

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

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

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

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: <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: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top _____ Bottom _____
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	ALBERS 1-29
Doc ID	1375236

Tops

Name	Top	Datum
Top Anhydrite	2608'	+426
Base Anhydrite	2638'	+396
Topeka	3824'	-790
Heebner	4033'	-999
Toronto	4055'	-1021
LKC	4074'	-1040
Stark	4285'	-1251
BKC	4347'	-1313
Pawnee	4458'	-1424
Fort Scott	4528'	-1494
Cherokee Shale	4557'	-1523
Johnson Zone	4600'	-1566
Mississippi	4631'	-1597





## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Mark Downing

### **Albers #1-29**

#### **29-9s-31w Thomas,KS**

Start Date: 2017.11.12 @ 19:46:00

End Date: 2017.11.13 @ 04:13:45

Job Ticket #: 64378                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.11.16 @ 10:23:08



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64378

**DST#: 1**

ATTN: Mark Downing

Test Start: 2017.11.12 @ 19:46:00

## GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:40:00

Time Test Ended: 04:13:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

**Interval: 4194.00 ft (KB) To 4287.00 ft (KB) (TVD)**

Reference Elevations: 3034.00 ft (KB)

Total Depth: 4287.00 ft (KB) (TVD)

3026.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8365**

**Inside**

Press@RunDepth: 131.96 psig @ 4195.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.11.12

End Date:

2017.11.13

Last Calib.: 2017.11.13

Start Time: 19:46:05

End Time:

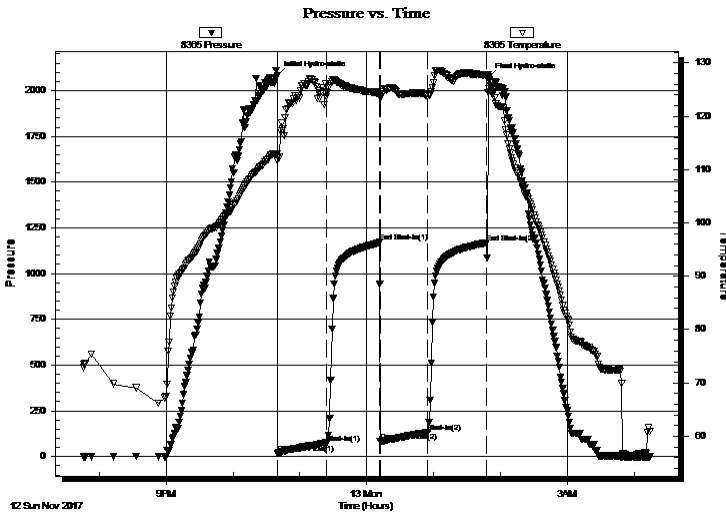
04:13:44

Time On Btm: 2017.11.12 @ 22:39:45

Time Off Btm: 2017.11.13 @ 01:49:00

TEST COMMENT: IF: 9" blow.  
IS: No return.  
FF: 8" Blow.  
FS: No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2081.14	113.01	Initial Hydro-static
1	18.32	111.64	Open To Flow (1)
44	74.05	124.28	Shut-In(1)
92	1170.32	124.24	End Shut-In(1)
93	82.17	123.53	Open To Flow (2)
135	131.96	123.86	Shut-In(2)
188	1167.84	127.72	End Shut-In(2)
190	2073.08	127.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	mcw 40m 60w (oil spots)	1.76
10.00	oil 100o	0.07

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64378

**DST#: 1**

ATTN: Mark Dow ning

Test Start: 2017.11.12 @ 19:46:00

## GENERAL INFORMATION:

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Time Tool Opened: 22:40:00

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Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

**Interval: 4194.00 ft (KB) To 4287.00 ft (KB) (TVD)**

Reference Elevations: 3034.00 ft (KB)

Total Depth: 4287.00 ft (KB) (TVD)

3026.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8845 Outside**

Press@RunDepth: psig @ 4195.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.11.12 End Date: 2017.11.13

Last Calib.: 1899.12.30

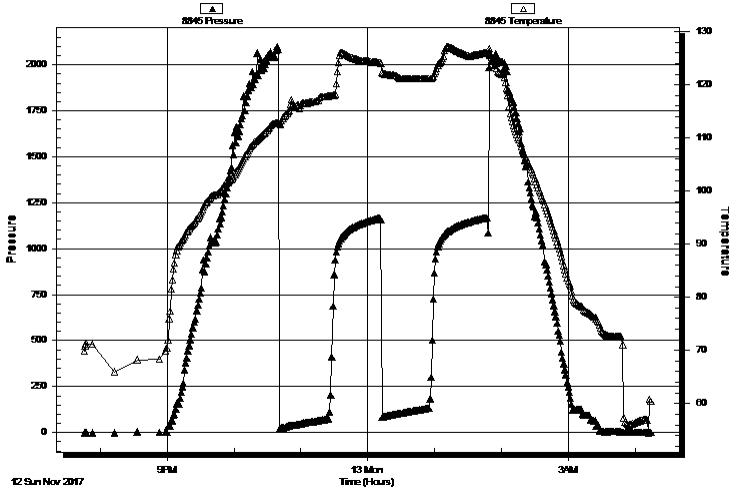
Start Time: 19:46:05 End Time: 04:13:44

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 9" blow .  
IS: No return.  
FF: 8" Blow .  
FS: No return.

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	mcw 40m 60w (oil spots)	1.76
10.00	oil 100o	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

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64378

**DST#: 1**

ATTN: Mark Dow ning

Test Start: 2017.11.12 @ 19:46:00

## Tool Information

Drill Pipe:	Length: 3880.00 ft	Diameter: 3.80 inches	Volume: 54.43 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 56.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4194.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	93.00 ft			
Tool Length:	113.00 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			4175.00	
Shut In Tool	5.00			4180.00	
Hydraulic tool	5.00			4185.00	
Packer	5.00			4190.00	20.00 Bottom Of Top Packer
Packer	4.00			4194.00	
Stubb	1.00			4195.00	
Recorder	0.00	8365	Inside	4195.00	
Recorder	0.00	8845	Outside	4195.00	
Perforations	24.00			4219.00	
Change Over Sub	1.00			4220.00	
Drill Pipe	63.00			4283.00	
Change Over Sub	1.00			4284.00	
Bullnose	3.00			4287.00	93.00 Bottom Packers & Anchor

**Total Tool Length: 113.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64378

**DST#: 1**

ATTN: Mark Downing

Test Start: 2017.11.12 @ 19:46:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

26000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	mcw 40m 60w (oil spots)	1.763
10.00	oil 100o	0.073

Total Length: 250.00 ft      Total Volume: 1.836 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

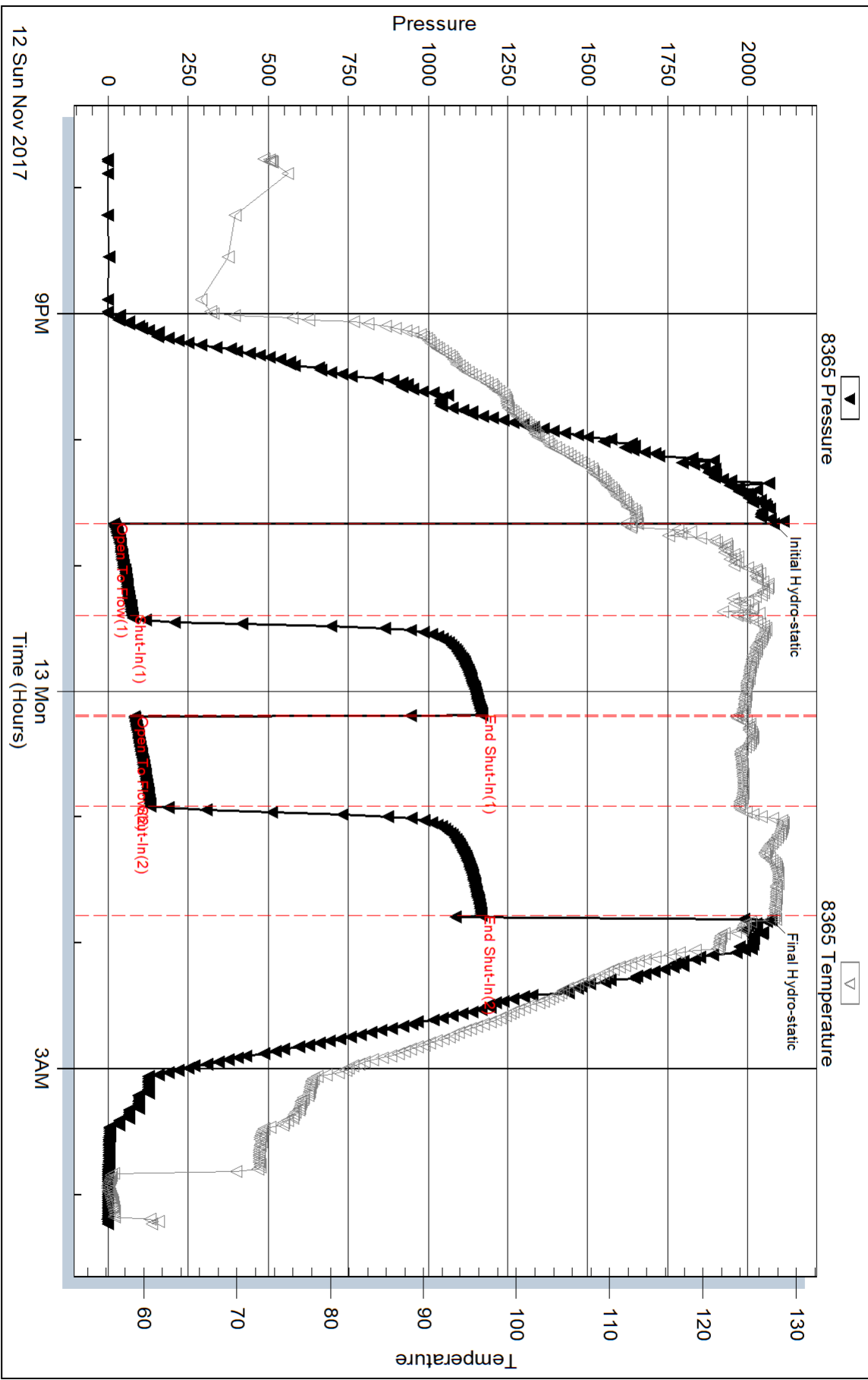
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .315 @ 57f = 26000ppm

### Pressure vs. Time

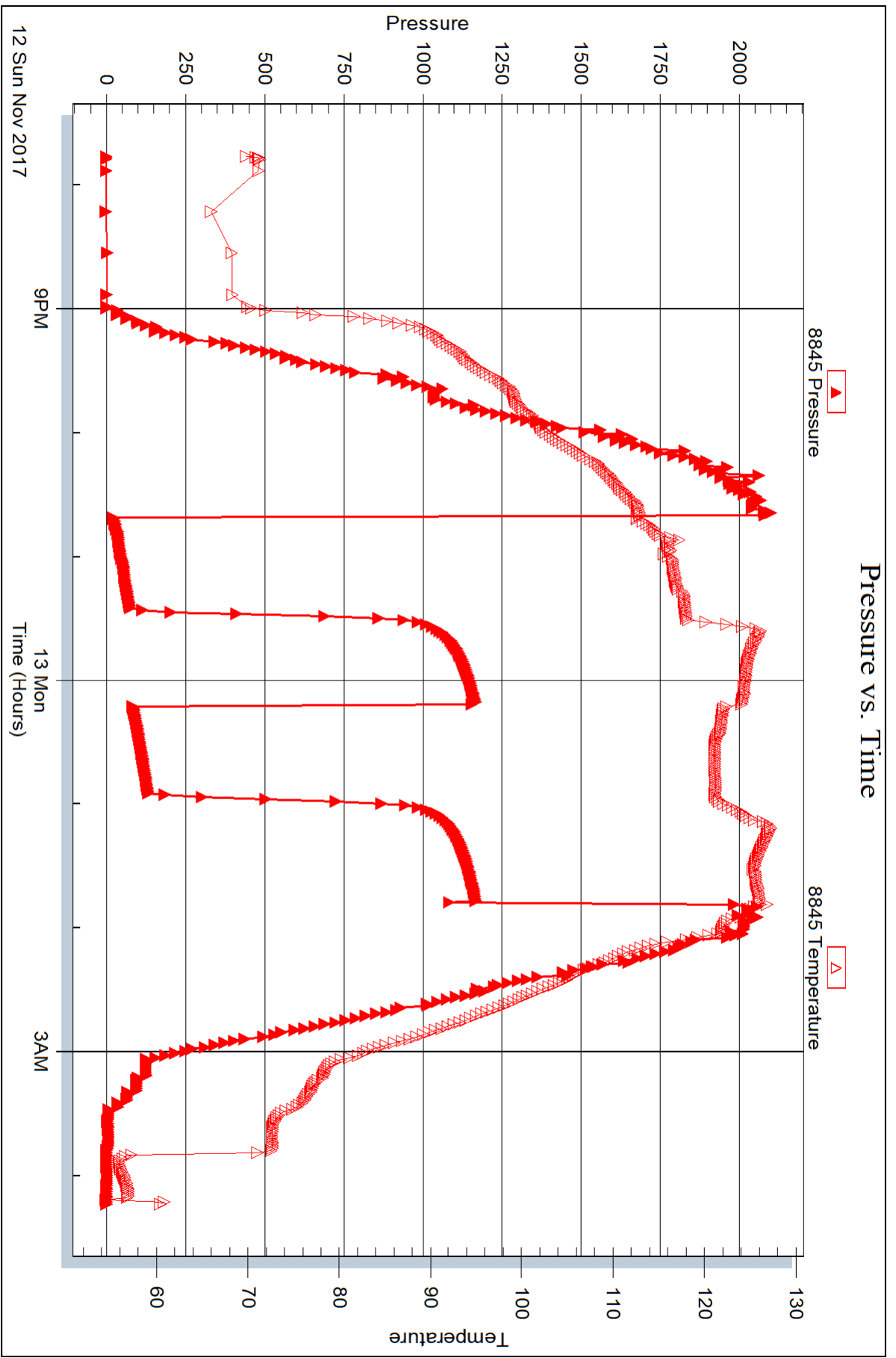


Serial #: 8845

Outside Downing Nelson Oil Co, Inc

Albers #1-29

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64378

Printed: 2017.11.16 @ 10:23:16



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Mark Downing

### **Albers #1-29**

### **29-9s-31w Thomas,KS**

Start Date: 2017.11.13 @ 14:47:00

End Date: 2017.11.13 @ 22:51:00

Job Ticket #: 64379                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.11.16 @ 10:22:31



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64379

**DST#: 2**

ATTN: Mark Dow ning

Test Start: 2017.11.13 @ 14:47:00

## GENERAL INFORMATION:

Formation: **LKC L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:01:00

Time Test Ended: 22:51:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 4314.00 ft (KB) To 4345.00 ft (KB) (TVD)**

Reference Elevations: 3034.00 ft (KB)

Total Depth: 4345.00 ft (KB) (TVD)

3026.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8845 Outside**

Press@RunDepth: 26.38 psig @ 4315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.11.13

End Date: 2017.11.13

Last Calib.: 2017.11.13

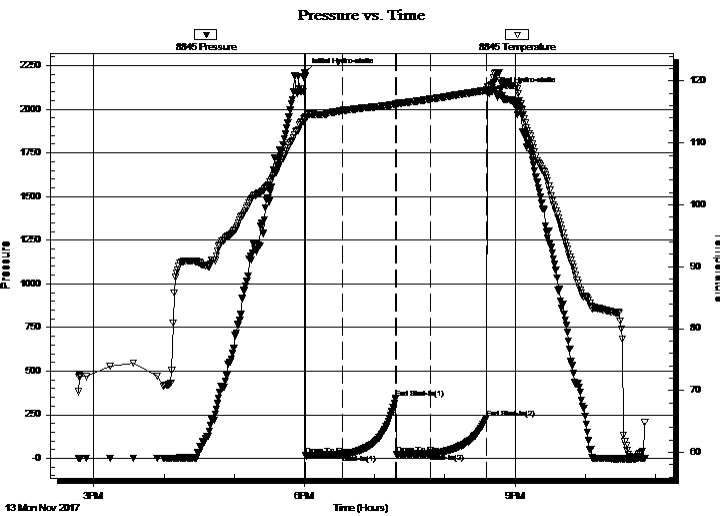
Start Time: 14:47:05

End Time: 22:50:59

Time On Btm: 2017.11.13 @ 18:00:30

Time Off Btm: 2017.11.13 @ 20:37:00

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



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2210.56	113.98	Initial Hydro-static
1	15.72	113.70	Open To Flow (1)
33	20.91	115.26	Shut-In(1)
78	345.16	116.25	End Shut-In(1)
78	21.31	116.22	Open To Flow (2)
108	26.38	117.08	Shut-In(2)
156	229.90	118.51	End Shut-In(2)
157	2103.32	119.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	ocm 15o 85m	0.15

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64379

**DST#: 2**

ATTN: Mark Downing

Test Start: 2017.11.13 @ 14:47:00

## GENERAL INFORMATION:

Formation: **LKC L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:01:00

Time Test Ended: 22:51:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 4314.00 ft (KB) To 4345.00 ft (KB) (TVD)**

Reference Elevations: 3034.00 ft (KB)

Total Depth: 4345.00 ft (KB) (TVD)

3026.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8365**

**Inside**

Press@RunDepth: psig @ 4315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.11.13

End Date:

2017.11.13

Last Calib.:

2017.11.13

Start Time: 14:47:05

End Time:

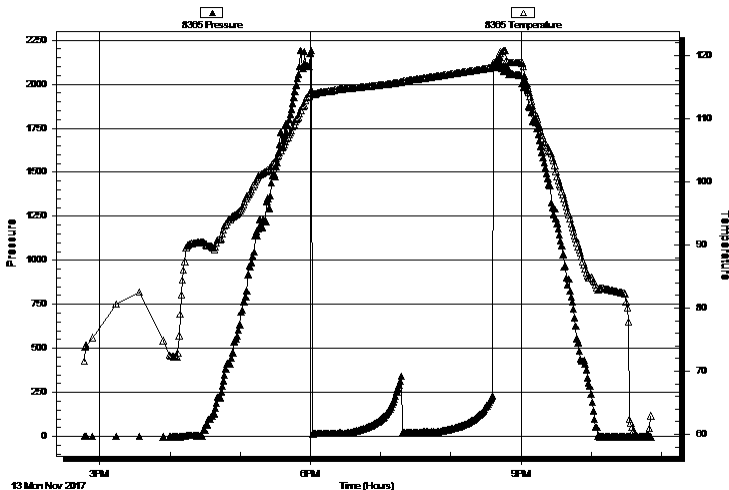
22:50:59

Time On Btm:

Time Off Btm:

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

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	ocm 15o 85m	0.15

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64379

**DST#: 2**

ATTN: Mark Downing

Test Start: 2017.11.13 @ 14:47:00

## Tool Information

Drill Pipe:	Length: 4005.00 ft	Diameter: 3.80 inches	Volume: 56.18 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 58.46 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4314.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	51.00 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			4295.00	
Shut In Tool	5.00			4300.00	
Hydraulic tool	5.00			4305.00	
Packer	5.00			4310.00	20.00 Bottom Of Top Packer
Packer	4.00			4314.00	
Stubb	1.00			4315.00	
Recorder	0.00	8365	Inside	4315.00	
Recorder	0.00	8845	Outside	4315.00	
Perforations	27.00			4342.00	
Bullnose	3.00			4345.00	31.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>51.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64379

**DST#: 2**

ATTN: Mark Dow ning

Test Start: 2017.11.13 @ 14:47:00

### 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: 50.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	ocm 15o 85m	0.147

Total Length: 20.00 ft      Total Volume: 0.147 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

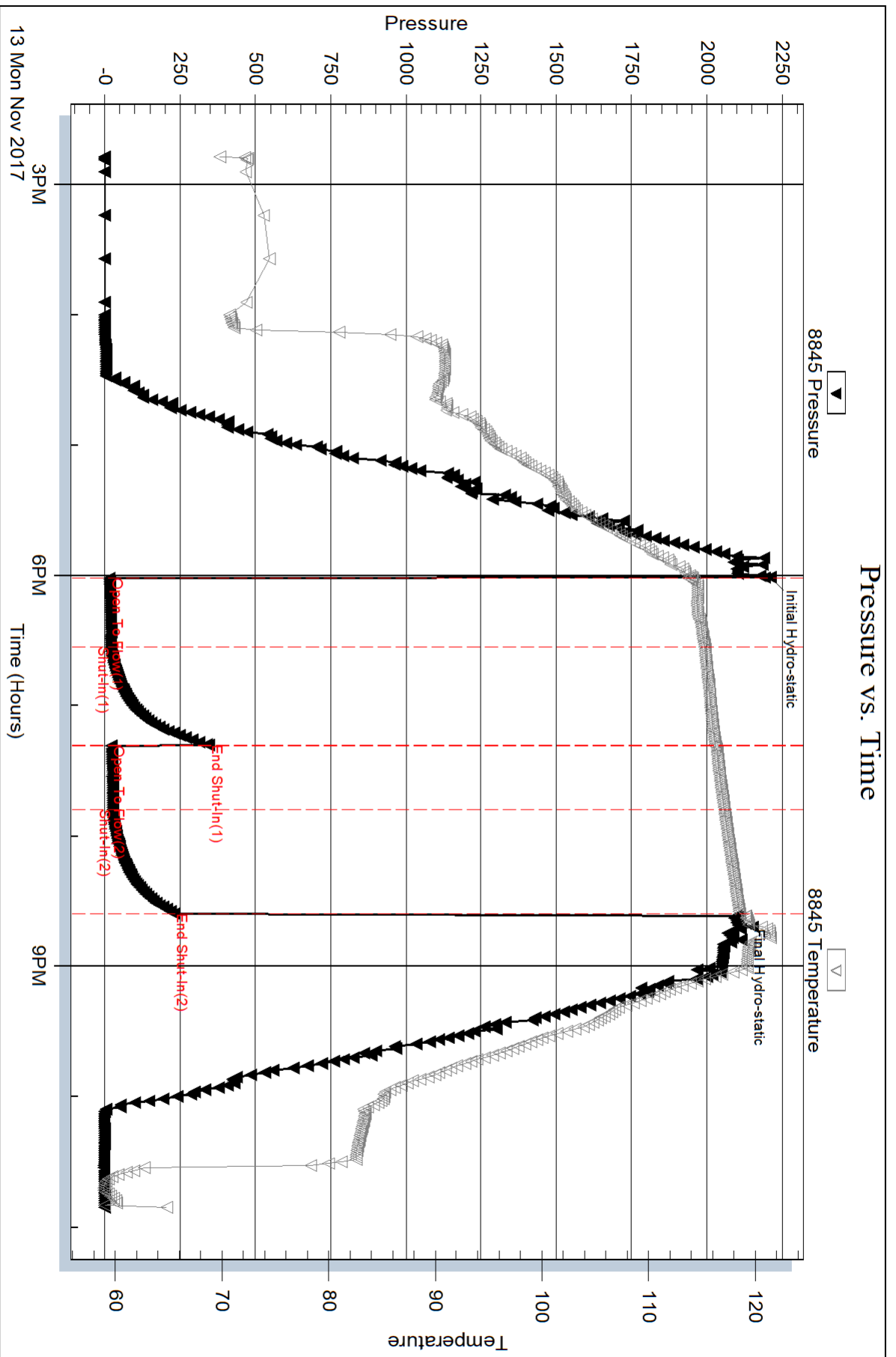


Serial #: 8845

Outside Downing Nelson Oil Co, Inc

Albers #1-29

DST Test Number: 2



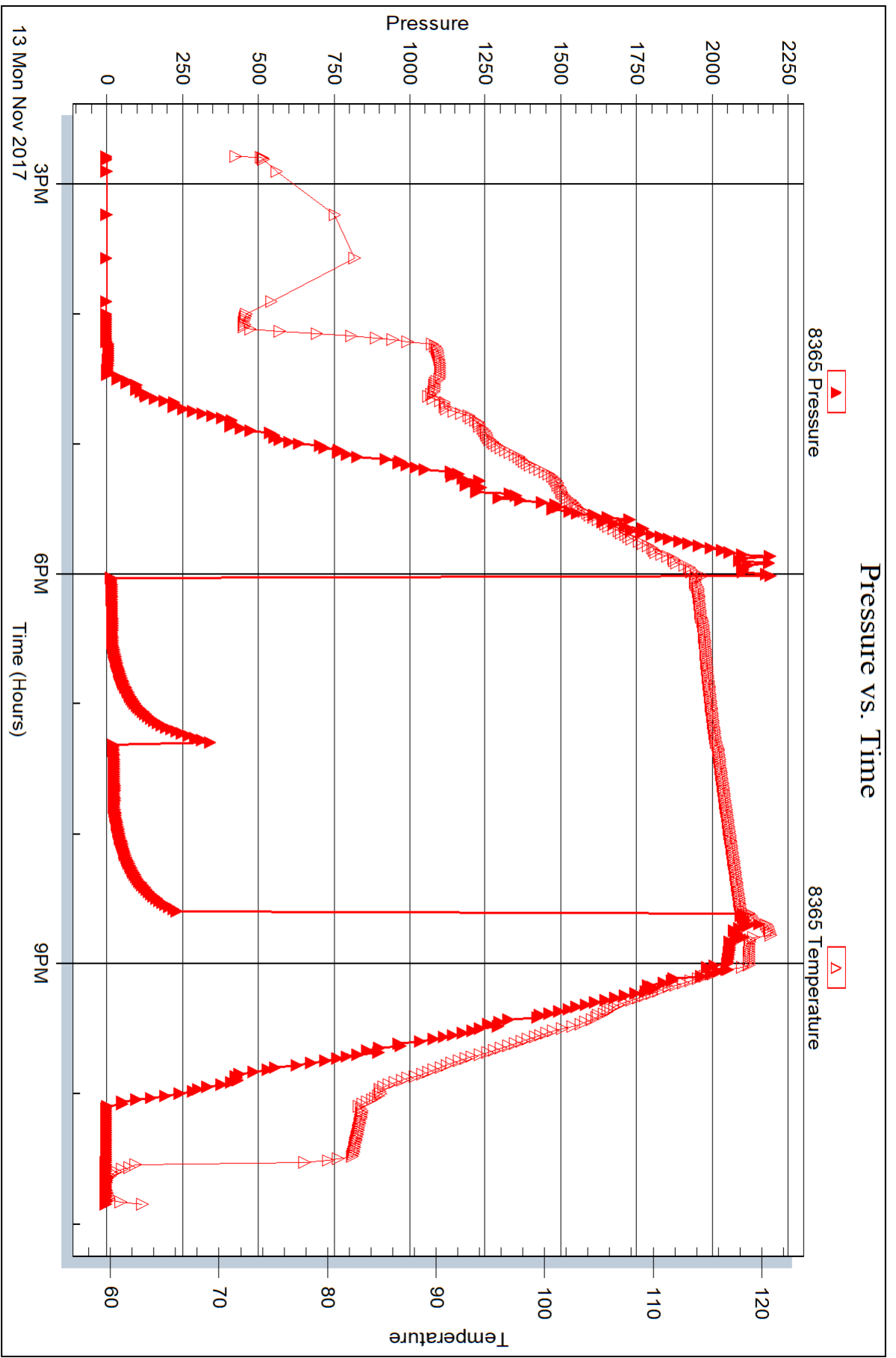
Serial #: 8365

Inside

Downing Nelson Oil Co, Inc

Albers #1-29

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64379

Printed: 2017.11.16 @ 10:22:32



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Mark Downing

### **Albers #1-29**

### **29-9s-31w Thomas,KS**

Start Date: 2017.11.14 @ 16:57:00

End Date: 2017.11.15 @ 01:34:45

Job Ticket #: 64380                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.11.16 @ 10:21:54

Downing Nelson Oil Co, Inc  
29-9s-31w Thomas,KS  
Albers #1-29  
DST # 3  
Pawnee  
2017.11.14



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64380

**DST#: 3**

ATTN: Mark Dow ning

Test Start: 2017.11.14 @ 16:57:00

## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:50:15

Time Test Ended: 01:34:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

**Interval: 4425.00 ft (KB) To 4477.00 ft (KB) (TVD)**

Reference Elevations: 3034.00 ft (KB)

Total Depth: 4477.00 ft (KB) (TVD)

3026.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8845 Outside**

Press@RunDepth: 42.06 psig @ 4426.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.11.14

End Date:

2017.11.15

Last Calib.: 2017.11.15

Start Time: 16:57:05

End Time:

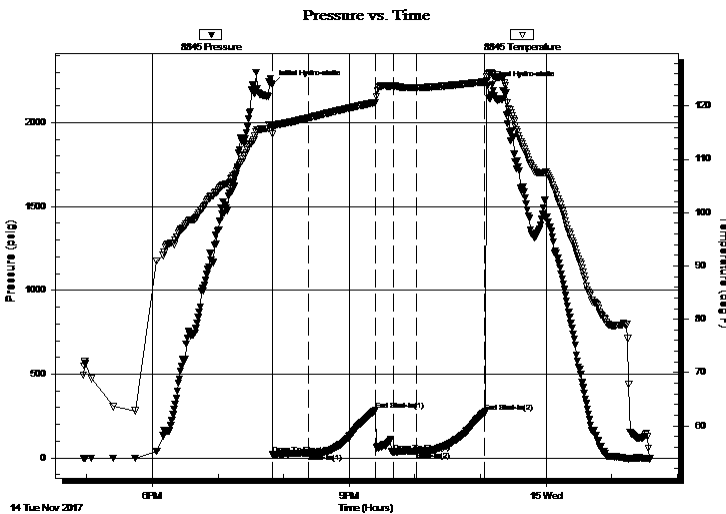
01:34:45

Time On Btm: 2017.11.14 @ 19:49:30

Time Off Btm: 2017.11.14 @ 23:06:45

TEST COMMENT: IF: 3" blow .  
IS: No return,  
FF: Surface blow .  
FS: No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2225.71	116.25	Initial Hydro-static
1	19.54	115.88	Open To Flow (1)
33	30.11	117.74	Shut-In(1)
95	287.69	120.65	End Shut-In(1)
111	32.21	123.81	Open To Flow (2)
133	42.06	123.42	Shut-In(2)
195	273.81	124.51	End Shut-In(2)
198	2220.57	125.92	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	socm 2o 98m	0.33

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64380

**DST#: 3**

ATTN: Mark Dow ning

Test Start: 2017.11.14 @ 16:57:00

## Tool Information

Drill Pipe:	Length: 4100.00 ft	Diameter: 3.80 inches	Volume: 57.51 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 59.79 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4425.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	79.00 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			4399.00	
Shut In Tool	5.00			4404.00	
Hydraulic tool	5.00			4409.00	
Jars	5.00			4414.00	
Safety Joint	2.00			4416.00	
Packer	5.00			4421.00	27.00 Bottom Of Top Packer
Packer	4.00			4425.00	
Stubb	1.00			4426.00	
Recorder	0.00	8365	Inside	4426.00	
Recorder	0.00	8845	Outside	4426.00	
Perforations	15.00			4441.00	
Change Over Sub	1.00			4442.00	
Drill Pipe	31.00			4473.00	
Change Over Sub	1.00			4474.00	
Bullnose	3.00			4477.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 79.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co, Inc

**29-9s-31w Thomas,KS**

PO Box 1019  
Hays, KS 67601

**Albers #1-29**

Job Ticket: 64380

**DST#: 3**

ATTN: Mark Dow ning

Test Start: 2017.11.14 @ 16:57:00

## 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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
45.00	socm 2o 98m	0.331

Total Length: 45.00 ft      Total Volume: 0.331 bbl

Num Fluid Samples: 0

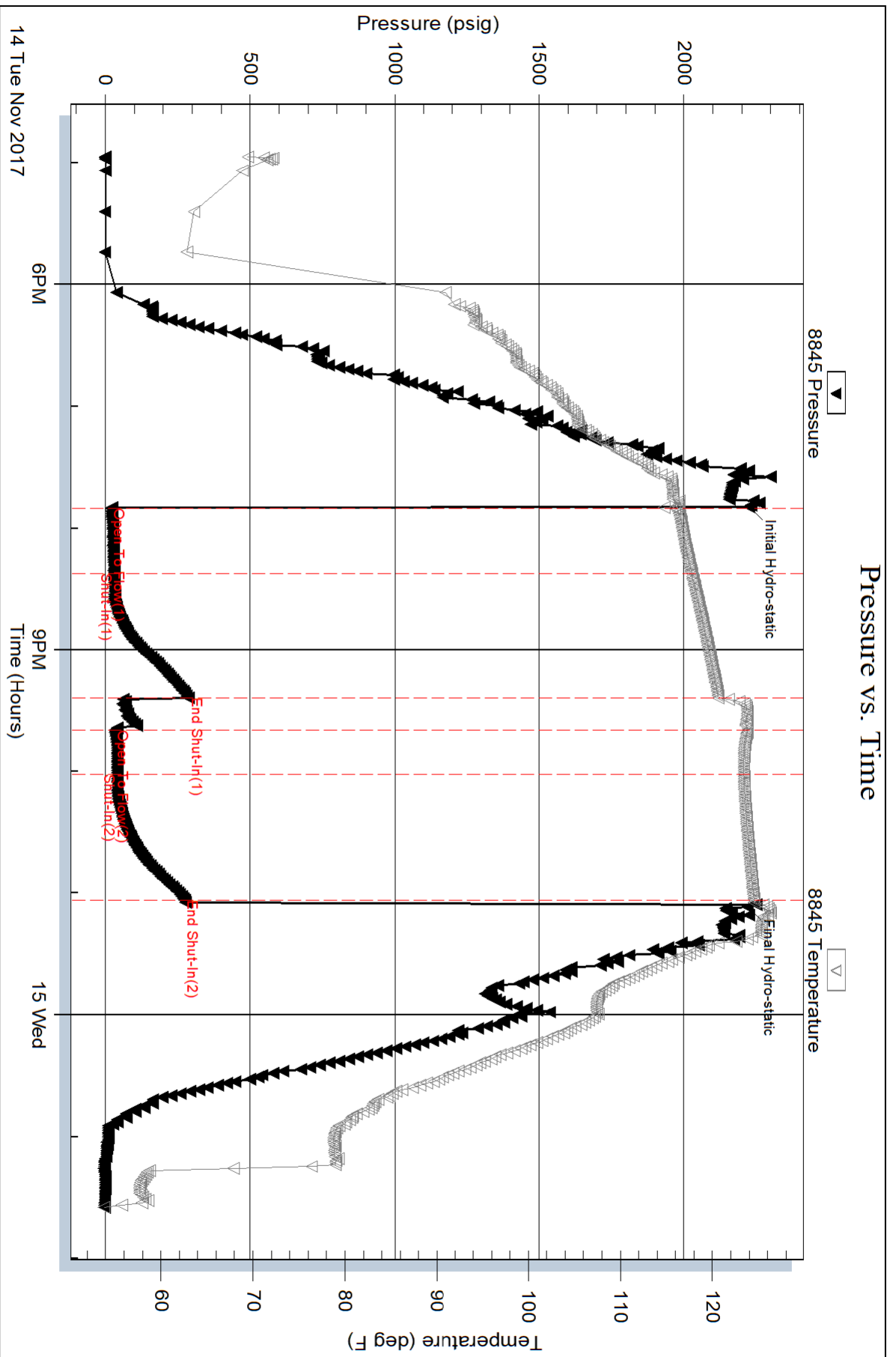
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





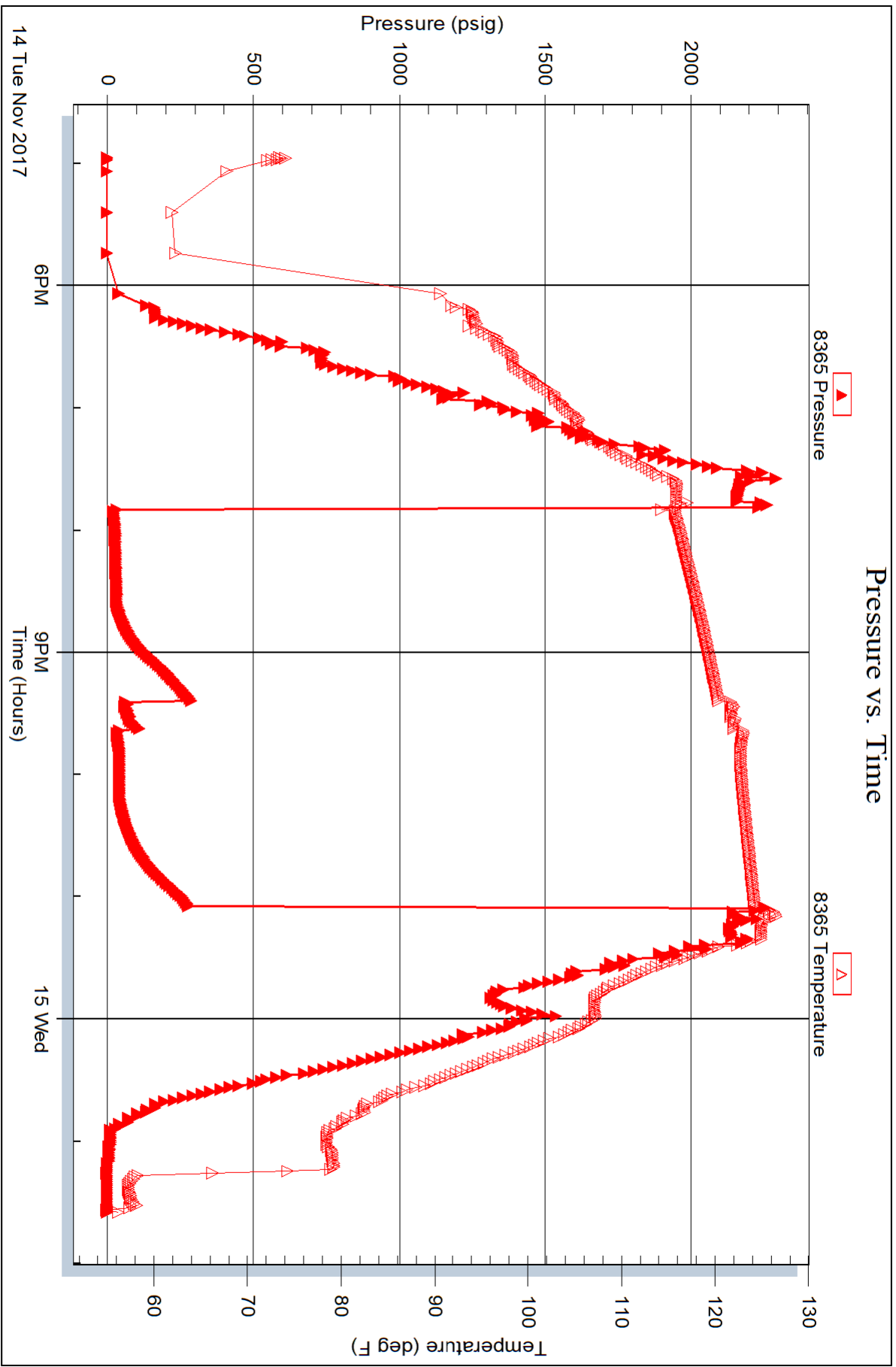
Serial #: 8365

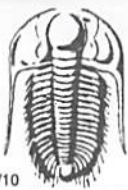
Inside

Downing Nelson Oil Co, Inc

Albers #1-29

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64378**

Well Name & No. Albers #1-29 Test No. 1 Date 11/13/17  
 Company Dawning Nelson Oil Co, Inc Elevation 3034 KB 3026 GL  
 Address PO Box 1019 Hays, Ks 67601  
 Co. Rep / Geo. Mark Dawning Rig Discovery #1  
 Location: Sec. 29 Twp. 9 S Rge. 31 W Co. Thomas State Ks

Interval Tested 4194 - 4287 Zone Tested LKC H-J  
 Anchor Length 93 Drill Pipe Run 2880 Mud Wt. 9.3  
 Top Packer Depth 4189 Drill Collars Run 0 Vis 50  
 Bottom Packer Depth 4194 Wt. Pipe Run 311 WL 8.0  
 Total Depth 4287 Chlorides 2,000 ppm System LCM 1/2 #

Blow Description IF : 9" blow  
ISI : No return.  
FF : 8" blow  
FSI : No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>OTL</u>	<u>100</u>			
<u>240</u>	<u>mcw oil spots</u>			<u>60%</u>	<u>40</u>

Rec Total 250 BHT 128 Gravity 34 API RW 35 @ 57 °F Chlorides 26000 ppm

(A) Initial Hydrostatic 2081  Test 1150 T-On Location 1545  
 (B) First Initial Flow 18  Jars No T-Started 2046  
 (C) First Final Flow 74  Safety Joint No T-Open 2236  
 (D) Initial Shut-In 1170  Circ Sub N/c T-Pulled 0136  
 (E) Second Initial Flow 82  Hourly Standby \_\_\_\_\_ T-Out 0414  
 (F) Second Final Flow 132  Mileage 132 RT <sup>99</sup> Comments \_\_\_\_\_  
 (G) Final Shut-In 1168  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2073  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1249.00  
 MP/DST Disc't \_\_\_\_\_

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45

Sub Total 1249

Approved By \_\_\_\_\_ Our Representative

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64379**

Well Name & No. Albers #1-29 Test No. 2 Date 11/13/2017  
 Company Downing Nelson Oil Co, Inc Elevation 3034 KB 3026 GL  
 Address PO Box 1019 Hays KS 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery #1  
 Location: Sec. 29 Twp. 9S Rge. 31W Co. Thomas State KS

Interval Tested 4314-4345 Zone Tested LKC L  
 Anchor Length 31 Drill Pipe Run 4005 Mud Wt. 9.2  
 Top Packer Depth 4309 Drill Collars Run 311 Vis 50  
 Bottom Packer Depth 4314 Wt. Pipe Run Ø WL 8.0  
 Total Depth 4345 Chlorides 2,000 ppm System LCM 1 1/2 #  
 Blow Description IF: 2" blow  
ISI: No return.  
FF: 1/2" blow  
FBI: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>OCN</u>	<u>15</u>		<u>85</u>	

Rec Total 20 BHT 119 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 211  Test 1150 T-On Location 1430  
 (B) First Initial Flow 16  Jars \_\_\_\_\_ T-Started 1447  
 (C) First Final Flow 21  Safety Joint \_\_\_\_\_ T-Open 1802  
 (D) Initial Shut-In 345  Circ Sub N/C T-Pulled 2032  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 2251  
 (F) Second Final Flow 26  Mileage 132 RT 99 Comments \_\_\_\_\_  
 (G) Final Shut-In 230  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2103  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1249

Initial Open 30  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Copies \_\_\_\_\_  
 Final Shut-In 45 Sub Total 0  
 Total 1249.00  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64380**

Well Name & No. Albers # 1-29 Test No. 3 Date 11/14/2017  
 Company Downing Nelson Oil Co, Inc Elevation 3034 KB 3026 GL  
 Address PO Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery #1  
 Location: Sec. 29 Twp. 9S Rge. 3W Co. Thomas State KS

Interval Tested 4425 - 4477 Zone Tested Pawnee  
 Anchor Length 52' Drill Pipe Run 4100 Mud Wt. 9.3  
 Top Packer Depth 4420 Drill Collars Run Ø Vis 50  
 Bottom Packer Depth 4425 Wt. Pipe Run 311 WL 7.6  
 Total Depth 4477 Chlorides 2000 ppm System LCM 1#

Blow Description IF! 3" blow  
IST! No return.  
FF! Surface blow  
FST! No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>50cm</u>		<u>2</u>		<u>98</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 45 BHT 126 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2226</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1530</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>used</u> <u>250</u>	T-Started <u>1557</u>
(C) First Final Flow <u>30</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1851</u>
(D) Initial Shut-In <u>288</u>	<input checked="" type="checkbox"/> Circ Sub <u>4/C</u>	T-Pulled <u>2151</u>
(E) Second Initial Flow <u>32</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2135 1/15</u>
(F) Second Final Flow <u>42</u>	<input checked="" type="checkbox"/> Mileage <u>132 RT X2</u> <u>99+99</u>	Comments <u>Pu tool @ 0230</u>
(G) Final Shut-In <u>274</u>	<input type="checkbox"/> Sampler	<u>1/16</u>
(H) Final Hydrostatic <u>2221</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby	Total <u>1673.00</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1673</u>	

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45

Approved By \_\_\_\_\_ Our Representative [Signature]

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LOG

SWIFT Services, Inc.

DATE  
11/06/17PAGE NO.  
1

CUSTOMER Downing & Nelson		WELL NO. 1-29		LEASE Albers		JOB TYPE Cement Surface		TICKET NO. 30543	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	2030								On location w/ 200 SKS std 3% CC 20% gel. Rig still drilling
									Rig Running $\varnothing 5\frac{1}{8}$ " 23# 305'
	0005								Hook up to Circulate.
	0035								Hook up to Swift, Start Water ahead.
	0040	3 1/2	5				0		Fin Water, Start Cmt.
	0100	5	48				0		Fin Cmt, Start Displacement.
	0105	4 1/2	18 1/2				350		Fin Displacement Cmt Did not Circulate.
	0135						250		Shut in, Called in for more Cmt, Will R. Washed up truck
	0430								100 SKS std 3% CC on location w/ 4 Joints of 1" tubing.
	0530								Run 1" Tubing, Tag at 90'
	0540	1/2							Start Mixing Cmt
	0630	1/2	21						Fin Cmt, Cmt to Surface. Pull 1" tubing Wash up truck Rack up Job Complete
									Thanks, Jon, Austin, Isaac

# SWIFT Services, Inc.

DATE  
16 Nov 17

PAGE NO.  
1

WELL NO. 1-29		LEASE Albas		JOB TYPE Cement long string		TICKET NO. 31032			
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
								375 SMD cement w/ 1/4" Floccs	
								5 1/2" x 14" casing bed joints 2631'	
								Centralizers 2, 6, 8, 10, 12, 14, 16 40	
								Baskets 2, 40 size jt	
	0640							on loc TRK 114	
	0912							start 5 1/2" x 14" casing in well	
	1021							Drop ball - circulate	
	1110	5	12			200		Pump 500 gal mud flush	
		5	20			200		Pump 20 bbl KCl fluid	
			8					Plug RH - MH <span style="float: right;">30 sk - 20 sk</span>	
	1125	5 1/2				200		mix SMD cement <span style="float: right;">200sk @ 11.2 PPG</span>	
		5 1/4				200			<span style="float: right;">75 sk @ 12.7 PPG</span>
		4 1/2				200			<span style="float: right;">50 sk @ 14 PPG</span>
			160 total			<del>200</del>			
								Drop latch down plug	
								wash out pump line	
	<del>1215</del> 1230	5				200		Displace plug	
	1230	5	65			<del>100</del> 1550		→ cement to surface ←	
								Land plug <span style="float: right;">15 sk top #</span>	
								Release pressure to truck - dried up	
	1235							Wash truck	
	1255							Rack up	
								Job complete	
								IT checks	
								Print, Balance & sign off	

**Marc A. Downing**  
**Consulting Petroleum Geologist**

**Geologic Report**  
**Drilling Time and Sample Log**

**Operator** **Downing-Nelson Oil Co., Inc.**  
**Lease** **Albers** **No. 1-29**  
**API #** **15-193-21004-0000**  
**Field** **Ostmeyer Northwest**  
**Location** **655' FNL & 2080' FEL**  
**Sec.** **29** **Twp.** **9s** **Rge.** **31w**  
**County** **Thomas** **State** **Kansas**

**Elevation**  
**KB** **3034**  
**DF** **3032**  
**GL** **3026**

**Casing Record**  
**Surface**  
**8 5/8" @ 305'**  
**Production**

**Electrical Surveys**  
**CNDL**  
**DIL**

Formation	Sample tops	Log Tops	Datum	Struct Comp
Top Anhydrite	2607	2608	+426	+1
Base Anhydrite	2639	2638	+396	+2
Topeka	3823	3824	-790	+1
Heebner	4033	4033	-999	+1
Toronto	4055	4055	-1021	-2
LKC	4073	4074	-1040	+5
Stark	4283	4285	-1251	FL
BKC	4344	4347	-1313	-2
Pawnee	4457	4458	-1424	+1
Fort Scott	4526	4528	-1494	-4
Cherokee Sh	4554	4557	-1523	-3
Johnson Zone	4598	4600	-1566	-3
Miss	4628	4631	-1597	-6
Total Depth	4680	4682	-1648	

**Discovery Drilling, Rig #1**  
**Commenced** **11-6-17** **Completed**  
**Samples Saved From** **3800** **To** **RTD**  
**Drilling Time Kept From** **3700** **To** **RTD**  
**Samples Examined From** **3800** **To** **RTD**  
**Geological Supervision From** **3800** **To** **RTD**

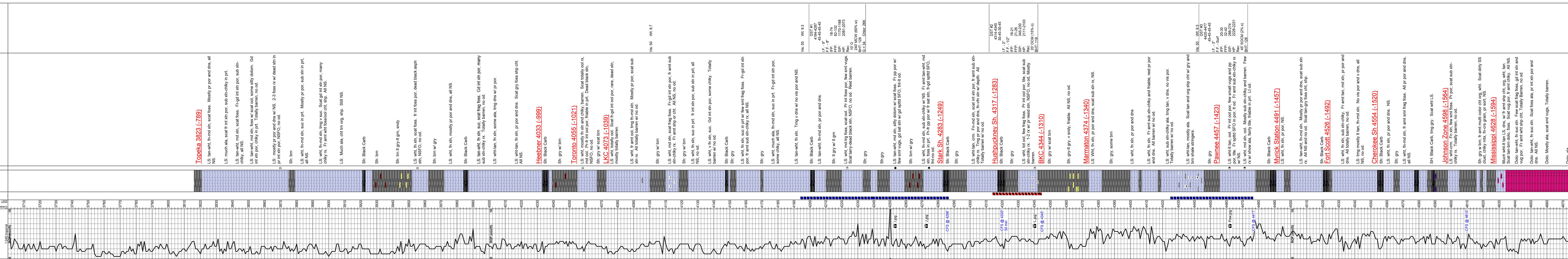
**Summary and Recommendations**

The Albers #1-29 was structurally adequate but did not develop well enough to produce. Due to the amount of water being produced on the Geerdes-Albers Unit, it was decided to set 5 1/2" production casing for a shallow salt water disposal well.

Respectfully Submitted,  
 Marc A. Downing

Reference Well For Structural Comparison **DNOCI**  
**Geerdes-Albers Unit #1-29** **2000' FNL & 2475' FWL** **Sec. 29-9s-31w**

Printed by GEOstrip V6 Striplog version 4.0.8.15 (www.gislog.com)



Geological Descriptions	Comment
LS: tan-wht, fr-md xin, scat foss. Mostly pr por and dns, all NS.	
LS: much ala, scat fr int xin por, sub xin-chiky in prt.	
LS: tan-wht, md xin, scat foss. Fr-gd int xin por, sub xin-chiky, all NS.	
LS: tan-wht, md xin, foss w/ scat ool, some stilly dolom. Gd int xin por, chiky in prt. Totally barren, no od.	
LS: mostly pr por and dns w/ NS. 2-3 foss rx w/ dead stn in prt int xin por, NSFO, no od.	
Sh: brn	
LS: wht, fr-md xin, suc in prt. Mostly pr por, sub xin in prt, all NS.	
LS: wht, fr-md xin, trng v suc. Scat gd int xin por, many chiky rx. Fr amt wht foss/ool cht, shp. All NS.	
LS: Much ala, cht tm org, shp. Still NS.	
Sh: Black Carb	
Sh: brn	
Sh: tm it gry-lt grn, sndy	
LS: wht, fr-md xin, scat foss. Fr int foss por, dead black asph stn, NSFO, no od.	
Sh: brn w/ gry	
LS: wht, fr-md xin, mostly pr por and dns, all NS.	
Sh: Black Carb	
LS: tan-wht, fr-md xin, suc. Scat frag foss. Gd int xin por, many sub xin-chiky rx. Totally barren, no od.	
LS: wht-ten, fr xin, some ala, trng dns w/ pr por.	
LS: wht-ten, fr xin, pr por and dns. Scat gry foss stp cht. All NS.	
<b>Heebner 4033 (-999)</b> Sh: Black Carb	
Sh: gry w/ brn	
<b>Toronto 4055 (-1021)</b> LS: wht, mostly fr xin and chiky, barren. Scat totally ool rx, md ool. Pr-fr int ool por, friable in prt. Dead black stn, NSFO, no od.	
<b>LKC 4073 (-1039)</b> LS: wht, totally ool. Scat fr-gd int ool por, rare, dead stn, mostly totally barren.	
LS: wht, fr amt ool, trng fr-md xin. Mostly pr por, scat sub xin rx. All totally barren w/ no od.	
Sh: gry w/ brn	
LS: wht, md xin, scat frag foss. Fr-gd int xin por, fr amt sub xin-chiky rx. Fr amt shp or cht. All NS, no od.	
Sh: gry w/ brn	
LS: wht, fr xin, suc in prt. Fr int xin por, sub xin in prt, all NS, no od.	
LS: wht, v fr xin, suc. Gd int xin por, some chiky. Totally barren w/ no od.	
Sh: Black Carb	
Sh: gry	
LS: wht, fr-md xin, suc in prt w/ few sml frag foss. Fr-gd int xin por, fr amt sub xin-chiky rx, all NS.	
Sh: gry	
LS: tan-wht, fr xin. Trng v dns w/ no vis por and NS.	
Sh: Black Carb	
LS: tan-wht, fr-md xin, pr por and dns.	
Sh: it gry w/ lt grn	
LS: wht, md-xin, suc in prt w/ few sml frag foss. Fr-gd int xin por, fr amt sub xin-chiky rx, all NS.	
Sh: gry	
LS: wht, much ala, fr-md xin, suc in prt. Fr-gd int xin por, some chiky, all NS.	
LS: tan-wht, fr xin. Trng v dns w/ no vis por and NS.	
Sh: Black Carb	
LS: wht, md xin, sub xin-chiky w/ NS. Fr amt tan-wht, md xin, foss in prt. Pr-fr pp por w/ fr sat stn, fr-gd spitted SFO, int-ft od.	
<b>Stark Sh. 4283 (-1249)</b> Sh: Black Carb	
Sh: gry	
LS: wht, fr-md xin, sub xin-chiky w/ NS. Fr amt tan-wht, md xin, foss in prt. Pr-fr pp por w/ fr sat stn, fr-gd spitted SFO, int-ft od.	
<b>Husphuckney Sh. 4317 (-1283)</b> Sh: Black Carb	
Sh: gry	
LS: wht, tot ool, few frag foss. Pr int ool por, tile, scat sub xin-chiky rx. 1-2 rx w/ pr resid stn, NSFO, no od. Mostly barren.	
<b>BKC 4344 (-1310)</b> Sh: gry w/ scat brn	
Sh: gry-lt gry, v sndy, friable. All NS, no od.	
<b>Marmaton 4374 (-1340)</b> LS: Wht, fr xin, pr por and dns, scat sub xin rx, NS.	
Sh: gry, some brn	
LS: wht, fr xin, pr por and dns	
LS: wht, fr-md xin, trng tan, v dns, no vis por.	
LS: wht-ten, mostly ala. Scat tan and org shp cht w/ gry and brn shale stringers.	
Sh: gry	
<b>Pawnee 4457 (-1423)</b> LS: wht-lt tan, ool. Pr int ool por, few small vugs and pp por, tile. Fr spitted SFO in prt, it od. Fr amt sub xin-chiky rx w/ NS.	
LS: trng mostly lt tan, fr-md xin. No vis por and v dns, all NS, no od.	
Sh: Black Carb	
<b>Myrick Station 4491 (-1457)</b> LS: wht, fr xin, pr por, NS.	
LS: tan-wht, fr-md xin. Mostly pr por and dns, scat sub xin rx. All NS and no od. Scat tan-gry foss cht, shp.	
Sh: Black Carb	
<b>Fort Scott 4526 (-1492)</b> LS: wht, fr xin, sub xin-chiky. Fr amt tan, md xin, pr por and dns. All totally barren, no od.	
LS: trng mostly lt tan, fr-md xin. No vis por and v dns, all NS, no od.	
<b>Cherokee Sh 4554 (-1520)</b> Sh: Black Carb	
LS: wht, fr xin, pr por and dns. NS.	
Sh: gry	
LS: wht, fr-md xin, fr amt sml frag foss. All pr por and dns, all NS.	
Sh: Black Carb, trng gry. Scat wht LS.	
<b>Johnson Zone 4598 (-1564)</b> LS: wht-orm. Fr xin, few sml foss. Pr por, scat sub xin-chiky rx. Totally barren, no od.	
Sh: gry v brn, fr amt multi color cht org, wht. Scat dirty SS clust, chiky mtx, fr-crs grain, pr sort, NS.	
<b>Mississippi 4628 (-1594)</b> Much wht-lt tan LS, dns, w/ fr amt shp cht, org, wht, tan. Scat tan-brn dol, foss. Scat vug por, fr amt chiky. All NS.	
Dolo. tan-wht, fr suc xin. Few scat frag foss, gd int xin and vug por. Fr amt wht shp cht, Totally barren, no od.	
Dolo. tan-wht, fr suc xin. Scat foss ala, pr int xin por and dns. All NS.	
Dolo. Mostly ala, scat sml vugs. Totally barren.	
Dolo. ala	
<b>RTD 4680 (-1646)</b>	

Vis: 50 Wt: 8.7  
 Vis: 50 Wt: 9.3  
 DST #1 4194-4287  
 I.F. - 2" 45-45-45-45  
 F.F. - 8" 18-74  
 I.F.P. 82-132  
 S.I.P. 1170-1168  
 H.P. 2081-2073  
 R.O. 240 MCW (60% w)  
 BHT: 128  
 G = 34 Chbr. 26K

DST #3 4374-4345  
 I.F. - 2" 30-45-30-45  
 F.F. - 1/2" 16-21  
 I.F.P. 345-230  
 S.I.P. 2114-2103  
 H.P. 2226-2221  
 Rec: 45' SOCM (15% o)  
 BHT: 126

DST #3 4425-4477  
 I.F. - 3" 45-45-45-45  
 F.F. - Surf 20-30  
 I.F.P. 32-42  
 S.I.P. 288-274  
 H.P. 2226-2221  
 Rec: 45' SOCM (2% o)  
 BHT: 126