15-081-21308

12-27s-34w

TRILOBITE TESTING L.L.C.

OPERATOR : Helmerich & Payne  DATE 8-17-2000
WELL NAME: Government B-4  KB 2959.00 ft  TICKET NO: 12620  DST # 1
LOCATION : 12-27s-34w Haskell co KS  GR 2948.00 ft  FORMATION: Morrow sand
INTERVAL : 4992.00 To 5070.00 ft  TD 5070.00 ft  TEST TYPE: CONVENTIONAL

RECORDER DATA

| | Mins | | Field | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|
| PF | 15 | Rec. | 13278 | 13278 | 2357 | | |
| SI | 60 | Range(Psi ) | 4400.0 | 4400.0 | 5000.0 | 0.0 | 0.0 |
| SF | 60 | Clock(hrs) | 12HR | 12HR | ELECT | | |
| FS | 180 | Depth(ft ) | 5067.0 | 5067.0 | 4993.0 | 0.0 | 0.0 |

TIME DATA----------
PF Fr. 1958 to 2013 hr
IS Fr. 2013 to 2113 hr
SF Fr. 2113 to 2213 hr
FS Fr. 2213 to 0113 hr

| | Field | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| A. Init Hydro | 2361.0 | 2365.0 | 2362.0 | 0.0 | 0.0 |
| B. First Flow | 154.0 | 155.0 | 23.0 | 0.0 | 0.0 |
| B1. Final Flow | 154.0 | 166.0 | 114.0 | 0.0 | 0.0 |
| C. In Shut-in | 1281.0 | 1305.0 | 1301.0 | 0.0 | 0.0 |
| D. Init Flow | 231.0 | 248.0 | 99.0 | 0.0 | 0.0 |
| E. Final Flow | 264.0 | 279.0 | 215.0 | 0.0 | 0.0 |
| F. Fl Shut-in | 1336.0 | 1342.0 | 1318.0 | 0.0 | 0.0 |
| G. Final Hydro | 2251.0 | 2303.0 | 2321.0 | 0.0 | 0.0 |
| Inside/Outside | I | I | I | | |

T STARTED 1723 hr
T ON BOTM 1956 hr
T OPEN 1958 hr
T PULLED 0113 hr
T OUT 0600 hr

RECOVERY
Tot Fluid 390.00 ft of 390.00 ft in DC and 0.00 ft in DP
150.00 ft of Drilling mud
0.00 ft of 100% mud
240.00 ft of Gassy oil cut mud
0.00 ft of 10% gas 20% oil 70% mud
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
SALINITY 1200.00 P.P.M. A.P.I. Gravity 0.00

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

| | |
|---|---|
| Tool Wt. | 1800.00 lbs |
| Wt Set On Packer | 25000.00 lbs |
| Wt Pulled Loose | 4000.00 lbs |
| Initial Str Wt | 82000.00 lbs |
| Unseated Str Wt | 84000.00 lbs |
| Bot Choke | 0.75 in |
| Hole Size | 7.78 in |
| D Col. ID | 2.25 in |
| D. Pipe ID | 3.80 in |
| D.C. Length | 711.00 ft |
| D.P. Length | 4273.00 ft |

BLOW DESCRIPTION
Initial Flow:
Weak blow built to 3" in bucket in 15 minutes.
Initial Shut-In:
No blow back.
Final Flow:
Weak blow built to 3" in bucket in 60 minutes.
Final Shut-In:
No blow back.

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

| | |
|---|---|
| Mud Type | Chemical |
| Weight | 9.20 lb/cf |
| Vis. | 42.00 S/L |
| W.L. | 8.00 in3 |
| F.C. | 0.00 in |
| Mud Drop Y | 20.0 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 | Brad Bortz |
| Co. Rep. | Brad Rine |
| Contr. | Cheyenne |
| Rig # | 3 |
| Unit # | |
| Pump T. | |

SAMPLES: None caught.
SENT TO:

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Government B-4

LOCATION : 12-27s-34w Haskell co KS

TICKET No. 12620 D.S.T. No. 1 DATE 8-17-2000

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 30

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 78

TOTAL TOOL ..... 108

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY .....

D.C. ABOVE TOOLS.Stands 12 Single Total 711

D.P. ABOVE TOOLS.Stands 69 Single Total 4273

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5092

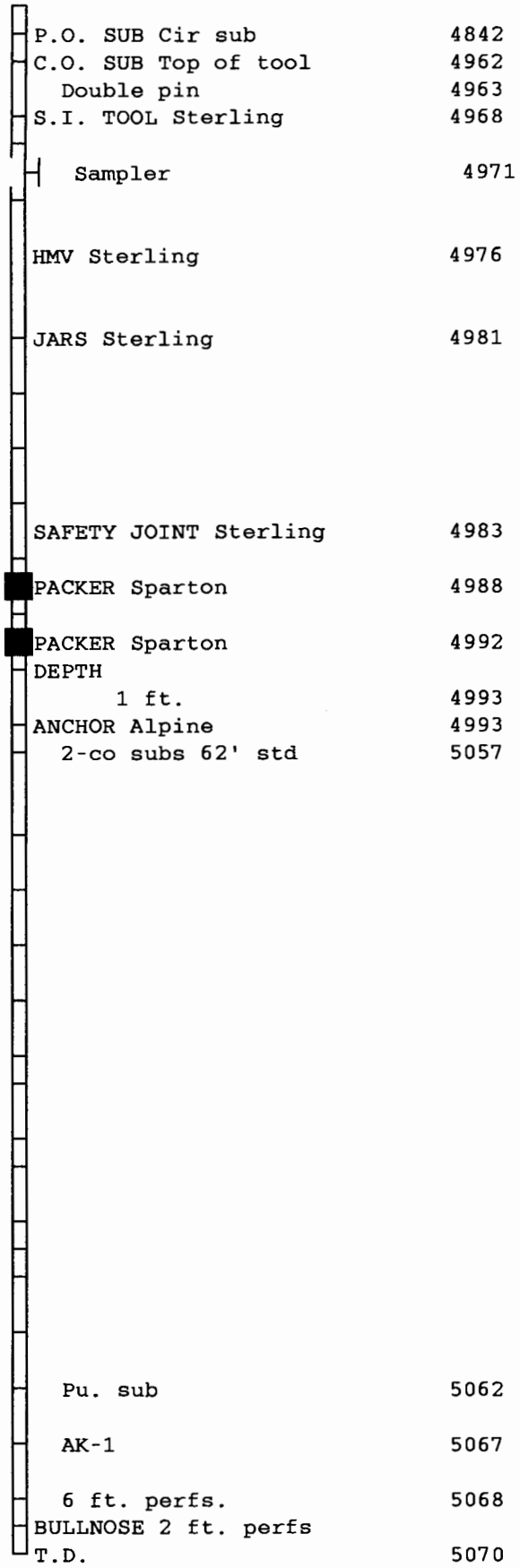
TOTAL DEPTH ..... 5070

TOTAL DRILL PIPE ABOVE K.B. ..... 22

REMARKS:

FLUID SAMPLER DATA

Total Vol. 4000 ML.
Total Vol. Rec. 3000 ML.
Oil 1000 ML.
Mud 2000 ML.
Wtr. 0 ML.
Gas 6.0 CF.
Psi. 450
Bht. 119 F.
Pit Chlorides 1000 PPM.

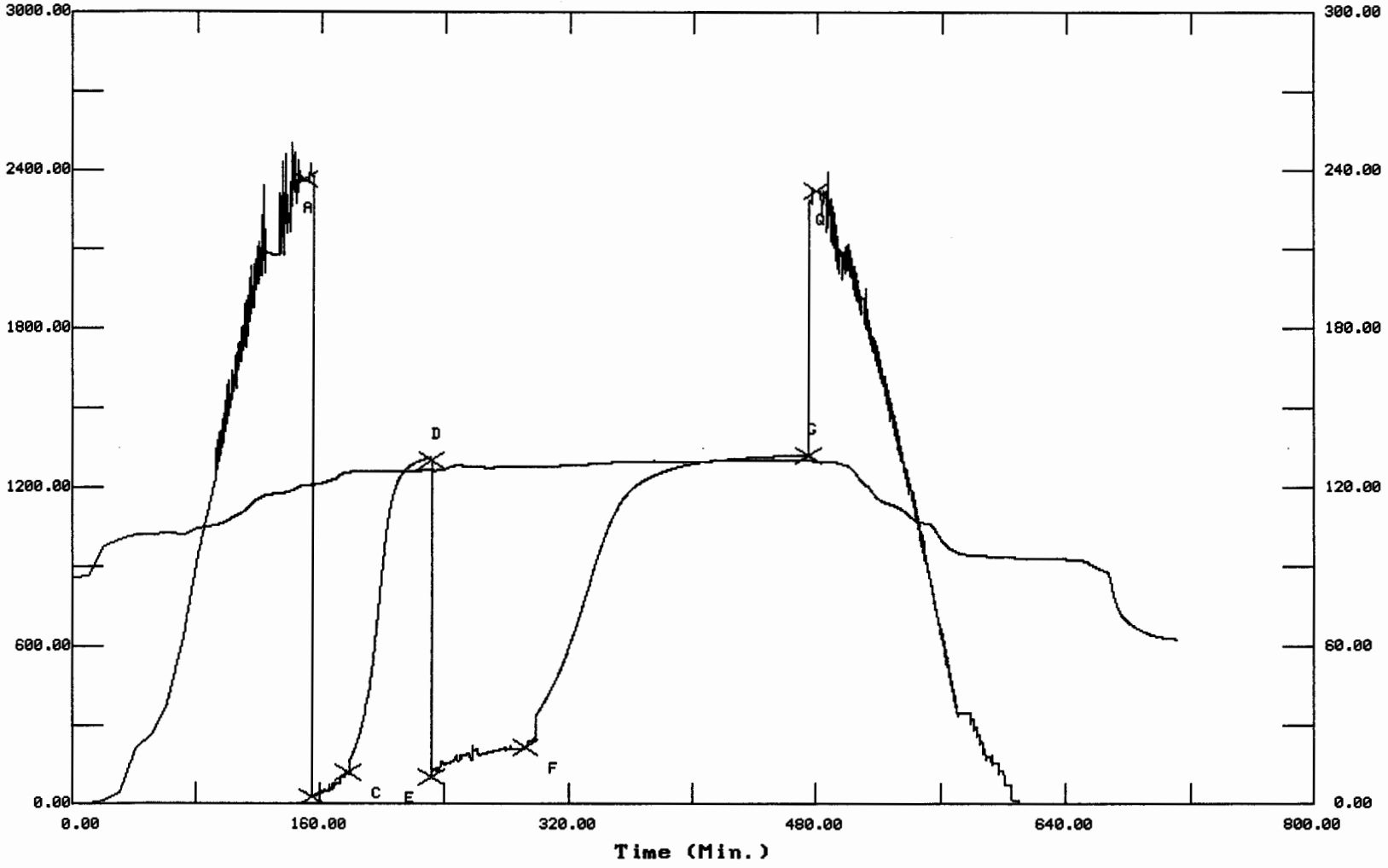


# TEST HISTORY

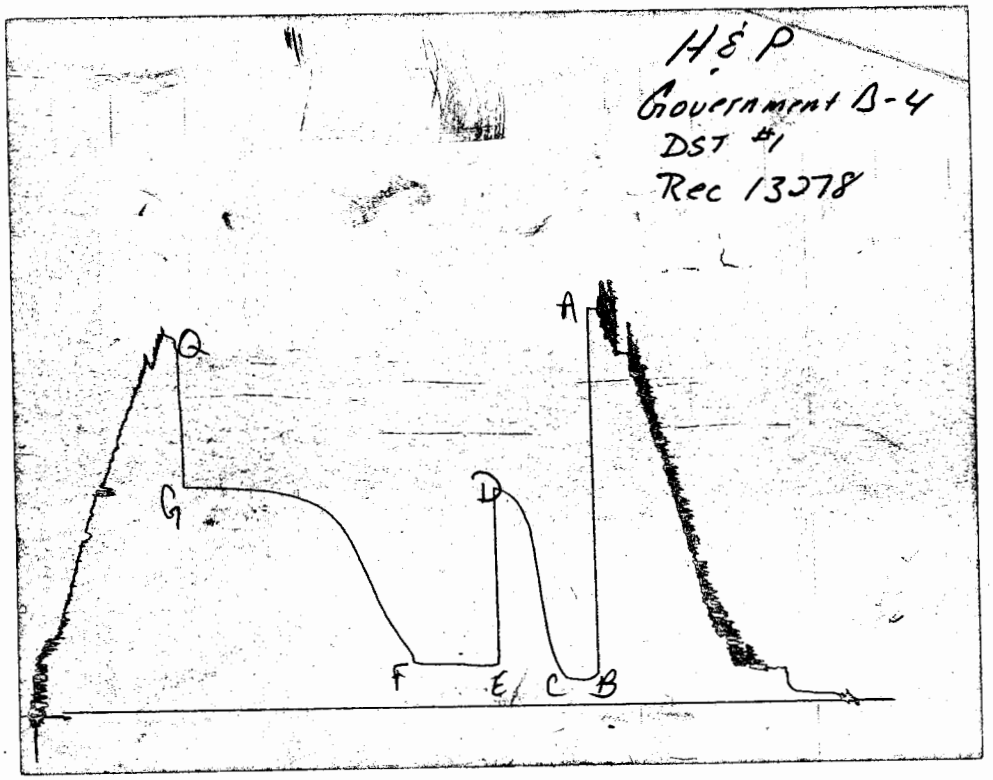
12620 DST #1 Government B-4 Helmerich & Payne

Flag Points

| | t(Min.) | P( PSIg) |
|---|---|---|
| A: | 0.00 | 2362.78 |
| B: | 0.00 | 23.20 |
| C: | 23.25 | 114.82 |
| D: | 53.50 | 1301.79 |
| E: | 0.00 | 99.40 |
| F: | 60.50 | 215.86 |
| G: | 182.25 | 1318.20 |
| Q: | 0.00 | 2321.92 |



# CHART PAGE




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

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

Nº 12620

Well Name & No. Government B-4 Test No. 1 Date 8-17-2000

Company Helmerich & Payne Zone Tested Morrow Snd

Address 1579 E. 21st Tulsa ok, 74114 Elevation 2959 KB 2948 GL

Co. Rep / Geo. Brad Rine Cont. Cheyenne #3 Est. Ft. of Pay — Por. — %

Location: Sec. 12 Twp. 27S Rge. 34W Co. Haskell State KS

No. of Copies R Distribution Sheet (Y, N) R Turnkey (Y, N) — Evaluation (Y, N) —

Interval Tested 4992 - 5070 Initial Str Wt./Lbs. 82,000 Unseated Str Wt./Lbs. 84,000

Anchor Length 78' tool 30 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 4,000

Top Packer Depth 4987 Tool Weight 1,800

Bottom Packer Depth 4992 Hole Size — 7 7/8" — Rubber Size — 6 3/4" —

Total Depth 5070 Wt. Pipe Run — Drill Collar Run 10 Stnds 711

Mud Wt. 9.2 LCM 2 Vis. 42 WL 8.0 Drill Pipe Size 4½ XH Ft. Run [redacted] 4273 22 up

Blow Description weak blow built to 3" in bucket in 15min I.F.P.

no Blow back I.S.I.P.

weak blow built to 3" in bucket in 60 min F.F.P.

no Blow back F.S.I.P.

Recovery — Total Feet 390' GIP 0 Ft. in DC 390 Ft. in DP —

| | | | | | | |
|---|---|---|---|---|---|---|
| Rec. 150' | Feet Of Drlg mud | %gas | %oil | %water | 100 | %mud |
| Rec. 240' | Feet Of gassy oil cut mud | 10 %gas | 20 %oil | %water | 70' | %mud |
| Rec. — | Feet Of — | %gas | %oil | %water | | %mud |
| Rec. — | Feet Of — | %gas | %oil | %water | | %mud |
| Rec. — | Feet Of — | %gas | %oil | %water | | %mud |

BHT 119° °F Gravity — °API D@ — °F Corrected Gravity — °API

RW — @ — °F Chlorides — ppm Recovery Chlorides 1000 ppm System

| | AK-1 | Alpine | | | | | |
|---|---|---|---|---|---|---|---|
| (A) Initital Hydrostatic Mud | 2361 | 2362 | PSI | Recorder No. | 2357 | T-On Location | 3:00 PM 2:23 |
| (B) First Initial Flow Pressure | 154 | 23 | PSI | (depth) | 4993 | T-Started | 5:23 PM |
| (C) First Final Flow Pressure | 154 | 114 | PSI | Recorder No. | 13278 | T-Open | 7:58 PM 12:37 |
| (D) Initial Shut-In Pressure | 1281 | 1301 | PSI | (depth) | 5067 | T-Pulled | 1:13 AM |
| (E) Second Initial Flow Pressure | 231 | 99 | PSI | Recorder No. | — | T-Out | 6:00 AM |
| (F) Final Flow Pressure | 264 | 215 | PSI | (depth) | — | T-Off Location | 7:00 AM |
| (G) Final Shut-in Pressure | 1336 | 1318 | PSI | Initial Opening | 15 | Test | ✓ 850 |
| (Q) Final Hydrostatic Mud | 2251 | 2321 | PSI | Initial Shut-in | 60 | Jars | ✓ 200 |
| | | | | Final Flow | 60 | Safety Joint | ✓ 50 |
| | | | | Final Shut-in | 180 | Straddle | |
| | | | | — | | Circ. Sub | ✓ |
| | | | | — | | Sampler | ✓ 200 |
| | | | | | | Extra Packer | |
| | | | | | | Elec. Rec. | ✓ 150 |
| | | | | | | Mileage | 60 ✓ 60 |
| | | | | | | Other | 4+5 150 |
| | | | | | | TOTAL PRICE $ | 1660 |



Approved By Brad Rine

Our Representative Brad Bolt

15hrs @ 1/5

TRILOBITE TESTING L.L.C.

OPERATOR : Helmerich & Payne  DATE 8-18-2000
WELL NAME: Government B-4  KB 2959.00 ft  TICKET NO: 12621  DST # 2
LOCATION : 12-27s-34w Haskell co KS  GR 2948.00 ft  FORMATION: Morrow/Chester
INTERVAL : 5073.00 To 5220.00 ft  TD 5220.00 ft  TEST TYPE: CONVENTIONAL

RECORDER DATA

| Mins | | Field | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| PF 15 | Rec. | 13278 | 13278 | 2357 | | |
| SI 60 | Range(Psi ) | 4400.0 | 4400.0 | 5000.0 | 0.0 | 0.0 |
| SF 60 | Clock(hrs) | 12HR | 12HR | ELECT | | |
| FS 120 | Depth(ft ) | 5217.0 | 5217.0 | 5074.0 | 0.0 | 0.0 |

TIME DATA----------
PF Fr. 0235 to 0250 hr
IS Fr. 0250 to 0350 hr
SF Fr. 0350 to 0450 hr
FS Fr. 0450 to 0750 hr

| | Field | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| A. Init Hydro | 2493.0 | 2478.0 | 2418.0 | 0.0 | 0.0 |
| B. First Flow | 242.0 | 233.0 | 46.0 | 0.0 | 0.0 |
| B1. Final Flow | 275.0 | 267.0 | 200.0 | 0.0 | 0.0 |
| C. In Shut-in | 1402.0 | 1401.0 | 1373.0 | 0.0 | 0.0 |
| D. Init Flow | 374.0 | 375.0 | 251.0 | 0.0 | 0.0 |
| E. Final Flow | 539.0 | 537.0 | 472.0 | 0.0 | 0.0 |
| F. Fl Shut-in | 1358.0 | 1347.0 | 1349.0 | 0.0 | 0.0 |
| G. Final Hydro | 2317.0 | 2300.0 | 2352.0 | 0.0 | 0.0 |
| Inside/Outside | I | I | I | | |

T STARTED 1215 hr
T ON BOTM 0233 hr
T OPEN 0235 hr
T PULLED 0750 hr
T OUT 1200 hr

RECOVERY
Tot Fluid 960.00 ft of 710.00 ft in DC and 250.00 ft in DP
780.00 ft of Drilling mud
0.00 ft of 100% mud
180.00 ft of Gassy slightly oil cut mud
0.00 ft of 70% mud 2% oil 28% gas
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
SALINITY 2400.00 P.P.M. A.P.I. Gravity 0.00

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

| | |
|---|---|
| Tool Wt. | 1800.00 lbs |
| Wt Set On Packer | 25000.00 lbs |
| Wt Pulled Loose | 4000.00 lbs |
| Initial Str Wt | 84000.00 lbs |
| Unseated Str Wt | 88000.00 lbs |
| Bot Choke | 0.75 in |
| Hole Size | 7.78 in |
| D Col. ID | 2.25 in |
| D. Pipe ID | 3.80 in |
| D.C. Length | 711.00 ft |
| D.P. Length | 4364.00 ft |

BLOW DESCRIPTION
Initial Flow:
Fair blow built to bottom of bucket in 13 minutes.
Initial Shut-In:
No blow back.
Final Flow:
Fair blow built to strong blow bottom of bucket in 28 minutes.
Final Shut-In:
No blow back.

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

| | |
|---|---|
| Mud Type | Chemical |
| Weight | 9.00 lb/cf |
| Vis. | 57.00 S/L |
| W.L. | 7.60 in3 |
| F.C. | 0.00 in |
| Mud Drop Y | 20.0 ft |
| 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 | Brad Bortz |
| Co. Rep. | Brad Rine |
| Contr. | Cheyenne |
| Rig # | 3 |
| Unit # | |
| Pump T. | |

SAMPLES: None caught.
SENT TO:

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Government B-4

LOCATION : 12-27s-34w Haskell co KS

TICKET No. 12621 D.S.T. No. 2 DATE 8-18-2000

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 30

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 147

TOTAL TOOL ..... 177

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY .....

D.C. ABOVE TOOLS.Stands 12 Single Total 711

D.P. ABOVE TOOLS.Stands 70 Single Total 4364

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5252

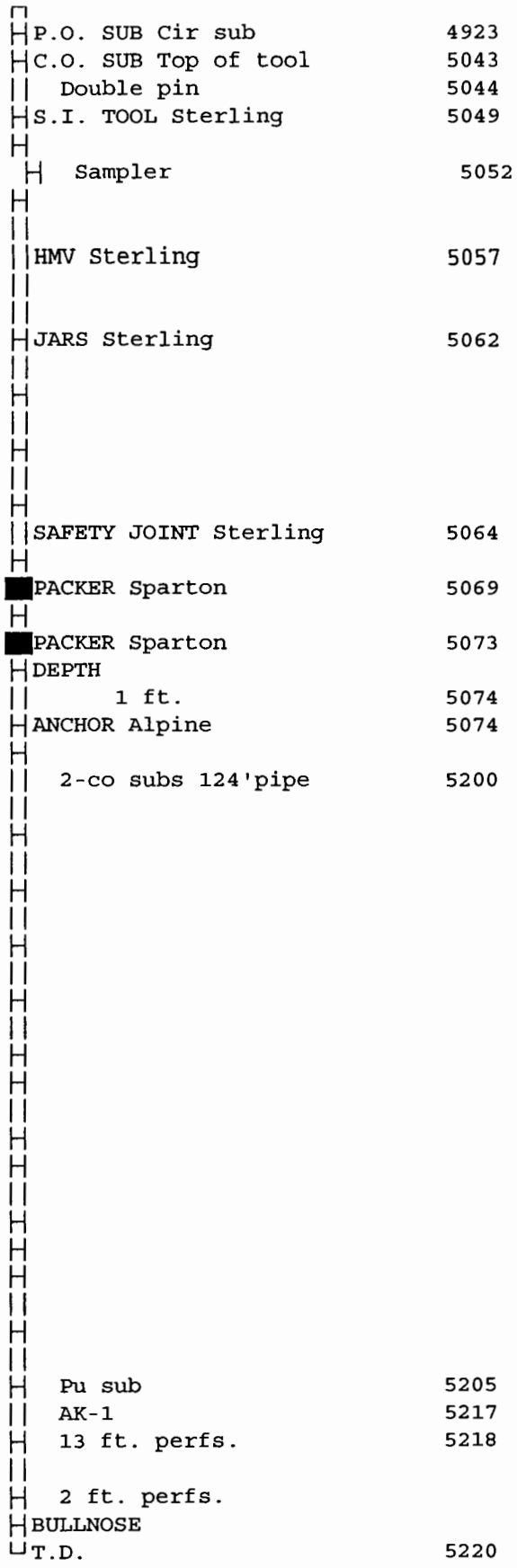
TOTAL DEPTH ..... 5220

TOTAL DRILL PIPE ABOVE K.B. ..... 32

REMARKS:

FLUID SAMPLER DATA

Total Vol. 4000 ML.
Total Vol. Rec. 4000 ML.
Oil 0 ML.
Mud 4000 ML.
Wtr. 0 ML.
Gas 3.0 CF.
Psi. 150
Bht. 121 F.
Pit chlorides 1000 PPM.
Rec RW. 1.97 Ohms at 86 F. 2400 PPM.
Slight scum of oil

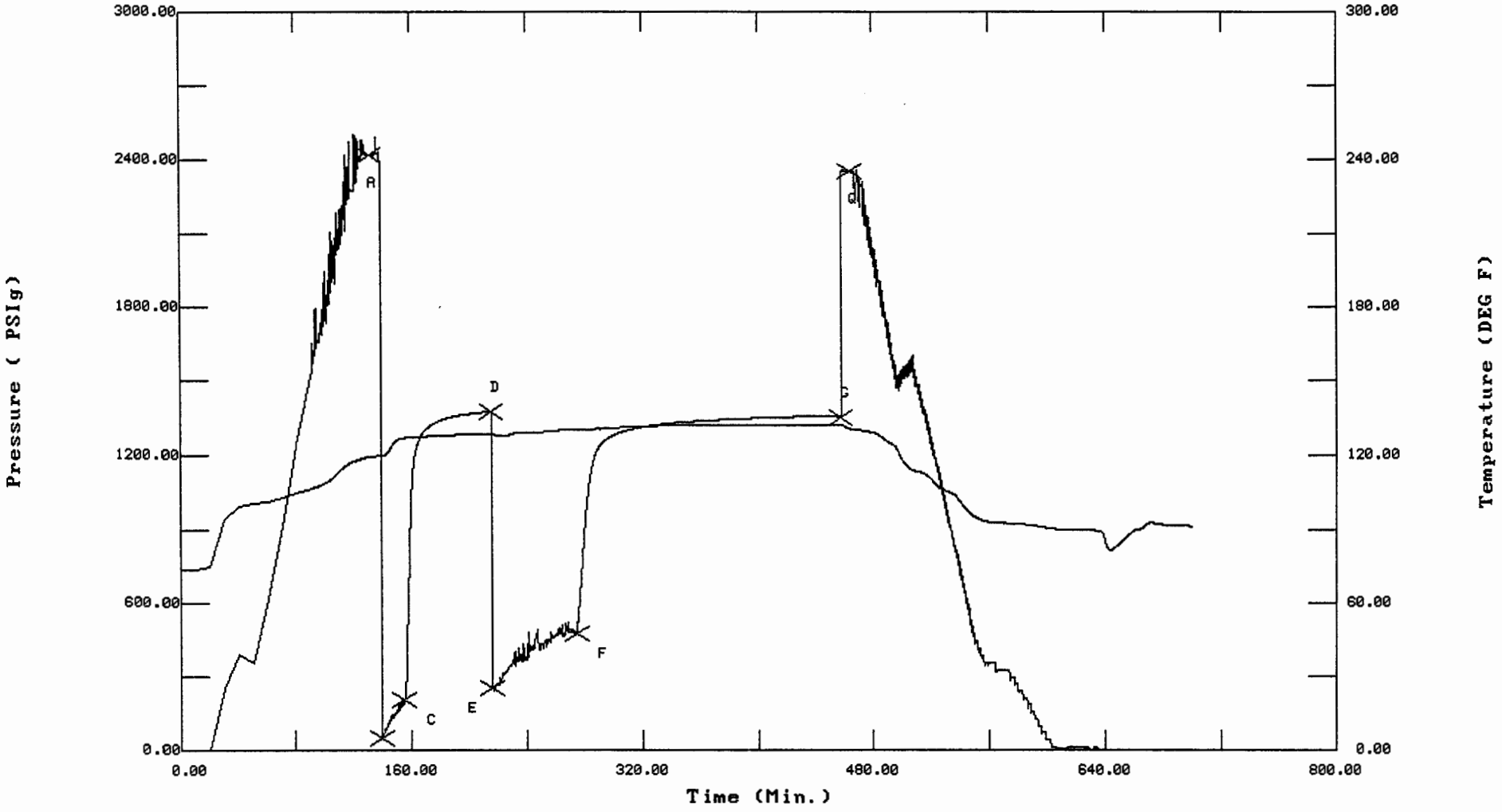


# TEST HISTORY

12621 DST #2 Government B-4 Helmerich & Payne

Flag Points

| | t(Min.) | P( PSIg) |
|---|---|---|
| A: | 0.00 | 2418.15 |
| B: | 0.00 | 46.43 |
| C: | 15.75 | 200.50 |
| D: | 60.25 | 1373.51 |
| E: | 0.00 | 251.13 |
| F: | 58.50 | 472.37 |
| G: | 183.75 | 1349.04 |
| Q: | 0.00 | 2352.74 |



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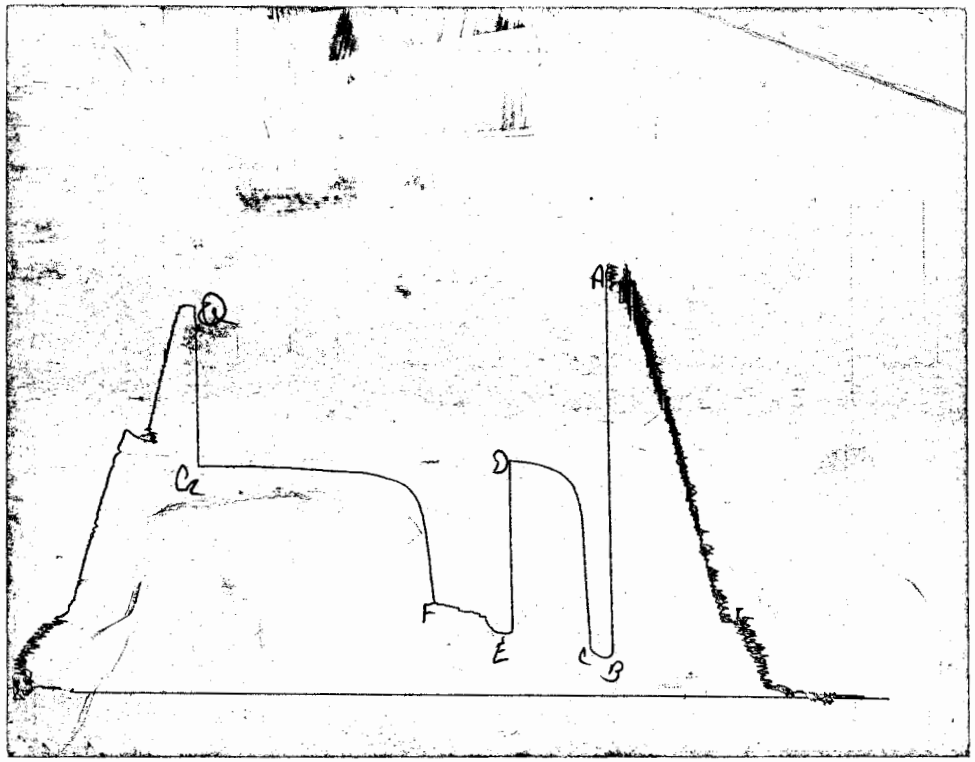


This is a photocopy of the actual AK-1 recorder chart

436691

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

№ 12621

Well Name & No. Government B-4 Test No. 2 Date 8-18-2000

Company Helmerich & Payne Zone Tested Morrow / Chester

Address 1579 E. 21st Tulsa OK, 74114 Elevation 2959 KB 2948 GL

Co. Rep / Geo. Brad Bine Cont. Cheyenne #3 Est. Ft. of Pay — Por. — %

Location: Sec. 12 Twp. 27S Rge. 34W Co. Haskell State KS

No. of Copies R Distribution Sheet (Y, N) R Turnkey (Y, N) — Evaluation (Y, N) —

Interval Tested 5073 - 5220 Initial Str Wt./Lbs. 84,000 Unseated Str Wt./Lbs. 88,000

Anchor Length 147' tool 30' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 4,000

Top Packer Depth 5068 Tool Weight 1,800

Bottom Packer Depth 5073 Hole Size — 7 7/8" — Rubber Size — 6 3/4" —

Total Depth 5220 Wt. Pipe Run — Drill Collar Run (12 stnds) 711

Mud Wt. 9.0 LCM 2 Vis. 57 WL 7.6 Drill Pipe Size (70 stnds) 4½ XH Ft. Run 4364 32' up

Blow Description Fair blow built to strong blow O.B.B. in 13min I.F.P.
NO Blow back I.S.I.P.
Fair blow built to strong blow O.B.B in 28min F.F.P.
NO Blow back F.S.I.P.

Recovery — Total Feet 960 GIP 0 Ft. in DC 710 Ft. in DP 250'

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rec. 780' | Feet Of Drilling mud | %gas | %oil | %water 100 | %mud |
| Rec. 180' | Feet Of gassy slightly oil cut mud 28 | %gas 2 | %oil | %water 70 | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud |

BHT 121° °F Gravity — °API D@ — °F Corrected Gravity — °API

RW 1.97 @ 86° °F Chlorides 2,400 ppm Recovery Chlorides 1000 ppm System

| | AK-1 | Alpine | | | | | |
|---|---|---|---|---|---|---|---|
| (A) Initial Hydrostatic Mud | 2493 | 2418 | PSI | Recorder No. | 2357 | T-On Location | 11:00 PM 1.15 |
| (B) First Initial Flow Pressure | 242 | 46 | PSI | (depth) | 5074 | T-Started | 12:15 AM |
| (C) First Final Flow Pressure | 275 | 200 | PSI | Recorder No. | 13278 | T-Open | 2:35 AM |
| (D) Initial Shut-In Pressure | 1402 | 1373 | PSI | (depth) | 5217 | T-Pulled | 7:50 AM 11:45 |
| (E) Second Initial Flow Pressure | 374 | 251 | PSI | Recorder No. | — | T-Out | 12:00 PM |
| (F) Second Final Flow Pressure | 539 | 472 | PSI | (depth) | — | T-Off Location | 1:00 |
| (G) Final Shut-in Pressure | 1358 | 1349 | PSI | Initial Opening | 15 | Test ✓ | 850 |
| (Q) Final Hydrostatic Mud | 2317 | 2352 | PSI | Initial Shut-in | 60 | Jars ✓ | 200 |
| | | | | Final Flow | 60 | Safety Joint ✓ | 50 |
| | | | | Final Shut-in | 180 | Straddle | |
| | | | | — | | Circ. Sub | |
| | | | | — | | Sampler ✓ | 200 |
| | | | | | | Extra Packer | |
| | | | | | | Elec. Rec. ✓ | 150 |
| | | | | | | Mileage | 60 mile ✓60 |
| | | | | | | Other | ext 3 90 |
| | | | | | | TOTAL PRICE $ | 1600 |

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Brad Bine

Our Representative Brad Bine

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1
3