

Confidentiality Requested:

Yes  No

**KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

**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

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

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  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

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

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

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

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

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
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)*

|   |  |         |             |               |         |
|---|--|---------|-------------|---------------|---------|
| Date of first Production/Injection or Resumed Production/Injection: | Producing Method:<br><input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____ |         |             |               |         |
| Estimated Production Per 24 Hours                                   | Oil Bbls.  | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |

|   |  |                                    |
|---|--|------------------------------------|
| DISPOSITION OF GAS:<br><input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease<br><i>(If vented, Submit ACO-18.)</i> | METHOD OF COMPLETION:<br><input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled<br><i>(Submit ACO-5) (Submit ACO-4)</i> | PRODUCTION INTERVAL:<br>Top Bottom |
|---|--|------------------------------------|

| Shots Per Foot | Perforation Top | Perforation Bottom | Bridge Plug Type | Bridge Plug Set At | Acid, Fracture, Shot, Cementing Squeeze Record<br><i>(Amount and Kind of Material Used)</i> |
|----------------|-----------------|--------------------|------------------|--------------------|---|
|                |                 |                    |                  |                    |   |
|                |                 |                    |                  |                    |   |
|                |                 |                    |                  |                    |   |
|                |                 |                    |                  |                    |   |

|                |       |         |            |  |
|----------------|-------|---------|------------|--|
| TUBING RECORD: | Size: | Set At: | Packer At: |  |
|----------------|-------|---------|------------|--|

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Shakespeare Oil Co., Inc. |
| Well Name | OTTLEY 2-21               |
| Doc ID    | 1416987                   |

All Electric Logs Run

|                 |
|-----------------|
|                 |
| Array Induction |
| Photo Density   |
| Comp Neutron    |
| Microlog        |

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Shakespeare Oil Co., Inc. |
| Well Name | OTTLEY 2-21               |
| Doc ID    | 1416987                   |

Tops

| Name              | Top  | Datum |
|-------------------|------|-------|
| Base Anhydrite    | 2246 | +537  |
| Heebner           | 3736 | -953  |
| Lansing           | 3774 | -991  |
| Muncie Creek      | 3934 | -1151 |
| Stark Shale       | 4018 | -1235 |
| Hushpuckney       | 4052 | -1269 |
| Marmaton          | 4164 | -1381 |
| Pawnee            | 4230 | -1447 |
| L. Cherokee Shale | 4311 | -1528 |
| Johnson           | 4354 | -1571 |
| Mississippian     | 4417 | -1634 |

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Shakespeare Oil Co., Inc. |
| Well Name | OTTLEY 2-21               |
| Doc ID    | 1416987                   |

#### Perforations

| Shots Per Foot | Perforation Top | Perforation Bottom | BridgePlugType | BridgePlugSet At | Material Record                      |
|----------------|-----------------|--------------------|----------------|------------------|--------------------------------------|
| 4              | 4355            | 4362               |                |                  | 250 gal 15% RWR-1, 1000 gal 15% NeFe |
| 4              | 4364            | 4368               |                |                  | 250 gal 15% RWR-1, 1000 gal 15% NeFe |
| 4              | 4372            | 4376               |                |                  | 250 gal 15% RWR-1, 1000 gal 15% NeFe |
| 4              | 4294            | 4297               |                |                  | 500 gal 15% RWR-1                    |
| 4              | 4268            | 4272               |                |                  | 500 gal 15% RWR-1                    |
| 4              | 4273            | 4277               |                |                  | 500 gal 15% RWR-1                    |
| 4              | 4216            | 4220               |                |                  | 500 gal 15% RWR-1                    |
| 4              | 4015            | 4018               |                |                  | 500 gal 15% RWR-1                    |
| 4              | 3992            | 3994               |                |                  | 500 gal 15% RWR-1                    |
| 4              | 3985            | 3989               |                |                  | 500 gal 15% RWR-1                    |





P. O. Box 466  
 Ness City, KS 67560  
 Off: 785-798-2300



# Invoice

|          |           |
|----------|-----------|
| DATE     | INVOICE # |
| 6/5/2018 | 27297     |

|   |
|---|
| BILL TO   |
| Shakespeare Oil Company, Inc<br>202 West Main Street<br>Salem, IL 62881 |

- Acidizing
- Cement
- Tool Rental

| TERMS  | Well No. | Lease  | County | Contractor            | Well Type | Well Category | Job Purpose     | Operator |
|--------|----------|--------|--------|-----------------------|-----------|---------------|-----------------|----------|
| Net 30 | #2-21    | Ottley | Logan  | Duke Drilling Rig ... | Oil       | Development   | Shallow Surface | David E. |

| PRICE REF. | DESCRIPTION                               | QTY | UM        | UNIT PRICE | AMOUNT    |
|------------|---|-----|-----------|------------|-----------|
| 575D       | Mileage - 1 Way                           | 100 | Miles     | 5.00       | 500.00    |
| 576D-S     | Pump Charge - Shallow Surface (< 500 Ft.) | 1   | Job       | 875.00     | 875.00    |
| 290        | D-Air                                     | 2   | Gallon(s) | 42.00      | 84.00T    |
| 325        | Standard Cement                           | 165 | Sacks     | 13.00      | 2,145.00T |
| 279        | Bentonite Gel                             | 3   | Sack(s)   | 30.00      | 90.00T    |
| 278        | Calcium Chloride                          | 7   | Sack(s)   | 40.00      | 280.00T   |
| 581D       | Service Charge Cement                     | 165 | Sacks     | 1.75       | 288.75    |
| 583D       | Drayage                                   | 814 | Ton Miles | 0.85       | 691.90    |
|            | Subtotal                                  |     |           |            | 4,954.65  |
|            | Sales Tax Logan County                    |     |           | 8.00%      | 207.92    |

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|                                     |              |            |
|-------------------------------------|--------------|------------|
| <b>We Appreciate Your Business!</b> | <b>Total</b> | \$5,162.57 |
|-------------------------------------|--------------|------------|

DW



Services, Inc.

TICKET 27297

CHARGE TO: Shakespeare Oil Co  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

PAGE 1 OF 1

|                        |   |                       |                        |                 |                 |               |       |
|------------------------|---|-----------------------|------------------------|-----------------|-----------------|---------------|-------|
| SERVICE LOCATIONS      | WELL/PROJECT NO.  | LEASE                 | COUNTY/PARISH          | STATE           | CITY            | DATE          | OWNER |
| 1. <u>Hays Ks</u>      | <u>2-21</u>   | <u>Otley</u>          | <u>Logan</u>           | <u>KS</u>       |                 | <u>6-5-18</u> |       |
| 2. <u>Ness City Ks</u> | TICKET TYPE<br><input type="checkbox"/> SERVICE<br><input type="checkbox"/> SALES | CONTRACTOR            | RIG NAME/NO.           | SHIPPED VIA     | DELIVERED TO    | ORDER NO.     |       |
|                        | <input type="checkbox"/> SALES  | <u>Dir's Drilling</u> | <u>Rig # 1</u>         | <u>YES</u>      | <u>Location</u> |               |       |
| 3.                     | WELL TYPE   | WELL CATEGORY         | JOB PURPOSE            | WELL PERMIT NO. | WELL LOCATION   |               |       |
|                        | <u>Oil</u>  | <u>Development</u>    | <u>Shallow Surface</u> |                 |                 |               |       |
| 4.                     | REFERRAL LOCATION   | INVOICE INSTRUCTIONS  |                        |                 |                 |               |       |

| PRICE REFERENCE | SECONDARY REFERENCE/<br>PART NUMBER | ACCOUNTING |      |    | DESCRIPTION                          | QTY.       |    |            | UNIT PRICE    | AMOUNT         |
|-----------------|-------------------------------------|------------|------|----|--------------------------------------|------------|----|------------|---------------|----------------|
|                 |                                     | LOG        | ACCT | DF |                                      |            | UM |            |               |                |
| <u>575</u>      |                                     |            |      |    | MILEAGE <u>Truck # 111</u>           | <u>100</u> |    | <u>mi</u>  | <u>5.00</u>   | <u>500.00</u>  |
| <u>5765</u>     |                                     |            |      |    | <u>Pump Charge - Shallow Surface</u> | <u>1</u>   |    | <u>ea</u>  | <u>875.00</u> | <u>875.00</u>  |
| <u>290</u>      |                                     |            |      |    | <u>D-Air</u>                         | <u>2</u>   |    | <u>gal</u> | <u>42.00</u>  | <u>84.00</u>   |
| <u>325</u>      |                                     |            |      |    | <u>Standard Cement</u>               | <u>165</u> |    | <u>sks</u> | <u>13.00</u>  | <u>2145.00</u> |
| <u>279</u>      |                                     |            |      |    | <u>Bentonite Gel</u>                 | <u>3</u>   |    | <u>sks</u> | <u>30.00</u>  | <u>90.00</u>   |
| <u>278</u>      |                                     |            |      |    | <u>Calcium Chloride</u>              | <u>7</u>   |    | <u>sks</u> | <u>40.00</u>  | <u>280.00</u>  |
| <u>581</u>      |                                     |            |      |    | <u>Service Charge - Cement</u>       | <u>165</u> |    | <u>sks</u> | <u>1.75</u>   | <u>288.75</u>  |
| <u>583</u>      |                                     |            |      |    | <u>Drillage</u>                      | <u>814</u> |    | <u>sqm</u> | <u>87</u>     | <u>691.90</u>  |

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

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

DATE SIGNED: \_\_\_\_\_ TIME SIGNED: \_\_\_\_\_  A.M.  P.M.

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

SURVEY

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

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 4954 65

TOTAL: 5162.59

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

SWIFT OPERATOR: David Edgerton APPROVAL: \_\_\_\_\_

Thank You!



JOB LOG

SWIFT Services, Inc.

DATE 6-5-18 PAGE NO.

CUSTOMER Shakespeare oil WELL NO. 2-21 LEASE Otley JOB TYPE Shallow Surface TICKET NO. 27297

| CHART NO. | TIME            | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS |   | PRESSURE (PSI) |        | DESCRIPTION OF OPERATION AND MATERIALS  |
|-----------|-----------------|------------|--------------------|-------|---|----------------|--------|---|
|           |                 |            |                    | T     | C | TUBING         | CASING |   |
|           | 00:30           |            |                    |       |   |                |        | on location                             |
|           |                 |            |                    |       |   |                |        | 8 5/8 csg<br>RTD - 267<br>pipe - 267.19 |
|           | 1:15            |            |                    |       |   |                |        | Break Circ on Bottom                    |
|           |                 | 5          | 5                  |       |   | 100            |        | pump wtr spacer                         |
|           | 1:30            | 5          | 40                 |       |   | 100            |        | pump Cmt - 165 sks @ 14.7 gpg           |
|           | 1:40            | 3          | 0                  |       |   | 100            |        | Start Disp                              |
|           | <del>1:40</del> | 3          | 10                 |       |   | 200            |        | Circulated 20 sks cmt to pit            |
|           | 1:45            | 3          | 15.75              |       |   | 400            |        | End Disp                                |
|           |                 |            |                    |       |   |                |        | Thanks<br>David, Zach & Isaac           |



|                                   |                    |                |                            |
|-----------------------------------|--------------------|----------------|----------------------------|
| PAGE<br>1 of 1                    | CUST NO<br>1003782 | YARD #<br>1718 | INVOICE DATE<br>06/18/2018 |
| INVOICE NUMBER<br><b>92734592</b> |                    |                |                            |

Pratt (620) 672-1201  
 B SHAKESPEARE OIL COMPANY  
 I 202 W MAIN ST  
 L SALEM  
 L IL US 62881  
 T  
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Ottley 2-21  
 O LOCATION  
 B COUNTY Logan  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 T JOB CONTACT  
 E

INT

| JOB #    | EQUIPMENT # | PURCHASE ORDER NO. | TERMS         | DUE DATE   |
|----------|-------------|--------------------|---------------|------------|
| 41114080 | 19916       |                    | Net - 30 days | 07/18/2018 |

|  | QTY      | U of M | UNIT PRICE | INVOICE AMOUNT |
|--|----------|--------|------------|----------------|
| <i>For Service Dates: 06/15/2018 to 06/15/2018</i>                   |          |        |            |                |
| 0041114080   |          |        |            |                |
| 171815739L Cement-New Well Casing/Pi 06/15/2018<br>Cement/Production |          |        |            |                |
| 50/50 POZ  | 270.00   | EA     | 5.50       | 1,485.00 T     |
| Gypsum   | 1,135.00 | EA     | 0.38       | 431.30 T       |
| C-17   | 114.00   | LB     | 10.00      | 1,140.00 T     |
| C-41P  | 57.00    | EA     | 2.00       | 114.00 T       |
| Gilsonite  | 1,350.00 | EA     | 0.34       | 459.00 T       |
| Salt   | 1,498.00 | EA     | 0.25       | 374.50 T       |
| Casing Swivel Rental   | 1.00     | EA     | 100.00     | 100.00         |
| Claymax KCL Substitute   | 2.00     | EA     | 17.50      | 35.00 T        |
| Mud Flush  | 500.00   | EA     | 0.75       | 375.00 T       |
| Heavy Equipment Mileage  | 200.00   | MI     | 3.75       | 750.00         |
| Blending & Mixing Service Charge                                     | 270.00   | BAG    | 0.70       | 189.00         |
| Proppant & Bulk Del. Chgs., per ton mil                              | 1,135.00 | EA     | 1.25       | 1,418.75       |
| Depth Charge; 4001'-5000'  | 1.00     | EA     | 1,260.00   | 1,260.00       |
| Plug Container Util. Chg.  | 1.00     | EA     | 125.00     | 125.00         |
| "Unit Mileage Chg (PU, cars one way)"                                | 100.00   | MI     | 2.25       | 225.00         |
| "Service Supervisor, first 8 hrs on loc.                             | 1.00     | EA     | 87.50      | 87.50          |
| Cement Data Acquisition Monitor                                      | 1.00     | EA     | 275.00     | 275.00         |

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|                           |                               |               |          |
|---------------------------|-------------------------------|---------------|----------|
| PLEASE REMIT TO:          | SEND OTHER CORRESPONDENCE TO: | SUB TOTAL     | 8,844.05 |
| BASIC ENERGY SERVICES, LP | BASIC ENERGY SERVICES, LP     | TAX           | 353.10   |
| PO BOX 841903             | 801 CHERRY ST, STE 2100       | INVOICE TOTAL | 9,197.15 |
| DALLAS, TX 75284-1903     | FORT WORTH, TX 76102          |               |          |

DW





Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

**PRESSURE PUMPING Job Log**



|                    |                         |                  |                                |                   |                    |              |
|--------------------|-------------------------|------------------|--------------------------------|-------------------|--------------------|--------------|
| Customer:          | Shakespeare Oil Company | Cement Pump No.: | 38117, 19919 6Hrs.             | Operator TRK No.: | 96816, 70752       |              |
| Address:           | 202 West Main Street    | Ticket #:        | 1718 15739 L                   | Bulk TRK No.:     | 14355, 37724 Jesse | 14355, 37724 |
| City, State, Zip:  | Salem IL, 62881-1519    | Job Type:        | Z42 - Cement Production Casing |                   |                    |              |
| Service District:  | 1718 - Liberal, Ks.     | Well Type:       | OIL                            |                   |                    |              |
| Well Name and No.: | Otley 2-21              | Well Location:   | 21, 14, 32                     | County:           | Logan              | State: Ks    |

| Type of Cmt | Sacks | Additives  | Truck Loaded On    |       |      |
|-------------|-------|--|--------------------|-------|------|
| 50/50 Poz   | 220   | 5% Gypsum, 10% Salt, 5# Gilsonite, .5% C-17, 1/4# Defoamer | 14355, 37724 Jesse | Front | Back |
| 50/50 Poz   | 50    | 5% Gypsum, 10% Salt, 5# Gilsonite, .5% C-17, 1/4# Defoamer | 14355, 37724 Jesse | Front | Back |
|             |       |  | 27808 Angel        | Front | Back |

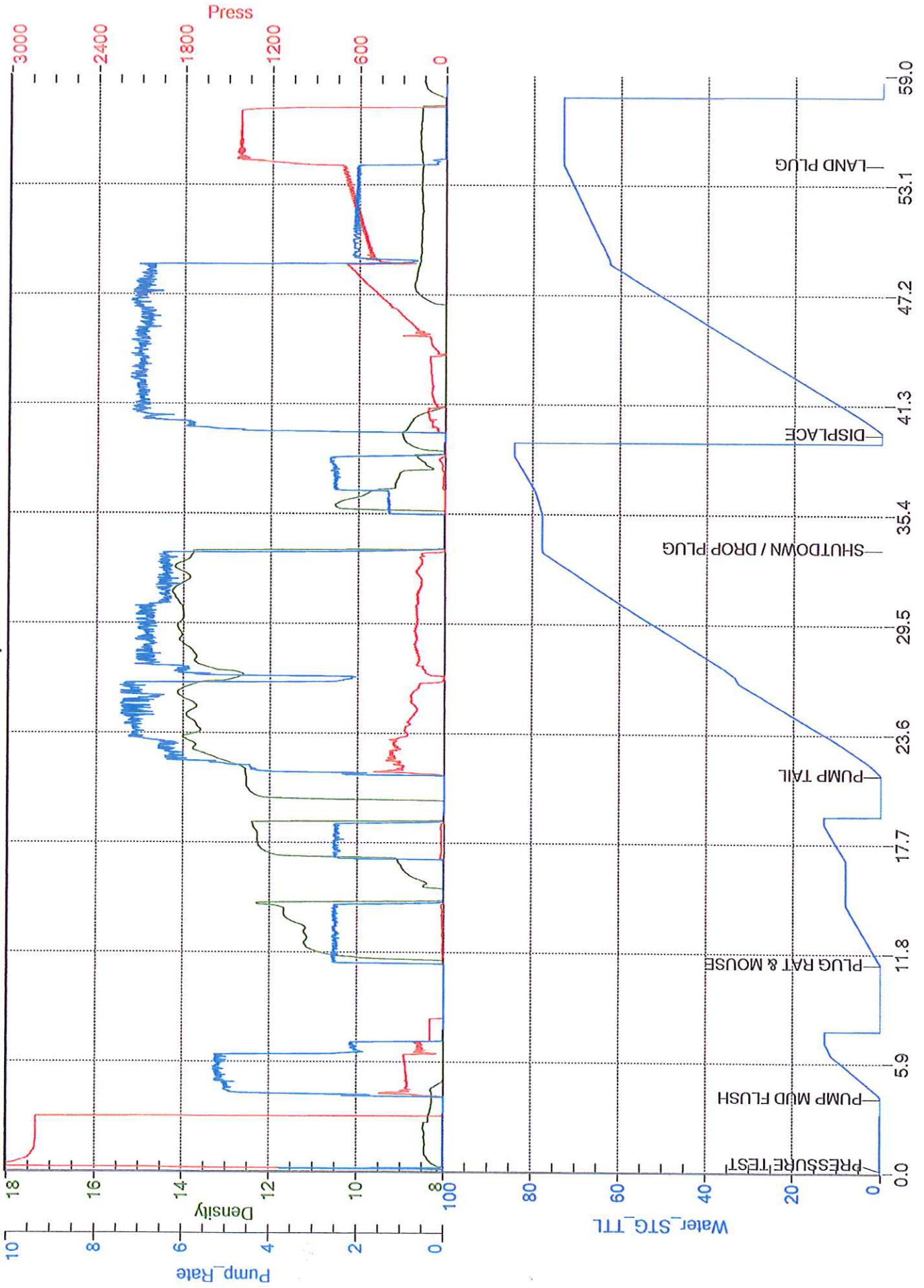
| Lead/Tail:              | Weight #1 Gal. | Cu/Ft/sk | Water Requirements | CU. FT. | Man Hours / Personnel |      |
|-------------------------|----------------|----------|--------------------|---------|-----------------------|------|
| <b>Tail:</b>            | 13.8           | 1.49     | 6.65               | 327.8   | TT Man Hours:         | 50.5 |
| <b>Rat &amp; Mouse:</b> | 13.8           | 1.49     | 6.65               | 74.5    | # of Men on Job:      | 5    |

| Time (am/pm) | (BPM) | Volume (BBLS) | Pumps |   | Pressure (PSI) |        | Description of Operation and Materials |
|--------------|-------|---------------|-------|---|----------------|--------|--|
|              |       |               | T     | C | Tubing         | Casing |  |
| 12:50        |       |               |       |   |                |        | ON LOCATION                            |
| 12:55        |       |               |       |   |                |        | SAFETY MEETING                         |
| 1:15 PM      |       |               |       |   |                |        | RIG UP                                 |
| 2:15 PM      |       |               |       |   |                |        | RIG TO CIRC. / WAIT ON BULK            |
| 5:00 PM      |       |               |       |   |                |        | RIG TO P.T.                            |
| 5:04 PM      |       |               |       |   |                |        | PRESSURE TEST TO 3000PSI               |
| 5:08 PM      | 5     | 11.9          |       |   |                | 280    | PUMP 500GALLONS MUD FLUSH              |
| 17:11        |       | 13.2 slurry   |       |   |                |        | CEMENT RAT & MOUSE                     |
| 17:25        | 7     | 58.3 slurry   |       |   |                | 330    | PUMP 220SX TAIL @ 13.8#                |
| 5:37 PM      |       |               |       |   |                |        | SHUTDOWN / DROP PLUG                   |
| 17:44        | 7     | 10            |       |   |                | 80     | DISPLACE                               |
|              | 7.1   | 20            |       |   |                | 90     |  |
|              | 7     | 30            |       |   |                | 100    |  |
|              | 6.9   | 40            |       |   |                | 330    |  |
|              | 7.1   | 50            |       |   |                | 510    |  |
| 17:55        | 6.8   | 59            |       |   |                | 680    | SLOW RATE TO 2BPM @ 510PSI             |
|              | 2     | 60            |       |   |                | 520    |  |
| 17:59        | 2     | 69.2          |       |   |                | 710    | LAND PLUG / PRESSURE UP TO 1400PSI     |
| 18:01        |       |               |       |   |                |        | RELEASE BACK --- FLOAT HELD            |
|              |       |               |       |   |                |        | JOB COMPLETE                           |

| Size Hole       | 7 7/8"       | Depth |          | TYPE       |          | Plug Container |  |
|-----------------|--------------|-------|----------|------------|----------|----------------|--|
| Size & Wt. Csg. | 4 1/2" 11.6# | Depth | 4514.38' | New / Used | Packer   | Depth          |  |
| Landing Press.  | 512.0psi     | Depth |          |            | Retainer | Depth          |  |
| Shoe Jt.        | 44.16'       | Type  |          |            | Perfs    | CIBP           |  |

|   |                       |   |
|---|-----------------------|---|
| Customer Signature:  | Basic Representative: | Daniel Beck   |
|   | Basic Signature:      |  |
|   | Date of Service:      | 6/15/2018   |

Shakespeare Oil Co.  
Ottley #2-21





|                |         |        |              |
|----------------|---------|--------|--------------|
| PAGE           | CUST NO | YARD # | INVOICE DATE |
| 1 of 1         | 1003782 | 1718   | 06/20/2018   |
| INVOICE NUMBER |         |        |              |
| 92736906       |         |        |              |

Pratt (620) 672-1201  
 B SHAKESPEARE OIL COMPANY  
 I 202 W MAIN ST  
 L SALEM  
 L IL US 62881  
 T  
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Ottley 2-21  
 O LOCATION  
 B COUNTY Logan  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 T JOB CONTACT  
 E

*INT*

|          |             |                    |               |            |
|----------|-------------|--------------------|---------------|------------|
| JOB #    | EQUIPMENT # | PURCHASE ORDER NO. | TERMS         | DUE DATE   |
| 41114899 | 19842       |                    | Net - 30 days | 07/20/2018 |

|   | QTY      | U of M | UNIT PRICE | INVOICE AMOUNT |
|---|----------|--------|------------|----------------|
| <i>For Service Dates: 06/19/2018 to 06/19/2018</i>                    |          |        |            |                |
| 0041114899  |          |        |            |                |
| 171815777L Cement-New Well Casing/Pi 06/19/2018<br>Cement/Port Collar |          |        |            |                |
| 60/40 POZ   | 350.00   | EA     | 6.00       | 2,100.00 T     |
| Cement Gel  | 2,064.00 | EA     | 0.13       | 268.32 T       |
| Celloflake  | 151.00   | EA     | 1.85       | 279.35 T       |
| Cotton Seed Hulls   | 500.00   | EA     | 0.18       | 90.00 T        |
| Heavy Equipment Mileage   | 300.00   | MI     | 3.75       | 1,125.00       |
| Blending & Mixing Service Charge                                      | 600.00   | BAG    | 0.70       | 420.00         |
| Proppant & Bulk Del. Chgs., per ton mil                               | 2,580.00 | EA     | 1.25       | 3,225.00       |
| Depth Charge; 2001'-3000'   | 1.00     | EA     | 900.00     | 900.00         |
| "Unit Mileage Chg (PU, cars one way)"                                 | 100.00   | MI     | 2.25       | 225.00         |
| "Service Supervisor, first 8 hrs on loc.                              | 1.00     | EA     | 87.50      | 87.50          |
| Cement Data Acquisition Monitor                                       | 1.00     | EA     | 275.00     | 275.00         |

RECEIVED  
 JUN 25 2018

*502-5  
 DW*

|                           |                               |               |          |
|---------------------------|-------------------------------|---------------|----------|
| PLEASE REMIT TO:          | SEND OTHER CORRESPONDENCE TO: | SUB TOTAL     | 8,995.17 |
| BASIC ENERGY SERVICES, LP | BASIC ENERGY SERVICES, LP     | TAX           | 219.01   |
| PO BOX 841903             | 801 CHERRY ST, STE 2100       | INVOICE TOTAL | 9,214.18 |
| DALLAS, TX 75284-1903     | FORT WORTH, TX 76102          |               |          |

*DW*









**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63684

**DST#: 1**

ATTN: Tim Priest

Test Start: 2018.06.08 @ 15:57:00

## GENERAL INFORMATION:

Formation: **LKC B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:24:30

Time Test Ended: 23:28:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

**Interval: 3800.00 ft (KB) To 3830.00 ft (KB) (TVD)**

Reference Elevations: 2783.00 ft (KB)

Total Depth: 3830.00 ft (KB) (TVD)

2771.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8319 Outside**

Press@RunDepth: 67.23 psig @ 3801.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.08

End Date: 2018.06.08

Last Calib.: 2018.06.08

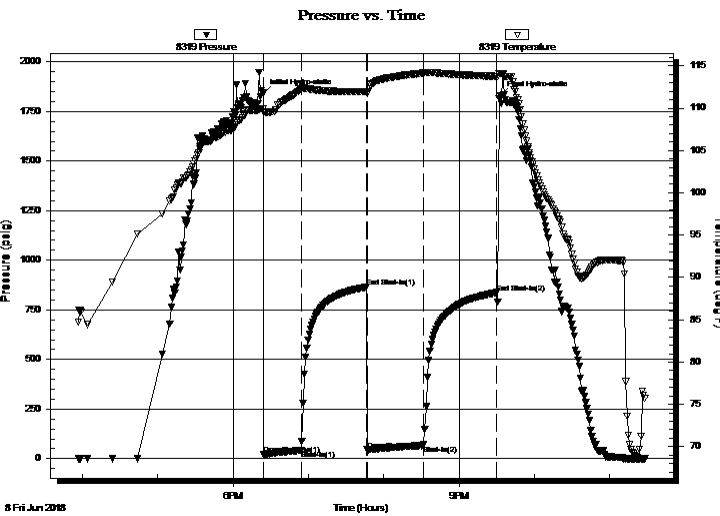
Start Time: 15:57:05

End Time: 23:27:59

Time On Btm: 2018.06.08 @ 18:24:00

Time Off Btm: 2018.06.08 @ 21:32:45

**TEST COMMENT:** IF: 6 1/2" blow .  
IS: No return.  
FF: 3 1/2" blow .  
FS: No return.



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1841.90         | 109.95       | Initial Hydro-static |
| 1           | 19.82           | 109.54       | Open To Flow (1)     |
| 31          | 42.63           | 112.26       | Shut-In(1)           |
| 83          | 864.87          | 111.95       | End Shut-In(1)       |
| 83          | 44.47           | 111.68       | Open To Flow (2)     |
| 128         | 67.23           | 114.12       | Shut-In(2)           |
| 186         | 837.12          | 113.75       | End Shut-In(2)       |
| 189         | 1829.08         | 114.12       | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 110.00      | mcw 15m 85w | 1.54         |
| 3.00        | Oil 100o    | 0.04         |
|             |             |              |
|             |             |              |
|             |             |              |

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63684

**DST#: 1**

ATTN: Tim Priest

Test Start: 2018.06.08 @ 15:57:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 110.00       | mcw 15m 85w | 1.543         |
| 3.00         | Oil 100o    | 0.042         |

Total Length: 113.00 ft      Total Volume: 1.585 bbl

Num Fluid Samples: 0

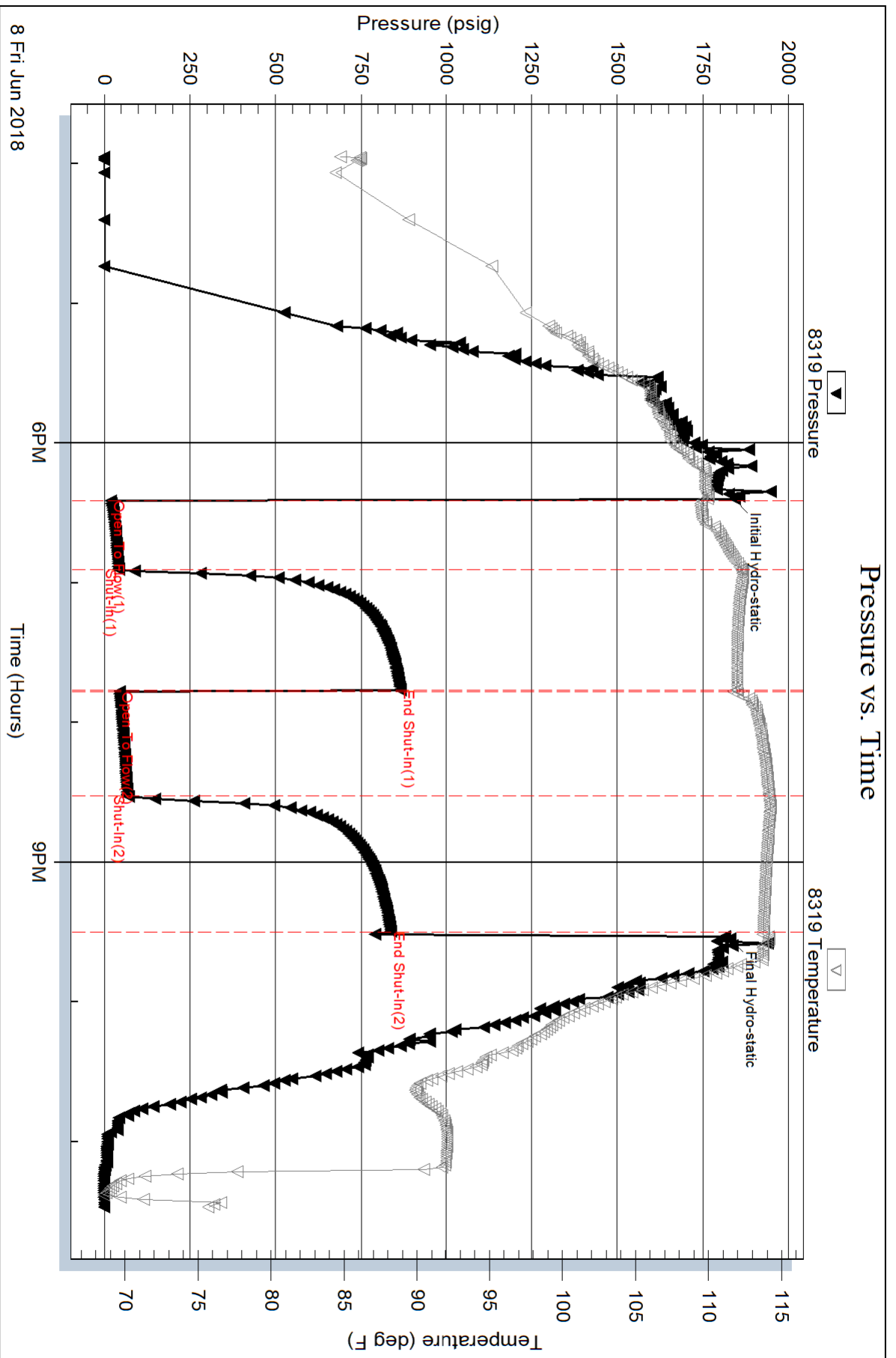
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .147 @ 82 = 43000ppm



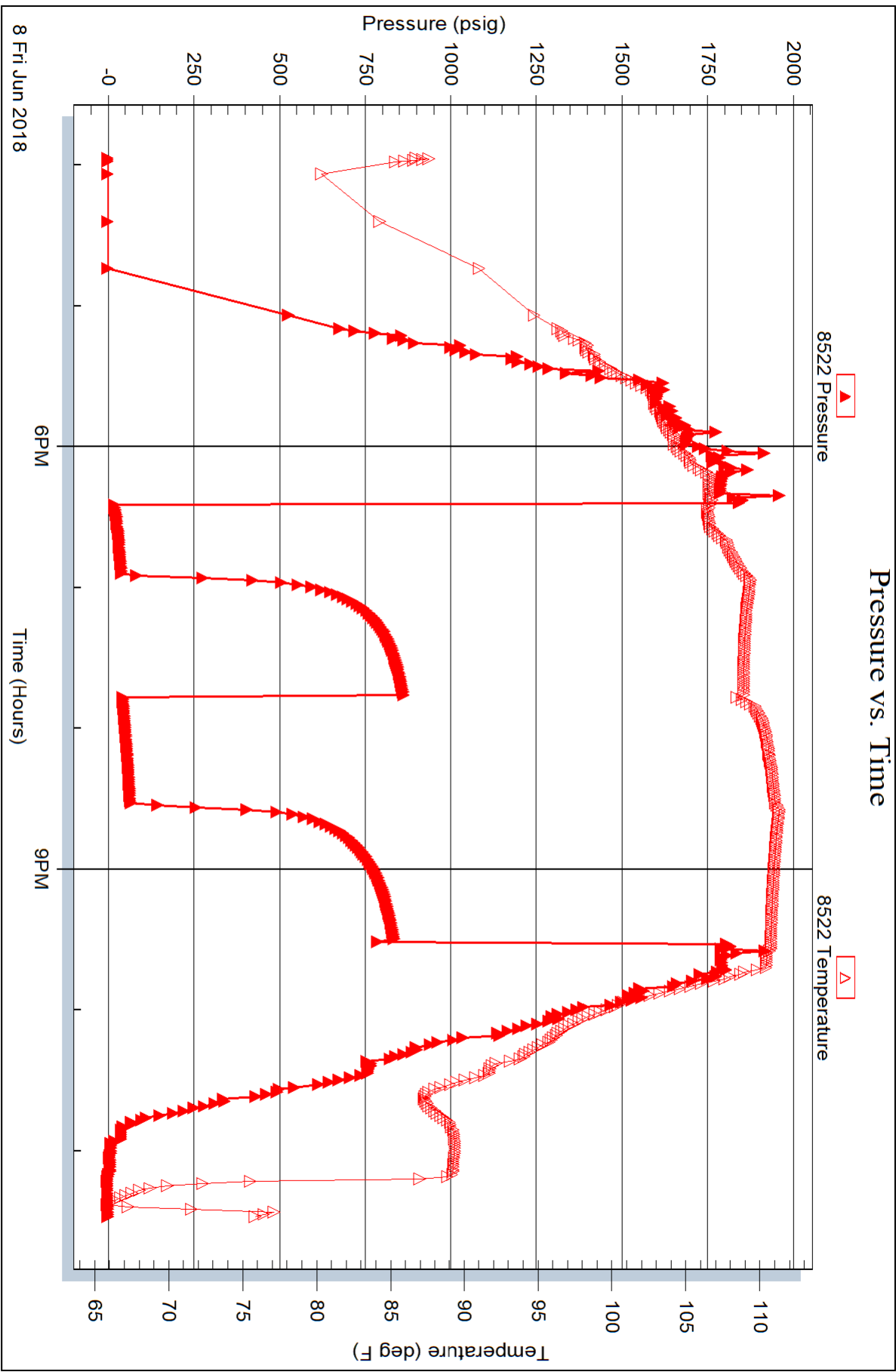
Serial #: 8522

Inside

Shakespeare Oil Co, Inc.

Ottley 2-21

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 63684

Printed: 2018.06.09 @ 00:12:33



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63684

**DST#: 2**

ATTN: Tim Priest

Test Start: 2018.06.09 @ 07:53:00

## GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:35:30

Time Test Ended: 13:17:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 3834.00 ft (KB) To 3868.00 ft (KB) (TVD)**

Reference Elevations: 2783.00 ft (KB)

Total Depth: 3868.00 ft (KB) (TVD)

2771.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8522 Inside**

Press@RunDepth: 26.61 psig @ 3835.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.09

End Date: 2018.06.09

Last Calib.: 2018.06.09

Start Time: 07:53:05

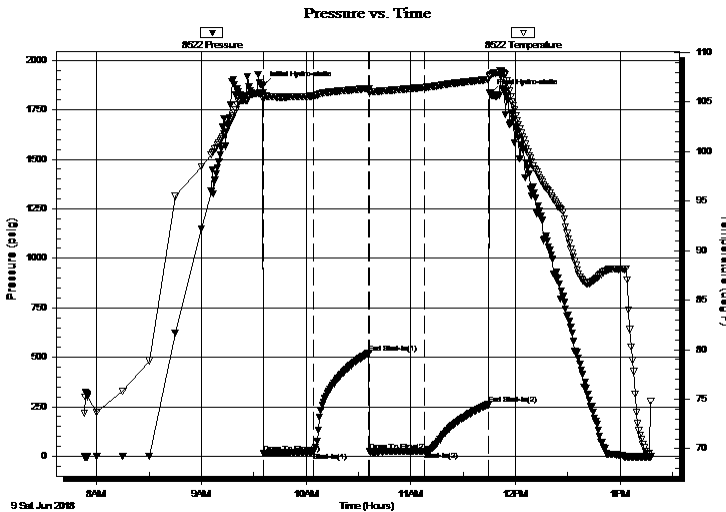
End Time: 13:17:44

Time On Btm: 2018.06.09 @ 09:35:15

Time Off Btm: 2018.06.09 @ 11:45:30

**TEST COMMENT:** IF: 1" blow .  
IS: No return.  
FF: No blow .  
FS: No return.

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1870.07         | 105.93       | Initial Hydro-static |
| 1           | 14.63           | 105.24       | Open To Flow (1)     |
| 29          | 21.74           | 105.60       | Shut-In(1)           |
| 61          | 522.23          | 106.38       | End Shut-In(1)       |
| 62          | 24.45           | 106.03       | Open To Flow (2)     |
| 93          | 26.61           | 106.48       | Shut-In(2)           |
| 129         | 261.32          | 107.27       | End Shut-In(2)       |
| 131         | 1831.15         | 107.64       | Final Hydro-static   |

## Recovery

| Length (ft) | Description              | Volume (bbl) |
|-------------|--------------------------|--------------|
| 25.00       | w cm 80m 20w (oil spots) | 0.35         |
|             |                          |              |
|             |                          |              |
|             |                          |              |
|             |                          |              |

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63684

**DST#: 2**

ATTN: Tim Priest

Test Start: 2018.06.09 @ 07:53:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description              | Volume<br>bbl |
|--------------|--------------------------|---------------|
| 25.00        | w cm 80m 20w (oil spots) | 0.351         |

Total Length: 25.00 ft      Total Volume: 0.351 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

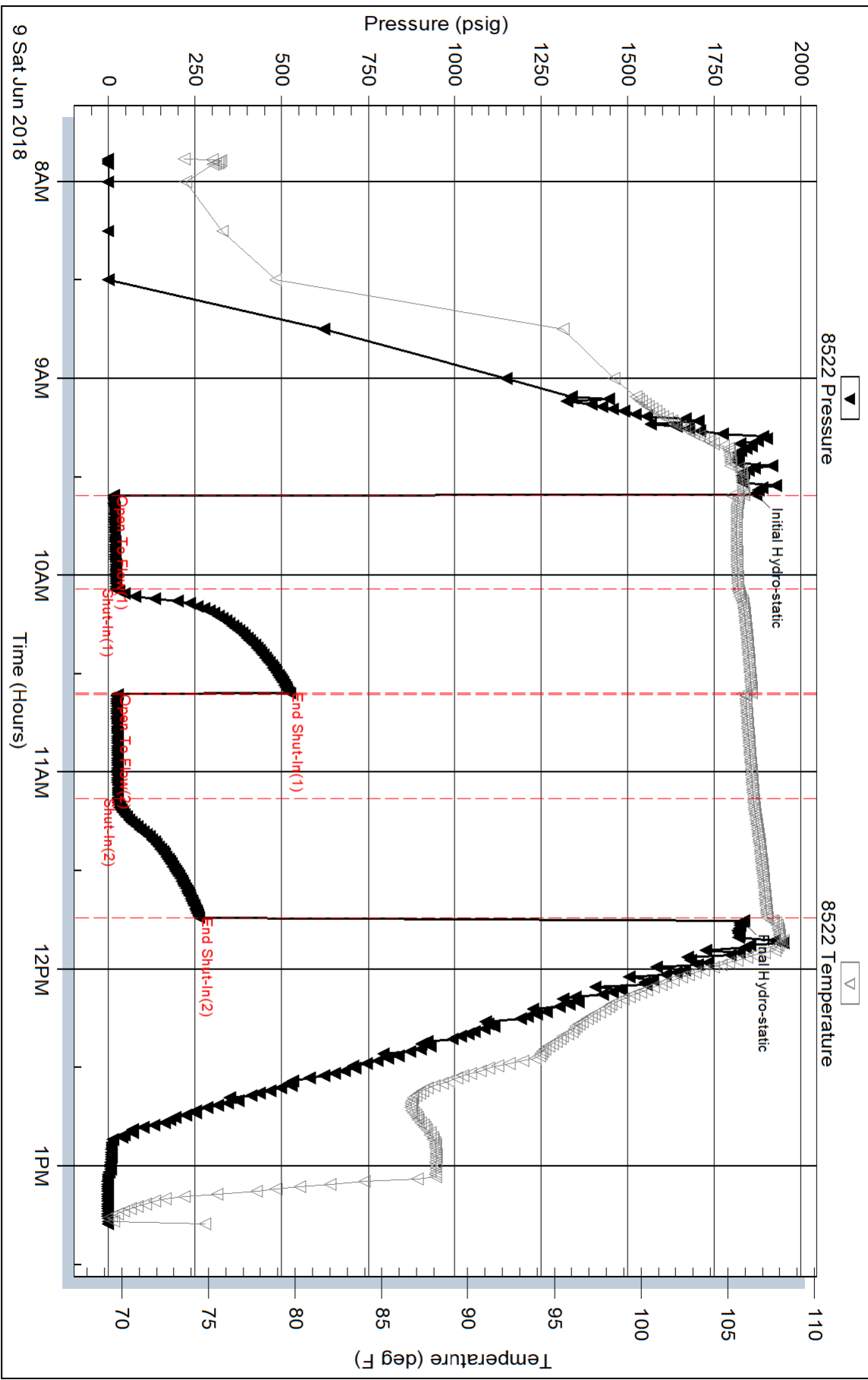
Laboratory Name:

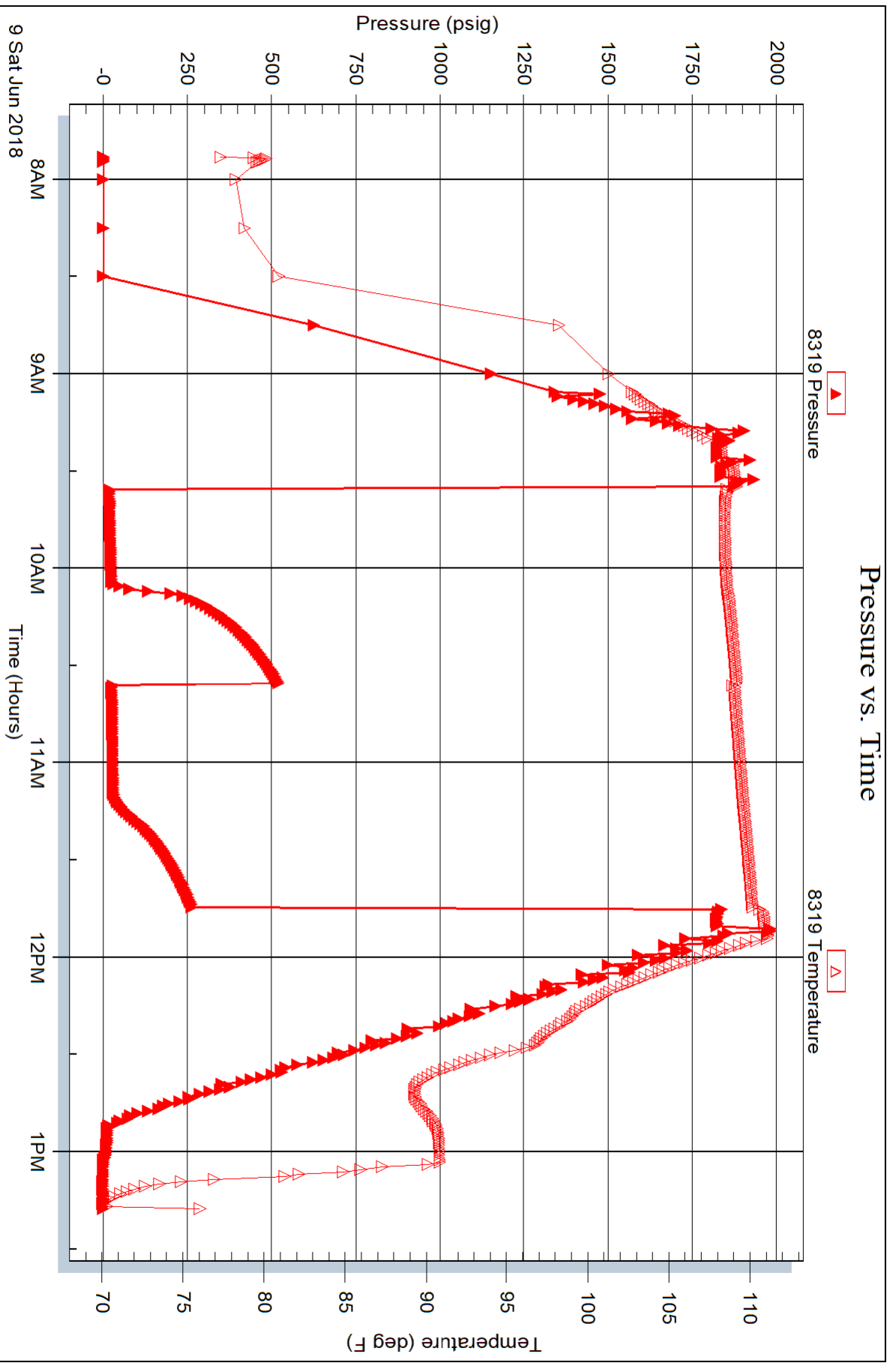
Laboratory Location:

Recovery Comments:



### Pressure vs. Time







**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63685

**DST#: 3**

ATTN: Tim Priest

Test Start: 2018.06.09 @ 19:58:00

## GENERAL INFORMATION:

Formation: **LKC E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:39:30

Time Test Ended: 01:31:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 3868.00 ft (KB) To 3888.00 ft (KB) (TVD)**

Reference Elevations: 2783.00 ft (KB)

Total Depth: 3888.00 ft (KB) (TVD)

2771.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8522**

**Inside**

Press@RunDepth: 24.76 psig @ 3869.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.09

End Date:

2018.06.10

Last Calib.: 2018.06.10

Start Time: 19:58:05

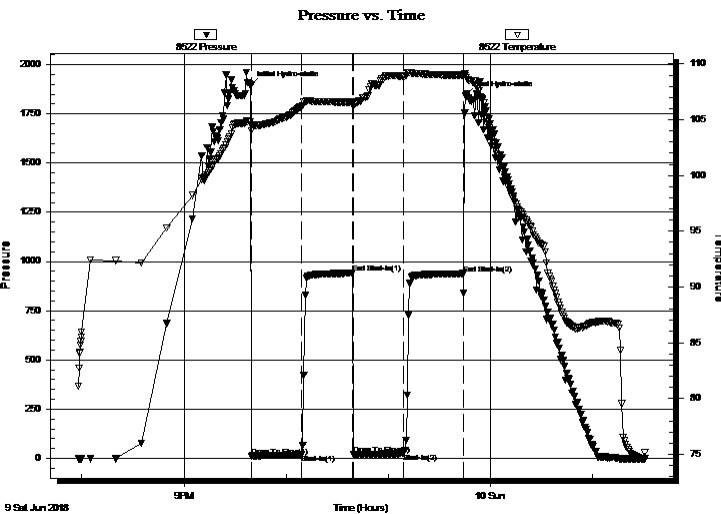
End Time:

01:30:59

Time On Btm: 2018.06.09 @ 21:39:15

Time Off Btm: 2018.06.09 @ 23:45:15

**TEST COMMENT:** IF: 1" blow .  
IS: No return.  
FF: No blow .  
FS: No return.



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1892.32         | 104.81       | Initial Hydro-static |
| 1           | 11.86           | 104.00       | Open To Flow (1)     |
| 30          | 18.00           | 106.15       | Shut-In(1)           |
| 60          | 940.14          | 106.59       | End Shut-In(1)       |
| 61          | 18.52           | 106.18       | Open To Flow (2)     |
| 90          | 24.76           | 108.89       | Shut-In(2)           |
| 125         | 938.19          | 109.01       | End Shut-In(2)       |
| 126         | 1842.01         | 108.96       | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 30.00       | mcw 50m 50w | 0.42         |
| 0.50        | oil 100o    | 0.01         |
|             |             |              |
|             |             |              |
|             |             |              |

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63685

**DST#: 3**

ATTN: Tim Priest

Test Start: 2018.06.09 @ 19:58:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 30.00        | mcw 50m 50w | 0.421         |
| 0.50         | oil 100o    | 0.007         |

Total Length: 30.50 ft      Total Volume: 0.428 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .222 @ 80f = 27000ppm

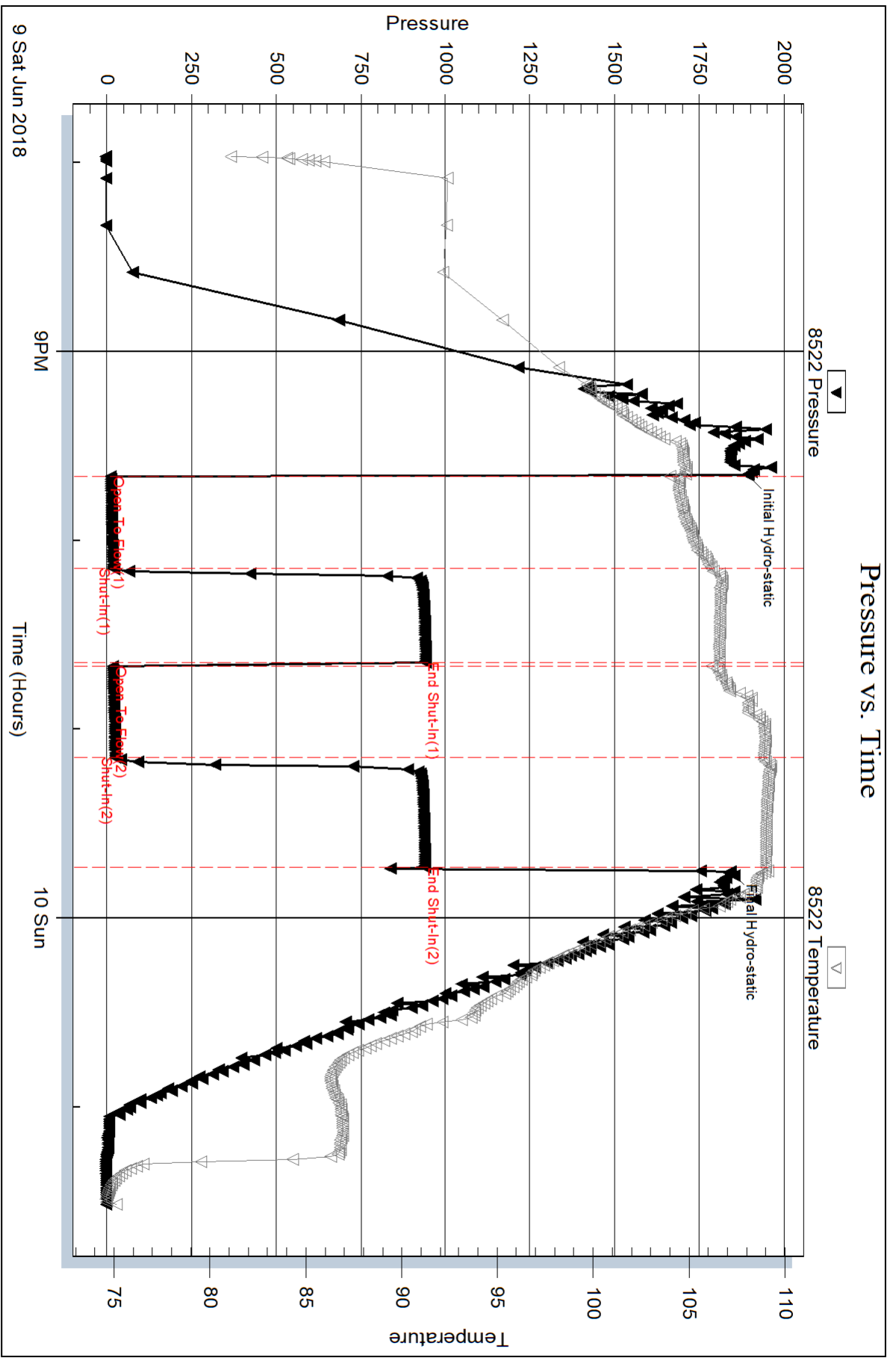
Serial #: 8522

Inside

Shakespeare Oil Co, Inc.

Ottley 2-21

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63685

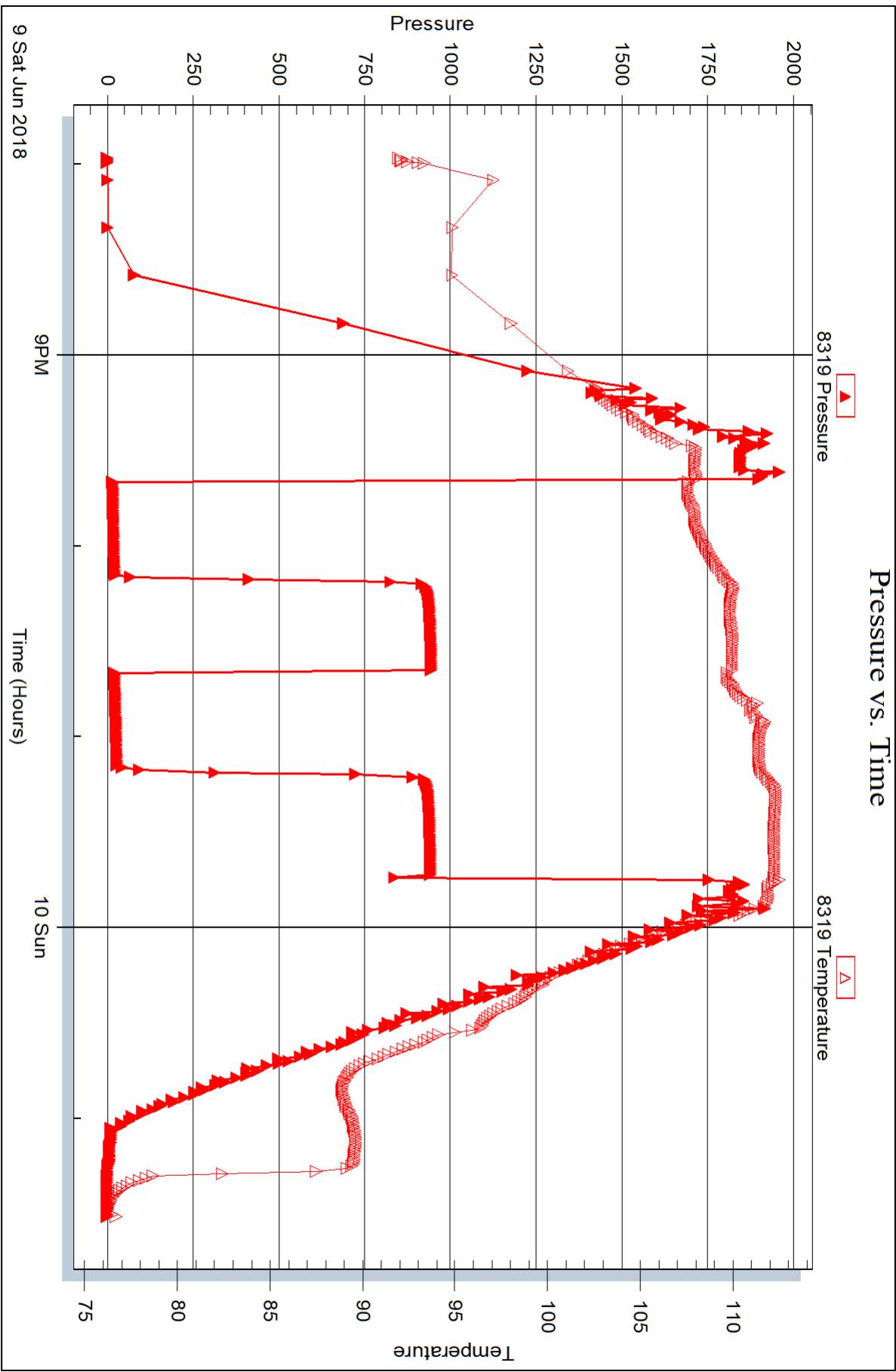
Printed: 2018.06.11 @ 09:34:42

Serial #: 8319

Outside Shakespeare Oil Co, Inc.

Ottley 2-21

DST Test Number: 3





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63686

**DST#: 4**

ATTN: Tim Priest

Test Start: 2018.06.10 @ 15:57:00

## GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:08:00

Time Test Ended: 23:47:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 3934.00 ft (KB) To 4020.00 ft (KB) (TVD)**

Reference Elevations: 2783.00 ft (KB)

Total Depth: 4020.00 ft (KB) (TVD)

2771.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8522 Inside**

Press@RunDepth: 46.80 psig @ 3935.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.10

End Date: 2018.06.10

Last Calib.: 2018.06.10

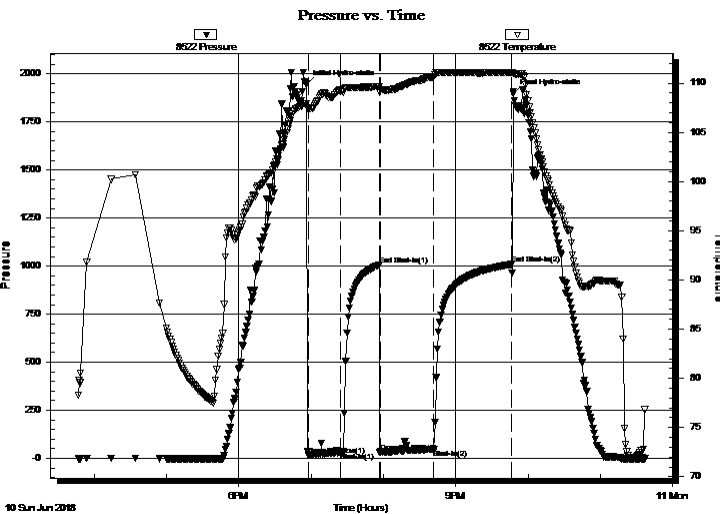
Start Time: 15:47:05

End Time: 23:37:29

Time On Btm: 2018.06.10 @ 18:56:15

Time Off Btm: 2018.06.10 @ 21:48:00

**TEST COMMENT:** IF: 2 1/2" blow .  
IS: No return.  
FF: 1 1/2" blow .  
FS: No return.



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1943.77         | 107.93       | Initial Hydro-static |
| 2           | 15.34           | 107.46       | Open To Flow (1)     |
| 29          | 29.50           | 109.32       | Shut-In(1)           |
| 61          | 1006.86         | 109.65       | End Shut-In(1)       |
| 62          | 33.40           | 109.37       | Open To Flow (2)     |
| 105         | 46.80           | 110.65       | Shut-In(2)           |
| 170         | 1008.76         | 111.07       | End Shut-In(2)       |
| 172         | 1896.98         | 110.96       | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 80.00       | socm 2o 98m | 1.12         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63686

**DST#: 4**

ATTN: Tim Priest

Test Start: 2018.06.10 @ 15:57:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 80.00        | socm 2o 98m | 1.122         |

Total Length: 80.00 ft      Total Volume: 1.122 bbl

Num Fluid Samples: 0

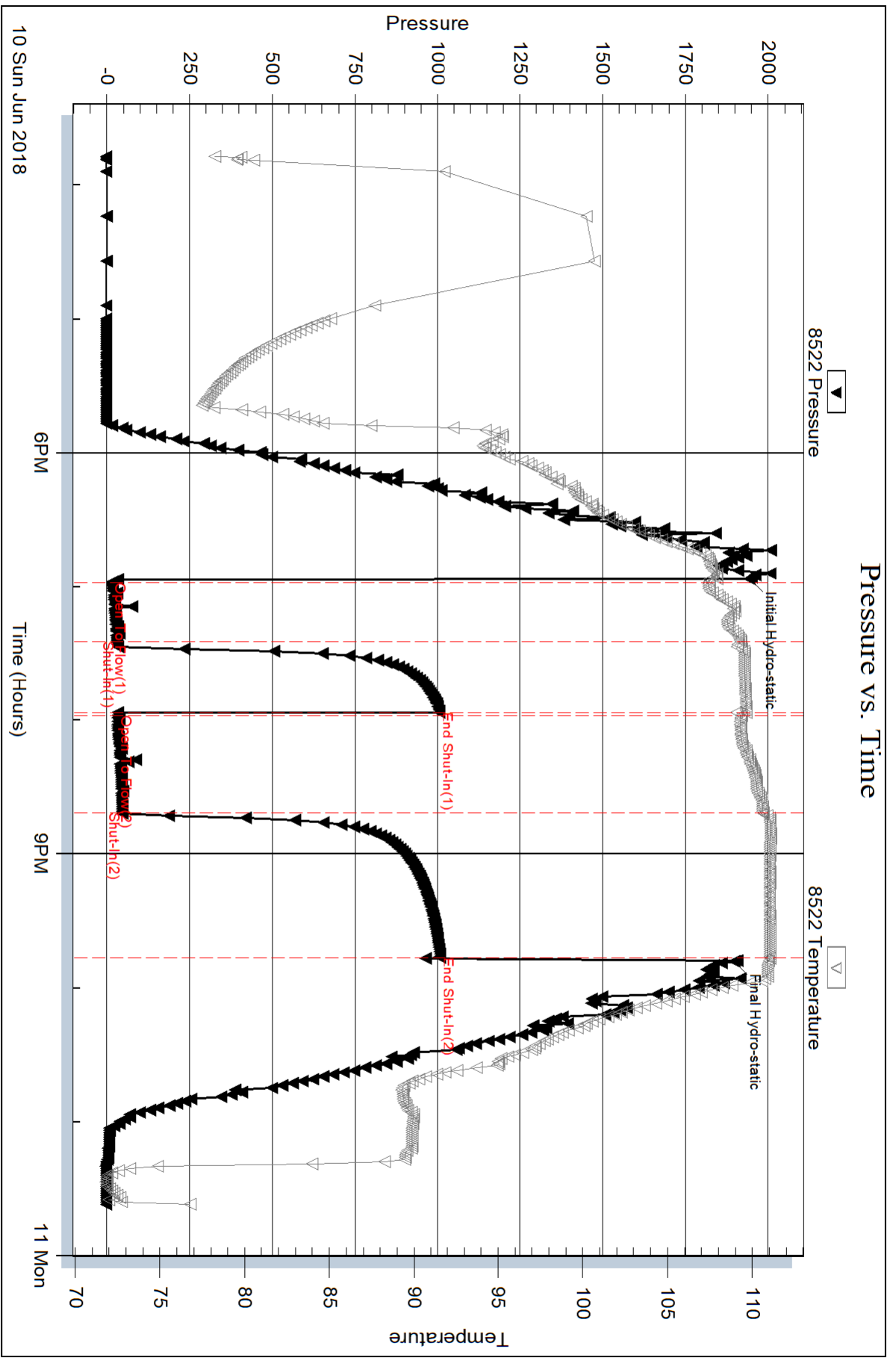
Num Gas Bombs: 0

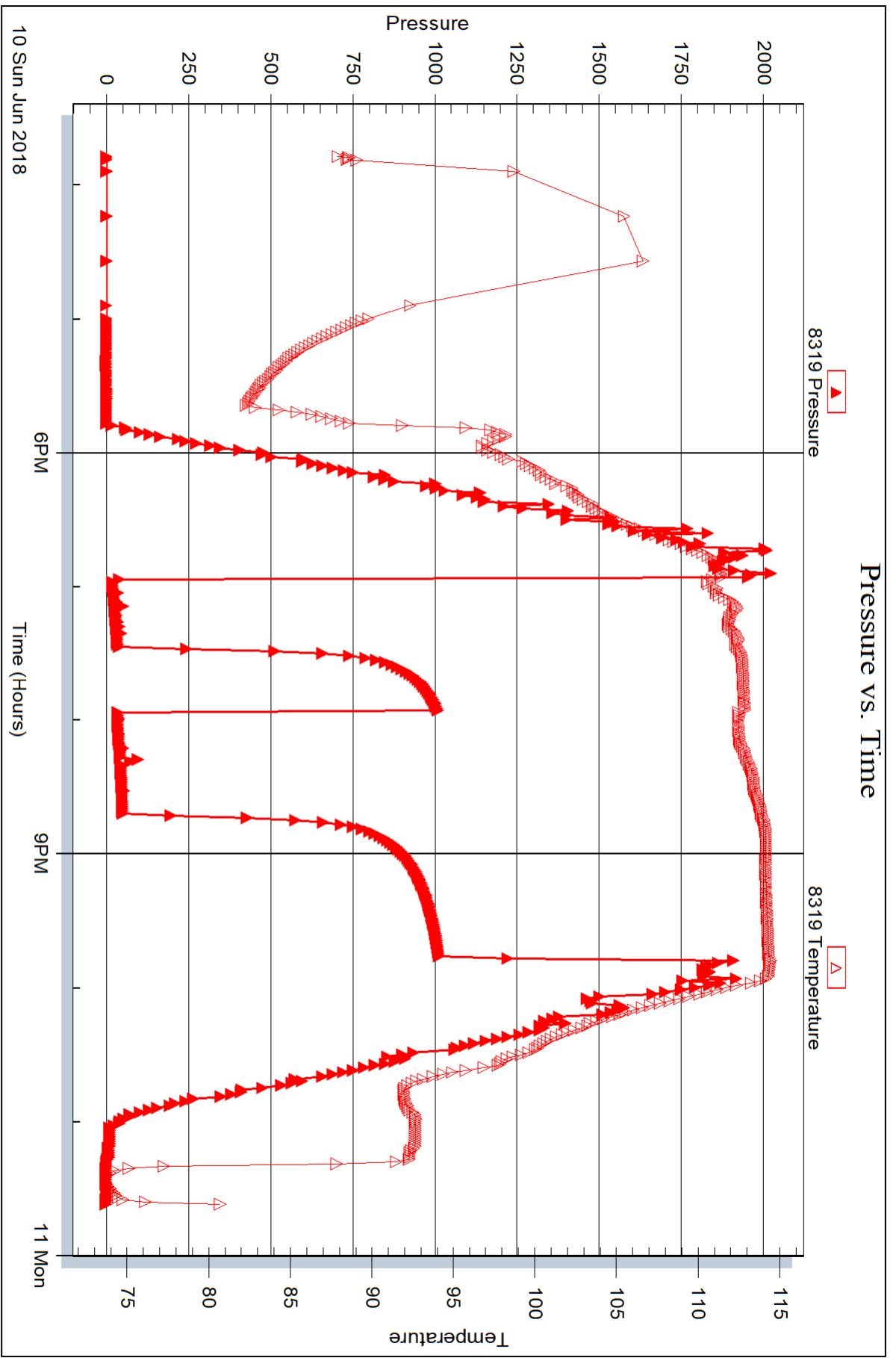
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63687

**DST#: 5**

ATTN: Tim Priest

Test Start: 2018.06.11 @ 07:57:00

## GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:27:45

Time Test Ended: 15:08:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 4020.00 ft (KB) To 4055.00 ft (KB) (TVD)**

Reference Elevations: 2783.00 ft (KB)

Total Depth: 4055.00 ft (KB) (TVD)

2771.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8522**

**Inside**

Press@RunDepth: 98.66 psig @ 4021.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.11

End Date:

2018.06.11

Last Calib.:

2018.06.11

Start Time: 07:29:05

End Time:

14:39:59

Time On Btm:

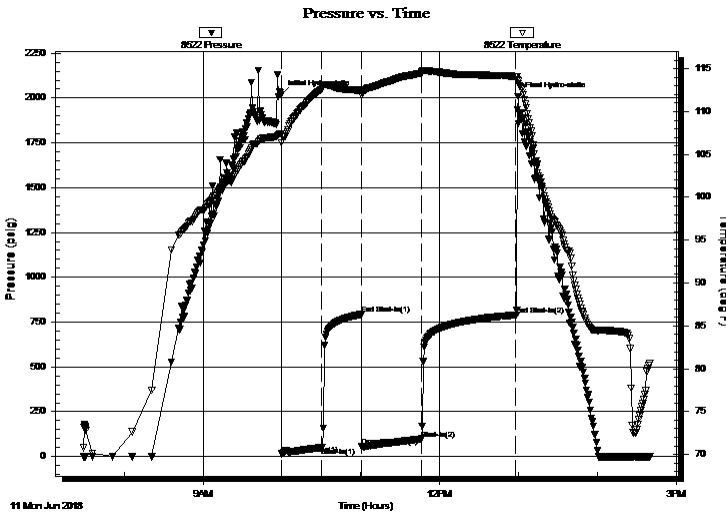
2018.06.11 @ 09:59:30

Time Off Btm:

2018.06.11 @ 12:59:45

TEST COMMENT: IF: 7 1/2" blow .  
IS: No return.  
FF: 7 1/2" blow .  
FS: No return.

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2020.54         | 107.45       | Initial Hydro-static |
| 1           | 14.92           | 106.37       | Open To Flow (1)     |
| 31          | 50.15           | 112.58       | Shut-In(1)           |
| 61          | 792.57          | 112.49       | End Shut-In(1)       |
| 62          | 53.83           | 111.92       | Open To Flow (2)     |
| 107         | 98.66           | 114.50       | Shut-In(2)           |
| 178         | 788.91          | 114.07       | End Shut-In(2)       |
| 181         | 2009.29         | 113.57       | Final Hydro-static   |

## Recovery

| Length (ft) | Description                    | Volume (bbl) |
|-------------|--------------------------------|--------------|
| 185.00      | mcw 5m 95w (oil puddle on top) | 2.60         |
|             |                                |              |
|             |                                |              |
|             |                                |              |
|             |                                |              |

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63687

**DST#: 5**

ATTN: Tim Priest

Test Start: 2018.06.11 @ 07:57:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

61000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description                    | Volume<br>bbl |
|--------------|--------------------------------|---------------|
| 185.00       | mcw 5m 95w (oil puddle on top) | 2.595         |

Total Length: 185.00 ft      Total Volume: 2.595 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

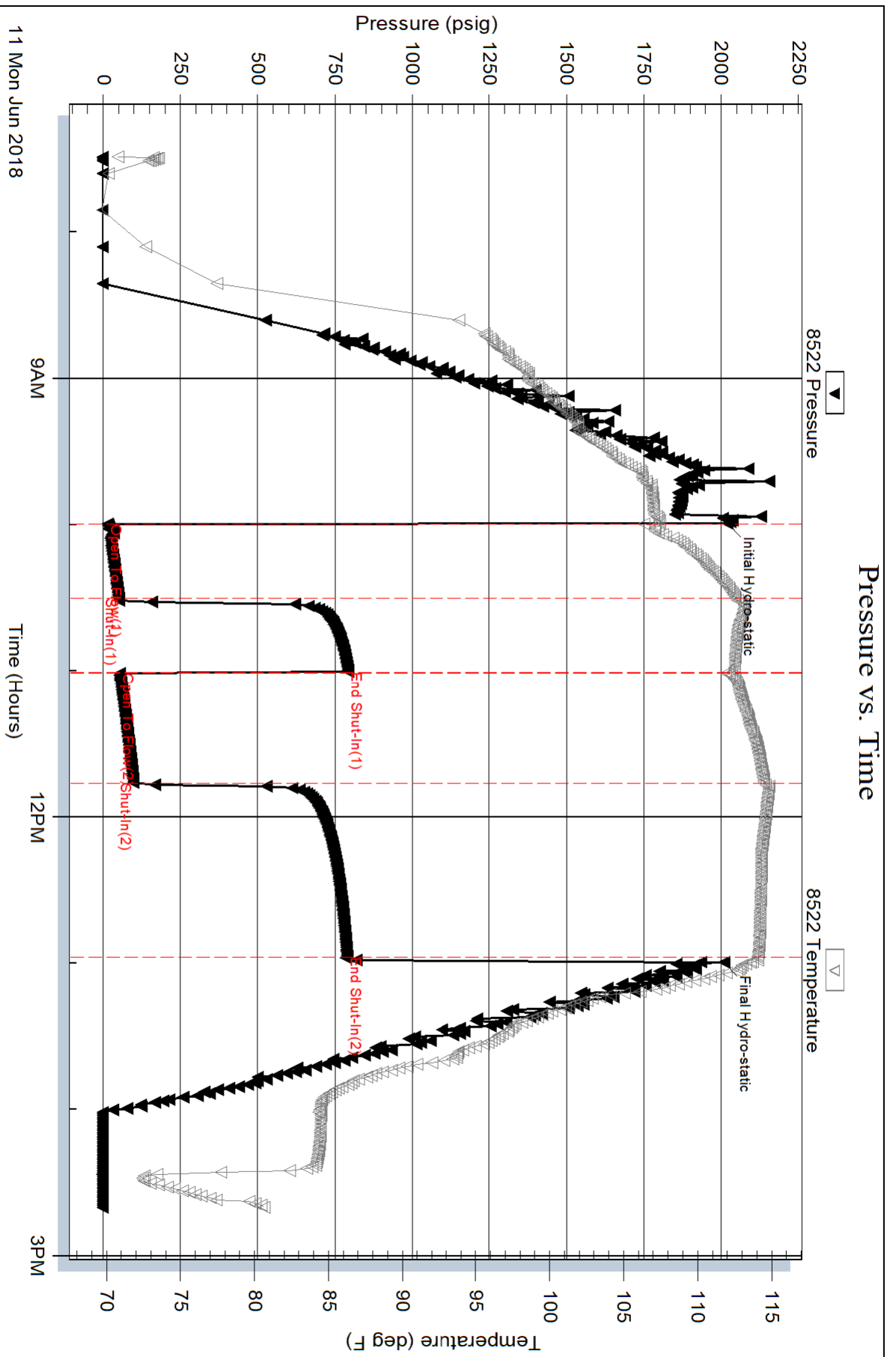
Serial #:

Laboratory Name:

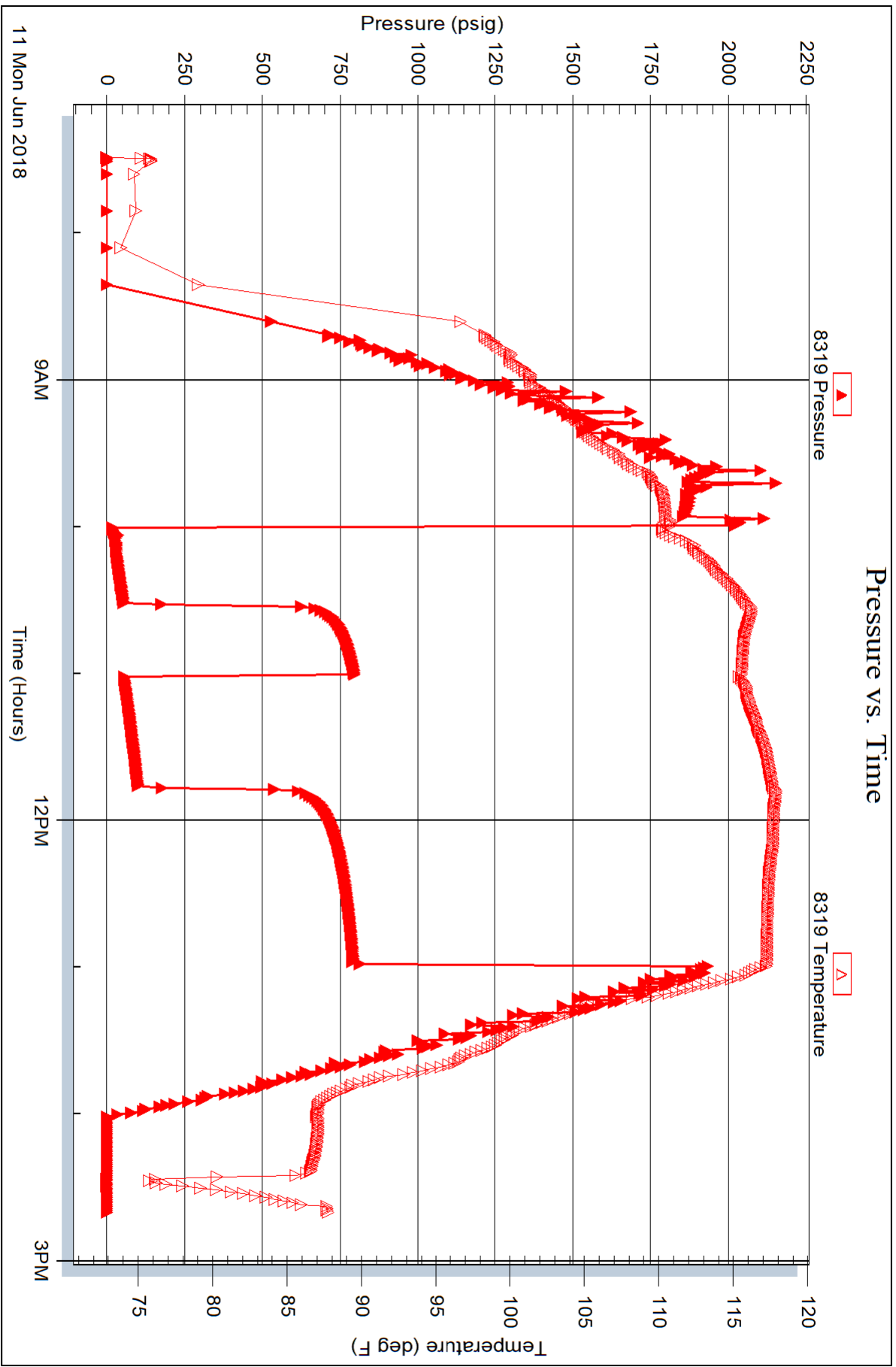
Laboratory Location:

Recovery Comments: rw is .103 @ 84f = 61000ppm

### Pressure vs. Time









**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63688

**DST#: 6**

ATTN: Tim Priest

Test Start: 2018.06.11 @ 21:42:00

## GENERAL INFORMATION:

Formation: **LKC L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:19:45

Time Test Ended: 05:48:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 4052.00 ft (KB) To 4095.00 ft (KB) (TVD)**

Reference Elevations: 2783.00 ft (KB)

Total Depth: 4088.00 ft (KB) (TVD)

2771.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8522**

**Inside**

Press@RunDepth: 488.74 psig @ 4053.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.11

End Date:

2018.06.12

Last Calib.:

2018.06.12

Start Time: 21:42:05

End Time:

05:48:29

Time On Btm:

2018.06.12 @ 00:18:45

Time Off Btm:

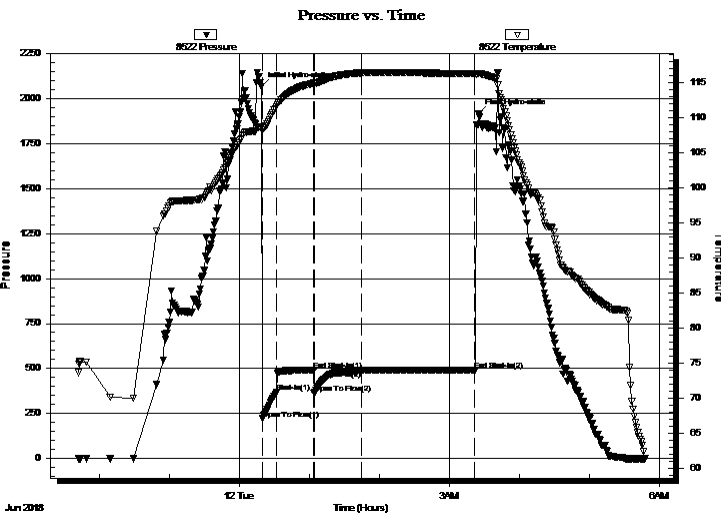
2018.06.12 @ 03:25:30

TEST COMMENT: IF BOB @ 2 min. built to 73".

IS: No return.

FF: BOB @ 2 1/2 min. Built to 40".

FS: No return



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2066.73         | 108.70       | Initial Hydro-static |
| 1           | 220.22          | 108.53       | Open To Flow (1)     |
| 13          | 365.53          | 111.64       | Shut-In(1)           |
| 45          | 489.89          | 114.96       | End Shut-In(1)       |
| 46          | 361.84          | 114.90       | Open To Flow (2)     |
| 86          | 488.74          | 116.43       | Shut-In(2)           |
| 183         | 490.13          | 116.29       | End Shut-In(2)       |
| 187         | 1918.43         | 116.35       | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 1040.00     | mcw 3m 97w  | 14.59        |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63688

**DST#: 6**

ATTN: Tim Priest

Test Start: 2018.06.11 @ 21:42:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

78000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 1040.00      | mcw 3m 97w  | 14.588        |

Total Length: 1040.00 ft      Total Volume: 14.588 bbl

Num Fluid Samples: 0

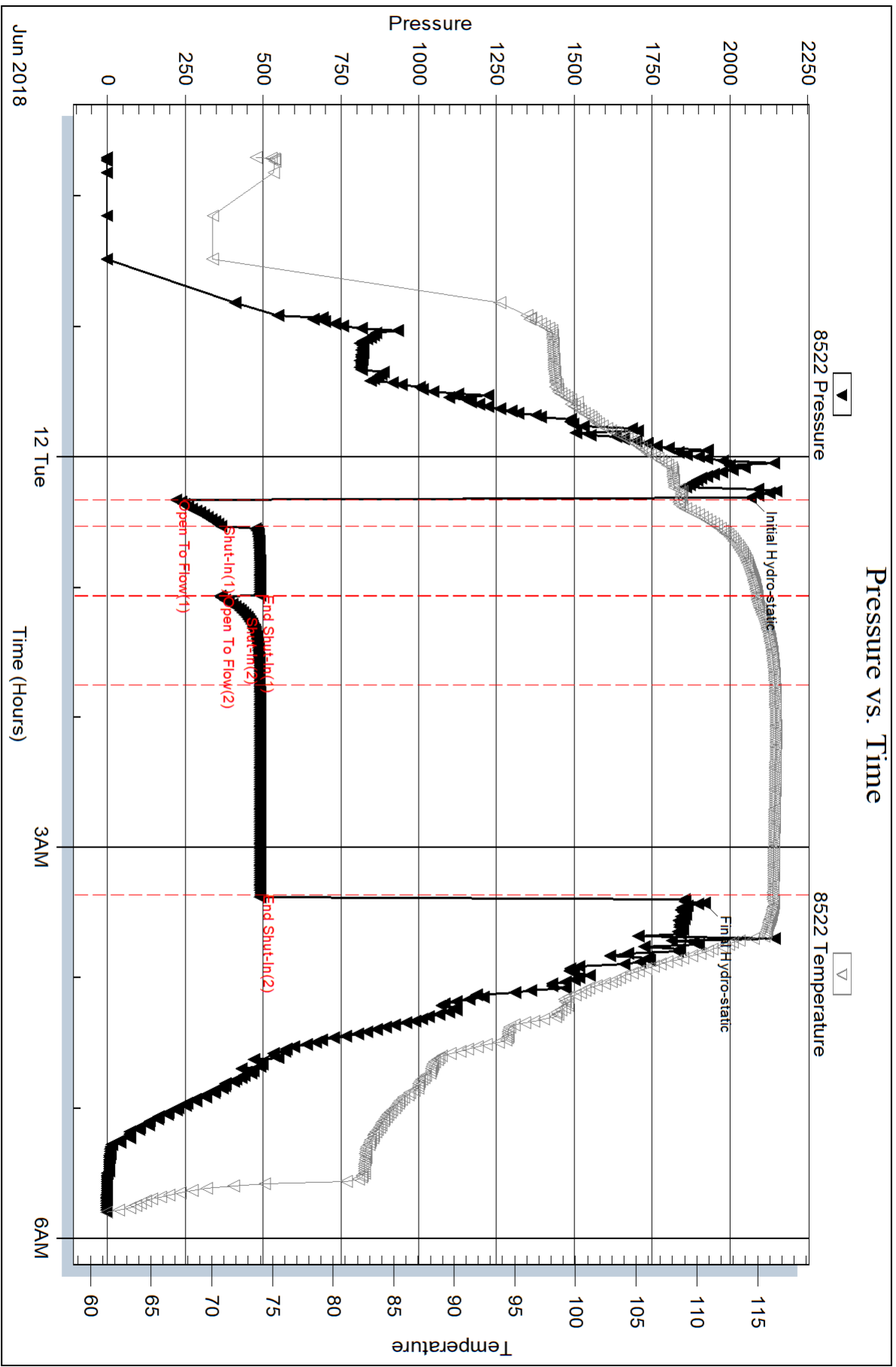
Num Gas Bombs: 0

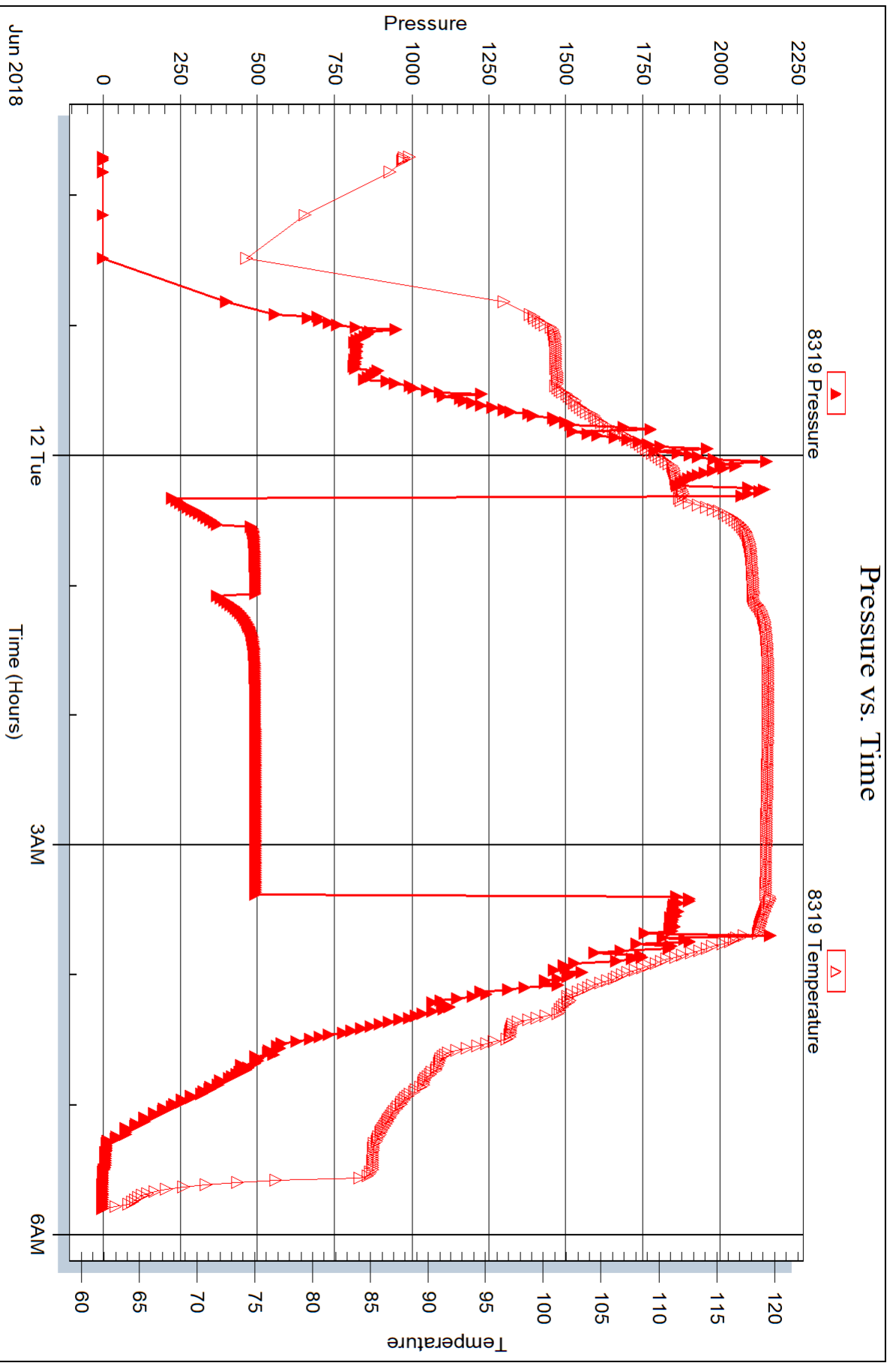
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .115 @ 60f = 78000ppm







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63689

**DST#: 7**

ATTN: Tim Priest

Test Start: 2018.06.13 @ 01:23:00

## GENERAL INFORMATION:

Formation: **Marmaton - Myric Sta**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:49:15

Time Test Ended: 09:05:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 4206.00 ft (KB) To 4290.00 ft (KB) (TVD)**

Reference Elevations: 2783.00 ft (KB)

Total Depth: 4290.00 ft (KB) (TVD)

2771.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8522**

**Inside**

Press@RunDepth: 129.12 psig @ 4207.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.13

End Date:

2018.06.13

Last Calib.:

2018.06.13

Start Time: 01:23:05

End Time:

09:05:14

Time On Btm:

2018.06.13 @ 03:47:45

Time Off Btm:

2018.06.13 @ 06:24:30

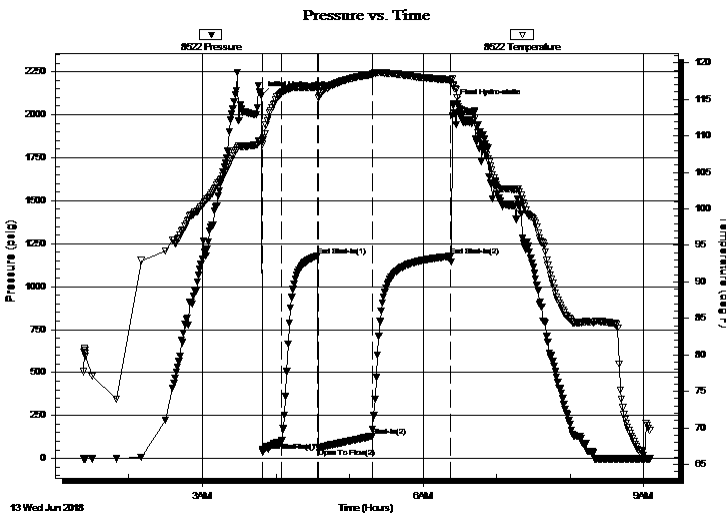
TEST COMMENT: IF: BOB @ 5 min. built to 29"

IS: No return.

FF: BOB @ 7 min, built to 38"

FS: No return.

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2111.55         | 109.21       | Initial Hydro-static |
| 2           | 43.73           | 109.39       | Open To Flow (1)     |
| 17          | 92.66           | 115.83       | Shut-In(1)           |
| 46          | 1179.30         | 116.54       | End Shut-In(1)       |
| 47          | 61.96           | 115.25       | Open To Flow (2)     |
| 91          | 129.12          | 118.41       | Shut-In(2)           |
| 155         | 1176.40         | 117.65       | End Shut-In(2)       |
| 157         | 2063.17         | 117.01       | Final Hydro-static   |

## Recovery

| Length (ft) | Description          | Volume (bbl) |
|-------------|----------------------|--------------|
| 120.00      | omcw 5o 30m 65w      | 1.68         |
| 60.00       | mco gmco 20g 20m 60o | 0.84         |
| 80.00       | gmco 10g 5m 85o      | 1.12         |
| 0.00        | 750' GIP             | 0.00         |
|             |                      |              |
|             |                      |              |

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63689

**DST#: 7**

ATTN: Tim Priest

Test Start: 2018.06.13 @ 01:23:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

25 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

55000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description          | Volume<br>bbbl |
|--------------|----------------------|----------------|
| 120.00       | omcw 5o 30m 65w      | 1.683          |
| 60.00        | mco gmco 20g 20m 60o | 0.842          |
| 80.00        | gmco 10g 5m 85o      | 1.122          |
| 0.00         | 750' GIP             | 0.000          |

Total Length: 260.00 ft      Total Volume: 3.647 bbl

Num Fluid Samples: 0

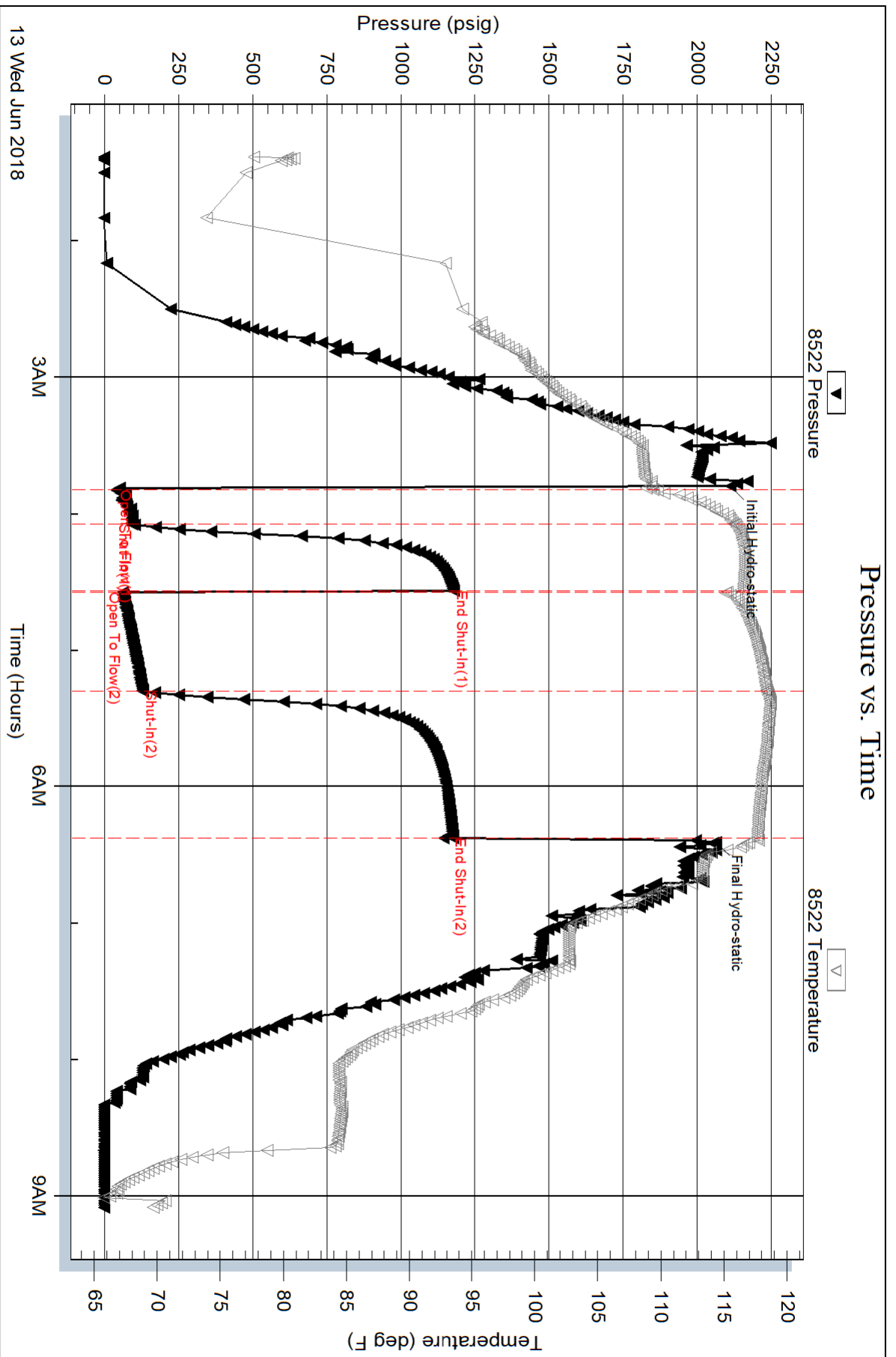
Num Gas Bombs: 0

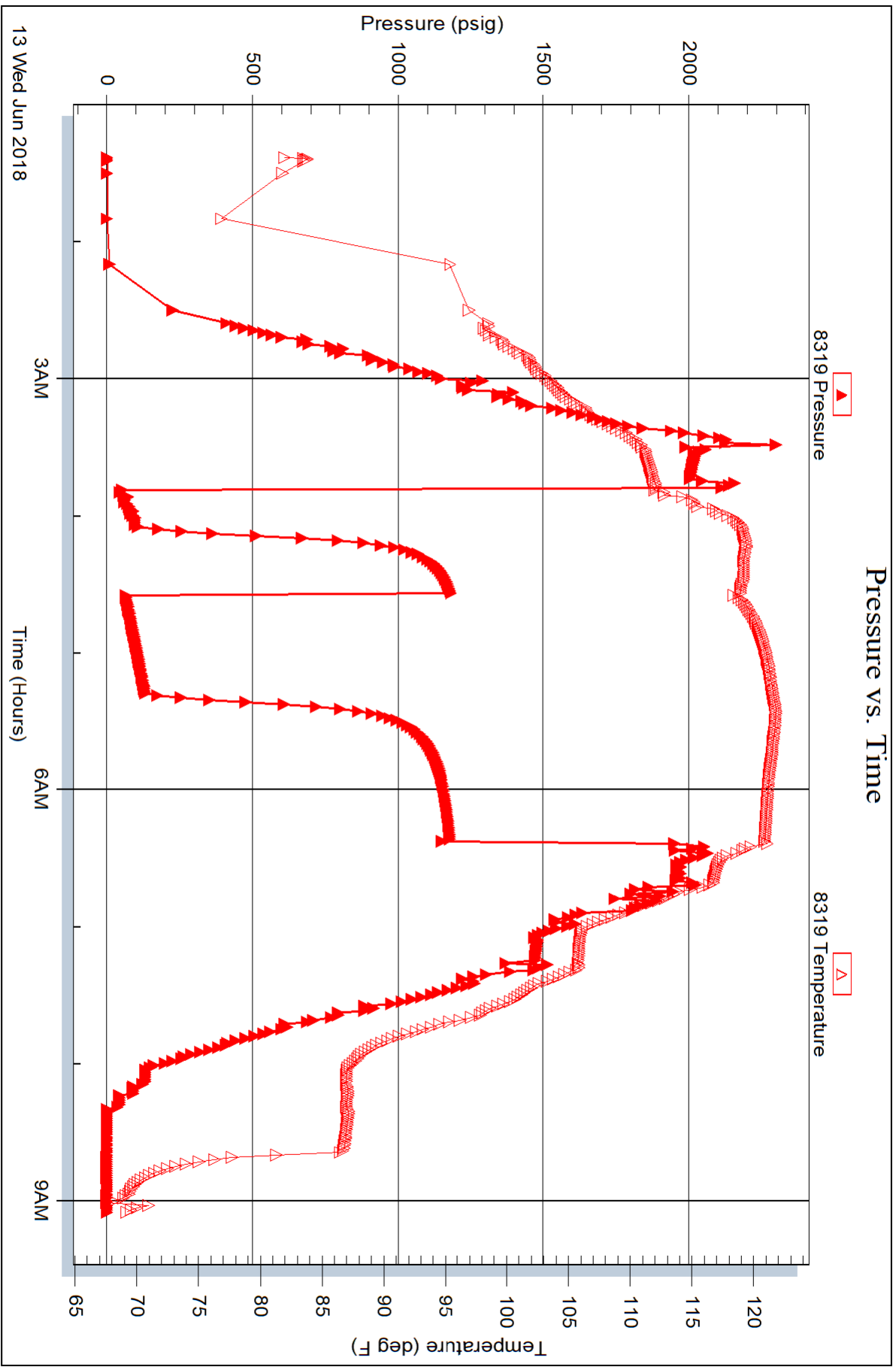
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .140 @ 68f = 55000ppm







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63690

**DST#: 8**

ATTN: Tim Priest

Test Start: 2018.06.13 @ 20:27:00

## GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:44:00

Time Test Ended: 03:46:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 4310.00 ft (KB) To 4380.00 ft (KB) (TVD)**

Reference Elevations: 2783.00 ft (KB)

Total Depth: 4380.00 ft (KB) (TVD)

2771.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8522 Inside**

Press@RunDepth: 31.39 psig @ 4311.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.13

End Date:

2018.06.14

Last Calib.: 2018.06.14

Start Time: 20:40:05

End Time:

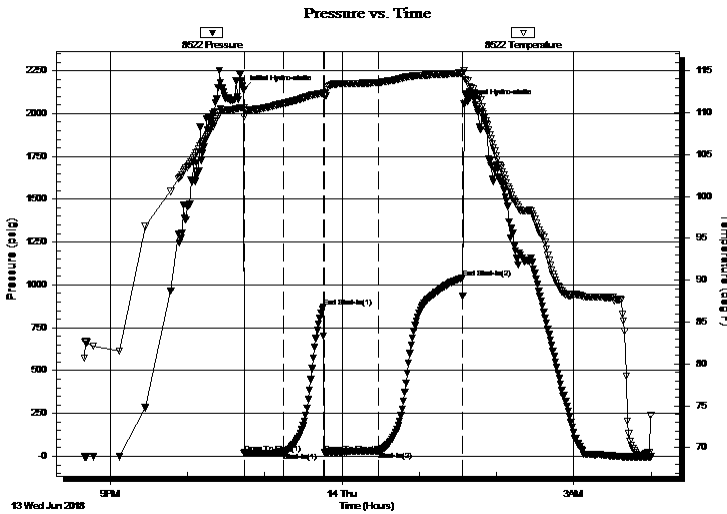
03:59:44

Time On Btm: 2018.06.13 @ 22:43:45

Time Off Btm: 2018.06.14 @ 01:34:45

**TEST COMMENT:** IF: 6" blow.  
IS: No return.  
FF: BOB @ 30 min. built to 13 1/2" blow.  
FS: No return.

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2139.70         | 110.56       | Initial Hydro-static |
| 1           | 18.99           | 109.50       | Open To Flow (1)     |
| 31          | 21.46           | 111.10       | Shut-In(1)           |
| 62          | 872.80          | 112.31       | End Shut-In(1)       |
| 63          | 20.11           | 111.98       | Open To Flow (2)     |
| 105         | 31.39           | 113.60       | Shut-In(2)           |
| 170         | 1040.90         | 114.72       | End Shut-In(2)       |
| 171         | 2054.62         | 115.03       | Final Hydro-static   |

## Recovery

| Length (ft) | Description      | Volume (bbl) |
|-------------|------------------|--------------|
| 45.00       | gmco 20g 30m 50o | 0.63         |
| 0.00        | 200' GIP         | 0.00         |
|             |                  |              |
|             |                  |              |
|             |                  |              |

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co, Inc.

**21 14s 32w, Logan, Ks**

202 W main ST  
Salem, IL 62881

**Ottley 2-21**

Job Ticket: 63690

**DST#: 8**

ATTN: Tim Priest

Test Start: 2018.06.13 @ 20:27:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5900.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description      | Volume<br>bbl |
|--------------|------------------|---------------|
| 45.00        | gmco 20g 30m 50o | 0.631         |
| 0.00         | 200' GIP         | 0.000         |

Total Length: 45.00 ft      Total Volume: 0.631 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8522

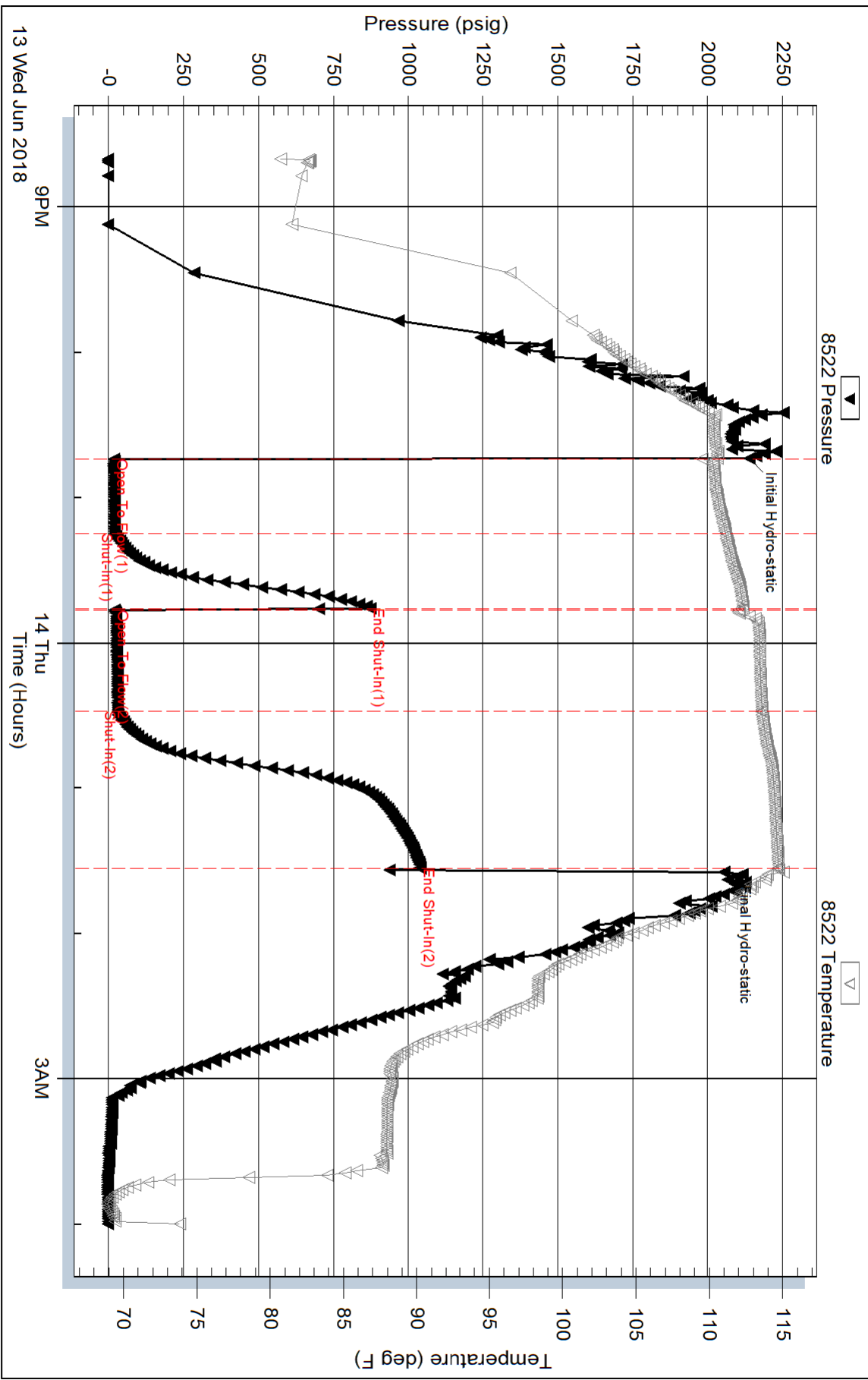
Inside

Shakespeare Oil Co, Inc.

Ottley 2-21

DST Test Number: 8

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 63690

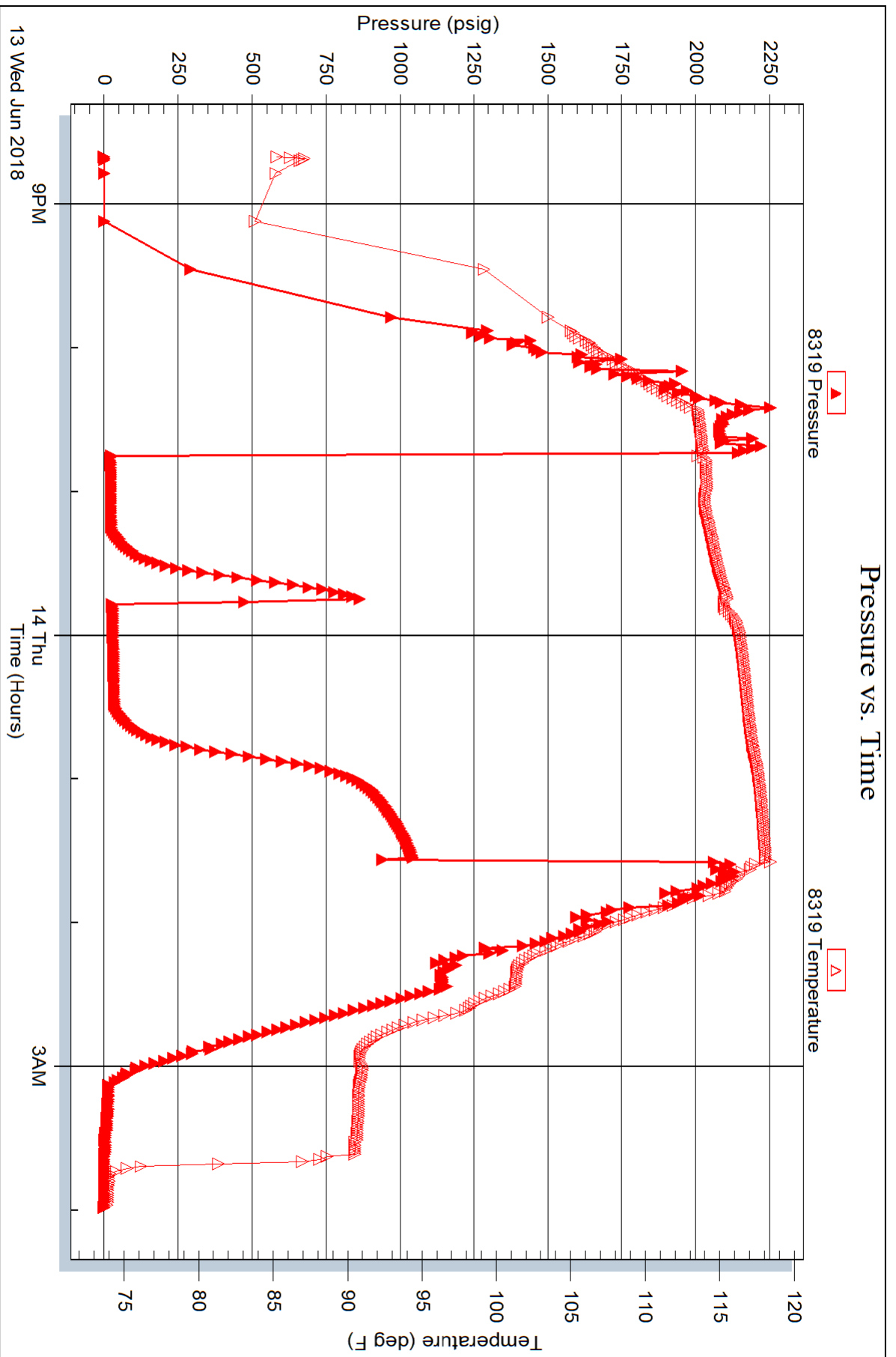
Printed: 2018.06.14 @ 05:27:12

Serial #: 8319

Outside Shakespeare Oil Co, Inc.

Oilley 2-21

DST Test Number: 8





**GEOLOGIST'S REPORT**  
**DRILLING TIME AND SAMPLE LOG**

COMPANY **SHAKESPEAR OIL CO.**

LEASE **Orkney 2-21**

FIELD **Chauk Buttes**

LOCATION **2050' FNL, 2490' FEL**

SFC **21 TWPSP 14S ROE 32W**

COUNTY **Logan STATE Kansas**

CONTRACTOR **Duke Drilling Rig #1**

SPUD **6-4-18** COMP

RTD **3500'** LTD

MUD UP **3500'** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3650'** to RTD

DRILLING TIME KEPT FROM **3500'** to RTD

SAMPLES EXAMINED FROM **3650'** to RTD

GEOLOGICAL SUPERVISION FROM **3700'** to RTD

GEOLOGIST ON WELL **Tim Priest**

FORMATION TOPS **ELECTRIC LOG**

BY **Weatherford**

ANALYTIC

HEATHER SHALE

LAUSING

STARK

BRC

Fort Scott

Cherokee Shale

Mississippi

ELEVATIONS

KG 2783'

DF

GL 2771'

Measurements Are All

From **KB**

CASING

CONDUCTION **N/A**

SURFACE **8-5/8" @ 267'**

PRODUCTION

ELECTRICAL

SURVEYS

CND./D./SP./P.E.

Micro

By: Weatherford

REMARKS

Respectfully Submitted,

Tim Priest

Petroleum Geologist

API #15-109-21551-00-00

**LEGEND**

