



WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic     Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening     Re-perf.     Conv. to ENHR     Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion    Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: \_\_\_\_\_

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

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total 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

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1147023

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

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

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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 Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other (Explain) \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Sunley-Rohr Unit 1-13
Doc ID	1147023

Tops

Name	Top	Datum
Top Anhydrite	1396'	+775
Base Anhydrite	1446'	+705
Topeka	3157'	-1006
Heebner	3406'	-1255
Toronto	3426'	-1275
LKC	3454'	-1303
BKC	3680'	-1529
Arbuckle	3758'	-1607

# 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. 6771

Date	5-14-13	Sec.	13	Twp.	14	Range	19	County	ELLIS	State	KANSAS	On Location		Finish	8:30
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Location Hays - Son 183 to Spring Hill Rd to 200-5 1/2 W. Hwy

Lease SUNLEY-ROHE Well No. # 1-13 Owner DOWNING & NELSON

Contractor DISCOVERY #4 To Quality Oilwell Cementing, Inc.  
Type Job SURFACE 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. 220 Charge To DOWNING & NELSON

Csg. 8 5/8 Depth 220' Street P.O. Box 1019

Tbg. Size Depth City Hays State KS, 67601

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

Cement Left in Csg. Shoe Joint 15' Cement Amount Ordered 150 com - 3cc - 2 gal

Meas Line Displace 13 Bbls

**EQUIPMENT** Common 150

Pumptrk # <u>16</u> No.	Cementer		Poz. Mix
	Helper <u>TRAVIS H.</u>		

Bulktrk # <u>14</u> No.	Driver		Gel. <u>3</u>
	Driver <u>LOUIE M.</u>		

Bulktrk <u>DU</u> No.	Driver		Calcium <u>5</u>
	Driver <u>GEORGE A.</u>		

**JOB SERVICES & REMARKS** Hulls

Remarks: Salt

Rat Hole Flowseal

Mouse Hole Koi-Seal

Centralizers Mud CLR 48

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

Handling 158

CEMENT DID NOT CIRCULATE! Mileage

**FLOAT EQUIPMENT**

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge Surface

THANK YOU! Mileage 8

X Signature M. B. [Signature] Tax

Discount

Total Charge

**JOB LOG**

**SWIFT Services, Inc.**

DATE 5-21-13 PAGE NO.

CUSTOMER Dawning Nelson WELL NO. 1-13 LEASE Sunley Rohr JOB TYPE 5 1/2 Two Stage Longstring TICKET NO. 24419

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0130							on location
								TD 3847 SS 19.91
								TP 3840 Insert 3820
								DV 10P63 1389' 5 1/2 x 14"
								centralizers 1,3,31,7,10,12,62
								Basket 63
	0200							Start Pipe
	0345							Drop Ball Break Circulation Rotate
	0415	5	12		✓		300	Start Mud Flush
		5	20		✓		300	Start KLL Flush
	0420	5	35		✓		200	Start 150 SKS EA2
	0430							Drop Plug wash out Pump + Lines
	0432	6			✓			Start D3 placement
			73		✓			Start KLL Flush
	0445	6	93.2		✓		600/1500	Start Lead Plug
								Release Dry
	0445							Drop opening Plug
			74					Plug RH 30SKS, MH 15 SKS
	0445						1100	Open DV
	0505	5	77.5		✓		200	Start SMD cement 180 SKS @ 11.2" 20 SKS 14.5"
	0530							Drop Closing Plug
	0530	5			✓		200	Start D3 placement
	0545	5	33.8		✓		1800	Lead Plug
								Release Dry
								circulate 20 SKS to bit
	0630							Job Complete
								Thank You
								Josh, Brian, Plant



## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson OilCo Inc**

PO Box 1019  
Hays KS 67601

ATTN: Ron Nelson

### **Sunley-Rohr #1-13**

### **13-14s-19w Ellis,KS**

Start Date: 2013.05.18 @ 22:20:24

End Date: 2013.05.19 @ 03:30:18

Job Ticket #: 52078                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.05.24 @ 09:12:05



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

Job Ticket: 52078

**DST#: 1**

ATTN: Ron Nelson

Test Start: 2013.05.18 @ 22:20:24

## GENERAL INFORMATION:

Formation: **LKC H-I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:03:49

Time Test Ended: 03:30:18

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 42

**Interval: 3551.00 ft (KB) To 3650.00 ft (KB) (TVD)**

Reference Elevations: 2151.00 ft (KB)

Total Depth: 3650.00 ft (KB) (TVD)

2143.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369**

**Inside**

Press @ RunDepth: 38.37 psig @ 3557.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.05.18

End Date:

2013.05.19

Last Calib.:

2013.05.19

Start Time: 22:20:24

End Time:

03:30:18

Time On Btm:

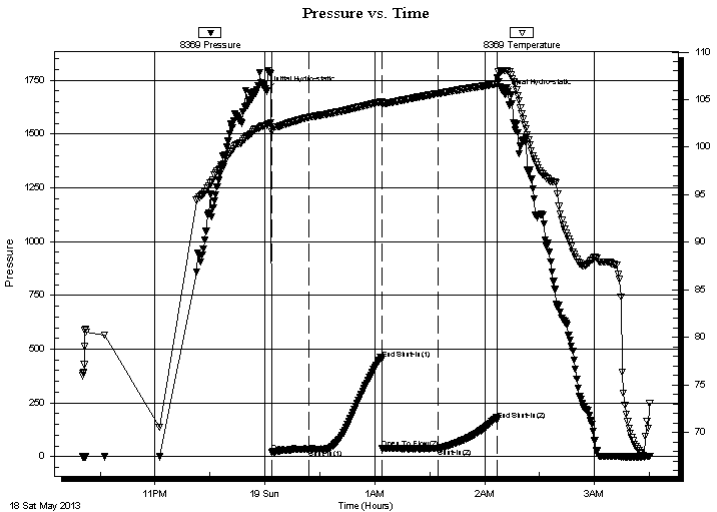
2013.05.19 @ 00:01:04

Time Off Btm:

2013.05.19 @ 02:10:49

**TEST COMMENT:** 30-IFP-w k bl thru-out 1/4" to 1/2" bl  
30-ISIP-no bl  
30-FFP-surface bl  
30-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1700.25	102.32	Initial Hydro-static
3	19.50	101.62	Open To Flow (1)
23	35.54	103.13	Shut-In(1)
63	454.39	104.77	End Shut-In(1)
63	37.81	104.62	Open To Flow (2)
94	38.37	105.64	Shut-In(2)
126	170.81	106.66	End Shut-In(2)
130	1689.68	108.03	Final Hydro-static

## Recovery

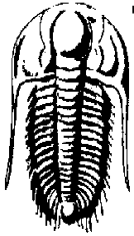
Length (ft)	Description	Volume (bbl)
45.00	SOCM 2%O98%M	0.36

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

Job Ticket: 52078

**DST#: 1**

ATTN: Ron Nelson

Test Start: 2013.05.18 @ 22:20:24

## Tool Information

Drill Pipe:	Length: 3520.00 ft	Diameter: 3.80 inches	Volume: 49.38 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 49.53 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3551.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	99.00 ft			
Tool Length:	120.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3531.00	
Shut In Tool	5.00			3536.00	
Hydraulic tool	5.00			3541.00	
Packer	5.00			3546.00	21.00 Bottom Of Top Packer
Packer	5.00			3551.00	
Stubb	1.00			3552.00	
Perforations	5.00			3557.00	
Recorder	0.00	8369	Inside	3557.00	
Recorder	0.00	8700	Outside	3557.00	
Blank Spacing	65.00			3622.00	
Perforations	25.00			3647.00	
Bullnose	3.00			3650.00	99.00 Bottom Packers & Anchor

**Total Tool Length: 120.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

Job Ticket: 52078

**DST#: 1**

ATTN: Ron Nelson

Test Start: 2013.05.18 @ 22:20:24

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.91 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	SOCM 2% O 98% M	0.358

Total Length: 45.00 ft      Total Volume: 0.358 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

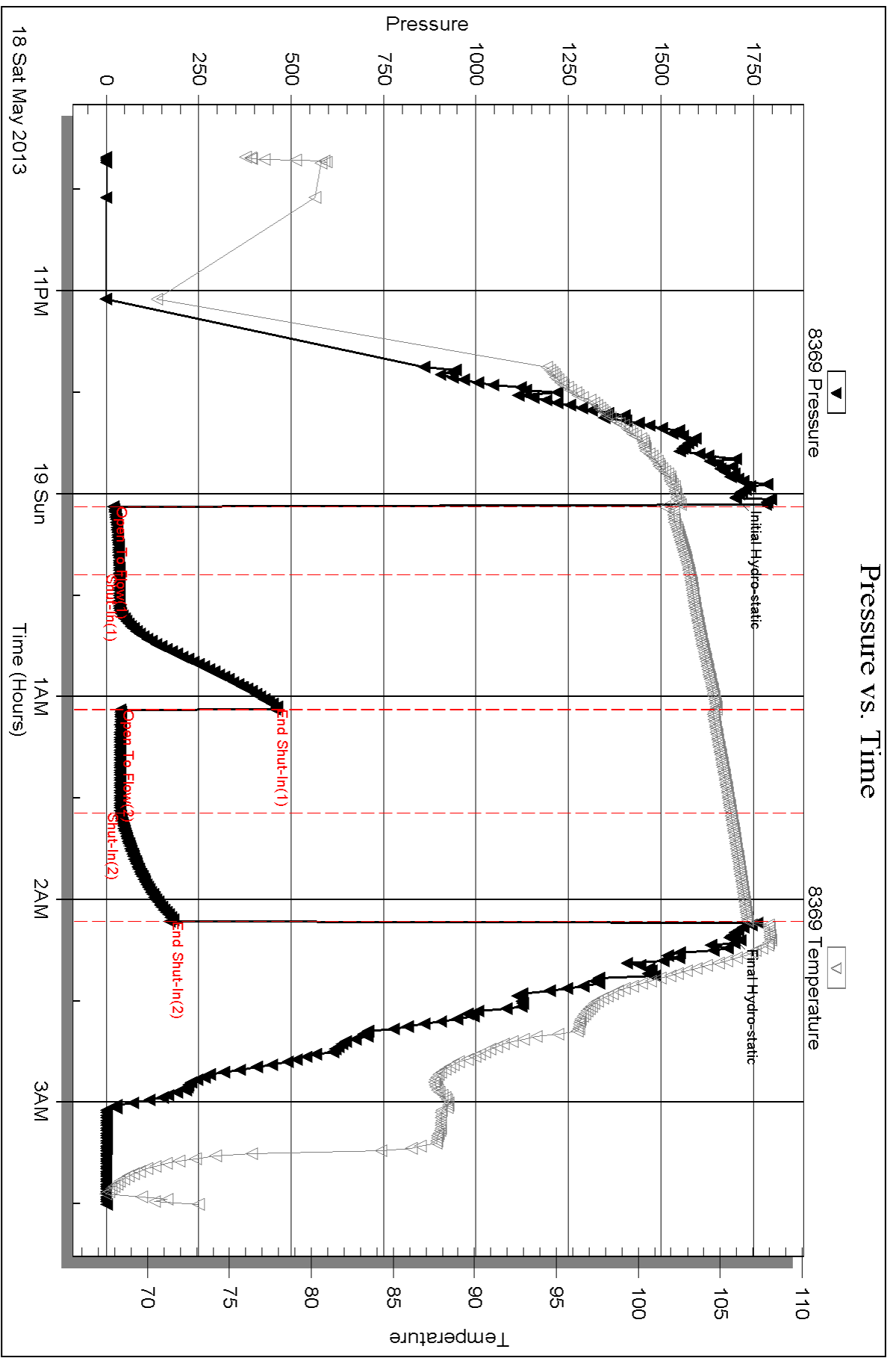
Serial #: 8369

Inside

Downing-Nelson OilCo Inc

Sunley-Rohr #1-13

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 52078

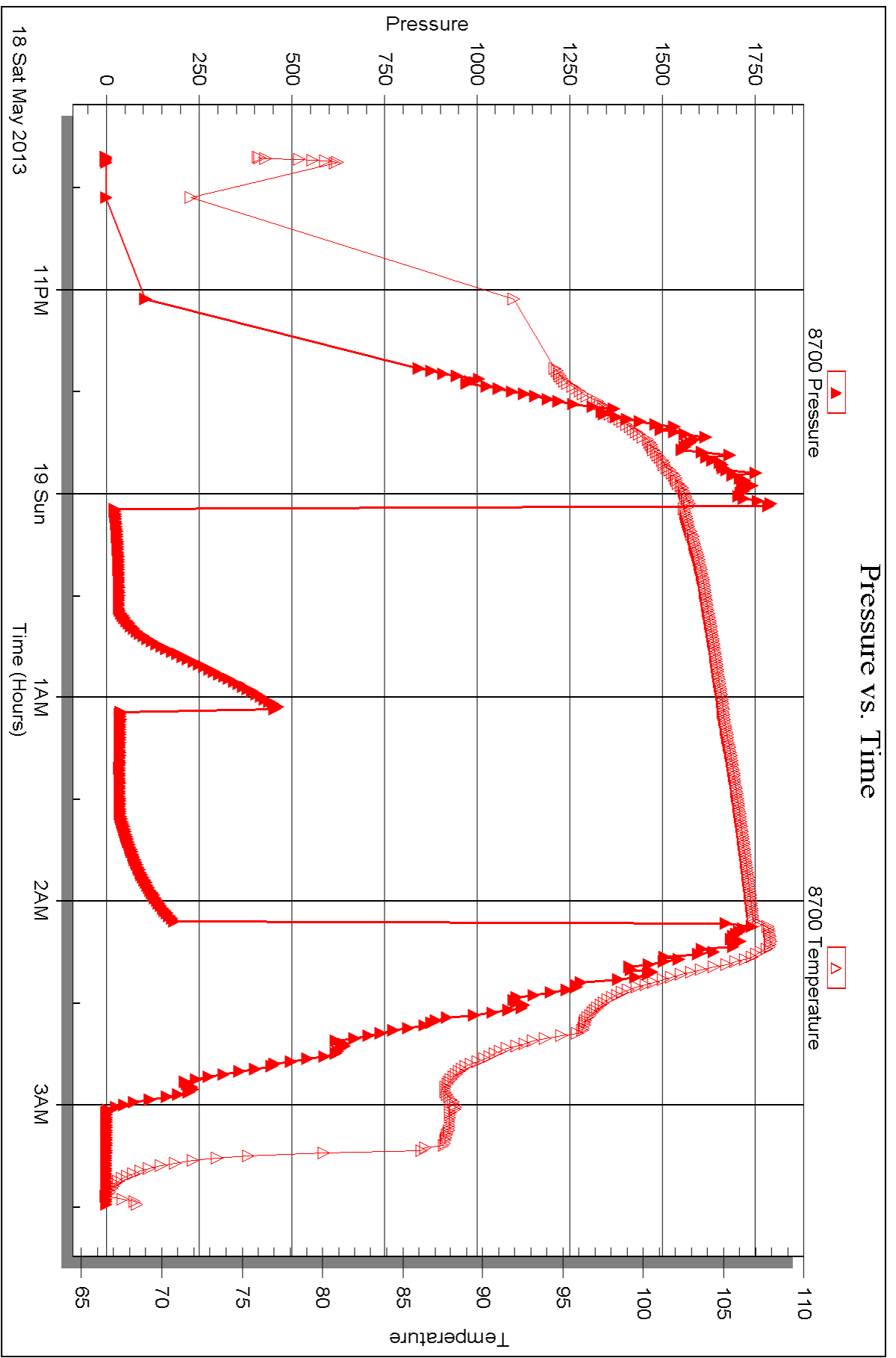
Printed: 2013.05.24 @ 09:12:08

Serial #: 8700

Outside Dow nting-Nelson OilCo Inc

Sunley-Rohr #1-13

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson OilCo Inc**

PO Box 1019  
Hays KS 67601

ATTN: Ron Nelson

### **Sunley-Rohr #1-13**

### **13-14s-19w Ellis,KS**

Start Date: 2013.05.19 @ 14:25:18

End Date: 2013.05.19 @ 19:19:27

Job Ticket #: 52079                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.05.24 @ 09:11:30



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

Job Ticket: 52079

**DST#: 2**

ATTN: Ron Nelson

Test Start: 2013.05.19 @ 14:25:18

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:49:58

Time Test Ended: 19:19:27

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 42

**Interval: 3724.00 ft (KB) To 3770.00 ft (KB) (TVD)**

Total Depth: 3770.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2151.00 ft (KB)

2143.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8369**

**Inside**

Press @ Run Depth: 37.12 psig @ 3735.00 ft (KB)

Start Date: 2013.05.19

End Date: 2013.05.19

Start Time: 14:25:18

End Time: 19:19:27

Capacity: 8000.00 psig

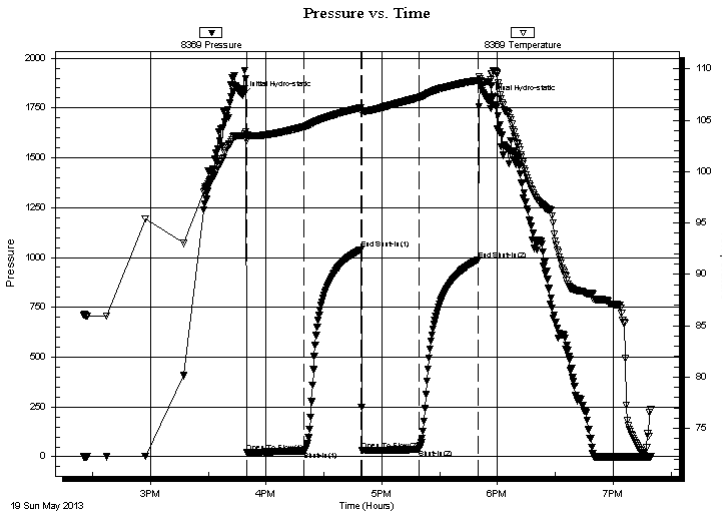
Last Calib.: 2013.05.19

Time On Btm: 2013.05.19 @ 15:47:58

Time Off Btm: 2013.05.19 @ 17:55:13

**TEST COMMENT:** 30-IFP-w k bl thru-out surface to 1/2" bl  
30-ISIP-no bl  
30-FFP-w k bl thru-out surface to 1/4" bl  
30-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1814.11	103.48	Initial Hydro-static
2	20.67	102.99	Open To Flow (1)
32	29.98	104.37	Shut-In(1)
62	1040.75	106.25	End Shut-In(1)
62	32.72	105.96	Open To Flow (2)
92	37.12	107.21	Shut-In(2)
122	988.14	108.90	End Shut-In(2)
128	1789.55	108.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	HO&GCM 5%G35%O60%M	0.10
25.00	CO	0.26
0.00	60'GIP	0.00

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Dow ning-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

Job Ticket: 52079

**DST#: 2**

ATTN: Ron Nelson

Test Start: 2013.05.19 @ 14:25:18

**Tool Information**

Drill Pipe:	Length: 3690.00 ft	Diameter: 3.80 inches	Volume: 51.76 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 51.91 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3724.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	46.00 ft				
Tool Length:	67.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3704.00	
Shut In Tool	5.00			3709.00	
Hydraulic tool	5.00			3714.00	
Packer	5.00			3719.00	21.00 Bottom Of Top Packer
Packer	5.00			3724.00	
Stubb	1.00			3725.00	
Perforations	10.00			3735.00	
Recorder	0.00	8369	Inside	3735.00	
Recorder	0.00	8700	Outside	3735.00	
Blank Spacing	32.00			3767.00	
Bullnose	3.00			3770.00	46.00 Bottom Packers & Anchor

**Total Tool Length: 67.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

Job Ticket: 52079

**DST#: 2**

ATTN: Ron Nelson

Test Start: 2013.05.19 @ 14:25:18

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.73 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
20.00	HO&GCM 5%G35%O60%M	0.098
25.00	CO	0.260
0.00	60'GIP	0.000

Total Length: 45.00 ft      Total Volume: 0.358 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

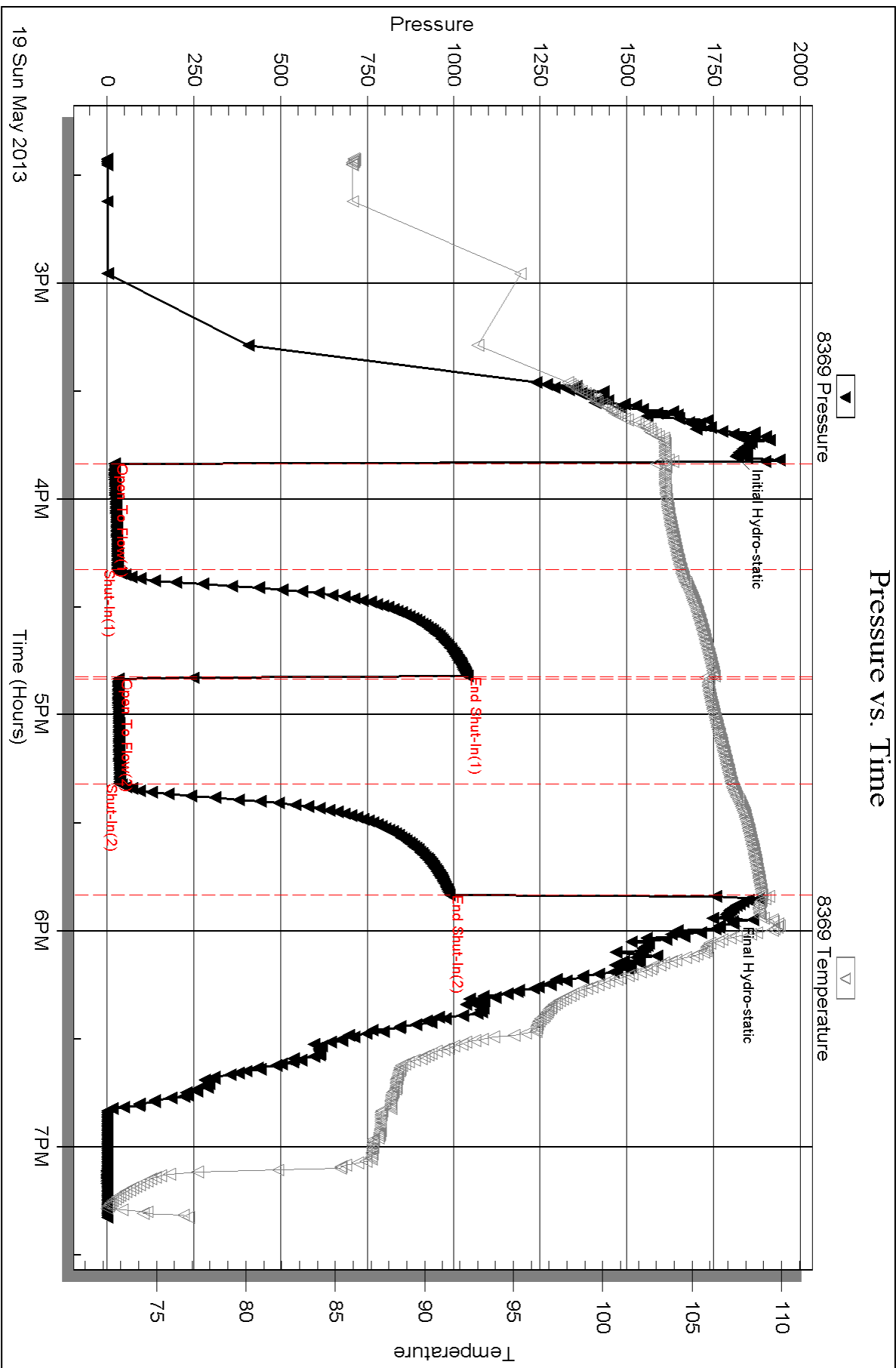
Serial #: 8369

Inside

Downing-Nelson OilCo Inc

Sunley-Rohr #1-13

DST Test Number: 2

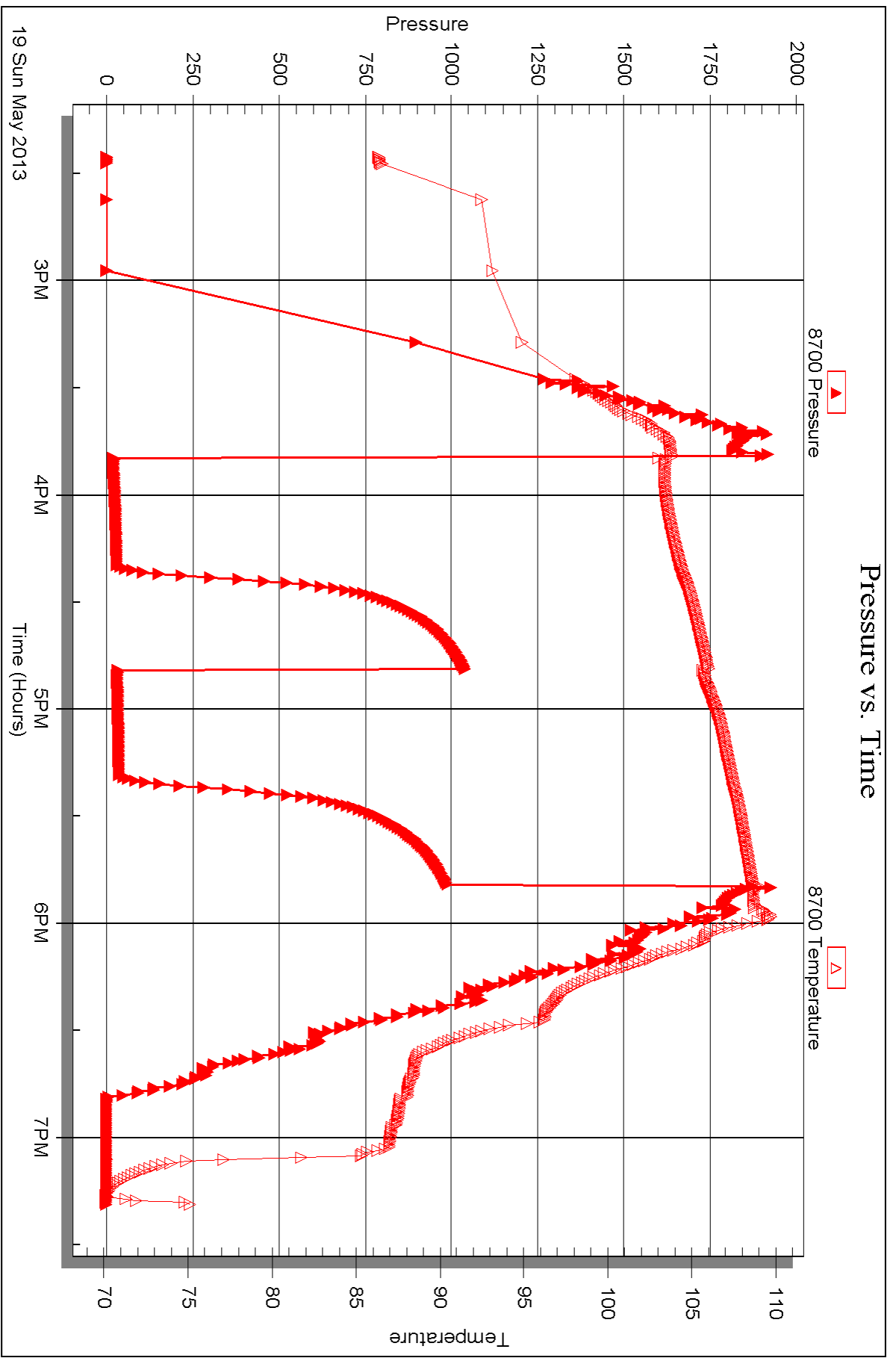


Serial #: 8700

Outside Dow nging-Nelson OilCo Inc

Sunley-Rohr #1-13

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson OilCo Inc**

PO Box 1019  
Hays KS 67601

ATTN: Ron Nelson

### **Sunley-Rohr #1-13**

### **13-14s-19w Ellis,KS**

Start Date: 2013.05.20 @ 00:35:46

End Date: 2013.05.20 @ 06:40:55

Job Ticket #: 52080                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.05.24 @ 09:10:47



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

ATTN: Ron Nelson

Job Ticket: 52080

**DST#: 3**

Test Start: 2013.05.20 @ 00:35:46

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:14:41

Time Test Ended: 06:40:55

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 42

**Interval: 3770.00 ft (KB) To 3783.00 ft (KB) (TVD)**

Reference Elevations: 2151.00 ft (KB)

Total Depth: 3783.00 ft (KB) (TVD)

2143.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369**

**Inside**

Press @ Run Depth: 249.72 psig @ 3775.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.05.20

End Date:

2013.05.20

Last Calib.:

2013.05.20

Start Time: 00:35:46

End Time:

06:40:55

Time On Btm:

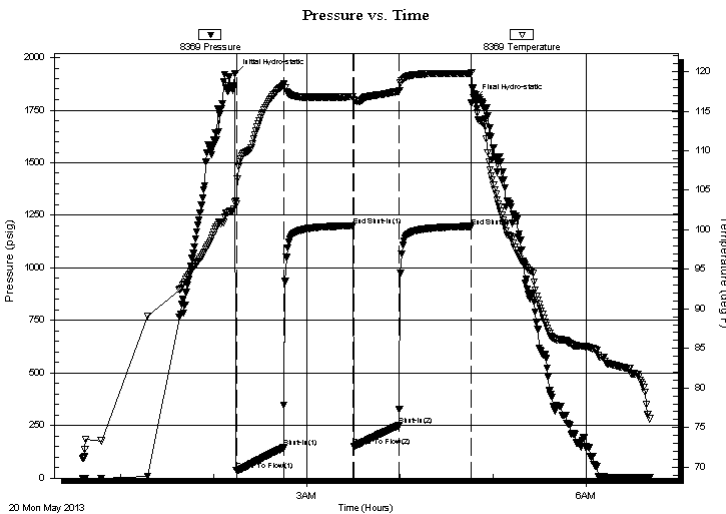
2013.05.20 @ 02:14:11

Time Off Btm:

2013.05.20 @ 04:48:41

**TEST COMMENT:** 30-IFP-w k to strg in 6 min  
45-ISIP-1/4" bl bk  
30-FFP-w k to strg in 11 min  
45-FSIP-1/4" bl bk

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1923.67	103.69	Initial Hydro-static
1	36.37	103.19	Open To Flow (1)
31	145.31	118.35	Shut-In(1)
76	1200.75	116.81	End Shut-In(1)
77	151.52	116.38	Open To Flow (2)
106	249.72	117.52	Shut-In(2)
152	1195.01	119.76	End Shut-In(2)
155	1806.56	116.25	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	MGO 20%G10%M70%O	0.57
620.00	CO	8.70
0.00	180'GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

Job Ticket: 52080

**DST#: 3**

ATTN: Ron Nelson

Test Start: 2013.05.20 @ 00:35:46

## Tool Information

Drill Pipe:	Length: 3724.00 ft	Diameter: 3.80 inches	Volume: 52.24 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 52.39 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3770.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	13.00 ft				
Tool Length:	34.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

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

Change Over Sub	1.00			3750.00	
Shut In Tool	5.00			3755.00	
Hydraulic tool	5.00			3760.00	
Packer	5.00			3765.00	21.00 Bottom Of Top Packer
Packer	5.00			3770.00	
Stubb	1.00			3771.00	
Perforations	4.00			3775.00	
Recorder	0.00	8369	Inside	3775.00	
Recorder	0.00	8700	Outside	3775.00	
Perforations	5.00			3780.00	
Bullnose	3.00			3783.00	13.00 Bottom Packers & Anchor

**Total Tool Length: 34.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing-Nelson OilCo Inc

**13-14s-19w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Sunley-Rohr #1-13**

Job Ticket: 52080

**DST#: 3**

ATTN: Ron Nelson

Test Start: 2013.05.20 @ 00:35:46

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.75 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	MGO 20%G10%M70%O	0.568
620.00	CO	8.697
0.00	180'GIP	0.000

Total Length: 680.00 ft      Total Volume: 9.265 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

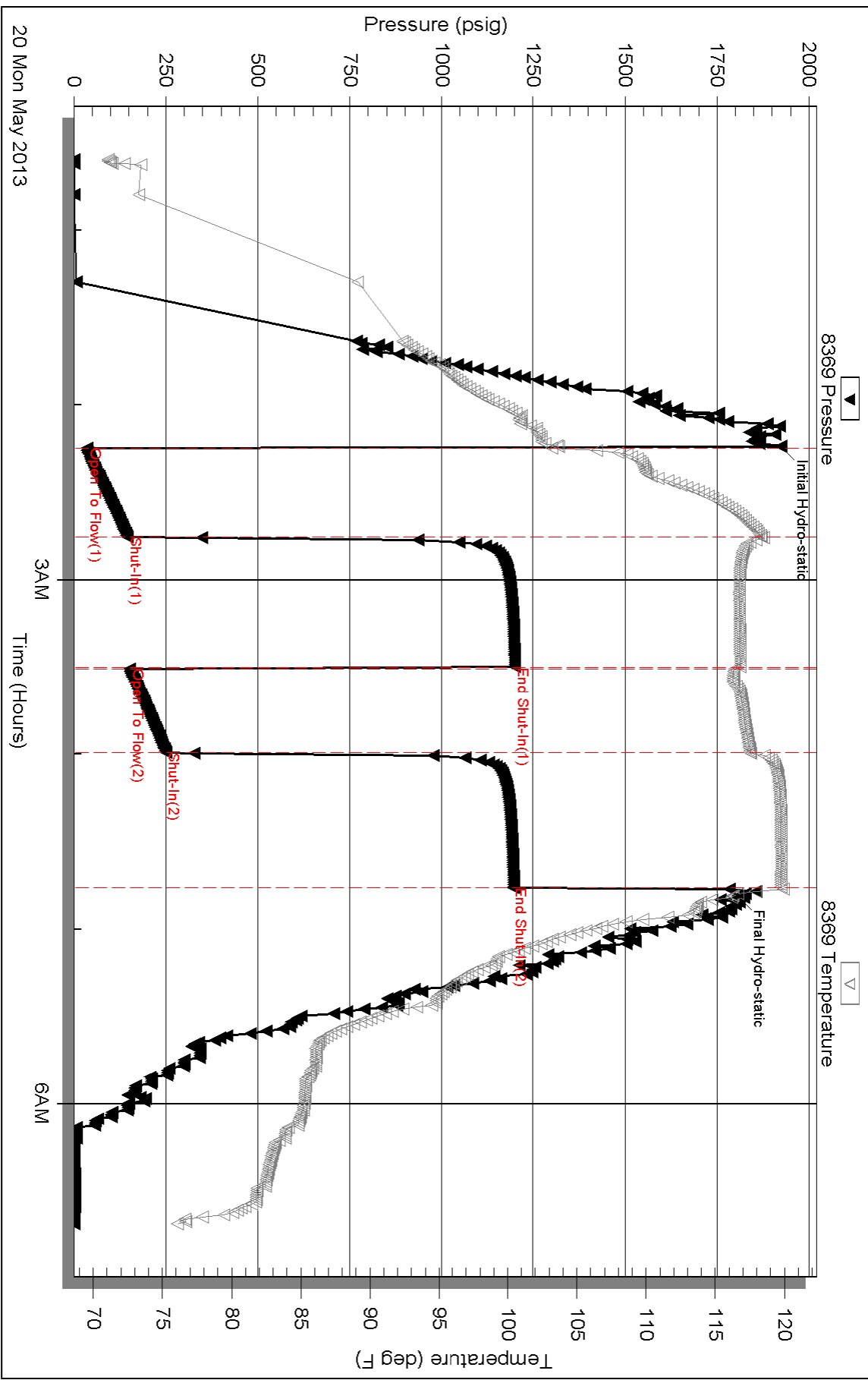
Laboratory Name:

Laboratory Location:

Recovery Comments:



### Pressure vs. Time

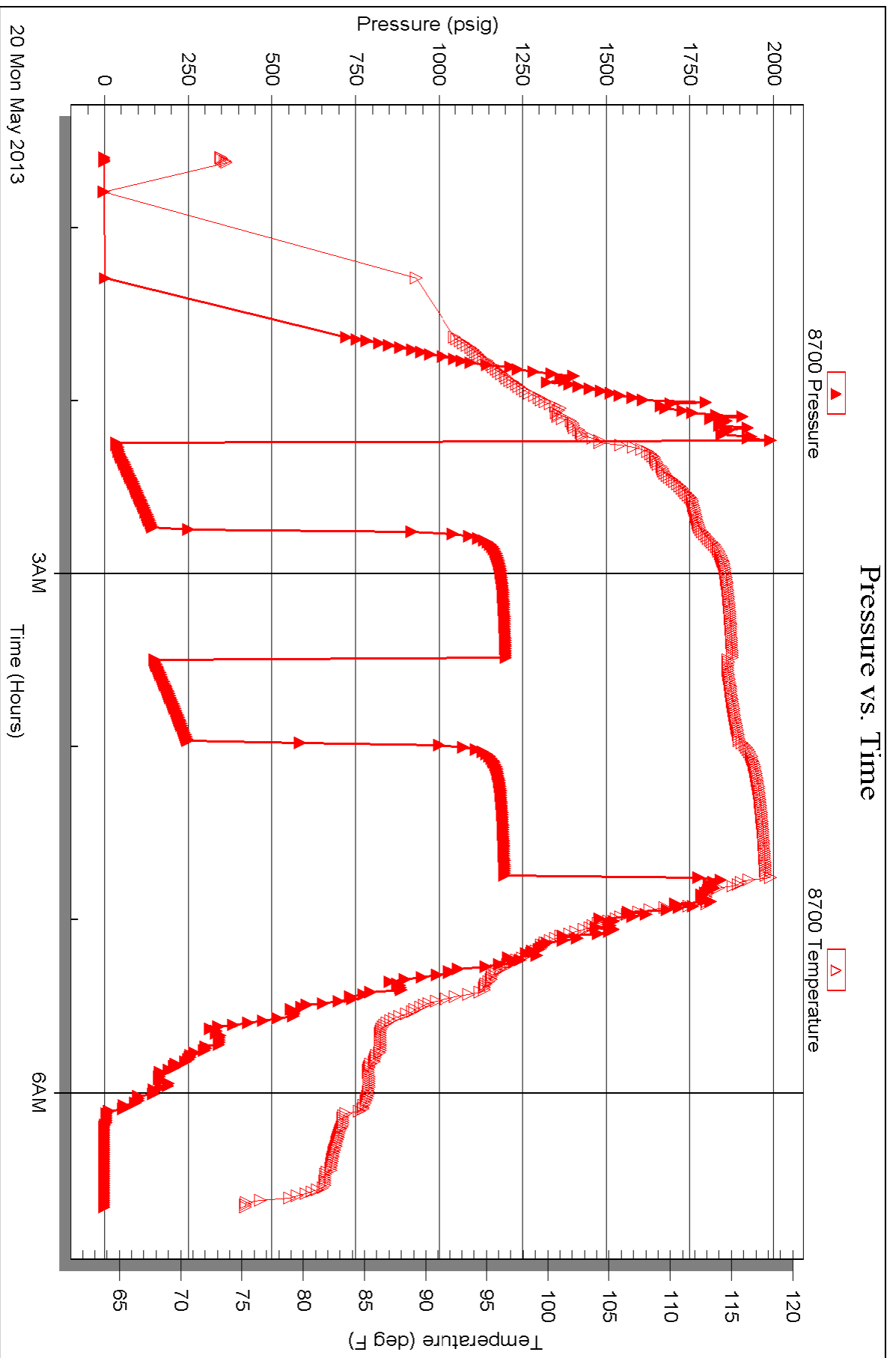


Serial #: 8700

Outside Dow nings-Nelson OilCo Inc

Sunley-Rohr #1-13

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52078

Well Name & No. Sunley-Rohr Unit #1-13 Test No. 1 Date 5-18-13  
 Company Downing-Nelson Oil Co Inc Elevation 2151 KB 2143 GL  
 Address P.O. Box 1019 Hays, Ks 67601  
 Co. Rep / Geo. AL Downing Rig DISCOVERY rig #4  
 Location: Sec. 13 Twp. 14<sup>s</sup> Rge. 19<sup>w</sup> Co. ELLIS State Ks

Interval Tested 3551-3650 Zone Tested LKC H-I-J  
 Anchor Length 99 Drill Pipe Run 3520 Mud Wt. 8.8  
 Top Packer Depth 3549 Drill Collars Run 30 Vis 54  
 Bottom Packer Depth 3551 Wt. Pipe Run - WL 8  
 Total Depth 3650 Chlorides 3000 ppm System LCM 2#  
 Blow Description IFP - WEAK BLOW THRU-OUT 1/4" TO 1/2" BLOW  
ISIP - NO BLOW  
FFP - WEAK SURFACE BLOW  
FSTIP - NO BLOW

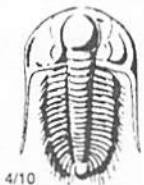
Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>50 CM</u>		<u>2</u>		<u>98</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 45 BHT 106 Gravity - API RW - @ - °F Chlorides - ppm  
 (A) Initial Hydrostatic 1700  Test 1150 T-On Location 2020  
 (B) First Initial Flow 19  Jars - T-Started 2220  
 (C) First Final Flow 35  Safety Joint - T-Open 0005  
 (D) Initial Shut-In 454  Circ Sub - T-Pulled 0205  
 (E) Second Initial Flow 37  Hourly Standby - T-Out 0330  
 (F) Second Final Flow 38  Mileage 12 RT 26.35  
 (G) Final Shut-In 170  Sampler -  
 (H) Final Hydrostatic 1689  Straddle -

Initial Open 30  Shale Packer -  
 Initial Shut-In 30  Shale Packer -  
 Final Flow 30  Extra Packer -  
 Final Shut-In 30  Extra Recorder -  
 Day Standby -  
 Accessibility -  
 Sub Total 1176.35  
 Sub Total 1176.35  
 Total 1176.35  
 MP/DST Disc't -

Approved By \_\_\_\_\_ Our Representative Ray Schwager Thank you

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. 52079

Well Name & No. Sunley - Rohr Unit #1-13 Test No. 2 Date 5-19-13  
 Company Downing - Nelson Oil Co Inc Elevation 2151 KB 2143 GL  
 Address PO Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Ron Nelson Rig Discovery rig 4  
 Location: Sec. 13 Twp. 14<sup>s</sup> Rge. 19<sup>w</sup> Co. ELLIS State Ks

Interval Tested 3724-3770 Zone Tested Arbuckle  
 Anchor Length 46 Drill Pipe Run 3690 Mud Wt. 9.3  
 Top Packer Depth 3719 Drill Collars Run 30 Vis 52  
 Bottom Packer Depth 3724 Wt. Pipe Run - WL 8.8  
 Total Depth 3770 Chlorides 5000 ppm System LCM 1#

Blow Description IFP - Weak Blow thru-out, surface to 1/2" Blow  
ISIP - NO Blow  
FFP - Weak Blow thru-out, surface to 1/4" Blow  
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>GIP</u>				
<u>25</u>	<u>CO</u>				
<u>20</u>	<u>H0+GCM</u>	<u>5</u>	<u>35</u>		<u>60</u>

Rec Total 45 BHT 109 Gravity 31 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1814  Test 1150 T-On Location 1345  
 (B) First Initial Flow 20  Jars - T-Started 1425  
 (C) First Final Flow 29  Safety Joint - T-Open 1550  
 (D) Initial Shut-In 1040  Circ Sub - T-Pulled 1750  
 (E) Second Initial Flow 32  Hourly Standby - T-Out 1919  
 (F) Second Final Flow 37  Mileage 17 RT 26.35 Comments -  
 (G) Final Shut-In 988  Sampler -  
 (H) Final Hydrostatic 1789  Straddle -  Ruined Shale Packer -  
 Shale Packer -  Ruined Packer -  
 Extra Packer -  Extra Copies -

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30  
 Sub Total 1176.35  
 MP/DST Disc't -

Approved By \_\_\_\_\_ Our Representative RAY SCHWAGM Thank you

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52080

Well Name & No. Sunley-Rohr Unit #1-13 Test No. 3 Date 5-20-13  
 Company Downing-Nelson Oil Co Inc Elevation 2151 KB 2143 GL  
 Address Po Box 1019 Hays, Ks 67601  
 Co. Rep / Geo. Ron Nelson Rig Discovery rig 4  
 Location: Sec. 13 Twp. 14<sup>s</sup> Rge. 19<sup>w</sup> Co. ELLIS State Ks

Interval Tested 3770-3783 Zone Tested Arbuckle  
 Anchor Length 13 Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.3  
 Top Packer Depth 3765 Drill Collars Run 30 Vis 52  
 Bottom Packer Depth 3770 Wt. Pipe Run \_\_\_\_\_ WL 8.8  
 Total Depth 3783 Chlorides 5000 ppm System LCM 1#

Blow Description I FP - Weak to Strong in 6 min  
ISIP - 1/4" Blow Back  
F FP - Weak to Strong in 11 min  
FSTP - 1/4" Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>6TP</u>				
<u>620</u>	<u>CO</u>				
<u>60</u>	<u>MGO</u>	<u>20</u>	<u>70</u>	<u>10</u>	
____	____	%gas	%oil	%water	%mud
____	____	%gas	%oil	%water	%mud

Rec Total 680 BHT 119 Gravity 31.1 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1923  Test 1150 T-On Location 0020  
 (B) First Initial Flow 36  Jars \_\_\_\_\_ T-Started 0035  
 (C) First Final Flow 145  Safety Joint \_\_\_\_\_ T-Open 0215  
 (D) Initial Shut-In 1200  Circ Sub \_\_\_\_\_ T-Pulled 0445  
 (E) Second Initial Flow 151  Hourly Standby \_\_\_\_\_ T-Out 0  
 (F) Second Final Flow 249  Mileage 26.35 Comments \_\_\_\_\_  
 (G) Final Shut-In 1195  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1806  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Shut-In 45  Day Standby \_\_\_\_\_ Total 1176.35  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1176.35

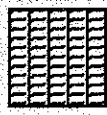
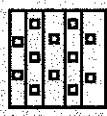
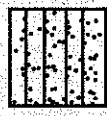
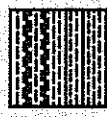
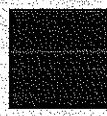
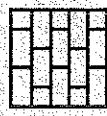
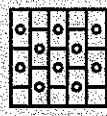
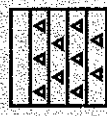
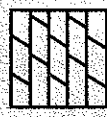
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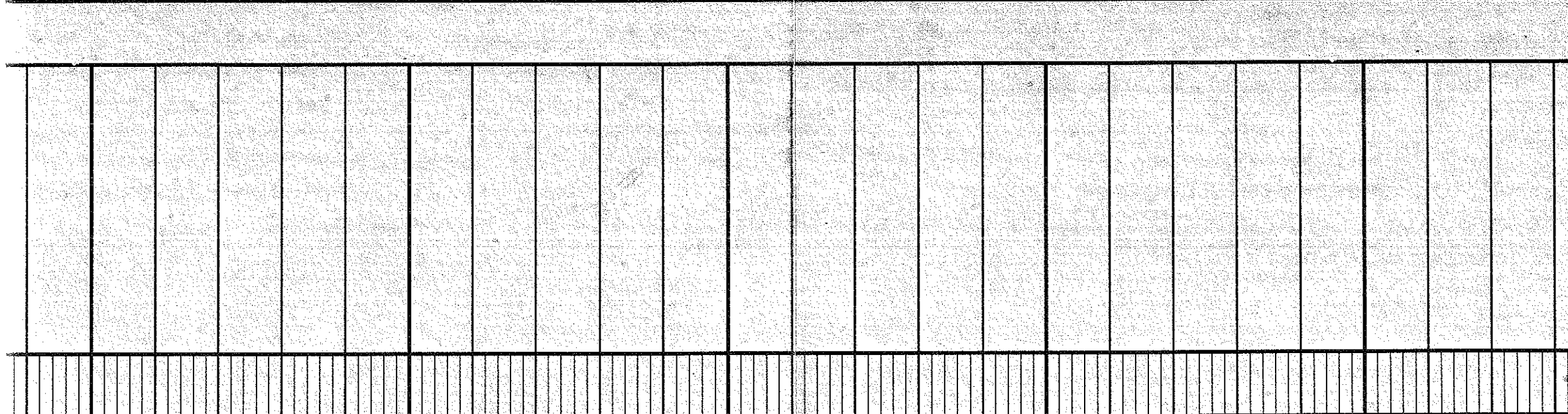
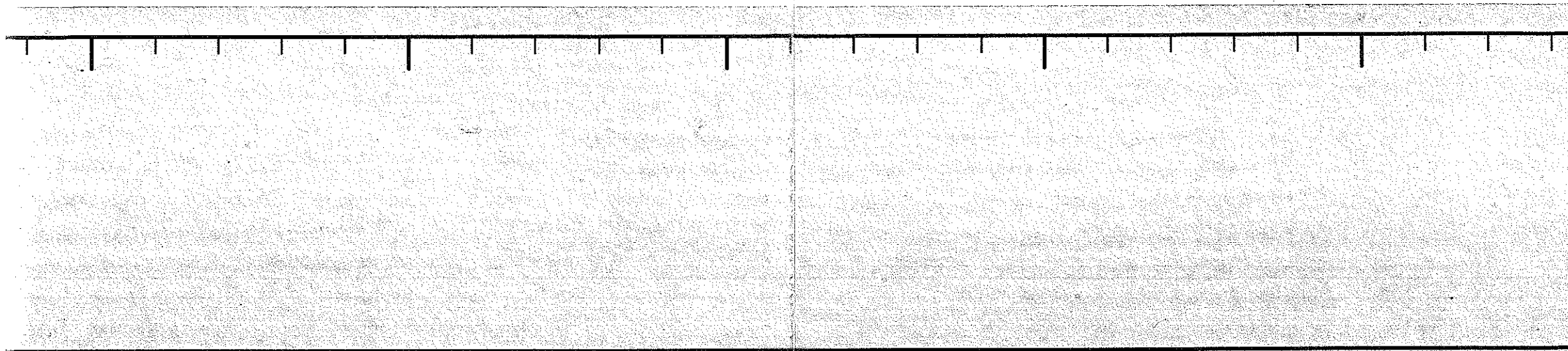




# LEGEND

-  Anhydrite
-  Salt
-  Sandstone
-  Shale
-  Carb sh
-  Limestone
-  Oil Lime
-  Chert
-  Dolomite

DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Decreases	DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
<p>↑</p> <p>TOP ANHYDRITE 1735"</p> <p>TOP SALT 1785"</p> <p>CASE ANHYDRITE 1785"</p> <p>TOP SALT 1805"</p>	<p>1400</p> <p>50</p> <p>1500</p> <p>3000</p>	<p>[Anhydrite pattern]</p> <p>[Salt pattern]</p> <p>[Sandstone pattern]</p> <p>[Shale pattern]</p> <p>[Carb sh pattern]</p> <p>[Limestone pattern]</p> <p>[Oil Lime pattern]</p> <p>[Chert pattern]</p> <p>[Dolomite pattern]</p>			



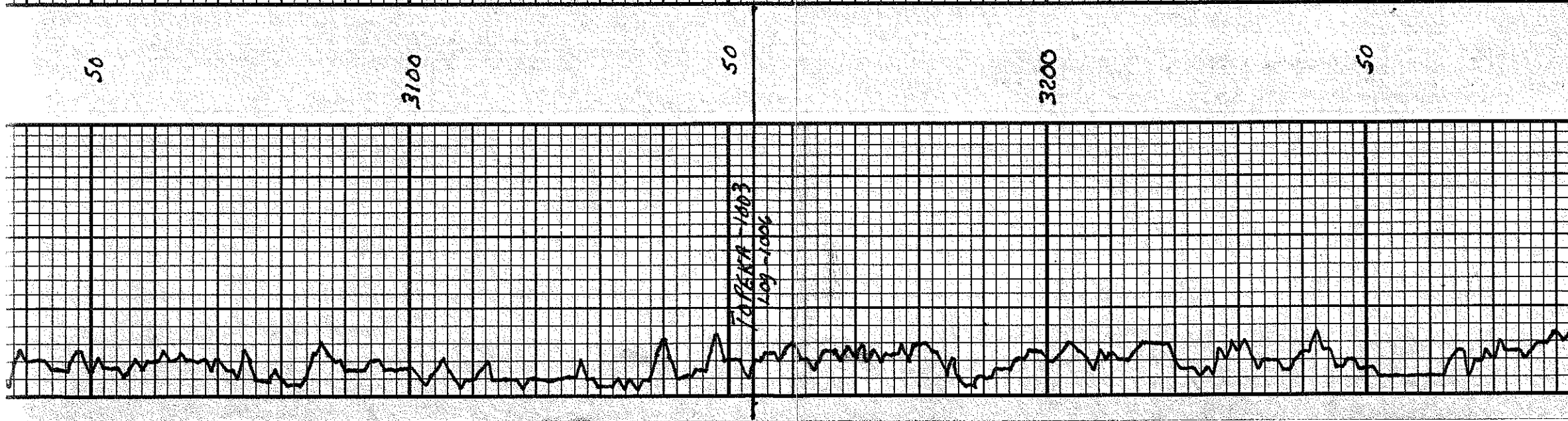
50

3100

50

3200

50



10/25/2014  
10/25/2014



3300

50

3400

50

3500

HOOPER ST  
LOG - 17.55

TORONTO - 1213  
LOG - 17.75

LAKE - 17.59  
LOG - 17.63

LOG - 17.50

SH BULKHEADS

SH BULKHEADS

LS tan v. chky sandstone  
with 1-2% carb. in part

LS tan v. chky sandstone  
with 1-2% carb. in part

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SH BULKHEADS

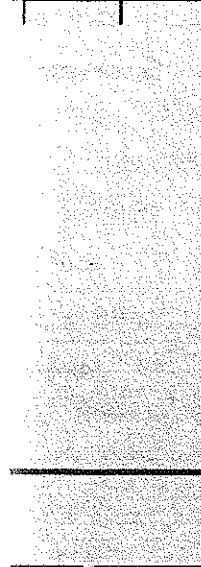
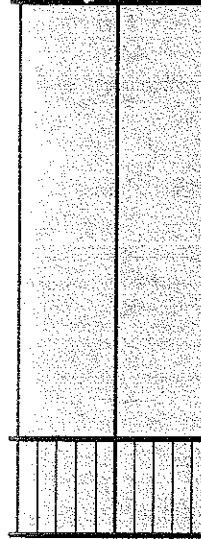
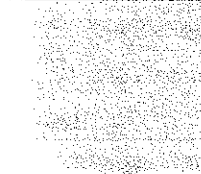
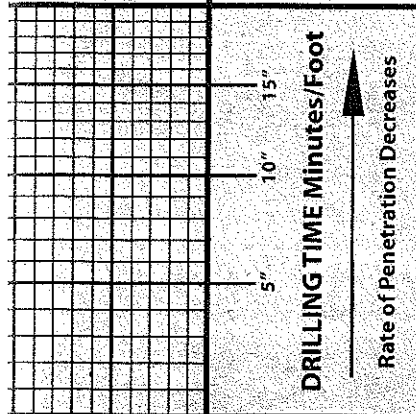
SH BULKHEADS

LS tan v. chky sandstone  
with 1-2% carb. in part









OIL SHOWS	REMARKS
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LITHOLOGY	DEPTH	SAMPLE DESCRIPTIONS
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CONTRACTOR Discovery Drilling Rig #4  
 LEASE Sunley-Sub #1-13 IP 1104  
 ELEVATION 2157' 4.5 RTD 3844'

LOCATION 1640' EAK & 145' FEL  
 SEC 13 TWP 14S RNG 19W  
 COUNTY ELLIS STATE KANSAS