

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 Recompletion Date _____ Date Reached TD _____ Completion Date or Recompletion Date _____

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

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

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

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

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</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	Downing-Nelson Oil Co Inc
Well Name	RUPP 2-15
Doc ID	1387224

All Electric Logs Run

Sonic
Micro
Dual Induction
Compensated Density Neutron

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	RUPP 2-15
Doc ID	1387224

Tops

Name	Top	Datum
Top Anhydrite	1555'	+639
Base Anhydrite	1601'	+593
Topeka	3225'	-1031
Heebner	3454'	-1260
Toronto	3474'	-1280
LKC	3489'	-1295
BKC	3732'	-1538
Marmaton	3808'	-1614
Arbuckle	3871'	-1677

Marc A. Downing	Geologic Report
Consulting Petroleum Geologist	Drilling Time and Sample Log

Operator Downing-Nelson Oil Co., Inc.	Elevation			
Lease Rupp	KB 2194			
API # 15-195-23038-0000	DF 2192			
Field Wildcat	GL 2186			
Location 1070' FNL & 1865' FWL	Casing Record			
Sec. 15 Twp. 13s Rge. 21w	Surface 8 5/8" @ 222'			
County Trego State Kansas	Production 5 1/2" @ 3983'			
Formation	Electrical Surveys			
Sample tops	CNDL, DIL, MEL, Sonic			
Log Tops	Datum			
Datum	Struct Comp			
Top Anhydrite	1555	1555	+639	+2
Base Anhydrite	1602	1601	+593	-2
Topeka	3224	3225	-1031	-3
Heebner	3452	3454	-1260	-3
Toronto	3468	3474	-1280	-6
LKC	3486	3489	-1295	-5
BKC	3731	3732	-1538	-1
Marmaton	3806	3808	-1614	FL
Arbuckle	3869	3871	-1677	+46
Total Depth	3982	3984	-1790	

Drilling Contractor	Discovery Drilling, Rig #4
Commenced	1-24-18 Completed 2-1-18
Samples Saved From	3200 To RTD
Drilling Time Kept From	3100 To RTD
Samples Examined From	3200 To RTD
Geological Supervision From	3200 To RTD

Summary and Recommendations

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

ROCK TYPES
Carbon Sh
Limest W/7> shale, gry

ACCESSORIES

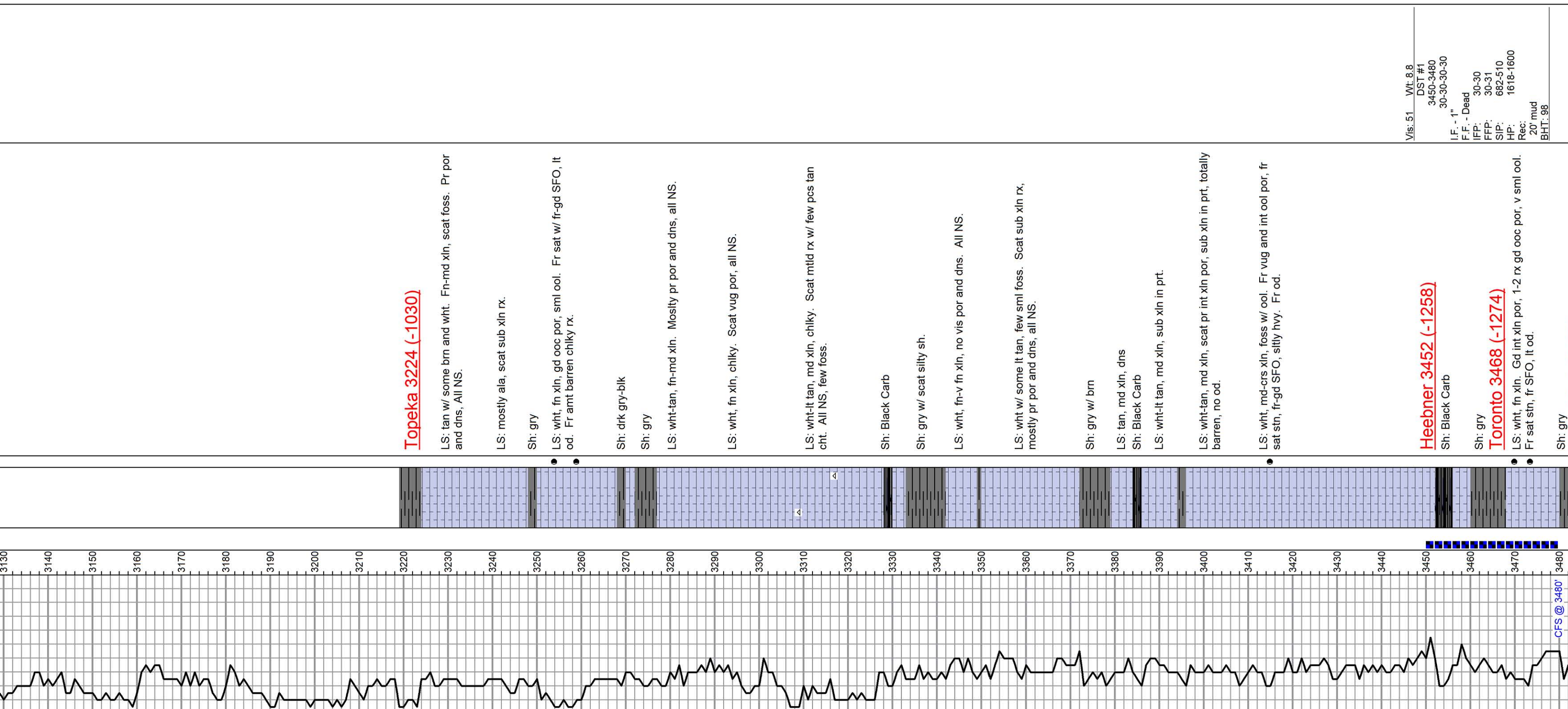
MINERAL
Chert White

STRINGER
Limestone
Sandstone
Shale
carb shale

MISC
Daily Report
Digital Photo
Document
Folder
Link
Vertical Log File
Horizontal Log File
Core Log File
Drill Cuttings Rpt

OIL SHOWS
Even Sin
Spotted Sin 60-75 %
Spotted Sin 5-15 %
Spotted Sin 1-25 %
Questionable Sin
Dead Oil Sin
Fluorescence

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.gstri.ca)



Depth (ft)	Geological Descriptions	Comment
V/S 51 - V/L 8.8 3450-3480 30-30-30-30 L.F. - 1" Dead FFF: 30-30 FFP: 30-31 SF: 662-510 HP: 1618-1600 Rec: mud BHT: 98	V/S 48 - V/L 9 DST #2 3507-3560 45-45-45-45 L.F. - 1.5" FFF: 35-59 FFP: 61-82 SIP: 631-627 HP: 1631-1625 Rec: mud 40' GIP 20' mud w/ show oil 120' WM (45% w) BHT: .05 Chbr. 53 K	V/S 54 - V/L 9 DST #3 3607-3695 30-45-30 L.F. - BOB 2 min / Surf SIB F.F. - BOB 30 sec. GTS 28 min - TSTM / 1/2" SIB FFF: 30-47 FFP: 48-49 SIP: 178-4 HP: 1768-1686 Rec: mud GTS 20' SOCM 60' SOCM (5%g, 10% w) BHT: .05
	LS: tan w/ some brn and wht. Fr-md xin, scat foss. Pr por and dns, All NS.	
	LS: mostly ala, scat sub xin rx.	
	Sh: gry	
	LS: wht, fn xin, gd ooc por, smi ool. Fr sat w/ fr-gd SFO, it od. Fr amt barren chiky rx.	
	Sh: drk gry-blk	
	Sh: gry	
	LS: wht-tan, fn-md xin. Mostly pr por and dns, all NS.	
	LS: wht, fn xin, chiky. Scat vulg por, all NS.	
	LS: wht-tan, md xin, chiky. Scat mild rx w/ few pcs tan cht. All NS, few foss.	
	Sh: Black Carb	
	Sh: gry w/ scat silty sh.	
	LS: wht, fn-vn xin, no vis por and dns. All NS.	
	LS: wht w/ some lt tan, few smi foss. Scat sub xin rx, mostly pr por and dns, all NS.	
	Sh: gry w/ brn	
	LS: tan, md xin, dns	
	Sh: Black Carb	
	LS: wht-tan, md xin, sub xin in prt.	
	LS: wht-tan, md xin, scat pr int xin por, sub xin in prt, totally barren, no od.	
	LS: wht, md-crs xin, foss w/ ool. Fr vulg and int ool por, fr sat sin, fr-gd SFO, silty hvy. Fr od.	
	LS: tan-wht, fn xin, pr por and dns.	
	Sh: gry	
	LS: wht-tan, ool, smi. Fr int ool por, few smi vugs, silty tile. Fr-gd sat sin, fr-gd SFO, gd od.	
	Sh: gry	
	LS: wht, md-crs xin, foss in prt, silty dolom. Fr int xin por w/ scat smi vugs. Fr-gd sat sin, fr-gd SFO, lt-fr od.	
	Sh: gry	
	LS: tan-brn, md xin, foss, silty dolom. Gd int xin por, gd lt brn sat, some total black sat. Gd SFO, strong od.	
	LS: wht, md xin, foss in prt. Gd vulg por, scat fr brn sat sin w/ spilt SFO, fr amt dead blk sin. Fr amt barren chiky rx, gd strong od.	
	Sh: gry	
	LS: wht, md xin, foss. Gd vulg and int foss por, scat lt brn sin and spilt SFO. Fr od. Rx silty tile, scat it gry cht.	
	LS: tan-wht, fn-md xin. Scat fr int xin and pp por w/ fr int sin and spilt SFO. Fr od. Rx silty tile, scat it gry cht.	
	Sh: Black Carb	
	Sh: gry	
	LS: tan-wht, fn-md xin. Scat fr int xin and pp por w/ fr int sin and spilt SFO. Fr od. Rx silty tile, scat it gry cht.	
	LS: few rx ala, mostly wht in xin, sub xin-chiky w/ NS. Trng fr int xin and pp por w/ fr-gd sat and SFO, gd od.	
	LS: wht-tan, fn xin, pr por and dns, scat tan-brn foss cht.	
	Sh: gry	
	LS: tan-wht, some gd int xin por w/ gd sat and SFO, mostly fr-gd ooc por. Fr-gd sat, 1-2 rx tot sat blk. Gd SFO, silty hvy, gd od.	
	LS: wht, fn-md xin, ool in prt, tile w/ pr por. Scat fr amt sub xin-chiky rx, all totally barren, no od.	
	LS: tan-wht, fn xin, ool in prt, tile w/ pr por. Scat fr amt sub xin-chiky rx, all totally barren, no od.	
	Sh: gry	
	Sh: gry, trng brn	
	LS: wht-tan, fn xin, dns	
	Sh: brn w/ gry	
	Sh: red-brn, washes red	
	LS: tan, md xin, dns. Scat org cht	
	LS: ala, much ship org cht	
	Marmaton 3806 (-1612) LS: tan, md xin, smi vugs, tile. Pr-fr sin, spilt SFO, no od. Trng fr amt tan ship cht, scat org. Pr por and dns, rare show.	
	LS: tan-wht, fn xin, tile. Much tan ship cht, 2-3 pos w/ fr sin in smi vugs, scat pr mbw sin, rare SFO, lt od.	
	LS: tan-wht, fn xin, sus in prt. Fr int xin and pp por, fr-gd sat sin, fr SFO. Tan-org ship cht, some sue and weath, some frac. Scat fr-gd sin w/ spilt SFO, fr od.	
	Cherokee Sh 3846 (-1692) Dolo: wht-tan, md rhom xin. Fr int xin por, few smi vugs, some silty tile. Fr-gd lt brn sat sin, fr-gd SFO when broken, lt-fr od.	
	Dolo: wht-tan, some rhomb xin rx ala, trng fn suc xin. Gd int xin por, gd sat sin and gd SFO. Lt-fr od. 2 rx w/ slit gilsonite sin on edge.	
	Sh: gry-brn w/ lots of wht chtk	
	Dolo: wht, fn xin, suc. V spilt SFO, scat it sin, no od. Fr amt v tile w/ no por and NS.	
	Dolo: tan-wht, fn suc xin, w/ some v fn rhombs. No show, totally barren, no od. Trng v tile.	
	Chiky LS: washes wht, NS. Some gry shales, lots wht chik.	
	Dolo: wht, fn-md xin w/ much ool tan cht. All NS, totally barren, no od.	
	Dolo: wht, fn rhom xin w/ gd por. Totally barren, NS, no od.	
	RTD: 3982 (-1788)	

Respectfully Submitted,

Marc A. Downing



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson, Marc Dow

Rupp #2-15

15-13s-21w Trego,KS

Start Date: 2018.01.28 @ 14:50:24

End Date: 2018.01.28 @ 20:32:48

Job Ticket #: 63502 DST #: 1

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

Printed: 2018.02.02 @ 09:06:19

Downing-Nelson Oil Co Inc
15-13s-21w Trego,KS
Rupp #2-15
DST # 1
Toronto
2018.01.28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63502

DST#: 1

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.28 @ 14:50:24

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:54:04

Time Test Ended: 20:32:48

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 77

Interval: 3450.00 ft (KB) To 3480.00 ft (KB) (TVD)

Reference Elevations: 2194.00 ft (KB)

Total Depth: 3480.00 ft (KB) (TVD)

2186.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8360

Inside

Press@RunDepth: 31.56 psig @ 3452.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.01.28

End Date:

2018.01.28

Last Calib.:

2018.01.28

Start Time: 14:50:24

End Time:

20:32:48

Time On Btm:

2018.01.28 @ 16:51:19

Time Off Btm:

2018.01.28 @ 19:03:04

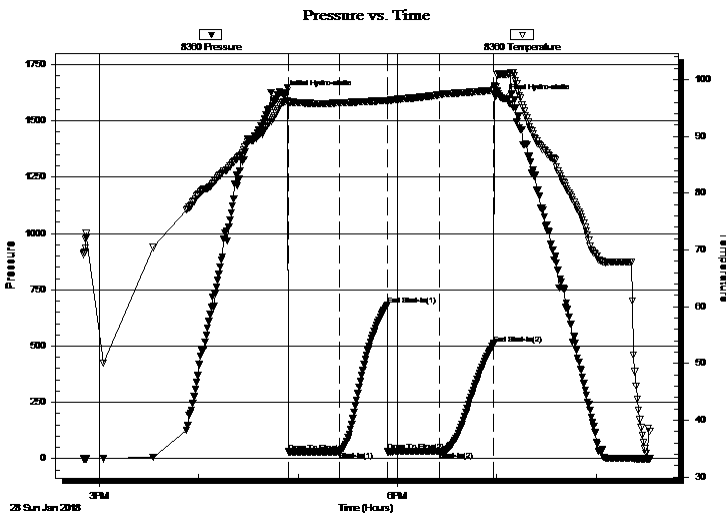
TEST COMMENT: 30-IFP-w k bl thru-out 1" to 1/4" blow

30-ISIP-no bl

30-FFP-no bl

30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1618.14	96.05	Initial Hydro-static
3	30.07	95.88	Open To Flow (1)
34	30.85	95.92	Shut-In(1)
63	682.94	96.33	End Shut-In(1)
63	30.70	96.06	Open To Flow (2)
95	31.56	97.35	Shut-In(2)
127	510.89	98.11	End Shut-In(2)
132	1600.01	100.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud	0.10

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63502

DST#: 1

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.28 @ 14:50:24

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:54:04

Time Test Ended: 20:32:48

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 77

Interval: 3450.00 ft (KB) To 3480.00 ft (KB) (TVD)

Reference Elevations: 2194.00 ft (KB)

Total Depth: 3480.00 ft (KB) (TVD)

2186.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8673 Outside

Press@RunDepth: psig @ 3452.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.01.28

End Date:

2018.01.28

Last Calib.:

2018.01.28

Start Time: 14:50:03

End Time:

20:31:57

Time On Btm:

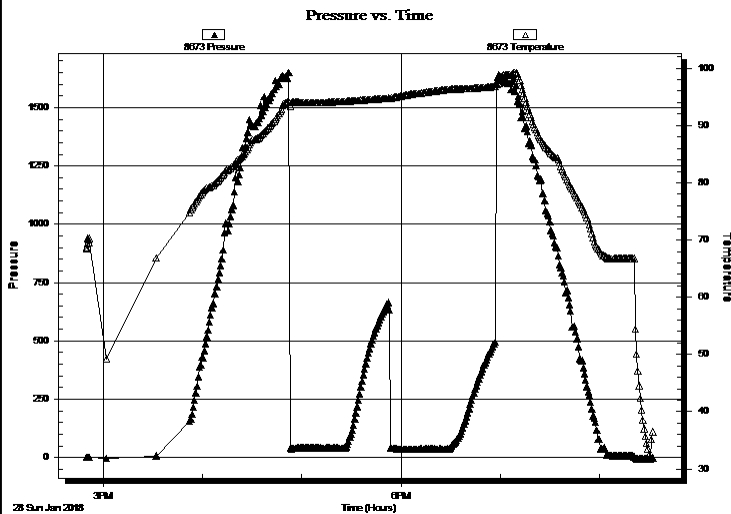
Time Off Btm:

TEST COMMENT: 30-IFP-w k bl thru-out 1" to 1/4" blow

30-ISIP-no bl

30-FFP-no bl

30-FSIP-no bl



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud	0.10

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

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63502

DST#: 1

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.28 @ 14:50:24

Tool Information

Drill Pipe:	Length: 3424.00 ft	Diameter: 3.80 inches	Volume: 48.03 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: 75000.00 lb
			<u>Total Volume: 48.18 bbl</u>	Tool Chased 7.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	3450.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3430.00	
Shut In Tool	5.00			3435.00	
Hydraulic tool	5.00			3440.00	
Packer	5.00			3445.00	21.00 Bottom Of Top Packer
Packer	5.00			3450.00	
Stubb	1.00			3451.00	
Perforations	1.00			3452.00	
Recorder	0.00	8360	Inside	3452.00	
Recorder	0.00	8673	Outside	3452.00	
Perforations	25.00			3477.00	
Bullnose	3.00			3480.00	30.00 Bottom Packers & Anchor

Total Tool Length: 51.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63502

DST#: 1

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.28 @ 14:50:24

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.11 in³

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 bbl
20.00	Mud	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

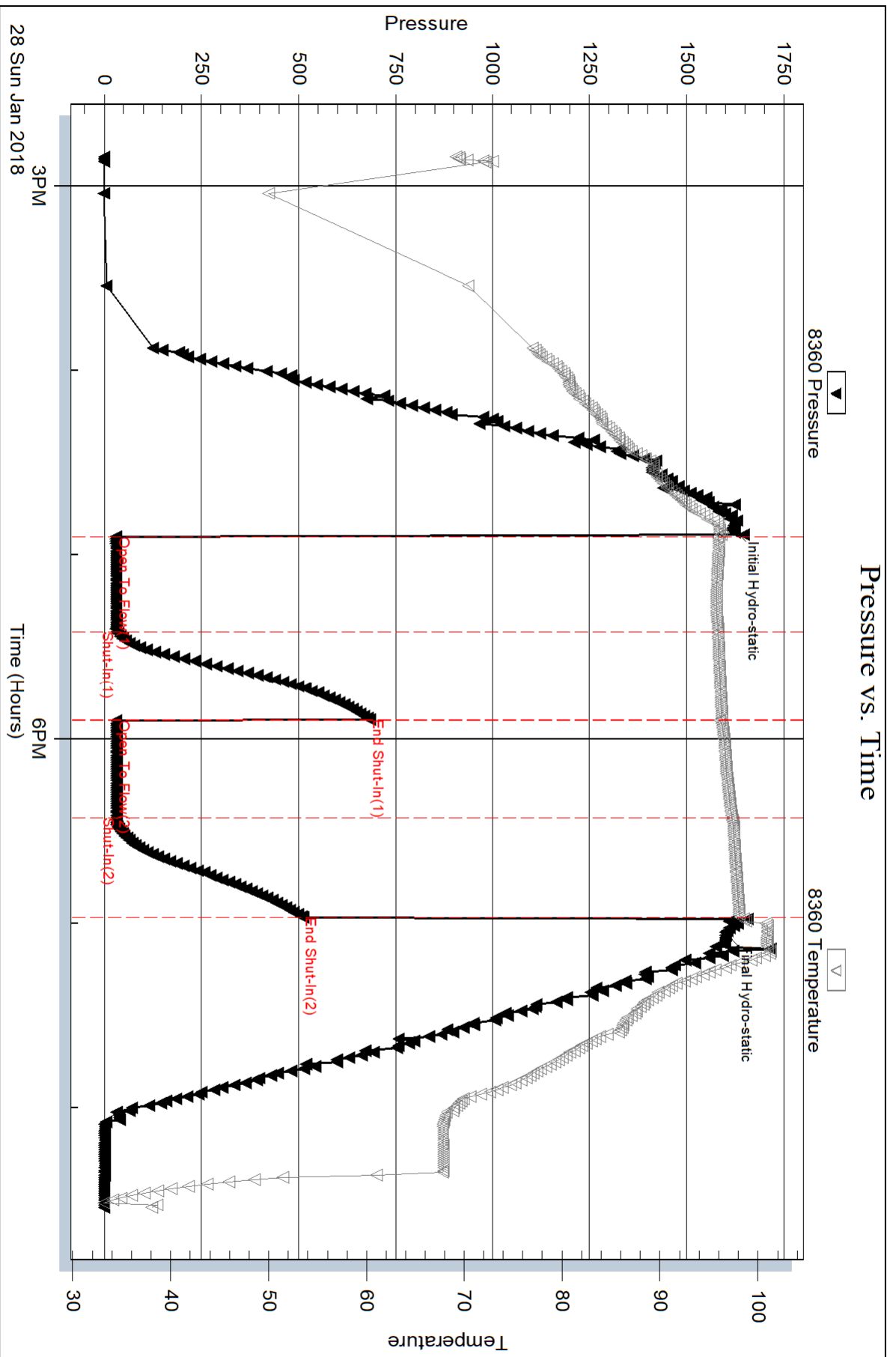
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: slid tool approx 7' to bottom

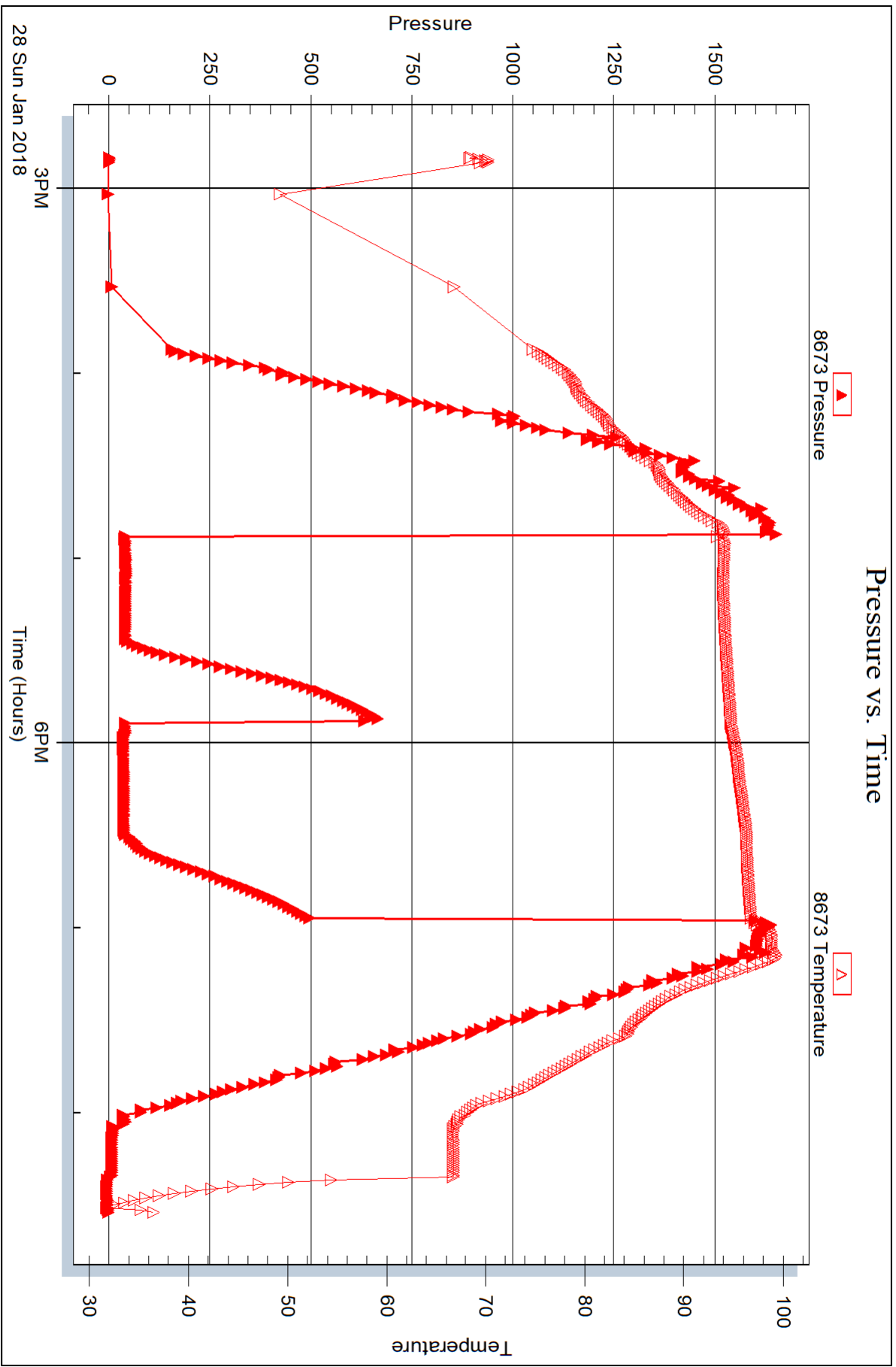


Serial #: 8673

Outside Dow n/ing-Nelson Oil Co Inc

Rupp #2-15

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson, Marc Dow

Rupp #2-15

15-13s-21w Trego,KS

Start Date: 2018.01.29 @ 09:50:09

End Date: 2018.01.29 @ 15:59:03

Job Ticket #: 63503 DST #: 2

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

Printed: 2018.02.02 @ 09:05:56



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63503

DST#: 2

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.29 @ 09:50:09

GENERAL INFORMATION:

Formation: **LKC C - E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:19:49

Time Test Ended: 15:59:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 77

Interval: 3507.00 ft (KB) To 3563.00 ft (KB) (TVD)

Reference Elevations: 2194.00 ft (KB)

Total Depth: 3563.00 ft (KB) (TVD)

2186.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8360

Inside

Press@RunDepth: 82.49 psig @ 3509.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.01.29

End Date:

2018.01.29

Last Calib.:

2018.01.29

Start Time: 09:50:09

End Time:

15:59:03

Time On Btm:

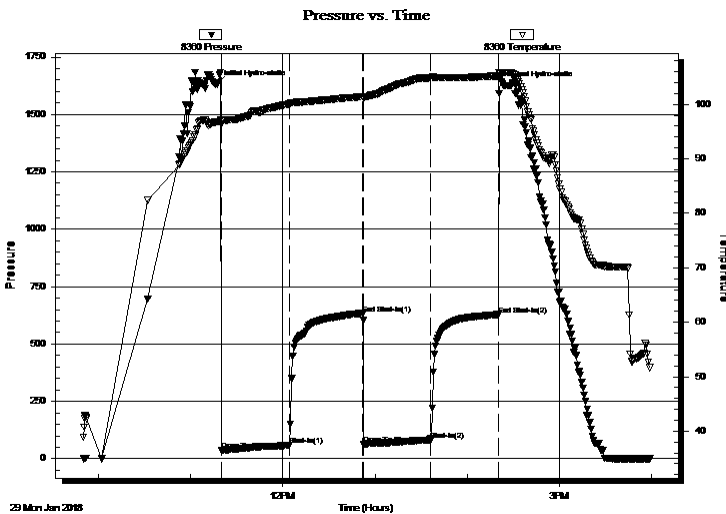
2018.01.29 @ 11:17:19

Time Off Btm:

2018.01.29 @ 14:25:03

TEST COMMENT: 45-IFP-w k blow 1/4" to 1 1/2" blow
45-ISIP-no blow back
45-FFP-w k blow 1/4" to 1 1/2" blow
45-FSIP-no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1631.77	96.77	Initial Hydro-static
3	35.55	96.34	Open To Flow (1)
48	59.69	100.15	Shut-In(1)
95	631.90	101.41	End Shut-In(1)
96	61.80	101.27	Open To Flow (2)
139	82.49	104.94	Shut-In(2)
184	627.73	105.23	End Shut-In(2)
188	1625.24	105.77	Final Hydro-static

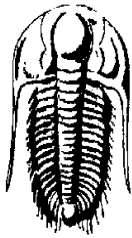
Recovery

Length (ft)	Description	Volume (bbl)
120.00	WM 45%W55%M	1.41
20.00	Mud w / show of oil	0.28
0.00	40' Gip	0.00

* 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

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63503

DST#: 2

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.29 @ 09:50:09

GENERAL INFORMATION:

Formation: **LKC C - E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:19:49

Time Test Ended: 15:59:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 77

Interval: 3507.00 ft (KB) To 3563.00 ft (KB) (TVD)

Reference Elevations: 2194.00 ft (KB)

Total Depth: 3563.00 ft (KB) (TVD)

2186.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8673 Outside

Press@RunDepth: psig @ 3509.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.01.29 End Date: 2018.01.29

Last Calib.: 2018.01.29

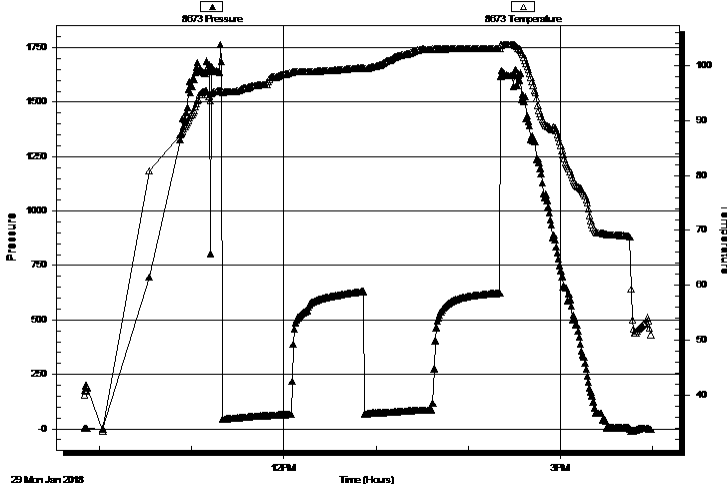
Start Time: 09:50:34 End Time: 15:59:13

Time On Btm:

Time Off Btm:

TEST COMMENT: 45-IFP-w k blow 1/4" to 1 1/2" blow
45-ISIP-no blow back
45-FFP-w k blow 1/4" to 1 1/2" blow
45-FSIP-no blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	WM 45%W55%M	1.41
20.00	Mud w / show of oil	0.28
0.00	40' 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 Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63503

DST#: 2

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.29 @ 09:50:09

Tool Information

Drill Pipe:	Length: 3487.00 ft	Diameter: 3.80 inches	Volume: 48.91 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: 80000.00 lb
			<u>Total Volume: 49.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3507.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	77.00 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			3487.00	
Shut In Tool	5.00			3492.00	
Hydraulic tool	5.00			3497.00	
Packer	5.00			3502.00	21.00 Bottom Of Top Packer
Packer	5.00			3507.00	
Stubb	1.00			3508.00	
Perforations	1.00			3509.00	
Recorder	0.00	8360	Inside	3509.00	
Recorder	0.00	8673	Outside	3509.00	
Blank Spacing	33.00			3542.00	
Perforations	18.00			3560.00	
Bullnose	3.00			3563.00	56.00 Bottom Packers & Anchor

Total Tool Length: 77.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63503

DST#: 2

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.29 @ 09:50:09

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:

53000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.12 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	WM 45%W55%M	1.410
20.00	Mud w / show of oil	0.281
0.00	40' Gip	0.000

Total Length: 140.00 ft Total Volume: 1.691 bbl

Num Fluid Samples: 0

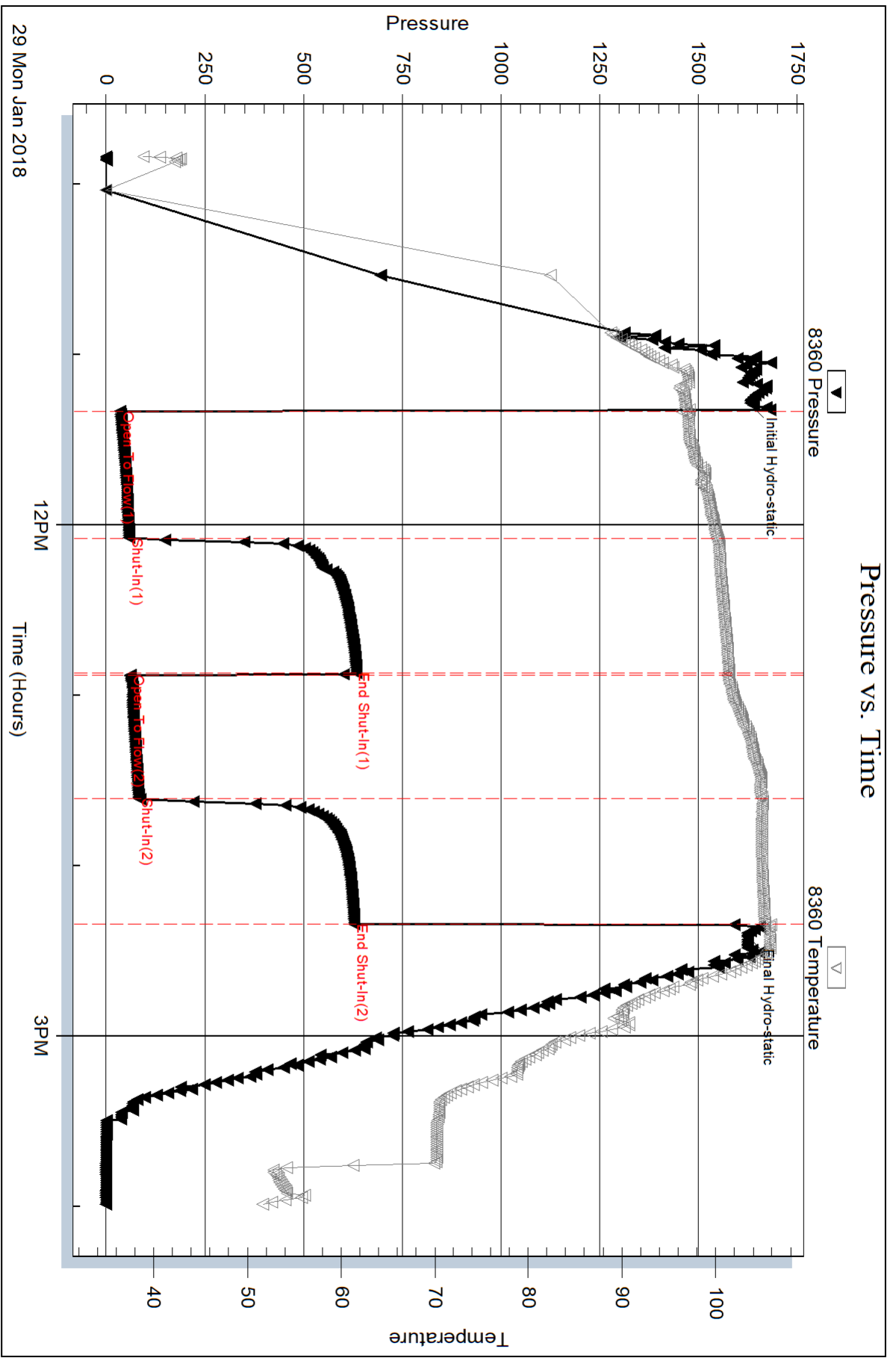
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .15@65F

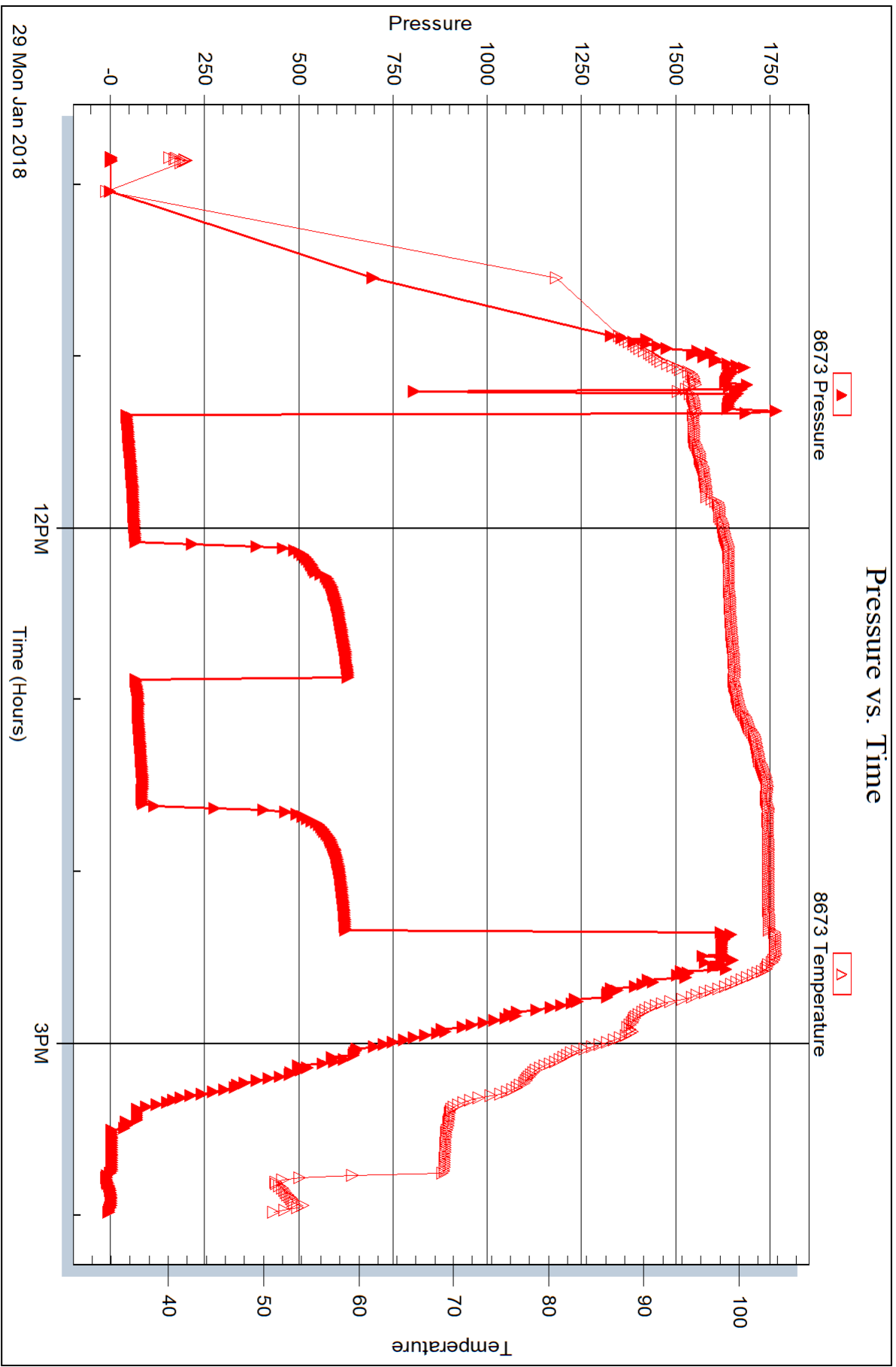


Serial #: 8673

Outside Dow nting-Nelson Oil Co Inc

Rupp #2-15

DST Test Number: 2





DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson, Marc Dow

Rupp #2-15

15-13s-21w Trego,KS

Start Date: 2018.01.30 @ 06:30:57

End Date: 2018.01.30 @ 10:43:06

Job Ticket #: 63504 DST #: 3

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

Printed: 2018.02.02 @ 09:05:29

Downing-Nelson Oil Co Inc
15-13s-21w Trego,KS
Rupp #2-15
DST # 3
LKC H - J
2018.01.30



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63504

DST#: 3

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.30 @ 06:30:57

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:33:07

Time Test Ended: 10:43:06

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 77

Interval: 3608.00 ft (KB) To 3685.00 ft (KB) (TVD)

Reference Elevations: 2194.00 ft (KB)

Total Depth: 3685.00 ft (KB) (TVD)

2186.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8360

Inside

Press@RunDepth: 49.06 psig @ 3617.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.01.30

End Date:

2018.01.30

Last Calib.:

2018.01.30

Start Time: 04:25:57

End Time:

10:38:06

Time On Btm:

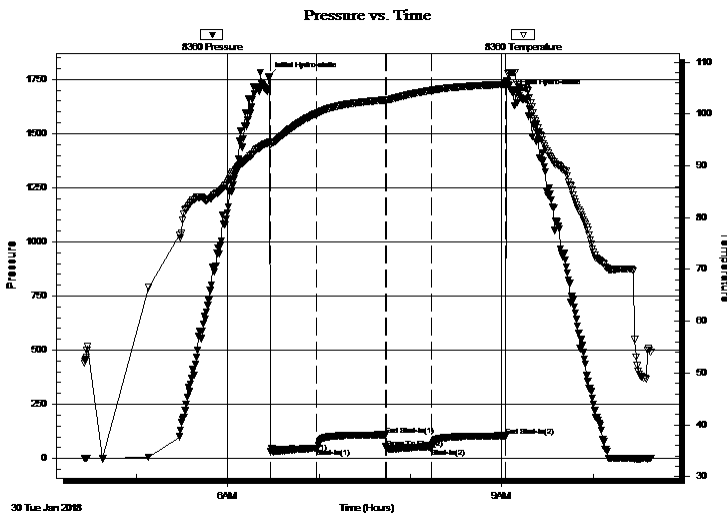
2018.01.30 @ 06:26:52

Time Off Btm:

2018.01.30 @ 09:07:36

TEST COMMENT: 30-IFP-BOB in 2 min
45-ISIP-surface blow back
30-FFP-BOB in 30 sec, GTSin 28 min
45-FSIP-1/2 " blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1760.71	94.47	Initial Hydro-static
2	30.90	94.19	Open To Flow (1)
32	47.63	100.08	Shut-In(1)
77	109.12	102.73	End Shut-In(1)
78	48.10	102.73	Open To Flow (2)
108	49.06	104.58	Shut-In(2)
156	104.36	105.76	End Shut-In(2)
161	1686.43	108.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	O&GCM 5%G10%O85%M	0.57
20.00	SOCM 1%O99%M	0.28
0.00	GTS , no gauge	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63504

DST#: 3

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.30 @ 06:30:57

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:33:07

Time Test Ended: 10:43:06

Interval: 3608.00 ft (KB) To 3685.00 ft (KB) (TVD)

Total Depth: 3685.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 77

Reference Elevations: 2194.00 ft (KB)

2186.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8673 Outside

Press@RunDepth: psig @ 3617.00 ft (KB)

Start Date: 2018.01.30

End Date:

2018.01.30

Capacity: 8000.00 psig

Last Calib.:

1899.12.30

Start Time:

04:25:38

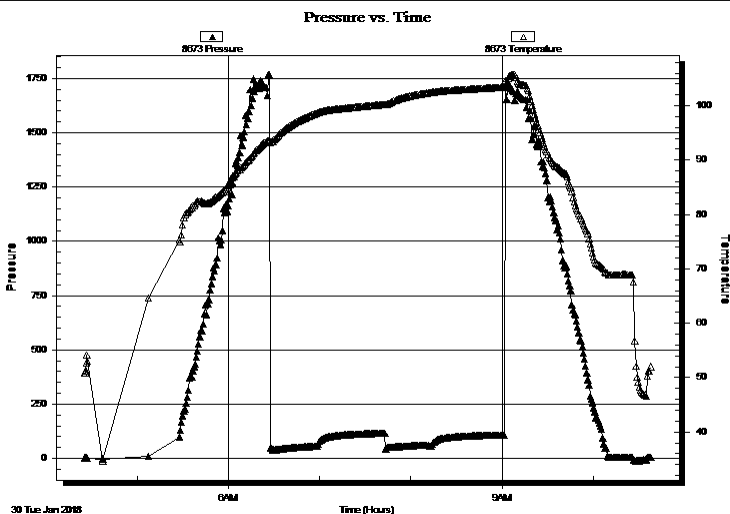
End Time:

10:37:47

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IFP-BOB in 2 min
45-ISIP-surface blow back
30-FFP-BOB in 30 sec, GTSin 28 min
45-FSIP-1/2 " blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	O&GCM 5% G10% O85% M	0.57
20.00	SOCM 1% O99% M	0.28
0.00	GTS, no gauge	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 Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63504

DST#: 3

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.30 @ 06:30:57

Tool Information

Drill Pipe:	Length: 3582.00 ft	Diameter: 3.80 inches	Volume: 50.25 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: 85000.00 lb
			<u>Total Volume: 50.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3608.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	98.00 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			3588.00	
Shut In Tool	5.00			3593.00	
Hydraulic tool	5.00			3598.00	
Packer	5.00			3603.00	21.00 Bottom Of Top Packer
Packer	5.00			3608.00	
Stubb	1.00			3609.00	
Perforations	8.00			3617.00	
Recorder	0.00	8360	Inside	3617.00	
Recorder	0.00	8673	Outside	3617.00	
Blank Spacing	65.00			3682.00	
Bullnose	3.00			3685.00	77.00 Bottom Packers & Anchor

Total Tool Length: 98.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63504

DST#: 3

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.30 @ 06:30:57

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: bbl

Water Loss: 7.12 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 4500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	O&GCM 5%G10%O85%M	0.568
20.00	SOCM 1%O99%M	0.281
0.00	GTS , no gauge	0.000

Total Length: 80.00 ft Total Volume: 0.849 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

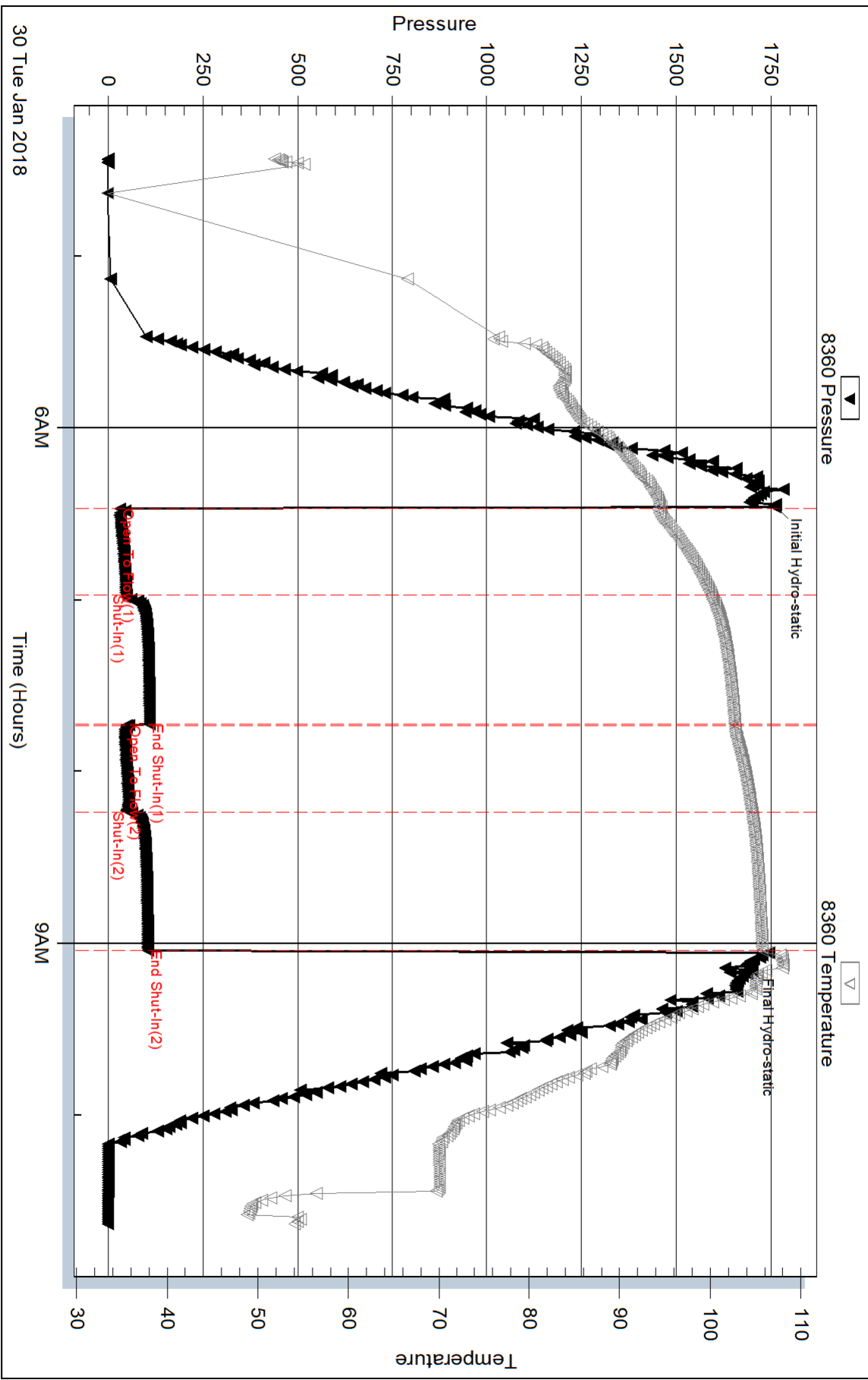
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

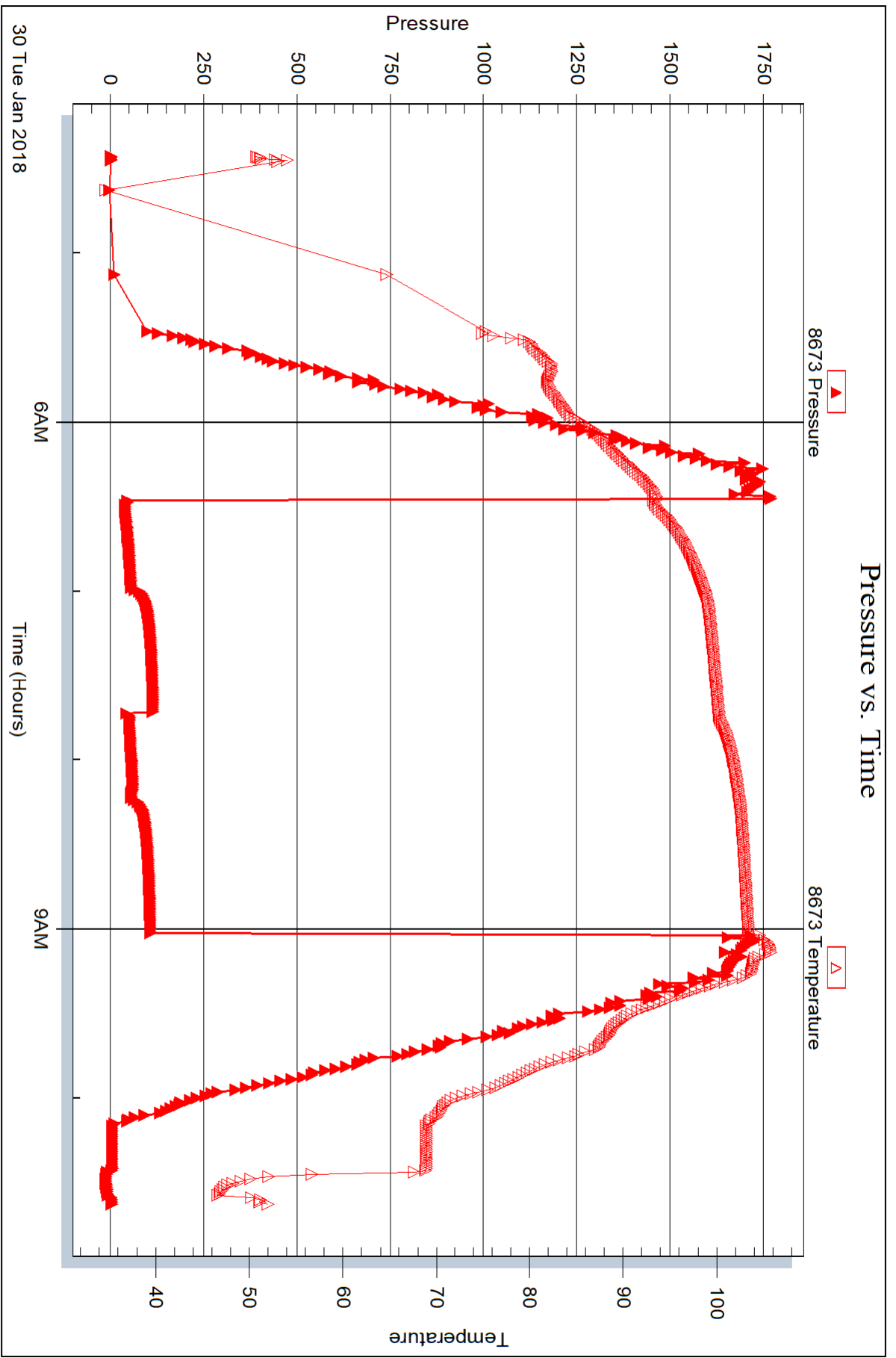


Serial #: 8673

Outside Dow nmg-Nelson Oil Co Inc

Rupp #2-15

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63504

Printed: 2018.02.02 @ 09:05:31



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson, Marc Dow

Rupp #2-15

15-13s-21w Trego,KS

Start Date: 2018.01.31 @ 01:25:44

End Date: 2018.01.31 @ 06:44:38

Job Ticket #: 63505 DST #: 4

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

Printed: 2018.02.02 @ 09:00:06



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63505

DST#: 4

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.31 @ 01:25:44

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:12:24

Time Test Ended: 06:44:38

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 77

Interval: 3813.00 ft (KB) To 3846.00 ft (KB) (TVD)

Reference Elevations: 2194.00 ft (KB)

Total Depth: 3846.00 ft (KB) (TVD)

2186.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8360

Inside

Press@RunDepth: 16.62 psig @ 3818.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.01.31

End Date:

2018.01.31

Last Calib.:

2018.01.31

Start Time: 01:25:44

End Time:

06:44:38

Time On Btm:

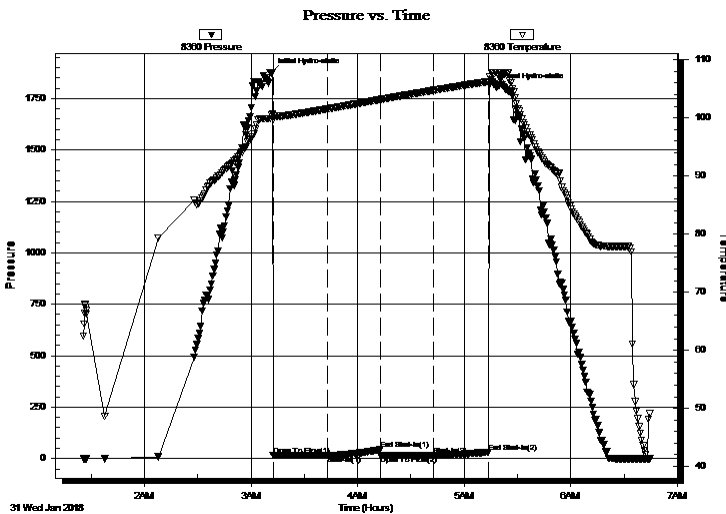
2018.01.31 @ 03:11:24

Time Off Btm:

2018.01.31 @ 05:18:09

TEST COMMENT: 30-IFP-w k bl 1/8" to surface bl
30-ISIP-no blow
30-FFP-no blow
30-FSIP-no blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1873.57	100.47	Initial Hydro-static
1	14.48	99.74	Open To Flow (1)
32	16.08	101.54	Shut-In(1)
62	43.65	103.16	End Shut-In(1)
62	15.25	103.15	Open To Flow (2)
92	16.62	104.76	Shut-In(2)
123	31.53	106.26	End Shut-In(2)
127	1803.49	107.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud	0.00

* 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

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63505

DST#: 4

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.31 @ 01:25:44

GENERAL INFORMATION:

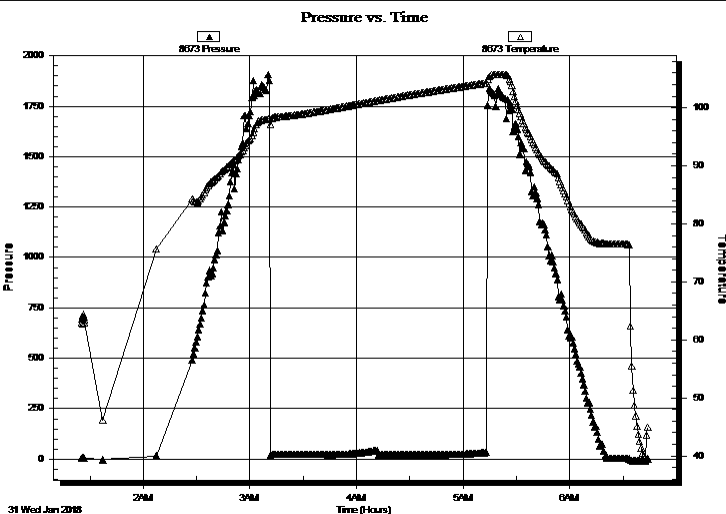
Formation: **Marmaton**
Deviated: No **Whipstock:** ft (KB)
Time Tool Opened: 03:12:24
Time Test Ended: 06:44:38
Interval: **3813.00 ft (KB) To 3846.00 ft (KB) (TVD)**
Total Depth: 3846.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches **Hole Condition:** Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 77
Reference Elevations: 2194.00 ft (KB)
 2186.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8673

Outside

Press@RunDepth: psig @ 3818.00 ft (KB) **Capacity:** 8000.00 psig
Start Date: 2018.01.31 **End Date:** 2018.01.31 **Last Calib.:** 2018.01.31
Start Time: 01:25:15 **End Time:** 06:43:54 **Time On Btm:**
 Time Off Btm:

TEST COMMENT: 30-IFP-w k bl 1/8" to surface bl
 30-ISIP-no blow
 30-FFP-no blow
 30-FSIP-no blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud	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 Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63505

DST#: 4

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.31 @ 01:25:44

Tool Information

Drill Pipe:	Length: 3773.00 ft	Diameter: 3.80 inches	Volume: 52.93 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:	75000.00 lb
			<u>Total Volume: 53.08 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3813.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	33.00 ft				
Tool Length:	54.00 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			3793.00	
Shut In Tool	5.00			3798.00	
Hydraulic tool	5.00			3803.00	
Packer	5.00			3808.00	21.00 Bottom Of Top Packer
Packer	5.00			3813.00	
Stubb	1.00			3814.00	
Perforations	4.00			3818.00	
Recorder	0.00	8360	Inside	3818.00	
Recorder	0.00	8673	Outside	3818.00	
Perforations	25.00			3843.00	
Bullnose	3.00			3846.00	33.00 Bottom Packers & Anchor

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63505

DST#: 4

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.31 @ 01:25:44

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: 58.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

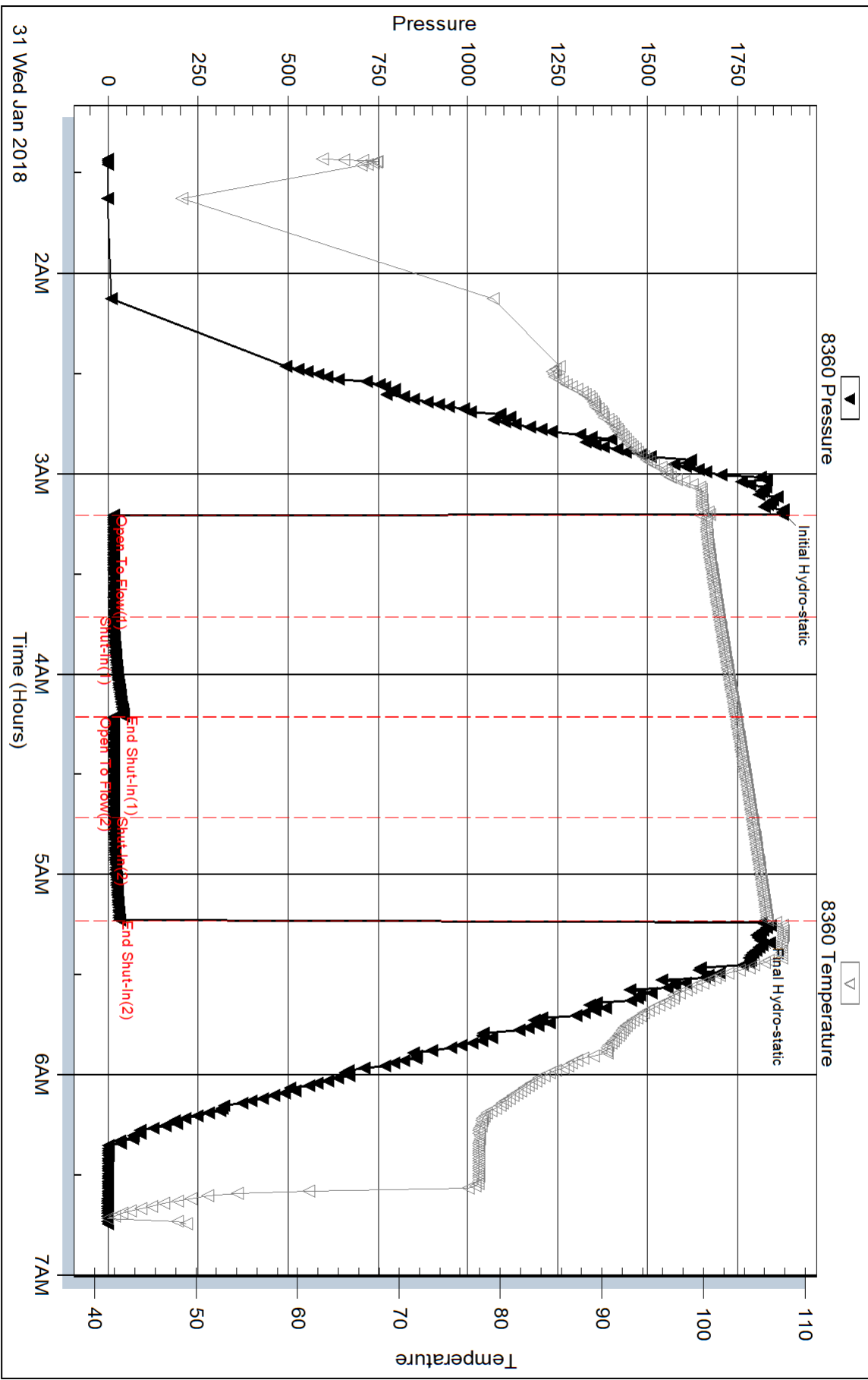
Serial #:

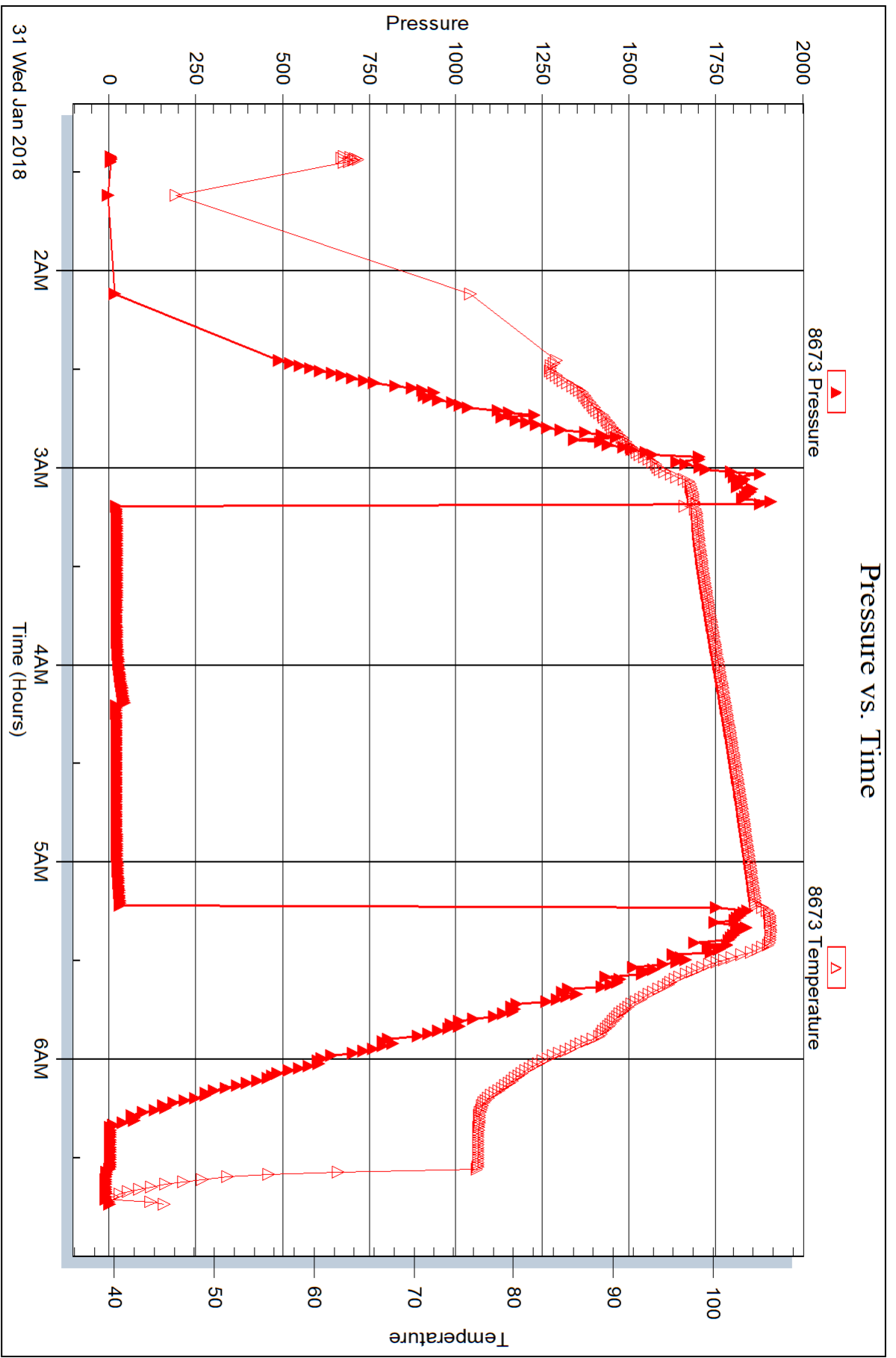
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson, Marc Dow

Rupp #2-15

15-13s-21w Trego,KS

Start Date: 2018.01.31 @ 14:50:52

End Date: 2018.01.31 @ 21:55:16

Job Ticket #: 63506 DST #: 5

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

Printed: 2018.02.02 @ 08:53:02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63506

DST#: 5

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.31 @ 14:50:52

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:43:32

Time Test Ended: 21:55:16

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 77

Interval: 3840.00 ft (KB) To 3895.00 ft (KB) (TVD)

Reference Elevations: 2194.00 ft (KB)

Total Depth: 3480.00 ft (KB) (TVD)

2186.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8360

Inside

Press@RunDepth: 158.07 psig @ 3844.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.01.31

End Date:

2018.01.31

Last Calib.:

2018.01.31

Start Time:

14:50:52

End Time:

21:55:16

Time On Btm:

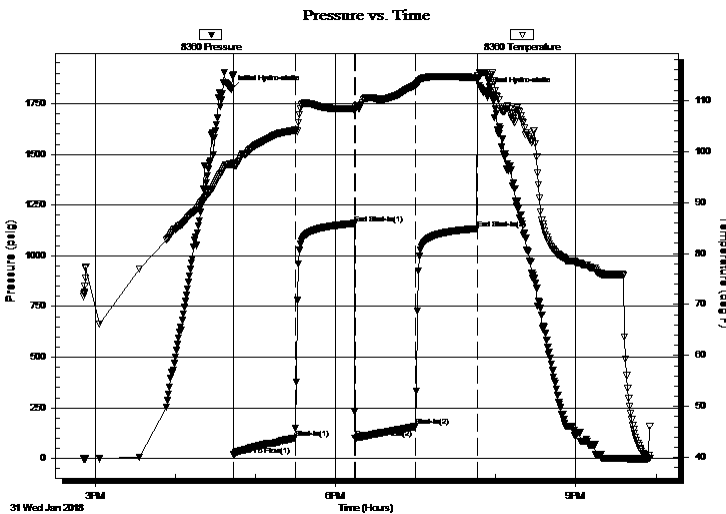
2018.01.31 @ 16:41:32

Time Off Btm:

2018.01.31 @ 19:50:31

TEST COMMENT: 45-IFP-w k to BOB in 30 min
45-ISIP-no blow back
45-FFP-w k to BOB in 40 min
45-FSIP-no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1820.92	97.50	Initial Hydro-static
2	19.30	97.12	Open To Flow (1)
48	99.99	104.16	Shut-In(1)
93	1158.89	108.41	End Shut-In(1)
93	101.50	108.36	Open To Flow (2)
139	158.07	113.00	Shut-In(2)
185	1134.06	114.55	End Shut-In(2)
189	1806.74	115.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	OCWM 10%O40%W50%M	0.60
62.00	O&GCM 10%G25%)65%M	0.87
80.00	MGO 10%G30%M60%O	1.12
140.00	CO	1.96
0.00	205' GIP	0.00

* 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

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63506

DST#: 5

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.31 @ 14:50:52

GENERAL INFORMATION:

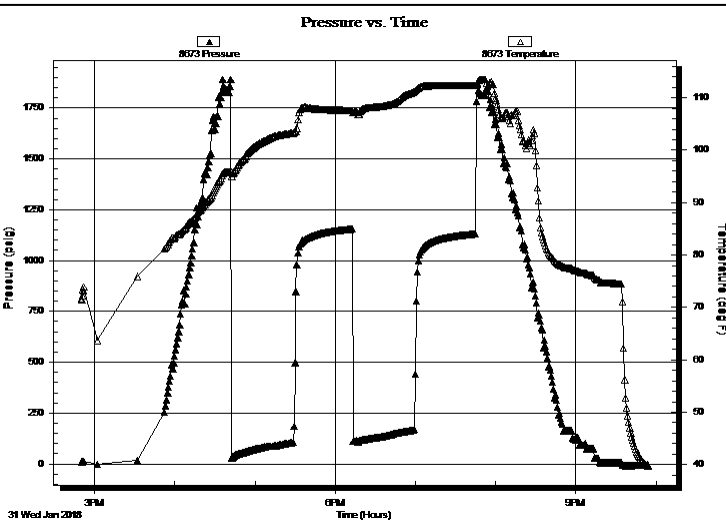
Formation: Arbuckle	Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 16:43:32	Time Test Ended: 21:55:16		Tester: Ray Schwager
			Unit No: 77
Interval: 3840.00 ft (KB) To 3895.00 ft (KB) (TVD)			Reference Elevations: 2194.00 ft (KB)
Total Depth: 3480.00 ft (KB) (TVD)			2186.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair		KB to GR/CF: 8.00 ft

Serial #: 8673

Outside

Press@RunDepth: psig @ 3844.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2018.01.31	End Date: 2018.01.31
Start Time: 14:50:10	End Time: 21:54:19
	Last Calib.: 2018.01.31
	Time On Btm:
	Time Off Btm:

TEST COMMENT: 45-IFP-w k to BOB in 30 min
45-ISIP-no blow back
45-FFP-w k to BOB in 40 min
45-FSIP-no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	OCWM 10%O40%W50%M	0.60
62.00	O&GCM 10%G25%)65%M	0.87
80.00	MGO 10%G30%M60%O	1.12
140.00	CO	1.96
0.00	205' 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 Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63506

DST#: 5

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.31 @ 14:50:52

Tool Information

Drill Pipe:	Length: 3804.00 ft	Diameter: 3.80 inches	Volume: 53.36 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: 70000.00 lb
			<u>Total Volume: 53.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	3840.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	76.00 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			3820.00	
Shut In Tool	5.00			3825.00	
Hydraulic tool	5.00			3830.00	
Packer	5.00			3835.00	21.00 Bottom Of Top Packer
Packer	5.00			3840.00	
Stubb	1.00			3841.00	
Perforations	3.00			3844.00	
Recorder	0.00	8360	Inside	3844.00	
Recorder	0.00	8673	Outside	3844.00	
Blank Spacing	33.00			3877.00	
Perforations	15.00			3892.00	
Bullnose	3.00			3895.00	55.00 Bottom Packers & Anchor

Total Tool Length: 76.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

15-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Rupp #2-15

Job Ticket: 63506

DST#: 5

ATTN: Ron Nelson, Marc Dow

Test Start: 2018.01.31 @ 14:50:52

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

38000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.12 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
62.00	OCWM 10%O40%W50%M	0.596
62.00	O&GCM 10%G25%)65%M	0.870
80.00	MGO 10%G30%M60%O	1.122
140.00	CO	1.964
0.00	205' GIP	0.000

Total Length: 344.00 ft

Total Volume: 4.552 bbf

Num Fluid Samples: 0

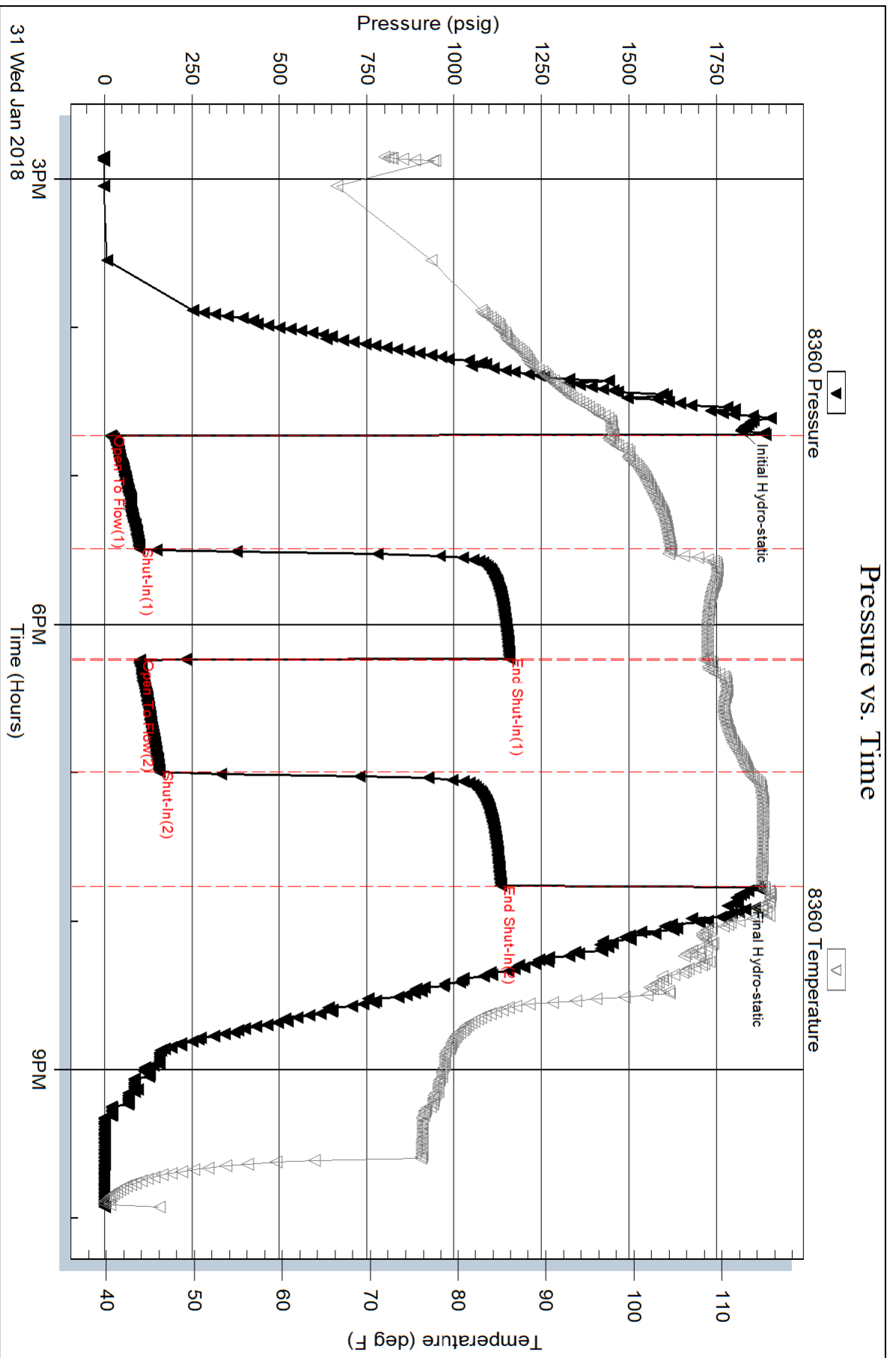
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .2@65F

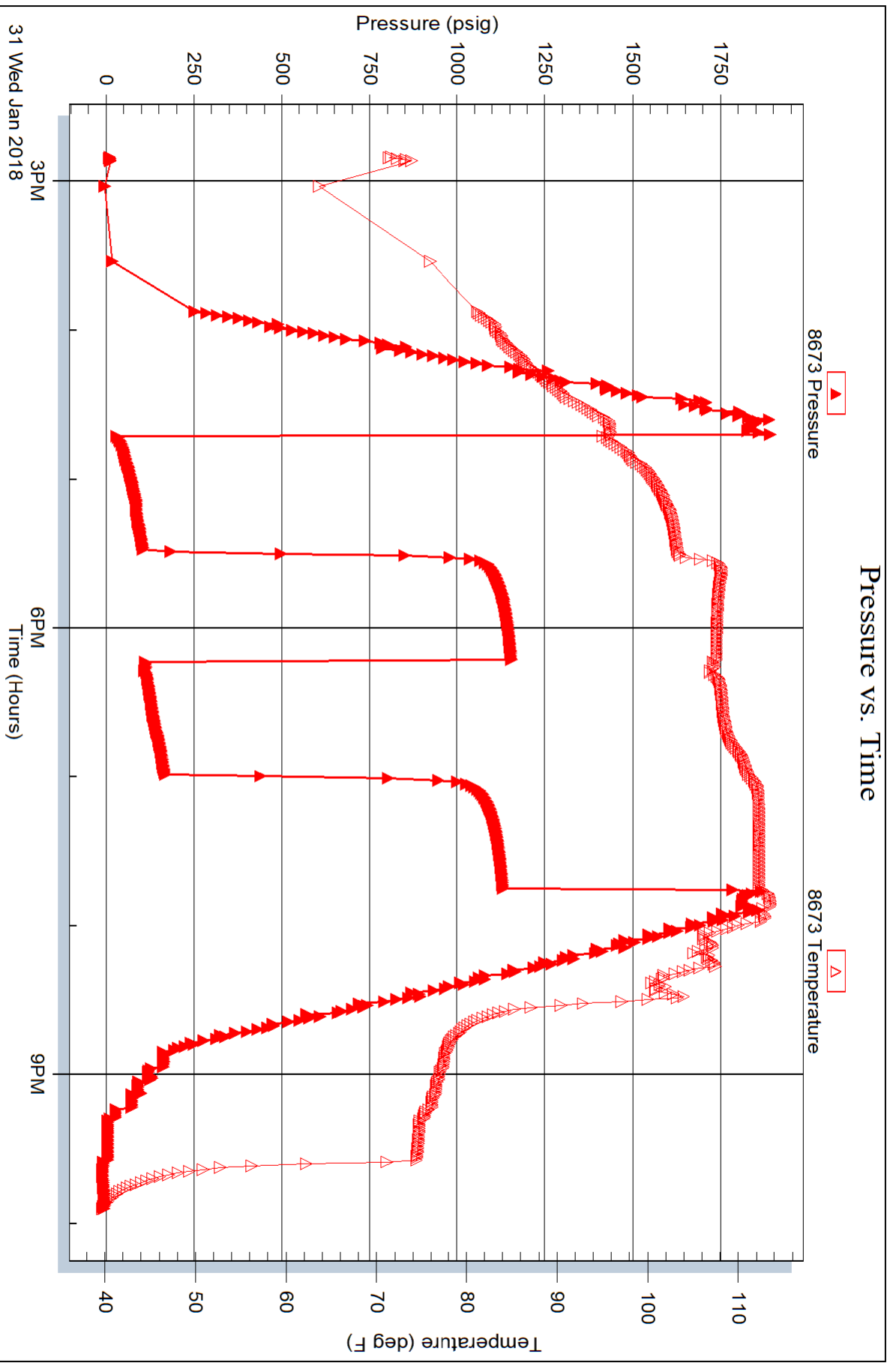


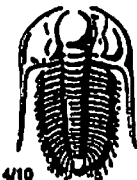
Serial #: 8673

Outside Dow nting-Nelson Oil Co Inc

Rupp #2-15

DST Test Number: 5





TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63502

Well Name & No. Rupp #2-15 Test No. 1 Date 1-28-18
 Company Downing-Nelson O, L Co Inc Elevation 2194 KB 2186 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. MARK Downing Rig Discovery rig 4
 Location: Sec. 15 Twp 13^s Rge. 21^w Co. Trego State K

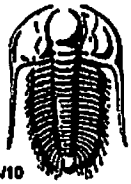
Interval Tested 3450-3480 Zone Tested TORONTO
 Anchor Length 30 Drill Pipe Run 3424 Mud Wt. 8.8
 Top Packer Depth 3445 Drill Collars Run 30 Vis 51
 Bottom Packer Depth 3450 Wt. Pipe Run - WL 7.2
 Total Depth 3480 Chlorides 4000 ppm System LCM 2#
 Blow Description TFP-Weak Blow 1" To 1/4" Blow
ISTP-NO Blow
FFP-NO Blow
FSTP-NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</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 20 BHT 98 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1618</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>1350</u>
(B) First Initial Flow <u>30</u>	<input type="checkbox"/> Jars	T-Started <u>1450</u>
(C) First Final Flow <u>30</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1655</u>
(D) Initial Shut-In <u>682</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1855</u>
(E) Second Initial Flow <u>30</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2032</u>
(F) Second Final Flow <u>31</u>	<input checked="" type="checkbox"/> Mileage <u>48RT</u> ³⁶	Comments <u>Slid Tool approx 7' to Bottom</u>
(G) Final Shut-In <u>510</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1600</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1086</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1086</u>	

Approved By _____ Our Representative Ray Schunger *THANK you*
 Triobite 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. 63503

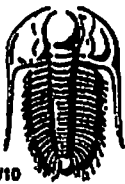
Well Name & No. Rupp #2-15 Test No. 2 Date 1-29-18
 Company Downing-Nelson Oil Co Inc Elevation 2194 KB 2186 GL
 Address PO Box 1019 Hays Ks 67601
 Co. Rep / Geo. MARC Downing Rig Discoveryrig 4
 Location: Sec. 15 Twp 13^S Rge. 21^W Co. Trego State Ks

Interval Tested 3507-3563 Zone Tested LKC C-E
 Anchor Length 56 Drill Pipe Run 3487 Mud Wt. 9
 Top Packer Depth 3502 Drill Collars Run 30 Vis 48
 Bottom Packer Depth 3507 Wt. Pipe Run — WL 7.2
 Total Depth 3563 Chlorides 4500 ppm System LCM 2[#]
 Blow Description IFP-WEAK Blow 1/4" To 1/2" Blow
ISIP-NO Blow
FFP-WEAK Blow 1/4" To 1/2" Blow
FSIP-NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>GIP</u>				
<u>20</u>	<u>Mud w/slow flow</u>				
<u>120</u>	<u>WM</u>			<u>45</u>	<u>55</u>

Rec Total 140 BHT 10.5 Gravity — API RW .15 @ 65 °F Chlorides 53000 ppm
 (A) Initial Hydrostatic 1631 Test 1050 T-On Location 0930
 (B) First Initial Flow 35 Jars _____ T-Started 0950
 (C) First Final Flow 59 Safety Joint _____ T-Open 1110
 (D) Initial Shut-In 631 Circ Sub _____ T-Pulled 1410
 (E) Second Initial Flow 61 Hourly Standby _____ T-Out 15
 (F) Second Final Flow 82 Mileage 48 RT ³⁶ Comments _____
 (G) Final Shut-In 627 Sampler _____ Slid Tool approx 8'
 (H) Final Hydrostatic 1625 Straddle _____ To Bottom
 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 1086
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1086

Approved By _____ Our Representative RAY SCHWAGER *thank you*
 TriLOBITE Testing Inc. shall not be liable for damaged or 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.



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63504

Well Name & No. Rupp #2-15 Test No. 3 Date 1-30-18
 Company Downing-Nelson Oil Co. Inc Elevation 2194 KB 2186 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. MARC Downing Rig Discovery rig 4
 Location: Sec. 15 Twp 13^s Rge. 21^w Co. Trego State Ks

Interval Tested 3608-3685 Zone Tested LKC H-J
 Anchor Length 77 Drill Pipe Run 3582 Mud Wt. 9
 Top Packer Depth 3603 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 3608 Wt. Pipe Run - WL 7.2
 Total Depth 3685 Chlorides 4500 ppm System LCM 2[#]

Blow Description IFP - BOBIN 2min
ISIP - SURFACE BLOWBACK
FFP - BOBIN 30sec. GTS IN 28min, NO GAUGE
FSIP - 1/2" Blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>-</u>	<u>GTS</u>				
<u>20</u>	<u>50CM</u>				
<u>60</u>	<u>OCM</u>	<u>5</u>	<u>10</u>		<u>85</u>
<u>-</u>	<u>-</u>				
<u>-</u>	<u>-</u>				

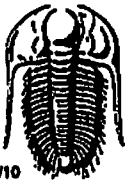
Rec Total 80 BHT 105 Gravity - API RW - @ - F Chlorides - ppm

(A) Initial Hydrostatic 1760 Test 1050 T-On Location 0350
 (B) First Initial Flow 30 Jars - T-Started 0425
 (C) First Final Flow 47 Safety Joint - T-Open 0630
 (D) Initial Shut-In 109 Circ Sub - T-Pulled 0900
 (E) Second Initial Flow 48 Hourly Standby - T-Out 1038
 (F) Second Final Flow 49 Mileage 36 Comments -
 (G) Final Shut-In 104 Sampler -
 (H) Final Hydrostatic 1686 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 1086
 Sub Total 1086 Accessibility - MP/DST Disc't -

Approved By _____ Our Representative RAY SCHWAGER THANK YOU

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63505

Well Name & No. Rupp # 2-15 Test No. 4 Date 1-31-18
 Company Downing-Netton Oil Co Inc Elevation 2194 KB 2186 GL
 Address PO Box 1019 Hays Ko 67601
 Co. Rep / Geo. MARC DOWNING Rig Discovery rig 4
 Location: Sec. 15 Twp 13^s Rge. 21^w Co. Trego State Ks

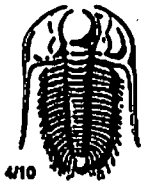
Interval Tested 3813-3846 Zone Tested MARMATON
 Anchor Length 33 Drill Pipe Run 3773 Mud Wt. 9
 Top Packer Depth 3808 Drill Collars Run 30 Vis 58
 Bottom Packer Depth 3813 Wt. Pipe Run — WL 7.6
 Total Depth 3846 Chlorides 6000 ppm System LCM 2[#]
 Blow Description IFP - WEAK Blow 1/8" TO SURFACE Blow
ISIP - NO Blow
FFP - NO Blow
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</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 1 BHT 106 Gravity — API RW — @ — °F Chlorides — ppm
 (A) Initial Hydrostatic 1873 Test 1050 T-On Location 0105
 (B) First Initial Flow 14 Jars — T-Started 0126
 (C) First Final Flow 16 Safety Joint — T-Open 0310
 (D) Initial Shut-In 43 Circ Sub — T-Pulled 0510
 (E) Second Initial Flow 15 Hourly Standby — T-Out 0644
 (F) Second Final Flow 16 Mileage 36 Comments —
 (G) Final Shut-In 31 Sampler —
 (H) Final Hydrostatic 1803 Straddle —
 Ruined Shale Packer —
 Ruined Packer —

Initial Open 30 Extra Packer — Extra Copies —
 Initial Shut-In 30 Extra Recorder — Sub Total 0
 Final Flow 30 Day Standby — Total 1086
 Final Shut-In 30 Accessibility — MP/DST Disc't —
 Sub Total 1086

Approved By _____ Our Representative Ray Schwager Thank you
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63506

Well Name & No. Rupp #2-15 Test No. 5 Date 1-31-18
 Company Downing-Nelson Oil Co Inc Elevation 2194 KB 2186 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. MARC Downing Rig DISCOVERY rig 4
 Location: Sec. 15 Twp 13^s Rge. 21^w Co. Trego State Ks

Interval Tested 3840-3895 Zone Tested Arbuckle
 Anchor Length 55 Drill Pipe Run 3804 Mud Wt. 9.1
 Top Packer Depth 3835 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 3840 Wt. Pipe Run - WL 7.2
 Total Depth 3895 Chlorides 6000 ppm System LCM 2#
 Blow Description IFP - WEAK TO BOBIN 30 MIN
ISIP - NO BLOW BACK
FFP - WEAK TO BOB IN 40 MIN
FSIP - NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>205</u>	<u>GTP</u>				
<u>140</u>	<u>CO</u>				
<u>80</u>	<u>MGO</u>	<u>10</u>	<u>60</u>	<u>30</u>	<u>30</u>
<u>62</u>	<u>O+GCM</u>	<u>10</u>	<u>25</u>	<u>65</u>	<u>65</u>
<u>62</u>	<u>OCWM</u>	<u>10</u>	<u>40</u>	<u>50</u>	<u>50</u>

Rec Total 344 BHT 114 Gravity 39 API RW 2 @ 65 °F Chlorides 38000 ppm
 (A) Initial Hydrostatic 1820 Test 1050 T-On Location 1435
 (B) First Initial Flow 19 Jars _____ T-Started 1450
 (C) First Final Flow 99 Safety Joint _____ T-Open 1640
 (D) Initial Shut-In 1158 Circ Sub _____ T-Pulled 1940
 (E) Second Initial Flow 101 Hourly Standby _____ T-Out 2155
 (F) Second Final Flow 158 Mileage 36 Comments _____
 (G) Final Shut-In 1134 Sampler _____
 (H) Final Hydrostatic 1806 Straddle _____
 Initial Open 45 Shale Packer _____
 Initial Shut-In 45 Shale Packer _____
 Final Flow 45 Extra Packer _____
 Final Shut-In 45 Extra Recorder _____
 Sub Total 1086 Day Standby _____
 Total 1086 Accessibility _____
 Sub Total 1086 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1086
 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.

LOG

SWIFT Services, Inc.

DATE: 01/24/18
 PAGE NO.: 1
 TICKET NO.: 30849

CUSTOMER: Downing & Nelson

WELL NO.: 2-15

LEASE: Rupp

JOB TYPE: Cont Surface

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2015							On location, set up trucks
								Csg - 8 5/8" x 23#
								RTD - 222
								Total Pipe 221.18
	2100							Start 8 5/8" Casing
	2130							Break Circulation
	2310							Hook up to Swift.
		4	5			200		Start water ahead
		4				200		Start 150 SKS std, 2% gel, 3% CC
		4	3L			200		Fin Cont, Start Displacement
		3	1			200		Cont Circulating
	2330	4	12.75			200		Fin Displ
								Shut in, Release trk
								Wash up
	2345							Job Complete
								Thanks
								Jon, Austin, Isaac

JG

SWIFT Services, Inc.

DATE 1 Feb 18 PAGE NO. 1

CUSTOMER *DeWine & Nelson*

WELL NO. *2-15*

LEASE *Rupp*

JOB TYPE *Cement long string 2 stage*

TICKET NO. *31154*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								200 sk SMD cement w/ 1/4" floccs 150 sk EA-2 cement w/ 1/4" floccs 5 1/2" x 14" casing 95 jts 3982' TD - 3982 5 1/2" x 14" DI tool 58 1543' Centralizers 1, 3, 5, 7, 9, 11, 57 Basket #58
	1600							on loc TRK 111
	1630							start 4 1/2" x 14" casing in well
	1805							circulate - Dropball - ROTATE
	1835	4	32			200		Pump 50 gal mud flush / 20 bbl KCl flush
		3 1/2	35			200		mix EA cement 150 sk @ 15.8 ppg Drop 1st stage Plug washout Pump & Line
	1910	6				200		Displace 1st stage plug
		6	90			600		
	1945	5	96			1800		Land 1st stage plug Release pressure to truck - dried up Drop Bomb
	1950	2				200		Pump 20 bbl KCl flush
		5	20			800		open DV tool - circulating
						200		
	2010	5	115			200		Plug RH - MH 30 sk - 15 sk mix SMD cement 155 sk @ 11.2 ppg Drop 2nd stage Plug
	2045	4				200		Displace plug → cement to surface ← 30 sk to PVT
	2100	3	38			1800		Land plug / close DV tool Release pressure to truck - dried up wash truck
	2110							Rack up job complete
	2150							Thurs Blaine, Zach & ISAAC