



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1240947  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

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

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

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

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

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

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

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

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

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

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

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

Designate Type of Completion:

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

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

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

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

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

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

Spud Date or 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

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

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

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

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

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

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

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

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

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

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

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

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



1240947

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  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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type 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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Black & Gold 1-17
Doc ID	1240947

All Electric Logs Run

Sonic
Micro
Dual Induction
Compensated Density Neutron

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Black & Gold 1-17
Doc ID	1240947

Tops

Name	Top	Datum
Top Anhydrite	1272'	+774
Base Anhydrite	1317'	+729
Topeka	3049'	-1003
Heebner	3299'	-1253
Toronto	3326'	-1280
LKC	3352'	-1306
BKC	3579'	-1533
Arbuckle	3644'	-1598

# 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. 993

Date	1-7-15	Sec.	17	Twp.	14	Range	18	County	Ellis	State	KS	On Location		Finish	8:15 AM
Lease								Well No.		Owner					
Contractor								Well No. 1-17		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										Charge To					
Hole Size								T.D.		Downing / Nelson					
Csg.								Depth		Street					
Tbg. Size								Depth		City					
Tool								Depth		State					
Cement Left in Csg.								Shoe Joint		The above was done to satisfaction and supervision of owner agent or contractor.					
Meas Line								Displace		Cement Amount Ordered					
EQUIPMENT								44 BC		325 8/20 31.44 2/CEL					
Pumptrk								No.		Common					
Bulktrk								No.		Poz. Mix					
Bulktrk								No.		Gel.					
Bulktrk								No.		Calcium					
JOB SERVICES & REMARKS										Hulls					
Remarks:										Salt					
Rat Hole										Flowseal					
Mouse Hole										Kol-Seal					
Centralizers										Mud CLR 48					
Baskets										CFL-117 or CD110 CAF 38					
D/V or Port Collar										Sand					
8 1/2 in Bottom Best Cement										Handling					
Mix 325 SK + Displace Plug										Mileage					
Cement										FLOAT EQUIPMENT					
										Guide Shoe					
										Centralizer					
										Baskets					
										AFU Inserts					
										Float Shoe					
										Latch Down					
										Pumptrk Charge					
										Mileage					
										Tax					
										Discount					
										Total Charge					
Signature															

Quality Oilwell Cementing

JOB LOG

SWIFT Services, Inc.

DATE 1-13-15 PAGE NO. 1

CUSTOMER Downing & Nelson Oil WELL NO. 1-17 LEASE Black & Gold JOB TYPE CMT 2-Stage Longstring TICKET NO. 27023

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1730					14 #	5 1/2	TD-3745' ON location - Float equip - Rig LD D.P.
	1945							start 5 1/2" casing to 3744' Insert Float shoe w/ Auto fill PK. Baffle - SJ - 25' = 3719' = <u>90 3/4 BBL</u> Cent. - 1-3-5-9-11-13-15-60 Cmt. Baskets Pin end #2 & #61 D.V. collar of #61 @ 1255' = <u>30 1/2 BBL</u> Drop fill-up ball - 5 feet
	2100							Fin running casing - Tag bottom
	2115							Start cir / Rotate casing
	2200							Fin cir - <u>1st stage</u> 500 gal Muel Flush 20 BBL KCL Flush 150 SKS EA-2. cmt
		5	12				400	Fin cmt - Wash pump & lines
		5	20				700	Drop D.V. LD. Plug - Start Displ
		4	37				400	caught lift press
							400	slow rate
		9 1/2					700	Plug Down - Last cir press - Hold - Release & Hold
		8	70				500	Drop D.V. opening device (no MH)
		6 1/2					700	Plug RH-30SKS SMD left 20SKS SMD cmt.
			90 3/4				900	<u>2nd stage</u>
							1200	Open D.V. - w/ P.T. w/ KCL Flush
		7 5	20				300	Fin KCL Flush
		4 1/2	83				300	Start 150 SKS SMD cmt @ 11.2 gal
							Vac	Fin cmt - NOT Wash Pump & Lines
		5					300	Drop D.V. Closing Plug
							1300	Start Displ
	2330		30 1/2					Plug Down - D.V. closed - Hold Release & Hold
								Job Complete <u>30SKS cmt. circulate</u> Wash up & Rackup TR
								Thanks Alan, Jan, Steve & Jared



## DRILL STEM TEST REPORT

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

P.O. Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Black & Gold #1-17**

### **17-14s-18w Ellis,KS**

Start Date: 2015.01.10 @ 16:04:00

End Date: 2015.01.11 @ 00:15:00

Job Ticket #: 60998                      DST #: 1

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

Printed: 2015.01.13 @ 13:12:35



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co, Inc.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

ATTN: Marc Dow ning

Job Ticket: 60998

**DST#: 1**

Test Start: 2015.01.10 @ 16:04:00

## GENERAL INFORMATION:

Formation: **LKC "C-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:22:30

Time Test Ended: 00:15:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Phillip Gage

Unit No: 70

**Interval: 3352.00 ft (KB) To 3404.00 ft (KB) (TVD)**

Reference Elevations: 2046.00 ft (KB)

Total Depth: 3404.00 ft (KB) (TVD)

2038.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8700**

**Outside**

Press@RunDepth: 57.16 psig @ 3353.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.10

End Date:

2015.01.11

Last Calib.:

2015.01.11

Start Time: 16:04:05

End Time:

00:14:59

Time On Btm:

2015.01.10 @ 19:22:00

Time Off Btm:

2015.01.10 @ 22:25:00

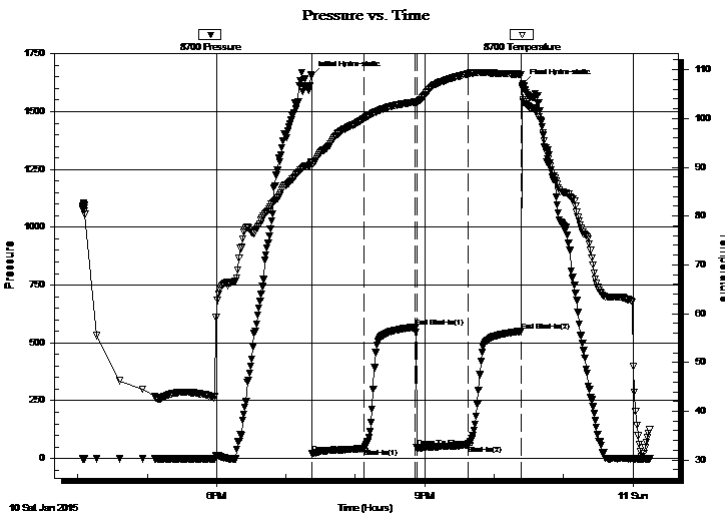
TEST COMMENT: 45-IF-Built to 6 1/4"

45-ISI-No Return

45-FF-Built to 5"

45-FSI-Weak Surface Return at 35 mins.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1657.06	91.06	Initial Hydro-static
1	20.20	90.43	Open To Flow (1)
46	43.08	100.00	Shut-In(1)
90	568.31	103.37	End Shut-In(1)
91	46.27	103.26	Open To Flow (2)
136	57.16	109.20	Shut-In(2)
182	550.61	109.07	End Shut-In(2)
183	1621.75	103.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	MW, 40% m, 60% w	0.62
15.00	WM, 40% w, 60% m	0.21
5.00	O, 100% o	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.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

Job Ticket: 60998

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.01.10 @ 16:04:00

## GENERAL INFORMATION:

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Test Type: Conventional Bottom Hole (Initial)

Tester: Phillip Gage

Unit No: 70

**Interval: 3352.00 ft (KB) To 3404.00 ft (KB) (TVD)**

Reference Elevations: 2046.00 ft (KB)

Total Depth: 3404.00 ft (KB) (TVD)

2038.00 ft (CF)

Hole Diameter: 7.88 inchesHole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8018 Inside**

Press@RunDepth: psig @ 3353.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.10

End Date:

2015.01.11

Last Calib.:

2015.01.11

Start Time: 16:04:05

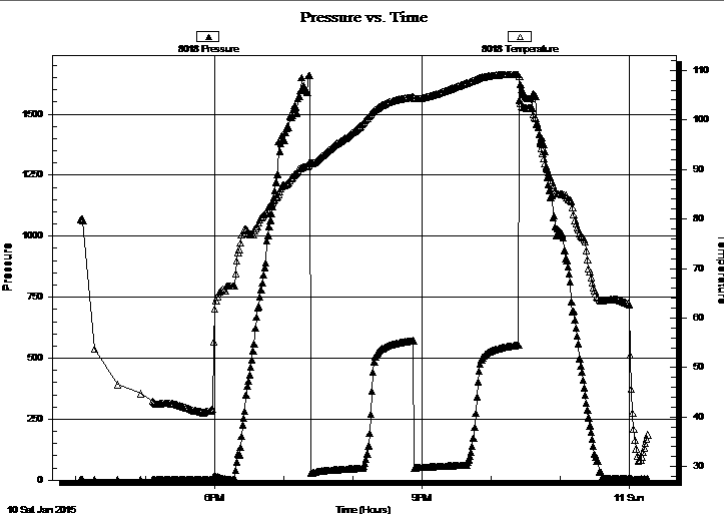
End Time:

00:15:29

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 45-IF-Built to 6 1/4"  
45-ISI-No Return  
45-FF-Built to 5"  
45-FSI-Weak Surface Return at 35 mins.



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	MW, 40%m, 60%w	0.62
15.00	WM, 40%w, 60%m	0.21
5.00	O, 100%o	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.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

Job Ticket: 60998

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.01.10 @ 16:04:00

## Tool Information

Drill Pipe:	Length: 3309.00 ft	Diameter: 3.80 inches	Volume: 46.42 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 46.56 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3352.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	52.00 ft			
Tool Length:	73.00 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			3332.00	
Shut In Tool	5.00			3337.00	
Hydraulic tool	5.00			3342.00	
Packer	5.00			3347.00	21.00 Bottom Of Top Packer
Packer	5.00			3352.00	
Stubb	1.00			3353.00	
Recorder	0.00	8018	Inside	3353.00	
Recorder	0.00	8700	Outside	3353.00	
Perforations	15.00			3368.00	
Change Over Sub	1.00			3369.00	
Drill Pipe	31.00			3400.00	
Change Over Sub	1.00			3401.00	
Bullnose	3.00			3404.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co, Inc.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

Job Ticket: 60998

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.01.10 @ 16:04:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

48000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbf
63.00	MW, 40% <i>m</i> , 60% <i>w</i>	0.620
15.00	WM, 40% <i>w</i> , 60% <i>m</i>	0.210
5.00	O, 100% <i>o</i>	0.070

Total Length: 83.00 ft      Total Volume: 0.900 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

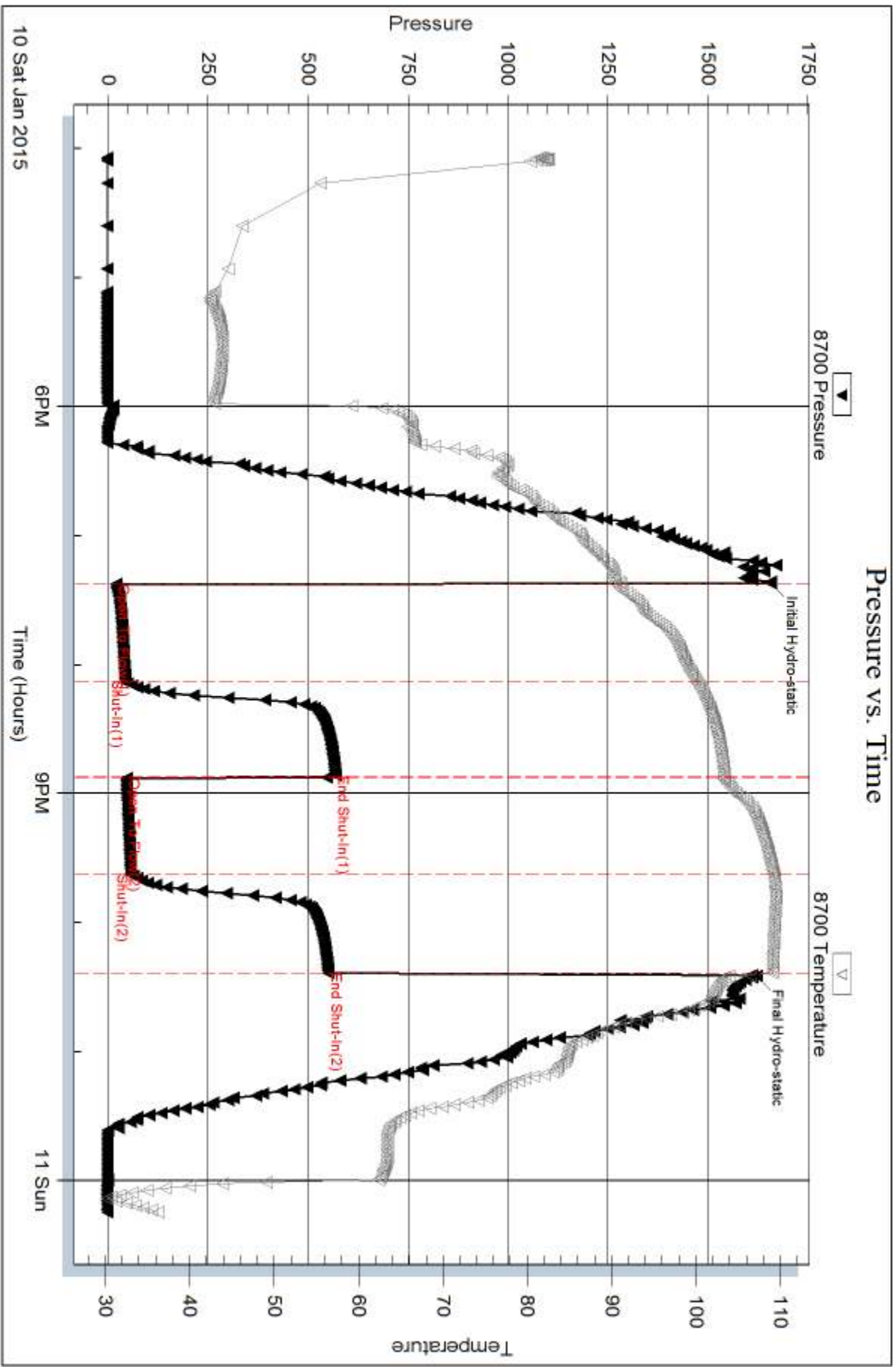
Recovery Comments: .5 @ 23 Degrees = 48000 Salinity

Serial #: 8700

Outside Dow n/g-Nelson Oil Co, Inc.

Black & Gold #1-17

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 60998

Printed: 2015.01.13 @ 13:12:36

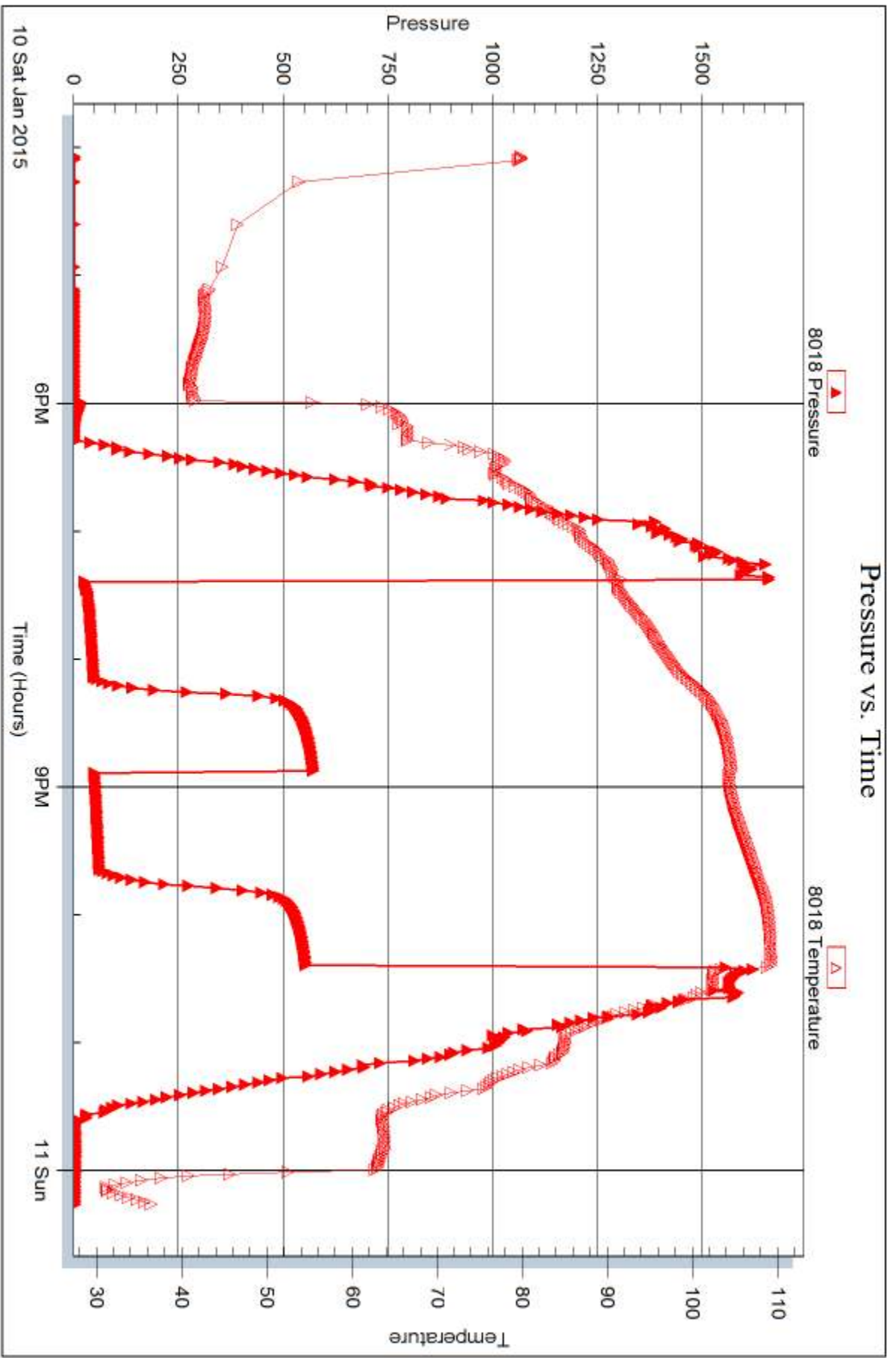
Serial #: 8018

Inside

Dow n/g-Nelson Oil Co, Inc.

Black & Gold #1-17

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60998

Printed: 2015.01.13 @ 13:12:37



## DRILL STEM TEST REPORT

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

P.O. Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Black & Gold #1-17**

### **17-14s-18w Ellis,KS**

Start Date: 2015.01.11 @ 22:20:28

End Date: 2015.01.12 @ 04:49:52

Job Ticket #: 61140                      DST #: 2

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

Printed: 2015.01.13 @ 11:59:14



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co, Inc.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

ATTN: Marc Dow ning

Job Ticket: 61140

**DST#: 2**

Test Start: 2015.01.11 @ 22:20:28

## GENERAL INFORMATION:

Formation: **Congl. Sd.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:55:53

Time Test Ended: 04:49:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schw ager

Unit No: 70

**Interval: 3573.00 ft (KB) To 3645.00 ft (KB) (TVD)**

Reference Elevations: 2046.00 ft (KB)

Total Depth: 3645.00 ft (KB) (TVD)

2038.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8018**

**Inside**

Press@RunDepth: 41.40 psig @ 3578.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.11

End Date:

2015.01.12

Last Calib.:

2015.01.12

Start Time: 22:20:28

End Time:

04:49:52

Time On Btm:

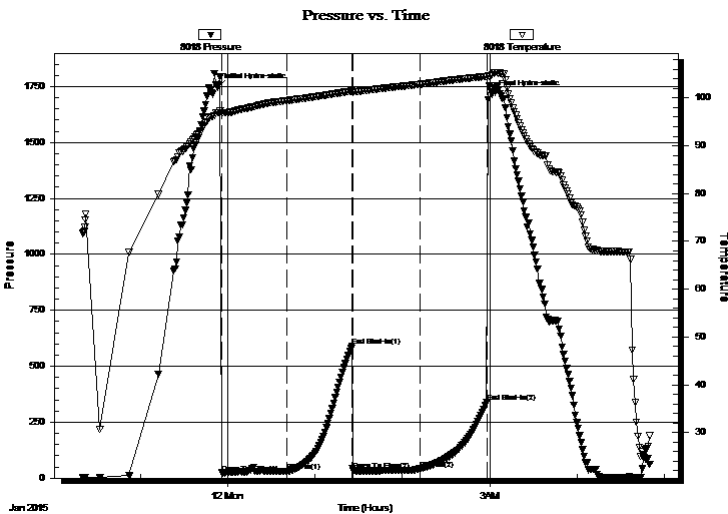
2015.01.11 @ 23:53:23

Time Off Btm:

2015.01.12 @ 03:01:52

**TEST COMMENT:** 45-IFP-w k bl thru-out 1/2" to 1 3/4" bl  
45-ISIP-no bl  
45-FFP-vy w k surface bl thru-out  
45-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1745.52	96.96	Initial Hydro-static
3	23.21	96.89	Open To Flow (1)
48	30.57	99.47	Shut-In(1)
92	588.81	101.48	End Shut-In(1)
93	34.31	101.33	Open To Flow (2)
139	41.40	102.85	Shut-In(2)
185	338.57	104.53	End Shut-In(2)
189	1713.99	104.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM 5%O95%M	0.10
2.00	CO	0.01

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co, Inc.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

ATTN: Marc Dow ning

Job Ticket: 61140

**DST#: 2**

Test Start: 2015.01.11 @ 22:20:28

## GENERAL INFORMATION:

Formation: **Congl. Sd.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:55:53

Time Test Ended: 04:49:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schw ager

Unit No: 70

**Interval: 3573.00 ft (KB) To 3645.00 ft (KB) (TVD)**

Reference Elevations: 2046.00 ft (KB)

Total Depth: 3645.00 ft (KB) (TVD)

2038.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8700**

**Outside**

Press@RunDepth: psig @ 3578.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.11

End Date:

2015.01.12

Last Calib.:

2015.01.12

Start Time: 22:20:17

End Time:

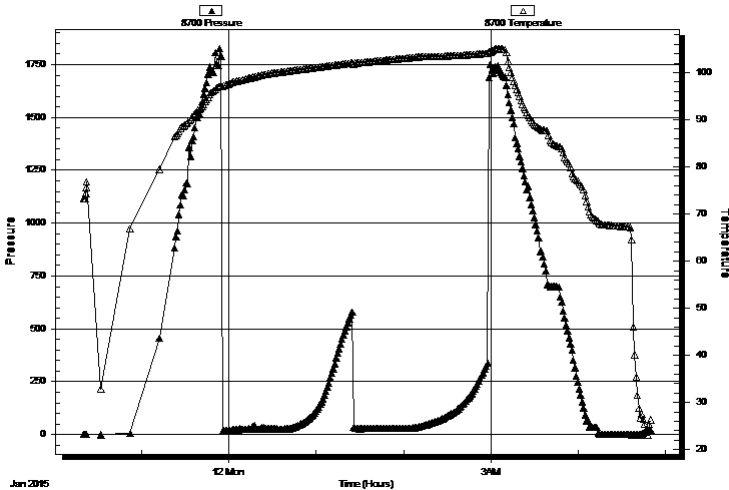
04:49:41

Time On Btm:

Time Off Btm:

TEST COMMENT: 45-IFP-w k bl thru-out 1/2" to 1 3/4" bl  
45-ISIP-no bl  
45-FFP-vy w k surface bl thru-out  
45-FSIP-no bl

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM 5% O95% M	0.10
2.00	CO	0.01

## 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.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

Job Ticket: 61140

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2015.01.11 @ 22:20:28

## Tool Information

Drill Pipe:	Length: 3533.00 ft	Diameter: 3.80 inches	Volume: 49.56 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 49.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3573.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	72.00 ft			
Tool Length:	93.00 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			3553.00	
Shut In Tool	5.00			3558.00	
Hydraulic tool	5.00			3563.00	
Packer	5.00			3568.00	21.00 Bottom Of Top Packer
Packer	5.00			3573.00	
Stubb	1.00			3574.00	
Perforations	4.00			3578.00	
Recorder	0.00	8018	Inside	3578.00	
Recorder	0.00	8700	Outside	3578.00	
Drill Pipe	64.00			3642.00	
Bullnose	3.00			3645.00	72.00 Bottom Packers & Anchor

**Total Tool Length: 93.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co, Inc.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

Job Ticket: 61140

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2015.01.11 @ 22:20:28

### 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: 55.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.53 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbf
20.00	OCM 5%O95%M	0.098
2.00	CO	0.010

Total Length: 22.00 ft Total Volume: 0.108 bbf

Num Fluid Samples: 0

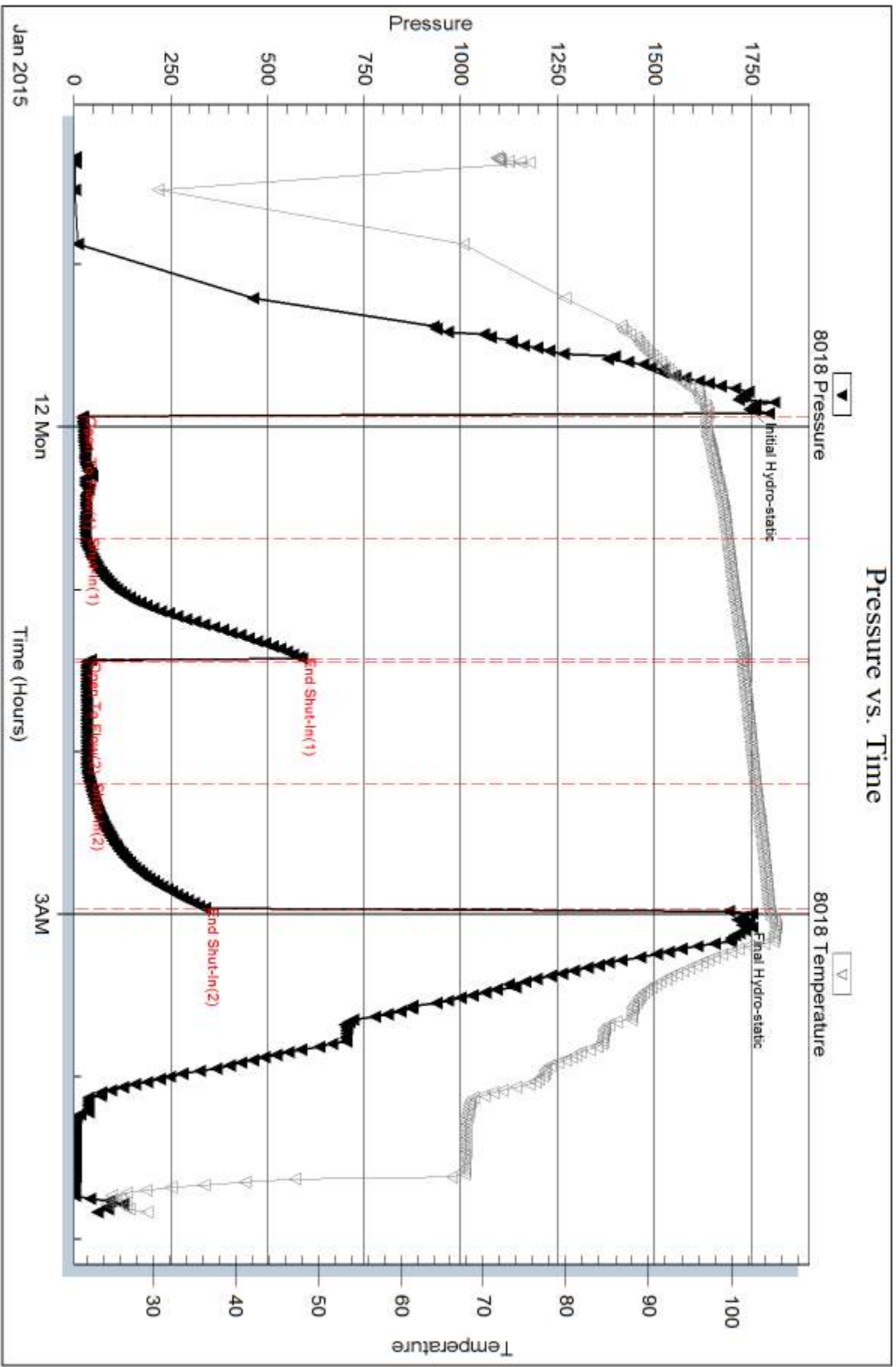
Num Gas Bombs: 0

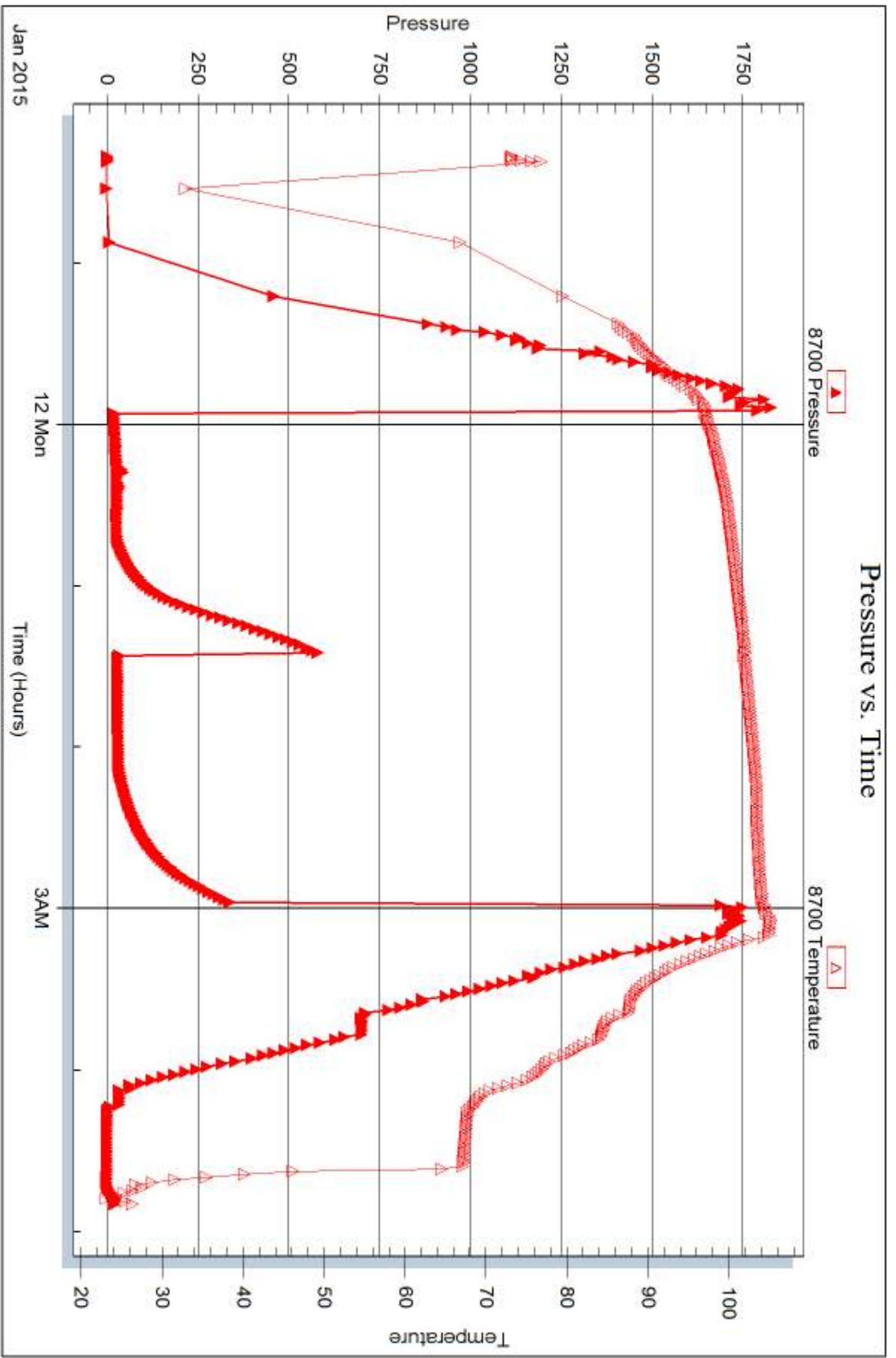
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

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

P.O. Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Black & Gold #1-17**

### **17-14s-18w Ellis,KS**

Start Date: 2015.01.12 @ 13:05:57

End Date: 2015.01.12 @ 21:37:51

Job Ticket #: 61141                      DST #: 3

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

Printed: 2015.01.13 @ 11:54:13



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co, Inc.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

ATTN: Marc Dow ning

Job Ticket: 61141

**DST#: 3**

Test Start: 2015.01.12 @ 13:05:57

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:30:22

Time Test Ended: 21:37:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schw ager

Unit No: 70

**Interval: 3574.00 ft (KB) To 3671.00 ft (KB) (TVD)**

Reference Elevations: 2046.00 ft (KB)

Total Depth: 3671.00 ft (KB) (TVD)

2038.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8018**

**Inside**

Press@RunDepth: 265.44 psig @ 3580.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.12

End Date:

2015.01.12

Last Calib.:

2015.01.12

Start Time: 13:05:57

End Time:

21:37:51

Time On Btm:

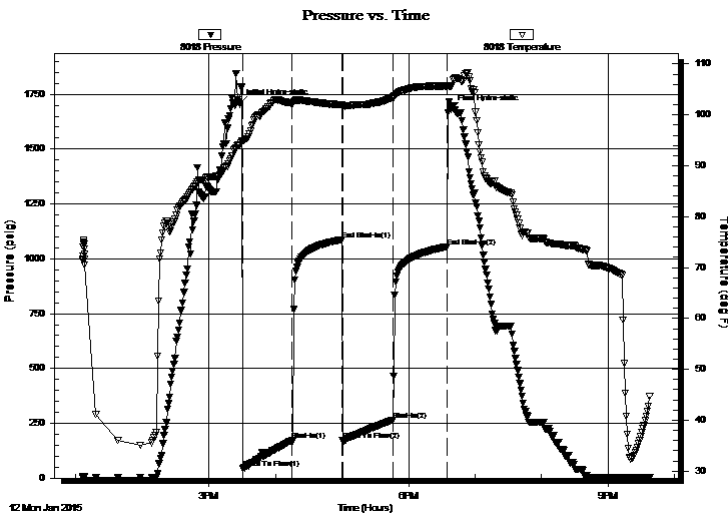
2015.01.12 @ 15:27:22

Time Off Btm:

2015.01.12 @ 18:38:21

**TEST COMMENT:** 45-IFP-w k to strg in 14 min  
45-ISIP-surface bl bk  
45-FFP-w k to strg in 17 min  
45-FSIP-surface bl bk

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1705.52	94.11	Initial Hydro-static
3	43.24	94.91	Open To Flow (1)
48	170.77	102.24	Shut-In(1)
93	1087.54	102.04	End Shut-In(1)
93	170.86	101.66	Open To Flow (2)
139	265.44	103.36	Shut-In(2)
187	1054.66	105.64	End Shut-In(2)
191	1681.04	105.61	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	160' GIP	0.00
310.00	MGO 20%M10%G70%O	4.08
270.00	CO	3.79

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co, Inc.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

Job Ticket: 61141

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2015.01.12 @ 13:05:57

## Tool Information

Drill Pipe:	Length: 3531.00 ft	Diameter: 3.80 inches	Volume: 49.53 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 49.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3574.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	97.00 ft			
Tool Length:	118.00 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			3554.00	
Shut In Tool	5.00			3559.00	
Hydraulic tool	5.00			3564.00	
Packer	5.00			3569.00	21.00 Bottom Of Top Packer
Packer	5.00			3574.00	
Stubb	1.00			3575.00	
Perforations	5.00			3580.00	
Recorder	0.00	8018	Inside	3580.00	
Recorder	0.00	8700	Outside	3580.00	
Blank Spacing	65.00			3645.00	
Perforations	23.00			3668.00	
Bullnose	3.00			3671.00	97.00 Bottom Packers & Anchor

**Total Tool Length: 118.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co, Inc.

**17-14s-18w Ellis,KS**

P.O. Box 1019  
Hays, KS 67601

**Black & Gold #1-17**

Job Ticket: 61141

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2015.01.12 @ 13:05:57

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	160' GIP	0.000
310.00	MGO 20%M10%G70%O	4.075
270.00	CO	3.787

Total Length: 580.00 ft

Total Volume: 7.862 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

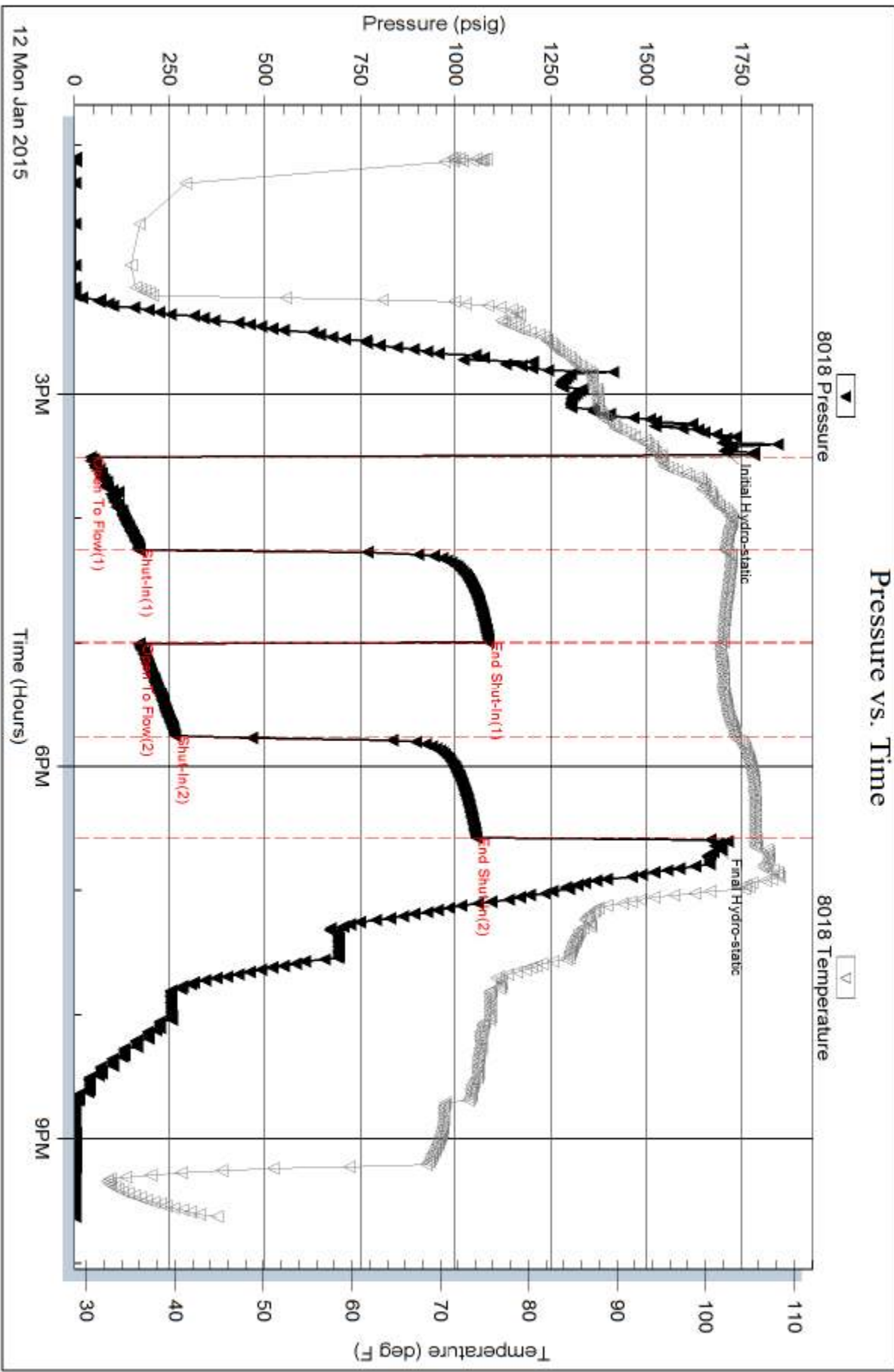
Serial #: 8018

Inside

Dow nting-Nelson Oil Co. Inc.

Black & Gold #1-17

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 61141

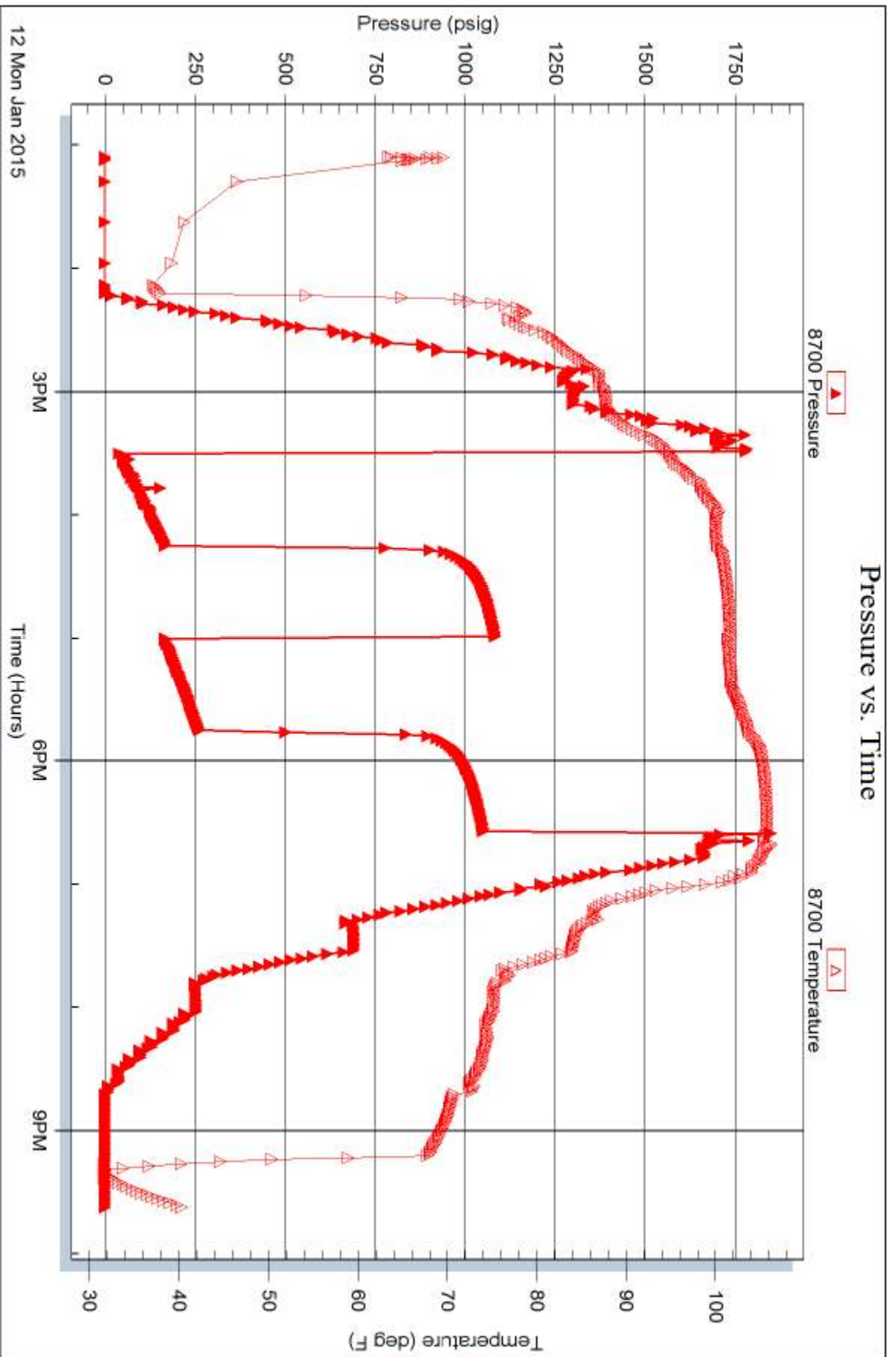
Printed: 2015.01.13 @ 11:54:16

Serial #: 8700

Outside Dow n/g-Nelson Oil Co, Inc.

Black & Gold #1-17

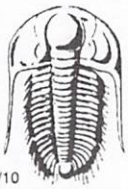
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 61141

Printed: 2015.01.13 @ 11:54:16



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 60998

Well Name & No. Black & Gold #1-17 Test No. 1 Date 1-10-15  
 Company Downing-Nelson Oil Co Inc Elevation 2046 KB 2038 GL  
 Address P.O. Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery Rig 1  
 Location: Sec. 17 Twp. 19s Rge. 18w Co. Ellis State KS

Interval Tested 3352-3404 Zone Tested LKL "C+D"  
 Anchor Length 52 Drill Pipe Run 3309 Mud Wt. 8.7  
 Top Packer Depth 3347 Drill Collars Run 29 Vis 60  
 Bottom Packer Depth 3352 Wt. Pipe Run 0 WL 8  
 Total Depth 3404 Chlorides 4,000 ppm System LCM 2#

Blow Description IF Built to 6 1/4"  
ISE No Return  
FF Built to 5"  
PSI- Weak Surface Return, at 35 mhs

Rec	Feet of	%gas	%oil	%water	%mud
<u>63'</u>	<u>mw</u>			<u>60%</u>	<u>40%</u>
<u>15'</u>	<u>wm</u>			<u>40%</u>	<u>60%</u>
<u>5'</u>	<u>0</u>		<u>100%</u>		

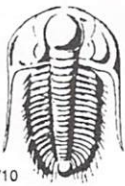
Rec Total 83' BHT 103 Gravity 37 API RW .5 @ 23 °F Chlorides 48,000 ppm

(A) Initial Hydrostatic 1,657  Test 1050 T-On Location 14:55  
 (B) First Initial Flow 20  Jars \_\_\_\_\_ T-Started 16:04  
 (C) First Final Flow 43  Safety Joint \_\_\_\_\_ T-Open 19:23  
 (D) Initial Shut-In 568  Circ Sub \_\_\_\_\_ T-Pulled 22:23  
 (E) Second Initial Flow 46  Hourly Standby \_\_\_\_\_ T-Out 00:16  
 (F) Second Final Flow 57  Mileage 16 RT 16 Comments \_\_\_\_\_  
 (G) Final Shut-In 550  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,671  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45  
 Sub Total 0  
 Total 1066  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1066

Approved By \_\_\_\_\_ Our Representative Phillip Hoop "Thank You"

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 61140

4/10

Well Name & No. Black + Gold #1-17 Test No. 2 Date 1-11-15  
 Company Downing-Nelson O.I. Co. Inc Elevation 2046 KB 2038 GL  
 Address PO Box 1019 Hays, Ks 67601  
 Co. Rep / Geo. MARC Downing Rig Discovery rig 1  
 Location: Sec. 17 Twp. 14<sup>s</sup> Rge. 18<sup>w</sup> Co. ELLIS State Ko

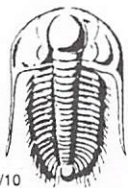
Interval Tested 3573-3645 Zone Tested Congl. sd.  
 Anchor Length 72 Drill Pipe Run 3533 Mud Wt. 9  
 Top Packer Depth 3568 Drill Collars Run 30 Vis 55  
 Bottom Packer Depth 3573 Wt. Pipe Run — WL 8.6  
 Total Depth 3645 Chlorides 8000 ppm System LCM 2<sup>th</sup>  
 Blow Description IFP - WEAK Blow thru-out 1/2" To 1 3/4" Blow  
ISFP - NO Blow  
FFP - Very WEAK surface Blow thru out  
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>OCM</u>	<u>5</u>			<u>95</u>
<u>2</u>	<u>CO</u>				

Rec Total 22 BHT 104 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 1745  Test 1050 T-On Location 2100  
 (B) First Initial Flow 23  Jars — T-Started 2220  
 (C) First Final Flow 30  Safety Joint — T-Open 2355  
 (D) Initial Shut-In 588  Circ Sub — T-Pulled 0255  
 (E) Second Initial Flow 34  Hourly Standby — T-Out 0449  
 (F) Second Final Flow 41  Mileage 16 RT 16 Comments —  
 (G) Final Shut-In 338  Sampler —  
 (H) Final Hydrostatic 1713  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Initial Open 45  Extra Recorder — Sub Total 0  
 Initial Shut-In 45  Day Standby — Total 1066  
 Final Flow 45  Accessibility — MP/DST Disc't —  
 Final Shut-In 45 Sub Total 1066

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. 61141

Well Name & No. BLACK + Gold #1-17 Test No. 3 Date 1-12-15  
 Company Downing-Nelson Oil Co, Inc. Elevation 2046 KB 2038 GL  
 Address PO Box 1019 Hays, KS 67601  
 Co. Rep / Geo. MARC Downing Rig Discovery rig 1  
 Location: Sec. 17 Twp. 14<sup>s</sup> Rge. 18<sup>w</sup> Co. ELLIS State Ks

Interval Tested 3574-3671 Zone Tested ARBUCKLE  
 Anchor Length 97 Drill Pipe Run 3531 Mud Wt. 9  
 Top Packer Depth 3569 Drill Collars Run 30 Vis 50  
 Bottom Packer Depth 3574 Wt. Pipe Run - WL 8.8  
 Total Depth 3671 Chlorides 8000 ppm System LCM 2#

Blow Description I FP - WEAK TO STRONG IN 14 MIN  
ISIP - SURFACE BLOW BACK  
FFP - WEAK TO STRONG IN 17 MIN  
FSIP - SURFACE BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>160</u>	<u>GIP</u>				
<u>310</u>	<u><del>AMGO</del> AMGO</u>	<u>10</u>	<u>70</u>	<u>20</u>	
<u>270</u>	<u>CO</u>				

Rec Total 580 BHT 105 Gravity 29 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1705  Test 1050 T-On Location 1215  
 (B) First Initial Flow 43  Jars \_\_\_\_\_ T-Started 1305  
 (C) First Final Flow 170  Safety Joint \_\_\_\_\_ T-Open 1530  
 (D) Initial Shut-In 1087  Circ Sub \_\_\_\_\_ T-Pulled 1830  
 (E) Second Initial Flow 170  Hourly Standby \_\_\_\_\_ T-Out 2137  
 (F) Second Final Flow 265  Mileage 16 RT 16 \_\_\_\_\_ Comments \_\_\_\_\_  
 (G) Final Shut-In 1054  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1681  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1066  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

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

Sub Total 1066  
 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.

