

WELL NAME: Pauls #9-5
COMPANY: NARCO
LOCATION: 9-23S-31W
Finney County Kansas
DATE: 05/16/97

TRILOBITE TESTING L.L.C.

OPERATOR : NARCO
WELL NAME: Pauls #9-5
LOCATION : 9-23S-31W-Finny Co Ks
INTERVAL : 4775.00 To 4830.00 ft

DATE 5-15-97
KB 2897.00 ft
GR 2892.00 ft
TD 4830.00 ft
TICKET NO: 10154
FORMATION: Morrow
TEST TYPE: CONV
DST #1

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 15 Rec.	13754	13754	2357			PF Fr. 0939 to 0954 hr
SI 60 Range(Psi)	4000.0	4000.0	4995.0	0.0	0.0	IS Fr. 0954 to 1054 hr
SF 60 Clock(hrs)	12	12	Elect			SF Fr. 1054 to 1154 hr
FS 120 Depth(ft)	4827.0	4827.0	4779.0	0.0	0.0	FS Fr. 1154 to 1354 hr

	Field	1	2	3	4	
A. Init Hydro	2421.0	2414.0	2343.0	0.0	0.0	T STARTED 0737 hr
B. First Flow	88.0	94.0	41.0	0.0	0.0	T ON BOTM 0936 hr
Bl. Final Flow	137.0	135.0	106.0	0.0	0.0	T OPEN 0939 hr
C. In Shut-in	305.0	316.0	307.0	0.0	0.0	T PULLED 1354 hr
D. Init Flow	167.0	170.0	131.0	0.0	0.0	T OUT 1645 hr
E. Final Flow	246.0	256.0	245.0	0.0	0.0	
F. Fl Shut-in	305.0	309.0	307.0	0.0	0.0	
G. Final Hydro	2390.0	2389.0	2362.0	0.0	0.0	
Inside/Outside	O	O	I			

RECOVERY

Tot Fluid 484.00 ft of 0.00 ft in DC and 484.00 ft in DP
135.00 ft of Gas in pipe
112.00 ft of Clean gassy oil 20%g 80%
124.00 ft of Slightly mud cut gassy oil 60%g 35%o 5%
186.00 ft of Oil cut gassy mud 50%g 30%o 20%
62.00 ft of Oil & water cut gassy mud 20%g 10%o 10%w 60%
0.00 ft of
0.00 ft of
0.00 ft of
SALINITY 0.00 P.P.M. A.P.I. Gravity 30.00

TOOL DATA-----
Tool Wt. 1500.00 lbs
Wt Set On Packer 20000.00 lbs
Wt Pulled Loose 50000.00 lbs
Initial Str Wt 44000.00 lbs
Unseated Str Wt 45000.00 lbs
Bot Choke 0.75 in
Hole Size 7.88 in
D Col. ID 0.00 in
D. Pipe ID 3.80 in
D.C. Length 0.00 ft
D.P. Length 4765.00 ft

BLOW DESCRIPTION

Initial Blow-Weak-building to 14" fair
blow

Initial Shut In - no blow back

Final Blow-Weak-building to 10" fair
blow

Final Shut In-no blow back

SAMPLES:
SENT TO:

MUD DATA-----
Mud Type Chemical
Weight 9.40 lb/c
Vis. 50.00 S/L
W.L. 9.60 in3
F.C. 0.00 in
Mud Drop N

Amt. of fill 0.00 ft
Btm. H. Temp. 121.00 F
Hole Condition Good
% Porosity 0.00
Packer Size 6.75 in
No. of Packers 2
Cushion Amt. 0.00
Cushion Type
Reversed Out N
Tool Chased N
Tester Dan Bangle
Co. Rep. Ron Osterbahr
Contr. Abercrombie
Rig # 8
Unit #
Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Pauls #9-5

LOCATION : 9-23S-31W-Finny Co Ks

TICKET No. 10154 D.S.T. No. 1 DATE 5-15-97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 31

INTERVAL TOOL

TOTAL PACKERS AND ANCHOR 25

TOTAL TOOL 56

DRILL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single 1 Total 30

TOTAL ASSEMBLY 86

C. ABOVE TOOLS.Stands Single Total

P. ABOVE TOOLS.Stands 78 Single Total 4765

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4851

TOTAL DEPTH 4830

TOTAL DRILL PIPE ABOVE K.B. 21

REMARKS:

FLUID SAMPLER DATA

SAMPLER RECOVERY	PIT MUD ANALYSIS
GAS O	CHLORIDES 3500 ppm
OIL 4000ML	RESISTIVITY 0.7 OHMS
MUD O	@ 81.3 F
WATER O	VISCOSITY 50
PRESSURE 300psi	MUD WEIGHT 9.4
TOTAL 4000ML	FILTRATE 9.6

SAMPLER ANALYSIS

W	Ohms@	F
CHLORIDES	ppm	
GRAVITY 30	corrected @ 60 F	

P.O. SUB	
C.O. SUB	4747
S.I. TOOL Sterling	4753
HMV Sterling	4758
JARS Bowen	4763
SAFETY JOINT Bowen	4766
PACKER	4770
PACKER	4775
DEPTH 4775	
STUBB 1'	4776
ANCHOR 2' Perfs	4778
1' Co Sub	4779
Alpine Recorder	4779
1 Jt Dp 30'	4809
1' Co Sub	4810
T.C.	
DEPTH	
5' Perfs	4815
5' Perfs	4820
5' Perfs	4825
Ak-1 Recorder	4827
BULLNOSE 5' Bullplug	4830
T.D.	

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk# 10154 DST# 1 Pauls #9-5 NARCO

DATE: 05/15/97

TIME: 07:38:17

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	110.00	2342.8	0.0	108.22		
***** Start Flow 1	0.00	40.6	0.0	109.60		
	1.00	50.5	9.9	109.68		
	2.00	58.4	17.8	109.78		
	3.00	65.9	25.3	109.85		
	4.00	71.6	31.0	109.88		
	5.00	77.5	36.9	109.87		
	6.00	82.4	41.8	109.96		
	7.00	87.4	46.7	110.33		
	8.00	92.1	51.4	110.89		
	9.00	96.8	56.2	111.55		
	10.00	101.5	60.9	112.22		
***** End Flow 1	11.00	105.8	65.2	112.85		
***** Start Shutin 1	0.00	105.8	0.0	112.85	0.0000	0.011
	1.00	114.0	8.2	113.43	12.0000	0.013
	2.00	118.2	12.3	113.93	6.5000	0.014
	3.00	122.0	16.2	114.36	4.6667	0.015
	4.00	125.9	20.1	114.71	3.7500	0.016
	5.00	129.5	23.7	115.00	3.2000	0.017
	6.00	271.2	165.4	115.24	2.8333	0.074
	7.00	279.8	174.0	115.45	2.5714	0.078
	8.00	284.3	178.5	115.64	2.3750	0.081
	9.00	287.4	181.5	115.83	2.2222	0.083
	10.00	289.6	183.8	116.00	2.1000	0.084
	11.00	291.5	185.6	116.15	2.0000	0.085
	12.00	292.7	186.9	116.27	1.9167	0.086
	13.00	294.1	188.3	116.37	1.8462	0.086
	14.00	295.1	189.3	116.47	1.7857	0.087
	15.00	296.1	190.3	116.54	1.7333	0.088
	16.00	296.8	191.0	116.62	1.6875	0.088
	17.00	297.5	191.7	116.69	1.6471	0.089
	18.00	298.2	192.4	116.75	1.6111	0.089
	19.00	298.7	192.9	116.81	1.5789	0.089
	20.00	299.2	193.4	116.87	1.5500	0.090
	21.00	299.8	194.0	116.92	1.5238	0.090
	22.00	300.2	194.4	116.96	1.5000	0.090
	23.00	300.8	195.0	117.01	1.4783	0.090
	24.00	301.0	195.2	117.05	1.4583	0.091
	25.00	301.3	195.5	117.08	1.4400	0.091
	26.00	301.6	195.8	117.12	1.4231	0.091
	27.00	301.8	196.0	117.15	1.4074	0.091
	28.00	302.0	196.2	117.18	1.3929	0.091
	29.00	302.3	196.5	117.21	1.3793	0.091
	30.00	302.7	196.9	117.24	1.3667	0.092
	31.00	303.0	197.1	117.28	1.3548	0.092
	32.00	303.1	197.3	117.30	1.3438	0.092
	33.00	303.4	197.6	117.34	1.3333	0.092
	34.00	303.4	197.6	117.36	1.3235	0.092
	35.00	303.6	197.8	117.39	1.3143	0.092
	36.00	303.9	198.1	117.43	1.3056	0.092
	37.00	304.1	198.2	117.46	1.2973	0.092

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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DATE: 05/15/97 TIME: 07:38:17

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	38.00	304.1	198.2	117.49	1.2895	0.092
	39.00	304.1	198.3	117.52	1.2821	0.092
	40.00	304.3	198.5	117.56	1.2750	0.093
	41.00	304.4	198.6	117.59	1.2683	0.093
	42.00	304.6	198.8	117.64	1.2619	0.093
	43.00	304.6	198.8	117.68	1.2558	0.093
	44.00	304.6	198.8	117.72	1.2500	0.093
	45.00	305.0	199.2	117.76	1.2444	0.093
	46.00	305.0	199.2	117.80	1.2391	0.093
	47.00	305.1	199.2	117.84	1.2340	0.093
	48.00	305.4	199.6	117.87	1.2292	0.093
	49.00	305.3	199.5	117.90	1.2245	0.093
	50.00	305.5	199.7	117.94	1.2200	0.093
	51.00	305.6	199.8	117.97	1.2157	0.093
	52.00	305.6	199.8	118.00	1.2115	0.093
	53.00	305.6	199.7	118.03	1.2075	0.093
	54.00	305.7	199.9	118.05	1.2037	0.093
	55.00	305.9	200.1	118.09	1.2000	0.094
	56.00	305.9	200.1	118.11	1.1964	0.094
	57.00	306.1	200.2	118.13	1.1930	0.094
	58.00	306.1	200.2	118.17	1.1897	0.094
	59.00	306.2	200.3	118.20	1.1864	0.094
	60.00	306.3	200.5	118.22	1.1833	0.094
	61.00	306.3	200.5	118.25	1.1803	0.094
	62.00	306.3	200.5	118.27	1.1774	0.094
	63.00	306.4	200.6	118.29	1.1746	0.094
***** End Shut-in 1	64.00	306.5	200.7	118.32	1.1719	0.094
***** Start Flow 2	0.00	131.4	0.0	118.34		
	1.00	135.4	3.9	118.36		
	2.00	139.6	8.1	118.38		
	3.00	143.1	11.7	118.40		
	4.00	146.5	15.1	118.42		
	5.00	150.0	18.5	118.43		
	6.00	153.5	22.1	118.46		
	7.00	156.6	25.2	118.48		
	8.00	159.7	28.3	118.50		
	9.00	162.8	31.4	118.52		
	10.00	165.8	34.4	118.54		
	11.00	168.8	37.3	118.57		
	12.00	171.4	39.9	118.60		
	13.00	174.3	42.9	118.63		
	14.00	177.1	45.7	118.67		
	15.00	179.7	48.3	118.70		
	16.00	182.3	50.9	118.73		
	17.00	184.5	53.1	118.77		
	18.00	187.2	55.7	118.81		
	19.00	189.6	58.2	118.85		
	20.00	192.1	60.7	118.89		
	21.00	194.0	62.6	118.94		
	22.00	196.0	64.6	118.96		
	23.00	197.8	66.4	119.00		

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24.00	200.2	68.7	119.04		
25.00	202.1	70.7	119.07		
26.00	203.9	72.5	119.11		
27.00	206.2	74.8	119.14		
28.00	208.0	76.6	119.18		
29.00	209.9	78.5	119.22		
30.00	211.7	80.3	119.25		
31.00	213.6	82.2	119.28		
32.00	215.2	83.8	119.32		
33.00	217.0	85.6	119.33		
34.00	218.7	87.3	119.37		
35.00	220.7	89.3	119.40		
36.00	222.2	90.8	119.43		
37.00	224.0	92.6	119.46		
38.00	225.8	94.3	119.49		
39.00	226.9	95.5	119.51		
40.00	228.3	96.9	119.54		
41.00	229.3	97.9	119.56		
42.00	230.5	99.1	119.58		
43.00	231.7	100.3	119.60		
44.00	232.9	101.5	119.61		
45.00	234.0	102.6	119.64		
46.00	235.2	103.7	119.66		
47.00	236.2	104.7	119.68		
48.00	237.3	105.8	119.70		
49.00	238.3	106.8	119.72		
50.00	238.9	107.5	119.73		
51.00	239.7	108.3	119.76		
52.00	240.4	109.0	119.79		
53.00	241.1	109.7	119.83		
54.00	241.8	110.4	119.85		
55.00	242.4	111.0	119.88		
56.00	243.0	111.6	119.90		
57.00	243.6	112.2	119.93		
58.00	244.3	112.9	119.95		
59.00	245.0	113.6	119.97		

***** End Flow 2

***** Start Shutin 2	0.00	245.0	0.0	119.97	0.0000	0.060
	1.00	288.2	43.2	120.00	71.0000	0.083
	2.00	291.9	46.9	120.02	36.0000	0.085
	3.00	293.7	48.8	120.04	24.3333	0.086
	4.00	294.7	49.8	120.06	18.5000	0.087
	5.00	295.6	50.6	120.07	15.0000	0.087
	6.00	296.4	51.4	120.10	12.6667	0.088
	7.00	296.9	52.0	120.11	11.0000	0.088
	8.00	297.4	52.5	120.14	9.7500	0.088
	9.00	298.0	53.0	120.16	8.7778	0.089
	10.00	298.4	53.5	120.17	8.0000	0.089
	11.00	298.7	53.7	120.19	7.3636	0.089
	12.00	299.2	54.2	120.21	6.8333	0.090
	13.00	299.4	54.5	120.22	6.3846	0.090
	14.00	299.8	54.8	120.23	6.0000	0.090

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15.00	299.9	55.0	120.24	5.6667	0.090
16.00	300.2	55.2	120.26	5.3750	0.090
17.00	300.6	55.6	120.27	5.1176	0.090
18.00	300.7	55.7	120.28	4.8889	0.090
19.00	300.9	55.9	120.29	4.6842	0.091
20.00	301.1	56.1	120.31	4.5000	0.091
21.00	301.3	56.3	120.32	4.3333	0.091
22.00	301.4	56.4	120.33	4.1818	0.091
23.00	301.6	56.7	120.35	4.0435	0.091
24.00	301.6	56.7	120.35	3.9167	0.091
25.00	301.8	56.8	120.37	3.8000	0.091
26.00	302.0	57.0	120.36	3.6923	0.091
27.00	302.0	57.1	120.38	3.5926	0.091
28.00	302.2	57.2	120.38	3.5000	0.091
29.00	302.3	57.3	120.40	3.4138	0.091
30.00	302.4	57.4	120.40	3.3333	0.091
31.00	302.6	57.6	120.41	3.2581	0.092
32.00	302.6	57.6	120.42	3.1875	0.092
33.00	302.7	57.7	120.43	3.1212	0.092
34.00	302.8	57.8	120.43	3.0588	0.092
35.00	303.0	58.0	120.44	3.0000	0.092
36.00	303.0	58.1	120.45	2.9444	0.092
37.00	303.0	58.1	120.46	2.8919	0.092
38.00	303.2	58.2	120.47	2.8421	0.092
39.00	303.2	58.2	120.47	2.7949	0.092
40.00	303.3	58.3	120.48	2.7500	0.092
41.00	303.4	58.4	120.49	2.7073	0.092
42.00	303.4	58.4	120.50	2.6667	0.092
43.00	303.5	58.5	120.50	2.6279	0.092
44.00	303.6	58.6	120.50	2.5909	0.092
45.00	303.6	58.6	120.51	2.5556	0.092
46.00	303.6	58.7	120.52	2.5217	0.092
47.00	303.9	58.9	120.52	2.4894	0.092
48.00	303.7	58.7	120.53	2.4583	0.092
49.00	303.9	58.9	120.54	2.4286	0.092
50.00	304.0	59.0	120.54	2.4000	0.092
51.00	304.1	59.2	120.54	2.3725	0.092
52.00	304.1	59.2	120.55	2.3462	0.092
53.00	304.1	59.2	120.56	2.3208	0.092
54.00	304.1	59.2	120.56	2.2963	0.092
55.00	304.2	59.2	120.57	2.2727	0.093
56.00	304.2	59.2	120.58	2.2500	0.093
57.00	304.3	59.3	120.58	2.2281	0.093
58.00	304.3	59.3	120.59	2.2069	0.093
59.00	304.5	59.5	120.60	2.1864	0.093
60.00	304.5	59.5	120.61	2.1667	0.093
61.00	304.5	59.5	120.61	2.1475	0.093
62.00	304.6	59.6	120.62	2.1290	0.093
63.00	304.6	59.7	120.62	2.1111	0.093
64.00	304.6	59.6	120.63	2.0938	0.093
65.00	304.7	59.8	120.63	2.0769	0.093

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Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
66.00	304.7	59.8	120.64	2.0606	0.093
67.00	305.0	60.0	120.64	2.0448	0.093
68.00	305.0	60.0	120.66	2.0294	0.093
69.00	305.0	60.0	120.66	2.0145	0.093
70.00	305.1	60.1	120.66	2.0000	0.093
71.00	305.1	60.1	120.67	1.9859	0.093
72.00	305.2	60.2	120.68	1.9722	0.093
73.00	305.1	60.1	120.68	1.9589	0.093
74.00	305.2	60.3	120.69	1.9459	0.093
75.00	305.1	60.1	120.69	1.9333	0.093
76.00	305.2	60.3	120.70	1.9211	0.093
77.00	305.3	60.3	120.71	1.9091	0.093
78.00	305.4	60.4	120.72	1.8974	0.093
79.00	305.4	60.4	120.73	1.8861	0.093
80.00	305.5	60.5	120.73	1.8750	0.093
81.00	305.5	60.5	120.74	1.8642	0.093
82.00	305.6	60.6	120.74	1.8537	0.093
83.00	305.6	60.6	120.75	1.8434	0.093
84.00	305.6	60.6	120.76	1.8333	0.093
85.00	305.6	60.6	120.77	1.8235	0.093
86.00	305.6	60.7	120.78	1.8140	0.093
87.00	305.6	60.7	120.79	1.8046	0.093
88.00	305.6	60.7	120.79	1.7955	0.093
89.00	305.8	60.8	120.80	1.7865	0.094
90.00	306.0	61.0	120.81	1.7778	0.094
91.00	306.0	61.0	120.82	1.7692	0.094
92.00	305.9	60.9	120.82	1.7609	0.094
93.00	305.9	60.9	120.83	1.7527	0.094
94.00	305.9	60.9	120.83	1.7447	0.094
95.00	305.9	60.9	120.84	1.7368	0.094
96.00	305.9	60.9	120.85	1.7292	0.094
97.00	305.9	60.9	120.86	1.7216	0.094
98.00	306.1	61.1	120.86	1.7143	0.094
99.00	306.1	61.1	120.87	1.7071	0.094
100.00	306.1	61.1	120.88	1.7000	0.094
101.00	306.0	61.0	120.89	1.6931	0.094
102.00	306.0	61.0	120.89	1.6863	0.094
103.00	306.2	61.2	120.90	1.6796	0.094
104.00	306.2	61.2	120.91	1.6731	0.094
105.00	306.2	61.3	120.91	1.6667	0.094
106.00	306.1	61.1	120.92	1.6604	0.094
107.00	306.1	61.1	120.92	1.6542	0.094
108.00	306.2	61.2	120.93	1.6481	0.094
109.00	306.2	61.2	120.94	1.6422	0.094
110.00	306.2	61.3	120.94	1.6364	0.094
111.00	306.2	61.3	120.96	1.6306	0.094
112.00	306.3	61.3	120.96	1.6250	0.094
113.00	306.2	61.2	120.97	1.6195	0.094
114.00	306.3	61.4	120.99	1.6140	0.094
115.00	306.4	61.4	120.99	1.6087	0.094
116.00	306.2	61.3	121.00	1.6034	0.094

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk# 10154 DST# 1 Pauls #9-5 NARCO

DATE: 05/15/97 TIME: 07:38:17

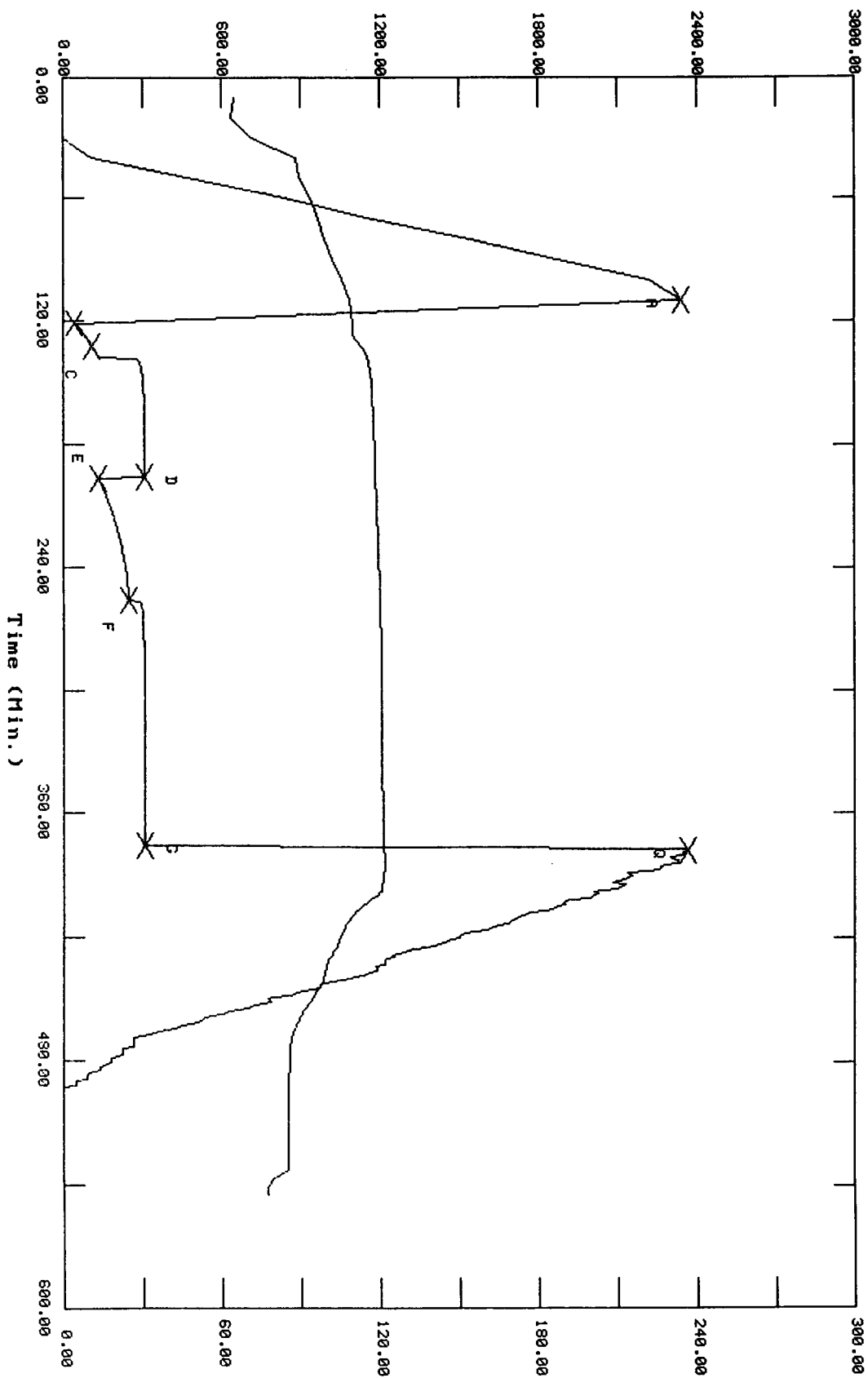
	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
	117.00	306.5	61.5	121.01	1.5983	0.094
	118.00	306.5	61.5	121.01	1.5932	0.094
	119.00	306.3	61.4	121.02	1.5882	0.094
***** End Shut-in 2	120.00	306.6	61.6	121.02	1.5833	0.094
***** Final Hydro.	378.00	2362.4	0.0	121.26		

TEST HISTORY

TR# 10154 DST# 1 Pauls #9-5 NARCO

Flag Points
t(Min.) P(PSig)

A:	0.00	2342.84
B:	0.00	40.61
C:	11.00	105.82
D:	64.00	306.50
E:	0.00	131.42
F:	59.00	244.98
G:	120.00	306.58
H:	0.00	2362.39

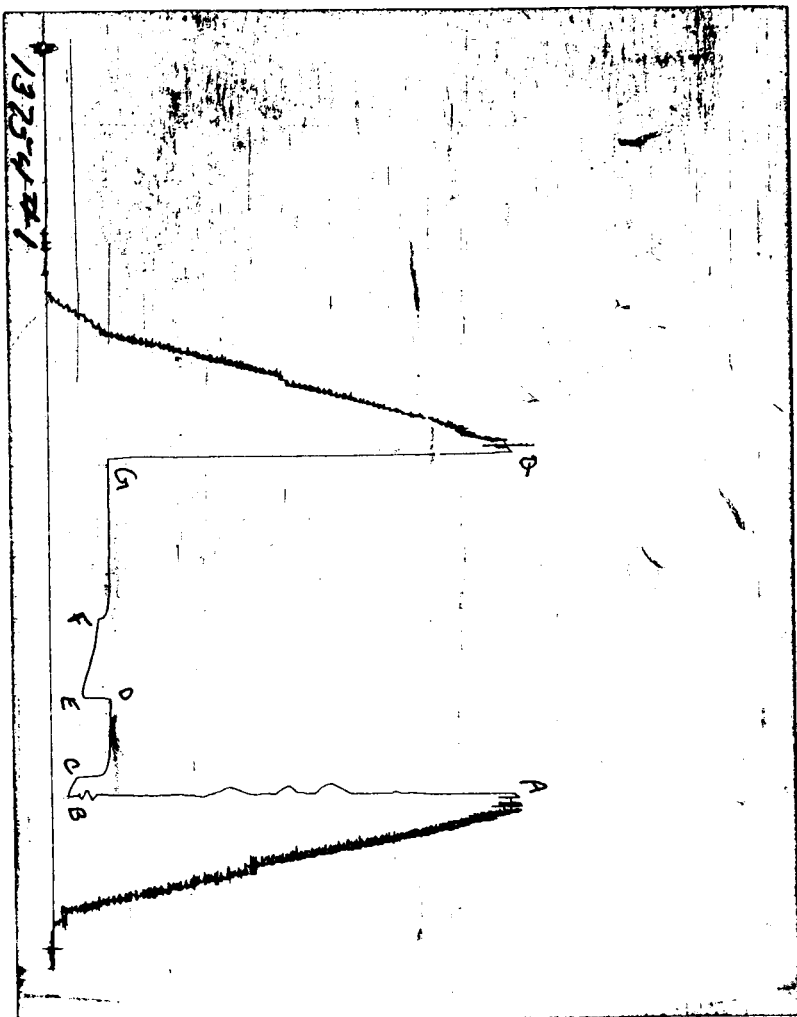


Pressure (PSig)

Temperature (DEG F)

Time (Min.)

CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 10184 Date 5-15-97
Company Name NARCO
Lease Pauls # 9-5 Test No. 1
County Finney Sec. 9 Twp. 23 Rng. 31

SAMPLER RECOVERY

Gas 0 ML
Oil 4000 ML
Mud 0 ML
Water 0 ML
Other _____ ML
Pressure 300 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 3500 ppm.
Resistivity 0.7 ohms @ 81.3 F
Viscosity 50
Mud Weight 9.4
Filtrate 9.6
Other _____

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
Gravity 30 corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.