| | |
|---|---|
| **WELL NAME:** | Charles Bosley |
| **COMPANY:** | Rheem Resources |
| **LOCATION:** | 3-19S-28W |
| | Lane County Kansas |
| **DATE:** | 04/17/97 |

TRILOBITE TESTING L.L.C.

OPERATOR : Rheem Resources — DATE 4-15-97
WELL NAME: Charles Bosley — KB 2741.00 ft — TICKET NO: 9960 — DST #1
LOCATION : 3-19-28 — GR 2736.00 ft — FORMATION: 140
INTERVAL : 4145.00 To 4170.00 ft — TD 4170.00 ft — TEST TYPE: CONV

RECORDER DATA

| Mins | | Field | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| PF 30 | Rec. | 11057 | 11057 | 2342 | | |
| SI 30 | Range(Psi ) | 4500.0 | 4500.0 | 4995.0 | 0.0 | 0.0 |
| SF 30 | Clock(hrs) | 12 hr | 12 hr | Elec | | |
| FS 30 | Depth(ft ) | 4165.0 | 4165.0 | 4146.0 | 0.0 | 0.0 |

TIME DATA----------
PF Fr. 0720 to 0750 hr
IS Fr. 0750 to 0820 hr
SF Fr. 0820 to 0850 hr
FS Fr. 0850 to 0920 hr

| | Field | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| A. Init Hydro | 2027.0 | 2033.0 | 2027.0 | 0.0 | 0.0 |
| B. First Flow | 22.0 | 50.0 | 10.0 | 0.0 | 0.0 |
| B1. Final Flow | 11.0 | 35.0 | 14.0 | 0.0 | 0.0 |
| C. In Shut-in | 939.0 | 945.0 | 967.0 | 0.0 | 0.0 |
| D. Init Flow | 33.0 | 64.0 | 14.0 | 0.0 | 0.0 |
| E. Final Flow | 22.0 | 45.0 | 15.0 | 0.0 | 0.0 |
| F. Fl Shut-in | 861.0 | 862.0 | 890.0 | 0.0 | 0.0 |
| G. Final Hydro | 2015.0 | 2019.0 | 2010.0 | 0.0 | 0.0 |
| Inside/Outside | O | O | I | | |

T STARTED 0511 hr
T ON BOTM 0717 hr
T OPEN 0720 hr
T PULLED 0920 hr
T OUT 1115 hr

RECOVERY
Tot Fluid 10.00 ft of 0.00 ft in DC and 10.00 ft in DP
10.00 ft of Drilling Mud with Oil specs 100 % 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

TOOL DATA----------

| | |
|---|---|
| Tool Wt. | 4000.00 lbs |
| Wt Set On Packer | 27000.00 lbs |
| Wt Pulled Loose | 58000.00 lbs |
| Initial Str Wt | 44000.00 lbs |
| Unseated Str Wt | 44000.00 lbs |
| Bot Choke | 0.75 in |
| Hole Size | 7.88 in |
| D Col. ID | 2.25 in |
| D. Pipe ID | 3.40 in |
| D.C. Length | 0.00 ft |
| D.P. Length | 4151.00 ft |
| H.W. Length | 570.00 ft |

BLOW DESCRIPTION
Initial Flow:
1/4" blow, died back to a weak 1/8"

Initial Shut In:
No return

Final Flow:
Bubble to open tool, no blow

Final Shut In:
No return

MUD DATA----------

| | |
|---|---|
| Mud Type | Chemical |
| Weight | 9.20 lb/c |
| Vis. | 48.00 S/L |
| W.L. | 8.80 in3 |
| F.C. | 0.00 in |
| Mud Drop Y | 15.0 ft |
| Amt. of fill | 0.00 ft |
| Btm. H. Temp. | 119.00 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 | Shane Mcbride |
| Co. Rep. | Scott Oatsdean |
| Contr. | Abercrombie |
| Rig # | 8 |
| Unit # | |
| Pump T. | |

SAMPLES:
SENT TO:

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Charles Bosley

LOCATION : 3-19-28

TICKET No. 9960 D.S.T. No. 1 DATE 4-15-97

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 22

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 25

TOTAL TOOL ..... 47

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY ..... 47

D.C. ABOVE TOOLS.Stands Single Total

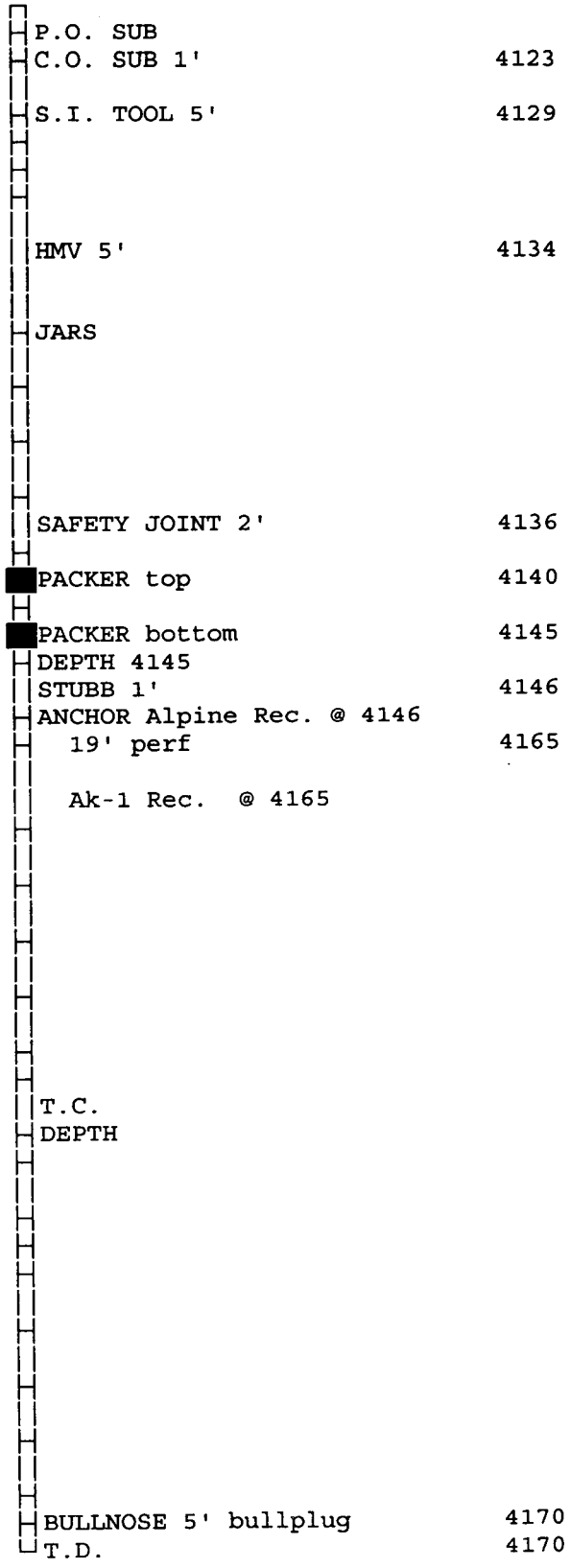
D.P. ABOVE TOOLS.Stands67 Single Total 4151

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4198

TOTAL DEPTH ..... 4170

TOTAL DRILL PIPE ABOVE K.B. ..... 28

REMARKS:



ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9960 DSt #1 Charles Bosley Rheem Resources

DATE: 04/15/97 TIME: 04:14:16

| | Time | Pressure PSIg | delta P PSIg | Temp. DEG F | (T+dT)/dT | P^2/10^6 |
|---|---|---|---|---|---|---|
| ****** Initial Hydro. | 128.00 | 2027.0 | 0.0 | 113.18 | | |
| ****** Start Flow 1 | 0.00 | 10.6 | 0.0 | 114.00 | | |
| | 1.00 | 10.9 | 0.3 | 114.28 | | |
| | 2.00 | 10.8 | 0.3 | 114.50 | | |
| | 3.00 | 11.2 | 0.6 | 114.66 | | |
| | 4.00 | 11.3 | 0.8 | 114.79 | | |
| | 5.00 | 11.5 | 0.9 | 114.87 | | |
| | 6.00 | 11.6 | 1.0 | 114.95 | | |
| | 7.00 | 11.7 | 1.1 | 115.00 | | |
| | 8.00 | 11.7 | 1.2 | 115.04 | | |
| | 9.00 | 11.8 | 1.3 | 115.08 | | |
| | 10.00 | 11.8 | 1.3 | 115.10 | | |
| | 11.00 | 11.9 | 1.3 | 115.12 | | |
| | 12.00 | 11.9 | 1.3 | 115.15 | | |
| | 13.00 | 12.0 | 1.4 | 115.16 | | |
| | 14.00 | 12.1 | 1.5 | 115.18 | | |
| | 15.00 | 12.2 | 1.6 | 115.20 | | |
| | 16.00 | 12.3 | 1.8 | 115.21 | | |
| | 17.00 | 12.4 | 1.8 | 115.23 | | |
| | 18.00 | 12.5 | 1.9 | 115.25 | | |
| | 19.00 | 12.6 | 2.0 | 115.28 | | |
| | 20.00 | 12.8 | 2.2 | 115.29 | | |
| | 21.00 | 12.7 | 2.1 | 115.32 | | |
| | 22.00 | 12.7 | 2.1 | 115.35 | | |
| | 23.00 | 12.9 | 2.3 | 115.37 | | |
| | 24.00 | 13.0 | 2.4 | 115.41 | | |
| | 25.00 | 13.1 | 2.5 | 115.44 | | |
| | 26.00 | 13.1 | 2.5 | 115.47 | | |
| | 27.00 | 13.2 | 2.6 | 115.51 | | |
| | 28.00 | 13.4 | 2.9 | 115.54 | | |
| | 29.00 | 13.4 | 2.9 | 115.58 | | |
| ****** End Flow 1 | 30.00 | 14.5 | 3.9 | 115.62 | | |
| ****** Start Shutin 1 | 0.00 | 14.5 | 0.0 | 115.62 | 0.0000 | 0.000 |
| | 1.00 | 19.6 | 5.1 | 115.65 | 31.0000 | 0.000 |
| | 2.00 | 27.0 | 12.5 | 115.70 | 16.0000 | 0.001 |
| | 3.00 | 38.3 | 23.8 | 115.75 | 11.0000 | 0.001 |
| | 4.00 | 57.1 | 42.6 | 115.80 | 8.5000 | 0.003 |
| | 5.00 | 89.5 | 74.9 | 115.86 | 7.0000 | 0.008 |
| | 6.00 | 149.4 | 134.9 | 115.90 | 6.0000 | 0.022 |
| | 7.00 | 238.1 | 223.6 | 115.96 | 5.2857 | 0.057 |
| | 8.00 | 336.8 | 322.3 | 116.03 | 4.7500 | 0.113 |
| | 9.00 | 429.2 | 414.7 | 116.08 | 4.3333 | 0.184 |
| | 10.00 | 508.9 | 494.4 | 116.15 | 4.0000 | 0.259 |
| | 11.00 | 575.8 | 561.3 | 116.21 | 3.7273 | 0.332 |
| | 12.00 | 631.5 | 617.0 | 116.29 | 3.5000 | 0.399 |
| | 13.00 | 678.0 | 663.5 | 116.35 | 3.3077 | 0.460 |
| | 14.00 | 717.4 | 702.9 | 116.42 | 3.1429 | 0.515 |
| | 15.00 | 751.0 | 736.5 | 116.48 | 3.0000 | 0.564 |
| | 16.00 | 779.4 | 764.9 | 116.55 | 2.8750 | 0.608 |
| | 17.00 | 805.5 | 791.0 | 116.62 | 2.7647 | 0.649 |
| | 18.00 | 828.0 | 813.5 | 116.67 | 2.6667 | 0.686 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9960 DSt #1 Charles Bosley Rheem Resources

DATE: 04/15/97 TIME: 04:14:16

| | Time | Pressure PSIg | delta P PSIg | Temp. DEG F | (T+dT)/dT | P^2/10^6 |
|---|---|---|---|---|---|---|
| | 19.00 | 847.6 | 833.1 | 116.74 | 2.5789 | 0.718 |
| | 20.00 | 865.5 | 850.9 | 116.79 | 2.5000 | 0.749 |
| | 21.00 | 881.2 | 866.7 | 116.85 | 2.4286 | 0.777 |
| | 22.00 | 895.4 | 880.9 | 116.90 | 2.3636 | 0.802 |
| | 23.00 | 908.2 | 893.7 | 116.95 | 2.3043 | 0.825 |
| | 24.00 | 920.1 | 905.6 | 117.01 | 2.2500 | 0.847 |
| | 25.00 | 931.1 | 916.6 | 117.06 | 2.2000 | 0.867 |
| | 26.00 | 941.1 | 926.6 | 117.12 | 2.1538 | 0.886 |
| | 27.00 | 950.4 | 935.9 | 117.17 | 2.1111 | 0.903 |
| | 28.00 | 958.9 | 944.4 | 117.22 | 2.0714 | 0.919 |
| ***** End Shut-in 1 | 29.00 | 966.8 | 952.2 | 117.21 | 2.0345 | 0.935 |
| ***** Start Flow 2 | 0.00 | 14.1 | 0.0 | 117.28 | | |
| | 1.00 | 14.3 | 0.3 | 117.30 | | |
| | 2.00 | 14.3 | 0.3 | 117.32 | | |
| | 3.00 | 14.3 | 0.3 | 117.34 | | |
| | 4.00 | 14.3 | 0.3 | 117.36 | | |
| | 5.00 | 14.3 | 0.3 | 117.39 | | |
| | 6.00 | 14.5 | 0.4 | 117.42 | | |
| | 7.00 | 14.5 | 0.4 | 117.45 | | |
| | 8.00 | 14.7 | 0.6 | 117.49 | | |
| | 9.00 | 14.8 | 0.7 | 117.55 | | |
| | 10.00 | 14.8 | 0.7 | 117.62 | | |
| | 11.00 | 14.9 | 0.8 | 117.70 | | |
| | 12.00 | 15.0 | 0.9 | 117.77 | | |
| | 13.00 | 15.2 | 1.1 | 117.84 | | |
| | 14.00 | 15.2 | 1.1 | 117.90 | | |
| | 15.00 | 15.2 | 1.1 | 117.96 | | |
| | 16.00 | 15.3 | 1.2 | 118.02 | | |
| | 17.00 | 15.4 | 1.3 | 118.07 | | |
| | 18.00 | 15.4 | 1.3 | 118.12 | | |
| | 19.00 | 15.5 | 1.4 | 118.16 | | |
| | 20.00 | 15.6 | 1.5 | 118.21 | | |
| | 21.00 | 15.6 | 1.5 | 118.26 | | |
| | 22.00 | 15.7 | 1.6 | 118.30 | | |
| | 23.00 | 15.8 | 1.7 | 118.34 | | |
| | 24.00 | 15.8 | 1.7 | 118.38 | | |
| | 25.00 | 15.8 | 1.7 | 118.42 | | |
| | 26.00 | 15.8 | 1.7 | 118.45 | | |
| | 27.00 | 15.8 | 1.7 | 118.49 | | |
| | 28.00 | 15.8 | 1.7 | 118.52 | | |
| | 29.00 | 15.8 | 1.7 | 118.56 | | |
| | 30.00 | 15.9 | 1.8 | 118.59 | | |
| ****** End Flow 2 | 31.00 | 15.5 | 1.4 | 118.63 | | |
| ****** Start Shutin 2 | 0.00 | 15.5 | 0.0 | 118.63 | 0.0000 | 0.000 |
| | 1.00 | 20.0 | 4.4 | 118.67 | 62.0000 | 0.000 |
| | 2.00 | 25.7 | 10.2 | 118.70 | 31.5000 | 0.001 |
| | 3.00 | 33.2 | 17.7 | 118.74 | 21.3333 | 0.001 |
| | 4.00 | 43.8 | 28.3 | 118.79 | 16.2500 | 0.002 |
| | 5.00 | 59.3 | 43.8 | 118.81 | 13.2000 | 0.004 |
| | 6.00 | 83.4 | 67.9 | 118.86 | 11.1667 | 0.007 |
| | 7.00 | 122.3 | 106.8 | 118.89 | 9.7143 | 0.015 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9960 DSt #1 Charles Bosley Rheem Resources

DATE: 04/15/97 TIME: 04:14:16

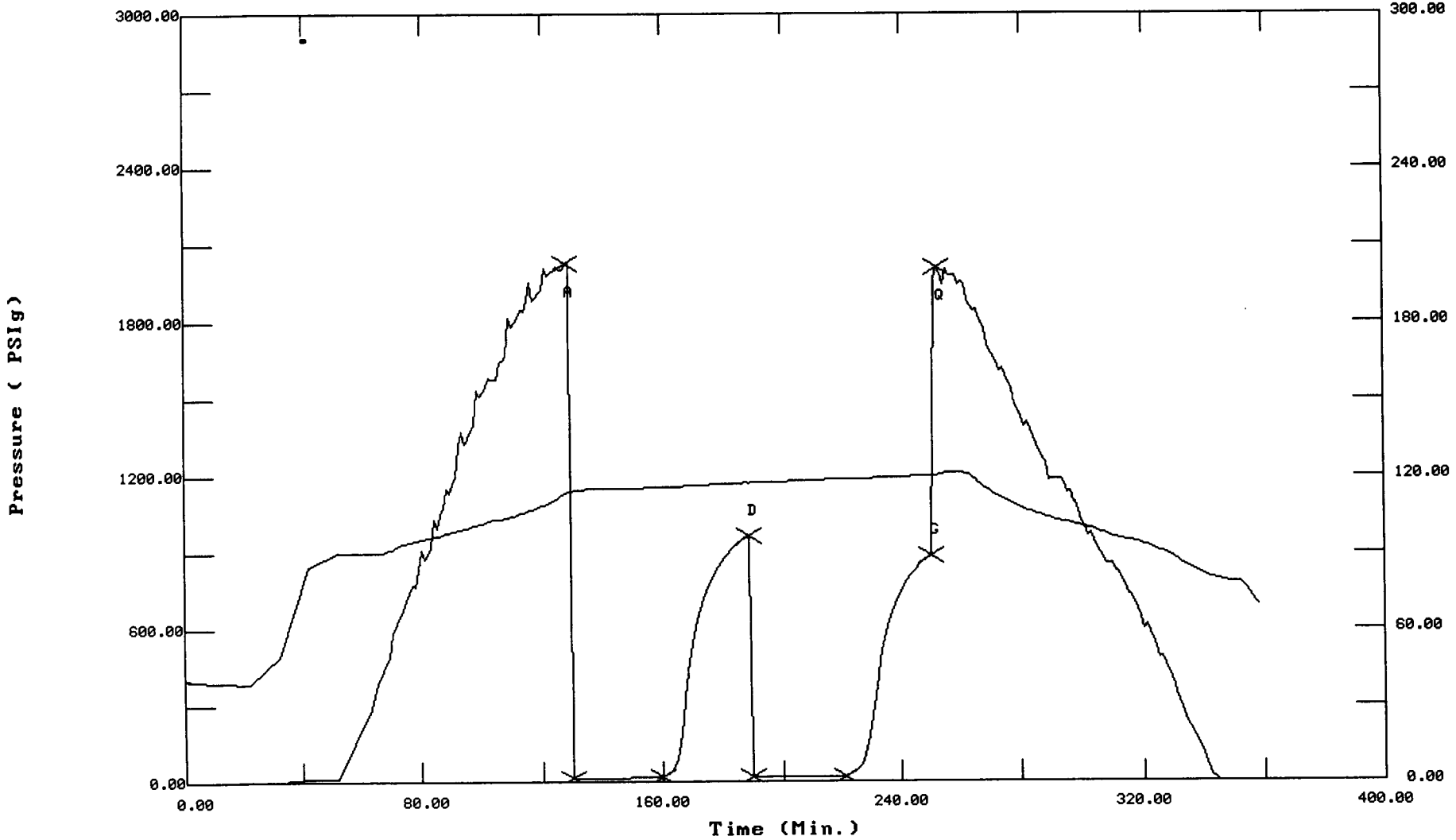
| | Time | Pressure PSIg | delta P PSIg | Temp. DEG F | (T+dT)/dT | P^2/10^6 |
|---|---|---|---|---|---|---|
| | 8.00 | 180.3 | 164.8 | 118.94 | 8.6250 | 0.032 |
| | 9.00 | 255.2 | 239.7 | 118.98 | 7.7778 | 0.065 |
| | 10.00 | 335.8 | 320.3 | 119.03 | 7.1000 | 0.113 |
| | 11.00 | 412.2 | 396.6 | 119.08 | 6.5455 | 0.170 |
| | 12.00 | 479.4 | 463.9 | 119.14 | 6.0833 | 0.230 |
| | 13.00 | 537.7 | 522.2 | 119.18 | 5.6923 | 0.289 |
| | 14.00 | 587.3 | 571.8 | 119.24 | 5.3571 | 0.345 |
| | 15.00 | 629.8 | 614.3 | 119.30 | 5.0667 | 0.397 |
| | 16.00 | 666.0 | 650.5 | 119.35 | 4.8125 | 0.444 |
| | 17.00 | 697.5 | 682.0 | 119.39 | 4.5882 | 0.487 |
| | 18.00 | 724.8 | 709.3 | 119.45 | 4.3889 | 0.525 |
| | 19.00 | 748.7 | 733.2 | 119.48 | 4.2105 | 0.561 |
| | 20.00 | 770.3 | 754.8 | 119.54 | 4.0500 | 0.593 |
| | 21.00 | 788.9 | 773.4 | 119.58 | 3.9048 | 0.622 |
| | 22.00 | 806.2 | 790.7 | 119.61 | 3.7727 | 0.650 |
| | 23.00 | 821.6 | 806.0 | 119.66 | 3.6522 | 0.675 |
| | 24.00 | 835.4 | 819.9 | 119.70 | 3.5417 | 0.698 |
| | 25.00 | 848.3 | 832.8 | 119.74 | 3.4400 | 0.720 |
| | 26.00 | 860.0 | 844.5 | 119.78 | 3.3462 | 0.740 |
| | 27.00 | 870.9 | 855.4 | 119.82 | 3.2593 | 0.758 |
| | 28.00 | 880.7 | 865.2 | 119.85 | 3.1786 | 0.776 |
| ****** End Shut-in 2 | 29.00 | 889.7 | 874.2 | 119.91 | 3.1034 | 0.792 |
| ****** Final Hydro. | 252.00 | 2009.9 | 0.0 | 120.11 | | |

# TEST HISTORY

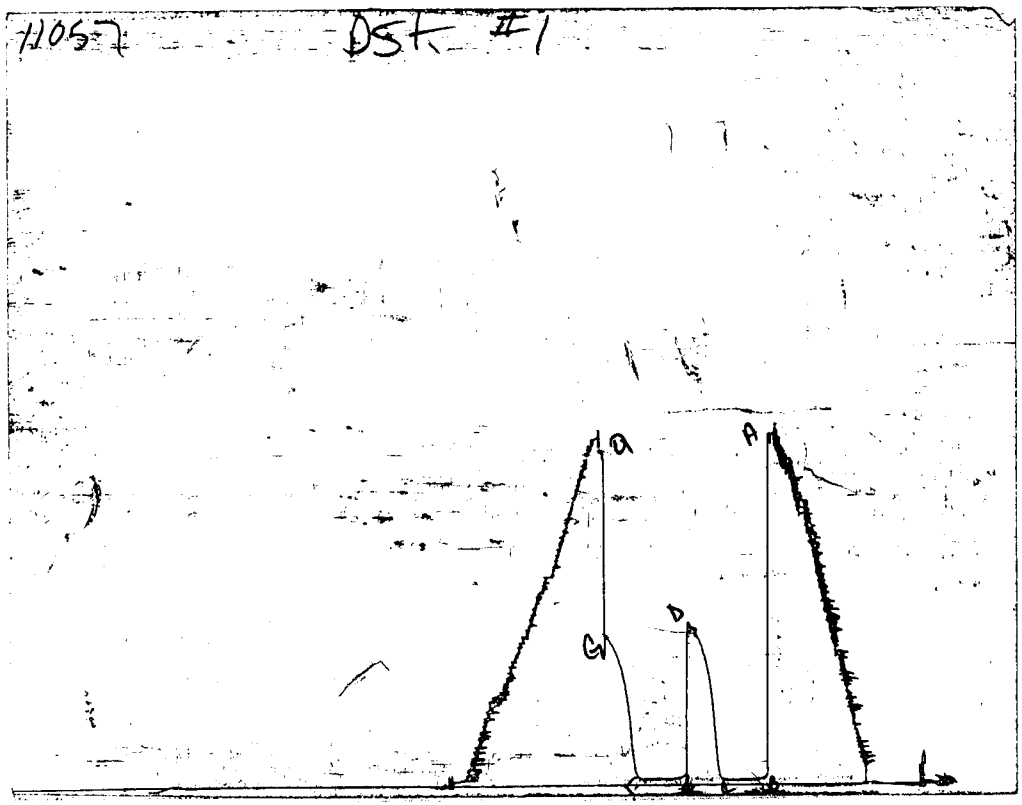
9960 DSt #1 Charles Bosley Rheem Resources

Flag Points

| | t(Min.) | P( PSIg) |
|---|---|---|
| A: | 0.00 | 2027.02 |
| B: | 0.00 | 10.57 |
| C: | 30.00 | 14.51 |
| D: | 29.00 | 966.76 |
| E: | 0.00 | 14.09 |
| F: | 31.00 | 15.52 |
| G: | 29.00 | 889.71 |
| Q: | 0.00 | 2009.89 |



# CHART PAGE




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

TRILOBITE TESTING L.L.C.

OPERATOR : Rheem Resources — DATE 4-16-97
WELL NAME: Charles Bosley #1 — KB 2741.00 ft — TICKET NO: 9961 — DST #2
LOCATION : 3-19-28 — GR 2736.00 ft — FORMATION: 220
INTERVAL : 4285.00 To 4315.00 ft — TD 4315.00 ft — TEST TYPE: CONV.

RECORDER DATA

| Mins | | | Field | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|
| PF | 30 | Rec. | 11057 | 11057 | 2342 | | |
| SI | 30 | Range(Psi ) | 4500.0 | 4500.0 | 4995.0 | 0.0 | 0.0 |
| SF | 30 | Clock(hrs) | 12 hr | 12 hr | Elec | | |
| FS | 30 | Depth(ft ) | 4310.0 | 4310.0 | 4286.0 | 0.0 | 0.0 |

TIME DATA----------
PF Fr. 0441 to 0511 hr
IS Fr. 0511 to 0541 hr
SF Fr. 0541 to 0611 hr
FS Fr. 0611 to 0641 hr

| | Field | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| A. Init Hydro | 2174.0 | 2183.0 | 2110.0 | 0.0 | 0.0 |
| B. First Flow | 56.0 | 69.0 | 14.0 | 0.0 | 0.0 |
| B1. Final Flow | 44.0 | 53.0 | 23.0 | 0.0 | 0.0 |
| C. In Shut-in | 984.0 | 967.0 | 979.0 | 0.0 | 0.0 |
| D. Init Flow | 67.0 | 76.0 | 24.0 | 0.0 | 0.0 |
| E. Final Flow | 56.0 | 66.0 | 29.0 | 0.0 | 0.0 |
| F. Fl Shut-in | 828.0 | 802.0 | 828.0 | 0.0 | 0.0 |
| G. Final Hydro | 2162.0 | 2094.0 | 2056.0 | 0.0 | 0.0 |
| Inside/Outside | O | O | I | | |

T STARTED 0245 hr
T ON BOTM 0438 hr
T OPEN 0441 hr
T PULLED 0641 hr
T OUT 0845 hr

RECOVERY
Tot Fluid 10.00 ft of 0.00 ft in DC and 10.00 ft in DP
10.00 ft of Drilling Mud with Oil specs 100% 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:
Weak surface blow, died in 28 mins

Initial Shut In:
No return

Final Flow:

Final Shut In:
No return

SAMPLES:
SENT TO:

Test Successful: Y

TOOL DATA----------

| | |
|---|---|
| Tool Wt. | 4000.00 lbs |
| Wt Set On Packer | 26000.00 lbs |
| Wt Pulled Loose | 63000.00 lbs |
| Initial Str Wt | 45000.00 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 | 0.00 in |
| D.C. Length | 0.00 ft |
| D.P. Length | 3703.00 ft |
| H.W. Length | 570.00 ft |

MUD DATA----------

| | |
|---|---|
| Mud Type | Chemical |
| Weight | 9.30 lb/c |
| Vis. | 48.00 S/L |
| W.L. | 8.80 in3 |
| F.C. | 0.00 in |
| Mud Drop N | |
| Amt. of fill | 0.00 ft |
| Btm. H. Temp. | 122.00 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 | Shane McBride |
| Co. Rep. | Scott Oatsdean |
| Contr. | Abercrombie |
| Rig # | 8 |
| Unit # | |
| Pump T. | |

*** TOOL DIAGRAM *** CONV.

/ELL NAME: Charles Bosley #1

.OCATION : 3-19-28

'ICKET No. 9961  D.S.T. No. 2  DATE 4-16-97

'OTAL TOOL TO BOTTOM OF TOP PACKERS ..... 22

:NTERVAL TOOL .....

3OTTOM PACKERS AND ANCHOR ..... 30

'OTAL TOOL ..... 52

)RILL COLLAR ANCHOR IN INTERVAL .....

).C. ANCHOR STND.Stands  Single  Total

).P. ANCHOR STND.Stands  Single  Total

'OTAL ASSEMBLY ..... 52

).C. ABOVE TOOLS.Stands  Single  Total

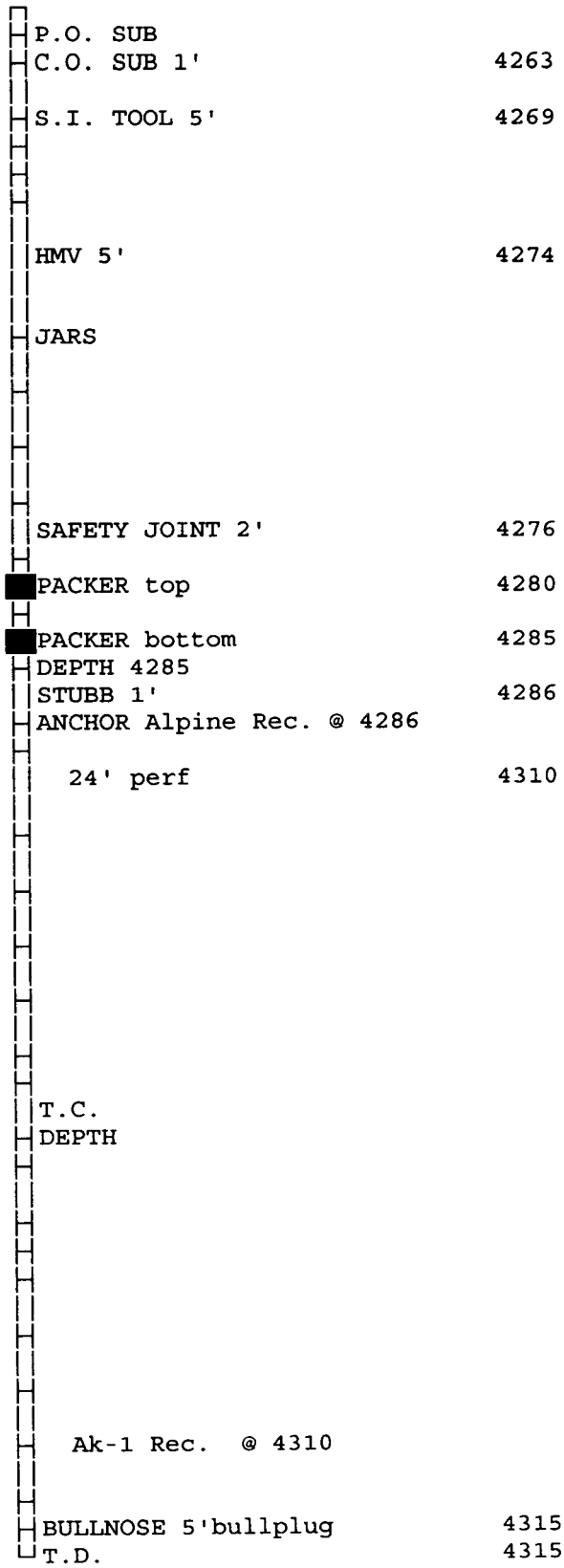
).P. ABOVE TOOLS.Stands  Single  Total 4273

'OTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4325

'OTAL DEPTH ..... 4315

'OTAL DRILL PIPE ABOVE K.B. ..... 10

REMARKS:



ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING
TEST: 9961 DST #2 Charles Bosley #1 Rheem Resources
DATE: 04/16/97 TIME: 01:48:27

| | Time | Pressure PSIg | delta P PSIg | Temp. DEG F | (T+dT)/dT | P^2/10^6 |
|---|---|---|---|---|---|---|
| ****** Initial Hydro. | 113.00 | 2110.4 | 0.0 | 115.03 | | |
| ****** Start Flow 1 | 0.00 | 13.7 | 0.0 | 115.43 | | |
| | 1.00 | 13.3 | -0.4 | 115.55 | | |
| | 2.00 | 13.6 | -0.1 | 115.62 | | |
| | 3.00 | 14.0 | 0.3 | 115.64 | | |
| | 4.00 | 14.4 | 0.8 | 115.64 | | |
| | 5.00 | 14.8 | 1.1 | 115.65 | | |
| | 6.00 | 15.2 | 1.5 | 115.65 | | |
| | 7.00 | 15.7 | 2.0 | 115.66 | | |
| | 8.00 | 15.9 | 2.3 | 115.66 | | |
| | 9.00 | 16.4 | 2.7 | 115.67 | | |
| | 10.00 | 16.7 | 3.0 | 115.69 | | |
| | 11.00 | 17.3 | 3.6 | 115.71 | | |
| | 12.00 | 17.5 | 3.9 | 115.73 | | |
| | 13.00 | 18.1 | 4.4 | 115.74 | | |
| | 14.00 | 18.4 | 4.7 | 115.76 | | |
| | 15.00 | 18.6 | 5.0 | 115.79 | | |
| | 16.00 | 19.2 | 5.5 | 115.82 | | |
| | 17.00 | 19.5 | 5.8 | 115.85 | | |
| | 18.00 | 19.7 | 6.0 | 115.88 | | |
| | 19.00 | 20.1 | 6.4 | 115.93 | | |
| | 20.00 | 20.2 | 6.5 | 115.99 | | |
| | 21.00 | 20.5 | 6.8 | 116.08 | | |
| | 22.00 | 20.8 | 7.1 | 116.18 | | |
| | 23.00 | 21.1 | 7.4 | 116.29 | | |
| | 24.00 | 21.2 | 7.6 | 116.37 | | |
| | 25.00 | 21.6 | 7.9 | 116.45 | | |
| | 26.00 | 21.7 | 8.1 | 116.51 | | |
| | 27.00 | 21.8 | 8.1 | 116.57 | | |
| | 28.00 | 22.2 | 8.6 | 116.62 | | |
| | 29.00 | 22.4 | 8.7 | 116.67 | | |
| | 30.00 | 22.6 | 8.9 | 116.72 | | |
| ****** End Flow 1 | 31.00 | 23.3 | 9.7 | 116.78 | | |
| ****** Start Shutin 1 | 0.00 | 23.3 | 0.0 | 116.78 | 0.0000 | 0.001 |
| | 1.00 | 29.1 | 5.8 | 116.82 | 32.0000 | 0.001 |
| | 2.00 | 36.8 | 13.5 | 116.87 | 16.5000 | 0.001 |
| | 3.00 | 47.5 | 24.2 | 116.92 | 11.3333 | 0.002 |
| | 4.00 | 63.5 | 40.2 | 116.97 | 8.7500 | 0.004 |
| | 5.00 | 89.2 | 65.9 | 117.02 | 7.2000 | 0.008 |
| | 6.00 | 134.1 | 110.8 | 117.07 | 6.1667 | 0.018 |
| | 7.00 | 217.0 | 193.7 | 117.13 | 5.4286 | 0.047 |
| | 8.00 | 337.7 | 314.4 | 117.20 | 4.8750 | 0.114 |
| | 9.00 | 437.5 | 414.2 | 117.26 | 4.4444 | 0.191 |
| | 10.00 | 498.4 | 475.0 | 117.32 | 4.1000 | 0.248 |
| | 11.00 | 557.7 | 534.4 | 117.39 | 3.8182 | 0.311 |
| | 12.00 | 627.7 | 604.4 | 117.46 | 3.5833 | 0.394 |
| | 13.00 | 691.9 | 668.6 | 117.53 | 3.3846 | 0.479 |
| | 14.00 | 744.6 | 721.3 | 117.60 | 3.2143 | 0.554 |
| | 15.00 | 785.0 | 761.6 | 117.66 | 3.0667 | 0.616 |
| | 16.00 | 815.6 | 792.3 | 117.73 | 2.9375 | 0.665 |
| | 17.00 | 840.2 | 816.9 | 117.79 | 2.8235 | 0.706 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9961 DST #2 Charles Bosley #1 Rheem Resources

DATE: 04/16/97 TIME: 01:48:27

| | Time | Pressure PSIg | delta P PSIg | Temp. DEG F | (T+dT)/dT | P^2/10^6 |
|---|---|---|---|---|---|---|
| | 18.00 | 862.6 | 839.3 | 117.86 | 2.7222 | 0.744 |
| | 19.00 | 883.2 | 859.9 | 117.92 | 2.6316 | 0.780 |
| | 20.00 | 901.0 | 877.6 | 117.99 | 2.5500 | 0.812 |
| | 21.00 | 917.0 | 893.7 | 118.04 | 2.4762 | 0.841 |
| | 22.00 | 929.7 | 906.3 | 118.09 | 2.4091 | 0.864 |
| | 23.00 | 940.5 | 917.2 | 118.15 | 2.3478 | 0.885 |
| | 24.00 | 949.9 | 926.6 | 118.21 | 2.2917 | 0.902 |
| | 25.00 | 957.9 | 934.6 | 118.26 | 2.2400 | 0.918 |
| | 26.00 | 964.6 | 941.3 | 118.31 | 2.1923 | 0.930 |
| | 27.00 | 970.2 | 946.9 | 118.36 | 2.1481 | 0.941 |
| | 28.00 | 975.1 | 951.7 | 118.41 | 2.1071 | 0.951 |
| ****** End Shut-in 1 | 29.00 | 979.3 | 955.9 | 118.46 | 2.0690 | 0.959 |
| ****** Start Flow 2 | 0.00 | 23.7 | 0.0 | 118.53 | | |
| | 1.00 | 23.9 | 0.2 | 118.55 | | |
| | 2.00 | 24.0 | 0.3 | 118.58 | | |
| | 3.00 | 24.2 | 0.4 | 118.59 | | |
| | 4.00 | 24.3 | 0.6 | 118.63 | | |
| | 5.00 | 24.7 | 0.9 | 118.66 | | |
| | 6.00 | 25.0 | 1.3 | 118.70 | | |
| | 7.00 | 25.3 | 1.5 | 118.73 | | |
| | 8.00 | 25.4 | 1.7 | 118.77 | | |
| | 9.00 | 25.7 | 1.9 | 118.81 | | |
| | 10.00 | 25.8 | 2.1 | 118.86 | | |
| | 11.00 | 25.9 | 2.2 | 118.88 | | |
| | 12.00 | 26.1 | 2.4 | 118.92 | | |
| | 13.00 | 26.3 | 2.6 | 118.97 | | |
| | 14.00 | 26.5 | 2.8 | 119.01 | | |
| | 15.00 | 26.8 | 3.0 | 119.05 | | |
| | 16.00 | 27.0 | 3.3 | 119.09 | | |
| | 17.00 | 27.3 | 3.5 | 119.14 | | |
| | 18.00 | 27.4 | 3.7 | 119.17 | | |
| | 19.00 | 27.7 | 3.9 | 119.22 | | |
| | 20.00 | 28.0 | 4.3 | 119.27 | | |
| | 21.00 | 28.2 | 4.4 | 119.31 | | |
| | 22.00 | 28.4 | 4.7 | 119.36 | | |
| | 23.00 | 28.6 | 4.9 | 119.39 | | |
| | 24.00 | 28.8 | 5.0 | 119.44 | | |
| | 25.00 | 28.9 | 5.1 | 119.48 | | |
| | 26.00 | 29.1 | 5.4 | 119.52 | | |
| | 27.00 | 29.2 | 5.5 | 119.57 | | |
| ****** End Flow 2 | 28.00 | 29.5 | 5.7 | 119.61 | | |
| ****** Start Shutin 2 | 0.00 | 29.5 | 0.0 | 119.61 | 0.0000 | 0.001 |
| | 1.00 | 31.5 | 2.1 | 119.66 | 60.0000 | 0.001 |
| | 2.00 | 36.2 | 6.7 | 119.70 | 30.5000 | 0.001 |
| | 3.00 | 41.5 | 12.0 | 119.74 | 20.6667 | 0.002 |
| | 4.00 | 47.7 | 18.2 | 119.79 | 15.7500 | 0.002 |
| | 5.00 | 55.2 | 25.8 | 119.83 | 12.8000 | 0.003 |
| | 6.00 | 64.5 | 35.1 | 119.87 | 10.8333 | 0.004 |
| | 7.00 | 76.3 | 46.8 | 119.92 | 9.4286 | 0.006 |
| | 8.00 | 91.6 | 62.1 | 119.97 | 8.3750 | 0.008 |
| | 9.00 | 111.8 | 82.3 | 120.01 | 7.5556 | 0.012 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 9961 DST #2 Charles Bosley #1 Rheem Resources

DATE: 04/16/97 TIME: 01:48:27

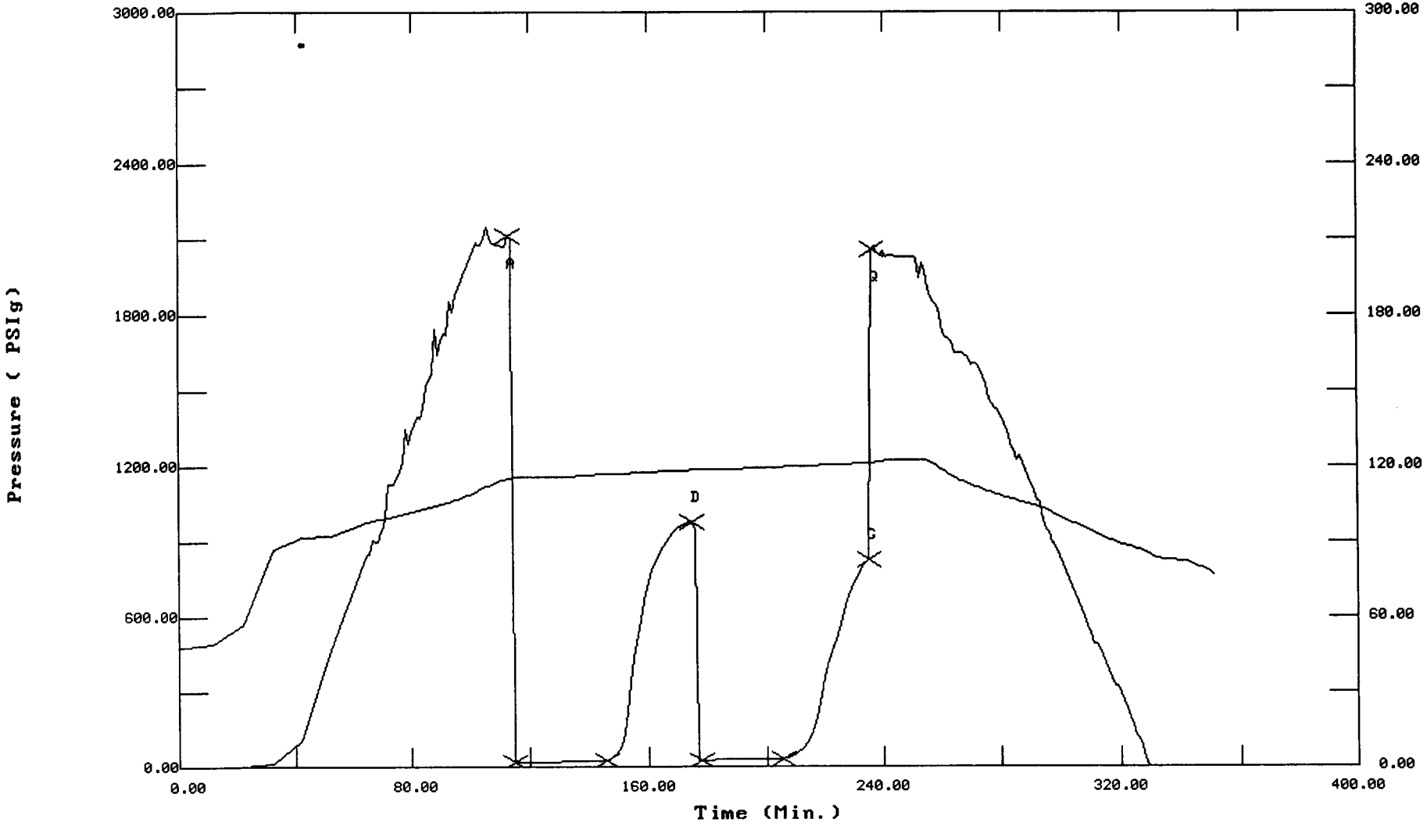
| | Time | Pressure PSIg | delta P PSIg | Temp. DEG F | (T+dT)/dT | P^2/10^6 |
|---|---|---|---|---|---|---|
| | 10.00 | 139.1 | 109.7 | 120.07 | 6.9000 | 0.019 |
| | 11.00 | 176.0 | 146.5 | 120.12 | 6.3636 | 0.031 |
| | 12.00 | 225.6 | 196.1 | 120.17 | 5.9167 | 0.051 |
| | 13.00 | 286.8 | 257.3 | 120.22 | 5.5385 | 0.082 |
| | 14.00 | 351.5 | 322.0 | 120.28 | 5.2143 | 0.124 |
| | 15.00 | 404.6 | 375.2 | 120.34 | 4.9333 | 0.164 |
| | 16.00 | 443.8 | 414.4 | 120.39 | 4.6875 | 0.197 |
| | 17.00 | 475.9 | 446.5 | 120.46 | 4.4706 | 0.227 |
| | 18.00 | 508.6 | 479.1 | 120.51 | 4.2778 | 0.259 |
| | 19.00 | 548.8 | 519.3 | 120.57 | 4.1053 | 0.301 |
| | 20.00 | 598.8 | 569.4 | 120.63 | 3.9500 | 0.359 |
| | 21.00 | 644.1 | 614.6 | 120.69 | 3.8095 | 0.415 |
| | 22.00 | 682.2 | 652.7 | 120.74 | 3.6818 | 0.465 |
| | 23.00 | 714.1 | 684.7 | 120.80 | 3.5652 | 0.510 |
| | 24.00 | 741.5 | 712.0 | 120.86 | 3.4583 | 0.550 |
| | 25.00 | 765.5 | 736.0 | 120.92 | 3.3600 | 0.586 |
| | 26.00 | 786.2 | 756.8 | 120.98 | 3.2692 | 0.618 |
| | 27.00 | 803.5 | 774.1 | 121.03 | 3.1852 | 0.646 |
| | 28.00 | 817.4 | 788.0 | 121.09 | 3.1071 | 0.668 |
| ****** End Shut-in 2 | 29.00 | 828.5 | 799.1 | 121.14 | 3.0345 | 0.686 |
| ****** Final Hydro. | 236.00 | 2056.1 | 0.0 | 121.23 | | |

# TEST HISTORY

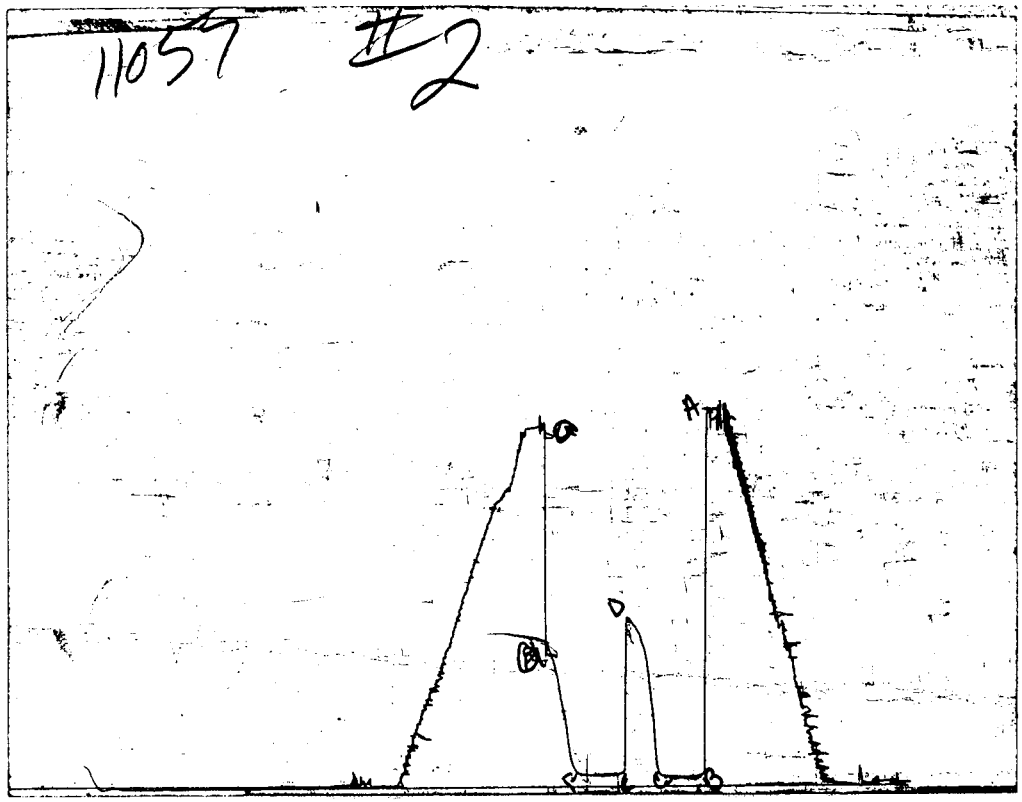
9961 DST #2 Charles Bosley #1 Rheem Resources

Flag Points

| | t(Min.) | P( PSIg) |
|---|---|---|
| A: | 0.00 | 2110.36 |
| B: | 0.00 | 13.67 |
| C: | 31.00 | 23.32 |
| D: | 29.00 | 979.26 |
| E: | 0.00 | 23.74 |
| F: | 28.00 | 29.45 |
| G: | 29.00 | 828.53 |
| Q: | 0.00 | 2056.14 |



# CHART PAGE




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