

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name CRIST "C" #1 Test No. 1 Date 4/25/94  
Company ABERCROMBIE DRILLING INC Zone MARMATON  
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3153  
Co. Rep./Geo. ARDEN RATZLAFF Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 3 Twp. 21S Rge. 35W Co. KEARNY State KS

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| Interval Tested <u>4457-4575</u> | Drill Pipe Size <u>4.5" XH</u>          |
| Anchor Length <u>118</u>         | Wt. Pipe I.D. - 2.7 Ft. Run <u>159</u>  |
| Top Packer Depth <u>4452</u>     | Drill Collar - 2.25 Ft. Run _____       |
| Bottom Packer Depth <u>4457</u>  | Mud Wt. <u>9.2</u> lb/Gal.              |
| Total Depth <u>4575</u>          | Viscosity <u>53</u> Filtrate <u>9.6</u> |

Tool Open @ 1:30 PM Initial Blow WEAK BLOW SURGING-PACKER FAILED 2 MINUTES  
TRIED TO RESET - NO HELP  
Final Blow MISRUN

Recovery - Total Feet 260 Flush Tool? NO

|                 |                             |
|-----------------|-----------------------------|
| Rec. <u>260</u> | Feet of <u>DRILLING MUD</u> |
| Rec. _____      | Feet of _____               |
| Rec. _____      | Feet of _____               |
| Rec. _____      | Feet of _____               |
| Rec. _____      | Feet of _____               |

BHT 120 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2183.4 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 4565 w / Clock No. 19960

(C) First Final Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure \_\_\_\_\_ PSI @ (depth) 4570 w / Clock No. 22992

(E) Second Initial Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

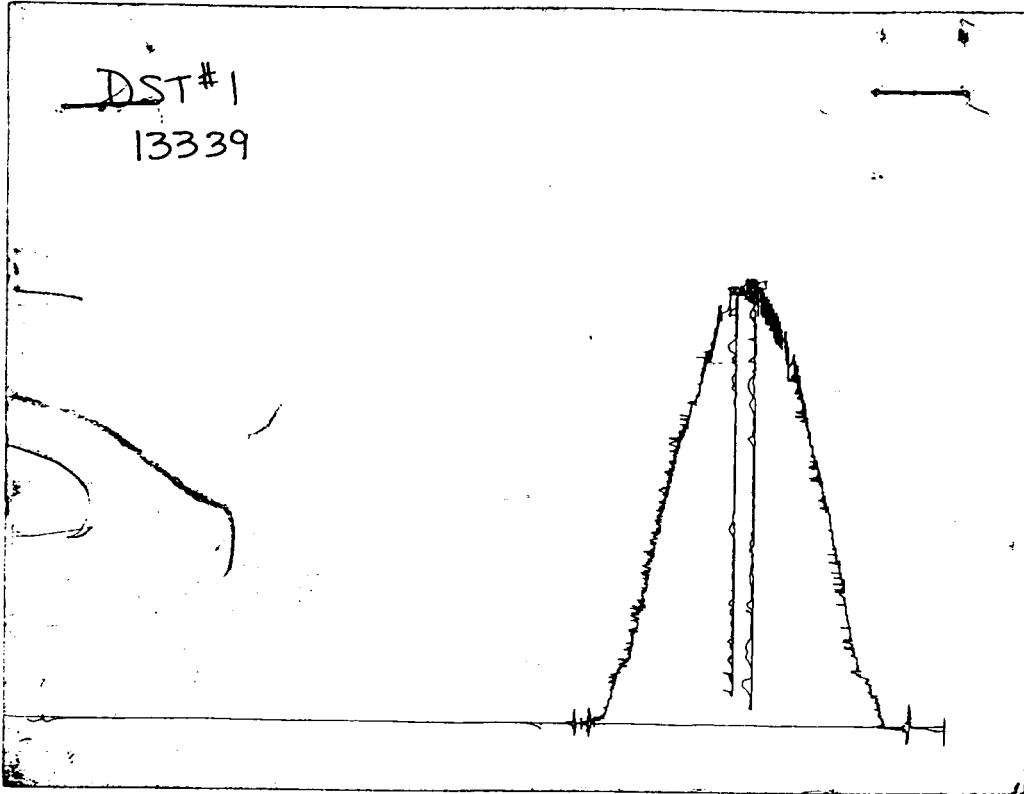
(F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure \_\_\_\_\_ PSI Initial Opening 3 Final Flow \_\_\_\_\_

(H) Final Hydrostatic Mud 2173.5 PSI Initial Shut-in \_\_\_\_\_ Final Shut-in \_\_\_\_\_

Our Representative ROD STEINBRINK

# CHART PAGE



This is an actual photograph of recorder chart #13339

## MISRUN

FIELD  
READING

OFFICE  
READING

|                                  |      |        |
|----------------------------------|------|--------|
| (A) INITIAL HYDROSTATIC MUD      | 2183 | 2183.4 |
| (B) FIRST INITIAL FLOW PRESSURE  |      |        |
| (C) FIRST FINAL FLOW PRESSURE    |      |        |
| (D) INITIAL CLOSED-IN PRESSURE   |      |        |
| (E) SECOND INITIAL FLOW PRESSURE |      |        |
| (F) SECOND FINAL FLOW PRESSURE   |      |        |
| (G) FINAL CLOSED-IN PRESSURE     |      |        |
| (H) FINAL HYDROSTATIC MUD        | 2173 | 2173.5 |

# TRILOBITE TESTING L.L.C.

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## Test Ticket

No 6872

|                 |                                          |                    |                 |                 |                 |
|-----------------|------------------------------------------|--------------------|-----------------|-----------------|-----------------|
| Well Name & No. | Crist 'C' #1                             | Test No.           | 1               | Date            | 4-25-94         |
| Company         | Abercrombie Drilling                     | Zone Tested        | Marmaton        |                 |                 |
| Address         | 150 N. Main Suite 801 Wichita, KS. 67202 | Elevation          | 3153            | (KB)            |                 |
| Co. Rep./Geo.   | Arden Ratzlaff                           | Cont.              | Abercrombie #4  | Est. Ft. of Pay |                 |
| Location: Sec.  | 3                                        | Twp.               | 21 <sup>S</sup> | Rge.            | 35 <sup>W</sup> |
|                 |                                          |                    |                 | Co.             | Kearny          |
|                 |                                          |                    |                 | State           | KS.             |
| No. of Copies?  |                                          | Distribution Sheet | Yes             | No              | Turnkey         |
|                 |                                          |                    | Yes             | No              | Evaluation      |

Interval Tested 4457 - 4575 Drill Pipe Size 4 1/2" XH  
 Anchor Length 118' Top Choke — 1" Bottom Choke — 3/4"  
 Top Packer Depth 4452 Hole Size — 7 7/8" Rubber Size — 6 3/4"  
 Bottom Packer Depth 4457 Wt. Pipe I.D. — 2.7 Ft. Run 159'  
 Total Depth 4575 Drill Collar — 2.25 Ft. Run —  
 Mud Wt. 9.2 lb/gal. Viscosity 53 Filtrate 9.6  
 Tool Open @ 1:30 pm Initial Blow Weak blow surging - packer failed 2 mins.  
Tried to reset - no help.  
 Final Blow —

| Recovery — Total Feet                      | Feet of Gas in Pipe | Flush Tool? |
|--------------------------------------------|---------------------|-------------|
| Rec. <u>260'</u> Feet Of <u>Drilg. Mud</u> | %gas                | %oil        |
| Rec. <u>260'</u> Feet Of <u>Drilg. Mud</u> | %gas                | %oil        |
| Rec. <u>260'</u> Feet Of <u>Drilg. Mud</u> | %gas                | %oil        |
| Rec. <u>260'</u> Feet Of <u>Drilg. Mud</u> | %gas                | %oil        |
| Rec. <u>260'</u> Feet Of <u>Drilg. Mud</u> | %gas                | %oil        |

BHT 120° °F Gravity — °API @ — °F Corrected Gravity — °API

RW — @ — °F Chlorides — ppm Recovery Chlorides 4,000 ppm System

(A) Initial Hydrostatic Mud 2183 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure — PSI @ (depth) 4565 w/Clock No. 19960

(C) First Final Flow Pressure — PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-In Pressure — PSI @ (depth) 4570 w/Clock No. 22992

(E) Second Initial Flow Pressure — PSI AK1 Recorder No. — Range —

(F) Second Final Flow Pressure — PSI @ (depth) — w/Clock No. —

(G) Final Shut-In Pressure — PSI Initial Opening 3 Test MR - 400.

(H) Final Hydrostatic Mud 2173 PSI Initial Shut-In — Jars —

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.

Final Flow — Safety Joint —

Final Shut-In — Straddle —

Circ. Sub X N/C

Sampler —

Extra Packer —

Other —

Approved By Arden Ratzlaff

Our Representative Rod Steinbrink

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name CRIST "C" #1 Test No. 2 Date 4/25/94  
Company ABERCROMBIE DRILLING INC Zone MARMATON  
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3153  
Co. Rep./Geo. ARDEN RATZLAFF Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 3 Twp. 21S Rge. 35W Co. KEARNY State KS

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| Interval Tested <u>4446-4575</u> | Drill Pipe Size <u>4.5" XH</u>          |
| Anchor Length <u>129</u>         | Wt. Pipe I.D. - 2.7 Ft. Run <u>159</u>  |
| Top Packer Depth <u>4441</u>     | Drill Collar - 2.25 Ft. Run _____       |
| Bottom Packer Depth <u>4446</u>  | Mud Wt. <u>9.2</u> lb/Gal.              |
| Total Depth <u>4575</u>          | Viscosity <u>53</u> Filtrate <u>9.6</u> |

Tool Open @ 5:10 PM Initial Blow WEAK BLOW STAYED STEADY @ 1/4"

Final Blow VERY WEAK SURFACE BLOW DIED IN 25 MINUTES

Recovery - Total Feet 10 Flush Tool? NO

|                |                                              |
|----------------|----------------------------------------------|
| Rec. <u>10</u> | Feet of <u>DRILLING MUD - NO SHOW OF OIL</u> |
| Rec. _____     | Feet of _____                                |
| Rec. _____     | Feet of _____                                |
| Rec. _____     | Feet of _____                                |
| Rec. _____     | Feet of _____                                |

BHT 123 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2309.6 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 66.5 PSI @ (depth) 4474 w / Clock No. 19960

(C) First Final Flow Pressure 66.5 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure 764.5 PSI @ (depth) 4570 w / Clock No. 22992

(E) Second Initial Flow Pressure 72.8 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

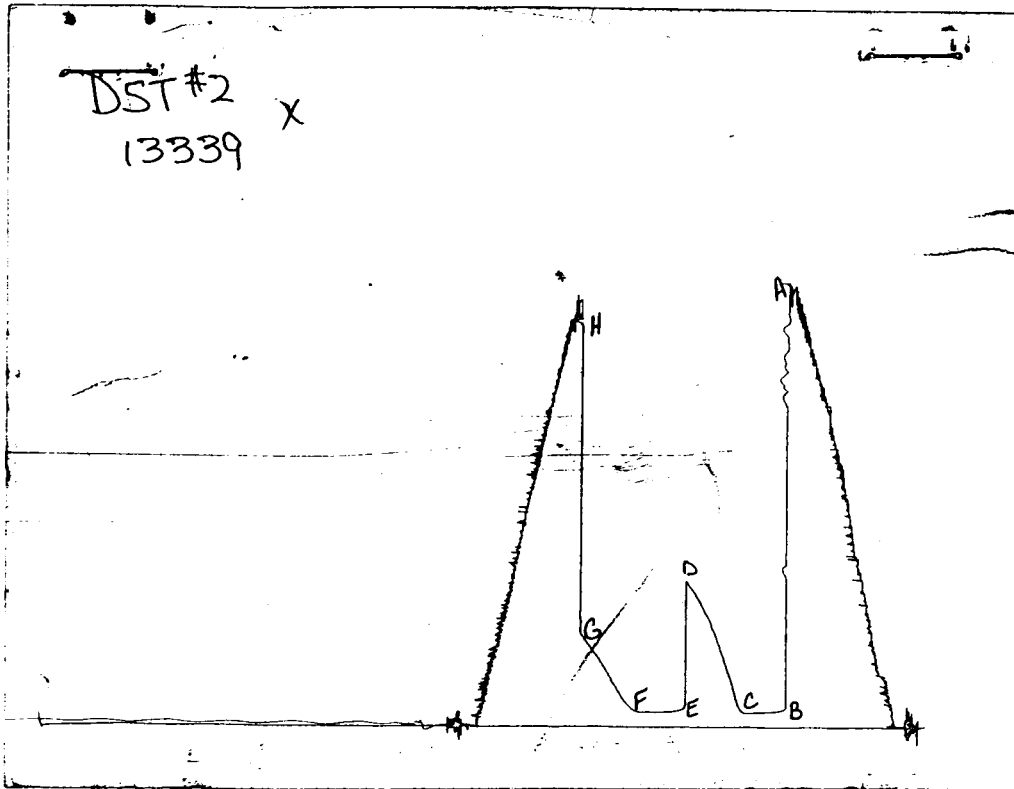
(F) Second Final Flow Pressure 72.8 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 494.8 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 2227.4 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative ROD STEINBRINK

# CHART PAGE



This is an actual photograph of recorder chart #13339

|  | FIELD<br>READING | OFFICE<br>READING |
|--|------------------|-------------------|
|--|------------------|-------------------|

|                                  |      |        |
|----------------------------------|------|--------|
| (A) INITIAL HYDROSTATIC MUD      | 2283 | 2309.6 |
| (B) FIRST INITIAL FLOW PRESSURE  | 52   | 66.5   |
| (C) FIRST FINAL FLOW PRESSURE    | 52   | 66.5   |
| (D) INITIAL CLOSED-IN PRESSURE   | 759  | 764.5  |
| (E) SECOND INITIAL FLOW PRESSURE | 52   | 72.8   |
| (F) SECOND FINAL FLOW PRESSURE   | 52   | 72.8   |
| (G) FINAL CLOSED-IN PRESSURE     | 488  | 494.8  |
| (H) FINAL HYDROSTATIC MUD        | 2223 | 2227.4 |

# TRILOBITE TESTING L.L.C.

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## Test Ticket

No 6873

|                 |                       |                    |                 |                 |                 |
|-----------------|-----------------------|--------------------|-----------------|-----------------|-----------------|
| Well Name & No. | Crist 'C' #1          | Test No.           | 2               | Date            | 4-25-94         |
| Company         | Abercrombie Drilling  | Zone Tested        | Marmaton        |                 |                 |
| Address         | 150 N. Main Suite 810 | Wichita, KS. 67202 | Elevation       | 3153 (KB)       |                 |
| Co. Rep./Geo.   | Arden Ratzlaff        | Cont.              | Abercrombie #4  | Est. Ft. of Pay |                 |
| Location: Sec.  | 3                     | Twp.               | 21 <sup>S</sup> | Rge.            | 35 <sup>W</sup> |
|                 |                       | Co.                | Kearny          | State           | KS.             |
| No. of Copies   |                       | Distribution Sheet | Yes             | No              | Turnkey         |
|                 |                       |                    | Yes             | X               | No              |
|                 |                       |                    |                 |                 | Evaluation      |

|                     |             |                             |                                |
|---------------------|-------------|-----------------------------|--------------------------------|
| Interval Tested     | 4446 - 4575 | Drill Pipe Size             | 4 1/2" XH                      |
| Anchor Length       | 129'        | Top Choke — 1"              | Bottom Choke — 3/4"            |
| Top Packer Depth    | 4441        | Hole Size — 7 7/8"          | Rubber Size — 6 3/4"           |
| Bottom Packer Depth | 4446        | Wt. Pipe I.D. — 2.7 Ft. Run | 159'                           |
| Total Depth         | 4575        | Drill Collar — 2.25 Ft. Run | —                              |
| Mud Wt.             | 9.2         | lb/gal.                     | Viscosity 53                   |
|                     |             |                             | Filtrate 9.6                   |
| Tool Open @         | 5:10 pm     | Initial Blow                | Weak blow stayed steady @ 1/4" |

Final Blow Very weak surface blow died in 25 mins.

|                       |         |                     |           |             |        |
|-----------------------|---------|---------------------|-----------|-------------|--------|
| Recovery — Total Feet | 10'     | Feet of Gas in Pipe | —         | Flush Tool? | No     |
| Rec.                  | Feet Of | %gas                | %oil      | %water      | %mud   |
| Rec.                  | Feet Of | %gas                | %oil      | %water      | %mud   |
| Rec.                  | 10'     | Feet Of             | Drlg. Mud | %gas        | %oil   |
| Rec.                  | Feet Of | no show oil         | %gas      | %oil        | %water |
| Rec.                  | Feet Of | %gas                | %oil      | %water      | %mud   |

BHT 123° °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides 4,000 ppm System

(A) Initial Hydrostatic Mud 2283 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 52 PSI @ (depth) 4474 w/Clock No. 19960

(C) First Final Flow Pressure 52 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-In Pressure 759 PSI @ (depth) 4570 w/Clock No. 22992

(E) Second Initial Flow Pressure 52 PSI AK1 Recorder No. — Range —

(F) Second Final Flow Pressure 52 PSI @ (depth) — w/Clock No. —

(G) Final Shut-In Pressure 488 PSI Initial Opening 30 Test

(H) Final Hydrostatic Mud 2223 PSI Initial Shut-In 45 Jars

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Final Flow 30 Safety Joint

Final Shut-In 45 Straddle

Circ. sub X N/C

Sampler

Extra Packer

Other

TOTAL PRICE \$

Approved By Arden Ratzlaff

Our Representative Rod Steinbrink

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name CRIST "C" #1 Test No. 3 Date 4/26/94  
Company ABERCROMBIE DRILLING INC Zone JOHNSON  
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3153  
Co. Rep./Geo. ARDEN RATZLAFF Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 3 Twp. 21S Rge. 35W Co. KEARNY State KS

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| Interval Tested <u>4601-4627</u> | Drill Pipe Size <u>4.5" XH</u>          |
| Anchor Length <u>26</u>          | Wt. Pipe I.D. - 2.7 Ft. Run <u>254</u>  |
| Top Packer Depth <u>4596</u>     | Drill Collar - 2.25 Ft. Run _____       |
| Bottom Packer Depth <u>4601</u>  | Mud Wt. <u>9.2</u> lb/Gal.              |
| Total Depth <u>4627</u>          | Viscosity <u>50</u> Filtrate <u>9.6</u> |

Tool Open @ 8:05 AM Initial Blow WEAK SURFACE BLOW DIED IN 17 MINUTES

Final Blow NO RETURN BLOW / FLUSHED TOOL / GOOD SURGE-NO HELP

Recovery - Total Feet 5 Flush Tool? YES

|               |                             |
|---------------|-----------------------------|
| Rec. <u>5</u> | Feet of <u>DRILLING MUD</u> |
| Rec. _____    | Feet of _____               |
| Rec. _____    | Feet of _____               |
| Rec. _____    | Feet of _____               |
| Rec. _____    | Feet of _____               |

BHT 123 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2430.8 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 47.8 PSI @ (depth) 4617 w / Clock No. 19960

(C) First Final Flow Pressure 47.8 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure 47.8 PSI @ (depth) 4622 w / Clock No. 22992

(E) Second Initial Flow Pressure 47.8 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

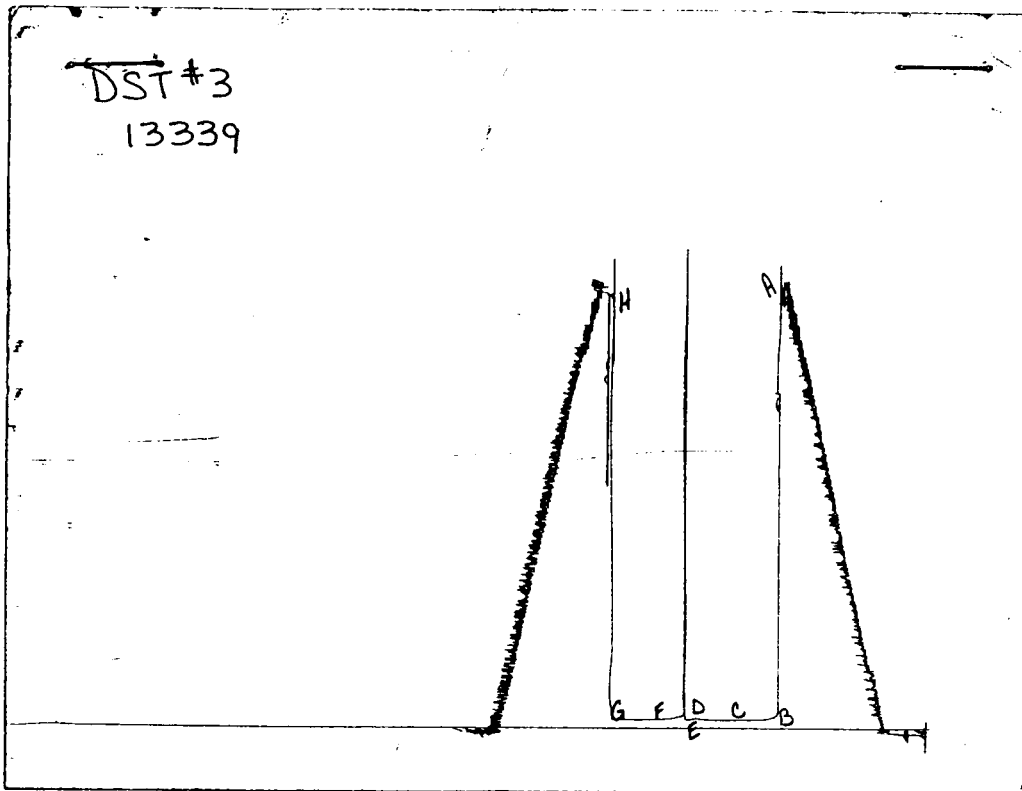
(F) Second Final Flow Pressure 47.8 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 47.8 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 2275.5 PSI Initial Shut-in 30 Final Shut-in 30

Our Representative ROD STEINBRINK

# CHART PAGE



This is an actual photograph of recorder chart #13339

|                                  | FIELD<br>READING | OFFICE<br>READING |
|----------------------------------|------------------|-------------------|
| (A) INITIAL HYDROSTATIC MUD      | 2323             | 2430.8            |
| (B) FIRST INITIAL FLOW PRESSURE  | 41               | 47.8              |
| (C) FIRST FINAL FLOW PRESSURE    | 41               | 47.8              |
| (D) INITIAL CLOSED-IN PRESSURE   | 41               | 47.8              |
| (E) SECOND INITIAL FLOW PRESSURE | 41               | 47.8              |
| (F) SECOND FINAL FLOW PRESSURE   | 41               | 47.8              |
| (G) FINAL CLOSED-IN PRESSURE     | 41               | 47.8              |
| (H) FINAL HYDROSTATIC MUD        | 2273             | 2275.5            |

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 6874

|                 |                                                 |                    |                       |                 |                       |
|-----------------|-------------------------------------------------|--------------------|-----------------------|-----------------|-----------------------|
| Well Name & No. | <u>Crist 'C' #1</u>                             | Test No.           | <u>3</u>              | Date            | <u>4-26-94</u>        |
| Company         | <u>Abercrombie Drilling</u>                     | Zone Tested        | <u>Johnson</u>        |                 |                       |
| Address         | <u>150 N. Main Suite 810 Wichita, KS. 67202</u> | Elevation          | <u>3153 (KB)</u>      |                 |                       |
| Co. Rep./Geo.   | <u>Arden Ratzlaff</u>                           | Cont.              | <u>Abercrombie #4</u> | Est. Ft. of Pay |                       |
| Location: Sec.  | <u>3</u>                                        | Twp.               | <u>21<sup>S</sup></u> | Rge.            | <u>35<sup>W</sup></u> |
|                 |                                                 | Co.                | <u>Kearny</u>         | State           | <u>KS</u>             |
| No. of Copies   |                                                 | Distribution Sheet | Yes                   | No              | Turnkey               |
|                 |                                                 |                    | Yes                   | No              | Evaluation            |

|                     |                    |                             |                                           |
|---------------------|--------------------|-----------------------------|-------------------------------------------|
| Interval Tested     | <u>4601 - 4627</u> | Drill Pipe Size             | <u>4 1/2" KH</u>                          |
| Anchor Length       | <u>26'</u>         | Top Choke — 1"              | Bottom Choke — 3/4"                       |
| Top Packer Depth    | <u>4596</u>        | Hole Size — 7 7/8"          | Rubber Size — 6 3/4"                      |
| Bottom Packer Depth | <u>4601</u>        | Wt. Pipe I.D. — 2.7 Ft. Run | <u>254'</u>                               |
| Total Depth         | <u>4627</u>        | Drill Collar — 2.25 Ft. Run | <u>—</u>                                  |
| Mud Wt.             | <u>9.2</u>         | lb/gal.                     | Viscosity <u>50</u> Filtrate <u>9.6</u>   |
| Tool Open @         | <u>8:05 am</u>     | Initial Blow                | <u>Weak surface blow died in 17 mins.</u> |

Final Blow No return blow / flushed tool - good surge / no help.

|                       |                   |                     |          |             |            |
|-----------------------|-------------------|---------------------|----------|-------------|------------|
| Recovery — Total Feet | <u>5'</u>         | Feet of Gas in Pipe | <u>—</u> | Flush Tool? | <u>YES</u> |
| Rec.                  | Feet Of           | %gas                | %oil     | %water      | %mud       |
| Rec.                  | Feet Of           | %gas                | %oil     | %water      | %mud       |
| Rec.                  | <u>5'</u> Feet Of | <u>Drilg. Mud</u>   | %gas     | %oil        | %water     |
| Rec.                  | Feet Of           | %gas                | %oil     | %water      | %mud       |
| Rec.                  | Feet Of           | %gas                | %oil     | %water      | %mud       |

BHT 123° °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 4,000 ppm System

(A) Initial Hydrostatic Mud 2323 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 41 PSI @ (depth) 4617 w/Clock No. 19960

(C) First Final Flow Pressure 41 PSI AK1 Recorder No. 13339 Range 4025

(D)\* Initial Shut-In Pressure 41 PSI @ (depth) 4622 w/Clock No. 22992

(E) Second Initial Flow Pressure 41 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

(F) Second Final Flow Pressure 41 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_

(G) Final Shut-In Pressure 41 PSI Initial Opening 30 Test \_\_\_\_\_

(H) Final Hydrostatic Mud 2273 PSI Initial Shut-In 30 Jars \_\_\_\_\_

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Final Flow 30 Safety Joint \_\_\_\_\_

Final Shut-In 30 Straddle \_\_\_\_\_

Circ. Sub X N/C

Sampler \_\_\_\_\_

Extra Packer \_\_\_\_\_

Other \_\_\_\_\_

Approved By Arden Ratzlaff

Our Representative Rod Steinbrink

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name CRIST "C" #1 Test No. 4 Date 4/26/94  
Company ABERCROMBIE DRILLING INC Zone FT SCOTT  
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3153  
Co. Rep./Geo. ARDEN RATZLAFF Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay 6  
Location: Sec. 3 Twp. 21S Rge. 35W Co. KEARNY State KS

|                     |                  |                             |                    |
|---------------------|------------------|-----------------------------|--------------------|
| Interval Tested     | <u>4629-4668</u> | Drill Pipe Size             | <u>4.5" XH</u>     |
| Anchor Length       | <u>39</u>        | Wt. Pipe I.D. - 2.7 Ft. Run | <u>254</u>         |
| Top Packer Depth    | <u>4624</u>      | Drill Collar - 2.25 Ft. Run |                    |
| Bottom Packer Depth | <u>4629</u>      | Mud Wt.                     | <u>9.3</u> lb/Gal. |
| Total Depth         | <u>4668</u>      | Viscosity                   | <u>50</u>          |
|                     |                  | Filtrate                    | <u>9.6</u>         |

Tool Open @ 10:00 AM Initial Blow SURFACE BLOW INCREASED TO 1" THROUGHOUT

Final Blow WEAK TO FAIR BLOW BUILT TO 4"

Recovery - Total Feet 30 Flush Tool? NO

|                |         |                                        |
|----------------|---------|----------------------------------------|
| Rec. <u>30</u> | Feet of | <u>OIL CUT MUD - 25% OIL / 75% MUD</u> |
| Rec. _____     | Feet of | _____                                  |
| Rec. _____     | Feet of | _____                                  |
| Rec. _____     | Feet of | _____                                  |
| Rec. _____     | Feet of | _____                                  |

BHT 124 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 7500 ppm System

(A) Initial Hydrostatic Mud 2314.5 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 85.2 PSI @ (depth) 4658 w / Clock No. 19960

(C) First Final Flow Pressure 78.0 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure 177.7 PSI @ (depth) 4663 w / Clock No. 22992

(E) Second Initial Flow Pressure 86.3 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

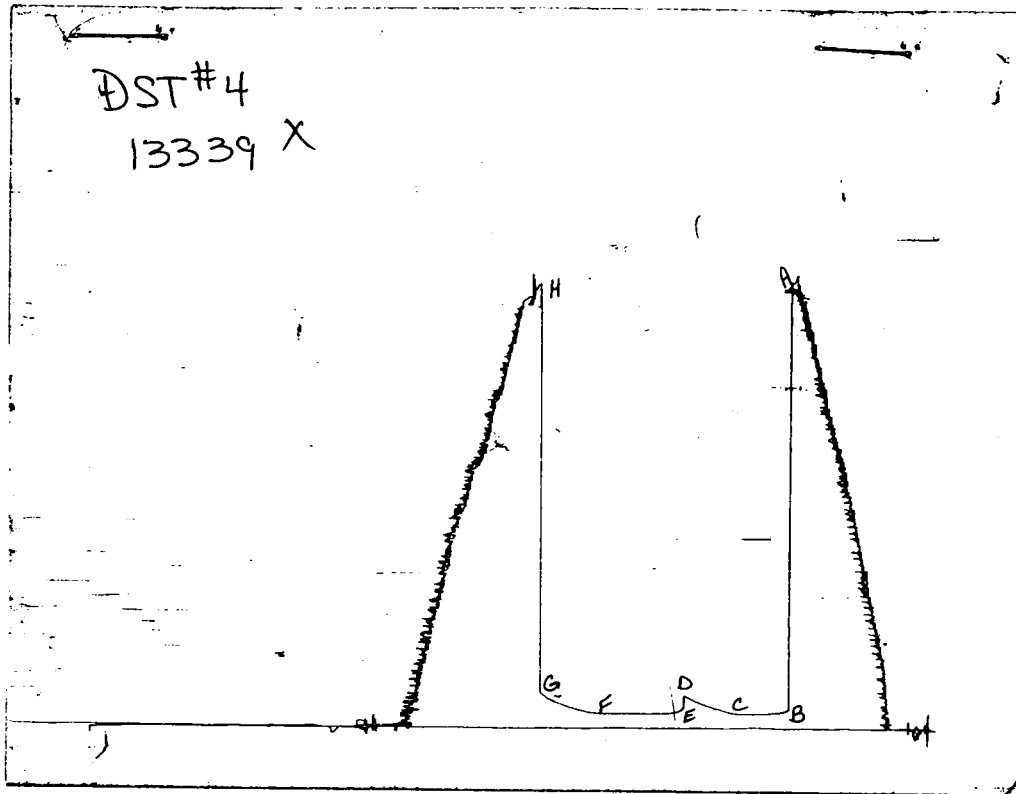
(F) Second Final Flow Pressure 80.1 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 189.1 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2258.4 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative ROD STEINBRINK

# CHART PAGE



This is an actual photograph of recorder chart #13339

|                                  | FIELD<br>READING | OFFICE<br>READING |
|----------------------------------|------------------|-------------------|
| (A) INITIAL HYDROSTATIC MUD      | 2303             | 2314.5            |
| (B) FIRST INITIAL FLOW PRESSURE  | 62               | 85.2              |
| (C) FIRST FINAL FLOW PRESSURE    | 62               | 78                |
| (D) INITIAL CLOSED-IN PRESSURE   | 176              | 177.7             |
| (E) SECOND INITIAL FLOW PRESSURE | 83               | 86.3              |
| (F) SECOND FINAL FLOW PRESSURE   | 83               | 80.1              |
| (G) FINAL CLOSED-IN PRESSURE     | 187              | 189.1             |
| (H) FINAL HYDROSTATIC MUD        | 2283             | 2258.4            |

# CALCULATED RECOVERY ANALYSIS

WEIGHT PIPE

DST #

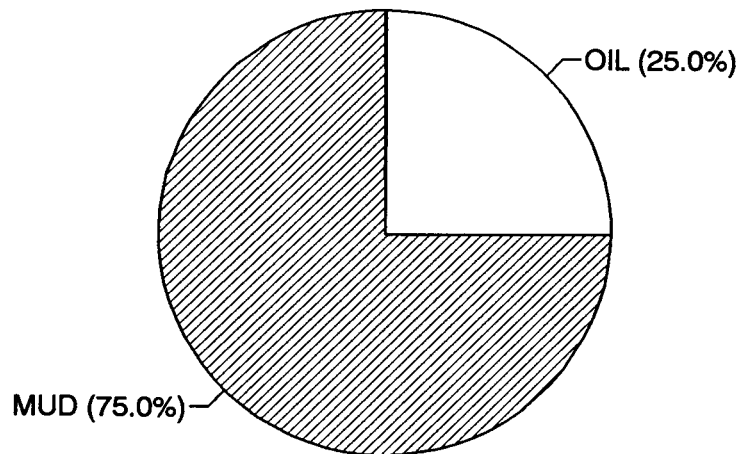
4

TICKET #

6875

| SAMPLE | TOTAL | GAS |      | OIL |      | WATER |      | MUD |      |
|--------|-------|-----|------|-----|------|-------|------|-----|------|
| #      | FEET  | %   | FEET | %   | FEET | %     | FEET | %   | FEET |
| 1      | 30    | 0   | 0    | 25  | 7.5  | 0     | 0    | 75  | 22.5 |
| 2      |       |     | 0    |     | 0    |       | 0    |     | 0    |
| 3      |       |     | 0    |     | 0    |       | 0    |     | 0    |
| 4      |       |     | 0    |     | 0    |       | 0    |     | 0    |
| 5      |       |     | 0    |     | 0    |       | 0    |     | 0    |
| TOTAL  | 30    | 0   | 0    | 25  | 7.5  | 0     | 0    | 75  | 22.5 |

|            |        |   | HRS OPEN | BBL/DAY |
|------------|--------|---|----------|---------|
| BBL OIL=   | 0.0525 | * | 1.5      | 0.84    |
| BBL WATER= | 0      | * |          | 0       |
| BBL MUD=   | 0.1575 |   |          |         |
| BBL GAS=   | 0      |   |          |         |



# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 6875

|                 |                                          |                    |                 |                 |                 |
|-----------------|------------------------------------------|--------------------|-----------------|-----------------|-----------------|
| Well Name & No. | Crist 'C' #1                             | Test No.           | 4               | Date            | 4-26-94         |
| Company         | Abercrombie Drilling                     | Zone Tested        | Ft. Scott       |                 |                 |
| Address         | 150 N. Main Suite 810 Wichita, KS. 67202 |                    | Elevation       | 3153            | (KB)            |
| Co. Rep./Geo.   | Arden Ratzlaff                           | Cont.              | Abercrombie #4  | Est. Ft. of Pay | 6'              |
| Location: Sec.  | 3                                        | Twp.               | 21 <sup>S</sup> | Rge.            | 35 <sup>W</sup> |
| Co.             | Kearny                                   | State              | KS.             |                 |                 |
| No. of Copies   |                                          | Distribution Sheet | Yes             | No              | Turnkey         |
|                 |                                          |                    | Yes             | X               | No              |
|                 |                                          |                    |                 |                 | Evaluation      |

Interval Tested 4629 - 4668 Drill Pipe Size 4 1/2" XH  
Anchor Length 39' Top Choke — 1" Bottom Choke — 3/4"  
Top Packer Depth 4624 Hole Size — 7 7/8" Rubber Size — 6 3/4"  
Bottom Packer Depth 4629 Wt. Pipe I.D. — 2.7 Ft. Run 254'  
Total Depth 4668 Drill Collar — 2.25 Ft. Run  
Mud Wt. 9.3 lb/gal. Viscosity 50 Filtrate 9.6  
Tool Open @ 10:00 pm Initial Blow Surface blow increased to 1" throughout.

Final Blow Weak to fair blow built to 4".

Recovery — Total Feet 30' Feet of Gas in Pipe — Flush Tool? No

| Rec. | Feet Of    | %gas    | %oil       | %water                | %mud                    |
|------|------------|---------|------------|-----------------------|-------------------------|
| Rec. | Feet Of    | %gas    | %oil       | %water                | %mud                    |
| Rec. | <u>30'</u> | Feet Of | <u>OCM</u> | — %gas <u>25</u> %oil | — %water <u>75</u> %mud |
| Rec. | Feet Of    | %gas    | %oil       | %water                | %mud                    |
| Rec. | Feet Of    | %gas    | %oil       | %water                | %mud                    |

BHT 124° °F Gravity — °API @ — °F Corrected Gravity — °API

RW — @ — °F Chlorides — ppm Recovery Chlorides 7,500 ppm System

(A) Initial Hydrostatic Mud 2303 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 62 PSI @ (depth) 4658 w/Clock No. 19960

(C) First Final Flow Pressure 62 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-In Pressure 176 PSI @ (depth) 4663 w/Clock No. 22992

(E) Second Initial Flow Pressure 83 PSI AK1 Recorder No. — Range —

(F) Second Final Flow Pressure 83 PSI @ (depth) — w/Clock No. —

(G) Final Shut-In Pressure 187 PSI Initial Opening 30 Test 600

(H) Final Hydrostatic Mud 2283 PSI Initial Shut-In 45 Jars —

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.

Final Flow 60 Safety Joint —

Final Shut-In 45 Straddle —

Circ. Sub X N/C

Sampler —

Extra Packer —

Other —

Approved By Arden Ratzlaff

Our Representative Rod Steinbrink

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name CRIST "C" #1 Test No. 5 Date 4/28/94  
Company ABERCROMBIE DRILLING INC Zone BEYMER  
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3153  
Co. Rep./Geo. ARDEN RATZLAFF Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 3 Twp. 21S Rge. 35W Co. KEARNY State KS

Interval Tested 4556-4590 Drill Pipe Size 4.5" XH  
Anchor Length 34 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 4551-4556 Drill Collar - 2.25 Ft. Run \_\_\_\_\_  
Bottom Packer Depth 4590 Mud Wt. 9.3 lb/Gal.  
Total Depth 5041 Viscosity 55 Filtrate 8.8

Tool Open @ 5:00 PM Initial Blow WEAK BLOW- PACKER FAILED - TIRED TO RESET- NO HELP

Final Blow \_\_\_\_\_

Recovery - Total Feet \_\_\_\_\_ Flush Tool? NO

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 120 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2343.6 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 4575 w / Clock No. 19960

(C) First Final Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure \_\_\_\_\_ PSI @ (depth) 4580 w / Clock No. 22992

(E) Second Initial Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 13276 Range 4000

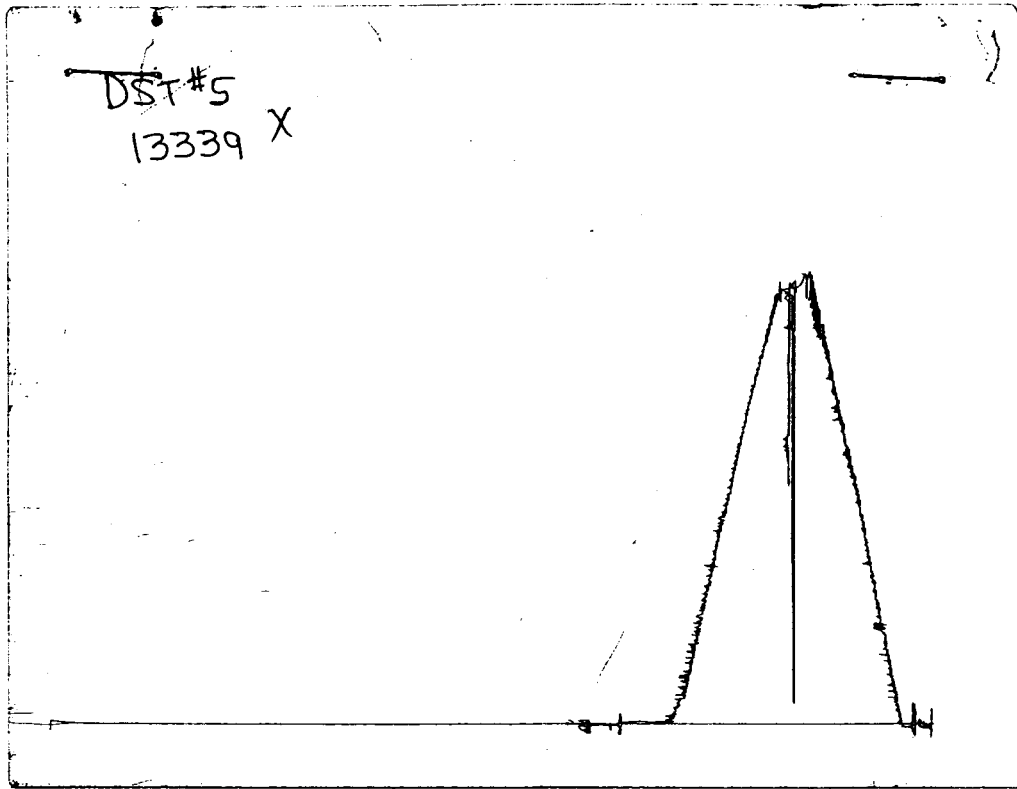
(F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) 5036 w / Clock No. 23832

(G) Final Shut-in Pressure \_\_\_\_\_ PSI Initial Opening \_\_\_\_\_ Final Flow \_\_\_\_\_

(H) Final Hydrostatic Mud 2314.5 PSI Initial Shut-in \_\_\_\_\_ Final Shut-in \_\_\_\_\_

Our Representative ROD STEINBRINK

# CHART PAGE

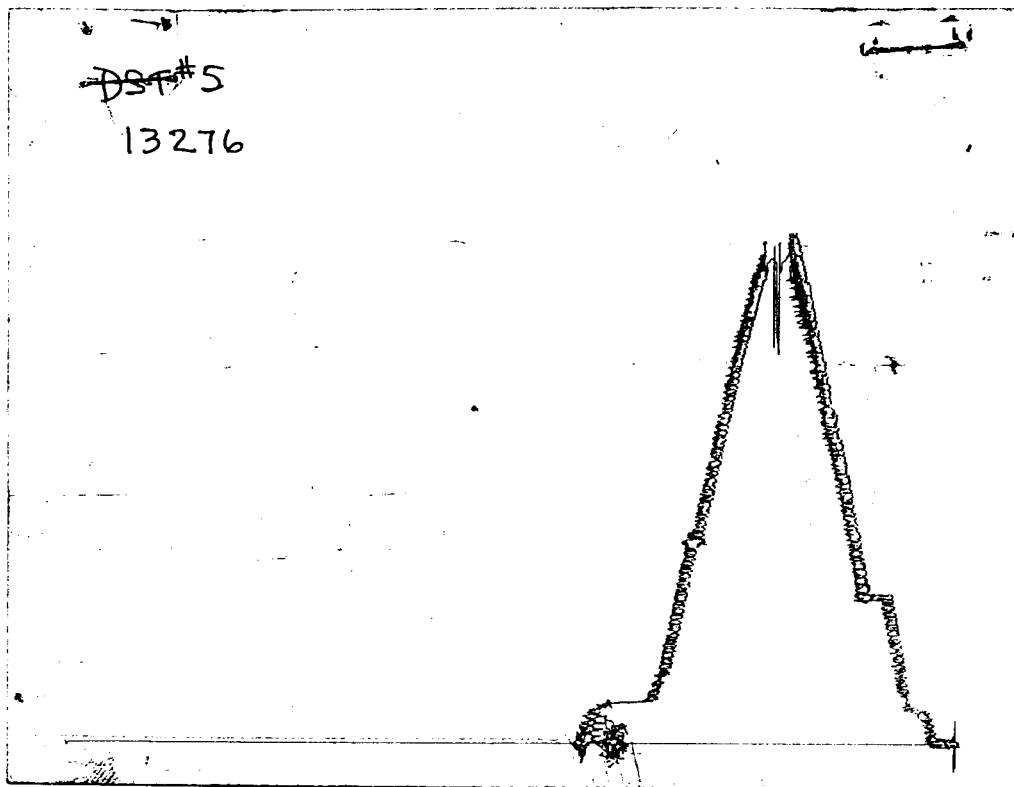


This is an actual photograph of recorder chart #13339

FIELD  
READING

OFFICE  
READING

|                                  |      |        |
|----------------------------------|------|--------|
| (A) INITIAL HYDROSTATIC MUD      | 2343 | 2343.6 |
| (B) FIRST INITIAL FLOW PRESSURE  |      |        |
| (C) FIRST FINAL FLOW PRESSURE    |      |        |
| (D) INITIAL CLOSED-IN PRESSURE   |      |        |
| (E) SECOND INITIAL FLOW PRESSURE |      |        |
| (F) SECOND FINAL FLOW PRESSURE   |      |        |
| (G) FINAL CLOSED-IN PRESSURE     |      |        |
| (H) FINAL HYDROSTATIC MUD        | 2293 | 2314.5 |



This is an actual photograph of recorder chart # 13276

FIELD  
READING

OFFICE  
READING

- (A) INITIAL HYDROSTATIC MUD
- (B) FIRST INITIAL FLOW PRESSURE
- (C) FIRST FINAL FLOW PRESSURE
- (D) INITIAL CLOSED-IN PRESSURE
- (E) SECOND INITIAL FLOW PRESSURE
- (F) SECOND FINAL FLOW PRESSURE
- (G) FINAL CLOSED-IN PRESSURE
- (H) FINAL HYDROSTATIC MUD

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 7051

|                 |                                         |                    |                 |                 |                 |
|-----------------|-----------------------------------------|--------------------|-----------------|-----------------|-----------------|
| Well Name & No. | Crist 'C' #1                            | Test No.           | 5               | Date            | 4-28-94         |
| Company         | Abercrombie Drilling                    | Zone Tested        | Beymer          |                 |                 |
| Address         | 150 N Main Suite 810 Wichita, KS. 67202 | Elevation          | 3153 (KB)       |                 |                 |
| Co. Rep./Geo.   | Arden Ratzlaff                          | cont.              | Abercrombie #4  | Est. Ft. of Pay |                 |
| Location: Sec.  | 3                                       | Twp.               | 21 <sup>S</sup> | Rge.            | 35 <sup>W</sup> |
|                 |                                         | co.                | Kearny          | state           | KS.             |
| No. of Copies   | Normal                                  | Distribution Sheet | Yes             | X               | No Turnkey      |
|                 |                                         |                    | Yes             | X               | No Evaluation   |

Interval Tested 4556 - ~~5041~~ 4590 Drill Pipe Size 4 1/2" XH  
 Anchor Length 34' Top Choke — 1" Bottom Choke — 3/4"  
 Top Packer Depth 4551 - 4556 Hole Size — 7 7/8" Rubber Size — 6 3/4"  
 Bottom Packer Depth 4590 Wt. Pipe I.D. — 2.7 Ft. Run —  
 Total Depth (LTD) 5041 Drill Collar — 2.25 Ft. Run —  
 Mud Wt. 9.3 lb/gal. Viscosity 55 Filtrate 8.8  
 Tool Open @ 5:00 pm Initial Blow Weak blow - packer failed tried to reset  
no help

Final Blow \_\_\_\_\_

Recovery — Total Feet \_\_\_\_\_ Feet of Gas in Pipe \_\_\_\_\_ Flush Tool? \_\_\_\_\_

| Rec. | Feet Of | %gas | %oil | %water | %mud |
|------|---------|------|------|--------|------|
| Rec. | Feet Of | %gas | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud |

BHT 120° °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 6.000 ppm System

(A) Initial Hydrostatic Mud 2343 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 4575 w/Clock No. 19960

(C) First Final Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-In Pressure \_\_\_\_\_ PSI @ (depth) 4580 w/Clock No. 22992

(E) Second Initial Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 13276 Range 4000

(F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) 5036 w/Clock No. 23832

(G) Final Shut-In Pressure \_\_\_\_\_ PSI Initial Opening \_\_\_\_\_ Test X misrun 500

(H) Final Hydrostatic Mud 2293 PSI Initial Shut-In \_\_\_\_\_ Jars \_\_\_\_\_

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Final Flow \_\_\_\_\_ Safety Joint \_\_\_\_\_

Final Shut-In \_\_\_\_\_ Straddle X 250

Circ. Sub X N/C

Sampler \_\_\_\_\_

Extra Packer X 150

Other \_\_\_\_\_

Approved By Arden Ratzlaff

Our Representative Rod Steinbrink

TOTAL PRICE \$ 900.00

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name CRIST "C" #1 Test No. 6 Date 4/28/94  
Company ABERCROMBIE DRILLING INC Zone BEYMER  
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3153  
Co. Rep./Geo. ARDEN RATZLAFF Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 3 Twp. 21S Rge. 35W Co. KEARNY State KS

Interval Tested 4554-4590 Drill Pipe Size 4.5" XH  
Anchor Length 36 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 4547-4554 Drill Collar - 2.25 Ft. Run \_\_\_\_\_  
Bottom Packer Depth 4590 Mud Wt. 9.3 lb/Gal.  
Total Depth 5041 Viscosity 55 Filtrate 8.8

Tool Open @ 9:30 PM Initial Blow FAIR TO STRONG BLOW OFF BOTTOM IN 12 MINUTES  
ISI: BLED OFF BLOW - NO RETURN  
Final Blow WEAK SURFACE BLOW SLOWLY BUILT TO 5" THROUGHOUT  
FSI: BLED OFF BLOW - NO RETURN

Recovery - Total Feet 330 Flush Tool? NO

Rec. 330 Feet of SLIGHTLY OIL SPOTTED MUD  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 122 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2386.7 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 106.1 PSI @ (depth) 4575 w / Clock No. 19960

(C) First Final Flow Pressure 119.5 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure 1128.4 PSI @ (depth) 4580 w / Clock No. 22992

(E) Second Initial Flow Pressure 161.1 PSI AK1 Recorder No. 13276 Range 4000

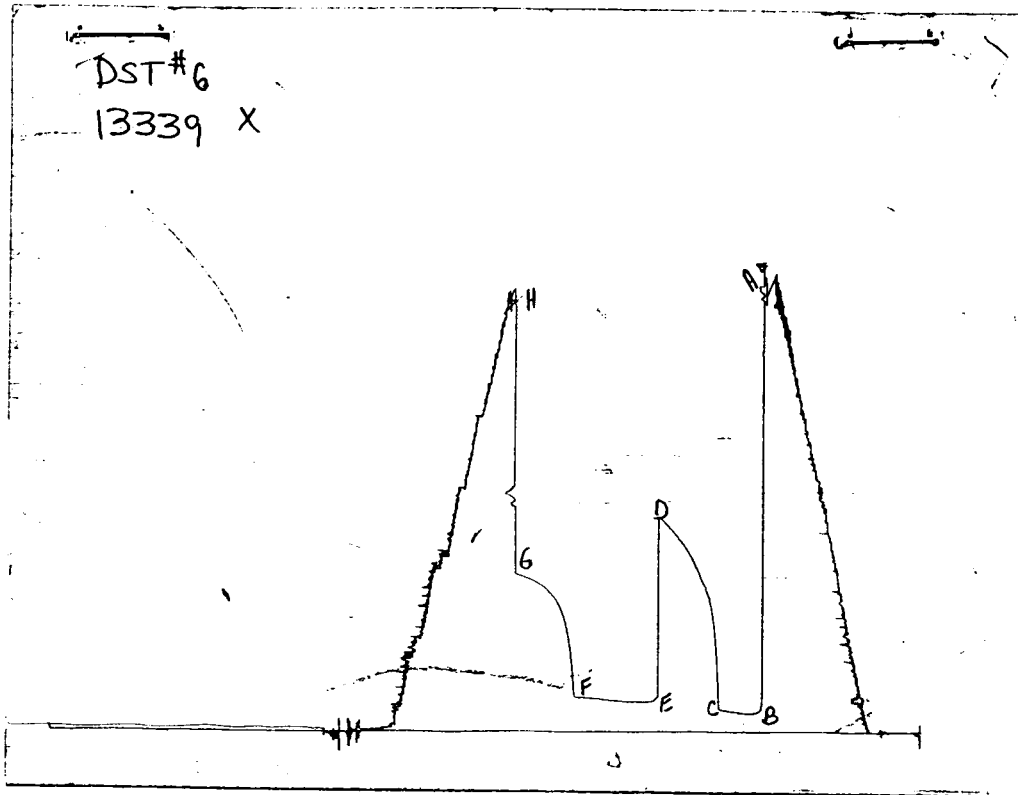
(F) Second Final Flow Pressure 180.8 PSI @ (depth) 5036 w / Clock No. 23832

(G) Final Shut-in Pressure 827.6 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2256.4 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative ROD STEINBRINK

# CHART PAGE

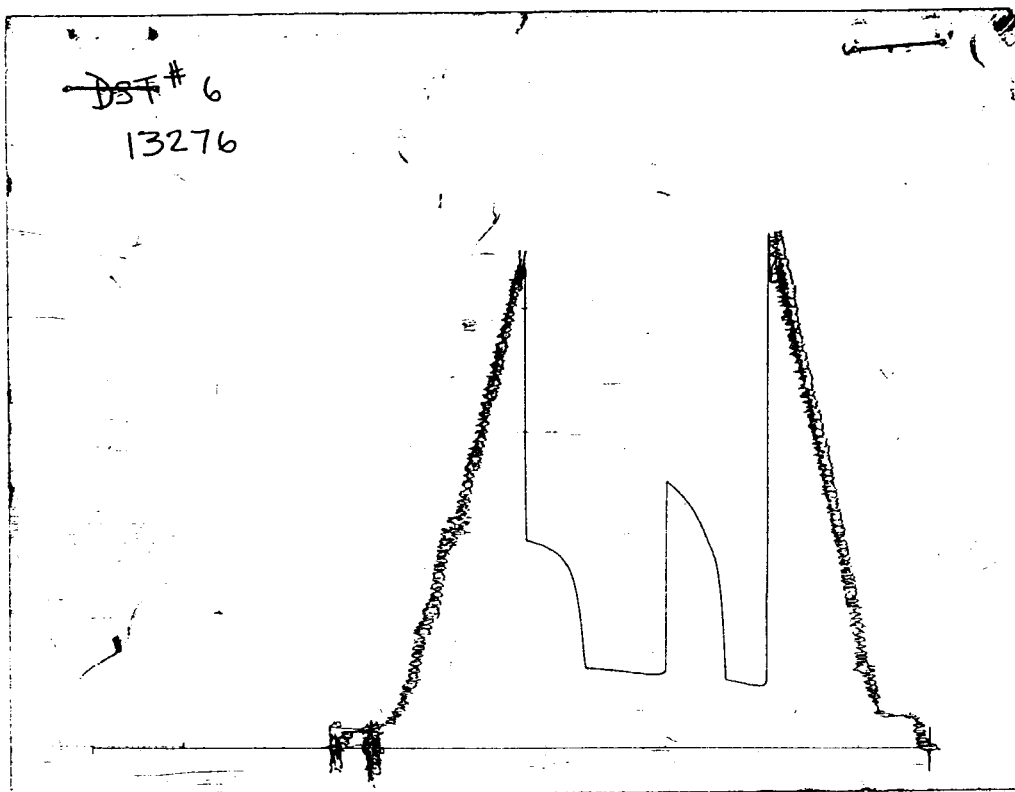


This is an actual photograph of recorder chart #13339

FIELD  
READING

OFFICE  
READING

|                                  |      |        |
|----------------------------------|------|--------|
| (A) INITIAL HYDROSTATIC MUD      | 2333 | 2386.7 |
| (B) FIRST INITIAL FLOW PRESSURE  | 83   | 106.1  |
| (C) FIRST FINAL FLOW PRESSURE    | 104  | 119.5  |
| (D) INITIAL CLOSED-IN PRESSURE   | 1120 | 1128.4 |
| (E) SECOND INITIAL FLOW PRESSURE | 135  | 161.1  |
| (F) SECOND FINAL FLOW PRESSURE   | 166  | 180.8  |
| (G) FINAL CLOSED-IN PRESSURE     | 819  | 827.6  |
| (H) FINAL HYDROSTATIC MUD        | 2303 | 2256.4 |



This is an actual photograph of recorder chart # 13276

FIELD  
READING

OFFICE  
READING

- (A) INITIAL HYDROSTATIC MUD
- (B) FIRST INITIAL FLOW PRESSURE
- (C) FIRST FINAL FLOW PRESSURE
- (D) INITIAL CLOSED-IN PRESSURE
- (E) SECOND INITIAL FLOW PRESSURE
- (F) SECOND FINAL FLOW PRESSURE
- (G) FINAL CLOSED-IN PRESSURE
- (H) FINAL HYDROSTATIC MUD

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No. 7053

|                 |                                                 |                    |                       |                 |                                        |
|-----------------|-------------------------------------------------|--------------------|-----------------------|-----------------|----------------------------------------|
| Well Name & No. | <u>Crist 'C' #1</u>                             | Test No.           | <u>6</u>              | Date            | <u>4-28-94</u>                         |
| Company         | <u>Abercrombie Drilling</u>                     | Zone Tested        | <u>Beymer</u>         |                 |                                        |
| Address         | <u>150 N. Main Suite 810 Wichita, KS. 67202</u> | Elevation          | <u>3153 (KB)</u>      |                 |                                        |
| Co. Rep./Geo.   | <u>Arden Ratzlaff</u>                           | Cont.              | <u>Abercrombie #4</u> | Est. Ft. of Pay |                                        |
| Location: Sec.  | <u>3</u>                                        | Twp.               | <u>21 S</u>           | Rge.            | <u>35 W</u>                            |
|                 |                                                 | Co.                | <u>Kearny</u>         | State           | <u>KS.</u>                             |
| No. of Copies   | <u>Normal</u>                                   | Distribution Sheet | Yes <u>X</u>          | No Turnkey      | Yes <u>X</u> No <u>    </u> Evaluation |

|                     |                    |                             |                               |
|---------------------|--------------------|-----------------------------|-------------------------------|
| Interval Tested     | <u>4554 - 4590</u> | Drill Pipe Size             | <u>4 1/2" KH</u>              |
| Anchor Length       | <u>36'</u>         | Top Choke — 1"              | Bottom Choke — <u>1/4"</u>    |
| Top Packer Depth    | <u>4547 - 4554</u> | Hole Size — <u>7 7/8"</u>   | Rubber Size — <u>6 3/4"</u>   |
| Bottom Packer Depth | <u>4590</u>        | Wt. Pipe I.D. — 2.7 Ft. Run | <u>    </u>                   |
| Total Depth         | <u>(LTD) 5041</u>  | Drill Collar — 2.25 Ft. Run | <u>    </u>                   |
| Mud Wt.             | <u>9.3</u> lb/gal. | Viscosity                   | <u>SS</u> Filtrate <u>8.8</u> |

Tool Open @ 9:30 pm Initial Blow fair to strong blow off bottom in 12 mins.  
ISI: Bled off blow - no return.

Final Blow Weak surface blow slowly built to 5" throughout.  
FSI: Bled off blow - no return.

Recovery — Total Feet 330' Feet of Gas in Pipe      Flush Tool? No

|      |                     |                         |      |      |        |      |
|------|---------------------|-------------------------|------|------|--------|------|
| Rec. | Feet Of             | <u>oil</u>              | %gas | %oil | %water | %mud |
| Rec. | Feet Of             | <u>Slightly Spotted</u> | %gas | %oil | %water | %mud |
| Rec. | <u>330'</u> Feet Of | <u>Mud</u>              | %gas | %oil | %water | %mud |
| Rec. | Feet Of             |                         | %gas | %oil | %water | %mud |
| Rec. | Feet Of             |                         | %gas | %oil | %water | %mud |

BHT 122° °F Gravity      °API @      °F Corrected Gravity      °API

RW      @      °F Chlorides      ppm Recovery Chlorides 6,000 ppm System

|                                  |             |     |                  |              |             |                     |
|----------------------------------|-------------|-----|------------------|--------------|-------------|---------------------|
| (A) Initial Hydrostatic Mud      | <u>2333</u> | PSI | AK1 Recorder No. | <u>13309</u> | Range       | <u>4700</u>         |
| (B) First Initial Flow Pressure  | <u>83</u>   | PSI | @ (depth)        | <u>4575</u>  | w/Clock No. | <u>19960</u>        |
| (C) First Final Flow Pressure    | <u>104</u>  | PSI | AK1 Recorder No. | <u>13339</u> | Range       | <u>4025</u>         |
| (D) Initial Shut-In Pressure     | <u>1120</u> | PSI | @ (depth)        | <u>4580</u>  | w/Clock No. | <u>22992</u>        |
| (E) Second Initial Flow Pressure | <u>135</u>  | PSI | AK1 Recorder No. | <u>13276</u> | Range       | <u>4000</u>         |
| (F) Second Final Flow Pressure   | <u>166</u>  | PSI | @ (depth)        | <u>5036</u>  | w/Clock No. | <u>23832</u>        |
| (G) Final Shut-In Pressure       | <u>819</u>  | PSI | Initial Opening  | <u>30</u>    | Test        | <u>X</u> <u>700</u> |
| (H) Final Hydrostatic Mud        | <u>2303</u> | PSI | Initial Shut-In  | <u>45</u>    | Jars        |                     |

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Final Flow 60 Safety Joint     

Final Shut-In 45 Straddle X 250

Circ. Sub X N/C

Sampler     

Extra Packers X 150<sup>00</sup>

Other 2 Shale Pkrs X 200<sup>00</sup>

TOTAL PRICE \$ 1300.00

Approved By Arden Ratzlaff

Our Representative Rod Steinbrink