

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
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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)</i> <i>(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	Farmer, John O., Inc.
Well Name	NIELSEN 1
Doc ID	1419805

Tops

Name	Top	Datum
Mississippi	2438	(-1098)
Kinderhook	2800	(-1460)
Hunton	2938	(-1598)
Maquoketa	2948	(-1608)
Viola	3022	(-1682)
Simpson Sand	3126	(-1786)
Arbuckle	3172	(-1832)
R.T.D.	3200	(-1860)





# Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

## DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: Discovery Drilling Co., Inc. LIC#31548  
370 West Wichita Avenue - P.O. Box 352 PO Box 763  
Russell, KS 67665 + 2635 Hays, KS 67601

Lease: Nielson # 1 Location: 215 FSL - 420 FWL  
SE/SW/SW/SW  
Section 25/ 16S/ 10E  
Lyon County, KS

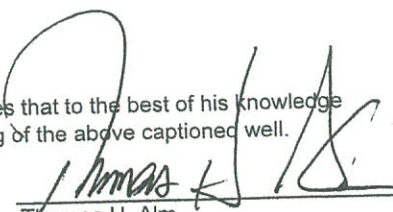
Loggers Total Depth: 3199' API#15- 111-20,536-00-00  
Rotary Total Depth: 3200' Elevation: 1332 GL - 1340 KB  
Commenced: 5/2/2018 Completed: 5/10/2018  
Casing: 8 5/8" @ 225' W/150sks Status: Oil Well  
5 1/2" @ 3200' N/120sks

### DEPTHS & FORMATIONS (All from KB)

Surface Lime & Shale	<u>0'</u>	Viola	<u>3026'</u>
Shale-Lime-Sand	<u>551'</u>	Simpson	<u>3013'</u>
Shale	<u>751'</u>	Arbuckle	<u>3172'</u>
Lime & Shale	<u>1096'</u>	RTD	<u>3200'</u>
Mississippian	<u>2422'</u>		
Kinderhook	<u>2790'</u>		
Hunton	<u>2927'</u>		

STATE OF KANSAS))  
) ss  
COUNTY OF ELLIS )

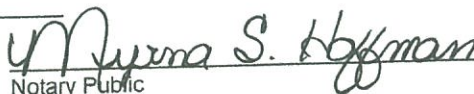
Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

  
Thomas H. Alm

Subscribed and sworn to before me on 5-16-2018

My Commission expires: 6-28-2018

(Place stamp or seal below)

  
Notary Public



# 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. 758

Date	5-3-18	Sec.	25	Twp.	16	Range	10	County	Lyon	State	Ks	On Location		Finish	7:45 AM	
Lease								Well No.		Location						
Nielsen								1		Council Grove - 10 E to F Rd, 25 to 32nd Rd						
Contractor	Discovery #2							Owner								
Type Job	Surface							To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.								
Hole Size	12 1/4"		T.D.		223'		Charge To									
Csg.	8 5/8"		Depth		223'		John O Farmer									
Tbg. Size			Depth				Street									
Tool			Depth				City									
Cement Left in Csg.		15'		Shoe Joint		15'		State								
Meas Line		Displace		13 1/4 BLS		The above was done to satisfaction a _____ ion of owner agent or contractor.										
EQUIPMENT								Cement Amount Ordered								
								150 Corn 3% CC 2% Gel								
Pumptrk	16	No.	Cementer	Rick				Comr								
Bulktrk	21	No.	Helper	Jordan				150								
Bulktrk	p.u.	No.	Driver					Poz. In...								
JOB SERVICES & REMARKS								Gel.								
Remarks: Cement did Circulate.								3								
Rat Hole								Calcium								
Mouse Hole								6								
Centralizers								Hulls								
Baskets								Salt								
D/V or Port Collar								Flowseal								
								Kol-Seal								
								Mud CLR 48								
								CFL-117 or CD110 CAF 38								
								Sand								
								Handling								
								159								
								Mileage								
								FLOAT EQUIPMENT								
								Guide Shoe								
								Centralizer								
								Baskets								
								AFU Inserts								
								Float Shoe								
								Latch Down								
								Pumptrk Charge								
								Surface								
								Mileage								
								80								
								Tax								
								Discount								
								Total Charge								
Signature																

# 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. 764

Date	5-10-18	Sec.	25	Twsp.	16	Range	10	County	Lyon	State	Ks	On Location		Finish	4:45 PM
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Location Council Grove 10E to F Rd, 25, 16E

Lease Nielson Well No. 1 Owner N/S

Contractor Discovery #2 To Quality Oilwell Cementing, Inc.  
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 Longstring Charge To John O Farmer

Hole Size 7 7/8" T.D. 3200'

Csg. 5 1/2' New 15.50# Depth 3200'

Tbg. Size Depth City State

Tool Depth The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 34' Shoe Joint 34' Cement Amount Ordered 150 Con 10% Salt 5/8 G. Grade

Meas Line Displace 75 1/2 BCS Segal mud Clean 48 20 BCS Kell

**EQUIPMENT**

Pumptrk 16 No. Cementer Helper David Poz. Mix

Bulktrk 14 No. Driver Driver Jordan Gel.

Bulktrk p.u. No. Driver Driver Rick Calcium

**JOB SERVICES & REMARKS**

Remarks: Hulls

Rat Hole Salt

Mouse Hole Flowseal

Centralizers Kol-Seal

Baskets Mud CLR 48

D/V or Port Collar CFL-117 or CD110 CAF 38

Pump Sand

16 Segal mud Clean 48, pump 50 BCS Kell Flush plug, Kell

w/ 30 SA Cement 5 1/2' Gas cap Mileage

w/ 120 SA Cement Shut down

wash pump + lines Displaced plug Centralizer 6

w/ 75 1/2 BCS of New First 10 BCS Kell Baskets 1

Released + held AFU Inserts

List pressure 600 # Float Shoe

Land plug to 1500 # Latch Down 1

Rotating head

Pumptrk Charge

Mileage

Tax  
Discount  
Total Charge

X Signature *[Signature]*



## DRILL STEM TEST REPORT

Prepared For: **John O. Farmer, Inc**

PO Box 352  
Russell, KS 67665-2635

ATTN: John Farmer/Austin K

### **Nielsen #1**

### **25-16S-10E Lyon, KS**

Start Date: 2018.05.08 @ 10:02:00

End Date: 2018.05.08 @ 15:24:30

Job Ticket #: 63389                      DST #: 1

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

Printed: 2018.05.10 @ 11:52:19

John O. Farmer, Inc  
25-16S-10E Lyon, KS  
Nielsen #1  
DST # 1  
Hunton  
2018.05.08





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63389

**DST#: 1**

ATTN: John Farmer/Austin K

Test Start: 2018.05.08 @ 10:02:00

## GENERAL INFORMATION:

Formation: **Hunton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:10:30

Time Test Ended: 15:24:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

**Interval: 2938.00 ft (KB) To 2949.00 ft (KB) (TVD)**

Reference Elevations: 1340.00 ft (KB)

Total Depth: 2949.00 ft (KB) (TVD)

1332.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

**Serial #: 8369 Outside**

Press@RunDepth: 42.70 psig @ 2939.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.08 End Date: 2018.05.08

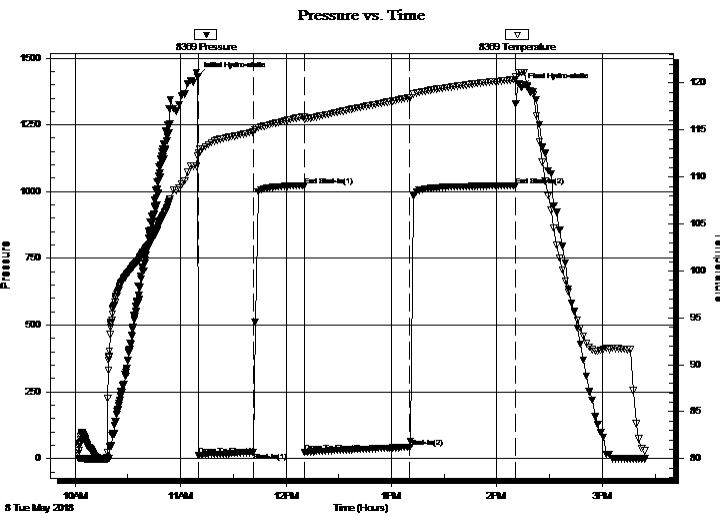
Last Calib.: 2018.05.08

Start Time: 10:02:01 End Time: 15:24:30

Time On Btm: 2018.05.08 @ 11:09:50

Time Off Btm: 2018.05.08 @ 14:13:50

TEST COMMENT: IF - Weak blow building to 2"  
FF - No blow building to 3"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1430.96	112.28	Initial Hydro-static
1	11.01	112.58	Open To Flow (1)
32	22.49	114.79	Shut-In(1)
61	1021.34	116.43	End Shut-In(1)
61	24.55	116.16	Open To Flow (2)
121	42.70	118.43	Shut-In(2)
181	1021.24	120.35	End Shut-In(2)
184	1389.63	121.12	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	Oil & mud cut w ater 4% O 80% W 16%	0.76

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63389

**DST#: 1**

ATTN: John Farmer/Austin K

Test Start: 2018.05.08 @ 10:02:00

## GENERAL INFORMATION:

Formation: **Hunton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:10:30

Time Test Ended: 15:24:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

**Interval: 2938.00 ft (KB) To 2949.00 ft (KB) (TVD)**

Reference Elevations: 1340.00 ft (KB)

Total Depth: 2949.00 ft (KB) (TVD)

1332.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

**Serial #: 8846 Inside**

Press@RunDepth: psig @ 2939.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.08

End Date:

2018.05.08

Last Calib.:

1899.12.30

Start Time: 10:02:01

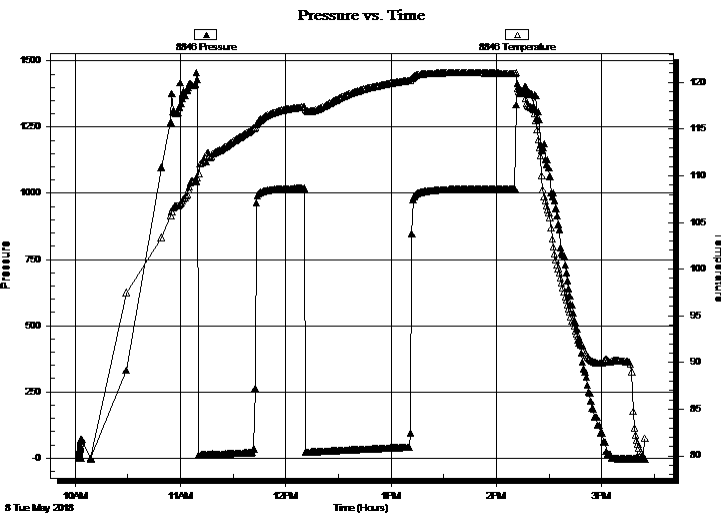
End Time:

15:24:40

Time On Btm:

Time Off Btm:

TEST COMMENT: IF - Weak blow building to 2"  
FF - No blow building to 3"



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	Oil & mud cut w ater 4% O 80% W 16%	0.76

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63389

**DST#: 1**

ATTN: John Farmer/Austin K

Test Start: 2018.05.08 @ 10:02:00

## Tool Information

Drill Pipe:	Length: 2631.00 ft	Diameter: 3.80 inches	Volume: 36.91 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 312.00 ft	Diameter: 3.34 inches	Volume: 3.38 bbl	Weight set on Packer: 23000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 59000.00 lb
			<u>Total Volume: 40.29 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	2938.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	31.00 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			2919.00	
Shut In Tool	5.00			2924.00	
Hydraulic tool	5.00			2929.00	
Packer	4.00			2933.00	20.00 Bottom Of Top Packer
Packer	5.00			2938.00	
Stubb	1.00			2939.00	
Recorder	0.00	8369	Outside	2939.00	
Recorder	0.00	8846	Inside	2939.00	
Perforations	5.00			2944.00	
Bullnose	5.00			2949.00	11.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>31.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63389

**DST#: 1**

ATTN: John Farmer/Austin K

Test Start: 2018.05.08 @ 10:02:00

### 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:

12500 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Oil & mud cut w ater 4% O 80% W 16% M	0.759

Total Length: 70.00 ft      Total Volume: 0.759 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

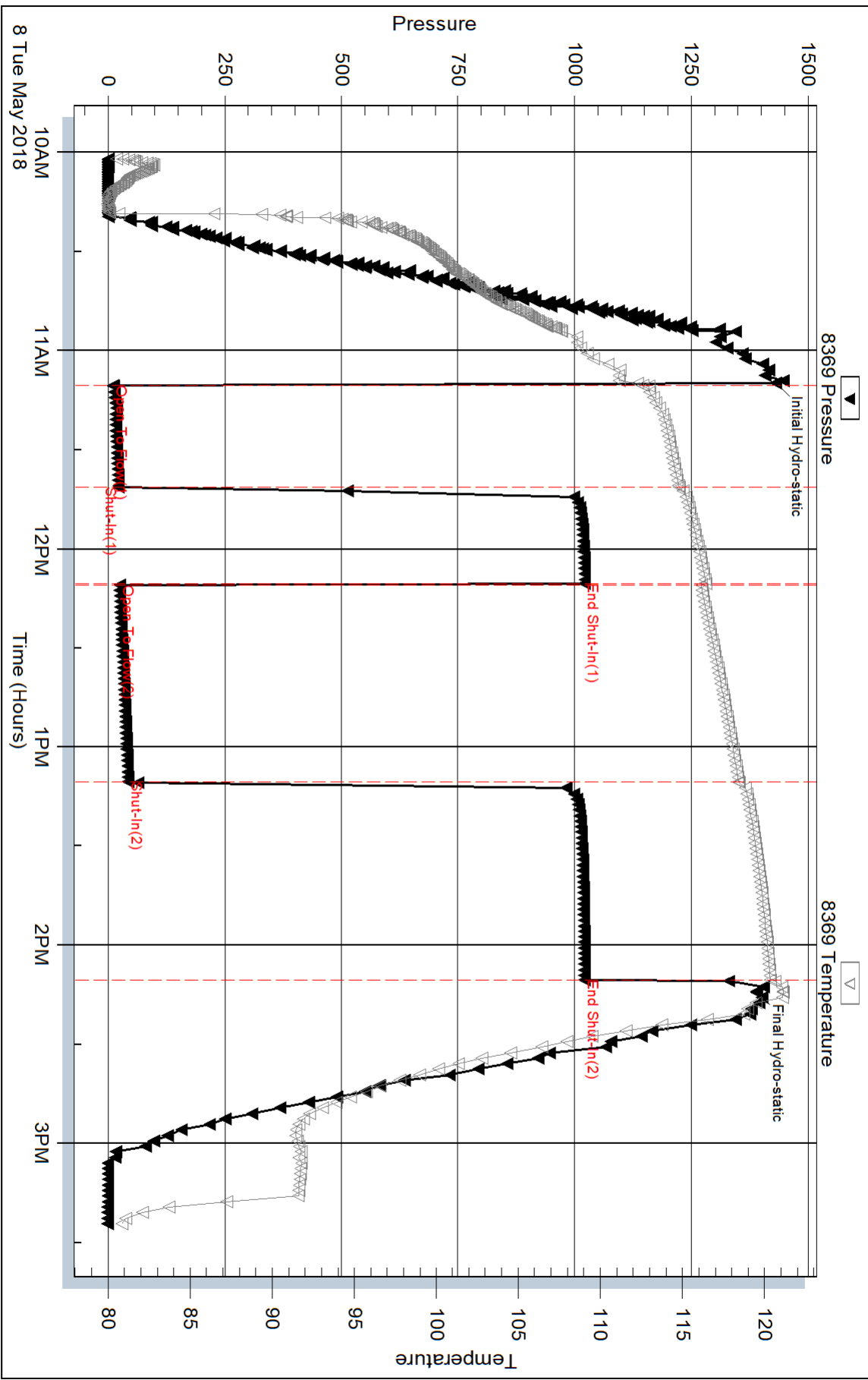
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time



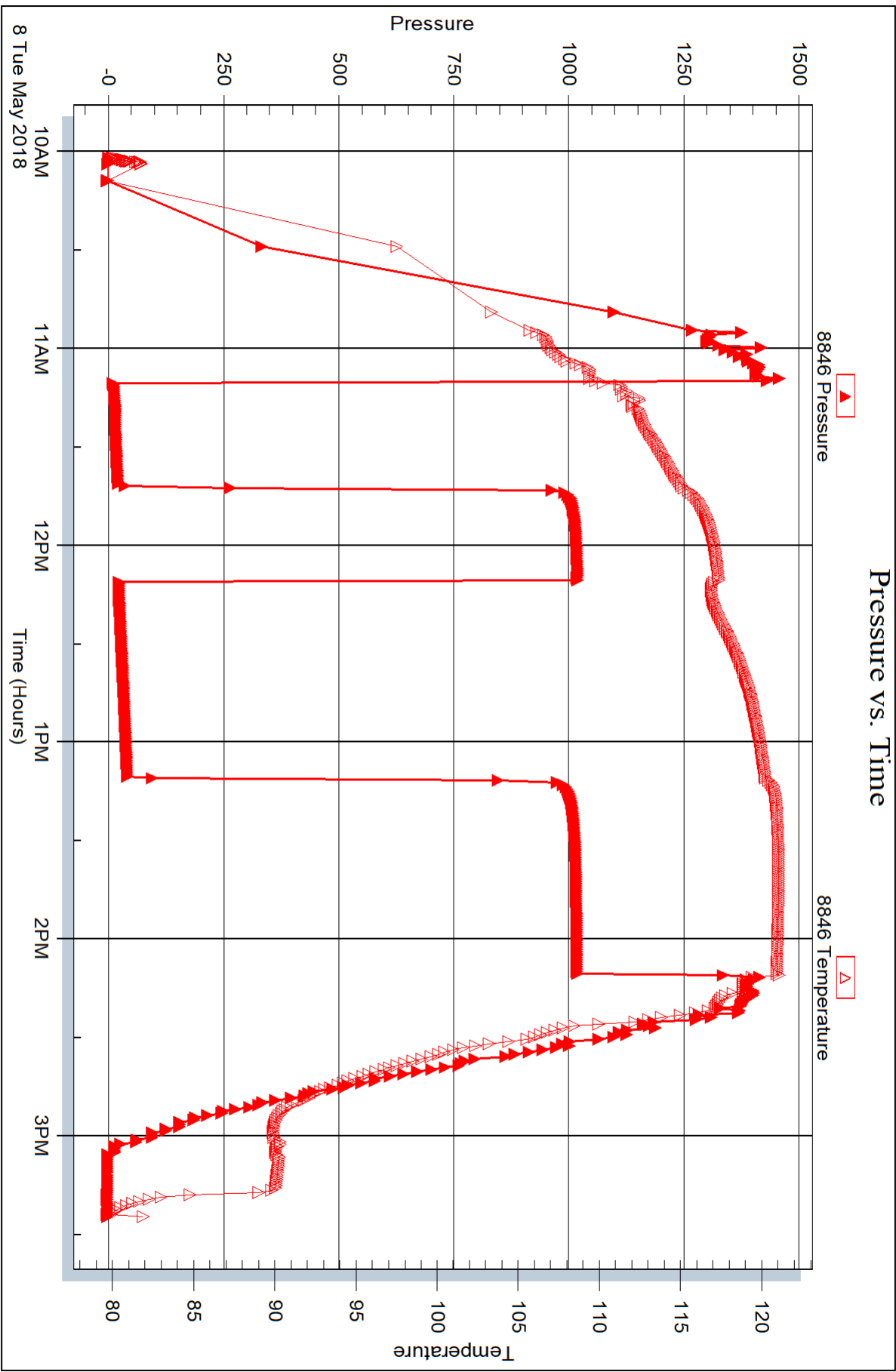
Serial #: 8846

Inside

John O. Farmer, Inc

Nielsen #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **John O. Farmer, Inc**

PO Box 352  
Russell, KS 67665-2635

ATTN: John Farmer/Austin K

### **Nielsen #1**

### **25-16S-10E Lyon, KS**

Start Date: 2018.05.09 @ 01:47:00

End Date: 2018.05.09 @ 05:54:40

Job Ticket #: 63390                      DST #: 2

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

Printed: 2018.05.10 @ 11:51:46



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63390

**DST#: 2**

ATTN: John Farmer/Austin K

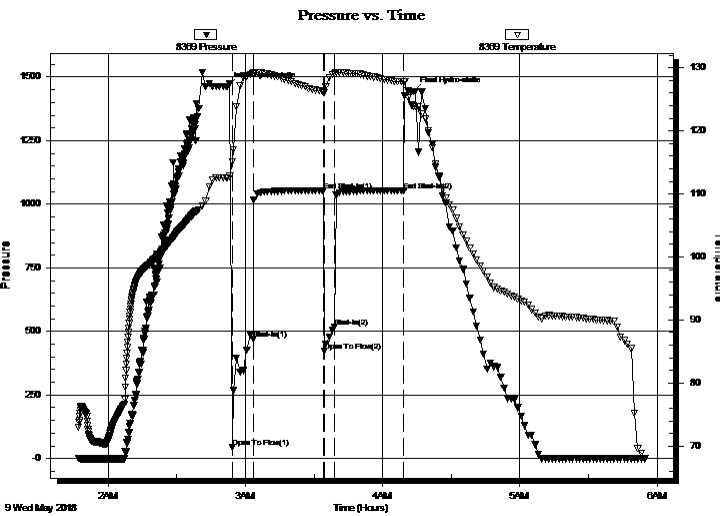
Test Start: 2018.05.09 @ 01:47:00

## GENERAL INFORMATION:

Formation: **Viola**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:54:20  
 Time Test Ended: 05:54:40  
 Interval: **3023.00 ft (KB) To 3031.00 ft (KB) (TVD)**  
 Total Depth: 3031.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jimmy Ricketts  
 Unit No: 80  
 Reference Elevations: 1340.00 ft (KB)  
 1332.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8369 Outside**  
 Press@RunDepth: 518.22 psig @ 3024.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.05.09 End Date: 2018.05.09 Last Calib.: 2018.05.09  
 Start Time: 01:47:01 End Time: 05:54:40 Time On Btm: 2018.05.09 @ 02:52:10  
 Time Off Btm: 2018.05.09 @ 04:13:20

TEST COMMENT: IF - Weak blow building to strong blow 2 minutes  
 FF - Weak blow building to strong blow 1 1/2 minutes



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1461.40	112.56	Initial Hydro-static
3	44.77	115.14	Open To Flow (1)
12	470.04	129.03	Shut-In(1)
42	1052.54	126.15	End Shut-In(1)
43	423.52	126.05	Open To Flow (2)
47	518.22	129.04	Shut-In(2)
78	1052.47	127.76	End Shut-In(2)
82	1444.17	123.92	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
685.00	Salt w ater 100% W	7.44
210.00	Heavy mud cut w ater 72% W 28% M	2.95

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63390

**DST#: 2**

ATTN: John Farmer/Austin K

Test Start: 2018.05.09 @ 01:47:00

### GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:54:20

Time Test Ended: 05:54:40

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: **3023.00 ft (KB) To 3031.00 ft (KB) (TVD)**

Reference Elevations: 1340.00 ft (KB)

Total Depth: 3031.00 ft (KB) (TVD)

1332.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

**Serial #: 8846**

**Inside**

Press@RunDepth: psig @ 3024.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.09

End Date:

2018.05.09

Last Calib.:

1899.12.30

Start Time: 01:47:01

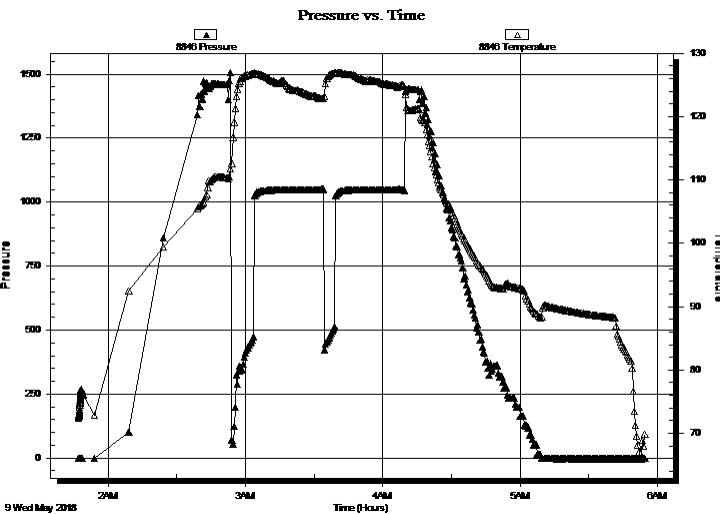
End Time:

05:54:50

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF - Weak blow building to strong blow 2 minutes  
FF - Weak blow building to strong blow 1 1/2 minutes



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
685.00	Salt w ater 100% W	7.44
210.00	Heavy mud cut w ater 72% W 28% M	2.95

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63390

**DST#: 2**

ATTN: John Farmer/Austin K

Test Start: 2018.05.09 @ 01:47:00

## Tool Information

Drill Pipe:	Length: 2724.00 ft	Diameter: 3.80 inches	Volume: 38.21 bbl	Tool Weight: 1900.00 lb
Heavy Wt. Pipe:	Length: 312.00 ft	Diameter: 2.70 inches	Volume: 2.21 bbl	Weight set on Packer: 23000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 67000.00 lb
			<u>Total Volume: 40.42 bbl</u>	Tool Chased 8.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3023.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	28.00 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			3004.00	
Shut In Tool	5.00			3009.00	
Hydraulic tool	5.00			3014.00	
Packer	4.00			3018.00	20.00 Bottom Of Top Packer
Packer	5.00			3023.00	
Stubb	1.00			3024.00	
Recorder	0.00	8369	Outside	3024.00	
Recorder	0.00	8846	Inside	3024.00	
Perforations	5.00			3029.00	
Bullnose	2.00			3031.00	8.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>28.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63390

**DST#: 2**

ATTN: John Farmer/Austin K

Test Start: 2018.05.09 @ 01:47:00

## 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:

16000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
685.00	Salt water 100% W	7.442
210.00	Heavy mud cut water 72% W 28% M	2.946

Total Length: 895.00 ft      Total Volume: 10.388 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

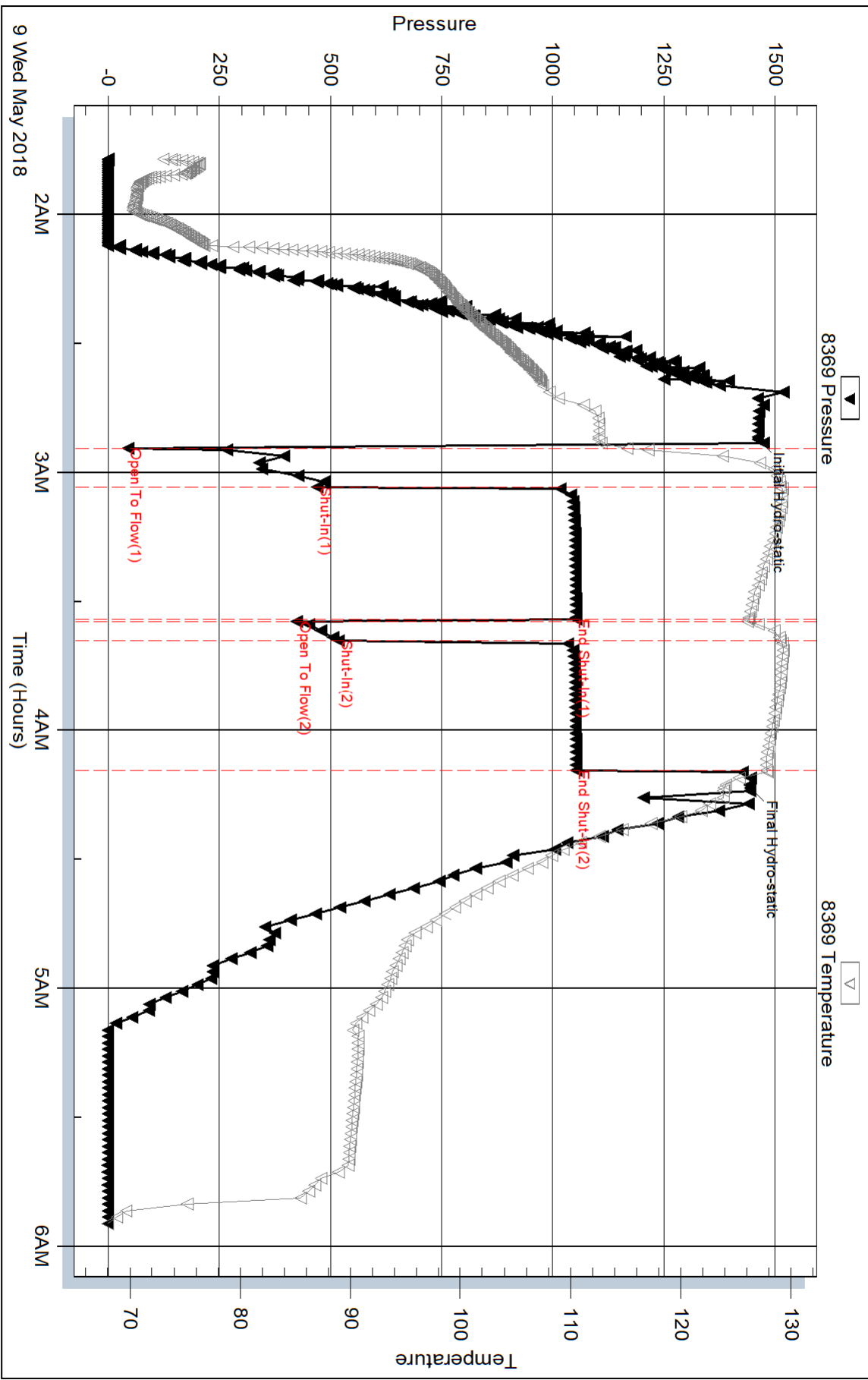
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time



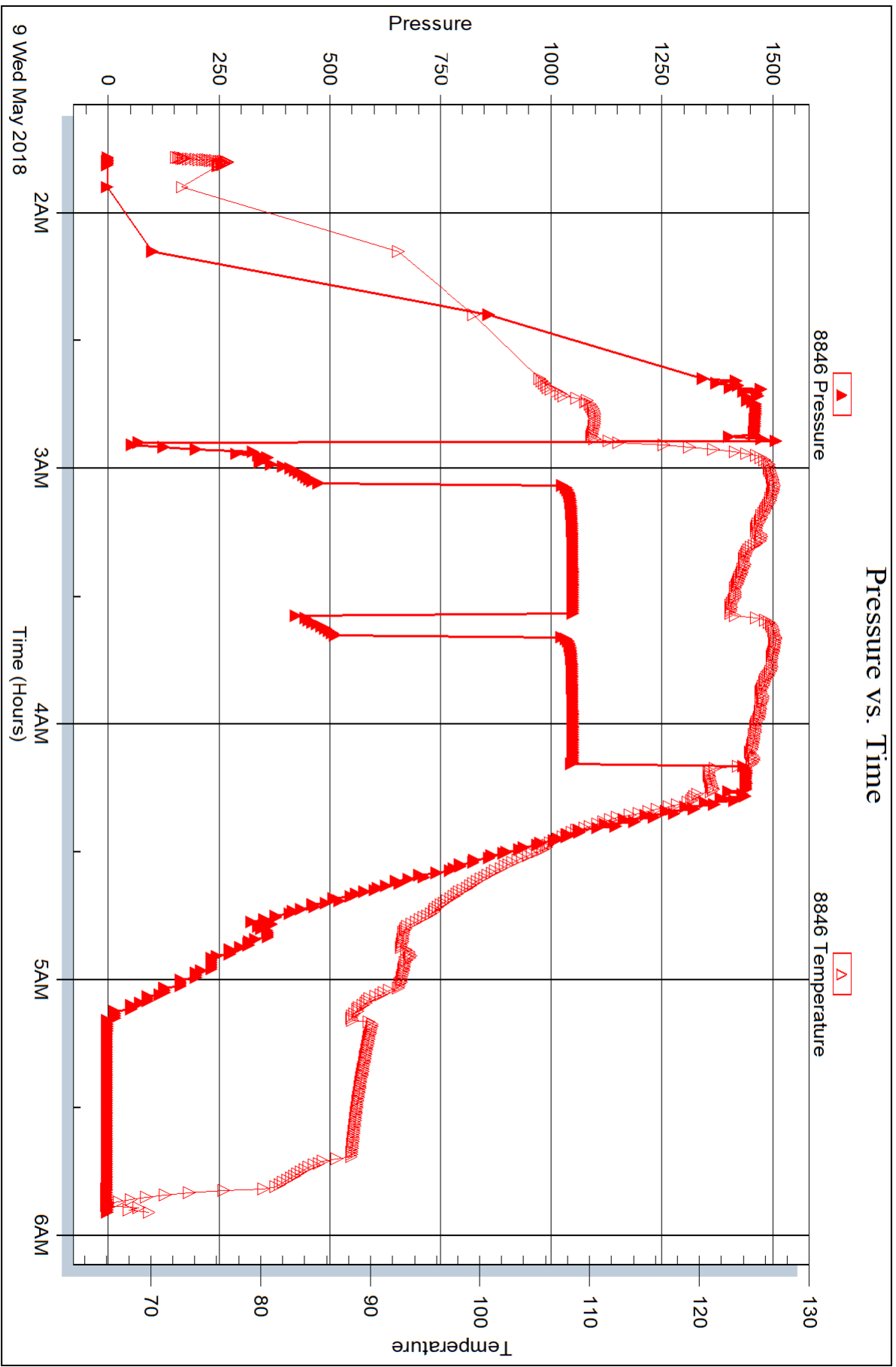
Serial #: 8846

Inside

John O. Farmer, Inc

Nielsen #1

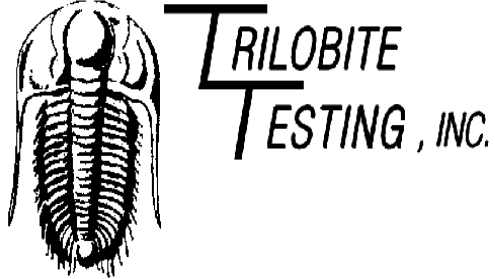
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 63390

Printed: 2018.05.10 @ 11:51:47



## DRILL STEM TEST REPORT

Prepared For: **John O. Farmer, Inc**

PO Box 352  
Russell, KS 67665-2635

ATTN: John Farmer/Austin K

### **Nielsen #1**

### **25-16S-10E Lyon, KS**

Start Date: 2018.05.10 @ 00:47:00

End Date: 2018.05.10 @ 07:16:50

Job Ticket #: 63391                      DST #: 3

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

Printed: 2018.05.10 @ 11:51:26

John O. Farmer, Inc  
25-16S-10E Lyon, KS  
Nielsen #1  
DST # 3  
Simpson Sand  
2018.05.10



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63391

**DST#: 3**

ATTN: John Farmer/Austin K

Test Start: 2018.05.10 @ 00:47:00

## GENERAL INFORMATION:

Formation: **Simpson Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:25:00

Time Test Ended: 07:16:50

Test Type: Conventional Straddle (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: **3128.00 ft (KB) To 3138.00 ft (KB) (TVD)**

Reference Elevations: 1340.00 ft (KB)

Total Depth: 3138.00 ft (KB) (TVD)

1332.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

**Serial #: 8369 Outside**

Press@RunDepth: 102.00 psig @ 3129.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.10

End Date:

2018.05.10

Last Calib.:

2018.05.10

Start Time: 00:47:01

End Time:

07:16:50

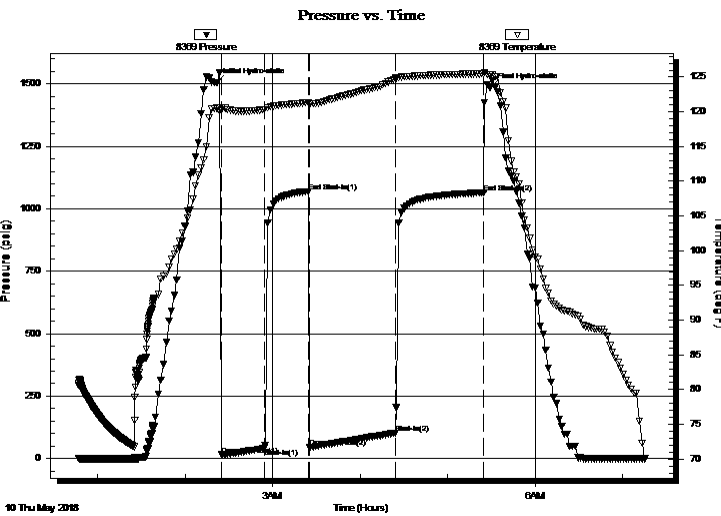
Time On Btm:

2018.05.10 @ 02:21:40

Time Off Btm:

2018.05.10 @ 05:29:39

TEST COMMENT: IF - Weak blow building to 8"  
FF - Weak blow building to 10"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1504.74	120.52	Initial Hydro-static
4	14.76	120.25	Open To Flow (1)
33	41.27	120.33	Shut-In(1)
63	1069.08	121.31	End Shut-In(1)
64	43.98	121.08	Open To Flow (2)
123	102.00	124.78	Shut-In(2)
184	1063.95	125.46	End Shut-In(2)
188	1486.17	125.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
230.00	Clean oil 100% O	1.63
15.00	Oil cut mud 17% O & 83% M	0.11

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

John O. Farmer, Inc  
 PO Box 352  
 Russell, KS 67665-2635  
 ATTN: John Farmer/Austin K

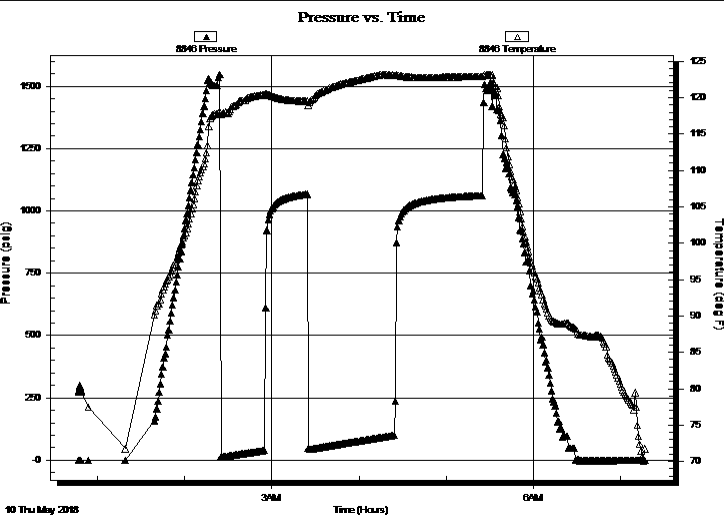
**25-16S-10E Lyon, KS**  
**Nielsen #1**  
 Job Ticket: 63391 **DST#: 3**  
 Test Start: 2018.05.10 @ 00:47:00

**GENERAL INFORMATION:**

Formation: **Simpson Sand**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Initial)  
 Time Tool Opened: 02:25:00 Tester: Jimmy Ricketts  
 Time Test Ended: 07:16:50 Unit No: 80  
 Interval: **3128.00 ft (KB) To 3138.00 ft (KB) (TVD)** Reference Elevations: 1340.00 ft (KB)  
 Total Depth: 3138.00 ft (KB) (TVD) 1332.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 8.00 ft

**Serial #: 8846** Inside  
 Press@RunDepth: psig @ 3129.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.05.10 End Date: 2018.05.10 Last Calib.: 1899.12.30  
 Start Time: 00:47:01 End Time: 07:16:50 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF - Weak blow building to 8"  
 FF - Weak blow building to 10"



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
230.00	Clean oil 100% O	1.63
15.00	Oil cut mud 17% O & 83% M	0.11

**Gas Rates**

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





**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

John O. Farmer, Inc  
 PO Box 352  
 Russell, KS 67665-2635  
 ATTN: John Farmer/Austin K

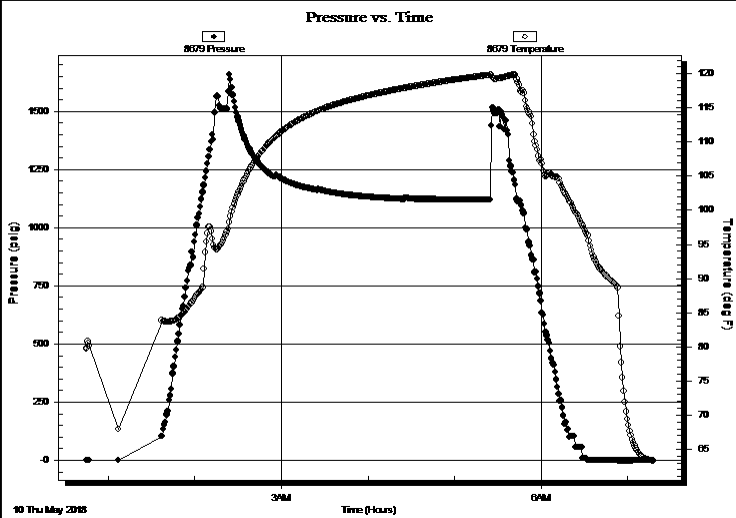
**25-16S-10E Lyon, KS**  
**Nielsen #1**  
 Job Ticket: 63391 **DST#: 3**  
 Test Start: 2018.05.10 @ 00:47:00

### GENERAL INFORMATION:

Formation: **Simpson Sand**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:25:00  
 Time Test Ended: 07:16:50  
 Interval: **3128.00 ft (KB) To 3138.00 ft (KB) (TVD)**  
 Total Depth: 3138.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Straddle (Initial)  
 Tester: Jimmy Ricketts  
 Unit No: 80  
 Reference Elevations: 1340.00 ft (KB)  
 1332.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8679 Below (Straddle)**  
 Press@RunDepth: psig @ 3139.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.05.10 End Date: 2018.05.10 Last Calib.: 1899.12.30  
 Start Time: 00:45:05 End Time: 07:17:29 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF - Weak blow building to 8"  
 FF - Weak blow building to 10"



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

Recovery		
Length (ft)	Description	Volume (bbl)
230.00	Clean oil 100% O	1.63
15.00	Oil cut mud 17% O & 83% M	0.11

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63391

**DST#: 3**

ATTN: John Farmer/Austin K

Test Start: 2018.05.10 @ 00:47:00

## Tool Information

Drill Pipe:	Length: 2818.00 ft	Diameter: 3.80 inches	Volume: 39.53 bbl	Tool Weight: 2800.00 lb
Heavy Wt. Pipe:	Length: 312.00 ft	Diameter: 2.70 inches	Volume: 2.21 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 41.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3128.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	3138.00 ft			
Interval between Packers:	10.00 ft			
Tool Length:	92.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			3109.00	
Shut In Tool	5.00			3114.00	
Hydraulic tool	5.00			3119.00	
Packer	4.00			3123.00	20.00 Bottom Of Top Packer
Packer	5.00			3128.00	
Stubb	1.00			3129.00	
Recorder	0.00	8369	Outside	3129.00	
Recorder	0.00	8846	Inside	3129.00	
Perforations	4.00			3133.00	
Blank Off Sub	1.00			3134.00	
T.C.	4.00			3138.00	10.00 Tool Interval
Packer	0.00			3138.00	
Stubb	1.00			3139.00	
Recorder	0.00	8679	Below	3139.00	
Change Over Sub	0.50			3139.50	
Blank Spacing	31.00			3170.50	
Change Over Sub	0.50			3171.00	
Perforations	24.00			3195.00	
Bullnose	5.00			3200.00	62.00 Bottom Packers & Anchor

**Total Tool Length: 92.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer, Inc

**25-16S-10E Lyon, KS**

PO Box 352  
Russell, KS 67665-2635

**Nielsen #1**

Job Ticket: 63391

**DST#: 3**

ATTN: John Farmer/Austin K

Test Start: 2018.05.10 @ 00:47:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32.1 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 43.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
230.00	Clean oil 100% O	1.629
15.00	Oil cut mud 17% O & 83% M	0.106

Total Length: 245.00 ft      Total Volume: 1.735 bbl

Num Fluid Samples: 0

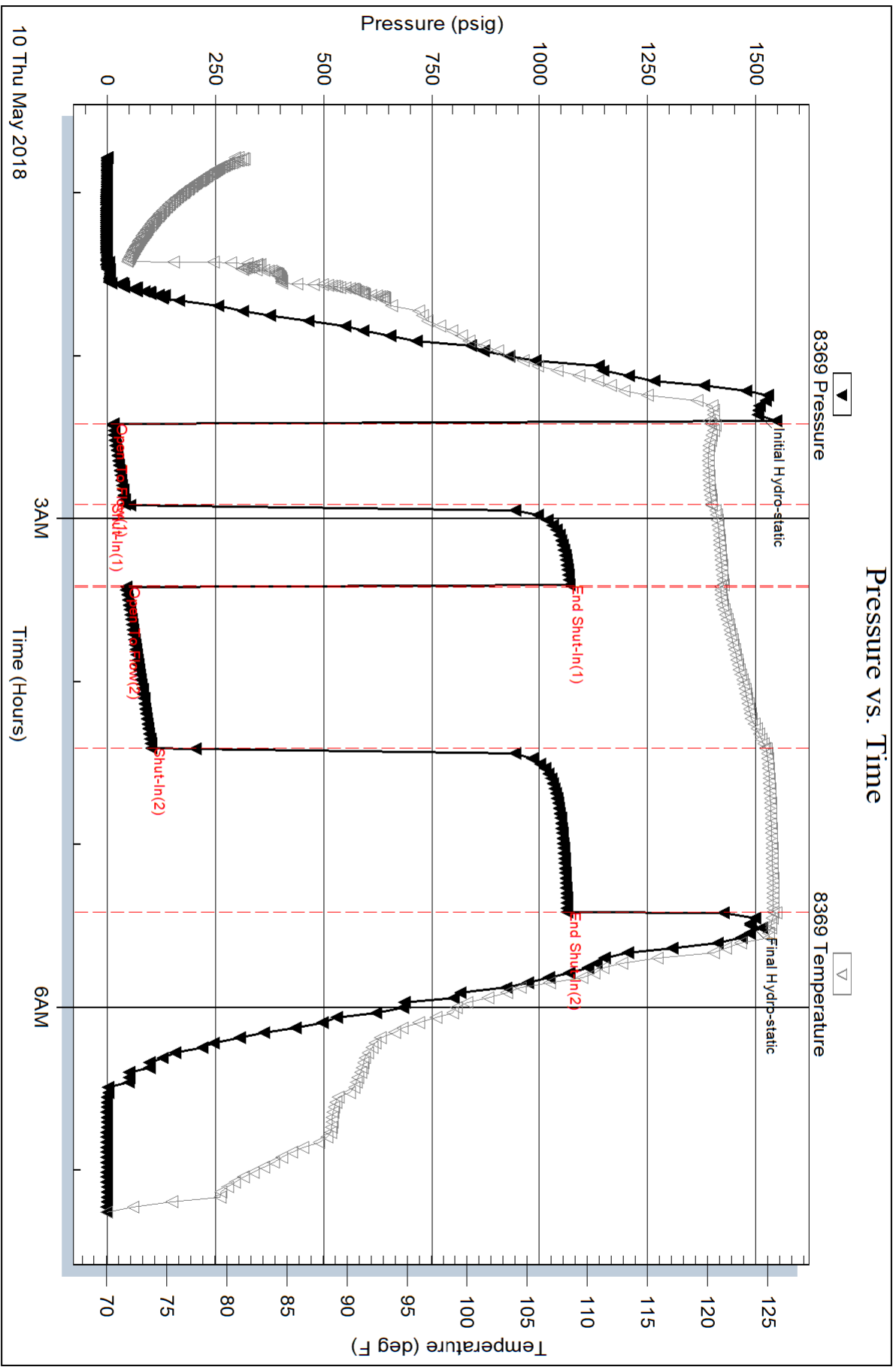
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



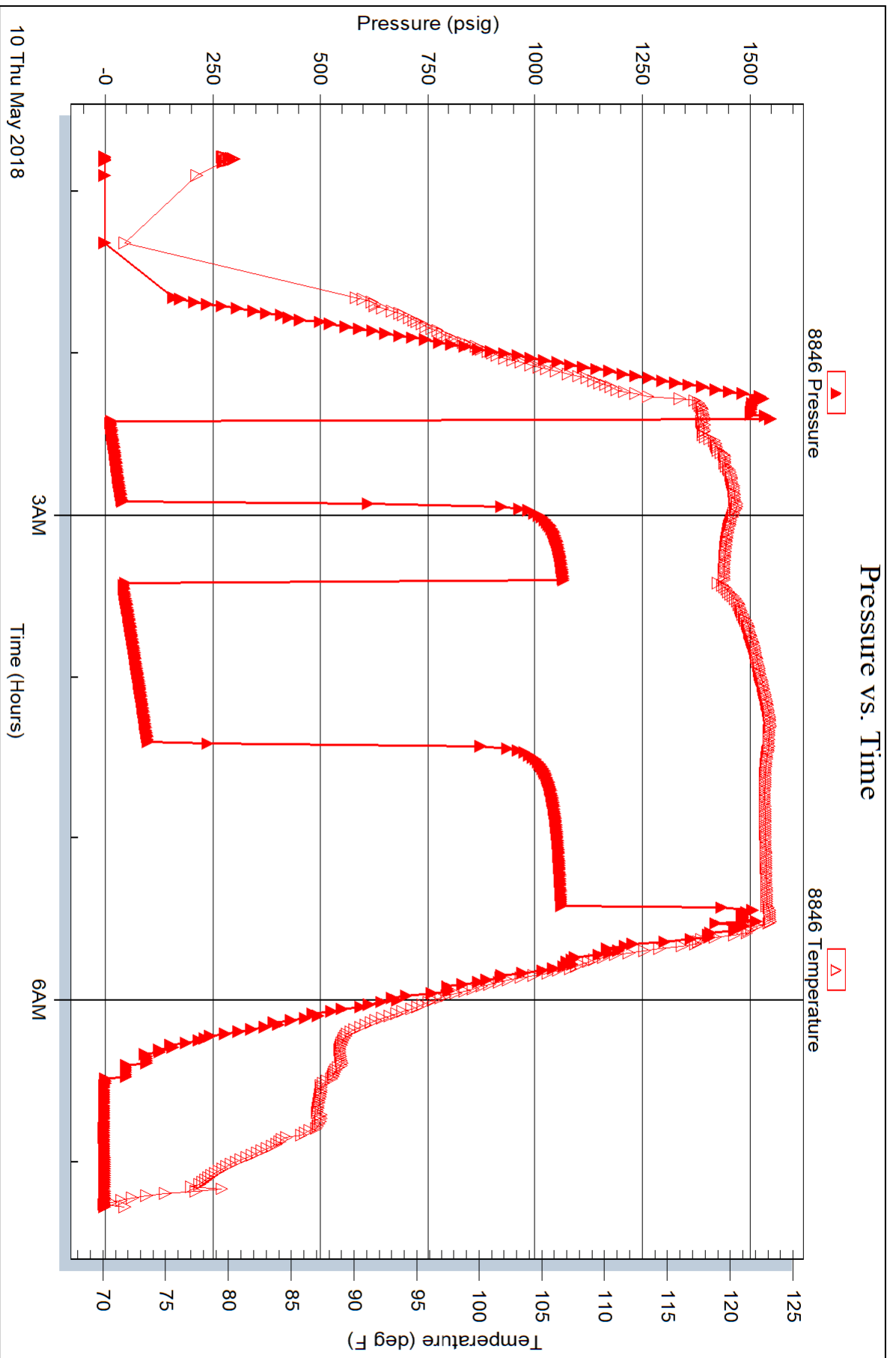
Serial #: 8846

Inside

John O. Farmer, Inc

Nielsen #1

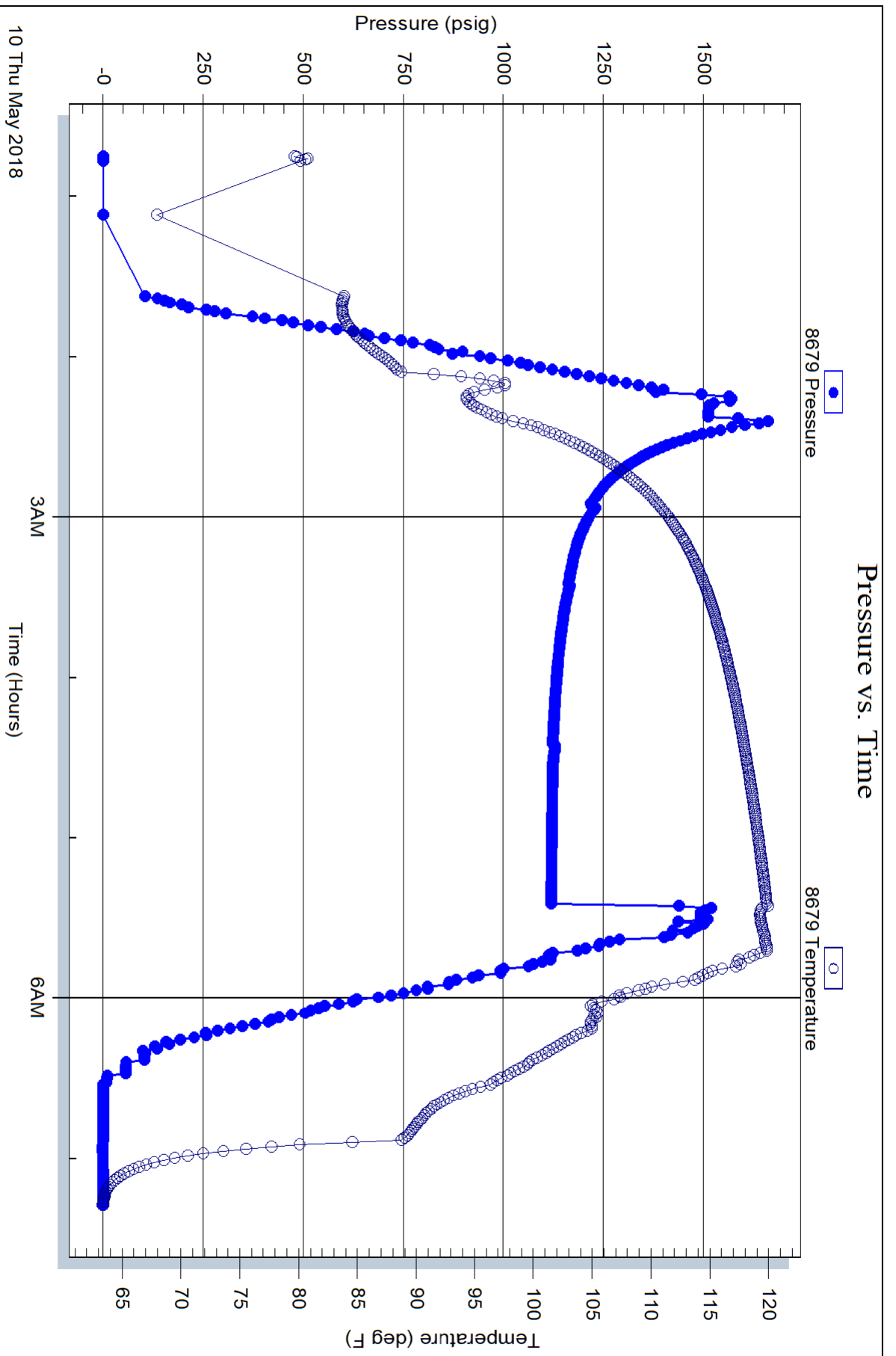
DST Test Number: 3



Triobite Testing, Inc

Ref. No: 63391

Printed: 2018.05.10 @ 11:51:28





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **63389**

Well Name & No. Nielsen #1 Test No. 1 Date 5-8-18  
 Company John O. Farmer Elevation 1340 KB 1332 GL  
 Address 370 West Wichita Ave Russell, KS 67665-2635  
 Co. Rep / Geo. John Farmer / Austin Klaus Rig Discovery Drilling #2  
 Location: Sec. 25 Twp 16 S Rge. 10 E Co. Lyon State Ks.

Interval Tested 2938-2949 Zone Tested Hutton  
 Anchor Length 11' Drill Pipe Run 2631 Mud Wt. 9.2  
 Top Packer Depth 2933 Drill Collars Run 0 Vis 48  
 Bottom Packer Depth 2938 Wt. Pipe Run 312 WL 9.2  
 Total Depth 2949 Chlorides 1100 ppm System LCM \_\_\_\_\_  
 Blow Description IF - weak blow building to 2 inches IFP  
FF - ~~NO~~ No blow building to 3 inches FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>oil + <del>water</del> cut water</u>	<u>4</u>	<u>80</u>	<u>16</u>	<u>mud</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 70 BHT 121 Gravity \_\_\_\_\_ API RW 0.448 @ 82.3° F Chlorides 12500 ppm  
 (A) Initial Hydrostatic 1431  Test 1050 T-On Location 09:40  
 (B) First Initial Flow 11  Jars \_\_\_\_\_ T-Started 1002  
 (C) First Final Flow 22  Safety Joint \_\_\_\_\_ T-Open 1111  
 (D) Initial Shut-In 1021  Circ Sub \_\_\_\_\_ T-Pulled 1411  
 (E) Second Initial Flow 25  Hourly Standby \_\_\_\_\_ T-Out 1520  
 (F) Second Final Flow 43  Mileage 222 RT 222 Comments \_\_\_\_\_  
 (G) Final Shut-In 1021  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1390  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 1522  
 Final Flow 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1522

Approved By \_\_\_\_\_ Our Representative Jimmy Roberts

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. 63390

Well Name & No. Nielsen #1 Test No. 2 Date 5-9-18  
 Company John O. Farmer, Inc Elevation 1340 KB 1332 GL  
 Address 370 West Wichita Ave Russell, KS 67665-2635  
 Co. Rep / Geo. John Farmer / Austin Klaus Rig Discovery #2  
 Location: Sec. 25 Twp 16S Rge. 10E Co. Lyon State KS

Interval Tested 3023-3031 Zone Tested Viola  
 Anchor Length 8' Drill Pipe Run 27 ~~28~~ 24 Mud Wt. 9.2  
 Top Packer Depth 3018 Drill Collars Run 0 Vis 48  
 Bottom Packer Depth 3023 Wt. Pipe Run 312 WL 9.2  
 Total Depth 3031 Chlorides 1100 ppm System LCM  
 Blow Description IF-weak blow building to strong blow 2 mins into IFP  
FF-weak blow building to strong blow 1 1/2 mins into FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>685</u>	<u>Water</u>			<u>100%</u>	
<u>210</u>	<u>Heavy mud cut water</u>			<u>72%</u>	<u>28%</u>

Rec Total 895 BHT 129 Gravity \_\_\_\_\_ API RW 0.358 @ 73.2° F Chlorides 16000 ppm  
 (A) Initial Hydrostatic 1461  Test 1050 T-On Location 2240  
 (B) First Initial Flow 45  Jars \_\_\_\_\_ T-Started 0147  
 (C) First Final Flow 470  Safety Joint \_\_\_\_\_ T-Open 0254  
 (D) Initial Shut-In 1053  Circ Sub \_\_\_\_\_ T-Pulled 0409  
 (E) Second Initial Flow 424  Hourly Standby \_\_\_\_\_ T-Out \_\_\_\_\_  
 (F) Second Final Flow 518  Mileage 36 RT 36 Comments \_\_\_\_\_  
 (G) Final Shut-In 1052  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1444  Straddle \_\_\_\_\_  
 Shale Packer 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 1336  
 Sub Total 1336 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Jimmy [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. **63391**

Well Name & No. Nielsen #1 Test No. 3 Date 5-10-18  
 Company John O. Farmer, Inc. Elevation 1340 KB 1332 GL  
 Address 370 West Wichita Avenue Russell, KS. 67665-2635  
 Co. Rep / Geo. John Farmer / Austin Klaus Rig Discovery Drilling #2  
 Location: Sec. 25 Twp 16 S Rge. 10 E Co. Lyon State KS.

Interval Tested 3128- 3138 Zone Tested Simpson Sand  
 Anchor Length 10' Drill Pipe Run 2818 Mud Wt. 9.3  
 Top Packer Depth 3123 Drill Collars Run 0 Vis 43  
 Bottom Packer Depth 3128 Wt. Pipe Run 312 WL 9.6  
 Total Depth 3200 Chlorides 1100 ppm System LCM  
 Blow Description IF-weak blow building to 8 inches IFA  
FF-weak blow building to 10 inches FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>230</u>	<u>clean oil</u>		<u>100</u>		
<u>15</u>	<u>oil cut mud</u>		<u>17</u>		<u>83</u>

Rec Total 245 BHT 125 Gravity 32.1 API RW @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1505</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>2230</u>
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars _____	T-Started <u>1245 + 1247</u>
(C) First Final Flow <u>41</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>0225</u>
(D) Initial Shut-In <u>1069</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0525</u>
(E) Second Initial Flow <u>44</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0710</u>
(F) Second Final Flow <u>102</u>	<input checked="" type="checkbox"/> Mileage <u>316</u> <u>RT 36</u>	Comments _____
(G) Final Shut-In <u>1064</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1486</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<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>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1966</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1966</u>	

Approved By \_\_\_\_\_ Our Representative James P. Kelly

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.



# AUSTIN B. KLAUS



**Cell 785.650.3629**  
**Work 785.483.3145**  
**Ext 225**

**PO BOX 352**  
**Russell, KS 67665**  
**austin.klaus@johnofarmer.com**

**Scale 1:240 (5"=100') Imperial**  
**Measured Depth Log**

**Well Name:** Nielsen #1  
**Location:** Lyon County  
**License Number:** API #15-111-20536-00-00  
**Spud Date:** 5/2/2018  
**Surface Coordinates:** Section 25, Township 16 South, Range 10 East  
**Bottom Hole Coordinates:** Vertical well w/ minimal deviation, same as above  
**Ground Elevation (ft):** 1,332' **K.B. Elevation (ft):** 1,340'  
**Logged Interval (ft):** 2,300 **To:** RTD **Total Depth (ft):** 3,200  
**Formation:** Miss-Arbuckle  
**Type of Drilling Fluid:** Chemical (Mud Co.)

**Region:** Kansas  
**Drilling Completed:** 5/9/2018

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

## OPERATOR

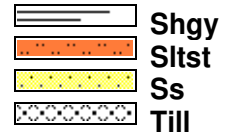
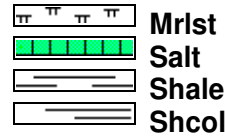
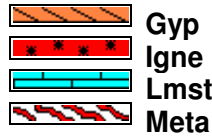
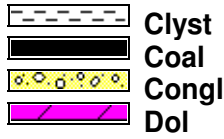
**Company:** John O. Farmer, Inc.  
**Address:** 370 W. Wichita Ave.  
Russell, KS 67665

## Comments

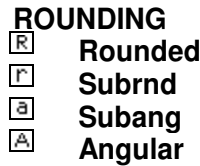
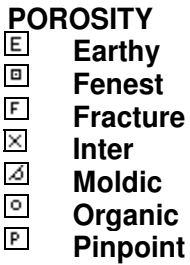
The Nielsen #1 well was drilled by Discovery Drilling Rig #2 (Tool Pusher: Terry Wickham).

The location for the Nielsen #1 was discovered via 3D seismic. Rock samples were gathered and evaluated from 2,300' - 3,200'. Oil shows were encountered in the Huton, Viola, & Simpson. Structurally, the Mississippian top was picked 14' low to the comparison well, Holle #1 (Little George Oil). Structural thinning occurred through the Miss, which resulted in a Kinderhook picked 2' high to the comparison well. Additional thinning occurred below the Hunton and the Viola top was picked 4' high to the comparison well. After evaluation of all oil shows, DST results, & electric logs, it was decided that 5 1/2" production casing be set to further evaluate the Nielsen #1 on 5/10/2018.

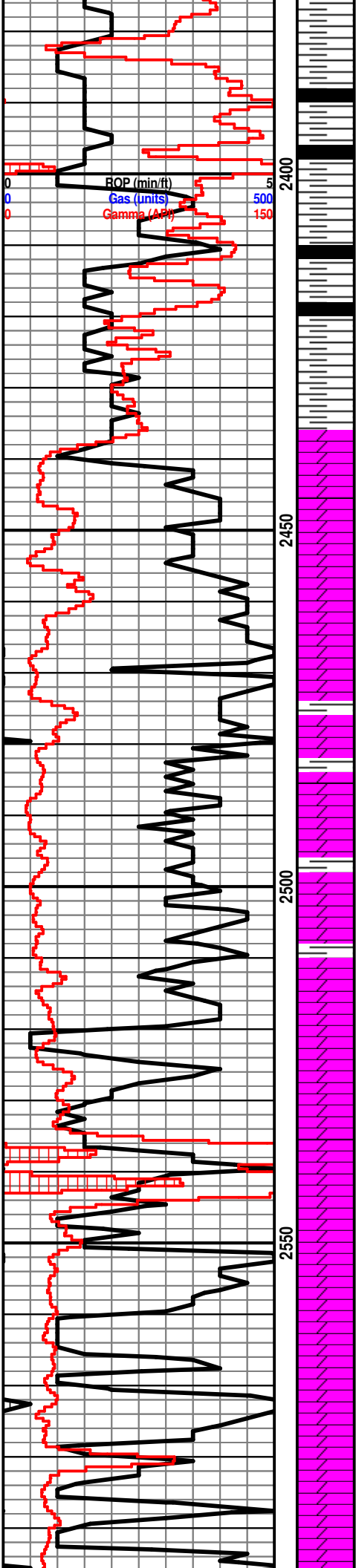
**ROCK TYPES**



**OTHER SYMBOLS**



Curve Track 1		Depth	Lithology	Geological Descriptions	DST/Mud/Survey																								
ROP (min/ft)	Gas (units)					Gamma (API)																							
0	0	0	22	<p>The open-hole logging was performed by Mr. Casey Patterson with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density Neutron, Dual Induction, and Microresistivity.</p> <p>Formation tops and datums from the open-hole logs include the following:</p> <table border="1"> <tr><td>Miss</td><td>2438</td><td>-1098</td></tr> <tr><td>Kinderhook</td><td>2800</td><td>-1460</td></tr> <tr><td>Hunton</td><td>2938</td><td>-1598</td></tr> <tr><td>Maq</td><td>2948</td><td>-1608</td></tr> <tr><td>Viola</td><td>3022</td><td>-1682</td></tr> <tr><td>Simp. SD</td><td>3126</td><td>-1786</td></tr> <tr><td>Arbuckle</td><td>3172</td><td>-1832</td></tr> <tr><td>RTD</td><td>3200</td><td>-1860</td></tr> </table>	Miss	2438	-1098	Kinderhook	2800	-1460	Hunton	2938	-1598	Maq	2948	-1608	Viola	3022	-1682	Simp. SD	3126	-1786	Arbuckle	3172	-1832	RTD	3200	-1860	<p>Mud Engineer: Rick Hughes Tester: Jimmy Ricketts</p>
Miss	2438	-1098																											
Kinderhook	2800	-1460																											
Hunton	2938	-1598																											
Maq	2948	-1608																											
Viola	3022	-1682																											
Simp. SD	3126	-1786																											
Arbuckle	3172	-1832																											
RTD	3200	-1860																											
5/2/2018	Spud 12 1/4" @ 7:00pm																												
5/3/2018	223', Circulate 8 5/8"																												
5/4/2018	762', Drilling																												
5/5/2018	1,528', Drilling																												
5/6/2018	2,021', Drilling																												
5/7/2018	2,656', Drilling																												
5/8/2018	2,949', CFS	2300																											
5/9/2018	3,031', Circ to Clean Hole																												
5/10/2018	3,200', DST #3																												
5/11/2018	3,200', Completed																												
		2350	Sh: ala																										



Sh: drk gry-blk

**Mississippian 2426' (-1086)**

Dolo: tan-gry, fn xln, DNS, NSFO

Dolo: ala

Dolo: tan-gry, poor int xln porosity, NSFO, scat  
sh: drk gry

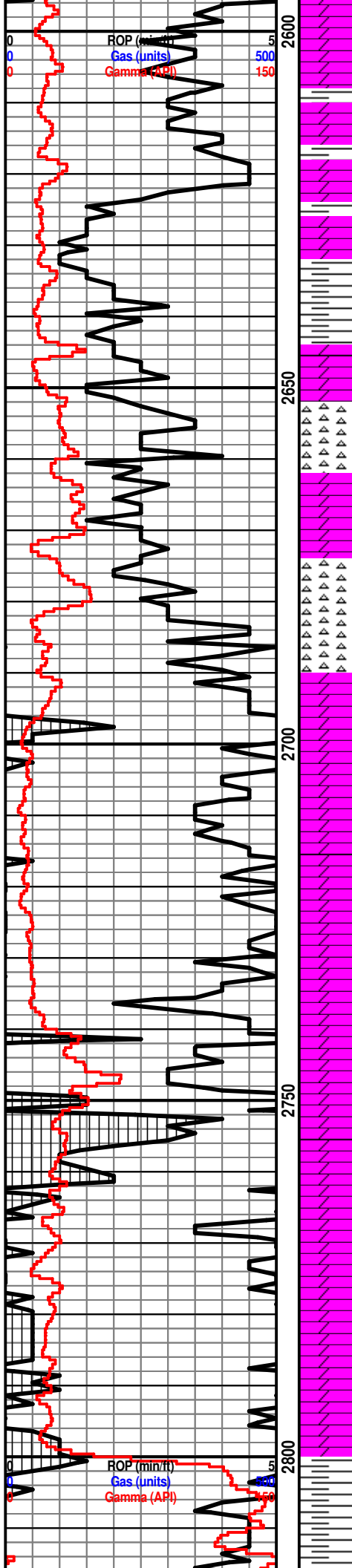
Dolo: ala

Dolo: tan-off wh, fn xln, fair int xln & int part  
porosity, NSFO

Dolo: tan, fn xln, DNS, NSFO

Dolo: ala

Dolo: tan-gry, fn-sub xln, mostly DNS, NSFO



Dolo: off wh-tan-gry, fn xln, no visible porosity, NSFO, scat sh: drk gry

Sh: drk gry

Chert: off wh-gry, fn-sub xln, DNS

Chert: ala

Dolo: tan-gry, fn-sub xln, DNS, NSFO

Dolo: ala

Dolo: tan-gry, fn-sub xln, DNS, NSFO

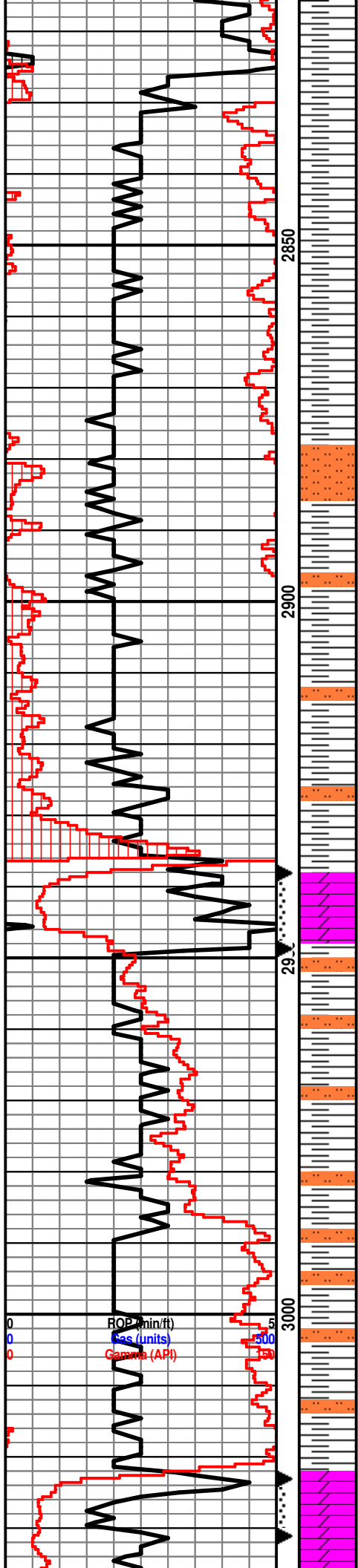
Dolo: ala

Dolo: gry, fn xln, no visible porosity, NSFO

Dolo: ala

Kinderhook 2804' (-1464)

Sh: drk gry-blk



Sh: drk gry-blk

Sh: lt gry

Sh: ala

Sh: lt-drk gry, scat sltst

Sh: ala

Sh: lt-drk gry

**Hunton 2937' (-1597)**

Dolo: off wh, fn xln, few md xln, poor int xln porosity, fair oil stn in porosity, VSSFO, fnt odor

**Maquoketa 2948' (-1608)**

Sh: lt gry, scat sltst

Sh: ala

Sh: lt gry

Sh: lt gry-drk gry, scat sltst

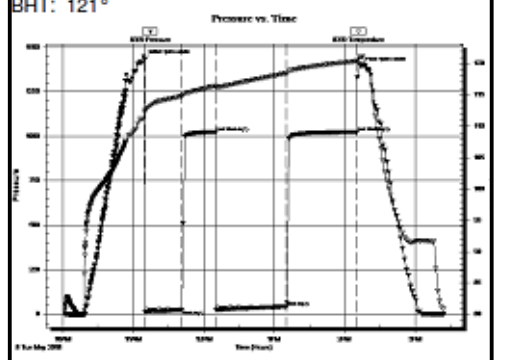
Sh: ala

**Viola 3022' (-1682)**

Dolo: off wh, fn-md xln, fair-good int xln porosity, hvv tarry oil sat in porosity, GSFO, good odor

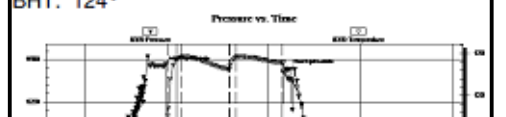
**DST #1 2.938-2.949 Hunton**

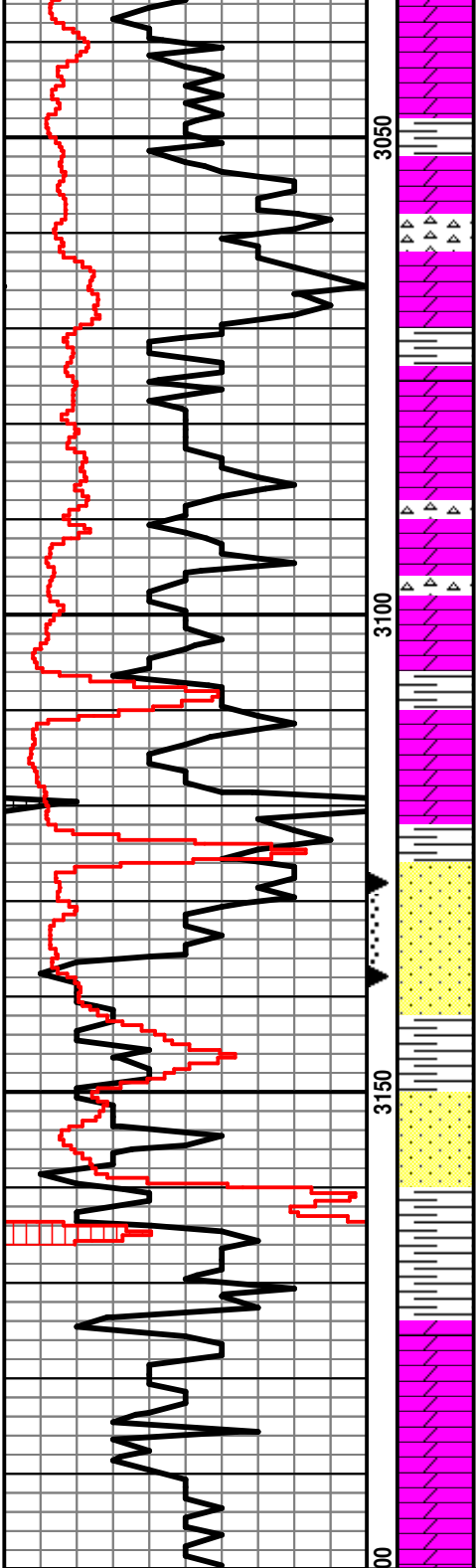
30"-30"-60"-60"  
 IF: weak blow built to 2", no blow back on shut in  
 FF: weak blow built to 3", no blow back on shut in  
 Rec: 70' Oil & Mud Cut Water (4% O, 16% M, 80% W)  
 FP: 11-22, 25-43#  
 SIP: 1,021-1,021#  
 HP: 1,431-1,390#  
 BHT: 121°



**DST #2 3.023-3.031 Viola**

10"-30"-5"-30"  
 IF: BOB in 2 minutes, no blow back on shut in  
 FF: BOB in 1.5 minutes, no blow back on shut in  
 Rec: 210' Heavy Mud Cut Water (28% M, 72% W)  
 685' Water (Chl. 16K)  
 895' Total Fluid Recovery  
 FP: 45-470, 424-518#  
 SIP: 1,053-1,052#  
 HP: 1,461-1,444#  
 BHT: 124°





Dolo: off wh, fn-md xln, fair-good int xln porosity, NSFO, no odor

Dolo: ala, scat sh: drk gry

Dolo: tan-brn, fn xln, poor int xln porosity, NSFO, hvy chert-off wh, shrp

Sh: drk gry-blk, scat lt gry

Dolo: tan-brn, fn-md xln, fair int xln porosity, NSFO, scat sh: drk gry

Dolo: ala

**Simpson Dolo 3106' (-1766)**

Dolo: off wh-tan, fn-md xln, poor-fair int xln porosity, scat sucrosic porosity, fair-good oil sat, FSFO, good odor

**Simpson Sand 3118' (-1778)**

Ss: qtz, off wh, fn-md grn, fair sorting, poor int grn porosity, mostly barren

Ss: qtz, off wh, fn-md grn, poor-fair sorting, fair int grn porosity, fair rnd-ang, fair-good oil sat, F-GSFO, fair-good odor

Sh: drk gry-blk

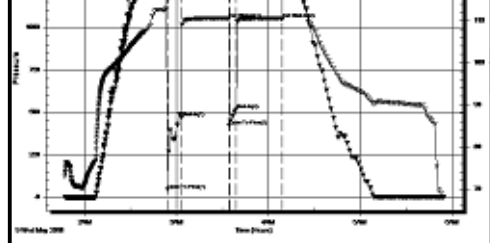
Ss: qtz, off wh, fn-md, grn, ang, poor int grn porosity, barren, scat sh: lt gry-grn

**Arbuckle 3175' (-1835)**

Dolo: off wh-tan-brn, fn-sub xln, mostly DNS

Dolo: ala

Dolo: off wh-tan, fn xln, mostly DNS, NSFO, scat chert-off wh



**DST #3 3,128-3,138 Simpson Sand**  
 30"-30"-60"-60"  
 IF: weak blow built to 8", no blow back on shut in  
 FF: weak blow built to 10", no blow back on shut in  
 Rec: 230' Clean Oil (32° API)  
 15' Heavy Oil Cut Mud (17% O, 83% M)  
 245' Total Fluid Recovery  
 FP: 15-41, 44-102#  
 SIP: 1,069-1,064#  
 HP: 1,505-1,486#  
 BHT: 125°

