17.9524	0.626
5.50	799.7	687.3	121.30	17.1818	0.639
5.75	807.1	694.8	121.36	16.4783	0.651
6.00	813.8	701.4	121.38	15.8333	0.662
6.25	819.8	707.4	121.39	15.2400	0.672
6.50	825.3	712.9	121.41	14.6923	0.681
6.75	830.2	717.8	121.43	14.1852	0.689
7.00	834.8	722.5	121.44	13.7143	0.697
7.25	839.1	726.7	121.44	13.2759	0.704
7.50	842.9	730.5	121.47	12.8667	0.710
7.75	846.5	734.1	121.47	12.4839	0.717
8.00	849.8	737.5	121.47	12.1250	0.722
8.25	852.9	740.6	121.49	11.7879	0.728
8.50	856.0	743.6	121.48	11.4706	0.733
8.75	858.7	746.3	121.52	11.1714	0.737
9.00	861.3	748.9	121.52	10.8889	0.742
9.25	863.5	751.2	121.53	10.6216	0.746
9.50	865.8	753.4	121.54	10.3684	0.750
9.75	867.9	755.5	121.54	10.1282	0.753
10.00	869.7	757.4	121.53	9.9000	0.756
10.25	871.7	759.3	121.55	9.6829	0.760
10.50	873.4	761.1	121.57	9.4762	0.763
10.75	875.1	762.7	121.57	9.2791	0.766
11.00	876.6	764.2	121.57	9.0909	0.768
11.25	878.0	765.7	121.58	8.9111	0.771
11.50	879.4	767.0	121.59	8.7391	0.773
11.75	880.8	768.4	121.58	8.5745	0.776
12.00	882.1	769.7	121.60	8.4167	0.778
12.25	883.2	770.9	121.59	8.2653	0.780
12.50	884.4	772.1	121.61	8.1200	0.782
12.75	885.4	773.1	121.63	7.9804	0.784
13.00	886.5	774.2	121.60	7.8462	0.786
13.25	887.5	775.2	121.61	7.7170	0.788
13.50	888.5	776.2	121.61	7.5926	0.789
13.75	889.4	777.0	121.61	7.4727	0.791
14.00	890.2	777.8	121.62	7.3571	0.792
14.25	891.1	778.7	121.61	7.2456	0.794
14.50	891.9	779.5	121.61	7.1379	0.795
14.75	892.6	780.2	121.62	7.0339	0.797
15.00	893.5	781.1	121.62	6.9333	0.798
15.25	894.3	782.0	121.62	6.8361	0.800
15.50	895.1	782.7	121.61	6.7419	0.801

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
15.75	895.7	783.3	121.62	6.6508	0.802
16.00	896.3	784.0	121.62	6.5625	0.803
16.25	896.9	784.6	121.61	6.4769	0.804
16.50	897.7	785.3	121.62	6.3939	0.806
16.75	898.4	786.0	121.61	6.3134	0.807
17.00	898.9	786.6	121.61	6.2353	0.808
17.25	899.6	787.2	121.61	6.1594	0.809
17.50	900.0	787.7	121.61	6.0857	0.810
17.75	900.8	788.4	121.60	6.0141	0.811
18.00	901.1	788.8	121.61	5.9444	0.812
18.25	901.8	789.4	121.60	5.8767	0.813
18.50	902.2	789.8	121.59	5.8108	0.814
18.75	902.7	790.3	121.59	5.7467	0.815
19.00	903.2	790.9	121.59	5.6842	0.816
19.25	903.7	791.4	121.60	5.6234	0.817
19.50	904.2	791.9	121.59	5.5641	0.818
19.75	904.6	792.3	121.58	5.5063	0.818
20.00	905.1	792.7	121.58	5.4500	0.819
20.25	905.5	793.1	121.58	5.3951	0.820
20.50	905.9	793.5	121.58	5.3415	0.821
20.75	906.3	794.0	121.58	5.2892	0.821
21.00	906.7	794.3	121.56	5.2381	0.822
21.25	907.1	794.7	121.55	5.1882	0.823
21.50	907.3	795.0	121.56	5.1395	0.823
21.75	907.9	795.6	121.56	5.0920	0.824
22.00	908.3	795.9	121.55	5.0455	0.825
22.25	908.6	796.2	121.55	5.0000	0.826
22.50	908.8	796.5	121.55	4.9556	0.826
22.75	909.2	796.8	121.54	4.9121	0.827
23.00	909.6	797.2	121.54	4.8696	0.827
23.25	909.9	797.5	121.53	4.8280	0.828
23.50	910.3	797.9	121.53	4.7872	0.829
23.75	910.5	798.2	121.52	4.7474	0.829
24.00	910.9	798.6	121.52	4.7083	0.830
24.25	911.2	798.8	121.53	4.6701	0.830
24.50	911.5	799.2	121.52	4.6327	0.831
24.75	911.8	799.4	121.51	4.5960	0.831
25.00	912.0	799.6	121.51	4.5600	0.832
25.25	912.3	799.9	121.51	4.5248	0.832
25.50	912.7	800.3	121.50	4.4902	0.833
25.75	913.0	800.6	121.50	4.4563	0.833
26.00	913.3	800.9	121.50	4.4231	0.834
26.25	913.5	801.2	121.49	4.3905	0.835
26.50	913.8	801.4	121.48	4.3585	0.835
26.75	914.0	801.6	121.48	4.3271	0.835
27.00	914.4	802.0	121.49	4.2963	0.836
27.25	914.6	802.2	121.48	4.2661	0.836
27.50	914.9	802.5	121.47	4.2364	0.837
27.75	915.1	802.8	121.48	4.2072	0.837
28.00	915.3	802.9	121.47	4.1786	0.838
28.25	915.5	803.1	121.47	4.1504	0.838

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
28.50	915.8	803.4	121.47	4.1228	0.839
28.75	916.1	803.7	121.46	4.0957	0.839
29.00	916.2	803.9	121.46	4.0690	0.839
29.25	916.5	804.1	121.46	4.0427	0.840
29.50	916.7	804.3	121.45	4.0169	0.840
29.75	916.9	804.5	121.44	3.9916	0.841
30.00	917.1	804.7	121.45	3.9667	0.841
30.25	917.3	805.0	121.46	3.9421	0.841
30.50	917.6	805.2	121.41	3.9180	0.842
30.75	917.8	805.5	121.42	3.8943	0.842
31.00	917.9	805.5	121.42	3.8710	0.843
31.25	918.2	805.8	121.42	3.8480	0.843
31.50	918.3	806.0	121.42	3.8254	0.843
31.75	918.5	806.1	121.42	3.8031	0.844
32.00	918.7	806.3	121.42	3.7812	0.844
32.25	918.9	806.5	121.41	3.7597	0.844
32.50	919.0	806.6	121.41	3.7385	0.845
32.75	919.2	806.8	121.41	3.7176	0.845
33.00	919.4	807.0	121.41	3.6970	0.845
33.25	919.6	807.2	121.40	3.6767	0.846
33.50	919.8	807.4	121.40	3.6567	0.846
33.75	920.0	807.6	121.40	3.6370	0.846
34.00	920.1	807.7	121.40	3.6176	0.847
34.25	920.3	807.9	121.39	3.5985	0.847
34.50	920.4	808.1	121.39	3.5797	0.847
34.75	920.5	808.1	121.39	3.5612	0.847
35.00	920.8	808.4	121.38	3.5429	0.848
35.25	920.9	808.6	121.39	3.5248	0.848
35.50	921.0	808.6	121.38	3.5070	0.848
35.75	921.3	808.9	121.38	3.4895	0.849
36.00	921.4	809.0	121.37	3.4722	0.849
36.25	921.5	809.1	121.37	3.4552	0.849
36.50	921.6	809.2	121.37	3.4384	0.849
36.75	921.7	809.3	121.36	3.4218	0.850
37.00	921.9	809.6	121.35	3.4054	0.850
37.25	921.9	809.6	121.35	3.3893	0.850
37.50	922.1	809.7	121.35	3.3733	0.850
37.75	922.5	810.1	121.36	3.3576	0.851
38.00	922.6	810.2	121.35	3.3421	0.851
38.25	922.6	810.2	121.35	3.3268	0.851
38.50	922.7	810.3	121.36	3.3117	0.851
38.75	922.9	810.5	121.35	3.2968	0.852
39.00	923.0	810.7	121.35	3.2821	0.852
39.25	923.1	810.7	121.35	3.2675	0.852
39.50	923.3	810.9	121.35	3.2532	0.852
39.75	923.4	811.0	121.34	3.2390	0.853
40.00	923.5	811.2	121.34	3.2250	0.853
40.25	923.6	811.2	121.34	3.2112	0.853
40.50	923.7	811.3	121.34	3.1975	0.853
40.75	923.8	811.4	121.33	3.1840	0.853
41.00	924.0	811.7	121.33	3.1707	0.854

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
41.25	924.1	811.7	121.34	3.1576	0.854
41.50	924.3	811.9	121.33	3.1446	0.854
41.75	924.4	812.0	121.32	3.1317	0.854
42.00	924.5	812.1	121.32	3.1190	0.855
42.25	924.5	812.2	121.32	3.1065	0.855
42.50	924.7	812.4	121.32	3.0941	0.855
42.75	924.8	812.5	121.32	3.0819	0.855
43.00	924.8	812.5	121.32	3.0698	0.855
43.25	925.0	812.7	121.32	3.0578	0.856
43.50	925.2	812.8	121.32	3.0460	0.856
43.75	925.1	812.8	121.31	3.0343	0.856
44.00	925.3	812.9	121.31	3.0227	0.856
44.25	925.4	813.0	121.30	3.0113	0.856
44.50	925.6	813.2	121.31	3.0000	0.857
44.75	925.6	813.2	121.30	2.9888	0.857
45.00	925.7	813.3	121.30	2.9778	0.857
45.25	925.9	813.5	121.30	2.9669	0.857
45.50	926.0	813.6	121.31	2.9560	0.857
45.75	926.1	813.7	121.30	2.9454	0.858
46.00	926.1	813.7	121.30	2.9348	0.858
46.25	926.2	813.8	121.30	2.9243	0.858
46.50	926.3	813.9	121.29	2.9140	0.858
46.75	926.4	814.0	121.29	2.9037	0.858
47.00	926.6	814.2	121.29	2.8936	0.859
47.25	926.6	814.2	121.29	2.8836	0.859
47.50	926.8	814.4	121.28	2.8737	0.859
47.75	926.8	814.5	121.29	2.8639	0.859
48.00	926.8	814.5	121.28	2.8542	0.859
48.25	926.9	814.5	121.29	2.8446	0.859
48.50	927.1	814.7	121.29	2.8351	0.859
48.75	927.2	814.9	121.29	2.8256	0.860
49.00	927.2	814.9	121.29	2.8163	0.860
49.25	927.4	815.0	121.27	2.8071	0.860
49.50	927.4	815.0	121.27	2.7980	0.860
49.75	927.7	815.3	121.27	2.7889	0.861
50.00	927.7	815.3	121.27	2.7800	0.861
50.25	927.6	815.2	121.27	2.7711	0.860
50.50	927.7	815.4	121.27	2.7624	0.861
50.75	927.8	815.4	121.26	2.7537	0.861
51.00	928.0	815.6	121.27	2.7451	0.861
51.25	927.9	815.5	121.26	2.7366	0.861
51.50	928.1	815.7	121.27	2.7282	0.861
51.75	928.1	815.7	121.26	2.7198	0.861
52.00	928.2	815.8	121.27	2.7115	0.862
52.25	928.2	815.9	121.27	2.7033	0.862
52.50	928.3	815.9	121.27	2.6952	0.862
52.75	928.4	816.1	121.26	2.6872	0.862
53.00	928.4	816.1	121.26	2.6792	0.862
53.25	928.5	816.2	121.26	2.6714	0.862
53.50	928.7	816.3	121.27	2.6636	0.862
53.75	928.7	816.4	121.26	2.6558	0.863

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
54.00	928.9	816.6	121.26	2.6481	0.863
54.25	928.9	816.6	121.27	2.6406	0.863
54.50	929.0	816.7	121.25	2.6330	0.863
54.75	929.0	816.7	121.26	2.6256	0.863
55.00	929.1	816.7	121.23	2.6182	0.863
55.25	929.2	816.8	121.24	2.6109	0.863
55.50	929.4	817.0	121.24	2.6036	0.864
55.75	929.4	817.0	121.24	2.5964	0.864
56.00	929.4	817.1	121.23	2.5893	0.864
56.25	929.6	817.2	121.23	2.5822	0.864
56.50	929.6	817.2	121.23	2.5752	0.864
56.75	929.6	817.2	121.24	2.5683	0.864
57.00	929.7	817.3	121.23	2.5614	0.864
57.25	929.7	817.3	121.23	2.5546	0.864
57.50	929.7	817.4	121.24	2.5478	0.864
57.75	929.8	817.5	121.23	2.5411	0.865
58.00	929.9	817.6	121.24	2.5345	0.865
58.25	930.0	817.7	121.23	2.5279	0.865
58.50	930.0	817.7	121.23	2.5214	0.865
58.75	930.2	817.8	121.23	2.5149	0.865
59.00	930.2	817.8	121.22	2.5085	0.865
59.25	930.2	817.8	121.23	2.5021	0.865
59.50	930.3	817.9	121.22	2.4958	0.865
59.75	930.5	818.1	121.23	2.4895	0.866
60.00	930.5	818.1	121.22	2.4833	0.866
60.25	930.4	818.0	121.22	2.4772	0.866
60.50	930.4	818.0	121.22	2.4711	0.866
60.75	930.5	818.2	121.22	2.4650	0.866
61.00	930.5	818.2	121.22	2.4590	0.866
61.25	930.6	818.2	121.22	2.4531	0.866
61.50	930.8	818.4	121.22	2.4472	0.866
61.75	930.8	818.4	121.22	2.4413	0.866
62.00	930.7	818.3	121.22	2.4355	0.866
62.25	930.8	818.5	121.21	2.4297	0.866
62.50	930.9	818.5	121.22	2.4240	0.867
62.75	931.1	818.8	121.22	2.4183	0.867
63.00	931.0	818.7	121.21	2.4127	0.867
63.25	931.0	818.7	121.21	2.4071	0.867
63.50	931.2	818.8	121.21	2.4016	0.867
63.75	931.2	818.8	121.22	2.3961	0.867
64.00	931.3	819.0	121.20	2.3906	0.867
64.25	931.3	818.9	121.20	2.3852	0.867
64.50	931.5	819.1	121.19	2.3798	0.868
64.75	931.5	819.1	121.19	2.3745	0.868
65.00	931.5	819.2	121.19	2.3692	0.868
65.25	931.6	819.3	121.19	2.3640	0.868
65.50	931.6	819.3	121.19	2.3588	0.868
65.75	931.5	819.2	121.19	2.3536	0.868
66.00	931.7	819.3	121.19	2.3485	0.868
66.25	931.7	819.3	121.20	2.3434	0.868
66.50	931.7	819.3	121.19	2.3383	0.868

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
66.75	931.9	819.5	121.19	2.3333	0.868
67.00	932.0	819.6	121.20	2.3284	0.869
67.25	932.0	819.6	121.19	2.3234	0.869
67.50	932.0	819.6	121.20	2.3185	0.869
67.75	932.1	819.8	121.19	2.3137	0.869
68.00	932.1	819.8	121.18	2.3088	0.869
68.25	932.2	819.8	121.18	2.3040	0.869
68.50	932.3	819.9	121.19	2.2993	0.869
68.75	932.1	819.7	121.18	2.2945	0.869
69.00	932.3	819.9	121.18	2.2899	0.869
69.25	932.3	819.9	121.18	2.2852	0.869
69.50	932.3	819.9	121.18	2.2806	0.869
69.75	932.2	819.8	121.18	2.2760	0.869
70.00	932.3	820.0	121.18	2.2714	0.869
70.25	932.5	820.2	121.18	2.2669	0.870
70.50	932.5	820.2	121.17	2.2624	0.870
70.75	932.5	820.2	121.18	2.2580	0.870
71.00	932.7	820.3	121.18	2.2535	0.870
71.25	932.7	820.3	121.16	2.2491	0.870
71.50	932.7	820.3	121.17	2.2448	0.870
71.75	932.7	820.3	121.16	2.2404	0.870
72.00	932.7	820.3	121.17	2.2361	0.870
72.25	932.8	820.4	121.18	2.2318	0.870
72.50	932.7	820.3	121.17	2.2276	0.870
72.75	932.9	820.5	121.17	2.2234	0.870
73.00	932.9	820.5	121.17	2.2192	0.870
73.25	933.0	820.6	121.16	2.2150	0.870
73.50	933.0	820.6	121.17	2.2109	0.870
73.75	933.0	820.6	121.17	2.2068	0.870
74.00	933.1	820.7	121.17	2.2027	0.871
74.25	933.1	820.7	121.16	2.1987	0.871
74.50	933.1	820.8	121.17	2.1946	0.871
74.75	933.1	820.8	121.16	2.1906	0.871
75.00	933.1	820.8	121.16	2.1867	0.871
75.25	933.2	820.8	121.16	2.1827	0.871
75.50	933.2	820.8	121.16	2.1788	0.871
75.75	933.3	820.9	121.16	2.1749	0.871
76.00	933.3	820.9	121.16	2.1711	0.871
76.25	933.4	821.1	121.17	2.1672	0.871
76.50	933.3	820.9	121.16	2.1634	0.871
76.75	933.4	821.0	121.16	2.1596	0.871
77.00	933.4	821.0	121.17	2.1558	0.871
77.25	933.6	821.2	121.16	2.1521	0.872
77.50	933.6	821.2	121.16	2.1484	0.872
77.75	933.6	821.2	121.16	2.1447	0.872
78.00	933.5	821.1	121.16	2.1410	0.871
78.25	933.7	821.4	121.16	2.1374	0.872
78.50	933.7	821.4	121.16	2.1338	0.872
78.75	933.7	821.4	121.16	2.1302	0.872
79.00	933.7	821.4	121.16	2.1266	0.872
79.25	933.7	821.4	121.16	2.1230	0.872

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9678 Mcdaniels/Johnson #B-1 DST#3 HAYES/OIL&GAS

DATE: 01/03/97

TIME: 21:37:54

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	79.50	933.7	821.4	121.16	2.1195	0.872
	79.75	933.7	821.4	121.16	2.1160	0.872
	80.00	933.9	821.5	121.16	2.1125	0.872
	80.25	933.9	821.5	121.16	2.1090	0.872
	80.50	933.9	821.5	121.16	2.1056	0.872
	80.75	934.0	821.6	121.16	2.1022	0.872
	81.00	934.1	821.7	121.16	2.0988	0.872
	81.25	934.1	821.7	121.16	2.0954	0.872
	81.50	934.1	821.8	121.15	2.0920	0.873
	81.75	934.1	821.8	121.16	2.0887	0.873
	82.00	934.2	821.9	121.16	2.0854	0.873
	82.25	934.2	821.9	121.16	2.0821	0.873
	82.50	934.2	821.9	121.16	2.0788	0.873
	82.75	934.2	821.9	121.16	2.0755	0.873
	83.00	934.3	821.9	121.16	2.0723	0.873
	83.25	934.3	821.9	121.16	2.0691	0.873
	83.50	934.4	822.0	121.16	2.0659	0.873
	83.75	934.4	822.0	121.16	2.0627	0.873
	84.00	934.4	822.0	121.17	2.0595	0.873
	84.25	934.3	821.9	121.17	2.0564	0.873
	84.50	934.5	822.1	121.16	2.0533	0.873
	84.75	934.5	822.1	121.15	2.0501	0.873
	85.00	934.5	822.1	121.16	2.0471	0.873
	85.25	934.5	822.1	121.16	2.0440	0.873
	85.50	934.5	822.1	121.16	2.0409	0.873
	85.75	934.6	822.3	121.18	2.0379	0.874
	86.00	934.6	822.3	121.18	2.0349	0.874
	86.25	934.6	822.3	121.17	2.0319	0.874
	86.50	934.6	822.3	121.16	2.0289	0.874
	86.75	934.6	822.3	121.17	2.0259	0.874
	87.00	934.8	822.4	121.17	2.0230	0.874
	87.25	934.8	822.4	121.17	2.0201	0.874
	87.50	934.8	822.4	121.15	2.0171	0.874
	87.75	934.8	822.4	121.13	2.0142	0.874
	88.00	934.8	822.4	121.13	2.0114	0.874
	88.25	934.9	822.5	121.11	2.0085	0.874
	88.50	934.9	822.5	121.13	2.0056	0.874
	88.75	934.8	822.4	121.12	2.0028	0.874
	89.00	934.8	822.4	121.15	2.0000	0.874
	89.25	934.8	822.4	121.17	1.9972	0.874
	89.50	934.8	822.4	121.14	1.9944	0.874
	89.75	935.1	822.7	121.14	1.9916	0.874
	90.00	935.1	822.7	121.13	1.9889	0.874
	90.25	935.0	822.6	121.13	1.9861	0.874
***** End Shut-in 2	90.50	935.0	822.6	121.14	1.9834	0.874
***** Final Hydro.	381.00	2125.7	0.0	121.01		