



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1131660
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: _____



1131660

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 <i>(Attach Additional Sheets)</i> | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Log | Formation (Top), Depth and Datum | <input type="checkbox"/> Sample |
| Samples Sent to Geological Survey | <input type="checkbox"/> Yes <input type="checkbox"/> No | Name | Top | Datum |
| 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: | | | | |

| 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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ | PRODUCTION INTERVAL: _____ _____ |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|

| | |
|-----------|-------------------------------------------------------|
| Form | ACO1 - Well Completion |
| Operator | Larson Engineering, Inc. dba Larson Operating Company |
| Well Name | Snider 1-9 |
| Doc ID | 1131660 |

Tops

| Name | Top | Datum |
|-------------|------|-------|
| Anhydrite | 2210 | +610 |
| B Anhydrite | 2239 | +581 |
| Heebner | 3927 | -1107 |
| Lansing | 3963 | -1143 |
| Stark Sh | 4222 | -1402 |
| Marmaton | 4334 | -1514 |
| Pawnee | 4420 | -1600 |
| Ft Scott | 4471 | -1651 |
| Cherokee SH | 4495 | -1676 |
| Eros. Miss | 4568 | -1748 |



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

TICKET No 23027

PAGE 1 OF 1

SERVICE LOCATIONS
 1. Hays, Ks. WELL/PROJECT NO. #1-9 LEASE Snider COUNTY/PARISH Lane STATE Ks CITY _____ DATE 12-27-12 OWNER Same
 2. Ness City, Ks. TICKET TYPE SERVICE SALES CONTRACTOR W W W S RIG NAME/NO. _____ SHIPPED VIA ET DELIVERED TO Location ORDER NO. _____
 3. WELL TYPE oil WELL CATEGORY Development JOB PURPOSE Port Cellar WELL PERMIT NO. _____ WELL LOCATION _____
 4. REFERRAL LOCATION _____ INVOICE INSTRUCTIONS _____

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | UM | | UNIT PRICE | AMOUNT |
|--------------------|-------------------------------------|------------|------|----|---------------------------|------|------|------|--|--------------------|--------------------|
| | | LOC | ACCT | DF | | | | | | | |
| 575 | | 1 | | | MILEAGE #111 | 50 | | mi | | 6 ⁰⁰ | 300 ⁰⁰ |
| 578 576 | | 1 | | | Pump Charge (Port Cellar) | 1 | 2162 | | | 1250 ⁰⁰ | 1250 ⁰⁰ |
| 290 | | 1 | | | D-Air | 2 | | | | 35 ⁰⁰ | 70 ⁰⁰ |
| 330 | | 2 | | | SMD Cement | 190 | | slks | | 16 ⁵⁰ | 3135 ⁰⁰ |
| 276 | | 2 | | | Floccle | 50 | | | | 2 ⁰⁰ | 100 ⁰⁰ |
| 581 | | 2 | | | Cement Service Charge | 235 | | slks | | 2 ⁰⁰ | 470 ⁰⁰ |
| 583 | | 2 | | | Drayage | 574 | | 57M | | 1 ⁰⁰ | 574 ⁵⁰ |

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
 DATE SIGNED 12-27-12 TIME SIGNED 1456 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 |
|--------------------------------------------------------------------------|-----------------------------------------|-----------------------------|-----------|------------|
| OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? | | | | 5899.50 |
| 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 checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | | |
| <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND | | | | TOTAL |
| | | | | 6107.72 |

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

SWIFT OPERATOR Mike Toth APPROVAL _____

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 12-27-12 PAGE NO. 1

CUSTOMER *Larsen Engineering* WELL NO. *#1-9* LEASE *Snider* JOB TYPE *Part Collar* TICKET NO. *23027*

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS | | PRESSURE (PSI) | | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|------|------------|--------------------|-------|---|----------------|--------|--------------------------------------------------|
| | | | | T | C | TUBING | CASING | |
| | 1100 | | | | | | | on loc setup trks |
| | | | | | | | | 2 3/8" x 5 1/2" P.C. 2162' |
| | 1245 | | | | | 1000 | | locate P.C. Test Csg to 1000 Psi Open P.C. |
| | 1340 | 3.5 | 3 | | | 200 | | Take injection rate |
| | 1345 | 3.5 | 0 | | | 200 | | Start SMD Cement |
| | 1411 | 3.5 | 92 | | | 400 | | circ cement Raise weight |
| | 1412 | 3.5 | 97/0 | | | 400 | | End Cement / start Displacement |
| | 1415 | | 7.5 | | | 400 | | Cement Displaced |
| | 1420 | | | | | 1000 | | Close P.C. Test csg to 1000 Psi |
| | 1440 | 3 | 0 | | | 150 | | Run site Reverse out Hole Clean |
| | | | 15 | | | | | |
| | | | | | | | | 190 sks SMD circ 20 sks topit |
| | | | | | | | | Thank you |
| | | | | | | | | Nick, David E. & Isaac |



CHARGE TO: **LARSON ENGINEERING**
 ADDRESS:
 CITY, STATE, ZIP CODE:

TICKET
 No 23524

PAGE 1 OF 2

SERVICE LOCATIONS: 1. **Ness City, KS**
 WELL/PROJECT NO.: **1-9** LEASE: **SWJEDER** COUNTY/PARISH: **LANE** STATE: **Ks** CITY: DATE: **12-21-12** OWNER: **SAME**
 2. TICKET TYPE: SERVICE SALES CONTRACTOR: **H-D DRILLING** RIG NAME/NO.: SHIPPED VIA: **CT** DELIVERED TO: **LOCATION** ORDER NO.:
 3. WELL TYPE: **OIL** WELL CATEGORY: **DEVELOPMENT** JOB PURPOSE: **5 1/2" LONGSTRING** WELL PERMIT NO.: WELL LOCATION: **4-23 Jct, 2W, 1 1/2 S, E**
 4. REFERRAL LOCATION: INVOICE INSTRUCTIONS:

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | U/M | | UNIT PRICE | AMOUNT |
|-----------------|-------------------------------------|------------|------|----|----------------------|------|--|-----|------|------------|---------|
| | | LOC | ACCT | DF | | | | | | | |
| 575 | | 1 | | | MILEAGE # 110 | 50 | | MT | | 6.00 | 300.00 |
| 578 | | 1 | | | PUMP CHARGE | 1 | | NOB | 4642 | 15.00 | 1500.00 |
| 221 | | 1 | | | LIQUID KCL | 2 | | GAL | | 25.00 | 50.00 |
| 280 | | 1 | | | FLOCHECK-21 | 500 | | GAL | | 2.50 | 1250.00 |
| 419 | | 1 | | | ROTATING HEAD RENTAL | 1 | | NOB | | 200.00 | 200.00 |

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
 DATE SIGNED: **12-21-12** TIME SIGNED: **0900** 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 #1 | AMOUNT |
|-------------------------------------------------------------------------------------------------|-------|------------|-----------|---------------|---------|
| OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? | | | | #1 | 3300.00 |
| WE UNDERSTOOD AND MET YOUR NEEDS? | | | | #2 | 5209.38 |
| OUR SERVICE WAS PERFORMED WITHOUT DELAY? | | | | Subtotal | 8509.38 |
| WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? | | | | Tax Lane 6.3% | 377.37 |
| ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | TOTAL | 8886.75 |
| <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND | | | | | |

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

SWIFT OPERATOR: **Wayne Wilson**

APPROVAL: *[Signature]*

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 12-21-12 PAGE NO.

CUSTOMER **ARSON ENGINEERING** WELL NO. **1-9** LEASE **SWINER** JOB TYPE **5 1/2" LONGSTRENG** TICKET NO. **23524**

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL/GAL) | PUMPS | | PRESSURE (PSI) | | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|------|------------|------------------|-------|---|----------------|--------|-----------------------------------------------------------------------------|
| | | | | T | C | TUBING | CASING | |
| | 0830 | | | | | | | ON LOCATION |
| | | | | | | | | TD-4643 SET = 4642 TP-4646 5 1/2" # 15.5 ST-42 Port Coupler = 2159 |
| | 0900 | | | | | | | DROP BALL - CIRCULATE ROTATE |
| | 1000 | 6 | 15 | | ✓ | 500 | | PUMP KCL FLUSH |
| | 1003 | 6 | 12 | | ✓ | 500 | | PUMP 500 GAL FLOCHECK-21 |
| | 1005 | 6 | 5 | | ✓ | 500 | | PUMP KCL FLUSH |
| | 1010 | | 7 | | | | | PLUG RH (30SKS) |
| | 1015 | 4 1/2 | 30 | | ✓ | 300 | | MAX CEMENT - 120 SKS FA-2 = 15.2 PPG |
| | 1025 | | | | | | | WASH OUT PUMP - LINES |
| | 1025 | | | | | | | RELEASE CATCH DOWN PLUG |
| | 1030 | 8 | 0 | | ✓ | | | DISPLACE PLUG |
| | | 7 | 100 | | | 750 | | SHUT OFF ROTATING |
| | 1047 | 6 | 109.6 | | | 1500 | | PLUG DOWN - PSE UP CATCH IN PLUG |
| | 1050 | | | | | OK | | RELEASE PSE - HELD |
| | | | | | | | | WASH TRUCK |
| | 1200 | | | | | | | JOB COMPLETE |

THANK YOU
WAYNE, DON, ISAAC

ALLIED OIL & GAS SERVICES, LLC 059204

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:
Great Bend, KS

| | | | | | | | |
|----------------------------------|------------------|----------------------------------------------------|------------------|---------------------------|----------------------------|--------------------------|---------------------------|
| DATE <u>12-8-12</u> | SEC <u>9</u> | TWP. <u>17s</u> | RANGE <u>24w</u> | CALLED OUT <u>4:00 PM</u> | ON LOCATION <u>7:00 PM</u> | JOB START <u>9:00 AM</u> | JOB FINISH <u>9:50 PM</u> |
| LEASE <u>Snider</u> | WELL# <u>1-9</u> | LOCATION <u>South 1/2 miles East into Location</u> | | | COUNTY <u>Lan</u> | STATE <u>KS</u> | |
| OLD OR <u>(NEW)</u> (Circle one) | | | <u>116 miles</u> | | | <u>1-01</u> | <u>6.3</u> |

CONTRACTOR H+D #3
 TYPE OF JOB Surface Casing
 HOLE SIZE 12 1/4" T.D. 254 ft
 CASING SIZE 8 5/8" 24# DEPTH 242 ft
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT 20 ft
 CEMENT LEFT IN CSG. 20 ft, 1.272 bbls, 5.35x
 PERFS. _____
 DISPLACEMENT 14.75 bbls Fresh Water

OWNER Larson Operating Co.
 CEMENT
 AMOUNT ORDERED 175# Class "A" +
3% Cucl + 2% Gel

EQUIPMENT
 PUMP TRUCK CEMENTER Charles Ekins /
 # 398 HELPER Josh Isaac /
 BULK TRUCK
 # 344/170 DRIVER Patrick Helgerson /
 BULK TRUCK
 # _____ DRIVER _____

| | | | |
|----------|-------------------|----------------|-----------------|
| COMMON | <u>175</u> | @ <u>17.90</u> | <u>3,132.50</u> |
| POZMIX | | @ | |
| GEL | <u>3</u> | @ <u>23.40</u> | <u>70.20</u> |
| CHLORIDE | <u>6</u> | @ <u>64.00</u> | <u>384.00</u> |
| ASC | | @ | |
| | | @ | |
| | | @ | |
| | | @ | |
| | | @ | |
| | | @ | |
| | | @ | |
| HANDLING | <u>189.22</u> | @ <u>2.48</u> | <u>469.26</u> |
| MILEAGE | <u>8.63 x 30x</u> | <u>2.60</u> | <u>673.18</u> |
| TOTAL | | | <u>4,729.10</u> |

REMARKS:

Pump 5 bbls Fresh Water
Pump 42 bbls Cement (175#)
Displace w/ 14.75 bbls Fresh Water
Leave 20 ft, 1.272 bbls, 5.35x Cement in Casing
Circulate 6 bbls, 25% Cement to Surface

258.90
 SERVICE

| | | | |
|-------------------|---------------|---------------|----------------|
| DEPTH OF JOB | <u>242</u> | | |
| PUMP TRUCK CHARGE | | | <u>1512.00</u> |
| EXTRA FOOTAGE | | @ | |
| MILEAGE | <u>Hum 30</u> | @ <u>7.70</u> | <u>231.00</u> |
| MANIFOLD | | @ | |
| | <u>Hum 30</u> | @ <u>4.40</u> | <u>132.00</u> |
| | | @ | |

CHARGE TO: Larson Operating Company
 STREET _____
 CITY _____ STATE _____ ZIP _____

TOTAL 1,875.35

PLUG & FLOAT EQUIPMENT

| | | |
|-------|---|--|
| _____ | @ | |
| _____ | @ | |
| _____ | @ | |
| _____ | @ | |
| _____ | @ | |

TOTAL _____

To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

| | |
|--------------------|---------------------|
| SALES TAX (If Any) | <u>225.96</u> |
| TOTAL CHARGES | <u>6,604.35</u> |
| DISCOUNT | <u>30% 1,981.35</u> |
| | <u>4,623.00</u> |

PRINTED NAME Humberto Martinez
 SIGNATURE [Signature]

IF PAID IN 30 DAYS



DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Snider #1-9

9-17s-29w Lane, KS

Start Date: 2012.12.14 @ 00:25:00

End Date: 2012.12.14 @ 06:20:30

Job Ticket #: 49935 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.21 @ 10:55:33



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS

Snider #1-9

Job Ticket: 49935

DST#: 1

Test Start: 2012.12.14 @ 00:25:00

GENERAL INFORMATION:

Formation: **Lansing "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:36:45

Time Test Ended: 06:20:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jace McKinney

Unit No: 46

Interval: 3985.00 ft (KB) To 4010.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4010.00 ft (KB) (TVD)

2813.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 103.11 psig @ 3986.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.12.14

End Date:

2012.12.14

Last Calib.: 2012.12.14

Start Time: 00:25:15

End Time:

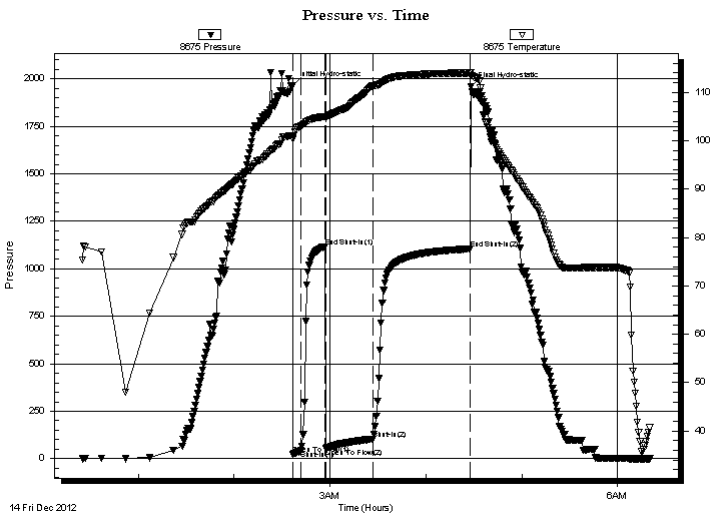
06:20:30

Time On Btm: 2012.12.14 @ 02:36:30

Time Off Btm: 2012.12.14 @ 04:28:15

TEST COMMENT: Built to 5" blow
Built to 1/2" return blow
B.O.B. in 13 min.
Bled off for 5 min. Built to 1 1/2" return blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1966.49 | 101.09 | Initial Hydro-static |
| 1 | 24.18 | 100.31 | Open To Flow (1) |
| 6 | 42.81 | 103.09 | Shut-In(1) |
| 21 | 1117.43 | 105.01 | End Shut-In(1) |
| 21 | 56.52 | 104.68 | Open To Flow (2) |
| 51 | 103.11 | 111.33 | Shut-In(2) |
| 111 | 1105.31 | 114.01 | End Shut-In(2) |
| 112 | 1961.03 | 114.13 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------------|--------------|
| 20.00 | Clean Oil | 0.10 |
| 200.00 | mco 50%M 50%O | 1.64 |
| 0.00 | 120 Feet Weak Gas In Pipe | 0.00 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49935

DST#: 1

ATTN: Vern Schrag

Test Start: 2012.12.14 @ 00:25:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3824.65 ft | Diameter: 3.80 inches | Volume: 53.65 bbl | Tool Weight: 2500.00 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: 147.44 ft | Diameter: 2.25 inches | Volume: 0.73 bbl | Weight to Pull Loose: 70000.00 lb |
| | | | <u>Total Volume: 54.38 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 14.59 ft | | | String Weight: Initial 58000.00 lb |
| Depth to Top Packer: | 3985.00 ft | | | Final 60000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 25.00 ft | | | |
| Tool Length: | 52.50 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

| | | | | | |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00 | | | 3958.50 | |
| Shut In Tool | 5.00 | | | 3963.50 | |
| Hydraulic tool | 5.00 | | | 3968.50 | |
| Jars | 5.00 | | | 3973.50 | |
| Safety Joint | 2.50 | | | 3976.00 | |
| Packer | 5.00 | | | 3981.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 3985.00 | |
| Stubb | 1.00 | | | 3986.00 | |
| Recorder | 0.00 | 8675 | Inside | 3986.00 | |
| Recorder | 0.00 | 8650 | Outside | 3986.00 | |
| Perforations | 21.00 | | | 4007.00 | |
| Change Over Sub | 0.00 | | | 4007.00 | |
| Drill Pipe | 0.00 | | | 4007.00 | |
| Change Over Sub | 0.00 | | | 4007.00 | |
| Bullnose | 3.00 | | | 4010.00 | 25.00 Bottom Packers & Anchor |

Total Tool Length: 52.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
Job Ticket: 49935 **DST#: 1**
Test Start: 2012.12.14 @ 00:25:00

Mud and Cushion Information

| | | |
|----------------------------------|----------------------------|---------------------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: 29 deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: ppm |
| Viscosity: 89.00 sec/qt | Cushion Volume: bbl | |
| Water Loss: 6.77 in ³ | Gas Cushion Type: | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | |
| Salinity: 3700.00 ppm | | |
| Filter Cake: 2.00 inches | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------------------|---------------|
| 20.00 | Clean Oil | 0.098 |
| 200.00 | mco 50%M 50%O | 1.645 |
| 0.00 | 120 Feet Weak Gas In Pipe | 0.000 |

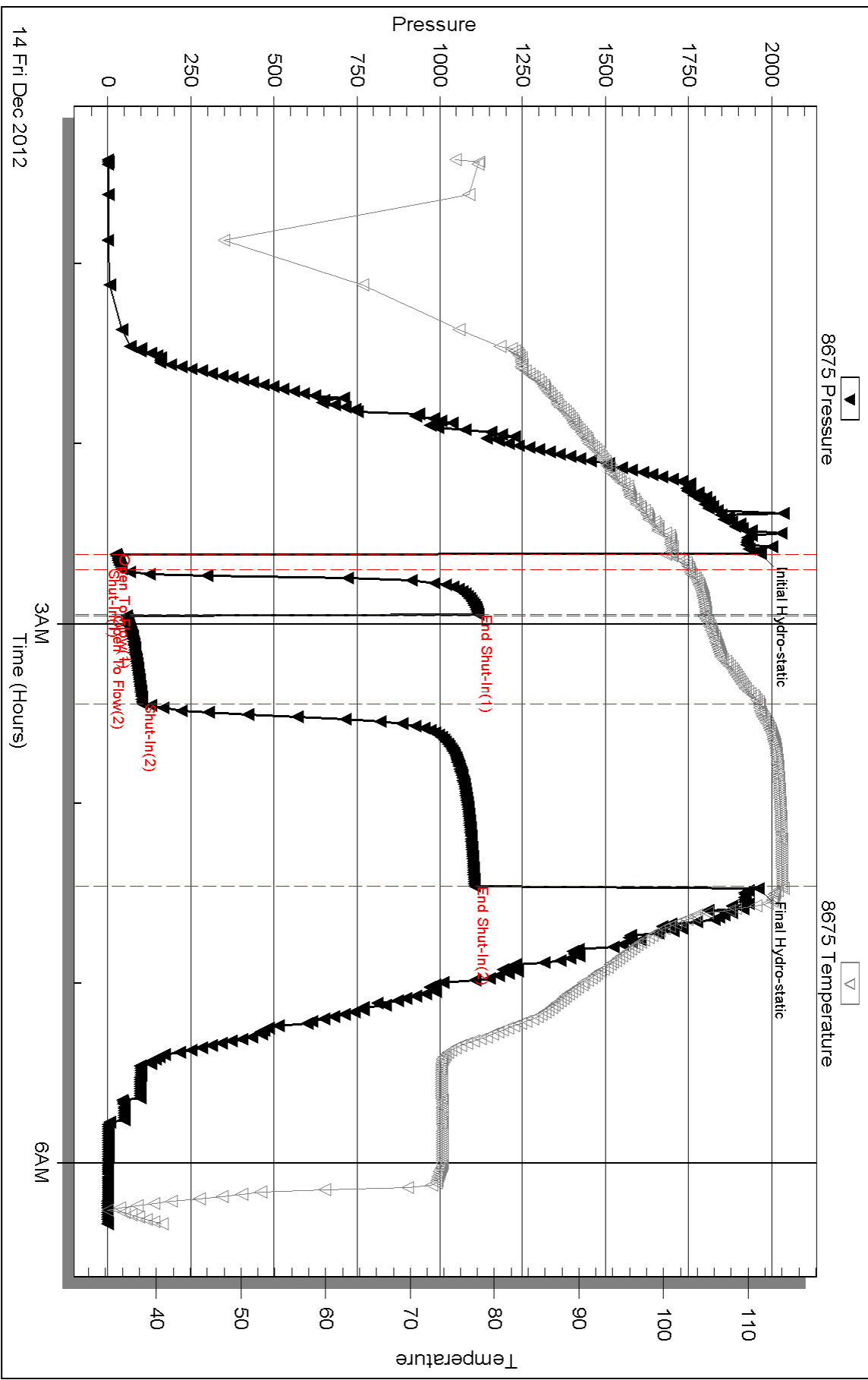
Total Length: 220.00 ft Total Volume: 1.743 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: API: 27 @ 40 F = 29

Pressure vs. Time

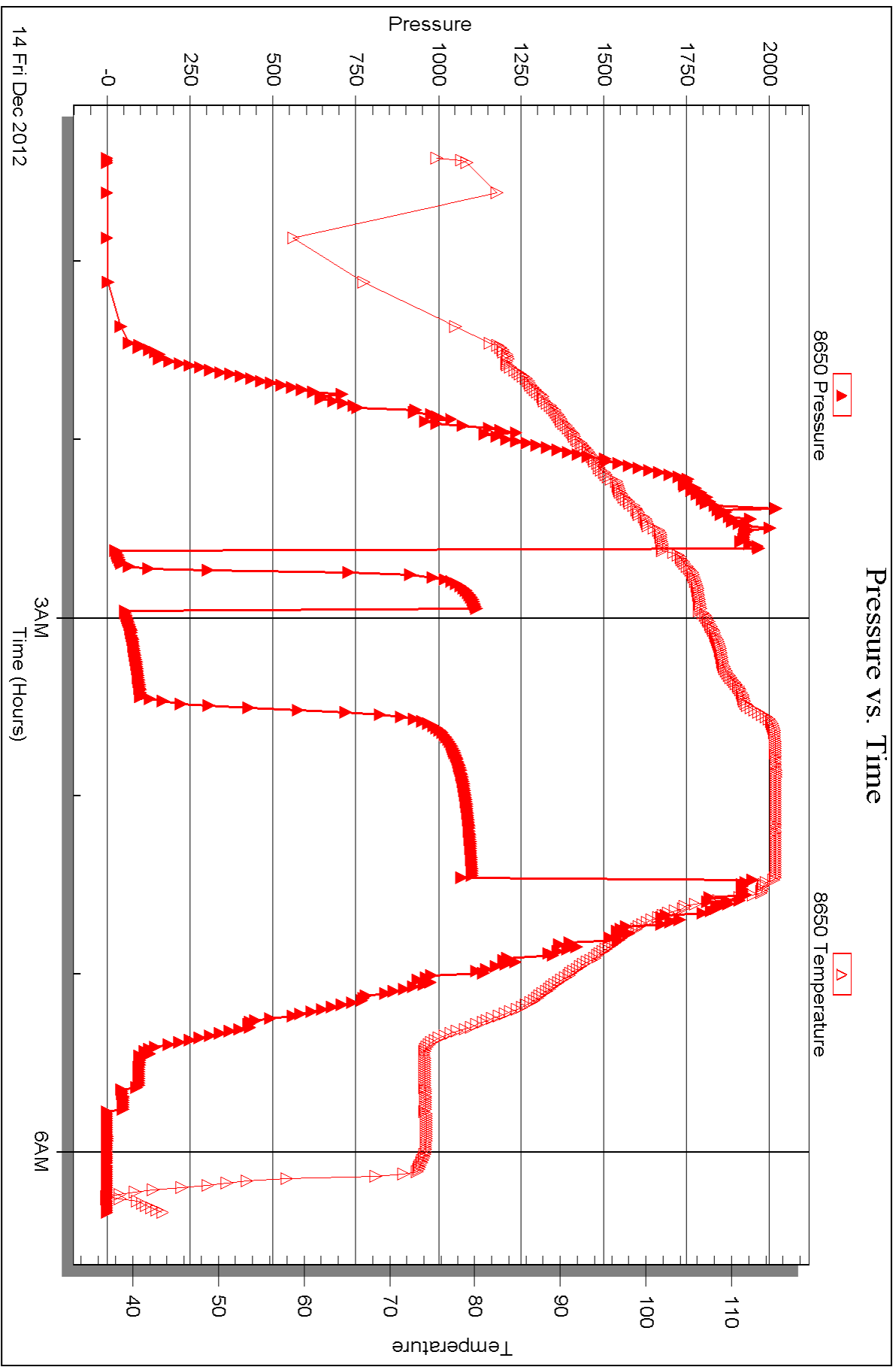


Serial #: 8650

Outside Larson Engineering, Inc

Snider #1-9

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Snider #1-9

9-17s-29w Lane, KS

Start Date: 2012.12.14 @ 16:20:00

End Date: 2012.12.14 @ 22:28:30

Job Ticket #: 49936 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.21 @ 10:54:50



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 W State RD 4
 Olmitz KS 67564-8561
 ATTN: Vern Schrag

9-17s-29w Lane, KS

Snider #1-9

Job Ticket: 49936

DST#: 2

Test Start: 2012.12.14 @ 16:20:00

GENERAL INFORMATION:

Formation: **Kansas City "E"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:32:15
 Time Test Ended: 22:28:30
 Interval: **4039.00 ft (KB) To 4052.00 ft (KB) (TVD)**
 Total Depth: 4052.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jace McKinney
 Unit No: 46
 Reference Elevations: 2820.00 ft (KB)
 2813.00 ft (CF)
 KB to GR/CF: 7.00 ft

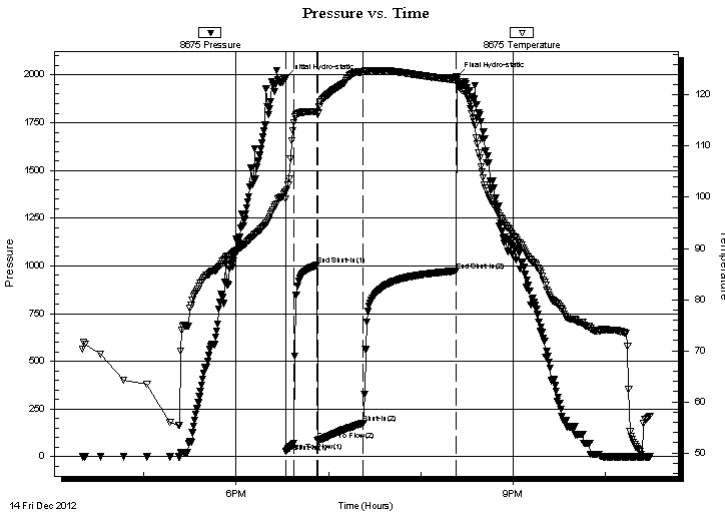
Serial #: 8675

Inside

Press @ RunDepth: 177.03 psig @ 4040.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.12.14 End Date: 2012.12.14 Last Calib.: 2012.12.14
 Start Time: 16:20:15 End Time: 22:28:30 Time On Btm: 2012.12.14 @ 18:32:00
 Time Off Btm: 2012.12.14 @ 20:23:15

TEST COMMENT: Built to 7" blow
 Bled off for 3 min. Built to 1/2" return blow
 B.O.B. in 10 min.
 Bled off for 5 min. Built to 2" return blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1983.66 | 101.09 | Initial Hydro-static |
| 1 | 29.71 | 99.73 | Open To Flow (1) |
| 6 | 70.02 | 114.56 | Shut-In(1) |
| 21 | 1003.62 | 116.80 | End Shut-In(1) |
| 21 | 85.71 | 116.25 | Open To Flow (2) |
| 51 | 177.03 | 124.58 | Shut-In(2) |
| 111 | 973.10 | 122.99 | End Shut-In(2) |
| 112 | 1992.43 | 122.99 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------------|--------------|
| 198.00 | Water 100% | 1.43 |
| 62.00 | mcw 40%M 60%W | 0.87 |
| 40.00 | Clean Oil gco 10%G 90%O | 0.56 |
| 0.00 | 200 Feet Weak Gas In Pipe | 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

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49936

DST#: 2

ATTN: Vern Schrag

Test Start: 2012.12.14 @ 16:20:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 3887.19 ft | Diameter: 3.80 inches | Volume: 54.53 bbl | Tool Weight: | 2500.00 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: 147.44 ft | Diameter: 2.25 inches | Volume: 0.73 bbl | Weight to Pull Loose: | 72000.00 lb |
| | | | <u>Total Volume: 55.26 bbl</u> | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 23.13 ft | | | String Weight: Initial | 60000.00 lb |
| Depth to Top Packer: | 4039.00 ft | | | Final | 62000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 13.00 ft | | | | |
| Tool Length: | 40.50 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 | | | 4012.50 | |
| Shut In Tool | 5.00 | | | 4017.50 | |
| Hydraulic tool | 5.00 | | | 4022.50 | |
| Jars | 5.00 | | | 4027.50 | |
| Safety Joint | 2.50 | | | 4030.00 | |
| Packer | 5.00 | | | 4035.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4039.00 | |
| Stubb | 1.00 | | | 4040.00 | |
| Recorder | 0.00 | 8675 | Inside | 4040.00 | |
| Recorder | 0.00 | 8650 | Outside | 4040.00 | |
| Perforations | 9.00 | | | 4049.00 | |
| Change Over Sub | 0.00 | | | 4049.00 | |
| Drill Pipe | 0.00 | | | 4049.00 | |
| Change Over Sub | 0.00 | | | 4049.00 | |
| Bullnose | 3.00 | | | 4052.00 | 13.00 Bottom Packers & Anchor |

Total Tool Length: 40.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49936

DST#: 2

ATTN: Vern Schrag

Test Start: 2012.12.14 @ 16:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

40000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|---------------------------|----------------|
| 198.00 | Water 100% | 1.434 |
| 62.00 | mcw 40%M 60%W | 0.870 |
| 40.00 | Clean Oil gco 10%G 90%O | 0.561 |
| 0.00 | 200 Feet Weak Gas In Pipe | 0.000 |

Total Length: 300.00 ft Total Volume: 2.865 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

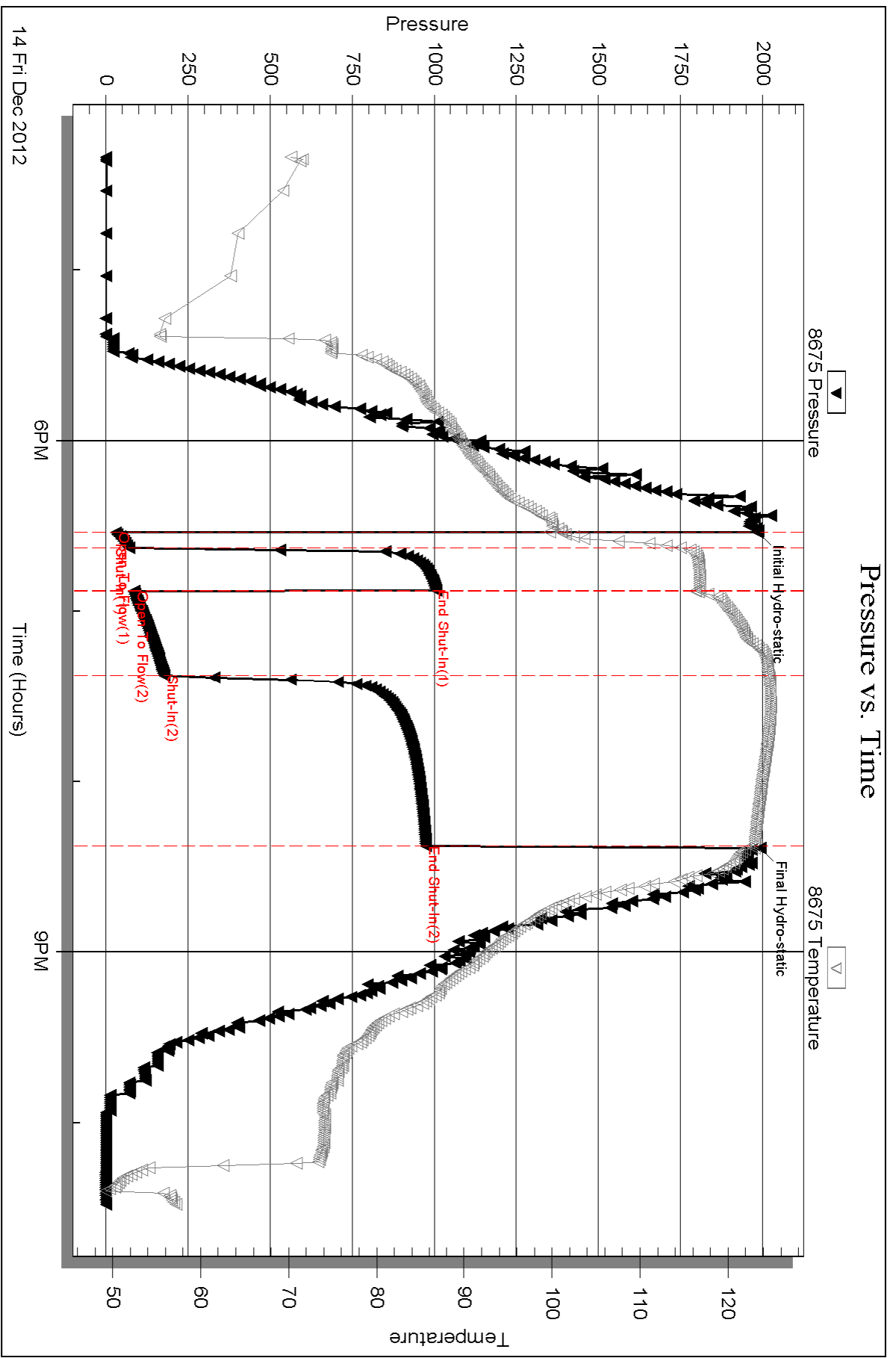
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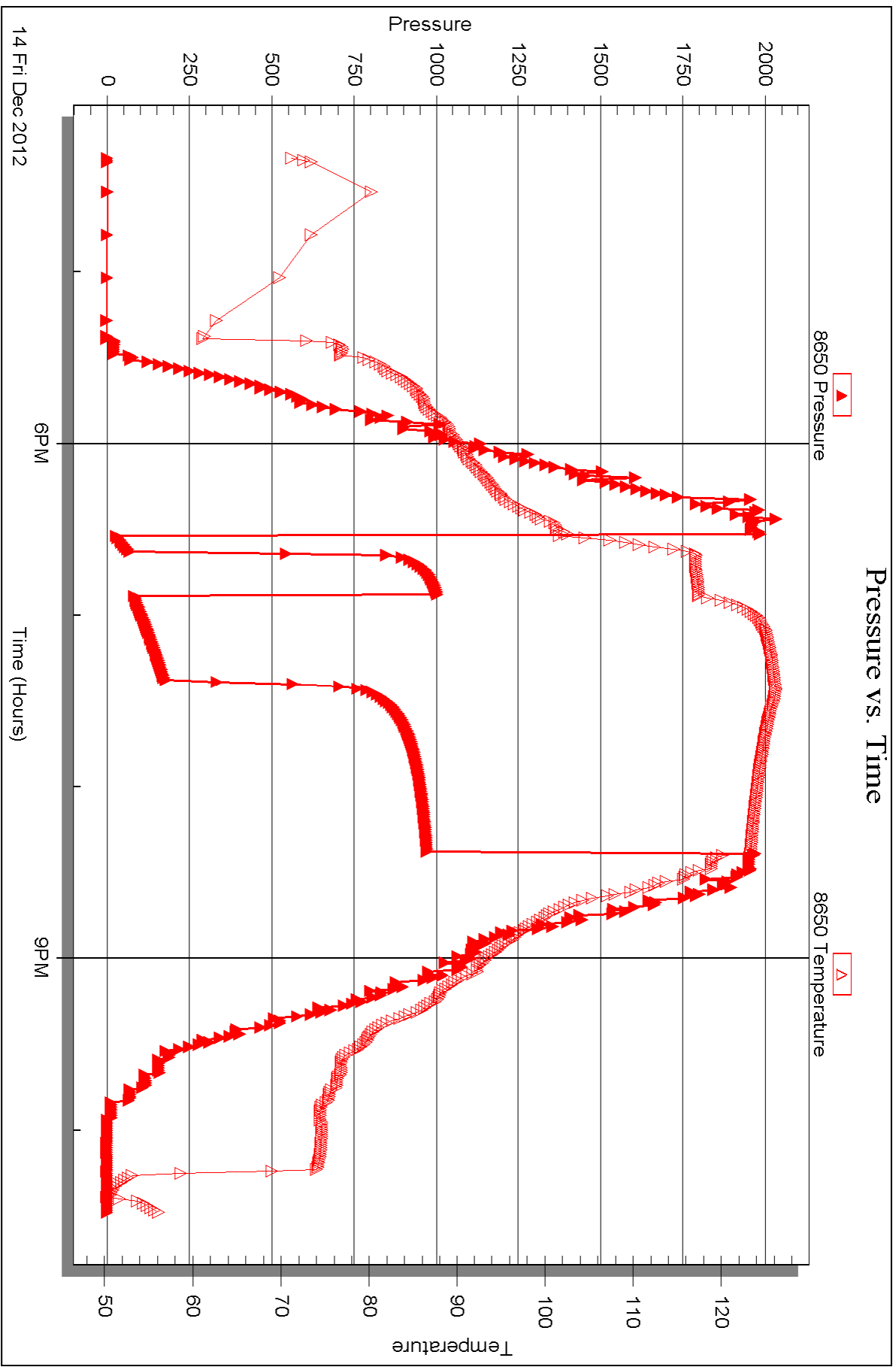
Laboratory Name:

Laboratory Location:

Recovery Comments: API: 29 @ 60 F = 29

RW: .30 @ 45 F = 40,000







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Snider #1-9

9-17s-29w Lane, KS

Start Date: 2012.12.15 @ 14:10:00

End Date: 2012.12.15 @ 19:35:15

Job Ticket #: 49937 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.21 @ 10:54:08



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 W State RD 4
 Olmitz KS 67564-8561
 ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
 Job Ticket: 49937 **DST#: 3**
 Test Start: 2012.12.15 @ 14:10:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:11:30
 Time Test Ended: 19:35:15
 Interval: **4129.00 ft (KB) To 4152.00 ft (KB) (TVD)**
 Total Depth: 4152.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jace McKinney
 Unit No: 46
 Reference Elevations: 2820.00 ft (KB)
 2813.00 ft (CF)
 KB to GR/CF: 7.00 ft

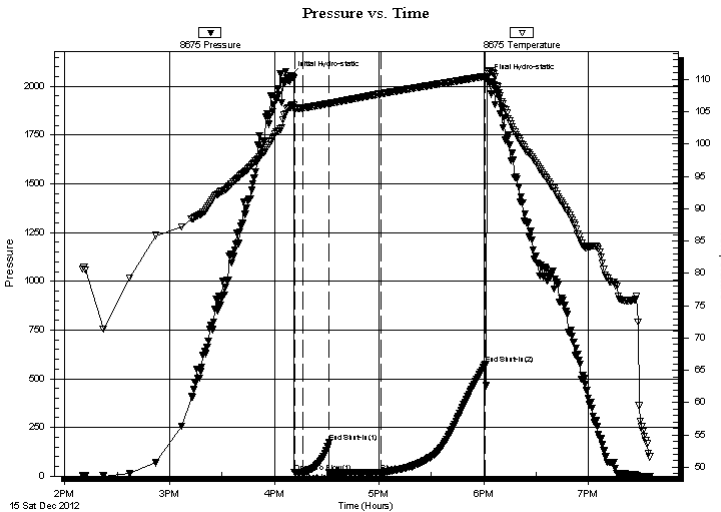
Serial #: 8675

Inside

Press @ Run Depth: 19.90 psig @ 4130.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.12.15 End Date: 2012.12.15 Last Calib.: 2012.12.15
 Start Time: 14:10:15 End Time: 19:35:15 Time On Btm: 2012.12.15 @ 16:09:45
 Time Off Btm: 2012.12.15 @ 18:02:00

TEST COMMENT: Built to 1/2" blow
 No return blow
 Built to 1/4" blow
 No return blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2053.03 | 105.91 | Initial Hydro-static |
| 2 | 18.67 | 105.41 | Open To Flow (1) |
| 7 | 18.97 | 105.58 | Shut-In(1) |
| 22 | 171.57 | 106.30 | End Shut-In(1) |
| 22 | 18.30 | 106.24 | Open To Flow (2) |
| 52 | 19.90 | 107.77 | Shut-In(2) |
| 112 | 574.07 | 110.48 | End Shut-In(2) |
| 113 | 2041.38 | 110.92 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------------|--------------|
| 5.00 | 100%Mud with 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

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49937

DST#: 3

ATTN: Vern Schrag

Test Start: 2012.12.15 @ 14:10:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3981.09 ft | Diameter: 3.80 inches | Volume: 55.84 bbl | Tool Weight: 2500.00 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: 147.44 ft | Diameter: 2.25 inches | Volume: 0.73 bbl | Weight to Pull Loose: 72000.00 lb |
| | | | <u>Total Volume: 56.57 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 27.03 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 4129.00 ft | | | Final 60000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 23.00 ft | | | |
| Tool Length: | 50.50 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

| | | | | | |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00 | | | 4102.50 | |
| Shut In Tool | 5.00 | | | 4107.50 | |
| Hydraulic tool | 5.00 | | | 4112.50 | |
| Jars | 5.00 | | | 4117.50 | |
| Safety Joint | 2.50 | | | 4120.00 | |
| Packer | 5.00 | | | 4125.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4129.00 | |
| Stubb | 1.00 | | | 4130.00 | |
| Recorder | 0.00 | 8675 | Inside | 4130.00 | |
| Recorder | 0.00 | 8650 | Outside | 4130.00 | |
| Perforations | 19.00 | | | 4149.00 | |
| Change Over Sub | 0.00 | | | 4149.00 | |
| Drill Pipe | 0.00 | | | 4149.00 | |
| Change Over Sub | 0.00 | | | 4149.00 | |
| Bullnose | 3.00 | | | 4152.00 | 23.00 Bottom Packers & Anchor |

Total Tool Length: 50.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
Job Ticket: 49937 **DST#: 3**
Test Start: 2012.12.15 @ 14:10:00

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: 59.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 8.77 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 2800.00 ppm | | | |
| Filter Cake: 2.00 inches | | | |

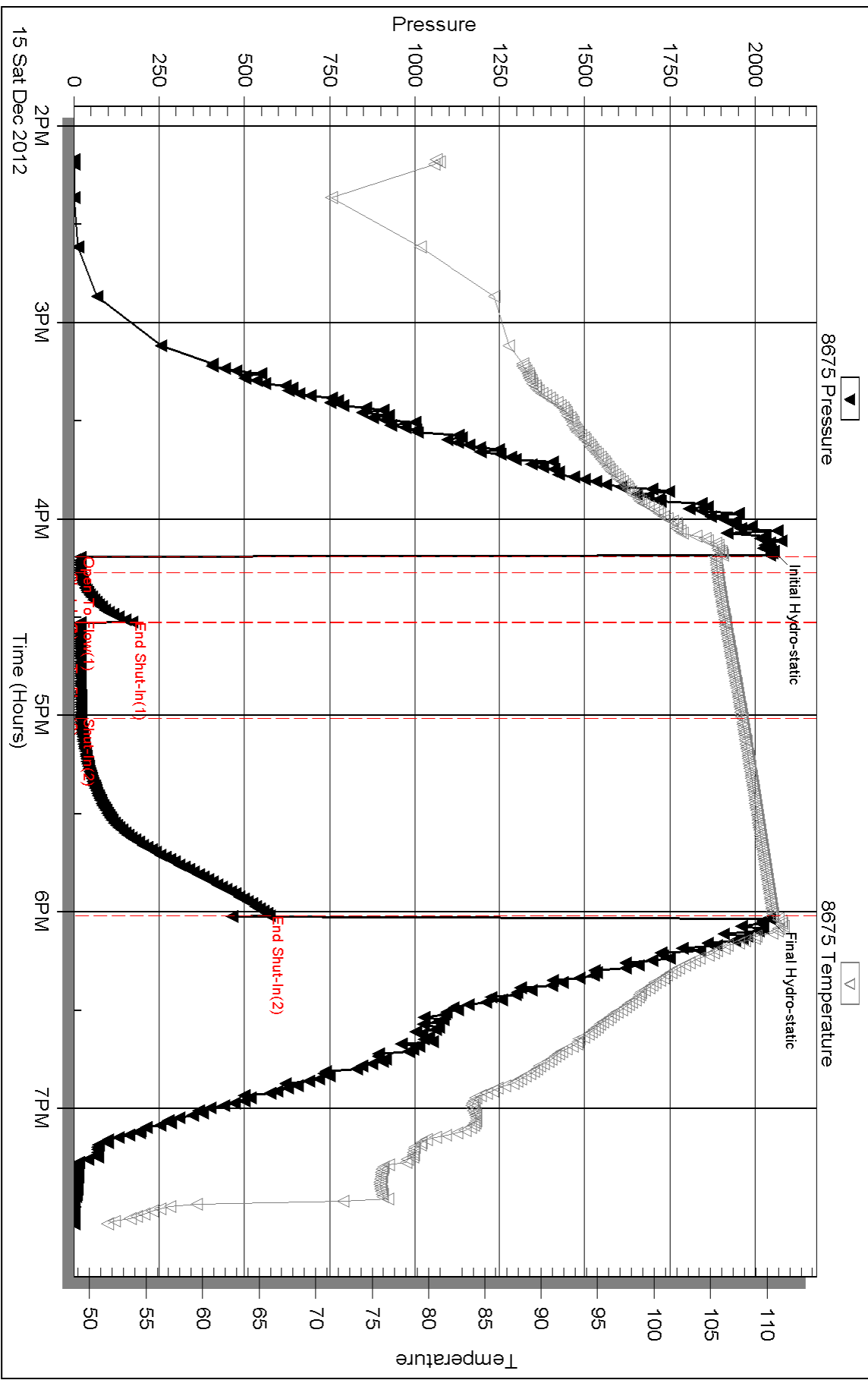
Recovery Information

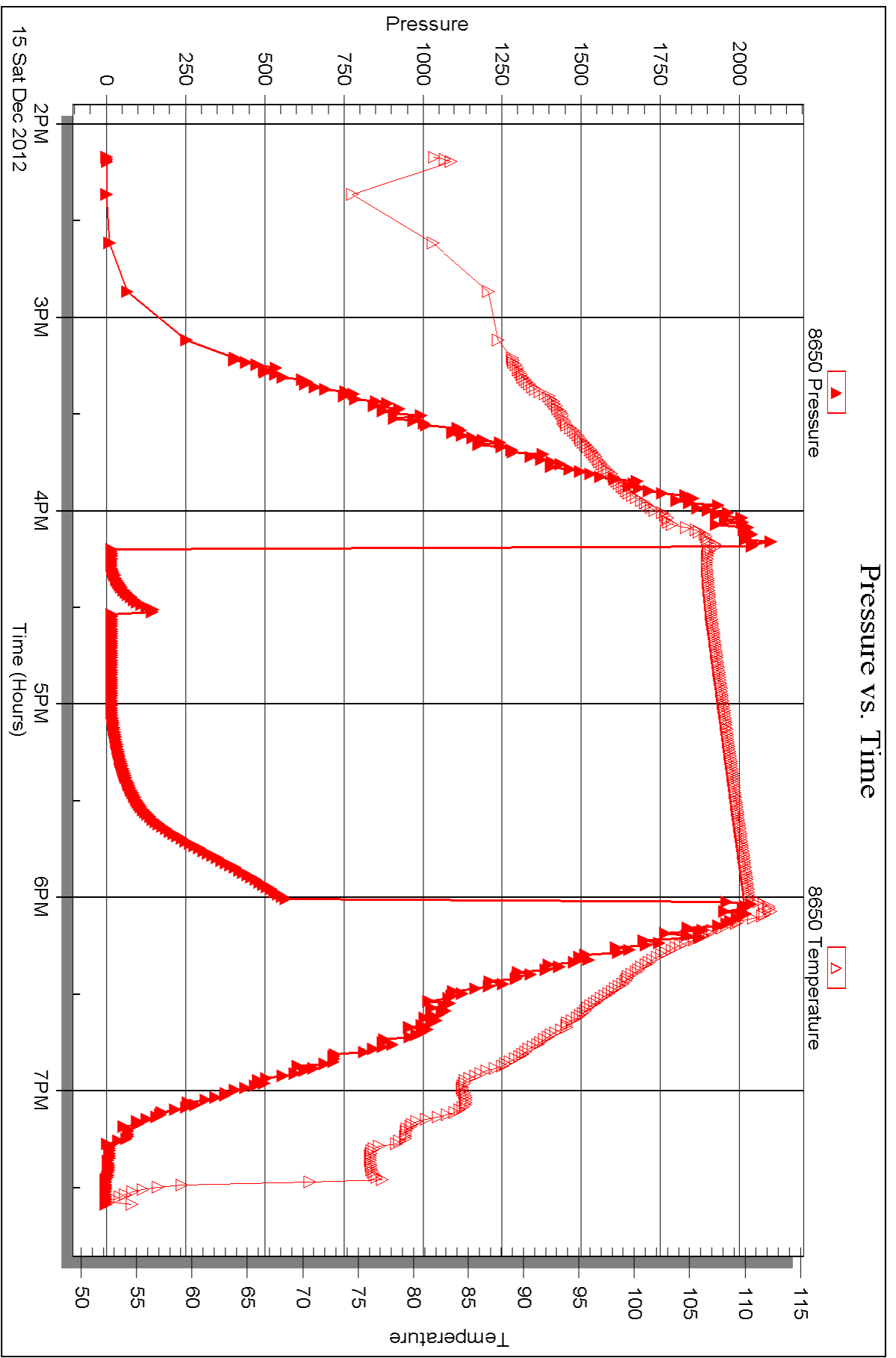
Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------------|---------------|
| 5.00 | 100%Mud w ith 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:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Snider #1-9

9-17s-29w Lane, KS

Start Date: 2012.12.16 @ 04:55:00

End Date: 2012.12.16 @ 10:48:00

Job Ticket #: 49938 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.21 @ 10:53:28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 W State RD 4
 Olmitz KS 67564-8561
 ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
 Job Ticket: 49938 **DST#: 4**
 Test Start: 2012.12.16 @ 04:55:00

GENERAL INFORMATION:

Formation: **Kansas City "I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:13:30
 Time Test Ended: 10:48:00
 Interval: **4159.00 ft (KB) To 4192.00 ft (KB) (TVD)**
 Total Depth: 4192.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jace McKinney
 Unit No: 46
 Reference Elevations: 2820.00 ft (KB)
 2813.00 ft (CF)
 KB to GR/CF: 7.00 ft

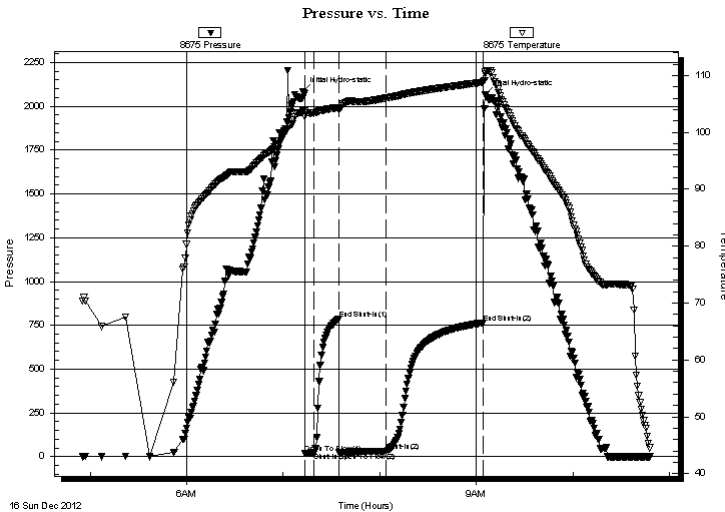
Serial #: 8675

Inside

Press @ RunDepth: 32.70 psig @ 4160.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.12.16 End Date: 2012.12.16 Last Calib.: 2012.12.16
 Start Time: 04:55:15 End Time: 10:48:00 Time On Btm: 2012.12.16 @ 07:12:15
 Time Off Btm: 2012.12.16 @ 09:05:30

TEST COMMENT: Built to 1" blow
 No return blow
 Built to 1" blow
 No return blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2082.80 | 103.64 | Initial Hydro-static |
| 2 | 19.28 | 102.74 | Open To Flow (1) |
| 7 | 23.12 | 103.48 | Shut-In(1) |
| 22 | 785.46 | 104.36 | End Shut-In(1) |
| 23 | 23.92 | 104.03 | Open To Flow (2) |
| 52 | 32.70 | 106.01 | Shut-In(2) |
| 113 | 764.89 | 108.81 | End Shut-In(2) |
| 114 | 2068.49 | 110.23 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------|--------------|
| 30.00 | 100% Mud w ith oil scum | 0.15 |
| | | |
| | | |
| | | |
| | | |

* 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

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49938

DST#: 4

ATTN: Vern Schrag

Test Start: 2012.12.16 @ 04:55:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4012.18 ft | Diameter: 3.80 inches | Volume: 56.28 bbl | Tool Weight: | 2500.00 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: 147.44 ft | Diameter: 2.25 inches | Volume: 0.73 bbl | Weight to Pull Loose: | 70000.00 lb |
| | | | <u>Total Volume: 57.01 bbl</u> | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 28.12 ft | | | String Weight: Initial | 60000.00 lb |
| Depth to Top Packer: | 4159.00 ft | | | Final | 60000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 33.00 ft | | | | |
| Tool Length: | 60.50 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 | | | 4132.50 | |
| Shut In Tool | 5.00 | | | 4137.50 | |
| Hydraulic tool | 5.00 | | | 4142.50 | |
| Jars | 5.00 | | | 4147.50 | |
| Safety Joint | 2.50 | | | 4150.00 | |
| Packer | 5.00 | | | 4155.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4159.00 | |
| Stubb | 1.00 | | | 4160.00 | |
| Recorder | 0.00 | 8675 | Inside | 4160.00 | |
| Recorder | 0.00 | 8650 | Outside | 4160.00 | |
| Perforations | 29.00 | | | 4189.00 | |
| Change Over Sub | 0.00 | | | 4189.00 | |
| Drill Pipe | 0.00 | | | 4189.00 | |
| Change Over Sub | 0.00 | | | 4189.00 | |
| Bullnose | 3.00 | | | 4192.00 | 33.00 Bottom Packers & Anchor |

Total Tool Length: 60.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
Job Ticket: 49938 **DST#: 4**
Test Start: 2012.12.16 @ 04:55:00

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: 59.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 8.78 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 2800.00 ppm | | | |
| Filter Cake: 2.00 inches | | | |

Recovery Information

Recovery Table

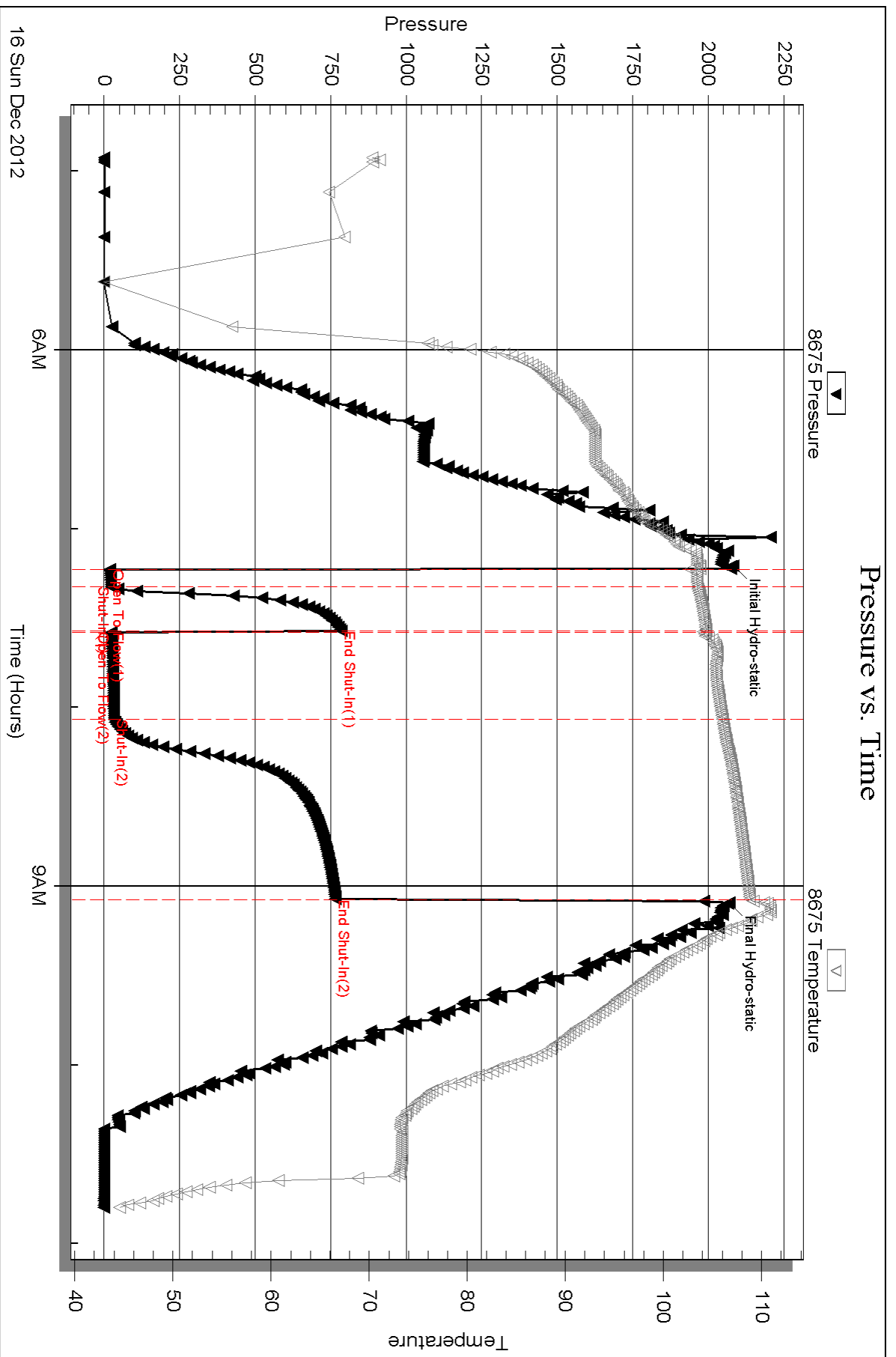
| Length ft | Description | Volume bbl |
|--------------|------------------------|---------------|
| 30.00 | 100% Mud with oil scum | 0.148 |

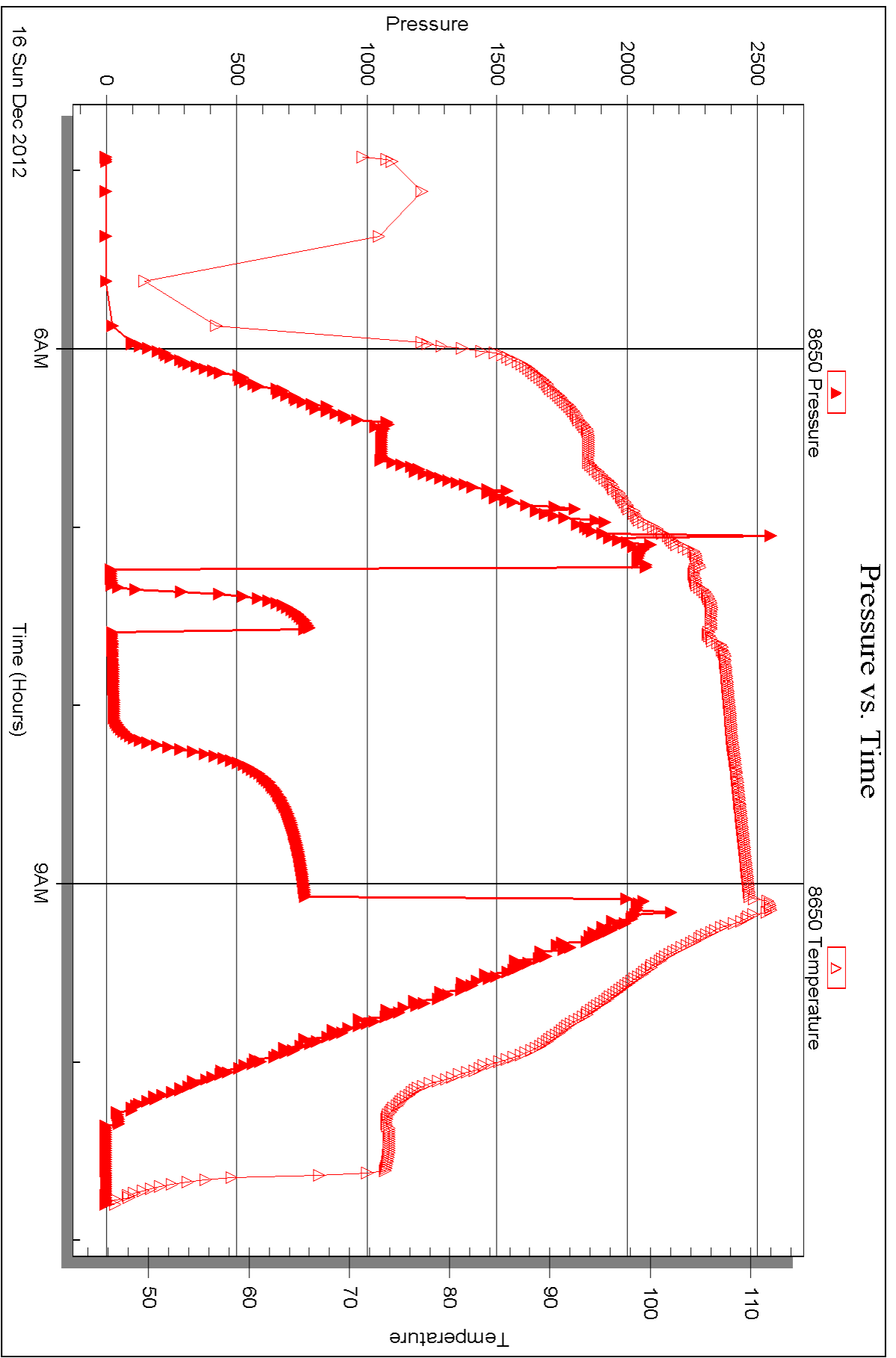
Total Length: 30.00 ft Total Volume: 0.148 bbl

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 67564-8561

ATTN: Vern Schrag

Snider #1-9

9-17s-29w Lane, KS

Start Date: 2012.12.16 @ 17:25:00

End Date: 2012.12.16 @ 23:13:15

Job Ticket #: 49939 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.21 @ 10:52:49



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 W State RD 4
 Olmitz KS 67564-8561
 ATTN: Vern Schrag

9-17s-29w Lane, KS

Snider #1-9

Job Ticket: 49939

DST#: 5

Test Start: 2012.12.16 @ 17:25:00

GENERAL INFORMATION:

Formation: **Kansas City "J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:30:00
 Time Test Ended: 23:13:15
 Interval: **4190.00 ft (KB) To 4204.00 ft (KB) (TVD)**
 Total Depth: 4204.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jace McKinney
 Unit No: 46
 Reference Elevations: 2820.00 ft (KB)
 2813.00 ft (CF)
 KB to GR/CF: 7.00 ft

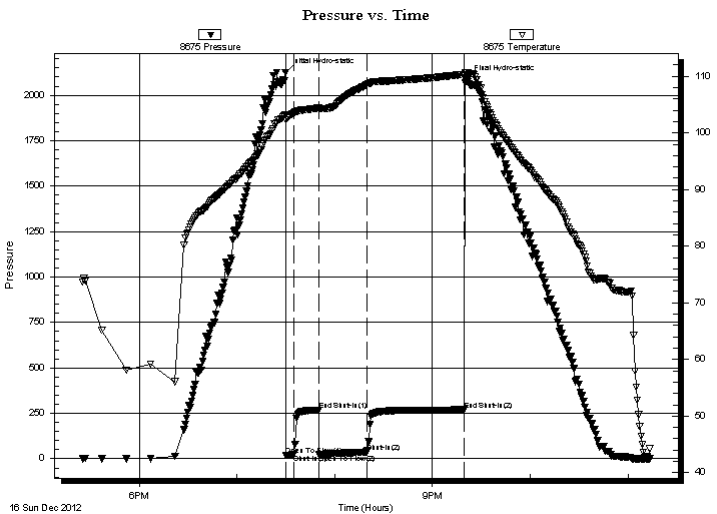
Serial #: 8675

Inside

Press @ Run Depth: 37.38 psig @ 4191.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.12.16 End Date: 2012.12.16 Last Calib.: 2012.12.16
 Start Time: 17:25:15 End Time: 23:13:15 Time On Btm: 2012.12.16 @ 19:29:45
 Time Off Btm: 2012.12.16 @ 21:21:15

TEST COMMENT: Built to 1" blow
 No return blow
 Built to 1 1/4" blow
 No return blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2125.81 | 103.12 | Initial Hydro-static |
| 1 | 19.35 | 102.40 | Open To Flow (1) |
| 6 | 22.77 | 103.60 | Shut-In(1) |
| 21 | 268.93 | 104.42 | End Shut-In(1) |
| 21 | 23.90 | 104.29 | Open To Flow (2) |
| 50 | 37.38 | 108.57 | Shut-In(2) |
| 110 | 269.17 | 110.32 | End Shut-In(2) |
| 112 | 2084.70 | 110.69 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------------|--------------|
| 30.00 | 100%Mud with few oil spots | 0.15 |
| | | |
| | | |
| | | |
| | | |

* 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

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49939

DST#: 5

ATTN: Vern Schrag

Test Start: 2012.12.16 @ 17:25:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4043.65 ft | Diameter: 3.80 inches | Volume: 56.72 bbl | Tool Weight: 2500.00 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: 147.44 ft | Diameter: 2.25 inches | Volume: 0.73 bbl | Weight to Pull Loose: 80000.00 lb |
| | | | <u>Total Volume: 57.45 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 28.59 ft | | | String Weight: Initial 62000.00 lb |
| Depth to Top Packer: | 4190.00 ft | | | Final 62000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 14.00 ft | | | |
| Tool Length: | 41.50 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 | | | 4163.50 | |
| Shut In Tool | 5.00 | | | 4168.50 | |
| Hydraulic tool | 5.00 | | | 4173.50 | |
| Jars | 5.00 | | | 4178.50 | |
| Safety Joint | 2.50 | | | 4181.00 | |
| Packer | 5.00 | | | 4186.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4190.00 | |
| Stubb | 1.00 | | | 4191.00 | |
| Recorder | 0.00 | 8675 | Inside | 4191.00 | |
| Recorder | 0.00 | 8650 | Outside | 4191.00 | |
| Perforations | 10.00 | | | 4201.00 | |
| Change Over Sub | 0.00 | | | 4201.00 | |
| Drill Pipe | 0.00 | | | 4201.00 | |
| Change Over Sub | 0.00 | | | 4201.00 | |
| Bullnose | 3.00 | | | 4204.00 | 14.00 Bottom Packers & Anchor |

Total Tool Length: 41.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
Job Ticket: 49939 **DST#: 5**
Test Start: 2012.12.16 @ 17:25:00

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: 59.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 6.78 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 2400.00 ppm | | | |
| Filter Cake: 2.00 inches | | | |

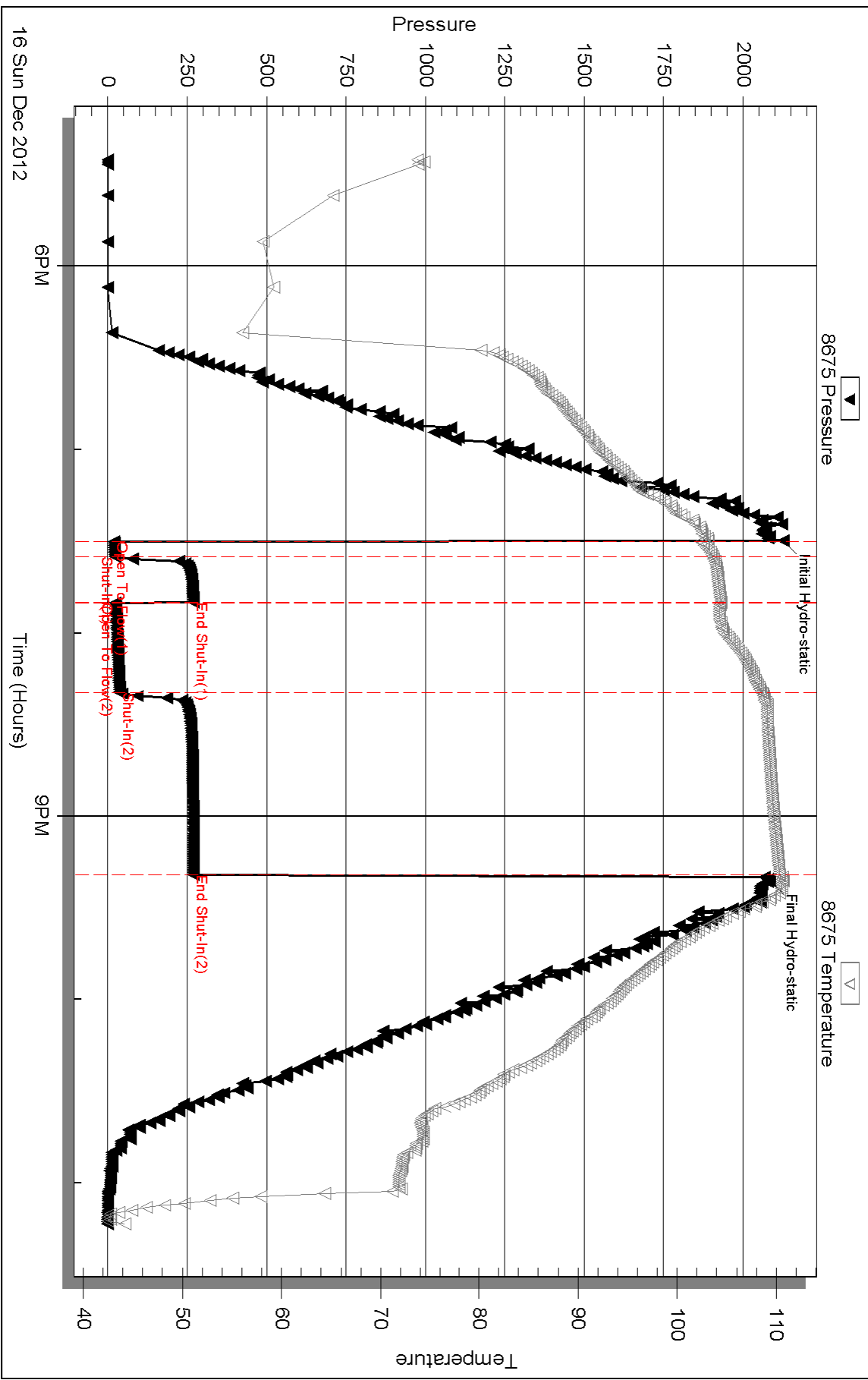
Recovery Information

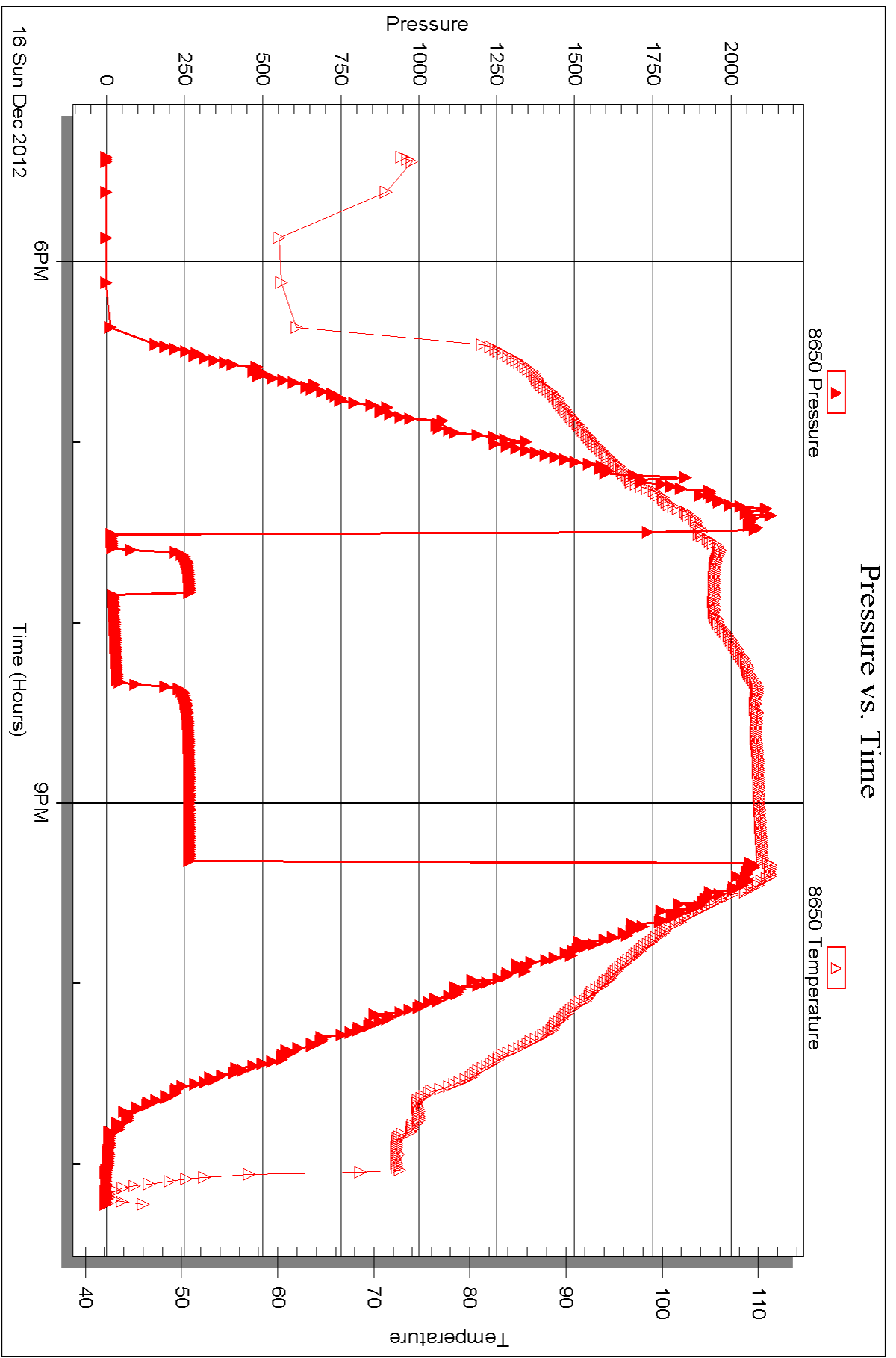
Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------------|---------------|
| 30.00 | 100%Mud w ith few oil spots | 0.148 |

Total Length: 30.00 ft Total Volume: 0.148 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Snider #1-9

9-17s-29w Lane, KS

Start Date: 2012.12.17 @ 08:25:00

End Date: 2012.12.17 @ 15:07:00

Job Ticket #: 49940 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.21 @ 10:48:30



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS

Snider #1-9

Job Ticket: 49940

DST#: 6

Test Start: 2012.12.17 @ 08:25:00

GENERAL INFORMATION:

Formation: **Kansas City**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:33:45
 Time Test Ended: 15:07:00
 Interval: **4220.00 ft (KB) To 4236.00 ft (KB) (TVD)**
 Total Depth: 4236.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jace McKinney
 Unit No: 46
 Reference Elevations: 2820.00 ft (KB)
 2813.00 ft (CF)
 KB to GR/CF: 7.00 ft

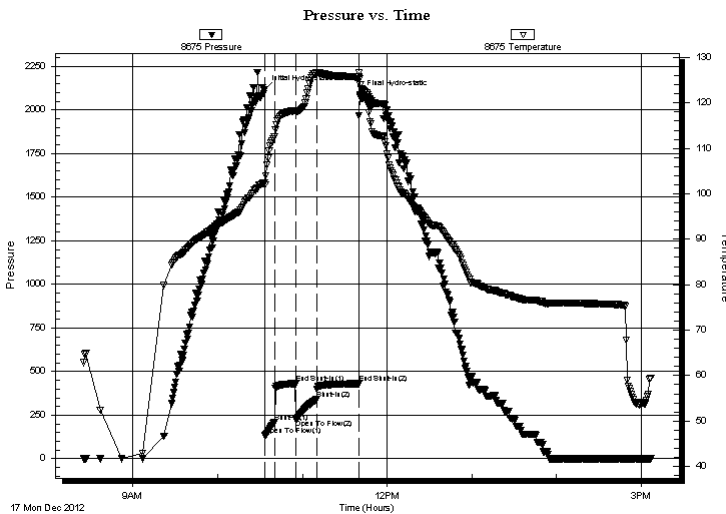
Serial #: 8675

Inside

Press @ RunDepth: 340.56 psig @ 4221.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.12.17 End Date: 2012.12.17 Last Calib.: 2012.12.17
 Start Time: 08:25:15 End Time: 15:07:00 Time On Btm: 2012.12.17 @ 10:33:30
 Time Off Btm: 2012.12.17 @ 11:40:45

TEST COMMENT: B.O.B. in 1 1/2 min.
 Bled off for 5 min. Built to 5" return blow
 B.O.B. in 1 min.
 Bled off for 5 min. Built to 4" return blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2115.76 | 102.46 | Initial Hydro-static |
| 1 | 132.80 | 101.95 | Open To Flow (1) |
| 7 | 211.37 | 112.55 | Shut-In(1) |
| 22 | 431.42 | 118.27 | End Shut-In(1) |
| 22 | 227.19 | 118.13 | Open To Flow (2) |
| 37 | 340.56 | 126.64 | Shut-In(2) |
| 67 | 431.27 | 125.66 | End Shut-In(2) |
| 68 | 2087.88 | 125.32 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------|--------------|
| 178.00 | gcmo 10%G 20%M 70%O | 1.15 |
| 250.00 | gco 10%G 90%O | 3.51 |
| 382.00 | gco 5%G 95%O | 5.36 |
| 0.00 | 610 Feet Gas In Pipe | 0.00 |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49940

DST#: 6

ATTN: Vern Schrag

Test Start: 2012.12.17 @ 08:25:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4074.40 ft | Diameter: 3.80 inches | Volume: 57.15 bbl | Tool Weight: 2500.00 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: 147.44 ft | Diameter: 2.25 inches | Volume: 0.73 bbl | Weight to Pull Loose: 72000.00 lb |
| | | | <u>Total Volume: 57.88 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 29.34 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 4220.00 ft | | | Final 62000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 16.00 ft | | | |
| Tool Length: | 43.50 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

| | | | | | |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00 | | | 4193.50 | |
| Shut In Tool | 5.00 | | | 4198.50 | |
| Hydraulic tool | 5.00 | | | 4203.50 | |
| Jars | 5.00 | | | 4208.50 | |
| Safety Joint | 2.50 | | | 4211.00 | |
| Packer | 5.00 | | | 4216.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4220.00 | |
| Stubb | 1.00 | | | 4221.00 | |
| Recorder | 0.00 | 8675 | Inside | 4221.00 | |
| Recorder | 0.00 | 8650 | Outside | 4221.00 | |
| Perforations | 12.00 | | | 4233.00 | |
| Change Over Sub | 0.00 | | | 4233.00 | |
| Drill Pipe | 0.00 | | | 4233.00 | |
| Change Over Sub | 0.00 | | | 4233.00 | |
| Bullnose | 3.00 | | | 4236.00 | 16.00 Bottom Packers & Anchor |

Total Tool Length: 43.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
Job Ticket: 49940 **DST#: 6**
Test Start: 2012.12.17 @ 08:25:00

Mud and Cushion Information

| | | |
|----------------------------------|----------------------------|---------------------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: 40 deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: ppm |
| Viscosity: 57.00 sec/qt | Cushion Volume: bbl | |
| Water Loss: 6.79 in ³ | Gas Cushion Type: | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | |
| Salinity: 2400.00 ppm | | |
| Filter Cake: 2.00 inches | | |

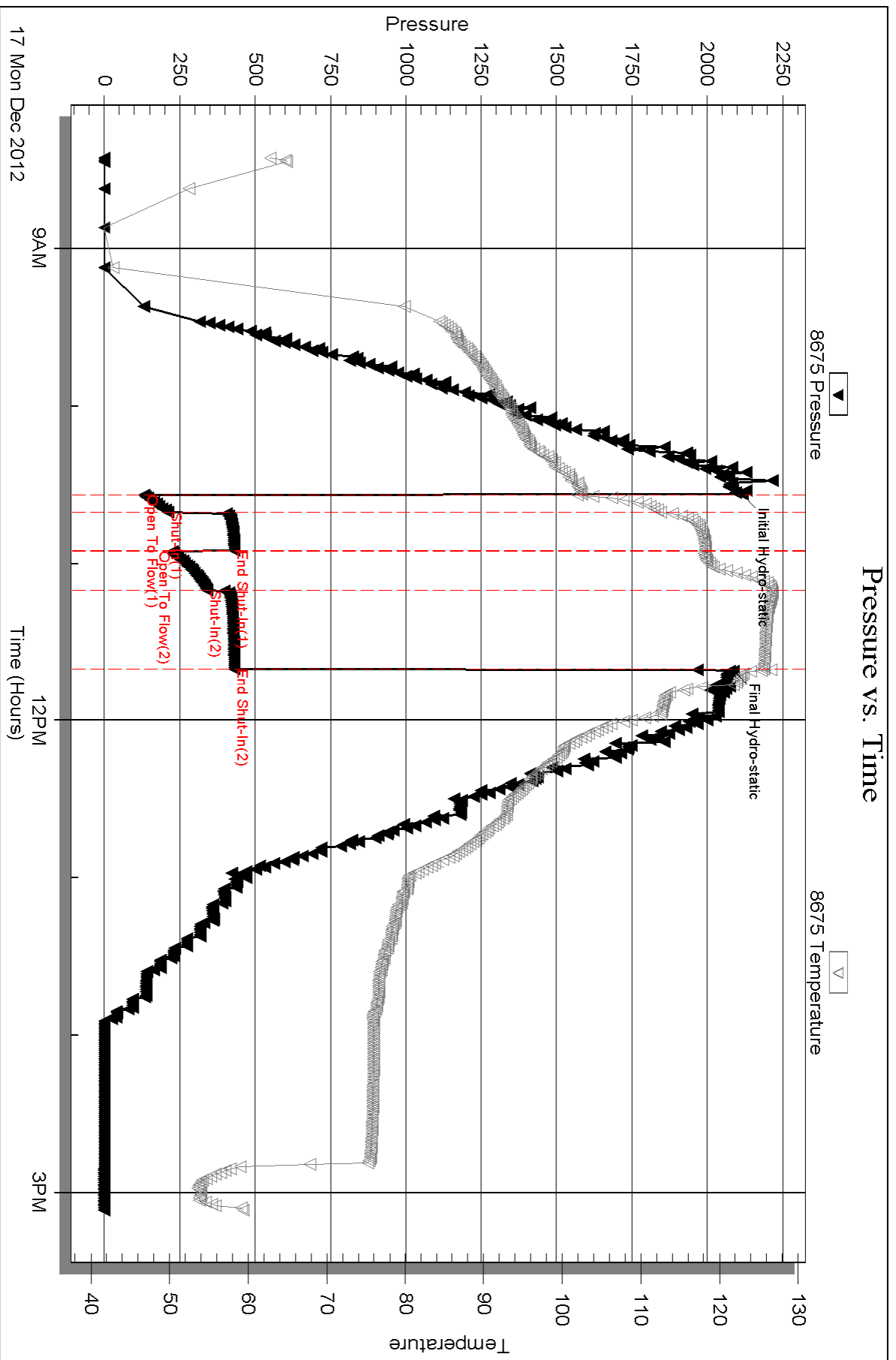
Recovery Information

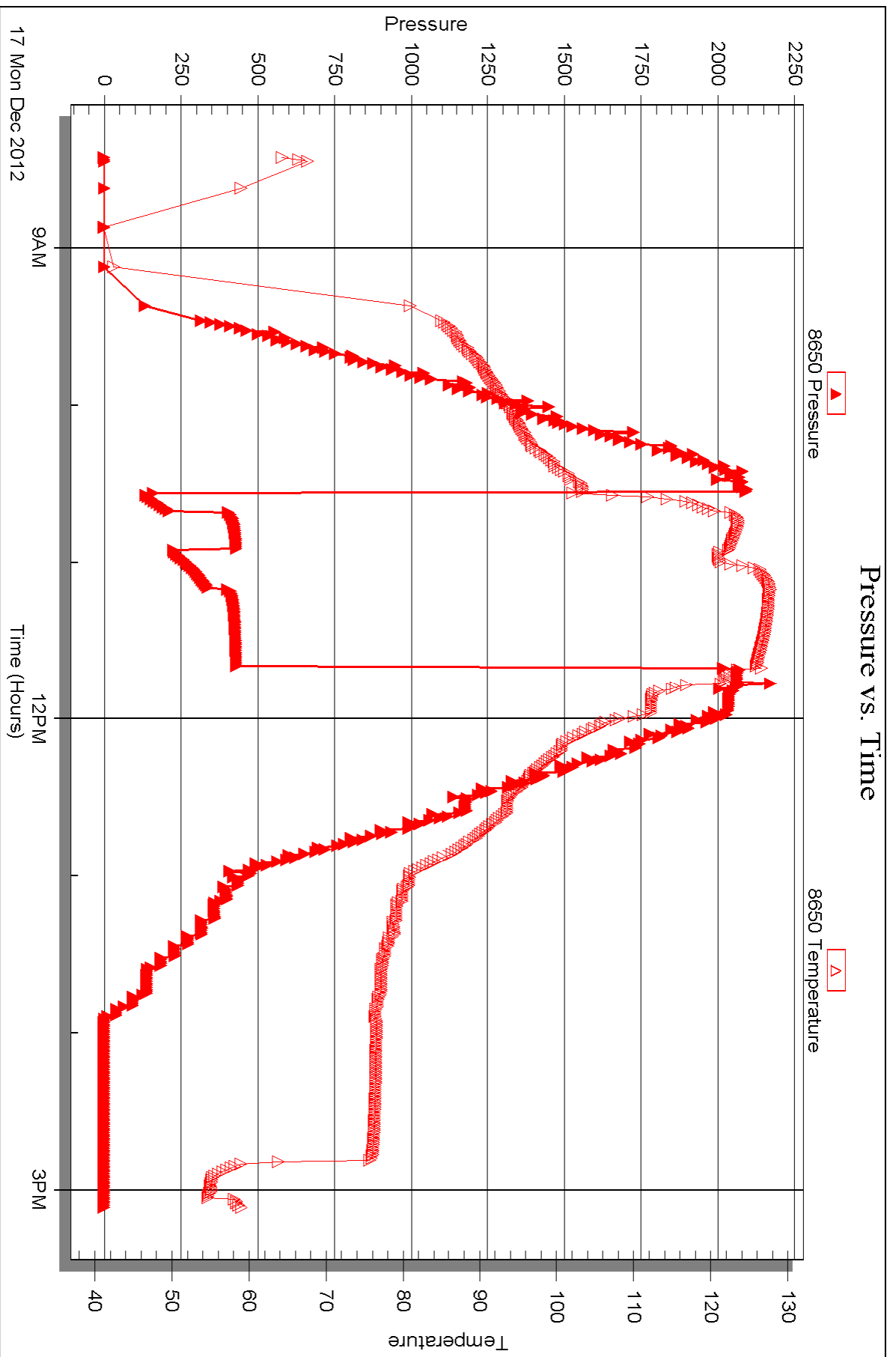
Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------|---------------|
| 178.00 | gcmo 10%G 20%M 70%O | 1.154 |
| 250.00 | gco 10%G 90%O | 3.507 |
| 382.00 | gco 5%G 95%O | 5.358 |
| 0.00 | 610 Feet Gas In Pipe | 0.000 |

Total Length: 810.00 ft Total Volume: 10.019 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: API: 39 @ 50 F = 40

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Snider #1-9

9-17s-29w Lane, KS

Start Date: 2012.12.17 @ 23:25:00

End Date: 2012.12.18 @ 04:25:45

Job Ticket #: 49941 DST #: 7

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.21 @ 10:47:28



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS

Snider #1-9

Job Ticket: 49941

DST#: 7

Test Start: 2012.12.17 @ 23:25:00

GENERAL INFORMATION:

Formation: **Middle Creek**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:34:15

Time Test Ended: 04:25:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4256.00 ft (KB) To 4265.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4265.00 ft (KB) (TVD)

2813.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 17.36 psig @ 4257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.12.17

End Date:

2012.12.18

Last Calib.: 2012.12.18

Start Time: 23:25:15

End Time:

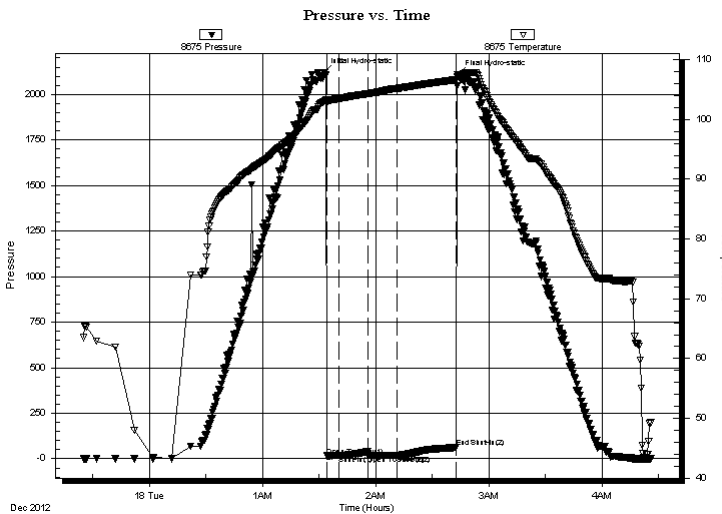
04:25:45

Time On Btm: 2012.12.18 @ 01:32:45

Time Off Btm: 2012.12.18 @ 02:43:30

TEST COMMENT: Built to 1/2" blow
No return blow
Few Bubbles Died in 10 min.
No return blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2118.59 | 103.01 | Initial Hydro-static |
| 2 | 15.98 | 102.63 | Open To Flow (1) |
| 8 | 17.43 | 103.50 | Shut-In(1) |
| 23 | 39.47 | 104.30 | End Shut-In(1) |
| 24 | 17.42 | 104.29 | Open To Flow (2) |
| 39 | 17.36 | 105.17 | Shut-In(2) |
| 70 | 61.65 | 106.67 | End Shut-In(2) |
| 71 | 2109.58 | 107.17 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 1.00 | 100%Mud | 0.00 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49941

DST#: 7

ATTN: Vern Schrag

Test Start: 2012.12.17 @ 23:25:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4106.07 ft | Diameter: 3.80 inches | Volume: 57.60 bbl | Tool Weight: 2500.00 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: 147.44 ft | Diameter: 2.25 inches | Volume: 0.73 bbl | Weight to Pull Loose: 72000.00 lb |
| | | | <u>Total Volume: 58.33 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 25.01 ft | | | String Weight: Initial 62000.00 lb |
| Depth to Top Packer: | 4256.00 ft | | | Final 62000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 9.00 ft | | | |
| Tool Length: | 36.50 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 | | | 4229.50 | |
| Shut In Tool | 5.00 | | | 4234.50 | |
| Hydraulic tool | 5.00 | | | 4239.50 | |
| Jars | 5.00 | | | 4244.50 | |
| Safety Joint | 2.50 | | | 4247.00 | |
| Packer | 5.00 | | | 4252.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4256.00 | |
| Stubb | 1.00 | | | 4257.00 | |
| Recorder | 0.00 | 8675 | Inside | 4257.00 | |
| Recorder | 0.00 | 8650 | Outside | 4257.00 | |
| Perforations | 5.00 | | | 4262.00 | |
| Change Over Sub | 0.00 | | | 4262.00 | |
| Drill Pipe | 0.00 | | | 4262.00 | |
| Change Over Sub | 0.00 | | | 4262.00 | |
| Bullnose | 3.00 | | | 4265.00 | 9.00 Bottom Packers & Anchor |

Total Tool Length: 36.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
Job Ticket: 49941 **DST#: 7**
Test Start: 2012.12.17 @ 23:25:00

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: 56.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 6.39 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 2200.00 ppm | | | |
| Filter Cake: 2.00 inches | | | |

Recovery Information

Recovery Table

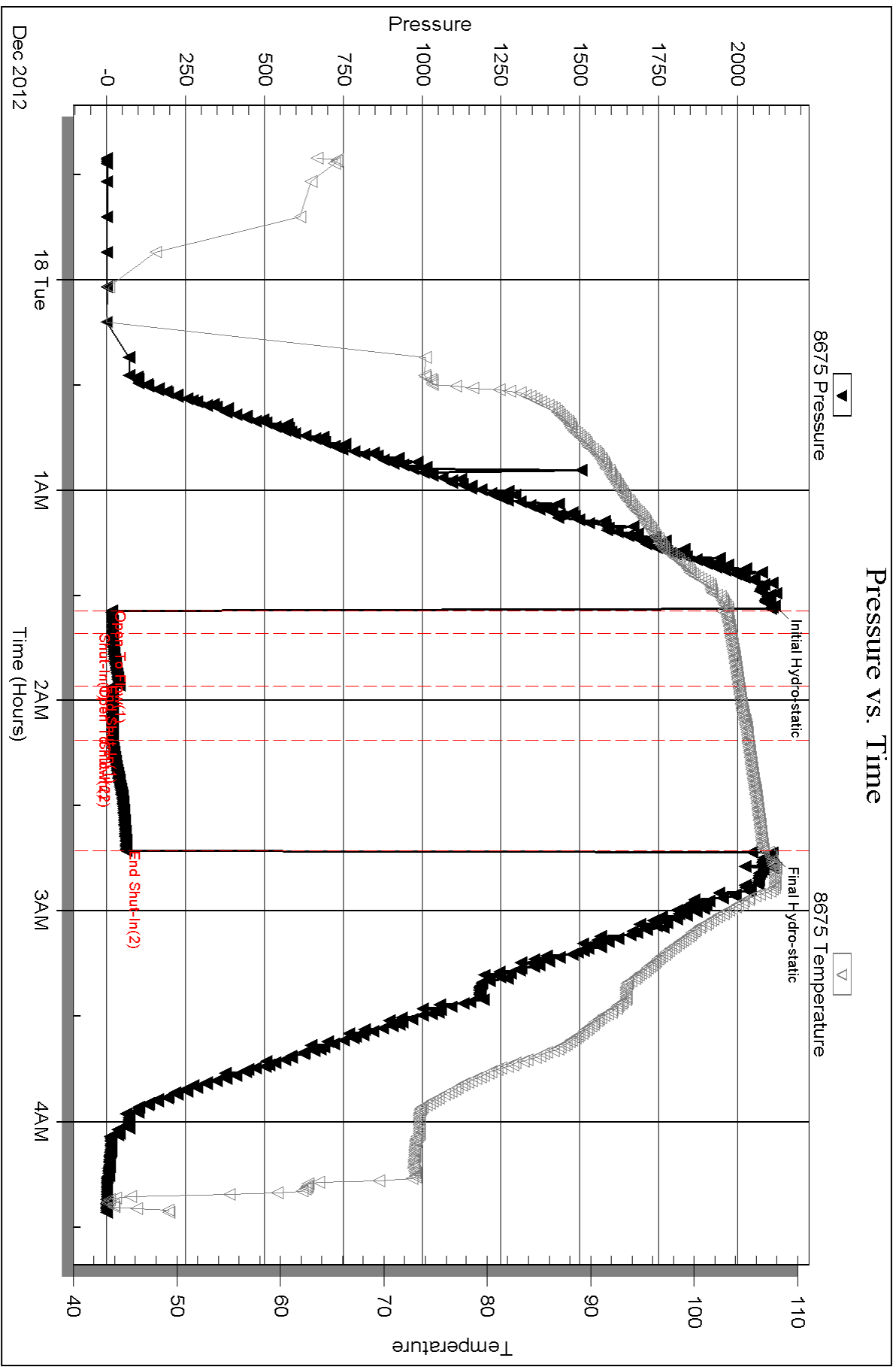
| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 1.00 | 100%Mud | 0.005 |

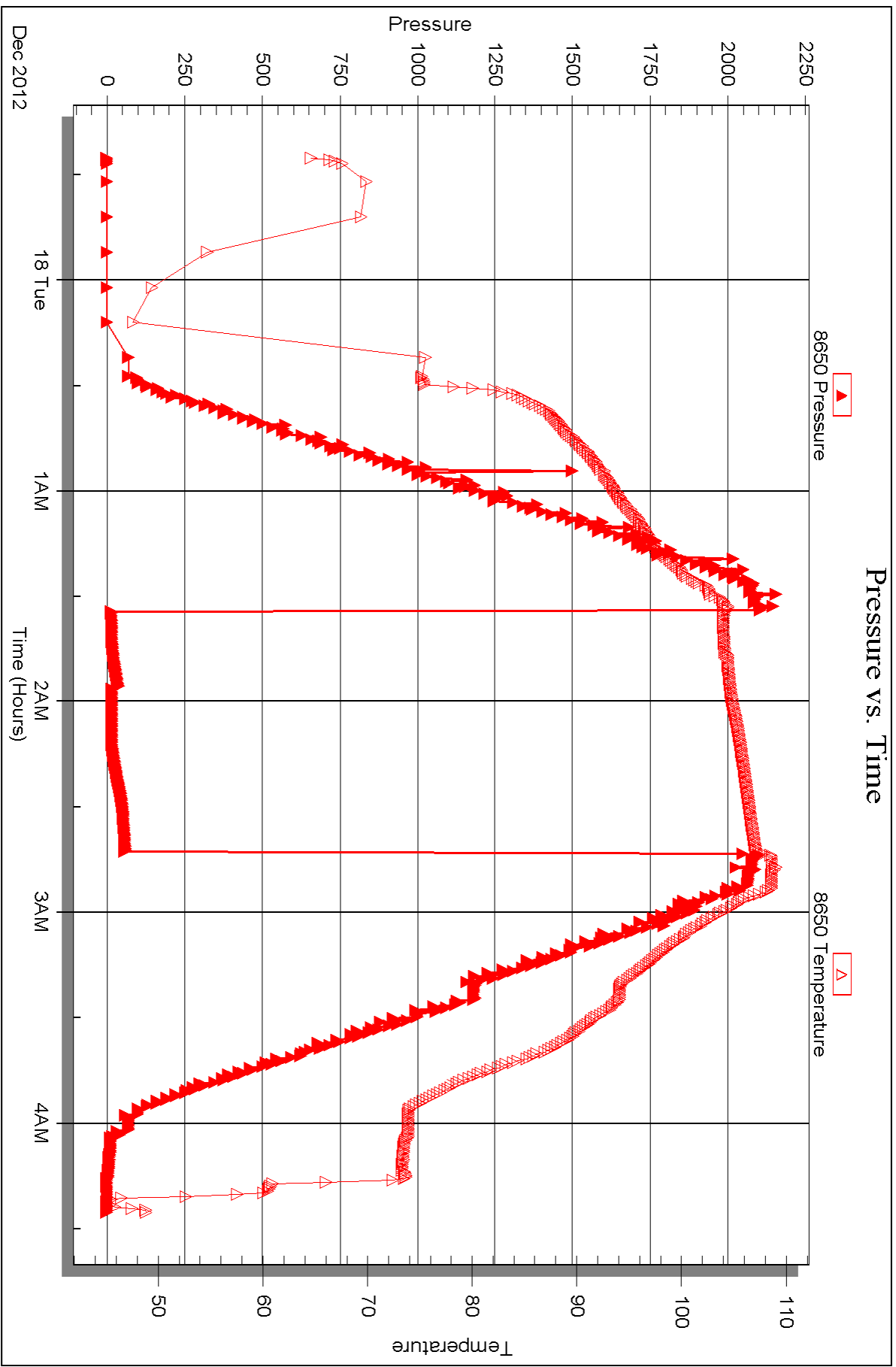
Total Length: 1.00 ft Total Volume: 0.005 bbl

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 67564-8561

ATTN: Vern Schrag

Snider #1-9

9-17s-29w Lane, KS

Start Date: 2012.12.19 @ 12:45:00

End Date: 2012.12.19 @ 19:49:00

Job Ticket #: 49942 DST #: 8

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.21 @ 10:46:41



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 W State RD 4
 Olmitz KS 67564-8561
 ATTN: Vern Schrag

9-17s-29w Lane, KS

Snider #1-9

Job Ticket: 49942

DST#: 8

Test Start: 2012.12.19 @ 12:45:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:12:45

Time Test Ended: 19:49:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4341.00 ft (KB) To 4495.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4495.00 ft (KB) (TVD)

2813.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 27.50 psig @ 4342.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.12.19

End Date:

2012.12.19

Last Calib.:

2012.12.19

Start Time: 12:45:15

End Time:

19:49:00

Time On Btm:

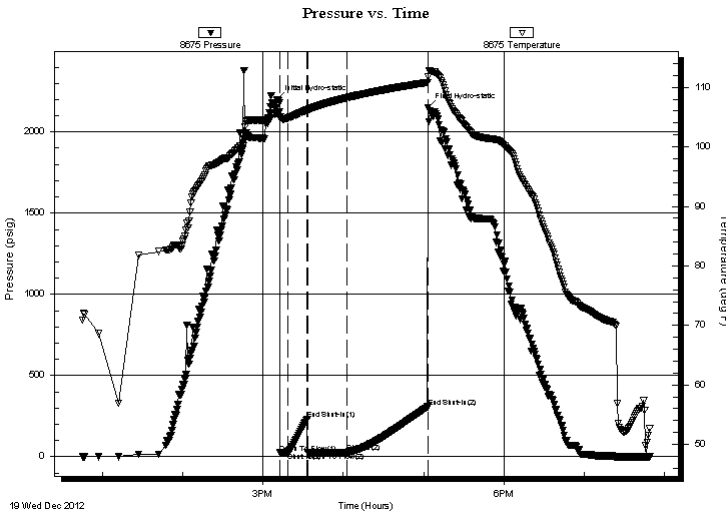
2012.12.19 @ 15:10:45

Time Off Btm:

2012.12.19 @ 17:03:15

TEST COMMENT: Built to 1" blow
 No return blow
 No blow
 No return blow

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2200.48 | 105.68 | Initial Hydro-static |
| 2 | 24.29 | 104.82 | Open To Flow (1) |
| 8 | 26.02 | 104.79 | Shut-In(1) |
| 23 | 231.53 | 106.19 | End Shut-In(1) |
| 23 | 26.21 | 106.09 | Open To Flow (2) |
| 53 | 27.50 | 108.25 | Shut-In(2) |
| 113 | 307.88 | 110.82 | End Shut-In(2) |
| 113 | 2151.41 | 111.70 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------|--------------|
| 10.00 | 100% Mud few oil spots | 0.05 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

9-17s-29w Lane, KS

562 W State RD 4
Olmitz KS 67564-8561

Snider #1-9

Job Ticket: 49942

DST#: 8

ATTN: Vern Schrag

Test Start: 2012.12.19 @ 12:45:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4201.01 ft | Diameter: 3.80 inches | Volume: 58.93 bbl | Tool Weight: 2500.00 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: 147.44 ft | Diameter: 2.25 inches | Volume: 0.73 bbl | Weight to Pull Loose: 76000.00 lb |
| | | | <u>Total Volume: 59.66 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 34.95 ft | | | String Weight: Initial 66000.00 lb |
| Depth to Top Packer: | 4341.00 ft | | | Final 66000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 154.00 ft | | | |
| Tool Length: | 181.50 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 | | | 4314.50 | |
| Shut In Tool | 5.00 | | | 4319.50 | |
| Hydraulic tool | 5.00 | | | 4324.50 | |
| Jars | 5.00 | | | 4329.50 | |
| Safety Joint | 2.50 | | | 4332.00 | |
| Packer | 5.00 | | | 4337.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4341.00 | |
| Stubb | 1.00 | | | 4342.00 | |
| Recorder | 0.00 | 8675 | Inside | 4342.00 | |
| Recorder | 0.00 | 8650 | Outside | 4342.00 | |
| Perforations | 23.00 | | | 4365.00 | |
| Change Over Sub | 0.00 | | | 4365.00 | |
| Drill Pipe | 126.00 | | | 4491.00 | |
| Change Over Sub | 1.00 | | | 4492.00 | |
| Bullnose | 3.00 | | | 4495.00 | 154.00 Bottom Packers & Anchor |

Total Tool Length: 181.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc
562 W State RD 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

9-17s-29w Lane, KS
Snider #1-9
Job Ticket: 49942 **DST#: 8**
Test Start: 2012.12.19 @ 12:45:00

Mud and Cushion Information

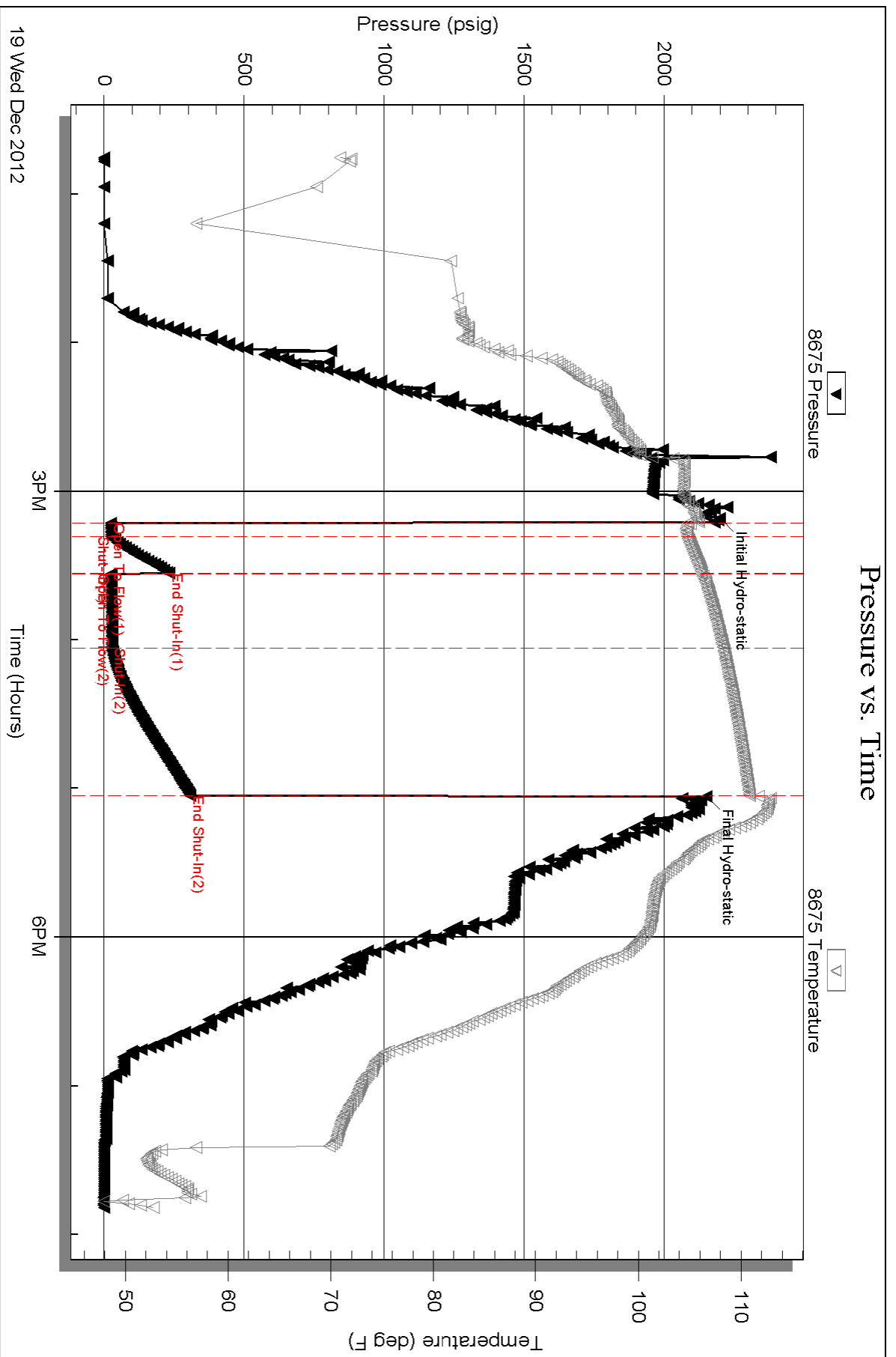
| | | | |
|----------------------------------|----------------------------|-----------------|---------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: | deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: | ppm |
| Viscosity: 56.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 6.39 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 2000.00 ppm | | | |
| Filter Cake: 2.00 inches | | | |

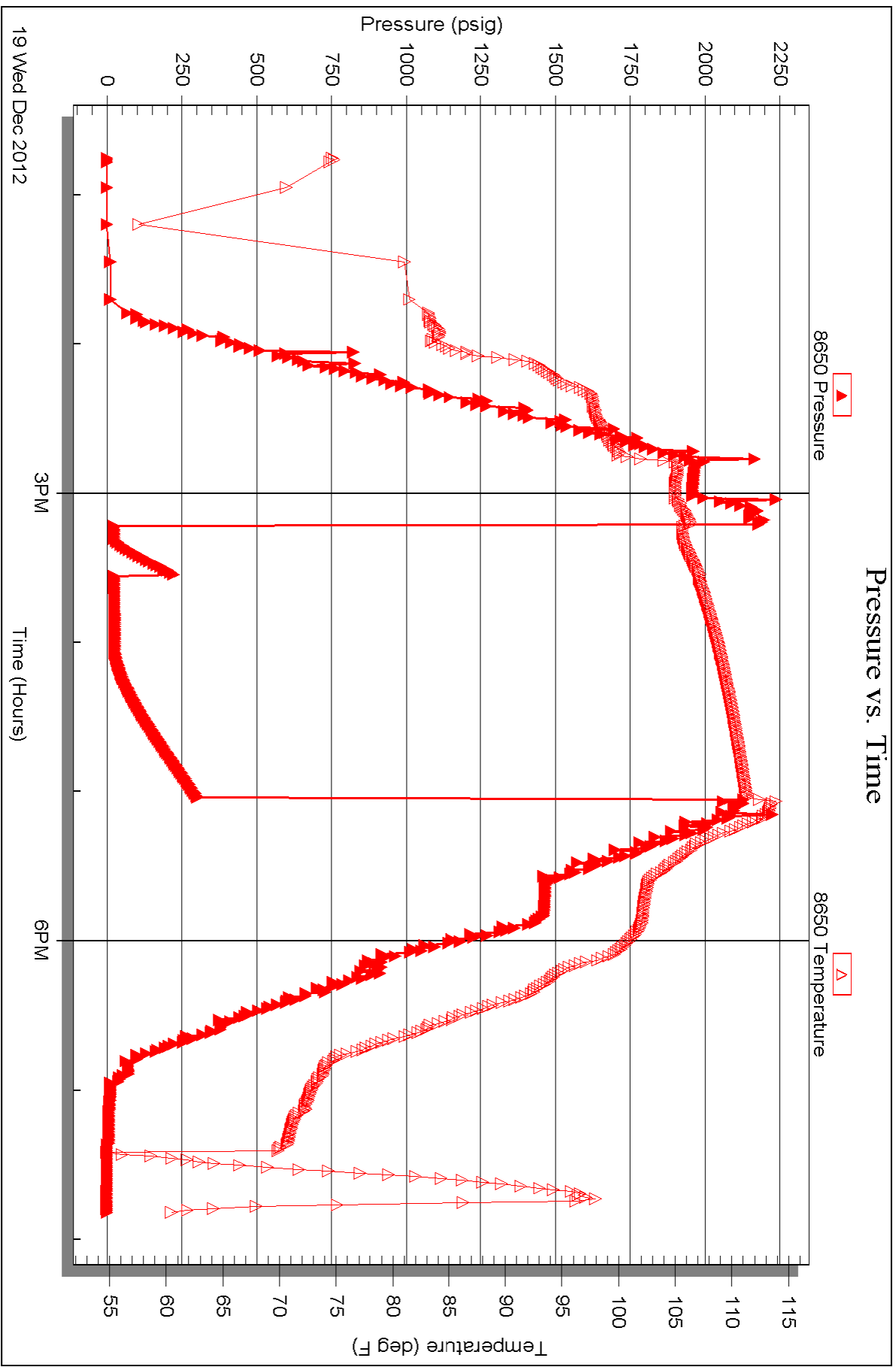
Recovery Information

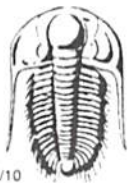
Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------------|---------------|
| 10.00 | 100% Mud few oil spots | 0.049 |

Total Length: 10.00 ft Total Volume: 0.049 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 49935

Well Name & No. Snider # 1-9 Test No. 1 Date 12/13/12 12/14/12
 Company Hanson Engineering, Inc Elevation 2820 KB 2813 GL
 Address 562 W State RD 4 Olmitz KS 67564-8561
 Co. Rep / Geo. Vern Schrag Rig HO Rig 3
 Location: Sec. 9 Twp. M3 Rge. 29w Co. Lane State KS

Interval Tested 3985-4010 Zone Tested Lansing "B"
 Anchor Length 25' Drill Pipe Run 3824.65 Mud Wt. 8.8
 Top Packer Depth 3981 Drill Collars Run 147.44 Vis 89
 Bottom Packer Depth 3985 Wt. Pipe Run _____ WL 6.8
 Total Depth 4010 Chlorides 3,200 ppm System LCM 1.0

Blow Description Built to 5" blow
Built to 2" return blow
B.O.B. in 13 min.

Bled off for 5 min. Built to 2" return blow

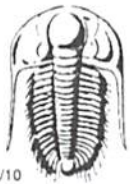
| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|-------------------------------|------------|------------|--------------|------------|
| <u>0</u> | <u>220' weak cast in pipe</u> | | | | |
| <u>20</u> | <u>Clean oil</u> | | <u>100</u> | | |
| <u>200</u> | <u>MCO</u> | | <u>50</u> | <u>50</u> | |
| Rec _____ | Feet of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |
| Rec _____ | Feet of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |

Rec Total 220 BHT 114 Gravity 29 API RW — @ — ° F Chlorides _____ ppm

(A) Initial Hydrostatic 1,966 Test 1250 T-On Location 23:30
 (B) First Initial Flow 24 Jars 250 T-Started 00:25
 (C) First Final Flow 43 Safety Joint 75 T-Open 2:37
 (D) Initial Shut-In 1,117 Circ Sub MCO T-Pulled 4:27
 (E) Second Initial Flow 57 Hourly Standby _____ T-Out 6:21
 (F) Second Final Flow 103 Mileage 66 BT 102.30
 (G) Final Shut-In 1,105 Sampler _____
 (H) Final Hydrostatic 1,961 Straddle _____

Initial Open 5 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 15 Shale Packer _____ Ruined Packer _____
 Final Flow 30 Extra Packer _____ Extra Copies _____
 Final Shut-In 60 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1677.30
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1677.30

Approved By _____ 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. 49936

Well Name & No. Snider # 1-9 Test No. 2 Date 12/14/12
 Company Larson Engineering, Inc Elevation 2820 KB 2813 GL
 Address 562 W State Rd 4 Omitz KS 67564-8561
 Co. Rep / Geo. Vern Schrag Rig HD Rig 3
 Location: Sec. 9 Twp. 17s Rge. 29w Co. Lane State KS

Interval Tested 4039-4052 Zone Tested Kansas City "E"
 Anchor Length 13 Drill Pipe Run 3887.79 Mud Wt. 8.8
 Top Packer Depth 4035 Drill Collars Run 147.44 Vis 52
 Bottom Packer Depth 4039 Wt. Pipe Run _____ WL 6.8
 Total Depth 4052 Chlorides 2,400 ppm System LCM 1

Blow Description Built to 7" below
Bled off for 3 min. Built to 1/2" return below
B.O.B. in 10 min.
Bled off for 5 min. Built to 2" return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|--------------------------------|-----------|------------|-----------|------|
| <u>0</u> | <u>200 feet casing in pipe</u> | | | | |
| <u>40</u> | <u>Clean Oil GCO</u> | <u>10</u> | <u>90</u> | | |
| <u>62</u> | <u>mcw</u> | | <u>60</u> | <u>40</u> | |
| <u>198</u> | <u>water</u> | | <u>100</u> | | |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 300 BHT 125 Gravity 29 API RW 30 @ 45 ° F Chlorides 40,000 ppm

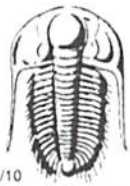
(A) Initial Hydrostatic 1,984 Test 1250 T-On Location 15:25
 (B) First Initial Flow 30 Jars 250 T-Started 16:20
 (C) First Final Flow 70 Safety Joint 75 T-Open 18:32
 (D) Initial Shut-In 1,004 Circ Sub N/C T-Pulled 20:22
 (E) Second Initial Flow 86 Hourly Standby T-Out 22:29
 (F) Second Final Flow 177 Mileage 66 RT 102.30
 (G) Final Shut-In 973 Sampler
 (H) Final Hydrostatic 1,992 Straddle
 Shale Packer
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Initial Open 5
 Initial Shut-In 15
 Final Flow 30
 Final Shut-In 60

Sub Total 0
 Total 1677.30
 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 49937

Well Name & No. Snider #1-9 Test No. 3 Date 12/15/12
 Company Lawson Engineering, Inc Elevation 2820 KB 2813 GL
 Address 562 W State RD 4 Olmitz KS 67564-8561
 Co. Rep / Geo. Vern Schrag Rig H0 Rig 3
 Location: Sec. 9 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4129-4152 Zone Tested Kansas City "A"
 Anchor Length 23 Drill Pipe Run 3981.09 Mud Wt. 9.2
 Top Packer Depth 4125 Drill Collars Run 147.44 Vis 59
 Bottom Packer Depth 4129 Wt. Pipe Run _____ WL 8.8
 Total Depth 4152 Chlorides 2,800 ppm System LCM .5

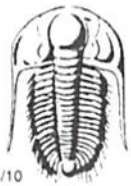
Blow Description Built to 1/2" below
No return below
Built to 1/4" below
No return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|----------|------------|-----------|-------------------------------|------------|------------|
| <u>5</u> | <u>100</u> | <u>90</u> | <u>Mud with low oil spots</u> | <u>100</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 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2,053 Test 1250 T-On Location 13:05
 (B) First Initial Flow 19 Jars 250 T-Started 14:10
 (C) First Final Flow 19 Safety Joint 75 T-Open 16:11
 (D) Initial Shut-In 172 Circ Sub N/C T-Pulled 18:01
 (E) Second Initial Flow 19 Hourly Standby T-Out 19:35
 (F) Second Final Flow 20 Mileage 66 BT 102.30 Comments _____
 (G) Final Shut-In 574 Sampler _____
 (H) Final Hydrostatic 2,041 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 1677.30
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1677.30

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **49938**

Well Name & No. Snider #1-9 Test No. 4 Date 12/16/12
 Company Larson Engineering, Inc Elevation 2820 KB 2813 GL
 Address 562 W State RD 4 Olmitz KS 67564-8561
 Co. Rep / Geo. Vern Schrag Rig HD Rig 3
 Location: Sec. 9 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4159-4192 Zone Tested Kansas City "I"
 Anchor Length 33 Drill Pipe Run 4012.18 Mud Wt. 9.2
 Top Packer Depth 4155 Drill Collars Run 147.44 Vis 59
 Bottom Packer Depth 4159 Wt. Pipe Run _____ WL 8.8
 Total Depth 4192 Chlorides 2,800 ppm System LCM 0.5

Blow Description Built to 1" below
No return below
Built to 1" below
No return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|--------------------------|------|------|------------|------|
| <u>30</u> | <u>Mud with oil swim</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 |

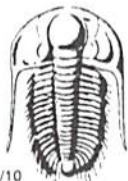
Rec Total 30 BHT 109 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm
 (A) Initial Hydrostatic 2,083 Test 1250 T-On Location 3:50
 (B) First Initial Flow 19 Jars 250 T-Started 4:55
 (C) First Final Flow 23 Safety Joint 75 T-Open 7:14
 (D) Initial Shut-In 785 Circ Sub N/C T-Pulled 9:04
 (E) Second Initial Flow 24 Hourly Standby _____ T-Out 10:48
 (F) Second Final Flow 33 Mileage Lele RT 102.30 Comments _____
 (G) Final Shut-In 765 Sampler _____
 (H) Final Hydrostatic 2,068 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 5
 Initial Shut-In 15
 Final Flow 30
 Final Shut-In 60

Sub Total 1677.30

Sub Total 1677.30

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 49939

4/10

Well Name & No. Snider # 1-9 Test No. 5 Date 12/10/12
 Company Harson Engineering, Inc Elevation 2820 KB 2813 GL
 Address 562 W State RD 4 Olmitz KS 67564-8561
 Co. Rep / Geo. Vern Schrag Rig HD Rig 3
 Location: Sec. 9 Twp. 17s Rge. 29w Co. Lane State KS

Interval Tested 4190-4204 Zone Tested Kansas City "5"
 Anchor Length 14 Drill Pipe Run 4043.65 Mud Wt. 9.2
 Top Packer Depth 4186 Drill Collars Run 147.44 Vis 57
 Bottom Packer Depth 4190 Wt. Pipe Run _____ WL 608
 Total Depth 4204 Chlorides 2,400 ppm System LCM 0.5

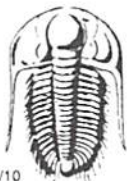
Blow Description Built to 1" below
No return below
Built to 1/4" below
No return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|-------------------------------|------|------|------------|------|
| <u>30</u> | <u>Mud with 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 30 BHT 109 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

| | | |
|--------------------------------------|-----------------------------------------------------------------|----------------------------------------------------|
| (A) Initial Hydrostatic <u>2,126</u> | <input checked="" type="checkbox"/> Test <u>1250</u> | T-On Location <u>16:35</u> |
| (B) First Initial Flow <u>19</u> | <input checked="" type="checkbox"/> Jars <u>250</u> | T-Started <u>17:25</u> |
| (C) First Final Flow <u>23</u> | <input checked="" type="checkbox"/> Safety Joint <u>75</u> | T-Open <u>19:31</u> |
| (D) Initial Shut-In <u>269</u> | <input checked="" type="checkbox"/> Circ Sub <u>N/C</u> | T-Pulled <u>21:21</u> |
| (E) Second Initial Flow <u>24</u> | <input type="checkbox"/> Hourly Standby _____ | T-Out <u>23:15</u> |
| (F) Second Final Flow <u>37</u> | <input checked="" type="checkbox"/> Mileage <u>66 RT</u> 102.30 | Comments _____ |
| (G) Final Shut-In <u>269</u> | <input type="checkbox"/> Sampler _____ | |
| (H) Final Hydrostatic <u>2,085</u> | <input type="checkbox"/> Straddle _____ | <input type="checkbox"/> Ruined Shale Packer _____ |
| | <input type="checkbox"/> Shale Packer _____ | <input type="checkbox"/> Ruined Packer _____ |
| Initial Open <u>5</u> | <input type="checkbox"/> Extra Packer _____ | <input type="checkbox"/> Extra Copies _____ |
| Initial Shut-In <u>16</u> | <input type="checkbox"/> Extra Recorder _____ | Sub Total <u>0</u> |
| Final Flow <u>30</u> | <input type="checkbox"/> Day Standby _____ | Total <u>1677.30</u> |
| Final Shut-In <u>60</u> | <input type="checkbox"/> Accessibility _____ | MP/DST Disc't _____ |
| | Sub Total <u>1677.30</u> | |

Approved By _____ 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. 49941

Well Name & No. Snider # 1-9 Test No. 7 Date 12/17/12 12/18/12
 Company Lawson Engineering, Inc Elevation 2820 KB 2813 GL _____
 Address 562 W State RD #1 Olmitz KS 67564-8561
 Co. Rep / Geo. Vern Schrag Rig 40 Rig 3
 Location: Sec. 9 Twp. 17s Rge. 29w Co. Lane State KS

Interval Tested 4256-4265 Zone Tested Middle Creek
 Anchor Length 9 Drill Pipe Run 4106.02 Mud Wt. 9.3
 Top Packer Depth 4251 Drill Collars Run 147.44 Vis 56
 Bottom Packer Depth 4256 Wt. Pipe Run _____ WL 6.4
 Total Depth 4265 Chlorides 2,200 ppm System LCM 1.0

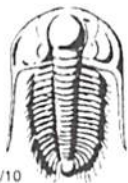
Blow Description Built to 1/2" below
No return below
Few Bubbles Died in 10 min.
No return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|----------|------------|------|------|------------|------|
| <u>1</u> | <u>Mud</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 1 BHT 106 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

| | | |
|--------------------------------------|-----------------------------------------------------------------|----------------------------------------------------|
| (A) Initial Hydrostatic <u>2,119</u> | <input checked="" type="checkbox"/> Test <u>1250</u> | T-On Location <u>23:00</u> |
| (B) First Initial Flow <u>16</u> | <input checked="" type="checkbox"/> Jars <u>250</u> | T-Started <u>23:25</u> |
| (C) First Final Flow <u>17</u> | <input checked="" type="checkbox"/> Safety Joint <u>75</u> | T-Open <u>1:34</u> |
| (D) Initial Shut-In <u>39</u> | <input checked="" type="checkbox"/> Circ Sub <u>N/C</u> | T-Pulled <u>2:39</u> |
| (E) Second Initial Flow <u>17</u> | <input type="checkbox"/> Hourly Standby _____ | T-Out <u>4:26</u> |
| (F) Second Final Flow <u>17</u> | <input checked="" type="checkbox"/> Mileage <u>66 RT</u> 102.30 | Comments _____ |
| (G) Final Shut-In <u>62</u> | <input type="checkbox"/> Sampler _____ | <input type="checkbox"/> Ruined Shale Packer _____ |
| (H) Final Hydrostatic <u>2,110</u> | <input type="checkbox"/> Straddle _____ | <input type="checkbox"/> Ruined Packer _____ |
| Initial Open <u>5</u> | <input type="checkbox"/> Shale Packer _____ | <input type="checkbox"/> Extra Copies _____ |
| Initial Shut-In <u>15</u> | <input type="checkbox"/> Extra Packer _____ | Sub Total <u>0</u> |
| Final Flow <u>15</u> | <input type="checkbox"/> Extra Recorder _____ | Total <u>1677.30</u> |
| Final Shut-In <u>30</u> | <input type="checkbox"/> Day Standby _____ | MP/DST Disc't _____ |
| | <input type="checkbox"/> Accessibility _____ | |
| | Sub Total <u>1677.30</u> | |

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 49942

Well Name & No. Snider #1-9 Test No. 8 Date 12/19/12
 Company Lawson Engineering Inc Elevation 2820 KB 2813 GL
 Address 562 W State RD 4 Olmitz KS, 67564-8561
 Co. Rep / Geo. Vern Schrag Rig HD Rig 3
 Location: Sec. 9 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4341-4495 Zone Tested Marmaton
 Anchor Length 154 Drill Pipe Run 4201.01 Mud Wt. 9.4
 Top Packer Depth 4337 Drill Collars Run 147.44 Vis 56
 Bottom Packer Depth 4341 Wt. Pipe Run _____ WL 6.4
 Total Depth 4495 Chlorides 2,000 ppm System LCM 1.5

Blow Description Built to 1" blow
No return below
No below
No return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|--------------------------|------|------|------------|------|
| <u>10</u> | <u>Mud 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 |

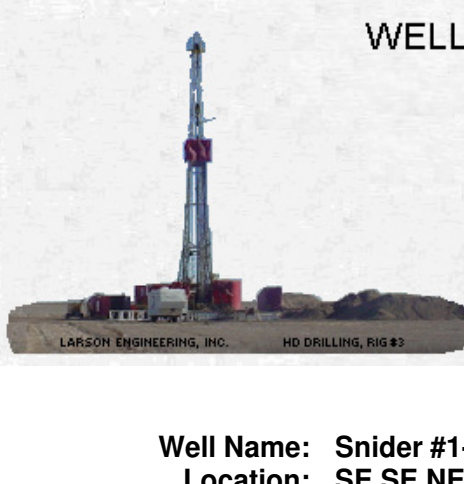
Rec Total 10 BHT 2,200 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm
 (A) Initial Hydrostatic 2,200 Test 1250 T-On Location 12:00
 (B) First Initial Flow 24 Jars 250 T-Started 12:45
 (C) First Final Flow 26 Safety Joint 75 T-Open 15:13
 (D) Initial Shut-In 232 Circ Sub N/C T-Pulled 17:03
 (E) Second Initial Flow 26 Hourly Standby BHS T-Out 19:49
 (F) Second Final Flow 28 Mileage WERT 102.30 Comments _____
 (G) Final Shut-In 308 Sampler _____
 (H) Final Hydrostatic 2,151 Straddle _____ Ruined Shale Packer _____
 Shale Packer 250 Ruined Packer _____
 Extra Packer _____ Extra Copies _____

Initial Open 5
 Initial Shut-In 15
 Final Flow 30
 Final Shut-In 60
 Day Standby 1d 7.5h Sub Total 1927.30
 Accessibility _____ MP/DST Disc't _____

Approved By _____ 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: Snider #1-9
Location: SE SE NE SW SEC. 09-17s-29w
Licence Number: API: 15-101-22412
Spud Date: December 08, 2012
Surface Coordinates: 1365' FSL & 2486' FWL

Region: Lane Co., KS
Drilling Completed: December 20, 2012

Bottom Hole Coordinates: 2813' Ground Elevation (ft): 2813' K.B. Elevation (ft): 2820'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4641'
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 6.25" x 2.25" x 560', Bit: HA21-S, 3926', HA20-Q to RTD, 7-7/8", jets 15-15-15; rpm 80, WOB 35k; Kelly Bushing 7' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

8-5/8" (20#) casing at 251'
5-1/2" (15.5#) production casing

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60 spm, Chemical, premix, displaced about 3363-3372'; earth pits, Morgan Mud, Inc., David Lines, Cade Lines.

OPEN HOLE LOGS:

DN, DIL (Run-1); ML (Run-2); No Sonic; 5" detail LTD-3600; 2" DI to rotary casing; Pioneer Energy Services, Hays, KS, Jerrod Long, Log total depth (4643') was 2' long to rotary total depth (4641').

DRILL STEM TEST #1:

LKC "B": Interval: 3985-4010 (25'); Blow: weak incr 5" IFP, 1/2" RB, BOB 13 min FFP, 2" RB; Times: 5-15-30-60; Recovery: 200' weak GIP, 300' TF: 40' GO (10%G, 90%O, API Grav 29), 62' MW (40%M, 60%W), 198' SW (100%W, Rw 0.30 @45 F, chlorides 40k); Pressures: HP: 1966-1961; SIP: 1117-1105; FP: 24-43, 57-103; BHT: 114 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #2:

LKC "E": Interval: 4039-4052 (13'); Blow: weak incr to 7" IFP, 1/2" RB, BOB 10 min FFP, 2" RB; Times: 5-15-30-60; Recovery: 200' weak GIP, 300' TF: 382' CGO (5%G, 95%O, 40 API Grav), 250' CGO (10%G, 90%O), 178' GMD (10%G, 20%M, 70%O); Pressures: HP: 1964-1992; SIP: 1004-973; FP: 30-70, 86-177; BHT: 125 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #3:

LKC "H": Interval: 4129-4152 (23'); Blow: weak 1/2" IFP, no RB, weak 1/4" FFP, no RB; Times: 5-15-30-60; Recovery: 5' oil spotted mud (100%M); Pressures: HP: 2053-2041; SIP: 172-574; FP: 19-19, 19-20; BHT: 120 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #4:

LKC "I": Interval: 4159-4192 (33'); Blow: weak incr 1" IFP, no RB, weak incr 1" FFP, no RB; Times: 5-15-30-60; Recovery: 30' mud w/wcm of oil; Pressures: HP: 2083-2068, SIP: 785-765, FP: 19-23, 24-32; BHT: 109 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #5:

LKC "J" Interval: 4190-4204 (14'); Blow: incr to 1" IFP, no RB, incr to 1.25" FFP, no RB; Times: 5-15-30-60; Recovery: 30' mud w/few oil spots (100%M); Pressures: HP: 2126-2085; SIP: 269-269; FP: 19-23, 24-32; BHT: 109 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #6:

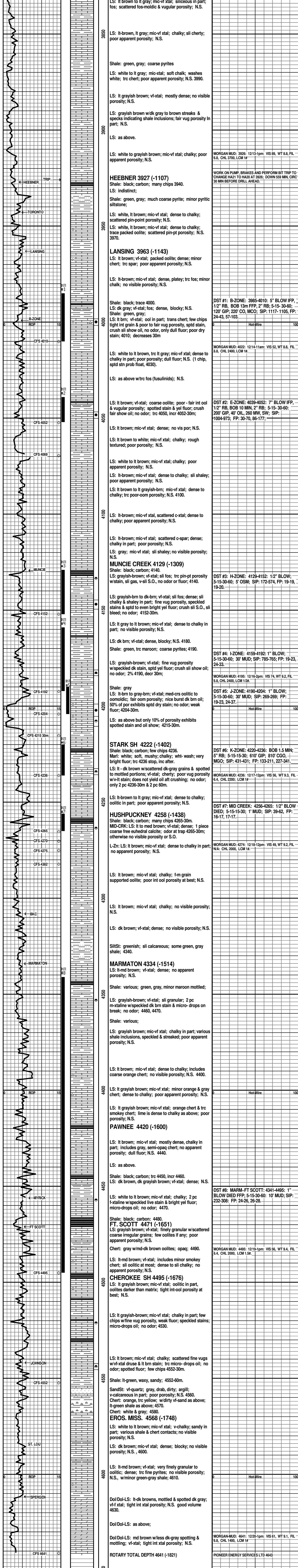
LKC "K": Interval: 4220-4236 (16'); Blow: BOB in 1.5 min FFP, 5" RB; BOB in 1 min FFP, 4" RB; Times: 5-15-30-60; Recovery: 610' GIP, 810' TF: 382' CGO (5%G, 95%O, 40 API Grav), 250' CGO (10%G, 90%O), 178' GMD (10%G, 20%M, 70%O); Pressures: HP: 2116-2088, SIP: 431-431; FP: 133-211, 227-341; BHT: 127 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #7:

LKC Middle Creek: Interval: 4256-4265 (9'); Blow: weak 1/2" IFP, no RB, weak surf blow died 10 min FFP, no RB; Times: 5-15-30-60; Recovery: 1' mud (100%M); Pressures: HP: 2119-2110; SIP: 39-62; FP: 16-17, 17-17; BHT: 106 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #8:

Marmaton thru Ft. Scott: Interval: 4341-4495 (154'); Blow: weak incr to 1" IFP, no RB, no blow FFP, no RB; Times: 5-15-30-60; Recovery: 10' mud w/few oil spots; Pressures: HP: 2200-2151; SIP: 232-308; FP: 24-26, 26-28; BHT: 110 F; dual packers (w/shale packer), jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.



Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



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Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

April 04, 2013

Thomas Larson
Larson Engineering, Inc. dba Larson Operating
Company
562 W STATE RD 4
OLMITZ, KS 67564-8561

Re: ACO1
API 15-101-22412-00-00
Snider 1-9
SW/4 Sec.09-17S-29W
Lane County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Thomas Larson