

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1245841
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

| | | |
|-----------------------------------|-----------------|---|
| Spud Date or Recompletion Date | Date Reached TD | Completion Date or Recompletion Date |
|-----------------------------------|-----------------|---|

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1245841

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

| | |
|--|---|
| Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____ | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum |
|--|---|

| CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used | | | | | | | |
|---|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| Report all strings set-conductor, surface, intermediate, production, etc. | | | | | | | |
| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| ADDITIONAL CEMENTING / SQUEEZE RECORD | | | | |
|--|------------------|----------------|--------------|----------------------------|
| Purpose: | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
| <input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone | | | | |
| | | | | |

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|-----------------------------------|-----------|---------|-------------|---------------|---------|
| | | | | | |

| | | |
|--|---|---|
| DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i> | METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ | PRODUCTION INTERVAL: _____ _____ |
|--|---|---|

| | |
|-----------|---|
| Form | ACO1 - Well Completion |
| Operator | Larson Engineering, Inc. dba Larson Operating Company |
| Well Name | Ehmke-Fisher 1-19 |
| Doc ID | 1245841 |

Tops

| Name | Top | Datum |
|----------------|------|-------|
| Anhydrite | 2218 | +620 |
| Base Anhydrite | 2247 | +591 |
| Heebner | 3915 | -1077 |
| Lansing | 3951 | -1113 |
| Stark Sh | 4219 | -1381 |
| Marmaton | 4359 | -1521 |
| Pawnee | 4412 | -1574 |
| Ft. Scott | 4466 | -1628 |
| Cherokee Sh | 4491 | 1653 |
| Mississippi | 4569 | -1731 |



CHARGE TO: Lardon Engineering
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET 27999

SERVICE LOCATIONS: 1. Ness City KS
 WELL/PROJECT NO. 1-19 LEASE Elmke-Fisher COUNTY/PARISH Lane STATE KS CITY Grigston DATE 3 DEC 14 OWNER _____
 2. TICKET TYPE SERVICE SALES CONTRACTOR H.D. RIG NAME/NO. 3 SHIPPED VICT DELIVERED TO location ORDER NO. _____
 3. WELL TYPE oil WELL CATEGORY Development JOB PURPOSE connect long string WELL PERMIT NO. _____ WELL LOCATION 19-17-29
 4. REFERRAL LOCATION _____ INVOICE INSTRUCTIONS _____

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | UM | | UNIT PRICE | AMOUNT | | | |
|-----------------|-------------------------------------|------------|------|----|----------------------------|-------|--|----|----|------------|---------|------|------|--------|
| | | LOC | ACCT | DF | | | | | | | | | | |
| 575 | | 1 | | | MILEAGE TRK 110 | 45 | | | | 6.00 | 270.00 | | | |
| 578 | | 1 | | | Pump Charge | 1 | | | | 1500.00 | 1500.00 | | | |
| 325 | | 1 | | | STANDARD Cement (for SA-2) | 155 | | | | 14.50 | 2247.50 | | | |
| 284 | | 1 | | | Calsal | 700 | | 7 | sk | 35.00 | 24500 | | | |
| 283 | | 1 | | | salt | 800 | | | | 0.20 | 160.00 | | | |
| 277 | | 1 | | | Gilsonite | 1085 | | 22 | sk | 0.75 | 813.75 | | | |
| 292 | | 1 | | | halad -322 | 150 | | | | 8.00 | 1200.00 | | | |
| 276 | | 1 | | | Flocle | 25 | | | | 2.50 | 62.50 | | | |
| 280 | | 1 | | | flocback 21 | 500 | | | | 3.00 | 1500.00 | | | |
| 221 | | 1 | | | KCL Liquid | 2 | | | | 25.00 | 50.00 | | | |
| 581 | | 1 | | | service charge | 155 | | | | 2.00 | 310.00 | | | |
| 583 | | 1 | | | Drayage | 14570 | | 15 | | 327.83 | 4771.15 | | | |
| | | | | | | | | | | | 327.83 | T.M. | 1.00 | 327.83 |

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

x Dwayne Tramm
 DATE SIGNED _____ TIME SIGNED _____ A.M. P.M.

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

| SURVEY | AGREE | UN-DECIDED | DIS-AGREE | PAGE TOTAL | AMOUNT |
|--|------------------------------|-----------------------------|-----------|------------|---------|
| OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? | | | | 8686 | 58 |
| WE UNDERSTOOD AND MET YOUR NEEDS? | | | | | |
| OUR SERVICE WAS PERFORMED WITHOUT DELAY? | | | | | |
| WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? | | | | | |
| ARE YOU SATISFIED WITH OUR SERVICE? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | | | |
| <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND | | | | TOTAL | 9135.51 |

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR [Signature] APPROVAL _____

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 3 DEC 14 PAGE NO.

CUSTOMER *Labor Engineering* WELL NO. *1-19* LEASE *Snake - Fisher* JOB TYPE *Cement long string* TICKET NO. *27999*

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS | | PRESSURE (PSI) | | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|------|------------|--------------------|-------|---|----------------|--------|--|
| | | | | T | C | TUBING | CASING | |
| | | | | | | | | 155 sk 2A-2 cement of Gilsonite & Floe 109 jts 5 1/2" x 15.5" casing Shoejt 1245' TD 4620 st 4619 PORT COLLAR 2196' |
| | 0830 | | | | | | | on loc TRK 110 |
| | 0840 | | | | | | | Drop ball - circulate - ROTATE |
| | 0945 | 5 | 5 | | | 200 | | Pump 5 bbl KCL flush |
| | | 5 | 12 | | | 200 | | Pump 500 gal Floeback |
| | | 5 | 15 | | | 200 | | Pump 15 bbl KCL flush |
| | | | 7 | | | | | Plug RH <u>30sk</u> |
| | 0957 | 5 | 32 | | | 200 | | Mix 2A-2 Cement <u>125sk</u> @ 15.3ppg |
| | | | | | | | | Drop latch down plug wear out pump & line |
| | 1015 | 6 | | | | 200 | | Displace plug |
| | | 6 | 107 | | | 800 | | |
| | 1040 | 6 | 109 | | | 1500 | | Land plug |
| | | | | | | | | Release pressure to truck - dried up |
| | 1045 | | | | | | | wash truck |
| | | | | | | | | break up |
| | 1110 | | | | | | | job complete |
| | | | | | | | | Thanks Blaine Flint & Assoc |



Services, Inc.

CHARGE TO: Arson Engineering
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET 28128

PAGE 1 OF 1

| | | | | | | | |
|--|---------------------------------|--|-----------------------------------|---|---------------------------------|--------------------------|-------|
| 1. SERVICE LOCATIONS <u>Waco City TX</u> | WELL/PROJECT NO. <u>1-19</u> | LEASE <u>Shawls-Fisher</u> | COUNTY/PARISH <u>L Ave</u> | STATE <u>KS</u> | CITY <u>Amoy</u> | DATE <u>11 Dec 14</u> | OWNER |
| 2. TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES | CONTRACTOR | RIG NAME NO. | WELL CATEGORY <u>Wild west</u> | SHIPPED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | DELIVERED TO <u>location</u> | ORDER NO. | |
| 3. WELL TYPE <u>Oil</u> | WELL INSTRUCTIONS | JOB PURPOSE <u>Development cement port collar</u> | WELL PERMIT NO. | WELL LOCATION <u>19-17-29</u> | | | |

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | | UNIT PRICE | AMOUNT |
|-----------------|-------------------------------------|------------|------|----|----------------|------|----|----------|------------|---------|
| | | LOC | ACCT | DF | | QTY. | UM | QTY. | | |
| 575 | | | | | MILEAGE | 50 | mi | | 6.00 | 300.00 |
| 576D | | | | | Pump charge | 1.00 | | | 1500.00 | 1500.00 |
| 330 | | | | | SMD cement | 150 | sk | | 18.50 | 2775.00 |
| 276 | | | | | Flare | 50 | lb | | 2.50 | 125.00 |
| 290 | | | | | D-Air | 200 | | | 4.20 | 840.00 |
| 581 | | | | | Service charge | 250 | sk | | 2.00 | 500.00 |
| 553 | | | | | Drayage | 24 | hr | 62.9477M | 1.00 | 621.94 |

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED _____ TIME SIGNED _____

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY

| | | | |
|--|------------------------------|-----------------------------|-----------|
| OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? | AGREE | UN-DECIDED | DIS-AGREE |
| WE UNDERSTOOD AND MET YOUR NEEDS? | | | |
| OUR SERVICE WAS PERFORMED WITHOUT DELAY? | | | |
| WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? | | | |
| ARE YOU SATISFIED WITH OUR SERVICE? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | |

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 5905 94

TOTAL 6119 30

SWIFT OPERATOR _____ APPROVAL _____

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 11 Dec 14 PAGE NO. 1

CUSTOMER *Ladson Engineering* WELL NO. *1-19* LEASE *Shmke - Fisher* JOB TYPE *Cement port collar* TICKET NO. *28128*

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS | | PRESSURE (PSI) | | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|-------------|------------|--------------------|-------|---|----------------|-------------|--|
| | | | | T | C | TUBING | CASING | |
| | | | | | | | | <i>20sk SMD cement w/ 1/4" flocals</i> <i>2 3/4" x 5 1/2" Port collar 2196'</i> |
| | <i>0830</i> | | | | | | | <i>on loc TRK 110</i> |
| | <i>0840</i> | | | | | <i>1000</i> | <i>1000</i> | <i>test to 1000 psi - held</i> <i>open port collar</i> |
| | <i>0849</i> | <i>3</i> | <i>3</i> | | | <i>400</i> | | <i>inj rate 3 bpm @ 400 psi</i> |
| | <i>0853</i> | <i>3</i> | | | | <i>400</i> | | <i>mix SMD cement @ 11.2 ppg</i> |
| | | <i>3</i> | <i>12</i> | | | <i>400</i> | | <i>fluid to surface</i> |
| | | <i>3</i> | <i>79</i> | | | <i>600</i> | | <i>— cement to surface</i> <i>{ 150' mixed }</i> <i>{ 15' to pit }</i> |
| | | <i>3</i> | <i>8</i> | | | <i>600</i> | | <i>Displace 8 bbl H₂O</i> |
| | | | | | | | | <i>close port collar</i> |
| | <i>0932</i> | | | | | <i>1000</i> | <i>1000</i> | <i>test to 1000 psi - held</i> <i>Run 5 joints</i> |
| | <i>0943</i> | | <i>20</i> | | | | | <i>Reverse hole clean</i> <i>- 2 cement plugs -</i> |
| | <i>0953</i> | | | | | | | <i>wash truck</i> <i>Back up</i> |
| | <i>1020</i> | | | | | | | <i>job complete</i> <i>Thru</i> <i>Print, Blank & Craig</i> |



DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd. 4
Olmitz KS. 67564

ATTN: Vern Schrag

Ehmke-Fisher #1-19

19-17s-29w Lane,KS

Start Date: 2014.11.28 @ 01:40:00

End Date: 2014.11.28 @ 07:54:59

Job Ticket #: 58720 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.05 @ 09:49:29



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering Inc
 562 W. State Rd. 4
 Olmitz KS. 67564
 ATTN: Vern Schrag

19-17s-29w Lane, KS
Ehmke-Fisher #1-19
 Job Ticket: 58720 **DST#: 1**
 Test Start: 2014.11.28 @ 01:40:00

GENERAL INFORMATION:

Formation: **LKC "I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:01:00
 Time Test Ended: 07:54:59
 Interval: **4158.00 ft (KB) To 4185.00 ft (KB) (TVD)**
 Total Depth: 4185.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Will MacLean
 Unit No: 71
 Reference Elevations: 2838.00 ft (KB)
 2829.00 ft (CF)
 KB to GR/CF: 9.00 ft

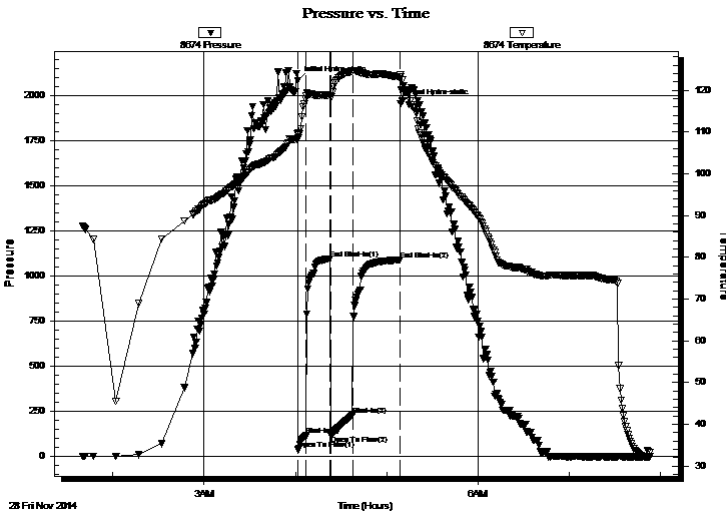
Serial #: 8674

Inside

Press@RunDepth: 229.62 psig @ 4160.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.28 End Date: 2014.11.28 Last Calib.: 2014.11.28
 Start Time: 01:40:00 End Time: 07:53:39 Time On Btm: 2014.11.28 @ 04:01:40
 Time Off Btm: 2014.11.28 @ 05:09:10

TEST COMMENT: IF- Surface Blow Built to BOB in 4 3/4"
 IS- Weak Surface Blow in 14 min
 FF- Surface Blow Built to BOB in 5 min
 FS- Weak Surface Blow in 3 1/2"min Built to 1"

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2082.06 | 109.76 | Initial Hydro-static |
| 1 | 37.81 | 108.53 | Open To Flow (1) |
| 6 | 115.20 | 118.58 | Shut-In(1) |
| 21 | 1096.81 | 118.70 | End Shut-In(1) |
| 22 | 118.54 | 118.16 | Open To Flow (2) |
| 36 | 229.62 | 124.53 | Shut-In(2) |
| 68 | 1090.21 | 123.14 | End Shut-In(2) |
| 68 | 1957.48 | 123.68 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------------|--------------|
| 186.00 | GMCW 4%g 15%m 81%w skim of Oil | c1.48 |
| 62.00 | OGMCW 3%oil 4%g 24%m 69%w | 0.87 |
| 124.00 | OGMCW 7%oil 10%g 38%m 45%w | 1.74 |
| 50.00 | GOWCM 11%g 20%oil 23%w 46%m | 0.70 |
| 48.00 | MGCO 3%m 6%g 91%oil | 0.67 |
| 0.00 | 212' of GIP | 0.00 |

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|-----------------|------------------|
| | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58720

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.11.28 @ 01:40:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4015.00 ft | Diameter: 3.80 inches | Volume: 56.32 bbl | Tool Weight: | 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 30000.00 lb |
| Drill Collar: | Length: 124.00 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: | 18000.00 lb |
| | | | <u>Total Volume: 56.93 bbl</u> | Tool Chased | ft |
| Drill Pipe Above KB: | 8.00 ft | | | String Weight: Initial | 52000.00 lb |
| Depth to Top Packer: | 4158.00 ft | | | Final | 54000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 27.00 ft | | | | |
| Tool Length: | 54.00 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 4132.00 | |
| Shut In Tool | 5.00 | | | 4137.00 | |
| Hydraulic tool | 5.00 | | | 4142.00 | |
| Jars | 5.00 | | | 4147.00 | |
| Safety Joint | 2.00 | | | 4149.00 | |
| Packer | 5.00 | | | 4154.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4158.00 | |
| Stubb | 1.00 | | | 4159.00 | |
| Perforations | 1.00 | | | 4160.00 | |
| Recorder | 0.00 | 8355 | Outside | 4160.00 | |
| Recorder | 0.00 | 8674 | Inside | 4160.00 | |
| Perforations | 20.00 | | | 4180.00 | |
| Bullnose | 5.00 | | | 4185.00 | 27.00 Bottom Packers & Anchor |

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58720

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.11.28 @ 01:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

54000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.72 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|--------------------------------------|----------------|
| 186.00 | GMCW 4%g 15%m 81%w skim of Oil on Tc | 1.480 |
| 62.00 | OGMCW 3%oil 4%g 24%m 69%w | 0.870 |
| 124.00 | OGMCW 7%oil 10%g 38%m 45%w | 1.739 |
| 50.00 | GOWCM 11%g 20%oil 23%w 46%m | 0.701 |
| 48.00 | MGCO 3%m 6%g 91%oil | 0.673 |
| 0.00 | 212' of GIP | 0.000 |

Total Length: 470.00 ft Total Volume: 5.463 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

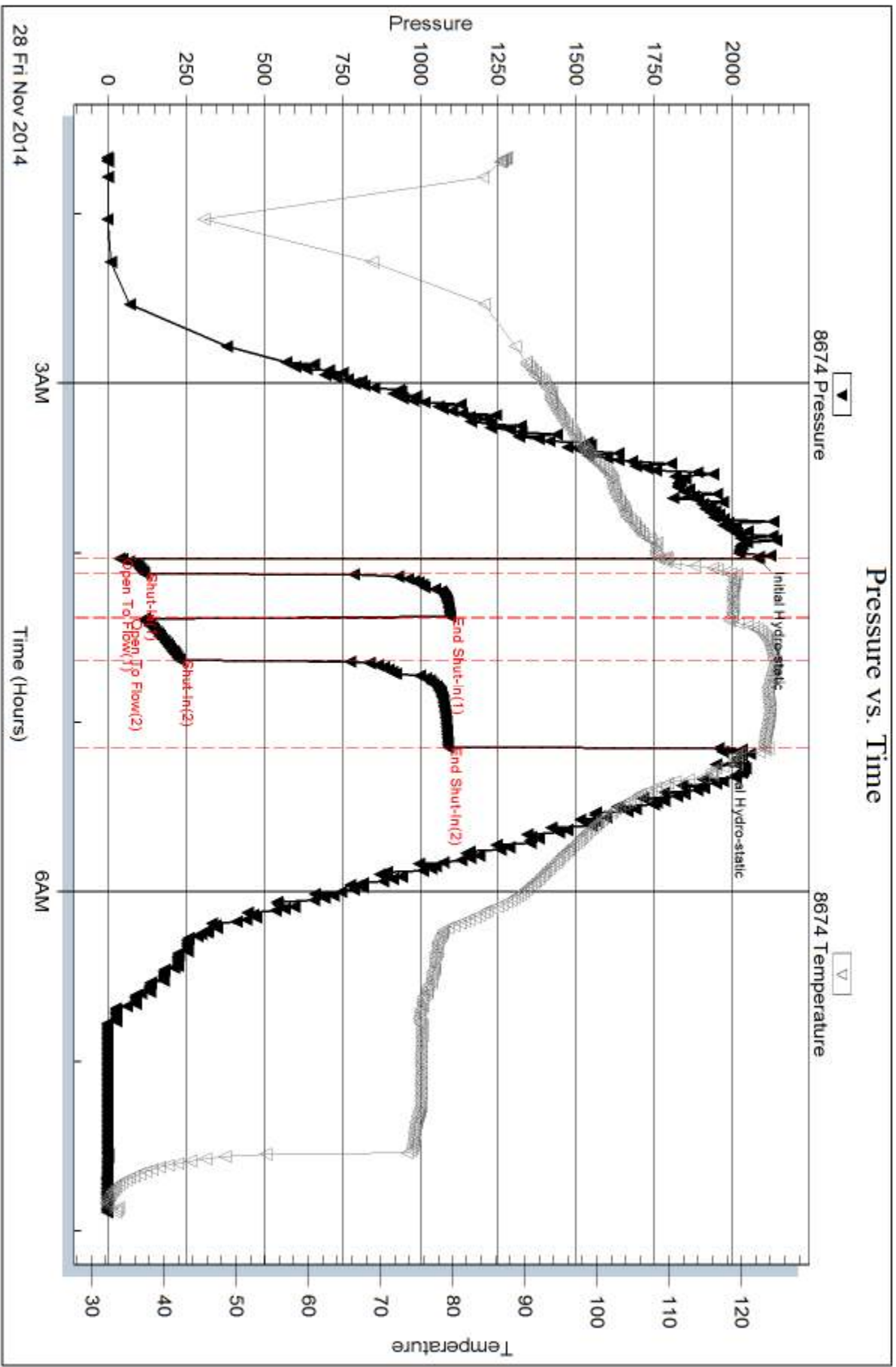
Serial #:

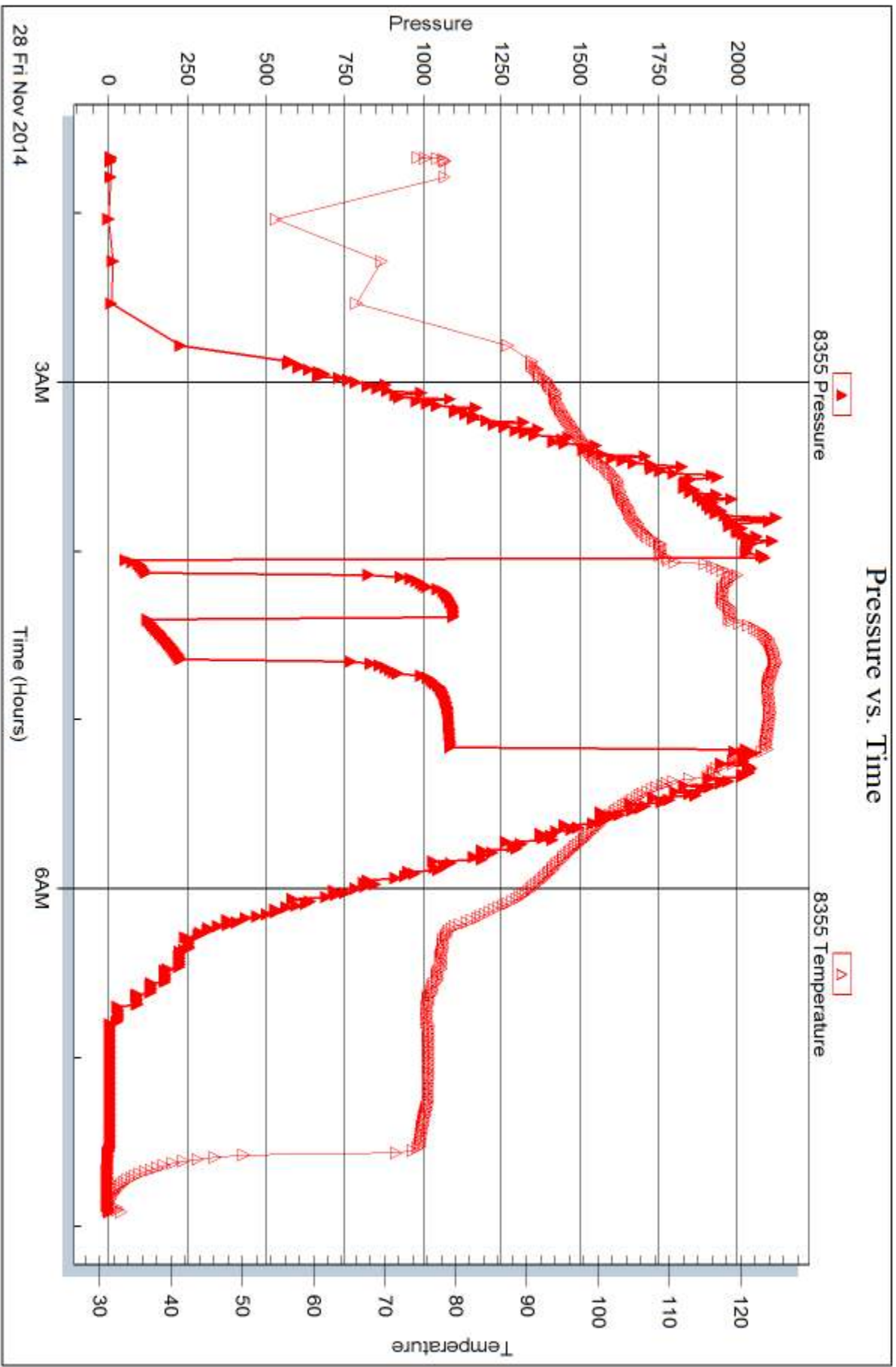
Laboratory Name:

Laboratory Location:

Recovery Comments: API is 31 @ 30f = 34

RW is .313 @ 30f = 54000







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd. 4
Olmitz KS. 67564

ATTN: Vern Schrag

Ehmke-Fisher #1-19

19-17s-29w Lane,KS

Start Date: 2014.11.28 @ 15:40:00

End Date: 2014.11.28 @ 20:30:39

Job Ticket #: 58721 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.05 @ 09:41:13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering Inc

19-17s-29w Lane, KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58721

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.11.28 @ 15:40:00

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:38:55

Time Test Ended: 20:30:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 71

Interval: 4148.00 ft (KB) To 4210.00 ft (KB) (TVD)

Reference Elevations: 2838.00 ft (KB)

Total Depth: 4185.00 ft (KB) (TVD)

2829.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8674

Inside

Press@RunDepth: 39.37 psig @ 4185.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.28

End Date:

2014.11.28

Last Calib.:

2014.11.28

Start Time: 15:40:00

End Time:

20:30:39

Time On Btm:

2014.11.28 @ 17:38:25

Time Off Btm:

2014.11.28 @ 18:50:40

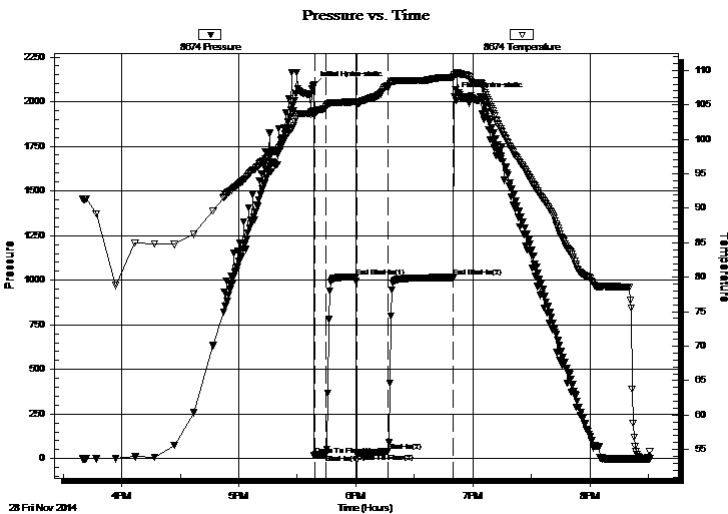
TEST COMMENT: IF- Weak Surface Blow Built to 1/2"

IS- No Blow

FF- Weak Surface Blow

FS- No Blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2092.21 | 104.15 | Initial Hydro-static |
| 1 | 19.48 | 103.77 | Open To Flow (1) |
| 7 | 25.85 | 104.67 | Shut-In(1) |
| 22 | 1018.51 | 105.48 | End Shut-In(1) |
| 22 | 27.68 | 105.07 | Open To Flow (2) |
| 38 | 39.37 | 107.72 | Shut-In(2) |
| 72 | 1015.54 | 109.01 | End Shut-In(2) |
| 73 | 2028.53 | 109.35 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------------|--------------|
| 15.00 | 100% m with Oil Spots in Tool | 0.07 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
| | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58721

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.11.28 @ 15:40:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4045.00 ft | Diameter: 3.80 inches | Volume: 56.74 bbl | Tool Weight: | 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 30000.00 lb |
| Drill Collar: | Length: 124.00 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: | 24000.00 lb |
| | | | <u>Total Volume: 57.35 bbl</u> | Tool Chased | ft |
| Drill Pipe Above KB: | 12.00 ft | | | String Weight: Initial | 54000.00 lb |
| Depth to Top Packer: | 4184.00 ft | | | Final | 54000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 26.00 ft | | | | |
| Tool Length: | 53.00 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 4158.00 | |
| Shut In Tool | 5.00 | | | 4163.00 | |
| Hydraulic tool | 5.00 | | | 4168.00 | |
| Jars | 5.00 | | | 4173.00 | |
| Safety Joint | 2.00 | | | 4175.00 | |
| Packer | 5.00 | | | 4180.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4184.00 | |
| Stubb | 1.00 | | | 4185.00 | |
| Recorder | 0.00 | 8355 | Outside | 4185.00 | |
| Recorder | 0.00 | 8674 | Inside | 4185.00 | |
| Perforations | 20.00 | | | 4205.00 | |
| Bullnose | 5.00 | | | 4210.00 | 26.00 Bottom Packers & Anchor |

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58721

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.11.28 @ 15:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.73 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------------------------|---------------|
| 15.00 | 100% m with Oil Spots in Tool | 0.074 |

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

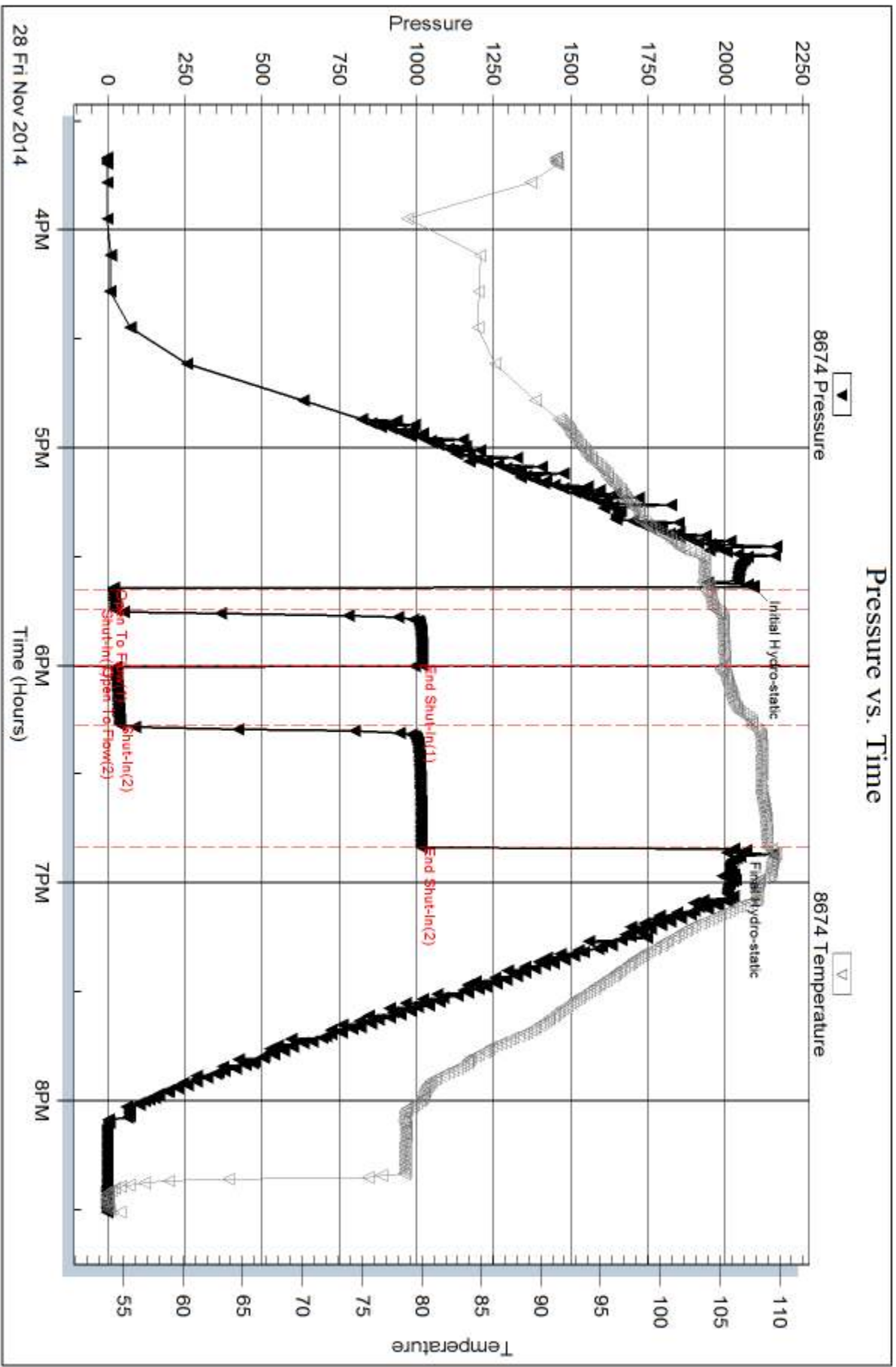
Num Gas Bombs: 0

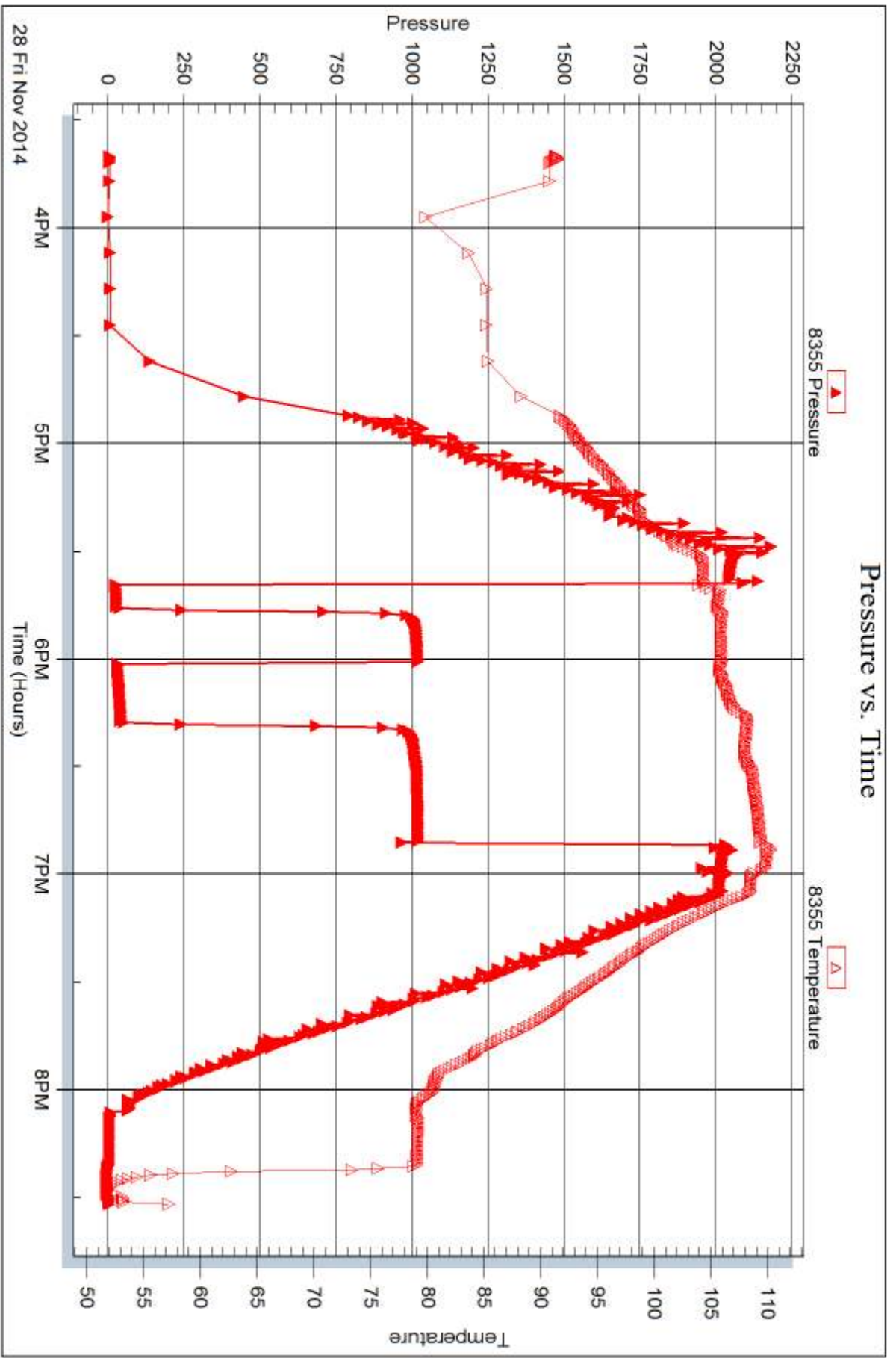
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd. 4
Olmitz KS. 67564

ATTN: Vern Schrag

Ehmke-Fisher #1-19

19-17s-29w Lane,KS

Start Date: 2014.11.29 @ 05:18:00

End Date: 2014.11.29 @ 11:16:39

Job Ticket #: 58722 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.05 @ 09:40:44



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering Inc
 562 W. State Rd. 4
 Olmitz KS. 67564
 ATTN: Vern Schrag

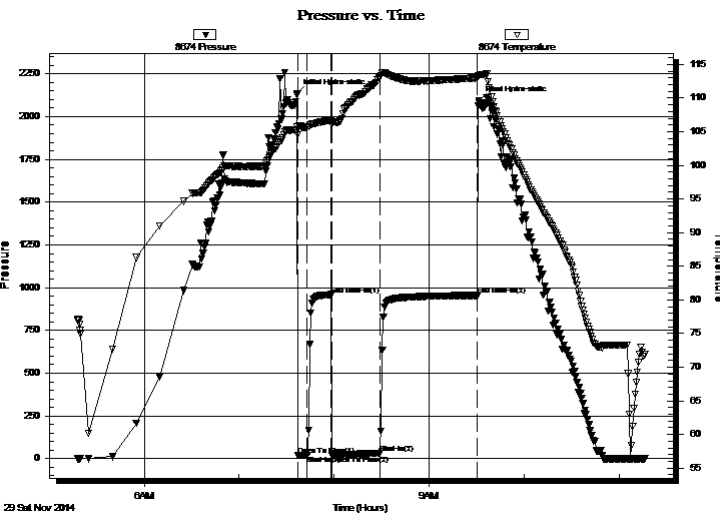
19-17s-29w Lane, KS
Ehmke-Fisher #1-19
 Job Ticket: 58722 **DST#: 3**
 Test Start: 2014.11.29 @ 05:18:00

GENERAL INFORMATION:

Formation: **LKC " K "**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 07:36:55 Tester: Will MacLean
 Time Test Ended: 11:16:39 Unit No: 71
 Interval: **4219.00 ft (KB) To 4231.00 ft (KB) (TVD)** Reference Elevations: 2838.00 ft (KB)
 Total Depth: 4231.00 ft (KB) (TVD) 2829.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 9.00 ft

Serial #: 8674 Inside
 Press@RunDepth: 32.59 psig @ 4221.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.29 End Date: 2014.11.29 Last Calib.: 2014.11.29
 Start Time: 05:18:00 End Time: 11:16:39 Time On Btm: 2014.11.29 @ 07:36:40
 Time Off Btm: 2014.11.29 @ 09:31:25

TEST COMMENT: IF- Weak Surface Blow Built to 1/2"
 IS- No Blow
 FF- Weak Surface Blow Built to 1/2"
 FS- No Blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2131.97 | 105.79 | Initial Hydro-static |
| 1 | 18.29 | 104.55 | Open To Flow (1) |
| 7 | 20.79 | 105.62 | Shut-In(1) |
| 22 | 958.65 | 106.78 | End Shut-In(1) |
| 22 | 20.58 | 106.05 | Open To Flow (2) |
| 52 | 32.59 | 112.96 | Shut-In(2) |
| 114 | 954.74 | 113.01 | End Shut-In(2) |
| 115 | 2094.46 | 113.26 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------------|--------------|
| 20.00 | 100% m with a Few Oil Spots | 0.10 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|-----------------|------------------|
| | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58722

DST#: 3

ATTN: Vern Schrag

Test Start: 2014.11.29 @ 05:18:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4078.00 ft | Diameter: 3.80 inches | Volume: 57.20 bbl | Tool Weight: | 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 28000.00 lb |
| Drill Collar: | Length: 124.00 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: | 10000.00 lb |
| | | | <u>Total Volume: 57.81 bbl</u> | Tool Chased | ft |
| Drill Pipe Above KB: | 10.00 ft | | | String Weight: Initial | 54000.00 lb |
| Depth to Top Packer: | 4219.00 ft | | | Final | 54000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 12.00 ft | | | | |
| Tool Length: | 39.00 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |
| Tool Comments: | | | | | |

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 4193.00 | |
| Shut In Tool | 5.00 | | | 4198.00 | |
| Hydraulic tool | 5.00 | | | 4203.00 | |
| Jars | 5.00 | | | 4208.00 | |
| Safety Joint | 2.00 | | | 4210.00 | |
| Packer | 5.00 | | | 4215.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4219.00 | |
| Stubb | 1.00 | | | 4220.00 | |
| Perforations | 1.00 | | | 4221.00 | |
| Recorder | 0.00 | 8355 | Outside | 4221.00 | |
| Recorder | 0.00 | 8674 | Inside | 4221.00 | |
| Perforations | 5.00 | | | 4226.00 | |
| Bullnose | 5.00 | | | 4231.00 | 12.00 Bottom Packers & Anchor |

Total Tool Length: 39.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58722

DST#: 3

ATTN: Vern Schrag

Test Start: 2014.11.29 @ 05:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.74 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------------|---------------|
| 20.00 | 100% m with a Few Oil Spots | 0.098 |

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

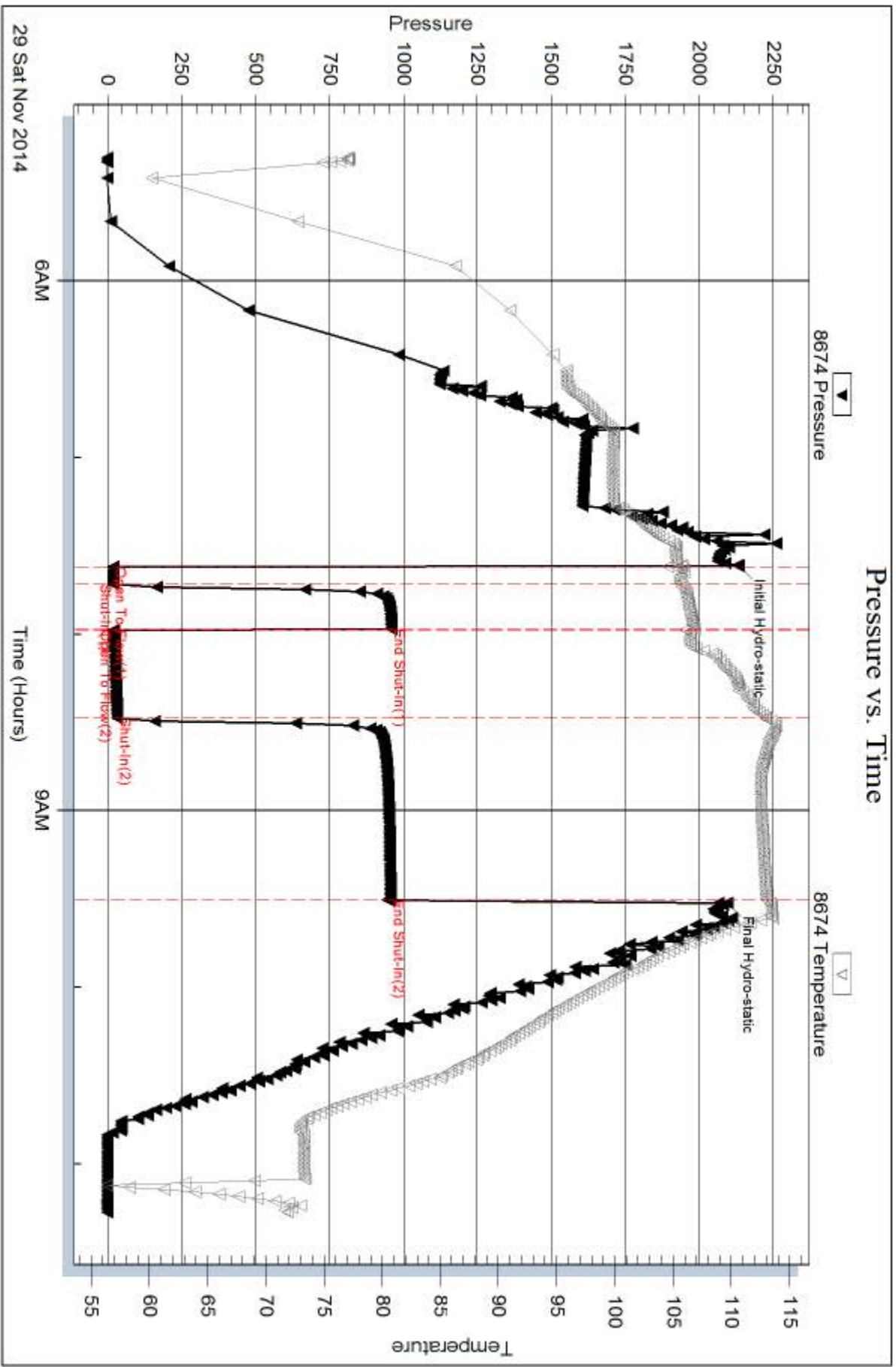
Num Gas Bombs: 0

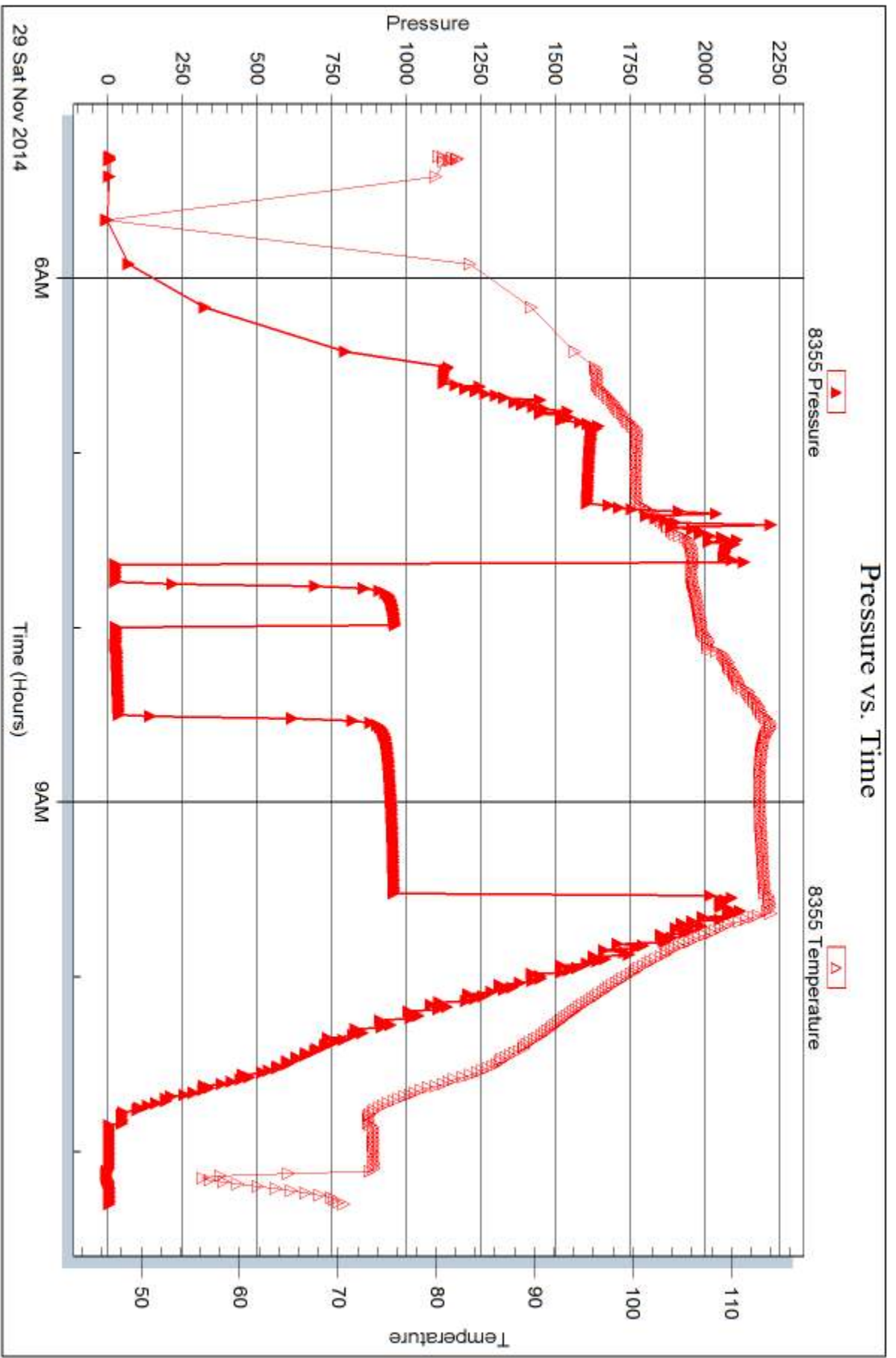
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd. 4
Olmitz KS. 67564

ATTN: Vern Schrag

Ehmke-Fisher #1-19

19-17s-29w Lane,KS

Start Date: 2014.11.30 @ 00:10:00

End Date: 2014.11.30 @ 04:57:09

Job Ticket #: 58723 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.05 @ 09:39:57



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering Inc

19-17s-29w Lane, KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58723

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.11.30 @ 00:10:00

GENERAL INFORMATION:

Formation: **LKC " L "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:11:10

Time Test Ended: 04:57:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 71

Interval: 4255.00 ft (KB) To 4274.00 ft (KB) (TVD)

Reference Elevations: 2838.00 ft (KB)

Total Depth: 4274.00 ft (KB) (TVD)

2829.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8674 Inside

Press@RunDepth: 18.84 psig @ 4259.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.30

End Date:

2014.11.30

Last Calib.: 2014.11.30

Start Time: 00:10:00

End Time:

04:57:09

Time On Btm: 2014.11.30 @ 02:10:55

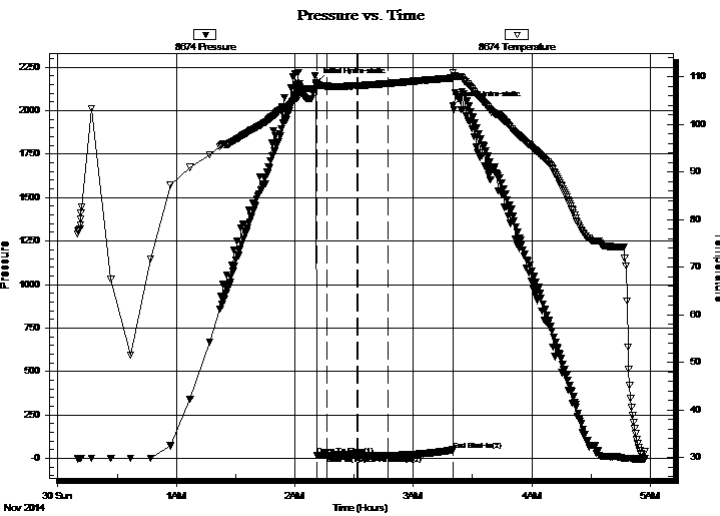
Time Off Btm: 2014.11.30 @ 03:20:10

TEST COMMENT: IF- Weak Surface Blow

IS- No Blow

FF- No Blow

FS- No Blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2160.68 | 108.48 | Initial Hydro-static |
| 1 | 16.92 | 107.67 | Open To Flow (1) |
| 6 | 18.51 | 108.00 | Shut-In(1) |
| 21 | 25.71 | 108.10 | End Shut-In(1) |
| 21 | 16.70 | 108.10 | Open To Flow (2) |
| 37 | 18.84 | 108.57 | Shut-In(2) |
| 69 | 49.39 | 109.73 | End Shut-In(2) |
| 70 | 2027.95 | 110.90 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------|--------------|
| 1.00 | 100% m w ith Oil Spots | 0.00 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
| | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58723

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.11.30 @ 00:10:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4112.00 ft | Diameter: 3.80 inches | Volume: 57.68 bbl | Tool Weight: | 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 26000.00 lb |
| Drill Collar: | Length: 124.00 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: | 12000.00 lb |
| | | | <u>Total Volume: 58.29 bbl</u> | Tool Chased | ft |
| Drill Pipe Above KB: | 8.00 ft | | | String Weight: Initial | 52000.00 lb |
| Depth to Top Packer: | 4255.00 ft | | | Final | 52000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 19.00 ft | | | | |
| Tool Length: | 46.00 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 4229.00 | |
| Shut In Tool | 5.00 | | | 4234.00 | |
| Hydraulic tool | 5.00 | | | 4239.00 | |
| Jars | 5.00 | | | 4244.00 | |
| Safety Joint | 2.00 | | | 4246.00 | |
| Packer | 5.00 | | | 4251.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4255.00 | |
| Stubb | 1.00 | | | 4256.00 | |
| Perforations | 3.00 | | | 4259.00 | |
| Recorder | 0.00 | 8355 | Outside | 4259.00 | |
| Recorder | 0.00 | 8674 | Inside | 4259.00 | |
| Perforations | 10.00 | | | 4269.00 | |
| Bullnose | 5.00 | | | 4274.00 | 19.00 Bottom Packers & Anchor |

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58723

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.11.30 @ 00:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------|---------------|
| 1.00 | 100% m with Oil Spots | 0.005 |

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

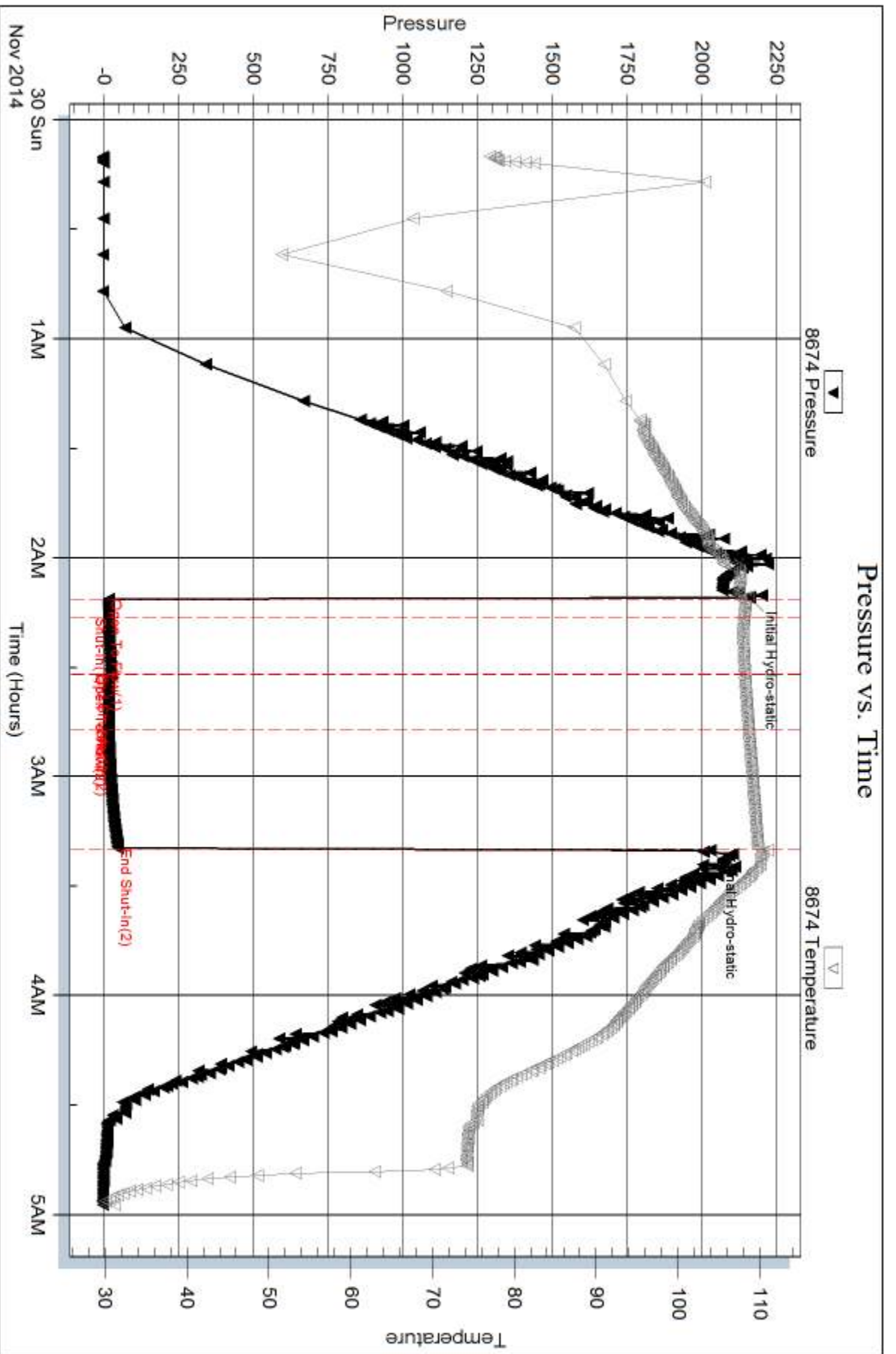
Num Gas Bombs: 0

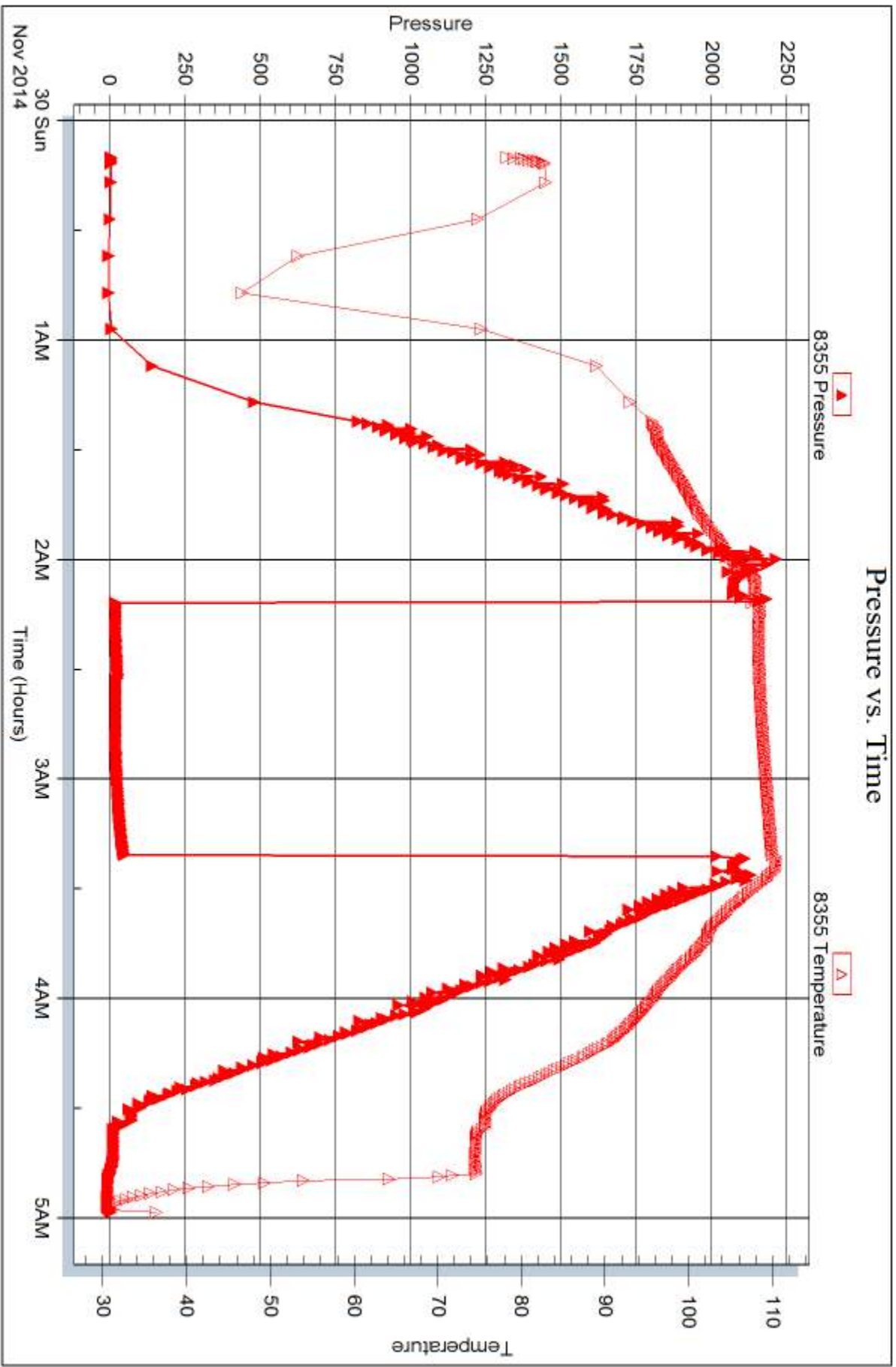
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd. 4
Olmitz KS. 67564

ATTN: Vern Schrag

Ehmke-Fisher #1-19

19-17s-29w Lane,KS

Start Date: 2014.11.30 @ 21:18:00

End Date: 2014.12.01 @ 03:00:24

Job Ticket #: 58724 DST #: 5

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.05 @ 09:32:10



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering Inc

19-17s-29w Lane, KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58724

DST#: 5

ATTN: Vern Schrag

Test Start: 2014.11.30 @ 21:18:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:49:40

Time Test Ended: 03:00:24

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 71

Interval: 4295.00 ft (KB) To 4400.00 ft (KB) (TVD)

Reference Elevations: 2838.00 ft (KB)

Total Depth: 4400.00 ft (KB) (TVD)

2829.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8674 Inside

Press@RunDepth: 24.22 psig @ 4297.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.30

End Date:

2014.12.01

Last Calib.: 2014.12.01

Start Time: 21:18:00

End Time:

03:00:24

Time On Btm: 2014.11.30 @ 23:49:25

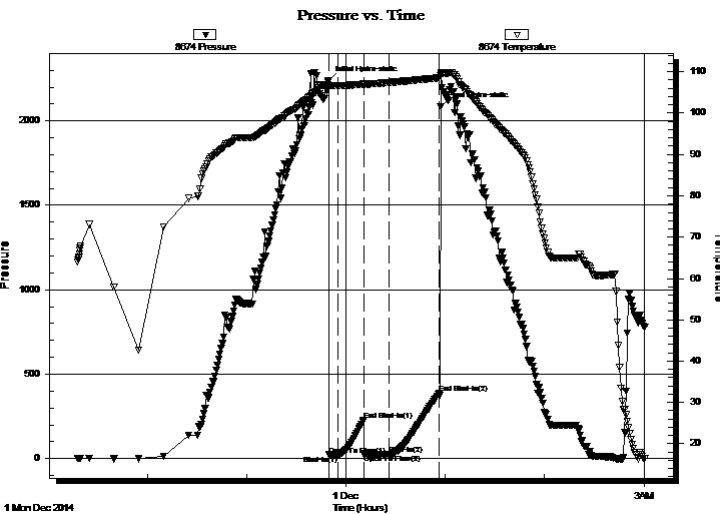
Time Off Btm: 2014.12.01 @ 00:57:10

TEST COMMENT: IF- Weak Surface Blow 1/2"

IS- No Blow

FF- Weak Surface Blow

FS- No Blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2239.00 | 107.03 | Initial Hydro-static |
| 1 | 21.57 | 106.32 | Open To Flow (1) |
| 6 | 22.02 | 106.64 | Shut-In(1) |
| 22 | 226.72 | 107.00 | End Shut-In(1) |
| 22 | 22.40 | 106.87 | Open To Flow (2) |
| 37 | 24.22 | 107.40 | Shut-In(2) |
| 67 | 385.10 | 108.54 | End Shut-In(2) |
| 68 | 2083.45 | 109.09 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------|--------------|
| 5.00 | 100% m w ith a Few Oil Spots | 0.02 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
| | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58724

DST#: 5

ATTN: Vern Schrag

Test Start: 2014.11.30 @ 21:18:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4172.00 ft | Diameter: 3.80 inches | Volume: 58.52 bbl | Tool Weight: | 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 28000.00 lb |
| Drill Collar: | Length: 124.00 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: | 8000.00 lb |
| | | | <u>Total Volume: 59.13 bbl</u> | Tool Chased | ft |
| Drill Pipe Above KB: | 28.00 ft | | | String Weight: Initial | 54000.00 lb |
| Depth to Top Packer: | 4295.00 ft | | | Final | 54000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 105.00 ft | | | | |
| Tool Length: | 132.00 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|---------------|------------|----------|------------|--------------------------------|
| Change Over Sub | 1.00 | | | 4269.00 | |
| Shut In Tool | 5.00 | | | 4274.00 | |
| Hydraulic tool | 5.00 | | | 4279.00 | |
| Jars | 5.00 | | | 4284.00 | |
| Safety Joint | 2.00 | | | 4286.00 | |
| Packer | 5.00 | | | 4291.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4295.00 | |
| Stubb | 1.00 | | | 4296.00 | |
| Perforations | 1.00 | | | 4297.00 | |
| Recorder | 0.00 | 8355 | Outside | 4297.00 | |
| Recorder | 0.00 | 8674 | Inside | 4297.00 | |
| Perforations | 33.00 | | | 4330.00 | |
| Change Over Sub | 1.00 | | | 4331.00 | |
| Drill Pipe | 63.00 | | | 4394.00 | |
| Change Over Sub | 1.00 | | | 4395.00 | |
| Bullnose | 5.00 | | | 4400.00 | 105.00 Bottom Packers & Anchor |
| Total Tool Length: | 132.00 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58724

DST#: 5

ATTN: Vern Schrag

Test Start: 2014.11.30 @ 21:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------------|---------------|
| 5.00 | 100% m with a Few Oil Spots | 0.025 |

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

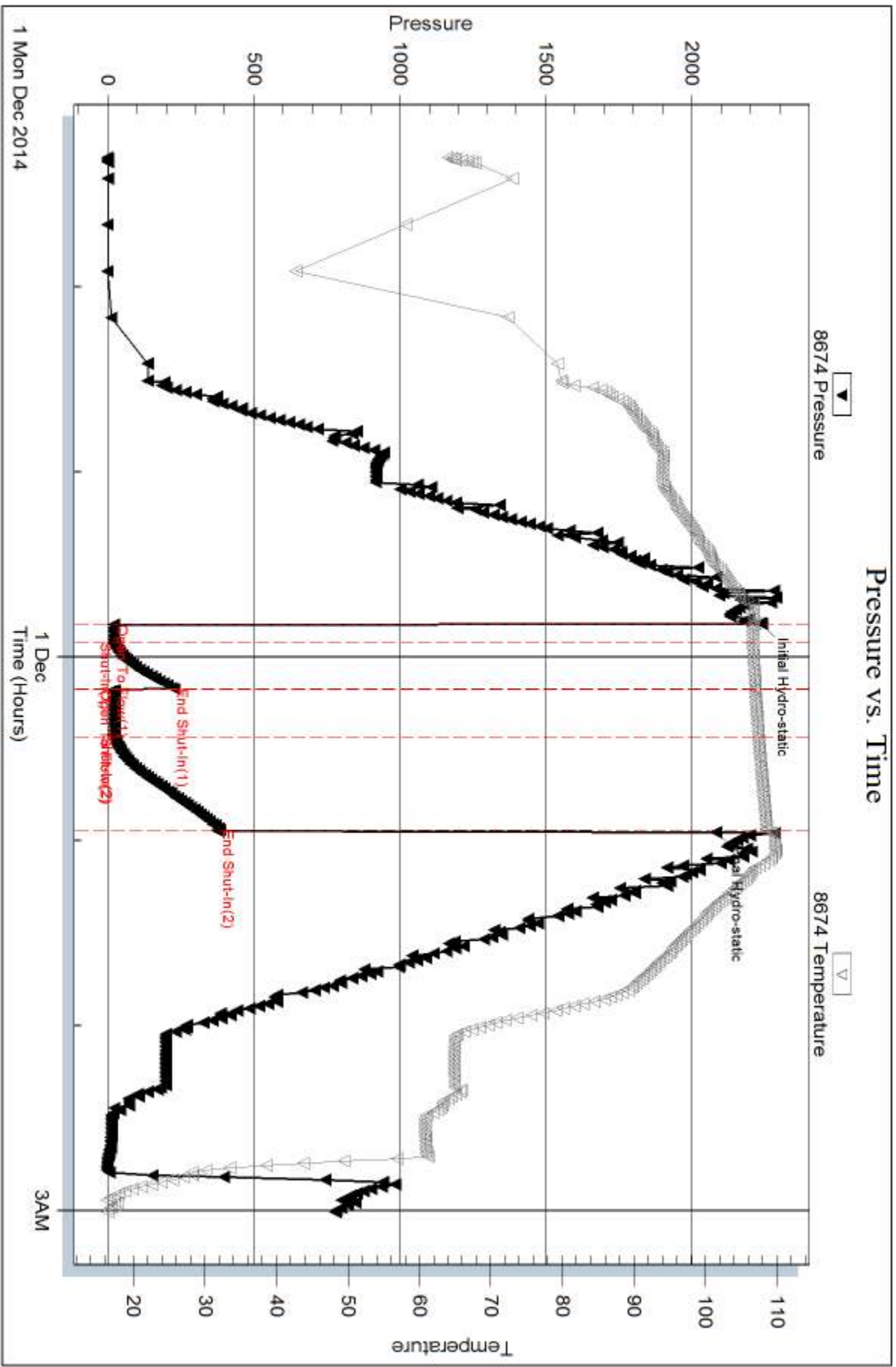
Num Gas Bombs: 0

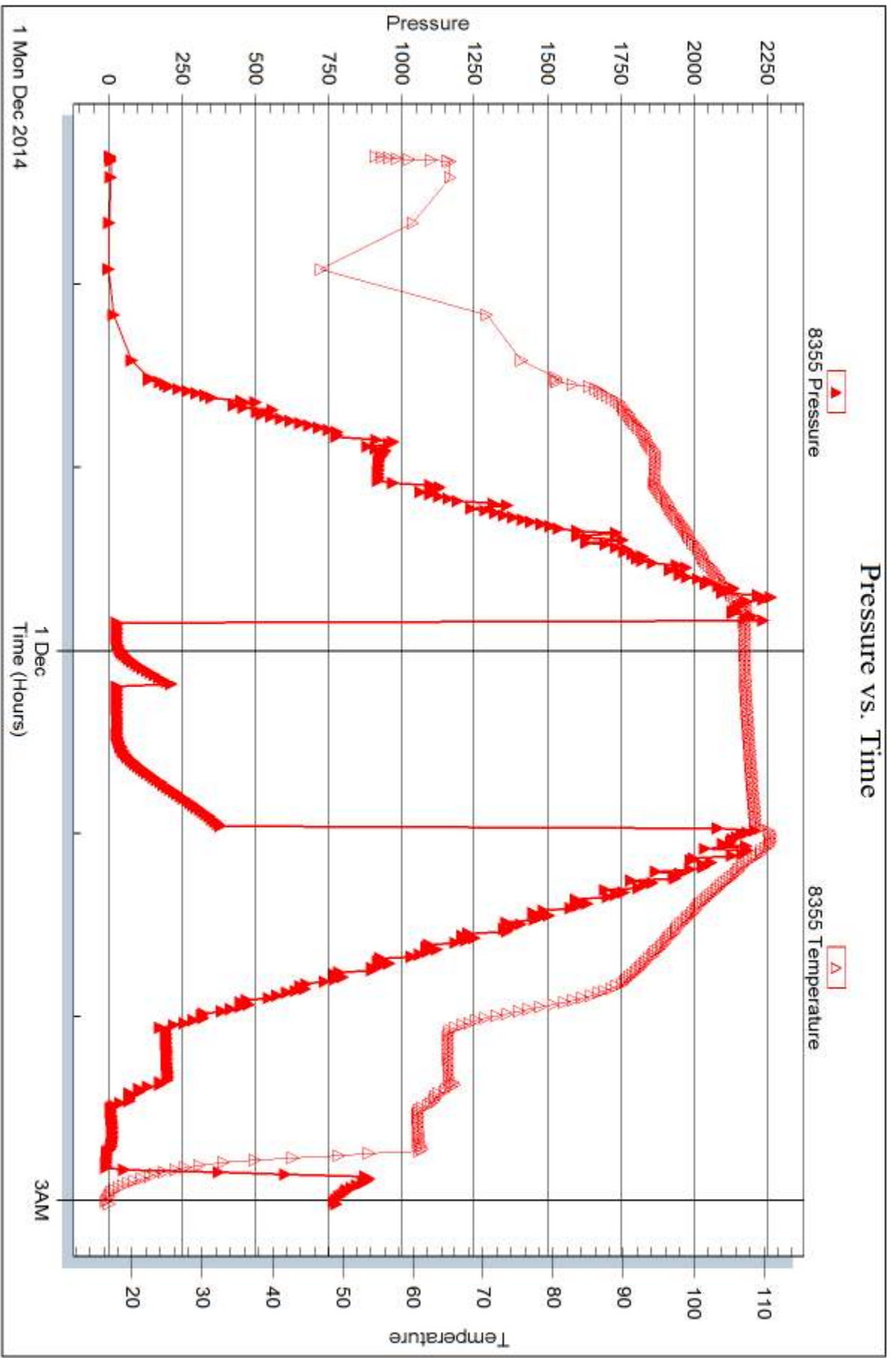
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd. 4
Olmitz KS. 67564

ATTN: Vern Schrag

Ehmke-Fisher #1-19

19-17s-29w Lane,KS

Start Date: 2014.12.01 @ 23:38:00

End Date: 2014.12.02 @ 06:53:30

Job Ticket #: 58725 DST #: 6

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.05 @ 09:31:27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering Inc

19-17s-29w Lane, KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58725

DST#: 6

ATTN: Vern Schrag

Test Start: 2014.12.01 @ 23:38:00

GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:21:25

Time Test Ended: 06:53:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 71

Interval: 4433.00 ft (KB) To 4560.00 ft (KB) (TVD)

Reference Elevations: 2838.00 ft (KB)

Total Depth: 4560.00 ft (KB) (TVD)

2829.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8674 Inside

Press@RunDepth: 188.22 psig @ 4434.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.01

End Date:

2014.12.02

Last Calib.: 2014.12.02

Start Time: 23:38:00

End Time:

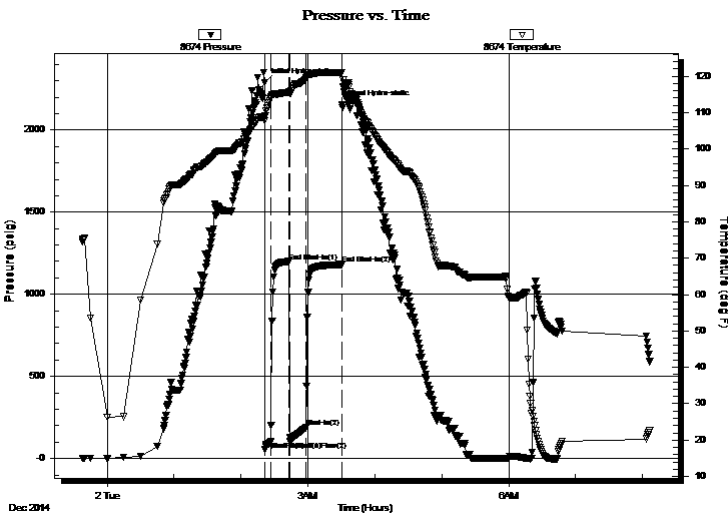
08:06:24

Time On Btm: 2014.12.02 @ 02:21:10

Time Off Btm: 2014.12.02 @ 03:30:40

TEST COMMENT: IF- Surface Blow Built to BOB in 2 1/4 min
IS- Weak Surface Blow in 1min Built to 1/4"
FF- Surface Blow Built to BOB in 2 min
FS- Weak Surface Blow Built to BOB in 11 3/4 min

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2288.27 | 108.75 | Initial Hydro-static |
| 1 | 52.41 | 107.81 | Open To Flow (1) |
| 6 | 103.37 | 114.11 | Shut-In(1) |
| 22 | 1199.92 | 115.60 | End Shut-In(1) |
| 23 | 102.76 | 115.08 | Open To Flow (2) |
| 37 | 188.22 | 119.27 | Shut-In(2) |
| 69 | 1181.84 | 120.91 | End Shut-In(2) |
| 70 | 2154.68 | 121.02 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------------|--------------|
| 186.00 | WOGCM 4%w 18%oil 31%g 47%m | 1.48 |
| 62.00 | WOGCM 3%w 15%oil 22%g 60%m | 0.87 |
| 62.00 | OMCG 18%oil 37%m 45%g | 0.87 |
| 62.00 | GMCO 23%g 26%m 51%oil | 0.87 |
| 72.00 | GO 14%g 86%oil | 1.01 |
| 0.00 | 1540' of GIP | 0.00 |

* Recovery from multiple tests

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|-----------------|------------------|
| | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58725

DST#: 6

ATTN: Vern Schrag

Test Start: 2014.12.01 @ 23:38:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4296.00 ft | Diameter: 3.80 inches | Volume: 60.26 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 32000.00 lb |
| Drill Collar: | Length: 124.00 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: 12000.00 lb |
| | | | <u>Total Volume: 60.87 bbl</u> | Tool Chased ft |
| Drill Pipe Above KB: | 14.00 ft | | | String Weight: Initial 56000.00 lb |
| Depth to Top Packer: | 4433.00 ft | | | Final 58000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 127.00 ft | | | |
| Tool Length: | 154.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|--------------------------------|
| Change Over Sub | 1.00 | | | 4407.00 | |
| Shut In Tool | 5.00 | | | 4412.00 | |
| Hydraulic tool | 5.00 | | | 4417.00 | |
| Jars | 5.00 | | | 4422.00 | |
| Safety Joint | 2.00 | | | 4424.00 | |
| Packer | 5.00 | | | 4429.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4433.00 | |
| Stubb | 1.00 | | | 4434.00 | |
| Recorder | 0.00 | 8355 | Outside | 4434.00 | |
| Recorder | 0.00 | 8674 | Inside | 4434.00 | |
| Perforations | 25.00 | | | 4459.00 | |
| Change Over Sub | 1.00 | | | 4460.00 | |
| Drill Pipe | 94.00 | | | 4554.00 | |
| Change Over Sub | 1.00 | | | 4555.00 | |
| Bullnose | 5.00 | | | 4560.00 | 127.00 Bottom Packers & Anchor |

Total Tool Length: 154.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

19-17s-29w Lane,KS

562 W. State Rd. 4
Olmitz KS. 67564

Ehmke-Fisher #1-19

Job Ticket: 58725

DST#: 6

ATTN: Vern Schrag

Test Start: 2014.12.01 @ 23:38:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.72 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------------|---------------|
| 186.00 | WOGCM 4%w 18%oil 31%g 47%m | 1.480 |
| 62.00 | WOGCM 3%w 15%oil 22%g 60%m | 0.870 |
| 62.00 | OMCG 18%oil 37%m 45%g | 0.870 |
| 62.00 | GMCO 23%g 26%m 51%oil | 0.870 |
| 72.00 | GO 14%g 86%oil | 1.010 |
| 0.00 | 1540' of GIP | 0.000 |

Total Length: 444.00 ft Total Volume: 5.100 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API is 31 @ 20f = 35

Serial #: 8674

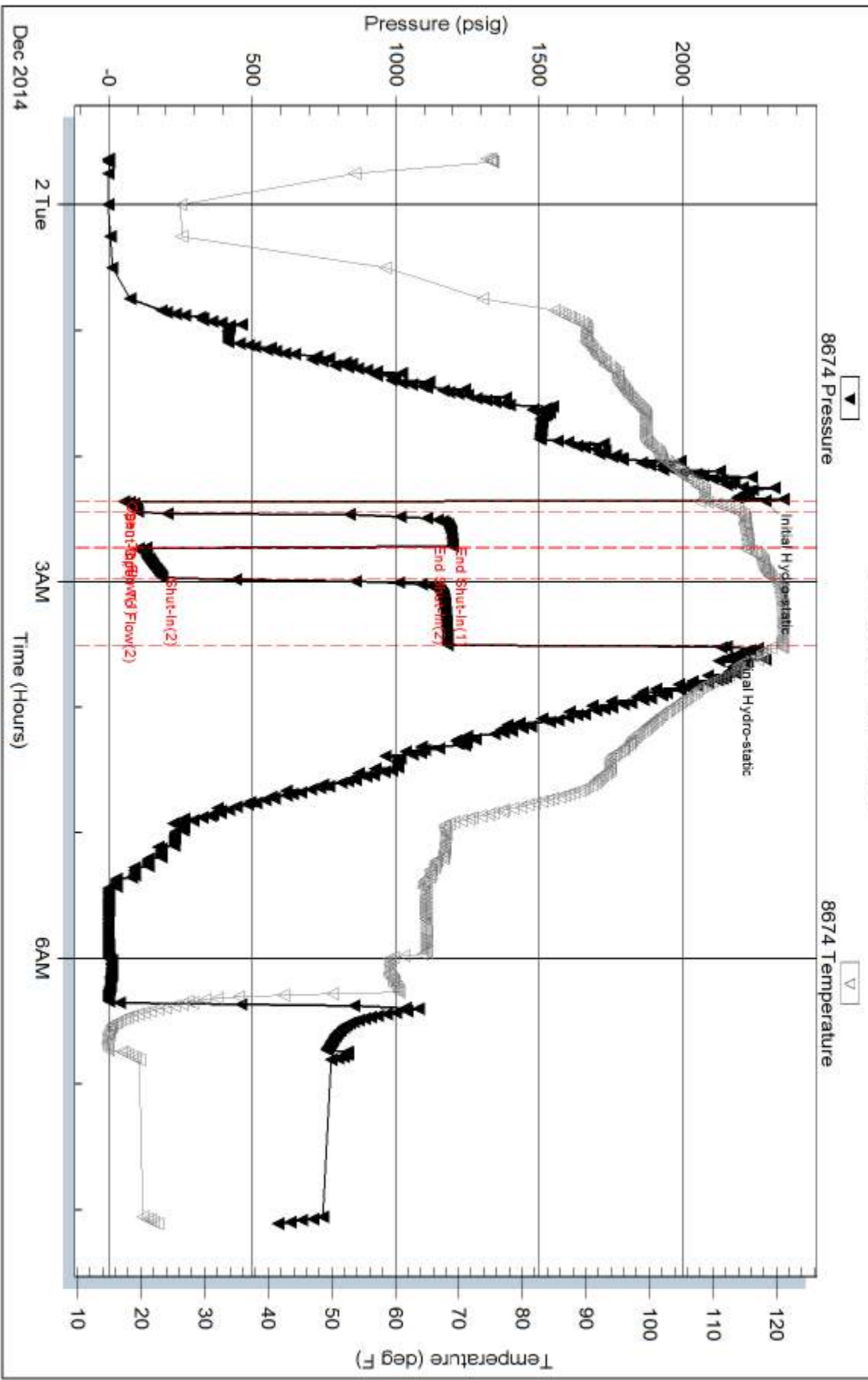
Inside

Larson Engineering Inc

Emke-Fisher #1-19

DST Test Number: 6

Pressure vs. Time

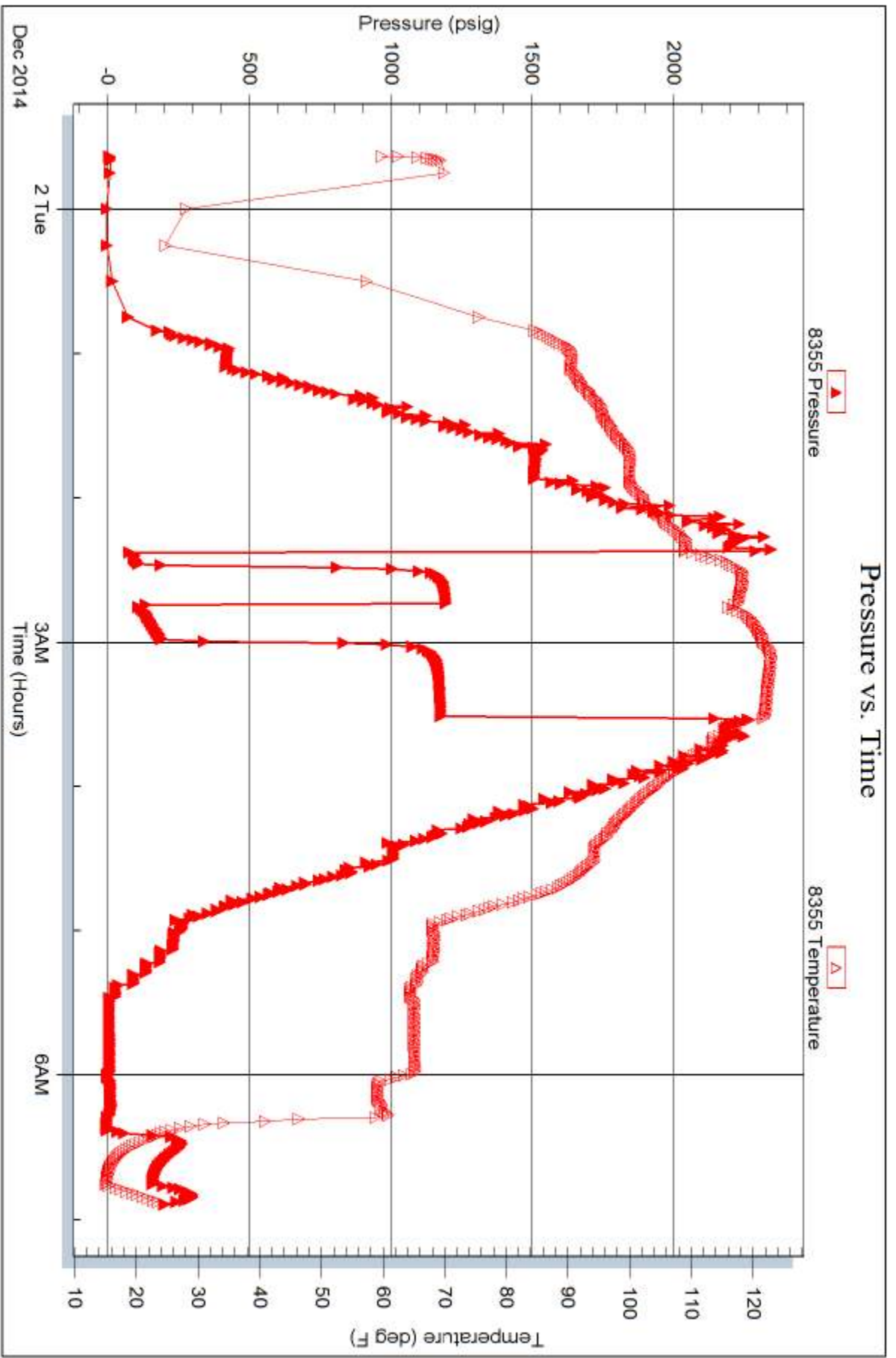


Serial #: 8355

Outside Larson Engineering Inc

Emke-Fisher #1-19

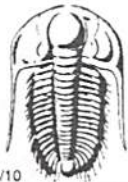
DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 58725

Printed: 2014, 12, 05 @ 09:31:29



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58720

Well Name & No. Ehmke-Fisher #1-19 Test No. DST #1 Date 11-28-14
 Company Larson Engineering Inc Elevation 2838 KB 2829 GL
 Address 562 W. State Rd 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D 3
 Location: Sec. 19 Twp. 17S Rge. 29W Co. Lanc State KS

Interval Tested 4158-4185 Zone Tested LRC "I"
 Anchor Length 27 Drill Pipe Run 4015 Mud Wt. 8.9
 Top Packer Depth 4154 Drill Collars Run 124 Vis Cl
 Bottom Packer Depth 4158 Wt. Pipe Run 0 WL 6.8
 Total Depth 4185 Chlorides 1500 ppm System LCM 116

Blow Description IF - Surface Blow Built to BOB in 4 3/4
ISI - Weak Surface Blow in 14 min
FF - Surface Blow Built to BOB in 5 min
FST - Weak Surface Blow in 3 1/2 min Built to 1"

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----|---------------------------|------|------|--------|------|
| 48 | MGCC | 6 | 91 | 3 | |
| 50 | GOWCM | 11 | 20 | 33 | 46 |
| 124 | OG-MCW | 10 | 7 | 45 | 38 |
| 62 | OG-MCW | 4 | 3 | 69 | 24 |
| 186 | G-MCW & the SKmat at only | 4 | | 81 | 15 |

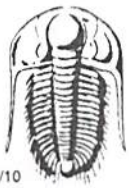
Rec Total 470 BHT 122 Gravity 34 API RW. 313 @ 30 °F Chlorides 54000 ppm

(A) Initial Hydrostatic 2082 Test 1250 T-On Location 12:04
 (B) First Initial Flow 37 Jars 250 T-Started 1:04
 (C) First Final Flow 115 Safety Joint 75 T-Open 3:25
 (D) Initial Shut-In 1096 Circ Sub NIC T-Pulled 5:09
 (E) Second Initial Flow 118 Hourly Standby T-Out 7:17
 (F) Second Final Flow 229 Mileage 48 R/A 74.40 Comments 212' of GIP
 (G) Final Shut-In 1090 Sampler API is 31 & 30 = 34
 (H) Final Hydrostatic 1957 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30
 Sub Total 0
 Total 1649.40
 MP/DST Disc't _____
 Sub Total 1649.40

Approved By Vern Schrag Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58721

Well Name & No. Ehm Re - Fisher #1-19 Test No. DST #2 Date 11-28-14
 Company Larson Engineering Inc Elevation 2838 KB 2829 GL
 Address 562 W. State Rd 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D 3
 Location: Sec. 19 Twp. 17s Rge. 29W Co. Lane State KS

Interval Tested 4184-4210 Zone Tested LRC "J"
 Anchor Length 26 Drill Pipe Run 4045 Mud Wt. 9.0
 Top Packer Depth 4180 Drill Collars Run 124 Vis 55
 Bottom Packer Depth 4184 Wt. Pipe Run 0 WL 6.8
 Total Depth 4210 Chlorides 1700 ppm System LCM 116
 Blow Description IF- Weak Surface Blow Built to 1/2"
ISI- No Blow
FF- Weak Surface Blow
F5I- No Blow

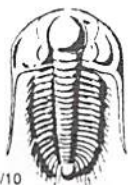
| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|-----------------------------------|------|------|--------|------|
| <u>15</u> | <u>Mud with oil spots in Tool</u> | | | | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 15 BHT 108 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2092 Test 1250 T-On Location 14:54
 (B) First Initial Flow 19 Jars 250 T-Started 15:40
 (C) First Final Flow 25 Safety Joint 75 T-Open 17:38
 (D) Initial Shut-In 1018 Circ Sub NIC T-Pulled _____
 (E) Second Initial Flow 27 Hourly Standby _____ T-Out 20:30
 (F) Second Final Flow 39 Mileage 48 R/T 74.40 Comments _____
 (G) Final Shut-In 1015 Sampler _____
 (H) Final Hydrostatic 2028 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1649.40
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1649.40

Approved By Vernon Schrag Our Representative N/A

Trilobite Testing Inc. shall not be liable for damaged 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58722

4/10

Well Name & No. Elmore-Fisher #1-19 Test No. DST #3 Date 11-29-14
 Company Lerson Engineering Elevation 2838 KB 2829 GL
 Address 562 W. State Rd 4 Olm. #2 RS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D #3
 Location: Sec. 19 Twp. 17S Rge. 29E Co. Lane State KS

Interval Tested 4219 - 4231 Zone Tested LRC "R"
 Anchor Length 12 Drill Pipe Run 4078 Mud Wt. 9.0
 Top Packer Depth 4215 Drill Collars Run 124 Vis 55
 Bottom Packer Depth 4219 Wt. Pipe Run 0 WL 6.8
 Total Depth 4231 Chlorides 1700 ppm System LCM 115

Blow Description IF - Weak Surface Blow Built to 1/2"
ISI - No Blow
FF - Weak Surface Blow Built to 5"
FSI - No Blow

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|---------------------------------|------|------|------------|------|
| <u>20</u> | <u>Mud with a few oil spots</u> | | | <u>100</u> | |
| 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 Total 15 BHT 113 Gravity 1250 API RW @ °F Chlorides ppm
 (A) Initial Hydrostatic 2131 Test 1250 T-On Location 4:50
 (B) First Initial Flow 18 Jars 250 T-Started 5:18
 (C) First Final Flow 20 Safety Joint 75 T-Open 7:36:55
 (D) Initial Shut-In 958 Circ Sub _____ T-Pulled 7:31
 (E) Second Initial Flow 20 Hourly Standby _____ T-Out 11:16
 (F) Second Final Flow 32 Mileage 48 R/T 74.40 Comments _____
 (G) Final Shut-In 954 Sampler _____
 (H) Final Hydrostatic 2094 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1649.40
 Initial Open 5
 Initial Shut-In 15
 Final Flow 30
 Final Shut-In 60
 Sub Total 1649.40
 Total 1649.40
 MP/DST Disc't _____

Approved By Vern Schrag Our Representative _____

Trilobite Testing Inc. shall not be liable for damaged 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.



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58723

Well Name & No. EhmK-Fisher #1-19 Test No. DST #4 Date 11-29-14
 Company Larson Engineering Inc Elevation 2838 KB 2829 GL
 Address 562 W. State Rd Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D R5B
 Location: Sec. 19 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4255-4274 Zone Tested LRC "L"
 Anchor Length 19 Drill Pipe Run 4112 Mud Wt. 9.2
 Top Packer Depth 4251 Drill Collars Run 124 Vis 49
 Bottom Packer Depth 4255 Wt. Pipe Run 0 WL 6.8
 Total Depth 4274 Chlorides 1800 ppm System LCM 116

Blow Description IF-Weak Surface Blow
ISI- No Blow
FF- No Blow
FST- No Blow

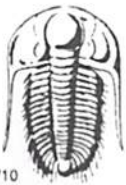
| Rec | Feet of | %gas | %oil | %water | %mud |
|-----|--------------------|------|------|--------|------|
| 1 | Mud with o.l Spots | | | 100 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Rec Total 1 BHT 111 Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2160 Test 1250 T-On Location 23:48
 (B) First Initial Flow 16 Jars 250 T-Started 00:10
 (C) First Final Flow 18 Safety Joint 75 T-Open 2:11
 (D) Initial Shut-In 25 Circ Sub MC T-Pulled 3:20
 (E) Second Initial Flow 16 Hourly Standby T-Out 4:57
 (F) Second Final Flow 18 Mileage 48 RIT 74.40 Comments
 (G) Final Shut-In 49 Sampler
 (H) Final Hydrostatic 2027 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Initial Open 5 Extra Recorder Sub Total 0
 Initial Shut-In 15 Day Standby Total 1649.40
 Final Flow 15 Accessibility MP/DST Disc't
 Final Shut-In 30 Sub Total 1649.40

Approved By [Signature] Our Representative [Signature]

Triobite Testing Inc. shall not be liable for damaged or destroyed 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58724

Well Name & No. Fhmke-Fisher #1-19 Test No. DST #5 Date 11-30-14
 Company Larson Engineering Inc Elevation 2838 KB 2829 GL
 Address 562 W. State Rd 4 Olathe KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-03
 Location: Sec. 19 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4295-4400 Zone Tested Marmaton
 Anchor Length 105 Drill Pipe Run 4172 Mud Wt. 9.1
 Top Packer Depth 4291 Drill Collars Run 124 Vis 54
 Bottom Packer Depth 4295 Wt. Pipe Run 0 WL 6.8
 Total Depth 4400 Chlorides 1800 ppm System LCM 1 1/2 lb

Blow Description IF - Weak Surface Blow 1/2"
ISL - No Blow
FF - Weak Surface Blow
ISL - No Blow

| Rec | Feet of | %gas | %oil | %water | %mud |
|----------|----------------------------|------|------|------------|------|
| <u>5</u> | <u>Mud a few oil spots</u> | | | <u>100</u> | |
| 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 Total 5 BHT 108 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

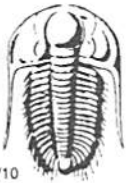
(A) Initial Hydrostatic 2239 Test 1250 T-On Location 20:24
 (B) First Initial Flow 21 Jars 250 T-Started 21:18
 (C) First Final Flow 22 Safety Joint 75 T-Open 23:49
 (D) Initial Shut-In 226 Circ Sub N/C T-Pulled 00:57
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 3:00
 (F) Second Final Flow 24 Mileage 48 RIT 74.40 Comments _____
 (G) Final Shut-In 385 Sampler _____
 (H) Final Hydrostatic 2083 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30

Sub Total 1649.40
 Total 1649.40
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **58725**

4/10

Well Name & No. Ehmer - Fisher #1-19 Test No. DST #6 Date 12-1-14
 Company Larson Engineering Inc Elevation 2838 KB 2829 GL
 Address 562 W. State Rd 4 Olathe KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D 3
 Location: Sec. 19 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4433-4560 Zone Tested CheroRcc
 Anchor Length 127 Drill Pipe Run 4296 Mud Wt. 9.1
 Top Packer Depth 4429 Drill Collars Run 124 Vis 59
 Bottom Packer Depth 4433 Wt. Pipe Run 0 WL 6.4
 Total Depth 4560 Chlorides 2000 ppm System LCM 216

Blow Description IF - Surface Blow Built to BOB in 2 1/4 min
ISI - Weak Surface Blow in 1 min Built to 1/4"
FF - Surface Blow Built to BOB in 2 min
FSI - Weak Surface Blow Built to BOB in 11 3/4 min

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------------|---------|------|------|--------|------|
| 72 | GO | 14 | 86 | | |
| 62 | GMCO | 23 | 51 | 26 | |
| 62 | OMCG | 45 | 18 | 37 | |
| 62 62 | WOGCM | 22 | 15 | 3 | 60 |
| 186 | WOGCM | 31 | 18 | 4 | 47 |

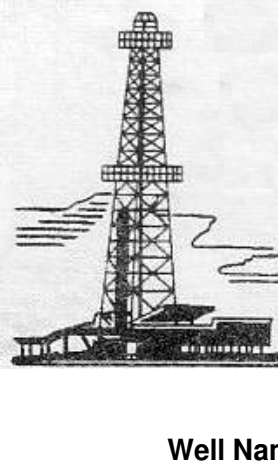
Rec Total 444 BHT 121 Gravity 35 API RW @ 74.40 °F Chlorides _____ ppm

(A) Initial Hydrostatic 2288 Test 1250 T-On Location 22:14
 (B) First Initial Flow 52 Jars 250 T-Started 23:38
 (C) First Final Flow 103 Safety Joint 75 T-Open 2:21
 (D) Initial Shut-In 1199 Circ Sub NIC T-Pulled 8:30
 (E) Second Initial Flow 102 Hourly Standby T-Out 6:53
 (F) Second Final Flow 188 Mileage 48 RIT Comments API is 81 @ 20ft = 35
 (G) Final Shut-In 1181 Sampler 1546 GIP
 (H) Final Hydrostatic 2154 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder
 Day Standby
 Accessibility

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30
 Sub Total 1649.40
 Total 1649.40
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged 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.



WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



Scale 1:240 (5"=100') Imperial

Well Name: EHMKE-FISHER #1-19
Location: SE SE SE NW OF SEC. 19-17S-29W
Licence Number: API: 15-101-22542
Spud Date: November 20, 2014
Surface Coordinates: 2572' FNL & 2017' FWL

Region: Lane Co., KS
Drilling Completed: December 02, 2014

Bottom Hole Coordinates:
Ground Elevation (ft): 2829' K.B. Elevation (ft): 2838'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4620'
Formation: Mississippi
Type of Drilling Fluid: Chemical Premix (Displaced)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: Larson Engineering Inc.
Address: 562 West State Road 4
Olmitz, KS 67564-8561

DRILLING CONTRACTOR:

H. D. Drilling, LLC, Rig #3 (Co. Tools)

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8" x 556', Kelly 40.30', Tool Joint 5.5" ; Bit: JZ-HA20Q, 7-7/8", standard jets 15-15-15; rpm 80, WOB 35k; Kelly Bushing 9' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

Set 8-5/8" casing at 253'

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60-62 spm, Chemical, premix, earth pits, Morgan Mud, Inc., Cade Lines.

OPEN HOLE LOGS:

DN, DI (SP) (Run-1); ML (Run-2); No Sonic; 5" detail LTD-3600; 2" DI to surface casing; LogTech-Pioneer Wireline, Hays, KS, Dan Schmidt, Log total depth (4610') was equal to rotary total depth (4610').

DRILL STEM TEST #1:

LKC (I-zone): Interval: 4158-4185 (27'): Blow: BOB 4-3/4 min IFP, surf blow back ISIP, BOB 5 min FFP, BB incr to 1' FSIP; Times: 5-15-15-30; Recovery: 212' GIP, 470' TF; Grindout: 48' GO (6%G, 91%O, 3%M, 34 grav.), 50' GOWM (11%G, 20%O, 33%W, 46%M), 124' GOMCW (10%G, 7%O, 45%W, 38%M), 62' OGMCW (4%G, 3%O, 69%W, 24%M), 186' GMCW (4%G, 81%W, 15%M, Rw 0.313 at 30 F, chlorides 54k); Pressures: HP: 2082-1957, SIP: 1096-1090, FP: 37-115, 118-229; BHT: 122 F; Trilobite Testing, Inc., Scott City, KS, Will

DRILL STEM TEST #2:

LKC (J-zone): Interval: 4184-4210 (26'): Blow: weak incr 1/2" IFP, no RB, weak surf blow FFP, no RB; Times: 5-15-15-30; Recovery: 15' mud w/oil spots (100%M); Pressures: HP: 2092-2028, SIP: 1018-1015, FP: 19-25, 27-39; BHT: 108 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

DRILL STEM TEST #3:

LKC (K-zone): Interval: 4219-4231 (12'): Blow: weak incr 1/2" IFP, no RB, weak incr 1/2" FFP, no RB; Times: 5-15-15-30; Recovery: 20' mud w/oil spots (100%M); Pressures: HP: 2131-2094, SIP: 958-954, FP: 18-20, 20-32; BHT: 113 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

DRILL STEM TEST #4:

LKC (L-zone): Interval: 4255-4274 (19'): Blow: weak surf IFP, no RB, no blow at 2nd open; Times: 5-15-15-30; Recovery: 1' mud w/oil spots (100%M); Pressures: HP: 2160-2027, SIP: 25-49, FP: 16-18, 16-18; BHT: 111 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

DRILL STEM TEST #5:

Pleasanton thru Altamont: Interval: 4295-4400 (105'): Blow: weak incr 1/2", no RB, weak surf FFP, no RB; Times: 5-15-15-30; Recovery: 5' mud w/oil spots (100%M); Pressures: HP: 2239-2083, SIP: 226-385, FP: 21-22, 22-24; BHT: 108 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

DRILL STEM TEST #6:

Cherokee: Interval: 4433-4560 (127'): Blow: BOB 2-1/4 min IFP, weak surf BB ISIP, BOB 2 min FFP, BOB BB in 12 min FSIP; Times: 5-15-15-30; Recovery: 1540' GIP, 444' TF; Grindouts: 72' GO (14%G, 86%O, grav. 35), 62' GOWM (23%G, 51%O, 26%M), 62' GOCM (45%G, 18%O, 37%M), 62' GOWCM (22%G, 15%O, 3%W, 60%M), 186' GOWCM (31%G, 18%O, 4%W, 47%M); Pressures: HP: 2288-2154, SIP: 1199-1181, FP: 52-103, 102-188; BHT: 121 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

