

Well Name: Miller #1-21
Company: Ranken Energy Corportion
Location: 21-16S-29W
Lane County Kansas
Date: 10-6-97

TRILOBITE TESTING L.L.C.

OPERATOR : Ranken Energy Corp.
 WELL NAME: Millere #1-21
 LOCATION : 21-16S-29W Lane KS
 INTERVAL : 4193.00 To 4226.00 ft

DATE 10/02/97

KB 2808.00 ft TICKET NO: 10539 DST #1
 GR 2800.00 ft FORMATION: Lansing K
 TD 4226.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	AK-1	AK-1	Alpine			PF Fr. 0345 to 0415 hr
SI 60 Range(Psi)	4300.0	4300.0	4995.0	0.0	0.0	IS Fr. 0415 to 0515 hr
SF 60 Clock(hrs)	12hr	12hr	Elec			SF Fr. 0515 to 0615 hr
FS 120 Depth(ft)	4221.0	4221.0	4196.0	0.0	0.0	FS Fr. 0615 to 0815 hr

	Field	1	2	3	4	
A. Init Hydro	2058.0	2064.0	2067.0	0.0	0.0	T STARTED 0224 hr
B. First Flow	44:0	39.0	20.0	0.0	0.0	T ON BOTM 0342 hr
B1. Final Flow	66.0	78.0	82.0	0.0	0.0	T OPEN 0345 hr
C. In Shut-in	230.0	226.0	227.0	0.0	0.0	T PULLED 0615 hr
D. Init Flow	110.0	98.0	83.0	0.0	0.0	T OUT 0942 hr
E. Final Flow	121.0	139.0	137.0	0.0	0.0	
F. Fl Shut-in	230.0	230.0	227.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2047.0	1994.0	2045.0	0.0	0.0	Tool Wt. 2400.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 54000.00 lbs
						Initial Str Wt 38000.00 lbs
						Unseated Str Wt 40000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 30.00 ft
						D.P. Length 4159.00 ft

RECOVERY

Tot Fluid 270.00 ft of 30.00 ft in DC and 240.00 ft in DP
 150.00 ft of Watery Mud With Oil Spots
 0.00 ft of 20%water 80%mud
 120.00 ft of Muddy Water
 0.00 ft of 15%mud 85%water
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of Rw .17@73

SALINITY 60000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow-
 weak 1/2" blow building to 7"

Initial Shutin-
 no blow

Final Flow-
 no blow for 6 minutes then weak
 surface blow building to 3"

Final Shutin-
 no blow

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/c
Vis.	46.00 S/L
W.L.	8.40 in3
F.C.	0.00 in
Mud Drop	

Amt. of fill	0.00 ft
Btm. H. Temp.	128.00 F.
Hole Condition	good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00

Cushion Type
 Reversed Out
 Tool Chased
 Tester Paul Simpson
 Co. Rep. Steve Davis
 Contr. Discovery
 Rig # 2
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Millere #1-21

LOCATION : 21-16S-29W Lane KS

TICKET No. 10539 D.S.T. No. 1 DATE 10/02/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 21

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 33 perf

TOTAL TOOL 54

DRILL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 54

C. ABOVE TOOLS.Stands Single 1 Total 30

P. ABOVE TOOLS.Stands 67 Single 1 Total 4159

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4243

TOTAL DEPTH 4226

TOTAL DRILL PIPE ABOVE K.B. 17

REMARKS:

P.O. SUB		
C.O. SUB Top of tool @		4173
S.I. TOOL H & T		4179
HMV Sterling		4184
JARS Sterling		n/a
SAFETY JOINT Bowen		n/a
PACKER Top		4188
PACKER Bottom		4193
DEPTH	4193	
STUBB 1'		4194
ANCHOR		
2' perf		4196
Alpine rec. @	4196	
5' perf		4201
5' perf		4206
5' perf		4211
T.C.		
DEPTH		
5' perf		4216
5' perf		4221
AK-1 rec @	4221	
BULLNOSE 5' bullplug		
T.D.	to	4226

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10539 Ranken Energy Corp. Miller #1-21 DST #1

DATE: 10/02/97 TIME: 01:40:09

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	123.50	2067.4	0.0	120.09		
***** Start Flow 1	0.00	20.3	0.0	120.08		
	0.50	23.9	3.6	120.15		
	1.00	26.7	6.4	120.20		
	1.50	29.5	9.2	120.26		
	2.00	31.9	11.6	120.30		
	2.50	33.2	12.9	120.36		
	3.00	34.5	14.2	120.39		
	3.50	35.8	15.5	120.41		
	4.00	36.9	16.6	120.46		
	4.50	38.2	17.9	120.52		
	5.00	39.3	19.0	120.60		
	5.50	40.5	20.2	120.65		
	6.00	41.6	21.3	120.71		
	6.50	42.6	22.3	120.75		
	7.00	43.8	23.5	120.81		
	7.50	45.0	24.7	120.89		
	8.00	46.1	25.8	120.97		
	8.50	48.3	28.0	121.06		
	9.00	49.0	28.7	121.17		
	9.50	50.6	30.3	121.27		
	10.00	51.1	30.8	121.36		
	10.50	51.0	30.7	121.45		
	11.00	51.6	31.3	121.54		
	11.50	52.3	32.0	121.63		
	12.00	53.0	32.7	121.70		
	12.50	53.6	33.3	121.78		
	13.00	54.3	34.0	121.82		
	13.50	55.1	34.8	121.88		
	14.00	55.8	35.5	121.93		
	14.50	56.5	36.2	121.96		
	15.00	57.4	37.1	122.01		
	15.50	58.1	37.8	122.05		
	16.00	58.9	38.6	122.08		
	16.50	59.8	39.5	122.13		
	17.00	60.6	40.3	122.17		
	17.50	61.3	41.0	122.20		
	18.00	62.0	41.7	122.24		
	18.50	62.7	42.4	122.28		
	19.00	63.5	43.2	122.33		
	19.50	64.1	43.8	122.39		
	20.00	65.0	44.7	122.44		
	20.50	65.6	45.3	122.50		
	21.00	66.3	46.0	122.56		
	21.50	67.0	46.7	122.61		
	22.00	67.7	47.4	122.68		
	22.50	68.4	48.1	122.73		
	23.00	69.1	48.8	122.78		
	23.50	69.8	49.5	122.83		
	24.00	70.4	50.1	122.89		
	24.50	71.2	50.9	122.94		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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DATE: 10/02/97 TIME: 01:40:09

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	25.00	71.8	51.5	122.99		
	25.50	72.8	52.5	123.05		
	26.00	73.7	53.4	123.10		
	26.50	74.2	53.9	123.16		
	27.00	74.9	54.6	123.23		
	27.50	75.5	55.2	123.29		
	28.00	76.2	55.9	123.35		
	28.50	76.8	56.5	123.43		
	29.00	77.4	57.1	123.48		
	29.50	78.0	57.7	123.54		
	30.00	78.7	58.4	123.61		
	30.50	79.3	59.0	123.67		
	31.00	79.8	59.5	123.73		
	31.50	80.5	60.2	123.79		
	32.00	81.1	60.8	123.85		
***** End Flow 1	32.50	81.6	61.3	123.90		
***** Start Shutin 1	0.00	81.6	0.0	123.90	0.0000	0.007
	0.50	105.0	23.4	123.95	66.0000	0.011
	1.00	186.2	104.6	124.01	33.5000	0.035
	1.50	197.5	115.9	124.05	22.6667	0.039
	2.00	202.3	120.7	124.10	17.2500	0.041
	2.50	205.4	123.7	124.15	14.0000	0.042
	3.00	207.6	126.0	124.19	11.8333	0.043
	3.50	209.4	127.8	124.24	10.2857	0.044
	4.00	210.8	129.2	124.28	9.1250	0.044
	4.50	211.9	130.3	124.33	8.2222	0.045
	5.00	213.0	131.4	124.37	7.5000	0.045
	5.50	213.8	132.2	124.40	6.9091	0.046
	6.00	214.6	133.0	124.45	6.4167	0.046
	6.50	215.3	133.7	124.49	6.0000	0.046
	7.00	215.9	134.2	124.52	5.6429	0.047
	7.50	216.4	134.8	124.54	5.3333	0.047
	8.00	216.9	135.3	124.59	5.0625	0.047
	8.50	217.4	135.7	124.61	4.8235	0.047
	9.00	217.7	136.1	124.64	4.6111	0.047
	9.50	218.2	136.5	124.66	4.4211	0.048
	10.00	218.5	136.9	124.70	4.2500	0.048
	10.50	218.8	137.2	124.74	4.0952	0.048
	11.00	219.2	137.5	124.76	3.9545	0.048
	11.50	219.5	137.8	124.77	3.8261	0.048
	12.00	219.7	138.1	124.80	3.7083	0.048
	12.50	220.0	138.4	124.82	3.6000	0.048
	13.00	220.2	138.6	124.84	3.5000	0.048
	13.50	220.4	138.8	124.87	3.4074	0.049
	14.00	220.6	139.0	124.89	3.3214	0.049
	14.50	220.8	139.2	124.91	3.2414	0.049
	15.00	221.0	139.4	124.92	3.1667	0.049
	15.50	221.2	139.6	124.95	3.0968	0.049
	16.00	221.3	139.7	124.96	3.0312	0.049
	16.50	221.6	139.9	124.98	2.9697	0.049
	17.00	221.7	140.1	125.00	2.9118	0.049

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
17.50	221.9	140.3	125.01	2.8571	0.049
18.00	222.0	140.4	125.02	2.8056	0.049
18.50	222.2	140.6	125.04	2.7568	0.049
19.00	222.4	140.7	125.06	2.7105	0.049
19.50	222.4	140.8	125.08	2.6667	0.049
20.00	222.6	141.0	125.08	2.6250	0.050
20.50	222.7	141.0	125.09	2.5854	0.050
21.00	222.8	141.2	125.11	2.5476	0.050
21.50	222.9	141.3	125.12	2.5116	0.050
22.00	223.0	141.4	125.13	2.4773	0.050
22.50	223.1	141.5	125.14	2.4444	0.050
23.00	223.2	141.6	125.16	2.4130	0.050
23.50	223.3	141.7	125.17	2.3830	0.050
24.00	223.4	141.8	125.18	2.3542	0.050
24.50	223.5	141.9	125.19	2.3265	0.050
25.00	223.6	142.0	125.19	2.3000	0.050
25.50	223.7	142.1	125.21	2.2745	0.050
26.00	223.8	142.1	125.22	2.2500	0.050
26.50	223.8	142.2	125.23	2.2264	0.050
27.00	224.0	142.3	125.24	2.2037	0.050
27.50	224.0	142.4	125.25	2.1818	0.050
28.00	224.1	142.5	125.25	2.1607	0.050
28.50	224.2	142.6	125.27	2.1404	0.050
29.00	224.2	142.6	125.27	2.1207	0.050
29.50	224.3	142.7	125.28	2.1017	0.050
30.00	224.4	142.8	125.29	2.0833	0.050
30.50	224.5	142.8	125.29	2.0656	0.050
31.00	224.5	142.9	125.30	2.0484	0.050
31.50	224.6	142.9	125.32	2.0317	0.050
32.00	224.7	143.0	125.32	2.0156	0.050
32.50	224.7	143.1	125.33	2.0000	0.050
33.00	224.7	143.1	125.33	1.9848	0.051
33.50	224.8	143.2	125.35	1.9701	0.051
34.00	224.9	143.2	125.35	1.9559	0.051
34.50	224.9	143.3	125.34	1.9420	0.051
35.00	225.0	143.4	125.37	1.9286	0.051
35.50	225.1	143.5	125.37	1.9155	0.051
36.00	225.1	143.5	125.35	1.9028	0.051
36.50	225.2	143.5	125.39	1.8904	0.051
37.00	225.1	143.5	125.39	1.8784	0.051
37.50	225.2	143.6	125.40	1.8667	0.051
38.00	225.3	143.6	125.40	1.8553	0.051
38.50	225.4	143.8	125.41	1.8442	0.051
39.00	225.4	143.8	125.42	1.8333	0.051
39.50	225.5	143.9	125.42	1.8228	0.051
40.00	225.5	143.9	125.42	1.8125	0.051
40.50	225.5	143.8	125.43	1.8025	0.051
41.00	225.6	144.0	125.43	1.7927	0.051
41.50	225.7	144.0	125.46	1.7831	0.051
42.00	225.6	144.0	125.44	1.7738	0.051
42.50	225.6	144.0	125.44	1.7647	0.051

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DATE: 10/02/97

TIME: 01:40:09

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	43.00	225.7	144.1	125.46	1.7558	0.051
	43.50	225.8	144.2	125.48	1.7471	0.051
	44.00	225.8	144.2	125.47	1.7386	0.051
	44.50	225.9	144.3	125.47	1.7303	0.051
	45.00	225.9	144.3	125.49	1.7222	0.051
	45.50	226.0	144.3	125.49	1.7143	0.051
	46.00	225.9	144.3	125.52	1.7065	0.051
	46.50	226.0	144.4	125.50	1.6989	0.051
	47.00	226.0	144.4	125.49	1.6915	0.051
	47.50	226.1	144.5	125.50	1.6842	0.051
	48.00	226.1	144.5	125.52	1.6771	0.051
	48.50	226.2	144.5	125.56	1.6701	0.051
	49.00	226.1	144.5	125.57	1.6633	0.051
	49.50	226.3	144.7	125.57	1.6566	0.051
	50.00	226.2	144.6	125.54	1.6500	0.051
	50.50	226.2	144.6	125.53	1.6436	0.051
	51.00	226.3	144.7	125.57	1.6373	0.051
	51.50	226.3	144.7	125.57	1.6311	0.051
	52.00	226.4	144.8	125.55	1.6250	0.051
	52.50	226.4	144.8	125.58	1.6190	0.051
	53.00	226.4	144.8	125.60	1.6132	0.051
	53.50	226.5	144.8	125.56	1.6075	0.051
	54.00	226.5	144.9	125.59	1.6019	0.051
	54.50	226.6	145.0	125.58	1.5963	0.051
	55.00	226.5	144.9	125.62	1.5909	0.051
	55.50	226.6	144.9	125.64	1.5856	0.051
	56.00	226.5	144.9	125.61	1.5804	0.051
	56.50	226.6	145.0	125.61	1.5752	0.051
	57.00	226.6	145.0	125.65	1.5702	0.051
	57.50	226.6	145.0	125.66	1.5652	0.051
	58.00	226.7	145.0	125.66	1.5603	0.051
	58.50	226.7	145.1	125.64	1.5556	0.051
	59.00	226.6	145.0	125.63	1.5508	0.051
***** End Shut-in 1	59.50	226.8	145.2	125.67	1.5462	0.051
***** Start Flow 2	0.00	83.5	0.0	125.63		
	0.50	84.0	0.5	125.63		
	1.00	84.6	1.1	125.63		
	1.50	85.0	1.6	125.62		
	2.00	85.6	2.1	125.64		
	2.50	86.4	2.9	125.63		
	3.00	87.4	3.9	125.63		
	3.50	88.1	4.6	125.63		
	4.00	88.7	5.2	125.64		
	4.50	89.3	5.8	125.65		
	5.00	89.9	6.4	125.67		
	5.50	90.4	6.9	125.70		
	6.00	91.0	7.6	125.72		
	6.50	91.6	8.1	125.80		
	7.00	92.2	8.7	125.84		
	7.50	92.7	9.2	125.88		
	8.00	93.3	9.8	125.98		

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8.50	94.0	10.5	126.05		
9.00	94.6	11.1	126.09		
9.50	95.2	11.7	126.13		
10.00	95.7	12.3	126.18		
10.50	96.4	12.9	126.23		
11.00	96.9	13.4	126.25		
11.50	97.4	13.9	126.31		
12.00	98.0	14.5	126.36		
12.50	98.5	15.0	126.40		
13.00	99.1	15.6	126.43		
13.50	99.6	16.1	126.50		
14.00	100.3	16.8	126.50		
14.50	100.9	17.4	126.58		
15.00	101.4	18.0	126.58		
15.50	102.0	18.5	126.60		
16.00	102.5	19.0	126.64		
16.50	103.0	19.5	126.66		
17.00	103.5	20.0	126.69		
17.50	104.0	20.5	126.74		
18.00	104.5	21.0	126.75		
18.50	105.0	21.5	126.83		
19.00	105.5	22.0	126.87		
19.50	106.0	22.5	126.85		
20.00	106.5	23.0	126.93		
20.50	107.0	23.5	126.99		
21.00	107.4	23.9	126.97		
21.50	108.0	24.5	127.04		
22.00	108.5	25.0	127.06		
22.50	108.9	25.4	127.09		
23.00	109.3	25.8	127.14		
23.50	109.8	26.3	127.20		
24.00	110.3	26.8	127.22		
24.50	110.8	27.3	127.28		
25.00	111.3	27.8	127.29		
25.50	111.8	28.3	127.34		
26.00	112.2	28.7	127.39		
26.50	112.7	29.2	127.43		
27.00	113.1	29.6	127.46		
27.50	113.7	30.2	127.50		
28.00	114.3	30.8	127.55		
28.50	114.9	31.4	127.58		
29.00	115.4	31.9	127.62		
29.50	115.8	32.3	127.65		
30.00	116.3	32.8	127.67		
30.50	116.7	33.2	127.69		
31.00	117.1	33.6	127.70		
31.50	117.5	34.0	127.71		
32.00	118.0	34.5	127.75		
32.50	118.4	34.9	127.77		
33.00	118.9	35.4	127.81		
33.50	119.3	35.8	127.84		

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DATE: 10/02/97 TIME: 01:40:09

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	34.00	119.8	36.3	127.87		
	34.50	120.2	36.7	127.90		
	35.00	120.7	37.2	127.92		
	35.50	121.0	37.5	127.97		
	36.00	121.4	37.9	127.98		
	36.50	121.7	38.2	127.99		
	37.00	122.2	38.7	128.03		
	37.50	122.7	39.2	128.04		
	38.00	123.1	39.6	128.07		
	38.50	123.5	40.0	128.09		
	39.00	123.9	40.4	128.11		
	39.50	124.3	40.8	128.13		
	40.00	124.7	41.2	128.16		
	40.50	125.1	41.6	128.17		
	41.00	125.5	42.0	128.19		
	41.50	125.8	42.3	128.21		
	42.00	126.2	42.7	128.23		
	42.50	126.6	43.1	128.25		
	43.00	127.0	43.5	128.26		
	43.50	127.4	43.9	128.28		
	44.00	127.9	44.4	128.30		
	44.50	128.3	44.8	128.32		
	45.00	128.8	45.3	128.34		
	45.50	129.1	45.6	128.36		
	46.00	129.6	46.1	128.37		
	46.50	129.9	46.4	128.39		
	47.00	130.4	46.9	128.40		
	47.50	130.7	47.2	128.43		
	48.00	131.1	47.6	128.44		
	48.50	131.4	47.9	128.46		
	49.00	131.8	48.3	128.47		
	49.50	132.2	48.7	128.49		
	50.00	132.5	49.0	128.51		
	50.50	132.9	49.4	128.52		
	51.00	133.3	49.8	128.53		
	51.50	133.7	50.2	128.54		
	52.00	134.1	50.6	128.56		
	52.50	134.5	51.0	128.59		
	53.00	134.9	51.4	128.60		
	53.50	135.2	51.7	128.62		
	54.00	135.6	52.1	128.62		
	54.50	135.8	52.4	128.64		
	55.00	136.2	52.7	128.66		
	55.50	136.7	53.2	128.68		
	56.00	136.9	53.4	128.69		
***** End Flow 2	56.50	137.3	53.9	128.70		
***** Start Shutin 2	0.00	137.3	0.0	128.70	0.0000	0.019
	0.50	188.7	51.4	128.72	179.0000	0.036
	1.00	204.1	66.8	128.73	90.0000	0.042
	1.50	208.4	71.1	128.75	60.3333	0.043
	2.00	210.7	73.4	128.76	45.5000	0.044

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10539 Ranken Energy Corp. Miller #1-21 DST #1

DATE: 10/02/97 TIME: 01:40:09

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
2.50	212.4	75.0	128.78	36.6000	0.045
3.00	213.5	76.2	128.78	30.6667	0.046
3.50	214.5	77.1	128.80	26.4286	0.046
4.00	215.2	77.9	128.81	23.2500	0.046
4.50	215.8	78.5	128.81	20.7778	0.047
5.00	216.4	79.0	128.82	18.8000	0.047
5.50	216.8	79.4	128.84	17.1818	0.047
6.00	217.2	79.9	128.83	15.8333	0.047
6.50	217.6	80.3	128.83	14.6923	0.047
7.00	218.0	80.7	128.83	13.7143	0.048
7.50	218.3	81.0	128.84	12.8667	0.048
8.00	218.6	81.2	128.84	12.1250	0.048
8.50	218.8	81.5	128.83	11.4706	0.048
9.00	219.1	81.7	128.83	10.8889	0.048
9.50	219.3	81.9	128.83	10.3684	0.048
10.00	219.4	82.1	128.82	9.9000	0.048
10.50	219.7	82.3	128.82	9.4762	0.048
11.00	219.9	82.6	128.83	9.0909	0.048
11.50	220.1	82.8	128.82	8.7391	0.048
12.00	220.3	83.0	128.82	8.4167	0.049
12.50	220.4	83.1	128.82	8.1200	0.049
13.00	220.6	83.3	128.81	7.8462	0.049
13.50	220.7	83.3	128.80	7.5926	0.049
14.00	220.8	83.5	128.80	7.3571	0.049
14.50	221.0	83.7	128.80	7.1379	0.049
15.00	221.2	83.9	128.78	6.9333	0.049
15.50	221.2	83.9	128.79	6.7419	0.049
16.00	221.4	84.1	128.78	6.5625	0.049
16.50	221.4	84.1	128.77	6.3939	0.049
17.00	221.5	84.2	128.76	6.2353	0.049
17.50	221.6	84.3	128.76	6.0857	0.049
18.00	221.7	84.4	128.76	5.9444	0.049
18.50	221.8	84.5	128.75	5.8108	0.049
19.00	221.9	84.6	128.75	5.6842	0.049
19.50	222.0	84.6	128.74	5.5641	0.049
20.00	222.1	84.7	128.73	5.4500	0.049
20.50	222.1	84.8	128.73	5.3415	0.049
21.00	222.2	84.9	128.73	5.2381	0.049
21.50	222.3	84.9	128.72	5.1395	0.049
22.00	222.4	85.0	128.72	5.0455	0.049
22.50	222.4	85.1	128.72	4.9556	0.049
23.00	222.6	85.2	128.72	4.8696	0.050
23.50	222.6	85.2	128.72	4.7872	0.050
24.00	222.7	85.3	128.70	4.7083	0.050
24.50	222.8	85.4	128.71	4.6327	0.050
25.00	222.8	85.5	128.70	4.5600	0.050
25.50	222.9	85.6	128.69	4.4902	0.050
26.00	223.0	85.6	128.69	4.4231	0.050
26.50	223.1	85.7	128.69	4.3585	0.050
27.00	223.0	85.7	128.69	4.2963	0.050
27.50	223.2	85.8	128.68	4.2364	0.050

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10539 Ranken Energy Corp. Miller #1-21 DST #1

DATE: 10/02/97

TIME: 01:40:09

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
28.00	223.1	85.8	128.67	4.1786	0.050
28.50	223.1	85.8	128.67	4.1228	0.050
29.00	223.2	85.9	128.67	4.0690	0.050
29.50	223.3	86.0	128.67	4.0169	0.050
30.00	223.4	86.1	128.67	3.9667	0.050
30.50	223.5	86.1	128.66	3.9180	0.050
31.00	223.5	86.2	128.67	3.8710	0.050
31.50	223.6	86.2	128.66	3.8254	0.050
32.00	223.6	86.3	128.65	3.7812	0.050
32.50	223.7	86.3	128.65	3.7385	0.050
33.00	223.7	86.4	128.65	3.6970	0.050
33.50	223.8	86.4	128.65	3.6567	0.050
34.00	223.8	86.4	128.64	3.6176	0.050
34.50	223.8	86.5	128.64	3.5797	0.050
35.00	223.9	86.6	128.63	3.5429	0.050
35.50	223.9	86.5	128.63	3.5070	0.050
36.00	224.0	86.6	128.64	3.4722	0.050
36.50	224.0	86.7	128.62	3.4384	0.050
37.00	224.1	86.7	128.63	3.4054	0.050
37.50	224.1	86.8	128.63	3.3733	0.050
38.00	224.1	86.7	128.63	3.3421	0.050
38.50	224.1	86.8	128.62	3.3117	0.050
39.00	224.2	86.8	128.61	3.2821	0.050
39.50	224.2	86.9	128.63	3.2532	0.050
40.00	224.2	86.9	128.62	3.2250	0.050
40.50	224.3	86.9	128.61	3.1975	0.050
41.00	224.3	87.0	128.61	3.1707	0.050
41.50	224.3	87.0	128.61	3.1446	0.050
42.00	224.3	87.0	128.61	3.1190	0.050
42.50	224.4	87.1	128.61	3.0941	0.050
43.00	224.4	87.0	128.59	3.0698	0.050
43.50	224.4	87.1	128.60	3.0460	0.050
44.00	224.5	87.1	128.61	3.0227	0.050
44.50	224.6	87.2	128.58	3.0000	0.050
45.00	224.6	87.3	128.59	2.9778	0.050
45.50	224.6	87.2	128.58	2.9560	0.050
46.00	224.7	87.3	128.58	2.9348	0.050
46.50	224.7	87.3	128.58	2.9140	0.050
47.00	224.7	87.4	128.58	2.8936	0.050
47.50	224.7	87.4	128.59	2.8737	0.051
48.00	224.8	87.4	128.58	2.8542	0.051
48.50	224.8	87.5	128.58	2.8351	0.051
49.00	224.9	87.6	128.57	2.8163	0.051
49.50	224.9	87.6	128.57	2.7980	0.051
50.00	225.0	87.6	128.56	2.7800	0.051
50.50	225.0	87.6	128.58	2.7624	0.051
51.00	225.1	87.8	128.58	2.7451	0.051
51.50	225.1	87.8	128.57	2.7282	0.051
52.00	225.0	87.7	128.56	2.7115	0.051
52.50	225.1	87.7	128.56	2.6952	0.051
53.00	225.1	87.7	128.56	2.6792	0.051

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10539 Ranken Energy Corp. Miller #1-21 DST #1

DATE: 10/02/97 TIME: 01:40:09

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
53.50	225.1	87.7	128.56	2.6636	0.051
54.00	225.1	87.8	128.56	2.6481	0.051
54.50	225.3	87.9	128.56	2.6330	0.051
55.00	225.2	87.9	128.55	2.6182	0.051
55.50	225.2	87.8	128.55	2.6036	0.051
56.00	225.2	87.9	128.55	2.5893	0.051
56.50	225.3	87.9	128.56	2.5752	0.051
57.00	225.4	88.0	128.55	2.5614	0.051
57.50	225.3	88.0	128.53	2.5478	0.051
58.00	225.3	88.0	128.54	2.5345	0.051
58.50	225.4	88.0	128.55	2.5214	0.051
59.00	225.4	88.0	128.53	2.5085	0.051
59.50	225.5	88.1	128.54	2.4958	0.051
60.00	225.4	88.1	128.55	2.4833	0.051
60.50	225.4	88.1	128.54	2.4711	0.051
61.00	225.5	88.2	128.54	2.4590	0.051
61.50	225.5	88.2	128.52	2.4472	0.051
62.00	225.5	88.2	128.53	2.4355	0.051
62.50	225.5	88.2	128.54	2.4240	0.051
63.00	225.6	88.2	128.52	2.4127	0.051
63.50	225.6	88.2	128.52	2.4016	0.051
64.00	225.6	88.3	128.53	2.3906	0.051
64.50	225.7	88.3	128.52	2.3798	0.051
65.00	225.7	88.4	128.52	2.3692	0.051
65.50	225.8	88.4	128.52	2.3588	0.051
66.00	225.7	88.4	128.53	2.3485	0.051
66.50	225.8	88.4	128.53	2.3383	0.051
67.00	225.8	88.4	128.51	2.3284	0.051
67.50	225.8	88.4	128.53	2.3185	0.051
68.00	225.8	88.5	128.52	2.3088	0.051
68.50	225.8	88.4	128.52	2.2993	0.051
69.00	225.8	88.5	128.51	2.2899	0.051
69.50	225.8	88.5	128.50	2.2806	0.051
70.00	225.9	88.5	128.51	2.2714	0.051
70.50	225.9	88.5	128.50	2.2624	0.051
71.00	225.8	88.5	128.51	2.2535	0.051
71.50	225.8	88.5	128.50	2.2448	0.051
72.00	225.9	88.5	128.50	2.2361	0.051
72.50	225.9	88.6	128.50	2.2276	0.051
73.00	225.8	88.5	128.51	2.2192	0.051
73.50	225.9	88.5	128.50	2.2109	0.051
74.00	225.9	88.5	128.49	2.2027	0.051
74.50	225.9	88.6	128.49	2.1946	0.051
75.00	226.0	88.6	128.49	2.1867	0.051
75.50	226.0	88.6	128.50	2.1788	0.051
76.00	226.0	88.6	128.49	2.1711	0.051
76.50	226.0	88.7	128.50	2.1634	0.051
77.00	226.0	88.7	128.49	2.1558	0.051
77.50	226.1	88.7	128.49	2.1484	0.051
78.00	226.0	88.7	128.48	2.1410	0.051
78.50	226.1	88.8	128.48	2.1338	0.051

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10539 Ranken Energy Corp. Miller #1-21 DST #1

DATE: 10/02/97 TIME: 01:40:09

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
79.00	226.2	88.8	128.49	2.1266	0.051
79.50	226.2	88.8	128.48	2.1195	0.051
80.00	226.2	88.8	128.48	2.1125	0.051
80.50	226.3	88.9	128.48	2.1056	0.051
81.00	226.3	88.9	128.48	2.0988	0.051
81.50	226.3	88.9	128.49	2.0920	0.051
82.00	226.3	88.9	128.48	2.0854	0.051
82.50	226.3	89.0	128.49	2.0788	0.051
83.00	226.3	89.0	128.48	2.0723	0.051
83.50	226.4	89.1	128.47	2.0659	0.051
84.00	226.4	89.0	128.49	2.0595	0.051
84.50	226.4	89.0	128.48	2.0533	0.051
85.00	226.4	89.1	128.48	2.0471	0.051
85.50	226.4	89.0	128.47	2.0409	0.051
86.00	226.3	88.9	128.48	2.0349	0.051
86.50	226.3	89.0	128.47	2.0289	0.051
87.00	226.4	89.0	128.49	2.0230	0.051
87.50	226.4	89.1	128.48	2.0171	0.051
88.00	226.5	89.1	128.47	2.0114	0.051
88.50	226.5	89.1	128.47	2.0056	0.051
89.00	226.5	89.1	128.47	2.0000	0.051
89.50	226.4	89.1	128.47	1.9944	0.051
90.00	226.5	89.2	128.48	1.9889	0.051
90.50	226.5	89.1	128.47	1.9834	0.051
91.00	226.5	89.1	128.46	1.9780	0.051
91.50	226.5	89.2	128.47	1.9727	0.051
92.00	226.6	89.2	128.47	1.9674	0.051
92.50	226.5	89.2	128.47	1.9622	0.051
93.00	226.6	89.2	128.48	1.9570	0.051
93.50	226.6	89.3	128.47	1.9519	0.051
94.00	226.5	89.2	128.48	1.9468	0.051
94.50	226.6	89.3	128.47	1.9418	0.051
95.00	226.6	89.2	128.47	1.9368	0.051
95.50	226.5	89.2	128.47	1.9319	0.051
96.00	226.7	89.3	128.48	1.9271	0.051
96.50	226.6	89.3	128.47	1.9223	0.051
97.00	226.6	89.3	128.46	1.9175	0.051
97.50	226.6	89.3	128.47	1.9128	0.051
98.00	226.7	89.3	128.48	1.9082	0.051
98.50	226.7	89.4	128.47	1.9036	0.051
99.00	226.7	89.3	128.47	1.8990	0.051
99.50	226.7	89.4	128.47	1.8945	0.051
100.00	226.7	89.4	128.47	1.8900	0.051
100.50	226.8	89.5	128.47	1.8856	0.051
101.00	226.7	89.4	128.46	1.8812	0.051
101.50	226.8	89.4	128.47	1.8768	0.051
102.00	226.9	89.5	128.47	1.8725	0.051
102.50	226.8	89.5	128.48	1.8683	0.051
103.00	226.9	89.5	128.47	1.8641	0.051
103.50	226.9	89.5	128.47	1.8599	0.051
104.00	226.7	89.4	128.47	1.8558	0.051

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10539 Ranken Energy Corp. Miller #1-21 DST #1

DATE: 10/02/97

TIME: 01:40:09

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶	
104.50	226.7	89.4	128.47	1.8517	0.051	
105.00	226.9	89.5	128.47	1.8476	0.051	
105.50	226.8	89.5	128.46	1.8436	0.051	
106.00	226.8	89.4	128.47	1.8396	0.051	
106.50	226.8	89.4	128.47	1.8357	0.051	
107.00	226.8	89.5	128.46	1.8318	0.051	
107.50	226.8	89.5	128.47	1.8279	0.051	
108.00	226.8	89.5	128.47	1.8241	0.051	
108.50	226.8	89.5	128.47	1.8203	0.051	
109.00	226.8	89.5	128.47	1.8165	0.051	
109.50	226.9	89.6	128.46	1.8128	0.051	
110.00	226.9	89.6	128.48	1.8091	0.051	
110.50	226.9	89.6	128.46	1.8054	0.051	
111.00	226.9	89.6	128.48	1.8018	0.052	
111.50	226.9	89.6	128.47	1.7982	0.051	
112.00	227.0	89.6	128.47	1.7946	0.052	
112.50	226.9	89.6	128.48	1.7911	0.052	
113.00	227.0	89.6	128.47	1.7876	0.052	
113.50	227.1	89.7	128.48	1.7841	0.052	
114.00	227.0	89.7	128.47	1.7807	0.052	
114.50	227.1	89.8	128.47	1.7773	0.052	
115.00	227.0	89.7	128.47	1.7739	0.052	
115.50	227.0	89.6	128.47	1.7706	0.052	
116.00	227.0	89.7	128.47	1.7672	0.052	
116.50	227.1	89.8	128.46	1.7639	0.052	
117.00	227.1	89.7	128.47	1.7607	0.052	
117.50	227.1	89.7	128.49	1.7574	0.052	
118.50	227.0	89.7	128.47	1.7511	0.052	
119.00	227.0	89.7	128.47	1.7479	0.052	
119.50	227.0	89.7	128.47	1.7448	0.052	
120.00	227.1	89.7	128.48	1.7417	0.052	
120.50	227.1	89.8	128.47	1.7386	0.052	
121.00	227.1	89.8	128.47	1.7355	0.052	
121.50	227.1	89.8	128.47	1.7325	0.052	
122.00	227.1	89.8	128.46	1.7295	0.052	
122.50	227.2	89.8	128.47	1.7265	0.052	
123.00	227.2	89.8	128.48	1.7236	0.052	
123.50	227.1	89.8	128.46	1.7206	0.052	
124.00	227.1	89.8	128.47	1.7177	0.052	
***** End Shut-in 2	124.50	227.2	89.8	128.47	1.7149	0.052
***** Final Hydro.	399.00	2045.9	0.0	128.60		

TEST HISTORY

10539 Ranken Energy Corp. Miller #1-21 DST #1

Flag Points

t (Min.) P (PSig)

A:	0.00	2067.41
B:	0.00	20.30
C:	32.50	81.62
D:	59.50	226.77
E:	0.00	83.50
F:	56.50	137.35
G:	124.50	227.18
H:	0.00	2045.93

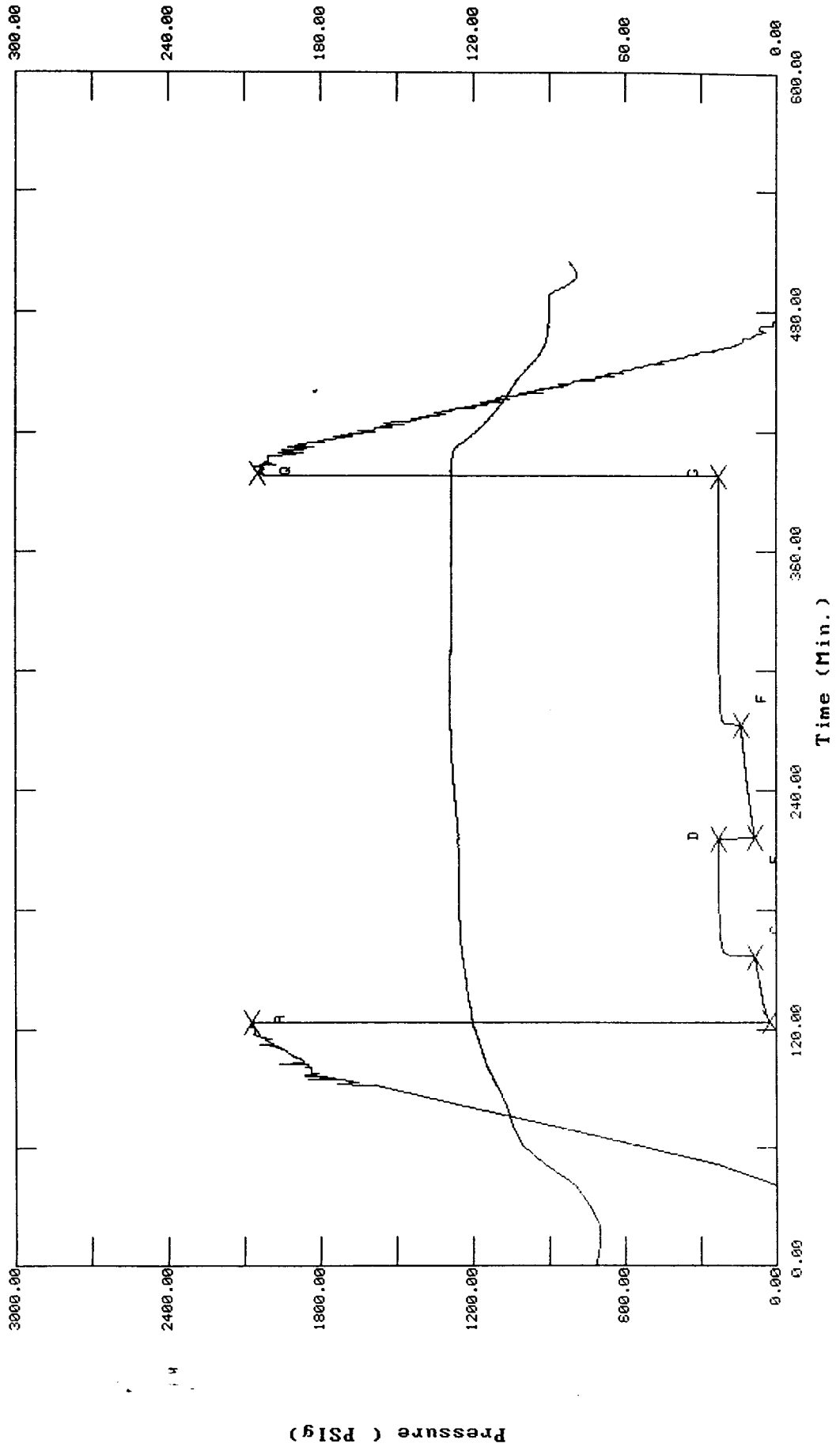
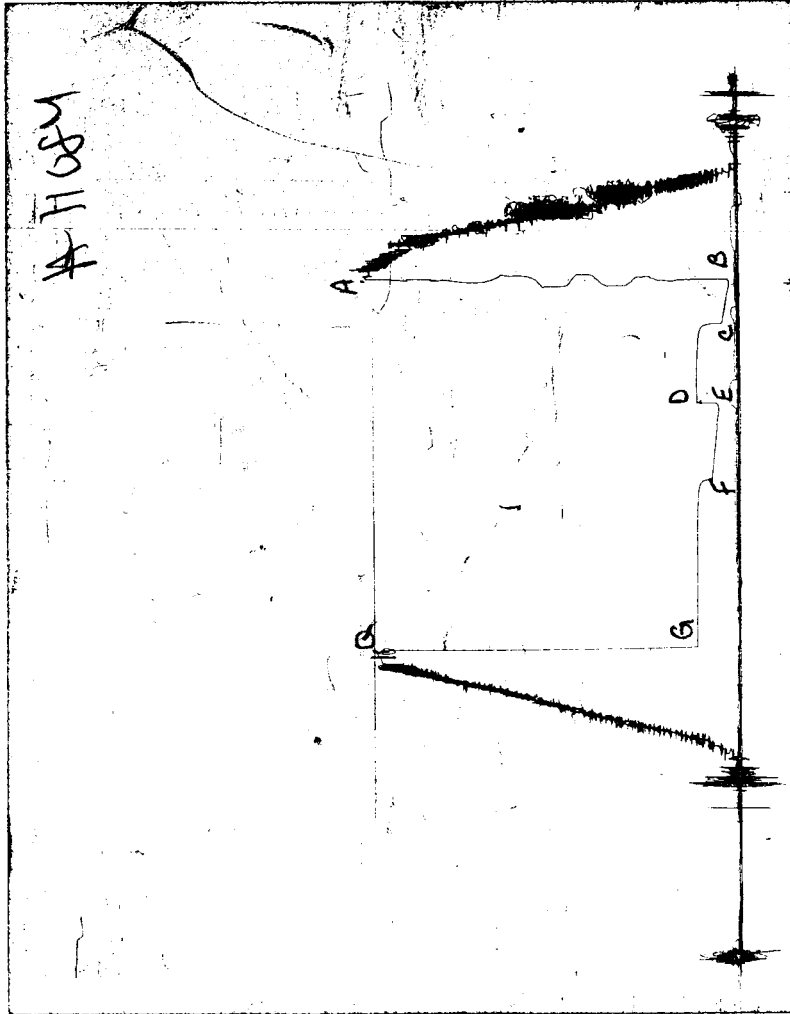


CHART PAGE



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

TRILOBITE TESTING L.L.C.

OPERATOR : Ranken Energy Corp.
 WELL NAME: Miller #1-21
 LOCATION : Sec21 T16s R29w Lane KS
 INTERVAL : 4374.00 To 4437.00 ft

DATE 10/03/97

KB 2808.00 ft TICKET NO: 10540 DST #2
 GR 2800.00 ft FORMATION: Altamont, Myrick, Pawn
 TD 4437.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	AK-1	AK-1	Alpine			PF Fr. 0653 to 0723 hr
SI 60 Range (Psi)	4300.0	4300.0	4995.0	0.0	0.0	IS Fr. 0723 to 0823 hr
SF 2 Clock (hrs)	12hr	12hr	Elec			SF Fr. 0823 to 0825 hr
FS 0 Depth (ft)	4400.0	4400.0	4375.0	0.0	0.0	FS Fr. to hr

	Field	1	2	3	4	
A. Init Hydro	2252.0	2229.0	2205.0	0.0	0.0	T STARTED 0534 hr
B. First Flow	55.0	36.0	19.0	0.0	0.0	T ON BOTM 0651 hr
B1. Final Flow	66.0	40.0	33.0	0.0	0.0	T OPEN 0653 hr
C. In Shut-in	1002.0	975.0	985.0	0.0	0.0	T PULLED 0825 hr
D. Init Flow	66.0	52.0	35.0	0.0	0.0	T OUT 0947 hr
E. Final Flow	0.0	0.0	38.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2241.0	2174.0	2202.0	0.0	0.0	Tool Wt. 3400.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 44000.00 lbs
						Initial Str Wt 38000.00 lbs
						Unseated Str Wt 38000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 30.00 ft
						D.P. Length 4159.00 ft

RECOVERY

Tot Fluid 15.00 ft of 15.00 ft in DC and 0.00 ft in DP
 15.00 ft of mud with oil scum in tool
 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

MUD DATA-----

Mud Type Chemical
 Weight 9.50 lb/cf
 Vis. 48.00 S/L
 W.L. 8.80 in3
 F.C. 0.00 in
 Mud Drop

BLOW DESCRIPTION

Initial Flow-
 weak blow died in 25 minutes
 Initial Shutin-
 no blow
 Final Flow-
 no blow flush tool surge died in
 2 minutes
 Final Shutin-
 no blow

Amt. of fill 0.00 ft
 Btm. H. Temp. 126.00 F
 Hole Condition good
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out
 Tool Chased
 Tester Paul Simpson
 Co. Rep. Steve Davis
 Contr. Discovery
 Rig # 2
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Miller #1-21

LOCATION : Sec21 T16s R29w Lane KS

TICKET No. 10540 D.S.T. No. 2 DATE 10/03/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 21

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 32 perf

TOTAL TOOL 53

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

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

TOTAL ASSEMBLY 84

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

D.P. ABOVE TOOLS.Stands70 Single 1 Total 4346

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4460

TOTAL DEPTH 4437

TOTAL DRILL PIPE ABOVE K.B. 23

REMARKS:

P.O. SUB		
C.O. SUB Top of tool @		4354
S.I. TOOL H & T		4360
HMV Sterling		4365
JARS Sterling		n/a
SAFETY JOINT Bowen		n/a
PACKER Top		4369
PACKER Bottom		4374
DEPTH	4374	
STUBB 1'		4375
ANCHOR		
Alpine rec. @4375		
5' perf		4380
5' perf		4385
5' perf		4390
T.C.		
DEPTH		
5' perf		4395
5' perf		4400
AK-1 rec @ 4400		
1 joint of pipe		
@ subs to		4432
BULLNOSE 5' bullplug		
T.D. to		4437

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10540 Ranken Energy Corp. Miller #1-21 DST #2
 DATE: 10/03/97 TIME: 04:56:10

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	115.50	2205.5	0.0	121.24		
***** Start Flow 1	0.00	18.6	0.0	121.17		
	0.50	19.2	0.6	121.22		
	1.00	19.6	1.0	121.24		
	1.50	20.1	1.5	121.23		
	2.00	20.4	1.8	121.23		
	2.50	20.9	2.3	121.25		
	3.00	21.1	2.5	121.23		
	3.50	21.3	2.7	121.22		
	4.00	21.8	3.2	121.21		
	4.50	22.2	3.6	121.18		
	5.00	22.3	3.7	121.19		
	5.50	22.5	3.9	121.16		
	6.00	22.7	4.1	121.15		
	6.50	22.9	4.3	121.14		
	7.00	23.1	4.5	121.14		
	7.50	23.3	4.7	121.12		
	8.00	23.5	4.9	121.13		
	8.50	23.6	5.0	121.12		
	9.00	23.7	5.1	121.12		
	9.50	23.9	5.3	121.12		
	10.00	24.1	5.6	121.13		
	10.50	24.4	5.8	121.12		
	11.00	24.5	5.9	121.13		
	11.50	24.8	6.2	121.13		
	12.00	25.0	6.4	121.13		
	12.50	25.3	6.7	121.15		
	13.00	25.4	6.9	121.16		
	13.50	25.7	7.1	121.17		
	14.00	25.9	7.3	121.17		
	14.50	26.2	7.6	121.19		
	15.00	26.4	7.8	121.19		
	15.50	26.5	7.9	121.21		
	16.00	26.6	8.0	121.21		
	16.50	26.9	8.3	121.23		
	17.00	27.2	8.6	121.24		
	17.50	27.3	8.7	121.25		
	18.00	27.4	8.8	121.26		
	18.50	27.6	9.0	121.27		
	19.00	27.6	9.0	121.29		
	19.50	27.9	9.3	121.31		
	20.00	28.1	9.5	121.33		
	20.50	28.3	9.7	121.33		
	21.00	28.4	9.8	121.36		
	21.50	28.7	10.1	121.36		
	22.00	28.8	10.2	121.39		
	22.50	28.9	10.3	121.39		
	23.00	29.1	10.5	121.41		
	23.50	29.4	10.8	121.43		
	24.00	29.5	10.9	121.45		
	24.50	29.6	11.0	121.47		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10540 Ranken Energy Corp. Miller #1-21 DST #2

DATE: 10/03/97 TIME: 04:56:10

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	25.00	29.9	11.3	121.48		
	25.50	29.9	11.3	121.50		
	26.00	30.2	11.6	121.52		
	26.50	30.4	11.8	121.54		
	27.00	30.5	11.9	121.56		
	27.50	30.7	12.1	121.58		
	28.00	30.8	12.2	121.59		
	28.50	31.1	12.5	121.62		
	29.00	31.3	12.7	121.63		
	29.50	31.5	12.9	121.65		
	30.00	31.6	13.0	121.67		
	30.50	31.7	13.1	121.69		
	31.00	31.7	13.1	121.72		
***** End Flow 1	31.50	32.5	13.9	121.72		
***** Start Shutin 1	0.00	32.5	0.0	121.72	0.0000	0.001
	0.50	34.9	2.4	121.75	64.0000	0.001
	1.00	37.3	4.8	121.77	32.5000	0.001
	1.50	40.0	7.5	121.78	22.0000	0.002
	2.00	42.8	10.3	121.81	16.7500	0.002
	2.50	45.9	13.4	121.82	13.6000	0.002
	3.00	49.2	16.7	121.85	11.5000	0.002
	3.50	53.0	20.5	121.87	10.0000	0.003
	4.00	57.2	24.7	121.89	8.8750	0.003
	4.50	61.9	29.4	121.91	8.0000	0.004
	5.00	67.1	34.6	121.93	7.3000	0.005
	5.50	73.1	40.6	121.96	6.7273	0.005
	6.00	80.0	47.5	121.98	6.2500	0.006
	6.50	87.9	55.4	121.99	5.8462	0.008
	7.00	97.1	64.6	122.02	5.5000	0.009
	7.50	108.0	75.4	122.05	5.2000	0.012
	8.00	120.7	88.2	122.07	4.9375	0.015
	8.50	136.0	103.4	122.08	4.7059	0.018
	9.00	154.2	121.6	122.11	4.5000	0.024
	9.50	176.0	143.4	122.13	4.3158	0.031
	10.00	202.0	169.5	122.16	4.1500	0.041
	10.50	232.3	199.8	122.19	4.0000	0.054
	11.00	266.9	234.4	122.22	3.8636	0.071
	11.50	305.3	272.8	122.23	3.7391	0.093
	12.00	346.4	313.8	122.27	3.6250	0.120
	12.50	388.9	356.4	122.30	3.5200	0.151
	13.00	431.1	398.6	122.32	3.4231	0.186
	13.50	472.2	439.7	122.35	3.3333	0.223
	14.00	511.5	479.0	122.39	3.2500	0.262
	14.50	548.3	515.8	122.40	3.1724	0.301
	15.00	582.5	550.0	122.44	3.1000	0.339
	15.50	613.5	581.0	122.47	3.0323	0.376
	16.00	641.8	609.3	122.49	2.9688	0.412
	16.50	667.6	635.1	122.53	2.9091	0.446
	17.00	690.8	658.3	122.55	2.8529	0.477
	17.50	711.8	679.3	122.63	2.8000	0.507
	18.00	730.8	698.3	122.65	2.7500	0.534

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10540 Ranken Energy Corp. Miller #1-21 DST #2

DATE: 10/03/97

TIME: 04:56:10

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
18.50	748.1	715.6	122.69	2.7027	0.560
19.00	763.7	731.2	122.72	2.6579	0.583
19.50	777.8	745.3	122.76	2.6154	0.605
20.00	790.8	758.3	122.79	2.5750	0.625
20.50	802.6	770.1	122.81	2.5366	0.644
21.00	813.2	780.7	122.83	2.5000	0.661
21.50	823.1	790.6	122.86	2.4651	0.677
22.00	832.1	799.6	122.91	2.4318	0.692
22.50	840.5	807.9	122.93	2.4000	0.706
23.00	848.2	815.7	122.95	2.3696	0.719
23.50	855.3	822.7	122.99	2.3404	0.731
24.00	861.9	829.4	123.00	2.3125	0.743
24.50	867.9	835.4	123.04	2.2857	0.753
25.00	873.7	841.2	123.07	2.2600	0.763
25.50	878.9	846.4	123.09	2.2353	0.773
26.00	883.9	851.4	123.12	2.2115	0.781
26.50	888.5	856.0	123.16	2.1887	0.789
27.00	892.9	860.4	123.19	2.1667	0.797
27.50	897.0	864.5	123.20	2.1455	0.805
28.00	900.8	868.3	123.23	2.1250	0.812
28.50	904.5	872.0	123.24	2.1053	0.818
29.00	907.9	875.4	123.28	2.0862	0.824
29.50	911.1	878.6	123.32	2.0678	0.830
30.00	914.2	881.7	123.33	2.0500	0.836
30.50	917.2	884.7	123.36	2.0328	0.841
31.00	919.9	887.4	123.36	2.0161	0.846
31.50	922.6	890.1	123.40	2.0000	0.851
32.00	925.1	892.6	123.45	1.9844	0.856
32.50	927.6	895.0	123.44	1.9692	0.860
33.00	929.9	897.4	123.47	1.9545	0.865
33.50	932.1	899.6	123.48	1.9403	0.869
34.00	934.1	901.6	123.49	1.9265	0.873
34.50	936.2	903.7	123.52	1.9130	0.877
35.00	938.1	905.6	123.55	1.9000	0.880
35.50	940.0	907.5	123.57	1.8873	0.884
36.00	941.7	909.2	123.59	1.8750	0.887
36.50	943.4	910.9	123.61	1.8630	0.890
37.00	945.3	912.8	123.63	1.8514	0.894
37.50	947.0	914.5	123.64	1.8400	0.897
38.00	948.6	916.1	123.67	1.8289	0.900
38.50	950.1	917.6	123.69	1.8182	0.903
39.00	951.5	919.0	123.70	1.8077	0.905
39.50	952.9	920.4	123.72	1.7975	0.908
40.00	954.2	921.7	123.74	1.7875	0.911
40.50	955.6	923.0	123.76	1.7778	0.913
41.00	956.9	924.3	123.76	1.7683	0.916
41.50	958.1	925.6	123.79	1.7590	0.918
42.00	959.3	926.7	123.81	1.7500	0.920
42.50	960.4	927.9	123.83	1.7412	0.922
43.00	961.5	929.0	123.84	1.7326	0.924
43.50	962.6	930.1	123.86	1.7241	0.927

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10540 Ranken Energy Corp. Miller #1-21 DST #2

DATE: 10/03/97

TIME: 04:56:10

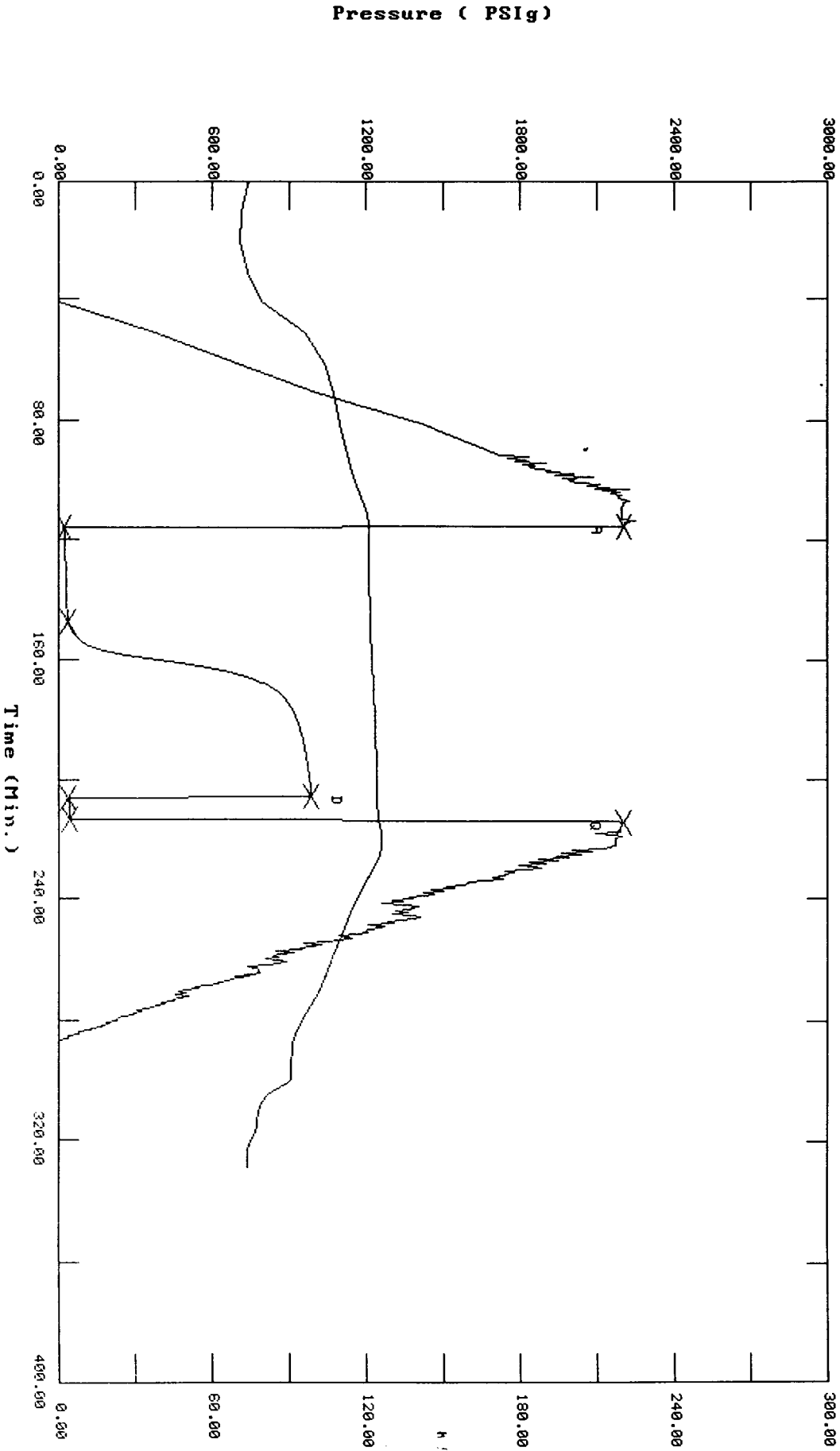
	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	44.00	963.6	931.1	123.88	1.7159	0.928
	44.50	964.6	932.1	123.90	1.7079	0.930
	45.00	965.5	933.0	123.91	1.7000	0.932
	45.50	966.5	934.0	123.92	1.6923	0.934
	46.00	967.4	934.9	123.95	1.6848	0.936
	46.50	968.3	935.8	123.97	1.6774	0.938
	47.00	969.3	936.8	123.98	1.6702	0.940
	47.50	970.2	937.7	124.01	1.6632	0.941
	48.00	971.0	938.5	124.00	1.6562	0.943
	48.50	972.0	939.5	124.03	1.6495	0.945
	49.00	972.7	940.2	124.04	1.6429	0.946
	49.50	973.5	941.0	124.05	1.6364	0.948
	50.00	974.3	941.8	124.06	1.6300	0.949
	50.50	975.1	942.6	124.09	1.6238	0.951
	51.00	975.8	943.3	124.10	1.6176	0.952
	51.50	976.5	944.0	124.10	1.6117	0.954
	52.00	977.3	944.8	124.12	1.6058	0.955
	52.50	978.0	945.5	124.14	1.6000	0.956
	53.00	978.7	946.2	124.16	1.5943	0.958
	53.50	979.3	946.8	124.18	1.5888	0.959
	54.00	980.0	947.5	124.18	1.5833	0.960
	54.50	980.6	948.1	124.21	1.5780	0.962
	55.00	981.3	948.8	124.21	1.5727	0.963
	55.50	981.8	949.3	124.23	1.5676	0.964
	56.00	982.5	950.0	124.25	1.5625	0.965
	56.50	983.1	950.6	124.26	1.5575	0.967
	57.00	983.7	951.2	124.28	1.5526	0.968
	57.50	984.3	951.8	124.29	1.5478	0.969
	58.00	984.8	952.3	124.31	1.5431	0.970
***** End Shut-in 1	58.50	985.3	952.8	124.35	1.5385	0.971
***** Start Flow 2	0.00	35.4	0.0	124.29		
	0.50	34.0	-1.3	124.30		
	1.00	33.9	-1.5	124.29		
	1.50	37.0	1.6	124.30		
	2.00	37.1	1.8	124.32		
	2.50	37.3	2.0	124.35		
	3.00	37.5	2.1	124.39		
	3.50	37.6	2.2	124.42		
	4.00	37.7	2.3	124.47		
	4.50	37.8	2.4	124.51		
	5.00	37.9	2.6	124.55		
	5.50	38.0	2.7	124.58		
	6.00	38.1	2.8	124.60		
	6.50	38.2	2.9	124.63		
***** End Flow 2	7.00	38.3	2.9	124.67		
***** Start Shutin 2	0.00	38.3	0.0	124.67	0.0000	0.001
	0.50	2180.9	2142.6	124.82	78.0000	4.756
***** End Shut-in 2	1.00	2200.4	2162.1	124.93	39.5000	4.842
***** Final Hydro.	214.50	2200.4	0.0	124.93		

10540 Ranken Energy Corp. Miller #1-21 DST #2

TEST HISTORY

Flag Points

Flag Points	Time (Min.)	Pressure (PSig)
A:	0.00	2205.53
B:	0.00	18.60
C:	31.50	32.51
D:	58.50	985.33
E:	0.00	35.37
F:	7.00	38.32
G:	0.00	2200.44

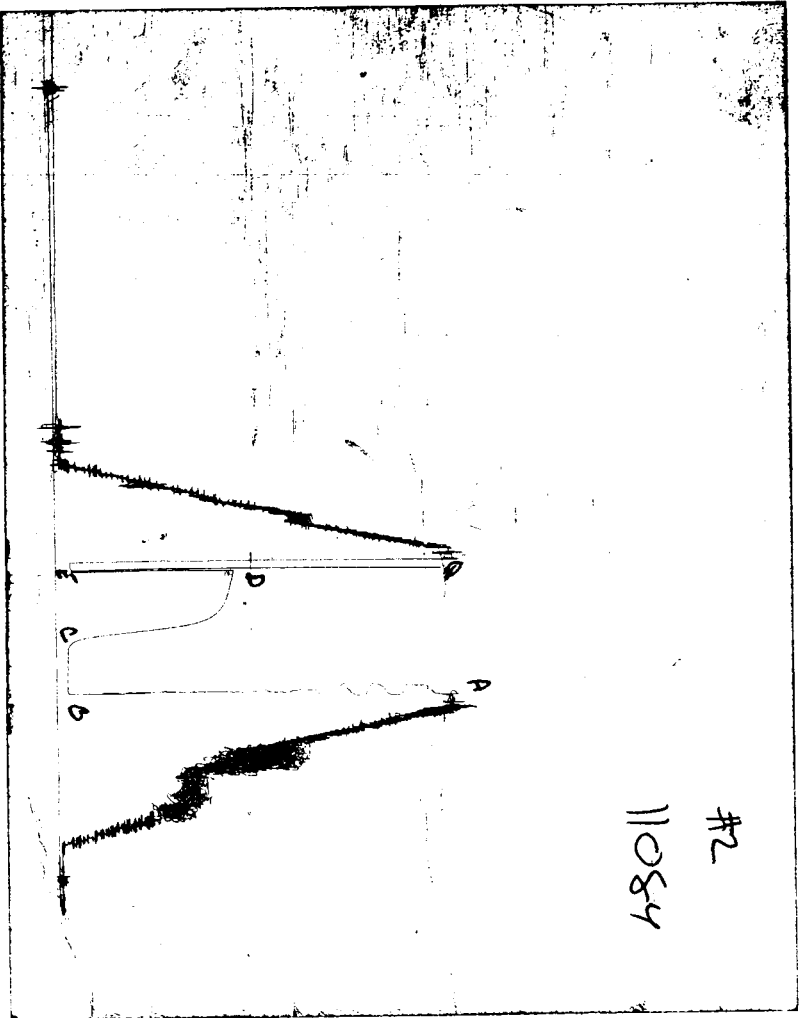


Pressure (PSig)

Temperature (DEG F)

Time (Min.)

CHART PAGE



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

TRILOBITE TESTING L.L.C.

OPERATOR : Ranken Energy Corp.
 WELL NAME: Miller #1-21
 LOCATION : Sec21 T16s R29w Lane KS
 INTERVAL : 4273.00 To 4480.00 ft

DATE 10/04/97

KB 2808.00 ft TICKET NO: 10541 DST #3
 GR 2800.00 ft FORMATION: Lenapah-Lwr.Ft.Scott
 TD 4643.00 ft TEST TYPE: CONV-STRADDLE

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	AK-1	AK-1	Alpine	Straddl		PF Fr. 2225 to 2255 hr
SI 45 Range(Psi)	3050.0	3050.0	4995.0	4400.0	0.0	IS Fr. 2255 to 2340 hr
SF 5 Clock(hrs)	12hr	12hr	Elec	12hr		SF Fr. 2340 to 2345 hr
FS 0 Depth(ft)	4475.0	4475.0	4279.0	4482.0	0.0	FS Fr. to hr

	Field	1	2	3	4	
A. Init Hydro	2292.0	2286.0	2188.0	0.0	0.0	T STARTED 2055 hr
B. First Flow	164.0	160.0	35.0	0.0	0.0	T ON BOTM 2222 hr
B1. Final Flow	164.0	160.0	52.0	0.0	0.0	T OPEN 2225 hr
C. In Shut-in	1062.0	1053.0	994.0	0.0	0.0	T PULLED 2345 hr
D. Init Flow	164.0	173.0	52.0	0.0	0.0	T OUT 0105 hr
E. Final Flow	164.0	173.0	54.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2229.0	2223.0	2137.0	0.0	0.0	Tool Wt. 9800.00 lbs
Inside/Outside	0	0	I	B		Wt Set On Packer 22000.00 lbs
						Wt Pulled Loose 52000.00 lbs
						Initial Str Wt 42000.00 lbs
						Unseated Str Wt 42000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 30.00 ft
						D.P. Length 4229.00 ft

RECOVERY

Tot Fluid 65.00 ft of 30.00 ft in DC and 35.00 ft in DP
 65.00 ft of mud with oil scum at top
 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-
 weak 1" blow decreasing to 3/4"
 Initial Shutin-
 no blow
 Final Flow-
 weak surace blow died in 3 minutes
 Final Shutin-
 no blow

SAMPLES:
 SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 9.70 lb/cf
 Vis. 57.00 S/L
 W.L. 8.90 in3
 F.C. 0.00 in
 Mud Drop
 Amt. of fill 0.00 ft
 Btm. H. Temp. 108.00 F
 Hole Condition good
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 3
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out
 Tool Chased
 Tester Paul Simpson
 Co. Rep. Steve Davis
 Contr. Discovery
 Rig # 2
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV-STRADDLE

WELL NAME: Miller #1-21

LOCATION : Sec21 T16s R29w Lane KS

TICKET No. 10541 D.S.T. No. 3 DATE 10/04/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 21

INTERVAL TOOL 163 tail

BOTTOM PACKERS AND ANCHOR 23 perf

TOTAL TOOL 207

DRILL COLLAR ANCHOR IN INTERVAL

T.C. ANCHOR STANDS Single Total

T.P. ANCHOR STANDS 3 Single Total 184

TOTAL ASSEMBLY 391

T.C. ABOVE TOOLS STANDS Single 1 Total 30

T.P. ABOVE TOOLS STANDS 68 Single 1 Total 4229

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4650

TOTAL DEPTH 4643

TOTAL DRILL PIPE ABOVE K.B. 7

REMARKS:

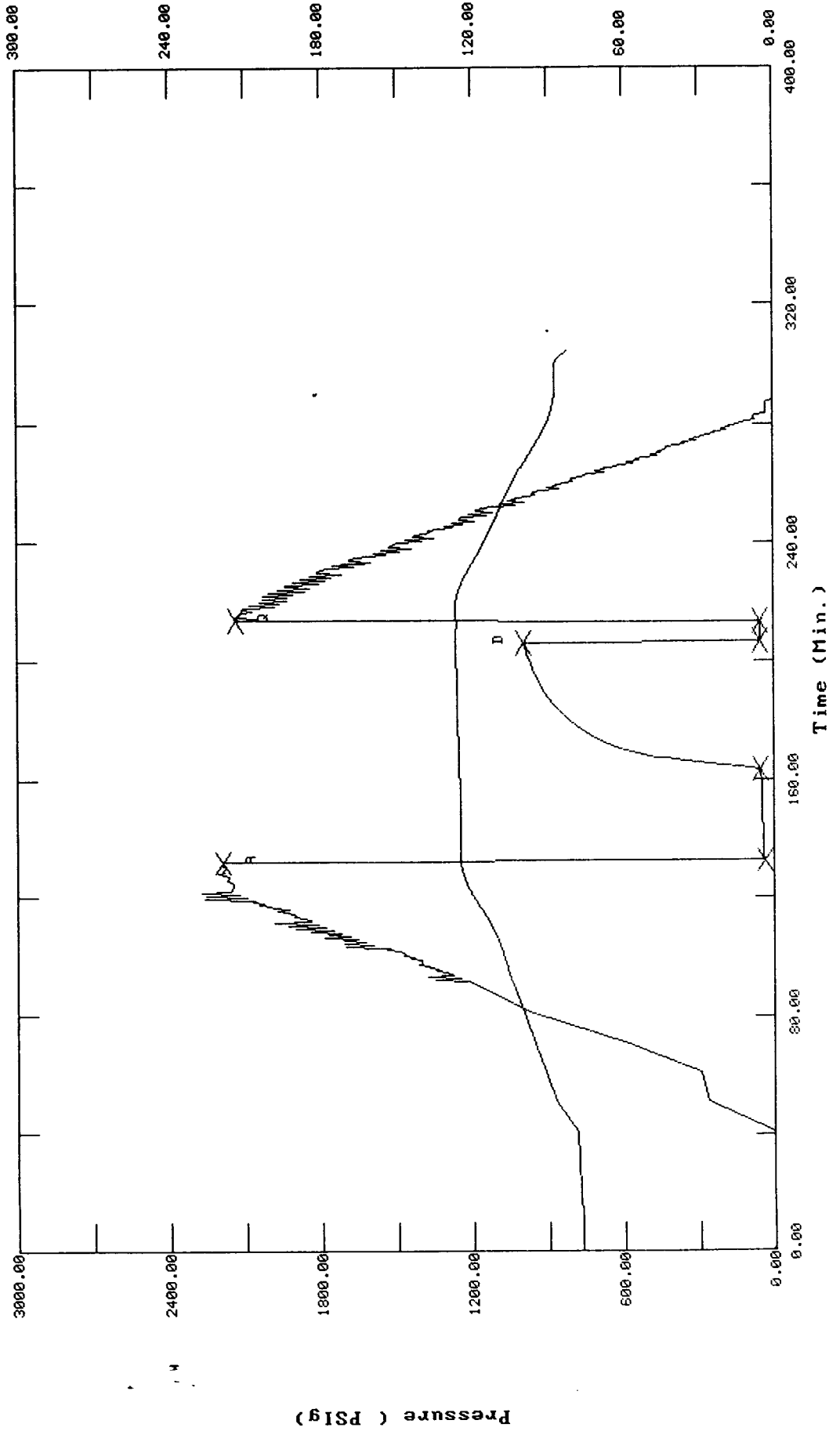
P.O. SUB	
C.O. SUB Top of tool @	4253
S.I. TOOL H & T	4259
HMV Sterling	4264
JARS Sterling	n/a
SAFETY JOINT Bowen	n/a
PACKER Top	4268
PACKER Bottom	4273
DEPTH	4273
STUBB 1'	4274
ANCHOR	
5' perf	4279
Alpine rec. @	4279
3 stands of pipe & subs to	4465
5' perf	4470
AK-1 rec @	4475
5' perf	4475
T.C. blank off sub	4476
DEPTH	
PACKER Straddle	4480
Stub	4481
1' perf	4482
AK-1 rec @	4482
5 joints of pipe @ subs to	4638
BULLNOSE 5' bullplug to	4643
T.D.	

TEST HISTORY

10541 Ranken Energy Corp. Miller #1-21 DST #3

Flag Points

t (Min.)	P (PSig)
A: 0.00	2187.97
B: 0.00	34.77
C: 31.00	51.55
D: 43.00	993.72
E: 0.00	51.67
F: 6.50	53.88
G: 0.00	2137.03



 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10541 Ranken Energy Corp. Miller #1-21 DST #3
 DATE: 10/04/97 TIME: 20:13:12

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	132.00	2188.0	0.0	124.85		
***** Start Flow 1	0.00	34.8	0.0	124.82		
	0.50	36.4	1.6	124.86		
	1.00	37.6	2.8	124.91		
	1.50	38.6	3.9	124.92		
	2.00	39.1	4.3	124.91		
	2.50	39.6	4.8	124.93		
	3.00	40.0	5.2	124.93		
	3.50	40.3	5.5	124.92		
	4.00	40.2	5.4	124.90		
	4.50	39.4	4.6	124.90		
	5.00	39.5	4.7	124.89		
	5.50	39.6	4.8	124.88		
	6.00	39.8	5.0	124.86		
	6.50	40.0	5.3	124.84		
	7.00	40.3	5.5	124.85		
	7.50	40.5	5.7	124.83		
	8.00	40.7	5.9	124.82		
	8.50	40.9	6.1	124.81		
	9.00	41.0	6.3	124.80		
	9.50	41.2	6.5	124.79		
	10.00	41.5	6.7	124.79		
	10.50	41.6	6.9	124.78		
	11.00	41.9	7.1	124.78		
	11.50	42.1	7.3	124.77		
	12.00	42.4	7.7	124.77		
	12.50	42.7	7.9	124.76		
	13.00	42.9	8.2	124.76		
	13.50	43.1	8.4	124.77		
	14.00	43.4	8.6	124.78		
	14.50	43.5	8.7	124.76		
	15.00	43.7	8.9	124.77		
	15.50	43.9	9.1	124.77		
	16.00	44.0	9.2	124.78		
	16.50	44.2	9.4	124.79		
	17.00	44.4	9.6	124.80		
	17.50	44.5	9.7	124.80		
	18.00	44.7	9.9	124.80		
	18.50	44.8	10.0	124.81		
	19.00	45.0	10.2	124.81		
	19.50	45.2	10.5	124.82		
	20.00	45.5	10.7	124.84		
	20.50	45.6	10.9	124.85		
	21.00	45.8	11.1	124.86		
	21.50	46.0	11.3	124.87		
	22.00	46.2	11.5	124.88		
	22.50	46.5	11.7	124.89		
	23.00	46.6	11.8	124.90		
	23.50	46.8	12.0	124.90		
	24.00	47.0	12.3	124.93		
	24.50	47.2	12.5	124.93		

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10541 Ranken Energy Corp. Miller #1-21 DST #3

DATE: 10/04/97 TIME: 20:13:12

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
25.00	47.5	12.7	124.95		
25.50	47.7	12.9	124.96		
26.00	48.0	13.2	124.97		
26.50	48.0	13.3	124.98		
27.00	48.1	13.4	125.00		
27.50	48.3	13.6	125.00		
28.00	48.5	13.7	125.02		
28.50	48.7	13.9	125.03		
29.00	48.8	14.0	125.05		
29.50	48.9	14.1	125.07		
30.00	49.0	14.2	125.08		
30.50	49.3	14.5	125.09		
31.00	51.5	16.8	125.10		

***** End Flow 1

***** Start Shutin 1

0.00	51.5	0.0	125.10	0.0000	0.003
0.50	90.9	39.4	125.12	63.0000	0.008
1.00	143.8	92.2	125.12	32.0000	0.021
1.50	200.4	148.8	125.16	21.6667	0.040
2.00	254.9	203.3	125.21	16.5000	0.065
2.50	305.2	253.7	125.23	13.4000	0.093
3.00	350.9	299.4	125.24	11.3333	0.123
3.50	392.3	340.8	125.26	9.8571	0.154
4.00	429.7	378.2	125.28	8.7500	0.185
4.50	463.6	412.1	125.29	7.8889	0.215
5.00	494.2	442.6	125.32	7.2000	0.244
5.50	521.9	470.3	125.35	6.6364	0.272
6.00	547.1	495.6	125.36	6.1667	0.299
6.50	570.1	518.5	125.39	5.7692	0.325
7.00	591.1	539.6	125.42	5.4286	0.349
7.50	610.4	558.8	125.44	5.1333	0.373
8.00	628.1	576.5	125.46	4.8750	0.394
8.50	644.5	593.0	125.49	4.6471	0.415
9.00	659.8	608.3	125.51	4.4444	0.435
9.50	674.1	622.5	125.54	4.2632	0.454
10.00	687.4	635.9	125.56	4.1000	0.473
10.50	699.7	648.2	125.59	3.9524	0.490
11.00	711.3	659.7	125.61	3.8182	0.506
11.50	722.0	670.5	125.62	3.6957	0.521
12.00	732.2	680.6	125.64	3.5833	0.536
12.50	742.1	690.5	125.65	3.4800	0.551
13.00	751.5	699.9	125.68	3.3846	0.565
13.50	760.4	708.8	125.70	3.2963	0.578
14.00	768.9	717.4	125.71	3.2143	0.591
14.50	777.1	725.6	125.73	3.1379	0.604
15.00	785.0	733.4	125.76	3.0667	0.616
15.50	792.8	741.2	125.73	3.0000	0.628
16.00	800.2	748.7	125.79	2.9375	0.640
16.50	807.5	756.0	125.82	2.8788	0.652
17.00	814.6	763.0	125.82	2.8235	0.664
17.50	821.5	769.9	125.86	2.7714	0.675
18.00	828.2	776.6	125.85	2.7222	0.686
18.50	834.6	783.1	125.86	2.6757	0.697

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 10541 Ranken Energy Corp. Miller #1-21 DST #3

DATE: 10/04/97

TIME: 20:13:12

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6	
	19.00	840.8	789.3	125.88	2.6316	0.707	
	19.50	846.9	795.3	125.89	2.5897	0.717	
	20.00	852.8	801.2	125.90	2.5500	0.727	
	20.50	858.5	807.0	125.92	2.5122	0.737	
	21.00	864.1	812.6	125.92	2.4762	0.747	
	21.50	869.5	817.9	125.93	2.4419	0.756	
	22.00	874.6	823.1	125.96	2.4091	0.765	
	22.50	879.7	828.1	125.99	2.3778	0.774	
	23.00	884.4	832.9	125.96	2.3478	0.782	
	23.50	889.1	837.6	126.00	2.3191	0.791	
	24.00	893.5	842.0	126.01	2.2917	0.798	
	24.50	897.9	846.3	126.03	2.2653	0.806	
	25.00	902.1	850.5	126.04	2.2400	0.814	
	25.50	906.1	854.5	126.05	2.2157	0.821	
	26.00	910.1	858.5	126.05	2.1923	0.828	
	26.50	913.9	862.3	126.07	2.1698	0.835	
	27.00	917.4	865.9	126.04	2.1481	0.842	
	27.50	921.1	869.5	126.09	2.1273	0.848	
	28.00	924.5	873.0	126.08	2.1071	0.855	
	28.50	927.9	876.3	126.11	2.0877	0.861	
	29.00	931.1	879.6	126.13	2.0690	0.867	
	29.50	934.2	882.6	126.15	2.0508	0.873	
	30.00	937.2	885.6	126.14	2.0333	0.878	
	30.50	940.1	888.6	126.16	2.0164	0.884	
	31.00	942.8	891.3	126.17	2.0000	0.889	
	31.50	945.6	894.1	126.18	1.9841	0.894	
	32.00	948.3	896.8	126.18	1.9688	0.899	
	32.50	951.0	899.4	126.20	1.9538	0.904	
	33.00	953.4	901.9	126.19	1.9394	0.909	
	33.50	955.9	904.4	126.21	1.9254	0.914	
	34.00	958.3	906.8	126.22	1.9118	0.918	
	34.50	960.6	909.1	126.24	1.8986	0.923	
	35.00	962.9	911.4	126.27	1.8857	0.927	
	35.50	965.3	913.8	126.25	1.8732	0.932	
	36.00	967.4	915.9	126.25	1.8611	0.936	
	36.50	969.6	918.0	126.27	1.8493	0.940	
	37.00	971.8	920.2	126.28	1.8378	0.944	
	37.50	973.9	922.3	126.27	1.8267	0.948	
	38.00	976.1	924.5	126.28	1.8158	0.953	
	38.50	978.0	926.5	126.30	1.8052	0.956	
	39.00	979.9	928.4	126.30	1.7949	0.960	
	39.50	981.7	930.2	126.32	1.7848	0.964	
	40.00	983.6	932.0	126.31	1.7750	0.967	
	40.50	985.4	933.9	126.32	1.7654	0.971	
	41.00	987.1	935.5	126.31	1.7561	0.974	
	41.50	988.8	937.3	126.34	1.7470	0.978	
	42.00	990.5	938.9	126.35	1.7381	0.981	
	42.50	992.1	940.6	126.36	1.7294	0.984	
*****	End Shut-in 1	43.00	993.7	942.2	126.37	1.7209	0.987
*****	Start Flow 2	0.00	51.7	0.0	126.35		
		0.50	52.0	0.3	126.33		

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

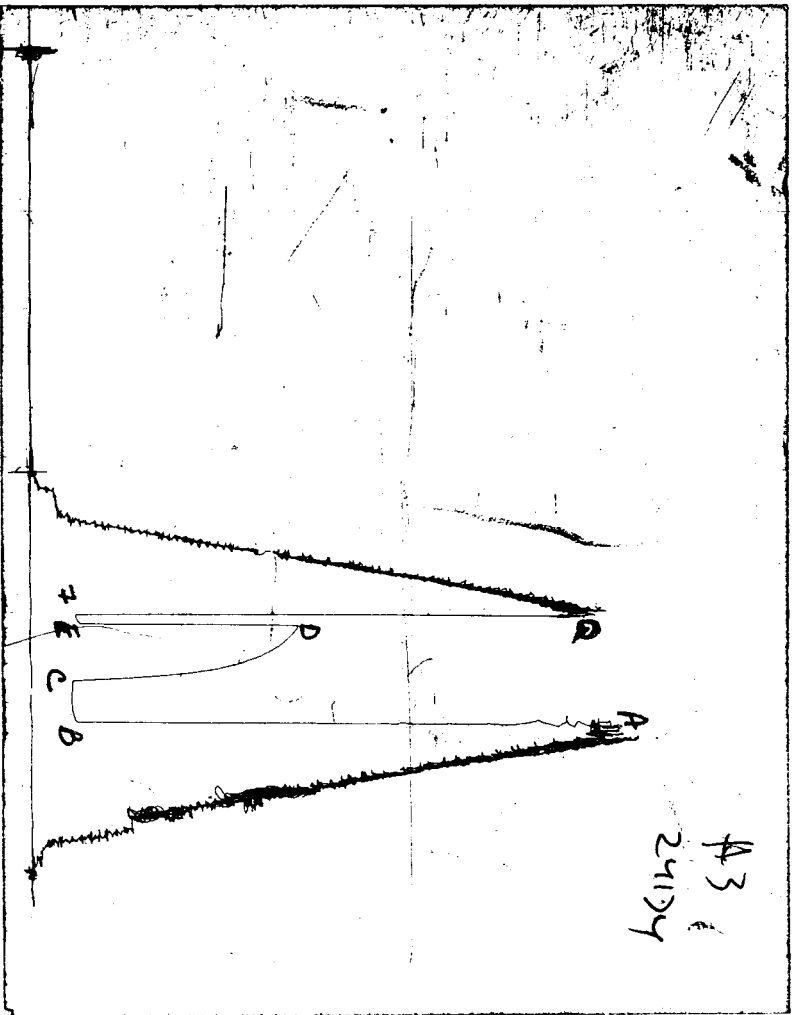
TEST: 10541 Ranken Energy Corp. Miller #1-21 DST #3

DATE: 10/04/97

TIME: 20:13:12

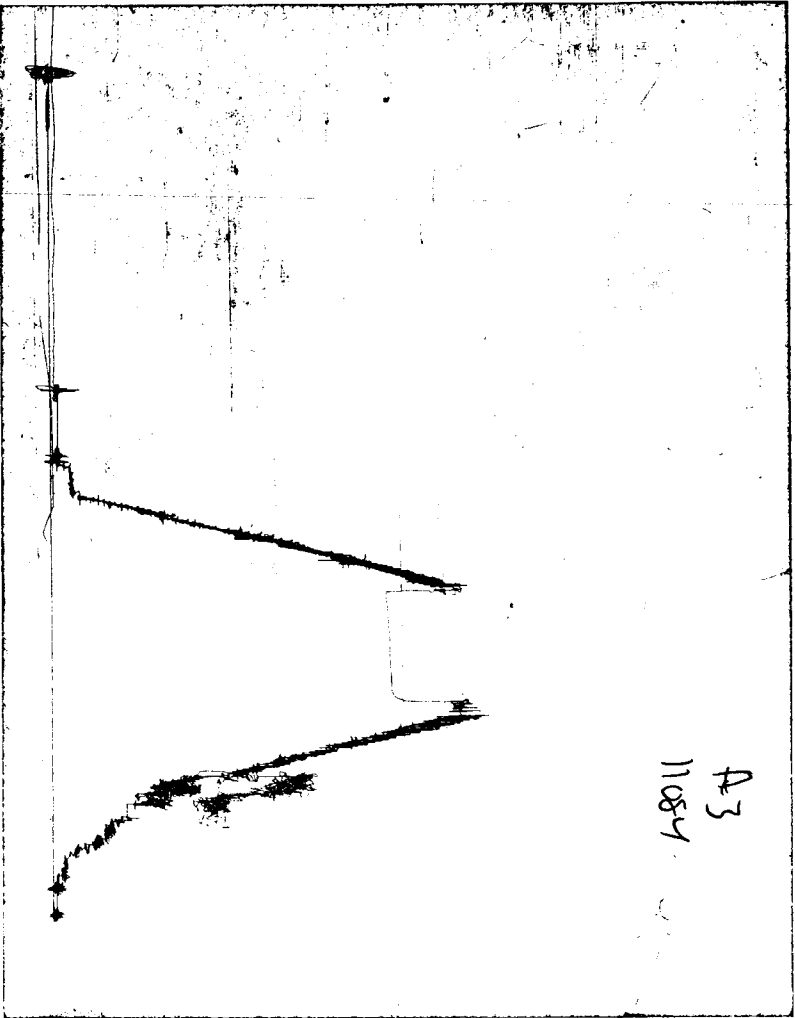
	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
	1.00	52.1	0.5	126.31		
	1.50	52.3	0.7	126.30		
	2.00	52.5	0.9	126.30		
	2.50	52.7	1.1	126.28		
	3.00	52.9	1.2	126.26		
	3.50	53.1	1.4	126.24		
	4.00	53.2	1.6	126.24		
	4.50	53.3	1.7	126.22		
	5.00	53.6	1.9	126.21		
	5.50	53.7	2.0	126.19		
	6.00	53.7	2.1	126.19		
*****	End Flow 2	6.50	53.9	2.2	126.17	
*****	Start Shutin 2	0.00	53.9	0.0	126.17	0.0000 0.003
*****	End Shut-in 2	0.50	2137.0	2083.1	126.26	76.0000 4.567
*****	Final Hydro.	214.00	2137.0	0.0	126.26	

CHART PAGE



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

CHART PAGE



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