



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1240944  
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<br>Recompletion Date | Date Reached TD | Completion Date or<br>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: \_\_\_\_\_



1240944

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](mailto: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><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 |                  |                |              |                            |
|  |                  |                |              |                            |

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<br>Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record<br><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 |
|-----------------------------------|-----------|---------|-------------|---------------|---------|
|                                   |           |         |             |               |         |

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

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Downing-Nelson Oil Co Inc |
| Well Name | Sunley-Curtain 1-26       |
| Doc ID    | 1240944                   |

Tops

| Name           | Top   | Datum |
|----------------|-------|-------|
| Top Anhydrite  | 1369' | +738  |
| Base Anhydrite | 1414' | +693  |
| Topeka         | 3128' | -1021 |
| Heebner        | 3384' | -1277 |
| Toronto        | 3404' | -1297 |
| LKC            | 3430' | -1323 |
| BKC            | 3671' | -1564 |
| Marmaton       | 3712' | -1605 |
| Arbuckle       | 3836' | -1729 |

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1076

|                        |                |      |          |            |                          |       |          |  |   |       |        |             |  |        |           |  |
|------------------------|----------------|------|----------|------------|--------------------------|-------|----------|--|---|-------|--------|-------------|--|--------|-----------|--|
| Date                   | 1-15-15        | Sec. | 26       | Twp.       | 14                       | Range | 19       | County   | ELLIS   | State | KANSAS | On Location |  | Finish | 7:00 P.M. |  |
| Location               |                |      |          |            |                          |       |          | Hay's KS 3 1/2 S 4 1/2 W 1/4 S INTD  |   |       |        |             |  |        |           |  |
| Lease                  | Sunley Curtin  |      |          | Well No.   | 1-26                     |       |          | Owner  | To Quality Oilwell Cementing, Inc.                  |       |        |             |  |        |           |  |
| Contractor             | Discovery      |      |          | DRLG Rtg#1 | CLIFF                    |       |          | You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |   |       |        |             |  |        |           |  |
| Type Job               | Cement Surface |      |          | Charge To  | Downing & Nelson Oil Co. |       |          |  |   |       |        |             |  |        |           |  |
| Hole Size              | 12 1/4         |      |          | T.D.       | 221                      |       |          | Street   |   |       |        |             |  |        |           |  |
| Csg.                   | 8 5/8 23#      |      |          | Depth      | 221                      |       |          | City   | State   |       |        |             |  |        |           |  |
| Tbg. Size              |                |      |          | Depth      |                          |       |          | The above was done to satisfaction and supervision of owner agent or contractor.   |   |       |        |             |  |        |           |  |
| Tool                   |                |      |          | Depth      |                          |       |          | Cement Amount Ordered  | 150 sx <del>250</del> <sup>Com</sup> <del>107</del> |       |        |             |  |        |           |  |
| Cement Left in Csg.    | 15'            |      |          | Shoe Joint |                          |       |          | 3% CC 2% gel   |   |       |        |             |  |        |           |  |
| Meas Line              | Displace       |      |          | 13.10 BBL  |                          |       |          |  |   |       |        |             |  |        |           |  |
| EQUIPMENT              |                |      |          |            |                          |       |          | Common   | 150   |       |        |             |  |        |           |  |
| Pumptrk                | 18             | No.  | Cementer | GLENDA G   |                          |       | Poz. Mix |  |   |       |        |             |  |        |           |  |
|                        |                |      | Helper   | CODY B     |                          |       | Gel.     | 3  |   |       |        |             |  |        |           |  |
| Bulktrk                | 1              | No.  | Driver   | LONNIE M   |                          |       | Calcium  | 5  |   |       |        |             |  |        |           |  |
|                        |                |      | Driver   |            |                          |       |          |  |   |       |        |             |  |        |           |  |
| Bulktrk                |                | No.  | Driver   |            |                          |       |          |  |   |       |        |             |  |        |           |  |
|                        |                |      | Driver   |            |                          |       |          |  |   |       |        |             |  |        |           |  |
| JOB SERVICES & REMARKS |                |      |          |            |                          |       |          | Hulls  |   |       |        |             |  |        |           |  |
| Remarks:               |                |      |          |            |                          |       |          | Salt   |   |       |        |             |  |        |           |  |
| Rat Hole               |                |      |          |            |                          |       |          | Flowseal   |   |       |        |             |  |        |           |  |
| Mouse Hole             |                |      |          |            |                          |       |          | Kol-Seal   |   |       |        |             |  |        |           |  |
| Centralizers           |                |      |          |            |                          |       |          | Mud CLR 48   |   |       |        |             |  |        |           |  |
| Baskets                |                |      |          |            |                          |       |          | CFL-117 or CD110 CAF 38  |   |       |        |             |  |        |           |  |
| D/V or Port Collar     |                |      |          |            |                          |       |          | Sand   |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Handling   | 158   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Mileage  |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | FLOAT EQUIPMENT  |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Guide Shoe   |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Centralizer  |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Baskets  |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | AFU Inserts  |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Float Shoe   |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Latch Down   |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Pumptrk Charge   | Surface   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Mileage  | 8   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Tax  |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Discount   |   |       |        |             |  |        |           |  |
|                        |                |      |          |            |                          |       |          | Total Charge   |   |       |        |             |  |        |           |  |
| X Signature            | [Signature]    |      |          |            |                          |       |          |  |   |       |        |             |  |        |           |  |

Quality Oilwell Cementing

THANKS

Cement Circulated

Set 8 5/8 @ 221 FT





## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

### **Sunley-Curtain #1-26**

#### **26 14s 19w Ellis,KS**

Start Date: 2015.01.19 @ 05:30:00

End Date: 2015.01.19 @ 12:13:00

Job Ticket #: 61390                      DST #: 1

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

Printed: 2015.01.22 @ 09:10:29



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61390

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.01.19 @ 05:30:00

## GENERAL INFORMATION:

Formation: **LKC " D "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:24:00

Time Test Ended: 12:13:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jim Svaty

Unit No: 76

**Interval: 3463.00 ft (KB) To 3487.00 ft (KB) (TVD)**

Reference Elevations: 2115.00 ft (KB)

Total Depth: 3487.00 ft (KB) (TVD)

2107.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8289 Inside**

Press@RunDepth: 19.50 psig @ 3464.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.19 End Date: 2015.01.19

Last Calib.: 2015.01.19

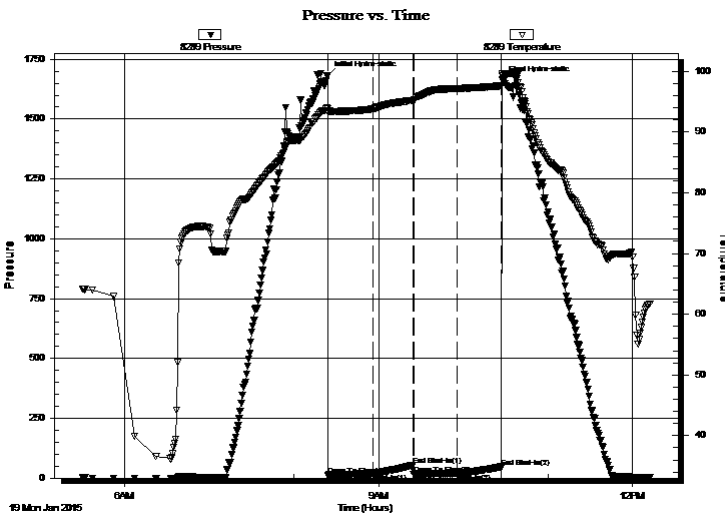
Start Time: 05:30:02 End Time: 12:12:30

Time On Btm: 2015.01.19 @ 08:23:45

Time Off Btm: 2015.01.19 @ 10:27:30

**TEST COMMENT:** 30-IFP- Surface Blow Building to 1"  
30-ISIP- No Blow  
30-FFP- Surface Blow Building to 1 1/2"  
30-FSIP- No Blow

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1681.79         | 93.88        | Initial Hydro-static |
| 1           | 13.20           | 93.28        | Open To Flow (1)     |
| 32          | 18.27           | 93.78        | Shut-In(1)           |
| 61          | 53.48           | 95.21        | End Shut-In(1)       |
| 61          | 15.56           | 95.17        | Open To Flow (2)     |
| 92          | 19.50           | 97.15        | Shut-In(2)           |
| 124         | 47.07           | 97.60        | End Shut-In(2)       |
| 124         | 1662.72         | 99.33        | Final Hydro-static   |

## Recovery

| Length (ft) | Description  | Volume (bbl) |
|-------------|--------------|--------------|
| 15.00       | OCM 5%o 95%m | 0.07         |
|             |              |              |
|             |              |              |
|             |              |              |
|             |              |              |

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61390

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.01.19 @ 05:30:00

## Tool Information

|                            |                    |                       |                                |                        |             |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe:                | Length: 3438.00 ft | Diameter: 3.80 inches | Volume: 48.23 bbl              | Tool Weight:           | 2500.00 lb  |
| Heavy Wt. Pipe:            | Length: 0.00 ft    | Diameter: 2.75 inches | Volume: 0.00 bbl               | Weight set on Packer:  | 25000.00 lb |
| Drill Collar:              | Length: 29.00 ft   | Diameter: 2.25 inches | Volume: 0.14 bbl               | Weight to Pull Loose:  | 44000.00 lb |
|                            |                    |                       | <u>Total Volume: 48.37 bbl</u> | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:       | 25.00 ft           |                       |                                | String Weight: Initial | 42000.00 lb |
| Depth to Top Packer:       | 3463.00 ft         |                       |                                | Final                  | 42000.00 lb |
| Depth to Bottom Packer:    | ft                 |                       |                                |                        |             |
| Interval betw een Packers: | 24.00 ft           |                       |                                |                        |             |
| Tool Length:               | 45.00 ft           |                       |                                |                        |             |
| Number of Packers:         | 2                  | Diameter: 6.75 inches |                                |                        |             |
| Tool Comments:             |                    |                       |                                |                        |             |

## Tool Description

| Tool Description          | Length (ft)  | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Change Over Sub           | 1.00         |            |          | 3443.00    |                               |
| Shut In Tool              | 5.00         |            |          | 3448.00    |                               |
| Hydraulic tool            | 5.00         |            |          | 3453.00    |                               |
| Packer                    | 5.00         |            |          | 3458.00    | 21.00 Bottom Of Top Packer    |
| Packer                    | 5.00         |            |          | 3463.00    |                               |
| Stubb                     | 1.00         |            |          | 3464.00    |                               |
| Recorder                  | 0.00         | 8289       | Inside   | 3464.00    |                               |
| Recorder                  | 0.00         | 6668       | Outside  | 3464.00    |                               |
| Perforations              | 20.00        |            |          | 3484.00    |                               |
| Bullnose                  | 3.00         |            |          | 3487.00    | 24.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>45.00</b> |            |          |            |                               |



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61390

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.01.19 @ 05:30:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.96 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description  | Volume<br>bbbl |
|--------------|--------------|----------------|
| 15.00        | OCM 5%o 95%m | 0.074          |

Total Length: 15.00 ft      Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8289

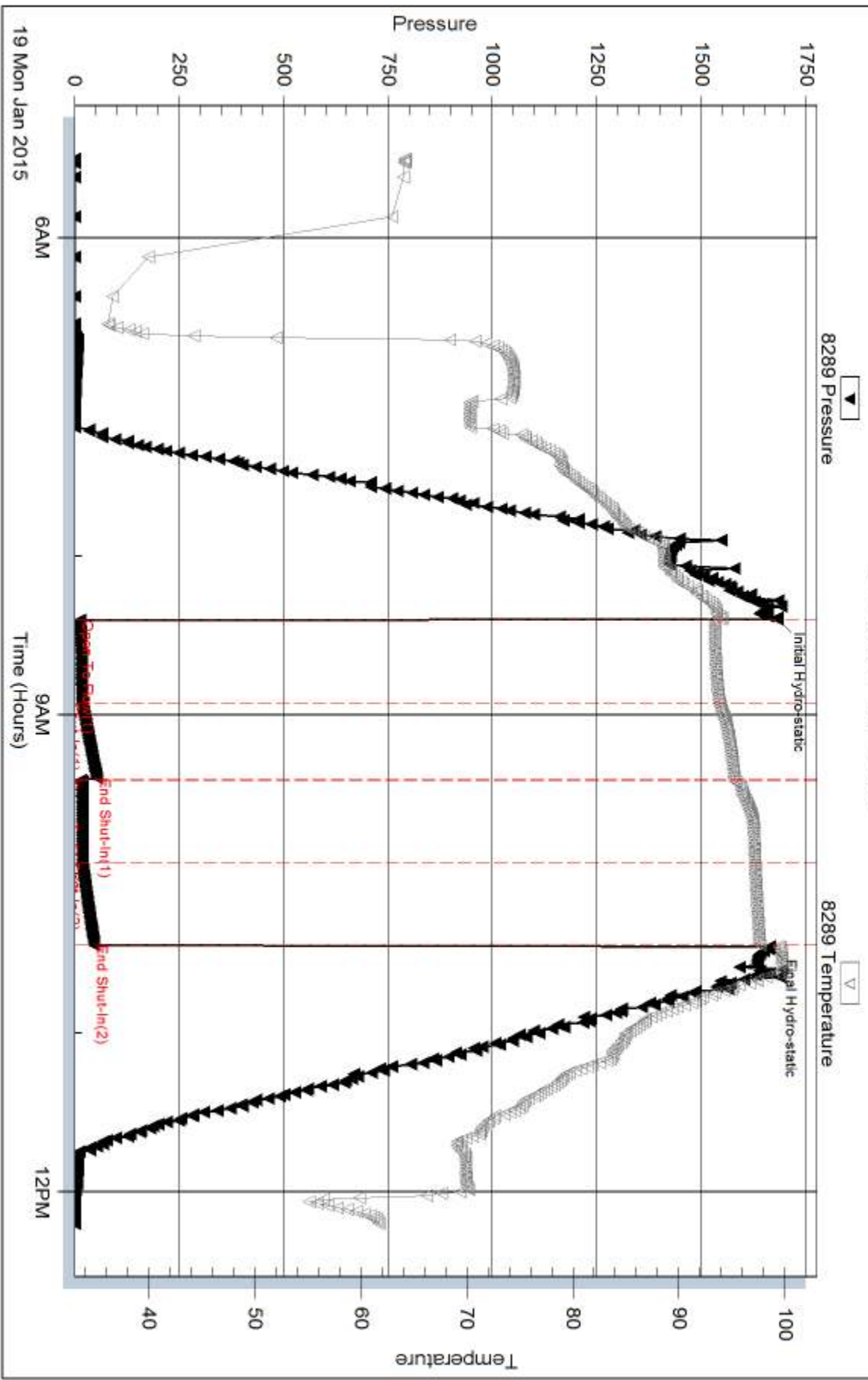
Inside

Dow nung-Nelson Oil Co Inc

Sunley-Curtain #1-26

DST Test Number: 1

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 61390

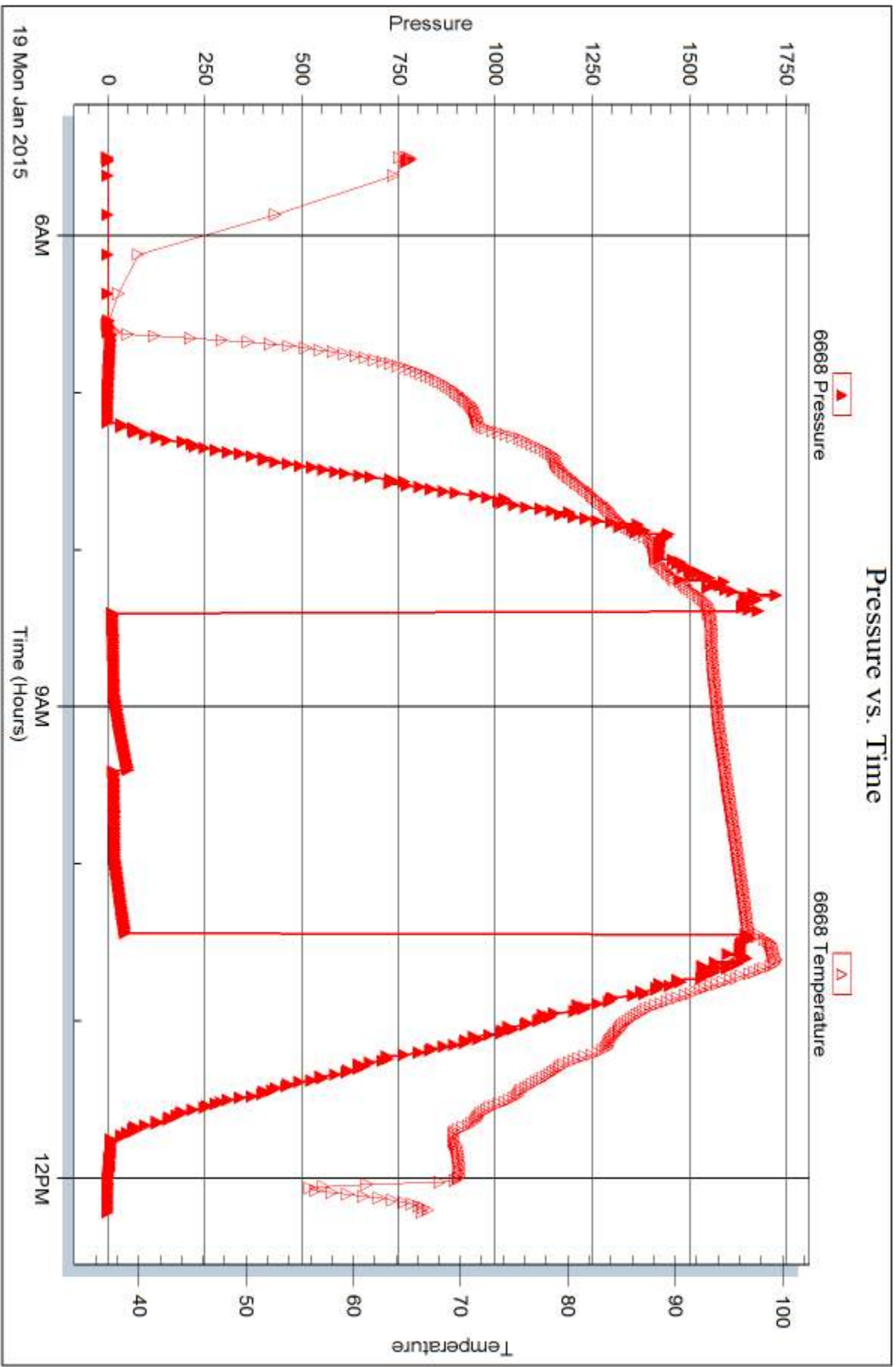
Printed: 2015.01.22 @ 09:10:30

Serial #: 6668

Outside Dow nrg-Nelson Oil Co Inc

Sunley-Curtain #1-26

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 61390

Printed: 2015.01.22 @ 09:10:30



## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

### **Sunley-Curtain #1-26**

#### **26 14s 19w Ellis,KS**

Start Date: 2015.01.20 @ 10:10:00

End Date: 2015.01.20 @ 17:25:00

Job Ticket #: 61391                      DST #: 2

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

Printed: 2015.01.22 @ 09:10:06



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61391

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2015.01.20 @ 10:10:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:23:15

Time Test Ended: 17:25:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jim Svaty

Unit No: 76

**Interval: 3719.00 ft (KB) To 3754.00 ft (KB) (TVD)**

Reference Elevations: 2115.00 ft (KB)

Total Depth: 3754.00 ft (KB) (TVD)

2107.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8289**

**Inside**

Press@RunDepth: 123.08 psig @ 3720.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.20

End Date:

2015.01.20

Last Calib.:

2015.01.20

Start Time: 10:10:02

End Time:

17:25:00

Time On Btm:

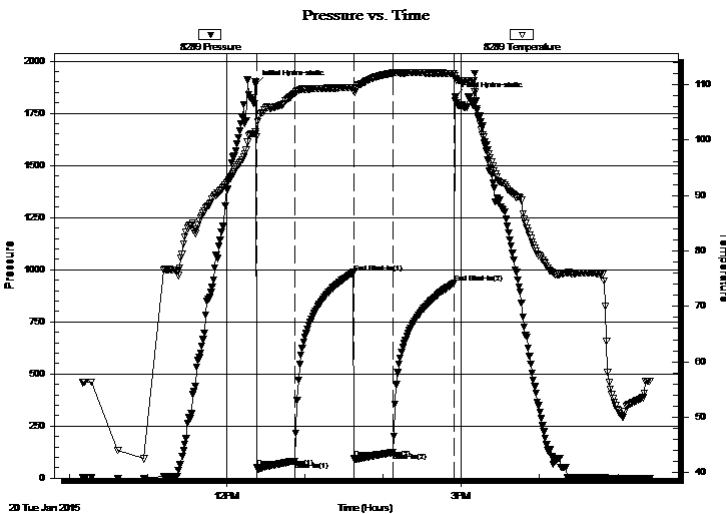
2015.01.20 @ 12:22:45

Time Off Btm:

2015.01.20 @ 14:55:30

**TEST COMMENT:** 30-IFP- BOB in 10 min.  
45-ISIP- Weak Surface Blow in 25 min.  
30-FFP- BOB in 26 min.  
45-FSIP- Weak Surface Blow in 15 min.

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1889.35         | 101.19       | Initial Hydro-static |
| 1           | 49.92           | 100.55       | Open To Flow (1)     |
| 30          | 82.18           | 108.34       | Shut-In(1)           |
| 75          | 986.03          | 109.42       | End Shut-In(1)       |
| 76          | 93.60           | 108.72       | Open To Flow (2)     |
| 105         | 123.08          | 112.08       | Shut-In(2)           |
| 152         | 934.95          | 112.03       | End Shut-In(2)       |
| 153         | 1830.95         | 111.12       | Final Hydro-static   |

## Recovery

| Length (ft) | Description        | Volume (bbl) |
|-------------|--------------------|--------------|
| 60.00       | OMCW 5%o 20%m 75%w | 0.58         |
| 63.00       | OCM 25%o 75%m      | 0.88         |
| 177.00      | CO 100%            | 2.48         |
|             |                    |              |
|             |                    |              |

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61391

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2015.01.20 @ 10:10:00

## Tool Information

|                            |                    |                       |                                |                                    |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:                | Length: 3692.00 ft | Diameter: 3.80 inches | Volume: 51.79 bbl              | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:            | Length: 0.00 ft    | Diameter: 2.75 inches | Volume: 0.00 bbl               | Weight set on Packer: 25000.00 lb  |
| Drill Collar:              | Length: 29.00 ft   | Diameter: 2.25 inches | Volume: 0.14 bbl               | Weight to Pull Loose: 46000.00 lb  |
|                            |                    |                       | <u>Total Volume: 51.93 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:       | 23.00 ft           |                       |                                | String Weight: Initial 40000.00 lb |
| Depth to Top Packer:       | 3719.00 ft         |                       |                                | Final 42000.00 lb                  |
| Depth to Bottom Packer:    | ft                 |                       |                                |                                    |
| Interval betw een Packers: | 35.00 ft           |                       |                                |                                    |
| Tool Length:               | 56.00 ft           |                       |                                |                                    |
| Number of Packers:         | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

## Tool Description

| Tool Description          | Length (ft)  | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Change Over Sub           | 1.00         |            |          | 3699.00    |                               |
| Shut In Tool              | 5.00         |            |          | 3704.00    |                               |
| Hydraulic tool            | 5.00         |            |          | 3709.00    |                               |
| Packer                    | 5.00         |            |          | 3714.00    | 21.00 Bottom Of Top Packer    |
| Packer                    | 5.00         |            |          | 3719.00    |                               |
| Stubb                     | 1.00         |            |          | 3720.00    |                               |
| Recorder                  | 0.00         | 8289       | Inside   | 3720.00    |                               |
| Recorder                  | 0.00         | 6668       | Outside  | 3720.00    |                               |
| Perforations              | 31.00        |            |          | 3751.00    |                               |
| Bullnose                  | 3.00         |            |          | 3754.00    | 35.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>56.00</b> |            |          |            |                               |





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61391

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2015.01.20 @ 10:10:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

23 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

27000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description        | Volume<br>bbbl |
|--------------|--------------------|----------------|
| 60.00        | OMCW 5%o 20%m 75%w | 0.577          |
| 63.00        | OCM 25%o 75%m      | 0.884          |
| 177.00       | CO 100%            | 2.483          |

Total Length: 300.00 ft

Total Volume: 3.944 bbl

Num Fluid Samples: 0

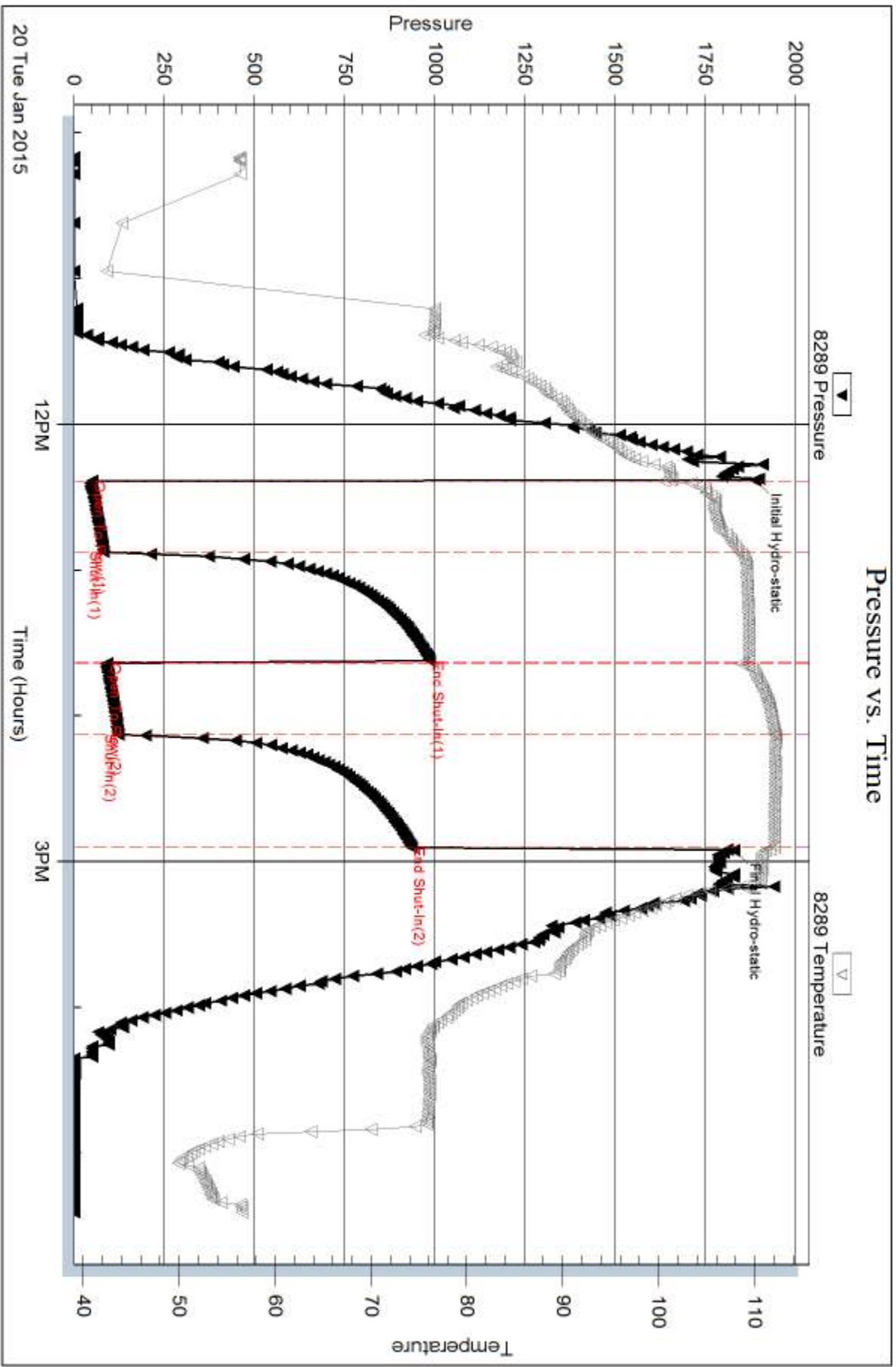
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .338 @ 52

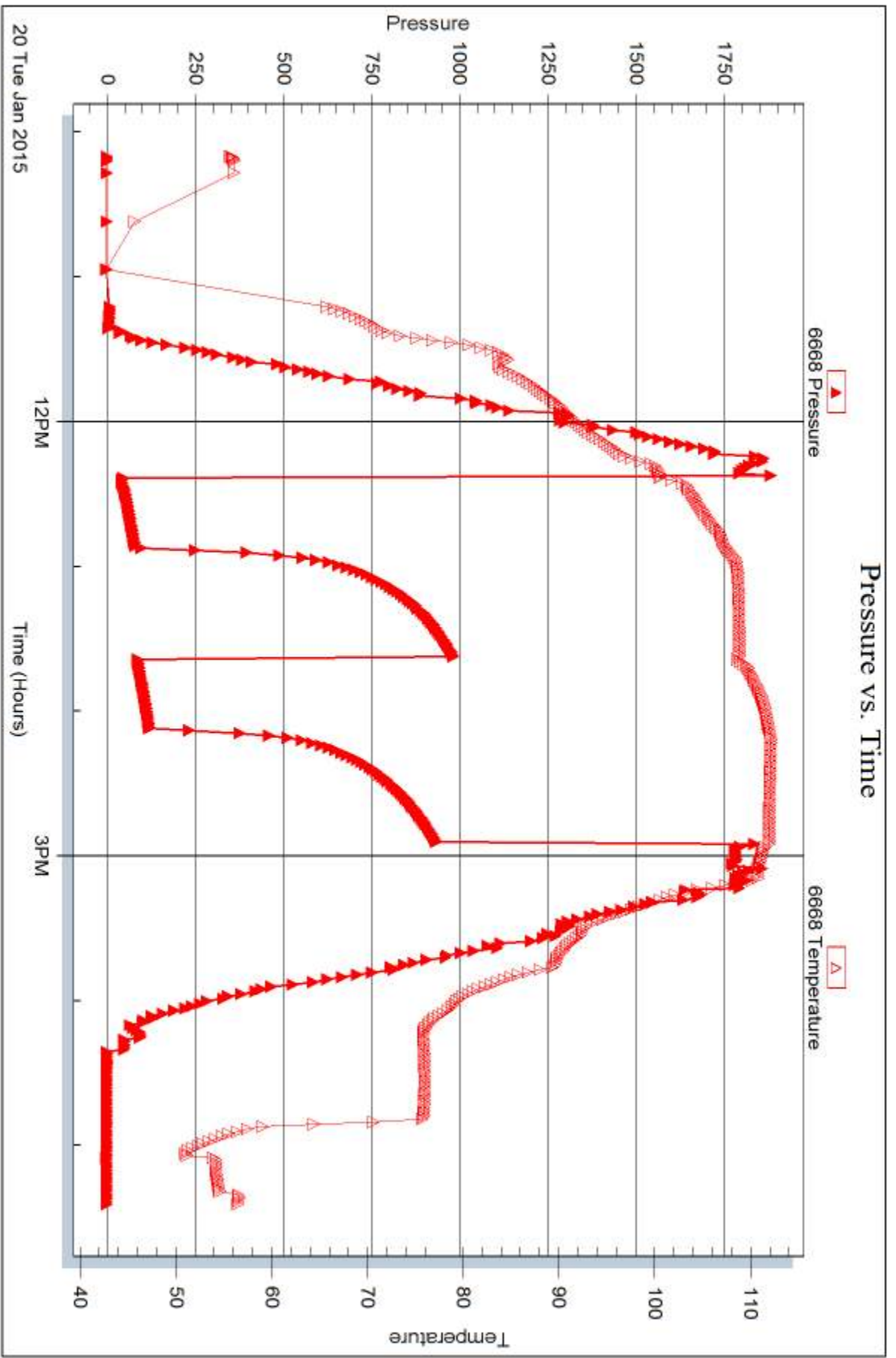


Serial #: 6668

Outside Dow nng-Nelson Oil Co Inc

Sunley-Curtain #1-26

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 61391

Printed: 2015.01.22 @ 09:10:07



## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

### **Sunley-Curtain #1-26**

#### **26 14s 19w Ellis,KS**

Start Date: 2015.01.21 @ 07:59:00

End Date: 2015.01.21 @ 15:11:00

Job Ticket #: 61392                      DST #: 3

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

Printed: 2015.01.22 @ 09:09:12



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61392

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2015.01.21 @ 07:59:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:50:00

Time Test Ended: 15:11:00

Test Type: Conventional Straddle (Reset)

Tester: Jim Svaty

Unit No: 76

**Interval: 3752.00 ft (KB) To 3761.00 ft (KB) (TVD)**

Reference Elevations: 2115.00 ft (KB)

Total Depth: 3834.00 ft (KB) (TVD)

2107.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8289 Outside**

Press@RunDepth: 227.41 psig @ 3753.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.21

End Date:

2015.01.21

Last Calib.:

2015.01.21

Start Time:

07:59:02

End Time:

15:11:00

Time On Btm:

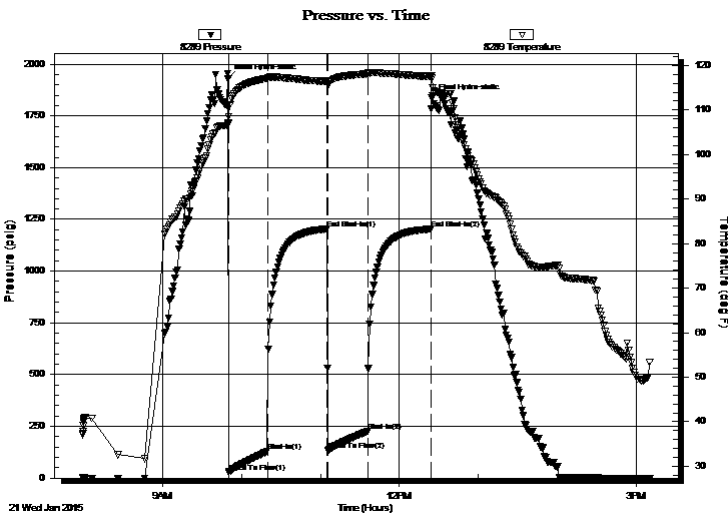
2015.01.21 @ 09:49:45

Time Off Btm:

2015.01.21 @ 12:24:30

**TEST COMMENT:** 30-IFP- BOB in 9 1/2 min.  
45-ISIP- Very Weak Surface Blow in 9 min.  
30-FFP- BOB in 11 min.  
45-FSIP- Very Weak Surface Blow in 18 min.

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1929.77         | 107.18       | Initial Hydro-static |
| 1           | 27.40           | 107.00       | Open To Flow (1)     |
| 30          | 128.83          | 117.12       | Shut-In(1)           |
| 76          | 1204.35         | 116.40       | End Shut-In(1)       |
| 76          | 134.49          | 115.78       | Open To Flow (2)     |
| 107         | 227.41          | 118.12       | Shut-In(2)           |
| 155         | 1203.93         | 117.49       | End Shut-In(2)       |
| 155         | 1835.10         | 117.14       | Final Hydro-static   |

## Recovery

| Length (ft) | Description              | Volume (bbl) |
|-------------|--------------------------|--------------|
| 440.00      | MCW 2% m 98% w           | 5.91         |
| 25.00       | Oil Scum MCW 25% m 75% w | 0.35         |
| 5.00        | Heavy CO 100%            | 0.07         |
|             |                          |              |
|             |                          |              |

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61392

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2015.01.21 @ 07:59:00

## Tool Information

|                            |                    |                       |                                |                                    |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:                | Length: 3724.00 ft | Diameter: 3.80 inches | Volume: 52.24 bbl              | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:            | Length: 0.00 ft    | Diameter: 2.75 inches | Volume: 0.00 bbl               | Weight set on Packer: 25000.00 lb  |
| Drill Collar:              | Length: 29.00 ft   | Diameter: 2.25 inches | Volume: 0.14 bbl               | Weight to Pull Loose: 50000.00 lb  |
|                            |                    |                       | <u>Total Volume: 52.38 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:       | 22.00 ft           |                       |                                | String Weight: Initial 44000.00 lb |
| Depth to Top Packer:       | 3752.00 ft         |                       |                                | Final 46000.00 lb                  |
| Depth to Bottom Packer:    | 3761.00 ft         |                       |                                |                                    |
| Interval betw een Packers: | 9.00 ft            |                       |                                |                                    |
| Tool Length:               | 102.00 ft          |                       |                                |                                    |
| Number of Packers:         | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub  | 1.00        |            |          | 3732.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3737.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3742.00    |                               |
| Packer           | 5.00        |            |          | 3747.00    | 21.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3752.00    |                               |
| Stubb            | 1.00        |            |          | 3753.00    |                               |
| Recorder         | 0.00        | 6668       | Inside   | 3753.00    |                               |
| Recorder         | 0.00        | 8289       | Outside  | 3753.00    |                               |
| Perforations     | 4.00        |            |          | 3757.00    |                               |
| Blank Off Sub    | 1.00        |            |          | 3758.00    |                               |
| Blank Spacing    | 3.00        |            |          | 3761.00    | 9.00 Tool Interval            |
| Packer           | 1.00        |            |          | 3762.00    |                               |
| Perforations     | 3.00        |            |          | 3765.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3766.00    |                               |
| Recorder         | 0.00        | 8789       | Below    | 3766.00    |                               |
| Blank Spacing    | 63.00       |            |          | 3829.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3830.00    |                               |
| Bullnose         | 3.00        |            |          | 3833.00    | 72.00 Bottom Packers & Anchor |

**Total Tool Length: 102.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning-Nelson Oil Co Inc

**26 14s 19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Curtain #1-26**

Job Ticket: 61392

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2015.01.21 @ 07:59:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 48.00 sec/qt  
Water Loss: 8.78 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 3000.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 19 deg API  
Water Salinity: 26000 ppm

## Recovery Information

Recovery Table

| Length<br>ft | Description                                    | Volume<br>bbl |
|--------------|--|---------------|
| 440.00       | MCW 2% <sub>m</sub> 98% <sub>w</sub>           | 5.908         |
| 25.00        | Oil Scum MCW 25% <sub>m</sub> 75% <sub>w</sub> | 0.351         |
| 5.00         | Heavy CO 100%                                  | 0.070         |

Total Length: 470.00 ft      Total Volume: 6.329 bbl

Num Fluid Samples: 0

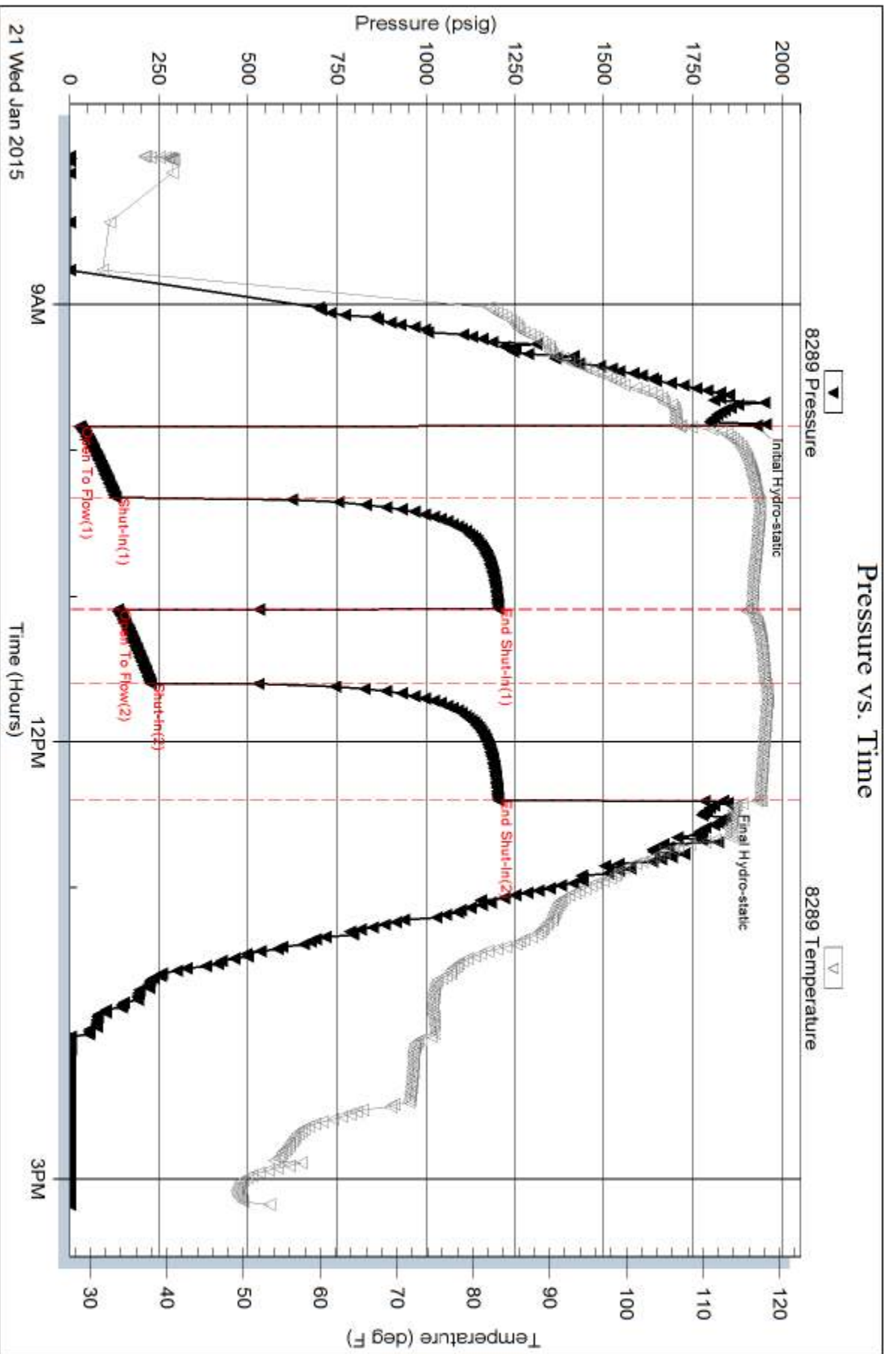
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .368 @ 50



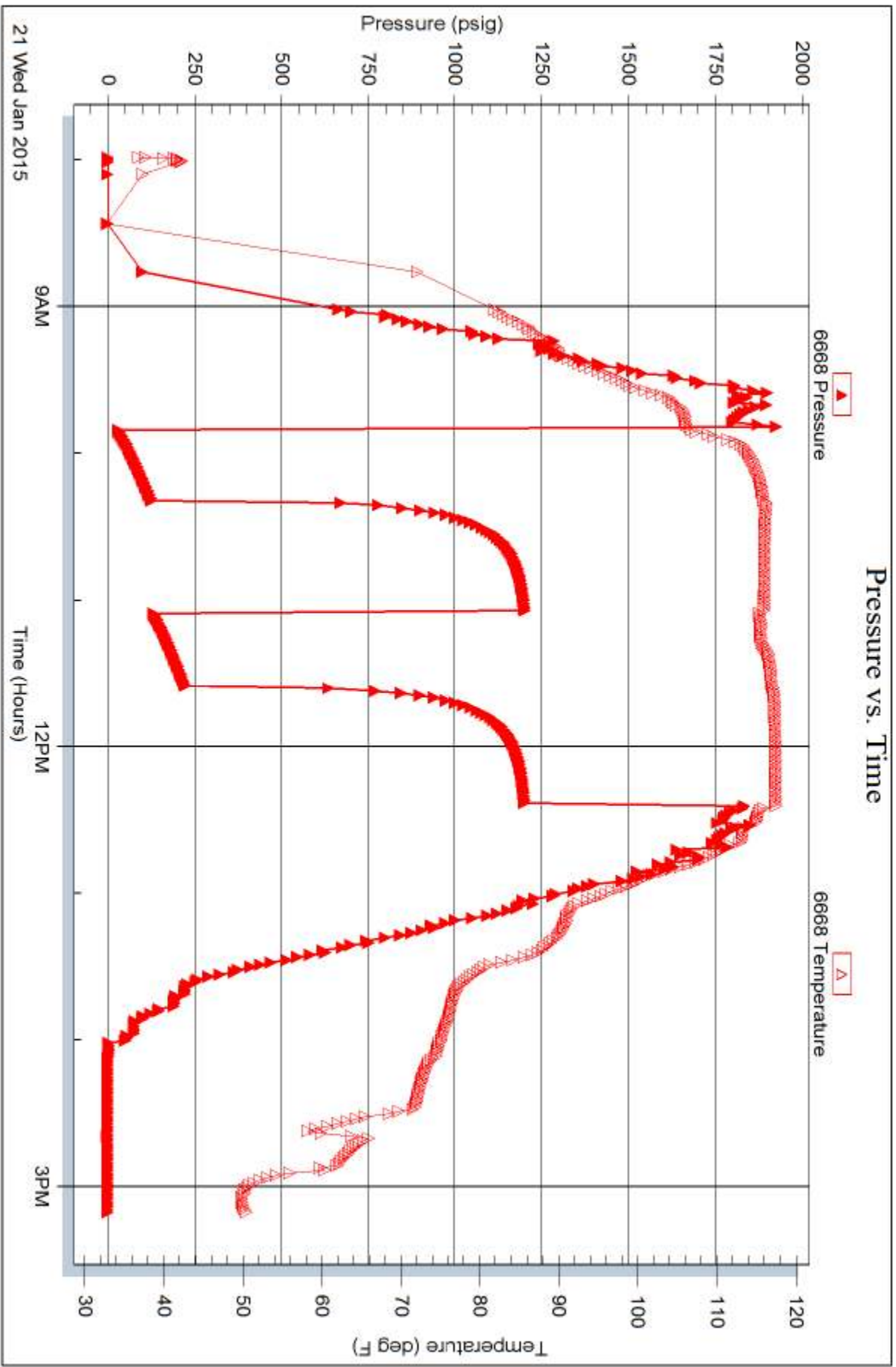
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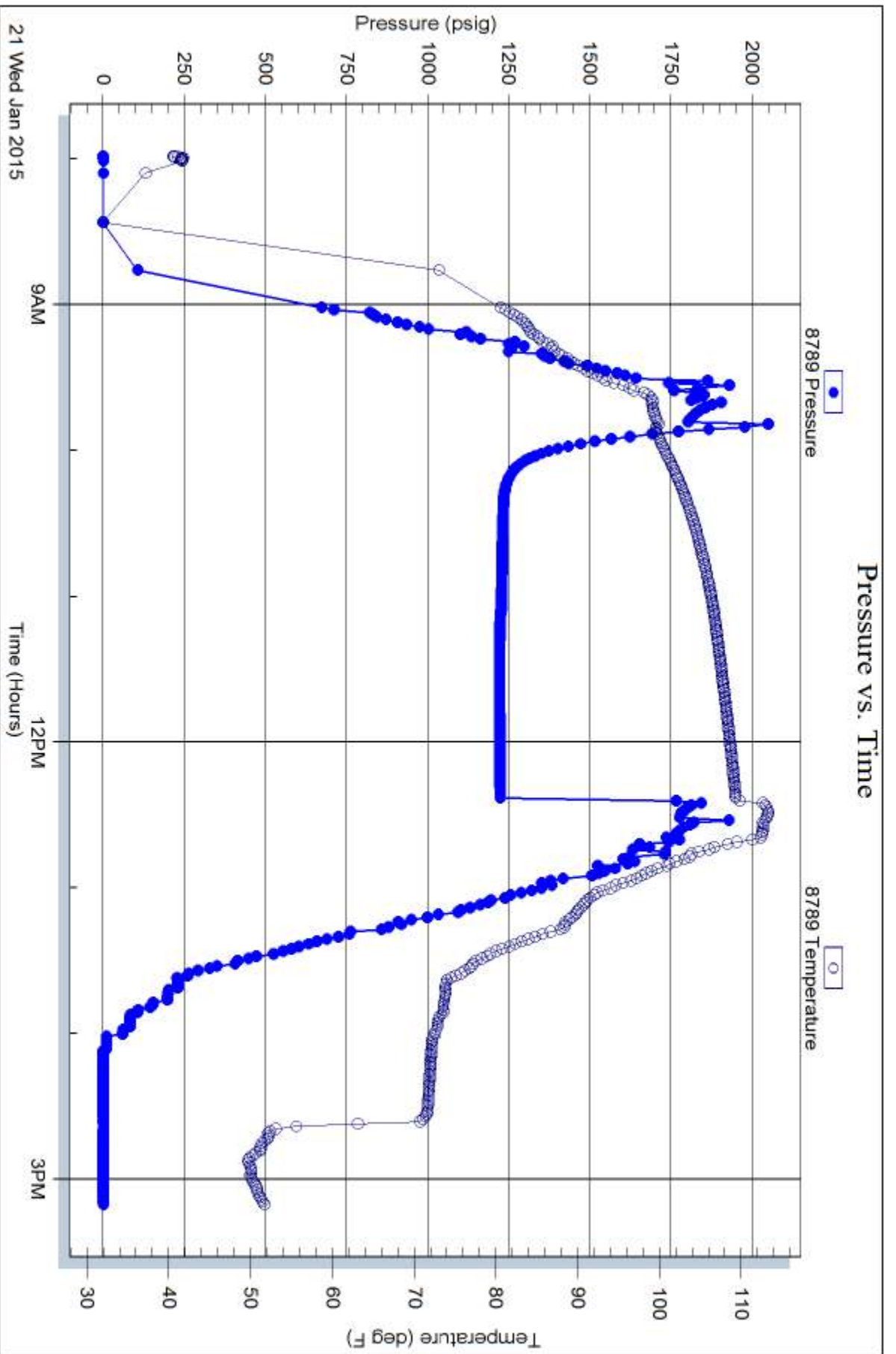
Inside

Dow nrg-Nelson Oil Co Inc

Sunley-Curtain #1-26

DST Test Number: 3







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 61390

4/10

Well Name & No. Sunley - CURTAIN 1-26 Test No. 1 Date 1-19-15  
 Company Downing-Nelson Oil Co INC. Elevation 2115 KB 2107 GL  
 Address P.O. Box 1019 HAYS KS 67601  
 Co. Rep / Geo. MARC DOWNING Rig Discovery #1  
 Location: Sec. 26 Twp. 14<sup>s</sup> Rge. 19<sup>w</sup> Co. ELLIS State KS

Interval Tested 3463-3487 Zone Tested LKC "D"  
 Anchor Length 24 Drill Pipe Run 3438 Mud Wt. 9.2  
 Top Packer Depth 3458 Drill Collars Run 29 Vis 54  
 Bottom Packer Depth 3463 Wt. Pipe Run 0 WL 8  
 Total Depth 3487 Chlorides 3000 ppm System LCM 1

Blow Description IFP - Surface Blow Building to 1 in.  
ISIP - No Blow  
FFP - Surface Blow Building to 1/2 in.  
FSIP - No Blow

| Rec       | Feet of    | %gas     | %oil | %water    | %mud |
|-----------|------------|----------|------|-----------|------|
| <u>15</u> | <u>OCM</u> | <u>5</u> |      | <u>95</u> |      |
| Rec       | Feet of    | %gas     | %oil | %water    | %mud |
| Rec       | Feet of    | %gas     | %oil | %water    | %mud |
| Rec       | Feet of    | %gas     | %oil | %water    | %mud |
| Rec       | Feet of    | %gas     | %oil | %water    | %mud |

Rec Total 15 BHT 99 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

|                         |             |
|-------------------------|-------------|
| (A) Initial Hydrostatic | <u>1681</u> |
| (B) First Initial Flow  | <u>13</u>   |
| (C) First Final Flow    | <u>18</u>   |
| (D) Initial Shut-In     | <u>53</u>   |
| (E) Second Initial Flow | <u>15</u>   |
| (F) Second Final Flow   | <u>19</u>   |
| (G) Final Shut-In       | <u>47</u>   |
| (H) Final Hydrostatic   | <u>1662</u> |

Test 1050  
 Jars \_\_\_\_\_  
 Safety Joint \_\_\_\_\_  
 Circ Sub \_\_\_\_\_  
 Hourly Standby \_\_\_\_\_  
 Mileage 22 22 RT  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1072

T-On Location 04:11  
 T-Started 05:30  
 T-Open 08:24  
 T-Pulled 10:24  
 T-Out 12:13  
 Comments \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1072  
 MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 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. 61391

Well Name & No. Sunley - Curtain 1-26 Test No. 2 Date 1-20-15  
 Company Downing - Nelson Oil Co. Inc. Elevation 2115 KB 2107 GL  
 Address P.O. Box 7019 Hays KS 67601  
 Co. Rep / Geo. MARC DOWNING Rig Discovery #1  
 Location: Sec. 26 Twp. 14S Rge. 19W Co. Ellis State KS

Interval Tested 3719 - 3754 Zone Tested Arbuckle  
 Anchor Length 35 Drill Pipe Run 3692 Mud Wt. 9.1  
 Top Packer Depth 3714 Drill Collars Run 29 Vis 48  
 Bottom Packer Depth 3719 Wt. Pipe Run 0 WL 8.8  
 Total Depth 3754 Chlorides 3000 ppm System LCM 1

Blow Description IFP - BOB in 10min.  
TSIP - Weak Surface Blow in 25min.  
FFP - BOB in 26min.  
FSIP - Weak Surface Blow in 15min.

| Rec        | Feet of       | %gas       | %oil      | %water    | %mud |
|------------|---------------|------------|-----------|-----------|------|
| <u>60</u>  | <u>OMCW</u>   | <u>5</u>   | <u>75</u> | <u>20</u> |      |
| <u>63</u>  | <u>OCM</u>    | <u>25</u>  |           | <u>75</u> |      |
| <u>177</u> | <u>CO</u>     | <u>100</u> |           |           |      |
|            |               |            |           |           |      |
|            |               |            |           |           |      |
|            | <u>70 SIP</u> |            |           |           |      |

Rec Total 300 BHT 112 Gravity 23 API RW 338 @ 52 °F Chlorides 27000 ppm

|                         |             |   |             |  |              |
|-------------------------|-------------|---|-------------|--|--------------|
| (A) Initial Hydrostatic | <u>1889</u> | <input checked="" type="checkbox"/> Test    | <u>1050</u> | T-On Location                                | <u>9:10</u>  |
| (B) First Initial Flow  | <u>49</u>   | <input type="checkbox"/> Jars               |             | T-Started                                    | <u>10:10</u> |
| (C) First Final Flow    | <u>82</u>   | <input type="checkbox"/> Safety Joint       |             | T-Open                                       | <u>12:23</u> |
| (D) Initial Shut-In     | <u>986</u>  | <input type="checkbox"/> Circ Sub           |             | T-Pulled                                     | <u>14:53</u> |
| (E) Second Initial Flow | <u>93</u>   | <input type="checkbox"/> Hourly Standby     |             | T-Out  | <u>17:25</u> |
| (F) Second Final Flow   | <u>123</u>  | <input checked="" type="checkbox"/> Mileage | <u>22</u>   | Comments                                     |              |
| (G) Final Shut-In       | <u>934</u>  | <input type="checkbox"/> Sampler            |             |  |              |
| (H) Final Hydrostatic   | <u>1830</u> | <input type="checkbox"/> Straddle           |             | <input type="checkbox"/> Ruined Shale Packer |              |

|                 |           |   |             |  |             |
|-----------------|-----------|---|-------------|--|-------------|
| Initial Open    | <u>30</u> | <input type="checkbox"/> Shale Packer   |             | <input type="checkbox"/> Ruined Packer |             |
| Initial Shut-In | <u>45</u> | <input type="checkbox"/> Extra Packer   |             | <input type="checkbox"/> Extra Copies  |             |
| Final Flow      | <u>30</u> | <input type="checkbox"/> Extra Recorder |             | Sub Total                              | <u>0</u>    |
| Final Shut-In   | <u>45</u> | <input type="checkbox"/> Day Standby    |             | Total                                  | <u>1072</u> |
|                 |           | <input type="checkbox"/> Accessibility  |             | MP/DST Disc't                          |             |
|                 |           | Sub Total                               | <u>1072</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. 61392

4/10

Well Name & No. Sunley-Curtain 1-26 Test No. 3 Date 1-21-15  
 Company Downing-Nelson Oil Co. Inc. Elevation 2115 KB 2107 GL  
 Address P.O. Box 1019 Hays KS 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #1  
 Location: Sec. 26 Twp. 14S Rge. 19W Co. Ellis State KS

Interval Tested 3752-3761 Zone Tested Arbuckle  
 Anchor Length 9 Andur-73TP Drill Pipe Run 3724 Mud Wt. 9.1  
 Top Packer Depth 3752 Drill Collars Run 29 Vis 48  
 Bottom Packer Depth 3761 Wt. Pipe Run 0 WL 8.8  
 Total Depth 3834 TD Chlorides 3000 ppm System LCM 1

Blow Description IFP - BOB in 9 1/2 min.  
ISIP - Very Weak Surface Blow in 9 min.  
FFP - BOB in 11 min.  
FSIP - Very Weak Surface Blow in 18 min.

| Rec        | Feet of             | %gas       | %oil      | %water    | %mud |
|------------|---------------------|------------|-----------|-----------|------|
| <u>440</u> | <u>MCW</u>          |            | <u>98</u> | <u>2</u>  |      |
| <u>25</u>  | <u>Oil Seum MCW</u> |            | <u>75</u> | <u>25</u> |      |
| <u>5</u>   | <u>Heavy CO</u>     | <u>100</u> |           |           |      |
|            |                     |            |           |           |      |
|            |                     |            |           |           |      |

Rec Total 470 BHT 117 Gravity 19 API RW 368 @ 50 °F Chlorides 26000 ppm

(A) Initial Hydrostatic 1929  Test 1050 T-On Location 07:57  
 (B) First Initial Flow 27  Jars \_\_\_\_\_ T-Started 07:59  
 (C) First Final Flow 128  Safety Joint \_\_\_\_\_ T-Open 09:50  
 (D) Initial Shut-In 1204  Circ Sub \_\_\_\_\_ T-Pulled 12:20  
 (E) Second Initial Flow 134  Hourly Standby \_\_\_\_\_ T-Out 15:11  
 (F) Second Final Flow 227  Mileage 22 Comments \_\_\_\_\_  
 (G) Final Shut-In 1203  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1835  Straddle 600  Ruined Shale Packer \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Shut-In 45  Day Standby \_\_\_\_\_ Total 1672  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1672

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.

|  |             |  |   |   |  |
|--|-------------|--|---|---|--|
| Marc A. Downing<br>Consulting Petroleum Geologist    |             | Geologic Report<br>Drilling Time and Sample Log          |   |   |  |
| Operator <b>Downing-Nelson Oil Co., Inc.</b>         |             | Elevation<br>KB 2107<br>DF 2105<br>GL 2099               |   | Lease <b>Sunley-Curtain</b><br>No. 1-26 |  |
| API # <b>15-051-26764-0000</b>                       |             | Casing Record Surface<br>8 5/8" @ 221'<br>5 1/2" @ 3833' |   |   |  |
| Field <b>Antonino</b>                                |             | Production<br>5 1/2" @ 3833'                             |   |   |  |
| Location <b>680' FNL &amp; 1665' FWL</b>             |             | Electrical Surveys<br>CNDL, DIL, MEL                     |   |   |  |
| Sec. 26  | Twp. 14s    | Rge. 19w   | County <b>Ellis</b> State <b>Kansas</b> |   |  |
| Formation  | Sample tops | Log Tops   | Datum                                   | Struct Comp                             |  |
| Top Anhydrite  | 1369        | 1369   | +738                                    | +                                       |  |
| Base Anhydrite                                       | 1411        | 1414   | +693                                    | NA                                      |  |
| Topoka   | 3124        | 3128   | -1021                                   | NA                                      |  |
| Heebner  | 3381        | 3384   | -1277                                   | +8                                      |  |
| Toronto  | 3404        | 3404   | -1297                                   | +11                                     |  |
| LKC  | 3429        | 3430   | -1323                                   | +10                                     |  |
| BKC  | 3669        | 3671   | -1564                                   | +15                                     |  |
| Marmaton   | 3710        | 3712   | -1605                                   | NA                                      |  |
| Arbuckle   | 3736        | 3738   | -1631                                   | NA                                      |  |
| Total Depth  | 3834        | 3836   | -1729                                   |   |  |
| Reference Well For Structural Comparison<br>Feitz #1 |             | D.G. Hansen<br>W/2 W/2 NW                                |   | Sec. 26-14s-19w                         |  |

|                             |                            |                   |
|-----------------------------|----------------------------|-------------------|
| Drilling Contractor         | Discovery Drilling, Rig #1 |                   |
| Commenced                   | 1-15-15                    | Completed 1-21-15 |
| Samples Saved From          | 3100                       | To RTD            |
| Drilling Time Kept From     | 3000                       | To RTD            |
| Samples Examined From       | 3100                       | To RTD            |
| Geological Supervision From | 3000                       | To RTD            |

**Summary and Recommendations**  
Due to structural position, DST recovery, and log evaluation, it was decided to set 5 1/2" production casing for completion in the Arbuckle.

Respectfully Submitted,  
  
Marc A. Downing

