Confidentiality Requested:
☐ Yes ☑ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1189875

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 # 30717
Name: Downing-Nelson Oil Co Inc
Address 1: PO BOX 1019
Address 2:
City: HAYS State: KS Zip: 67601 + __ __ __ __
Contact Person: Ron Nelson
Phone: (785) 621-2610
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Marc Downing
Purchaser: Coffeyville Resources

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 #:

08/08/2013	08/15/2013	08/16/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-195-22878-00-00
Spot Description:
SE - NE - SW - NE Sec. 20 Twp. 12 S. R. 22 ☐ East ☑ West
1900 Feet from ☑ North / ☐ South Line of Section
1460 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☑ NE ☐ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Trego
Lease Name: Tyler Fabrizius Well #: 1-20
Field Name: Wildcat
Producing Formation: LKC
Elevation: Ground: 2407 Kelly Bushing: 2415
Total Vertical Depth: 4180 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 221 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 1815 Feet
If Alternate II completion, cement circulated from: 1815
feet depth to: 0 w/ 175 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 24000 ppm Fluid volume: 320 bbls
Dewatering method used: Evaporated
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:** Deanna Garrison **Date:** 02/19/2014

[redacted] 1189875

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Tyler Fabrizius Well #: 1-20

Sec. 20 Twp. 12 S. R. 22 ☐ East ☑ West County: Trego

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Micro
Dual Induction
Compensated Density/Neutron

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name Attached | Top Attached | Datum Attached

CASING RECORD ☑ New ☐ 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
Surface Pipe	12.25	8.625	23	221	Common	150	2% Gel & 3% CC
Production Casing	7.875	5.5	14	4178	EA/2	150	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

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 *(Amount and Kind of Material Used)*	Depth
4	4118-4123	150 gallons NE Acid	4118-4123
		100 gallons Acid	4118-4123

TUBING RECORD: Size: 2.875 Set At: 4135 Packer At: Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 09/10/2013

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	25		25		

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Tyler Fabrizius 1-20
Doc ID	1189875

Tops

Name	Top	Datum
Top Anhydrite	1823'	+592
Base Anhydrite	1865'	+550
Topeka	3418'	-1003
Heebner	3636'	-1221
Toronto	3654'	-1239
LKC	3670'	-1255
BKC	3908'	-1493
Marmaton	4002'	-1587
Arbuckle	4118'	-1703

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 7285

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
8-8-13	20	12	22	Trego	KS		7:30PM

Location Ogallah 2W 5Into

Lease Tyler Fabrizius Well No. 1-20

Contractor Discovery #4

Type Job Surface

Hole Size 12 1/4 T.D. 220'

Csg. 8 5/8 Depth 220'

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 30' Shoe Joint

Meas Line Displace 12 3/4 bbl

EQUIPMENT

Pumptrk 5 No. Cementer Helper Nick

Bulktrk 1 No. Driver Driver Lonnie M

Bulktrk PU No. Driver Driver Brett

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Cement Circulated!!

Owner

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.

Charge To Downing Nelson

Street

City State

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

Cement Amount Ordered 150 3 +2

Common	150
Poz. Mix	
Gel.	3
Calcium	5
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	159
Mileage	

FLOAT EQUIPMENT

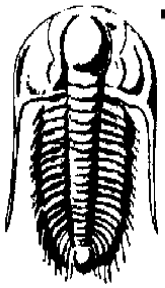
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	28
Tax	
Discount	
Total Charge	

X Signature Mike Lundblom

JOB LOG — **SWIFT Services, Inc.** — DATE 5 Aug 13 — PAGE NO.

CUSTOMER: Downing & Nelson — WELL NO.: 1-20 — LEASE: Tyler Fabricius — JOB TYPE: 5½ Longstring — TICKET NO.: 24599

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	2000							ON LOCATION
	2115							START PIPE 5½-14#
								RID @ 4180 SET @ 4178
								SHOE JT. 21.33'
								CENTRALIZERS 1, 3, 5, 7, 9, 11, 57
								BASKETS. 5, 58
								DV TOOL @ 1815 # 58
	2255							DROP BALL - CIRCULATE
	2318	6	12		↘		300	Pump 500 gal MUD FLUSH
		6	20		↘		300	Pump 20 Bbl KCL FLUSH
	2325	4	36		↘			MIX 150 sx EA-2
	2336							WASH OUT Pump & LINES
	2339	6			↘			START DISPLACING PLUG
	2356	Ø	101½		↘		1500	PLUG DOWN LATCH PLUG IN
	2358							RELEASE PSI - DRY
	2359							DROP DV OPENING TOOL
	0020				↘		1100	OPEN DV
	0021	6	20		↘			Pump 20 Bbl KCL FLUSH
	0029		7.5					PLUG RH - 30 sx, MH - 20 sx
	0035	6	97		↘			MIX 175 sx SMD
	0059							WASH OUT Pump & LINES
	0101	6			↘			START DISPLACING CLOSING PLUG
	0110	Ø	44		↘		1500	PLUG DOWN - CLOSE DV
	0112				↘			RELEASE PSI - DRY
	0120							WASH TRUCK
	0200							JOB COMPLETE
								THANKS # 115
								JASON JEFF ISAAC



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co.**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

20-12s-22wTrego,KS

Tyler Fabrizius #1-20

Start Date: 2013.08.12 @ 20:10:00
End Date: 2013.08.13 @ 02:45:30
Job Ticket #: 54755 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.16 @ 08:21:12

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54755 **DST#: 1**

Test Start: 2013.08.12 @ 20:10:00

GENERAL INFORMATION:

Formation: **KC "C-D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:07:30
Time Test Ended: 02:45:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Brett Dickinson
Unit No: 59

Interval: 3698.00 ft (KB) To 3744.00 ft (KB) (TVD)
Total Depth: 3744.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

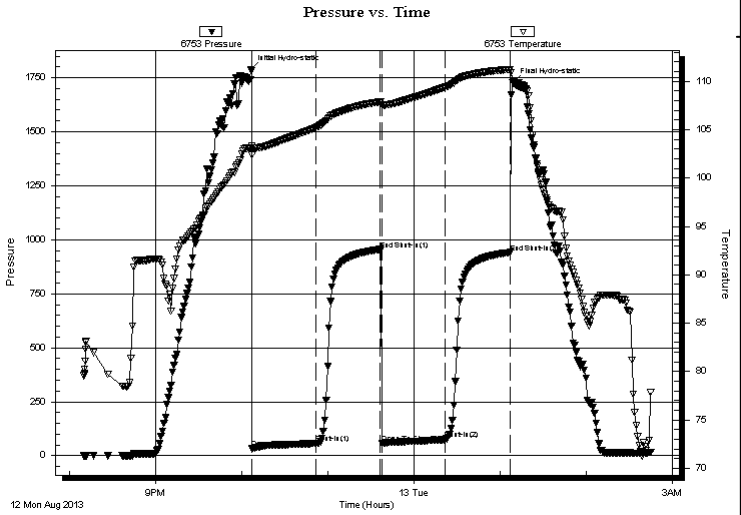
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Inside**

Press@RunDepth: 74.89 psig @ 3708.00 ft (KB)
Start Date: 2013.08.12 End Date: 2013.08.13
Start Time: 20:10:05 End Time: 02:45:29

Capacity: 8000.00 psig
Last Calib.: 2013.08.13
Time On Btm: 2013.08.12 @ 22:06:30
Time Off Btm: 2013.08.13 @ 01:09:30

TEST COMMENT: IF-4" blow
ISI-No blow
FF-4" blow
FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1788.64	103.03	Initial Hydro-static
1	33.41	102.40	Open To Flow (1)
46	56.84	105.21	Shut-In(1)
90	955.22	107.88	End Shut-In(1)
92	58.32	107.56	Open To Flow (2)
136	74.89	109.38	Shut-In(2)
181	941.29	111.22	End Shut-In(2)
183	1727.46	109.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
89.00	Oil spotted MCW 20%M 80%W	0.98
1.00	Free Oil	0.01

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54755 **DST#: 1**

Test Start: 2013.08.12 @ 20:10:00

GENERAL INFORMATION:

Formation: **KC "C-D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:07:30
Time Test Ended: 02:45:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Brett Dickinson
Unit No: 59

Interval: 3698.00 ft (KB) To 3744.00 ft (KB) (TVD)
Total Depth: 3744.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

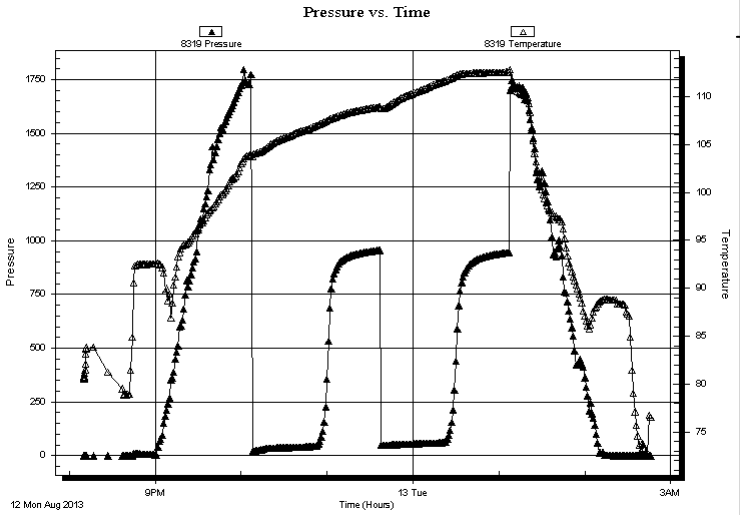
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8319 **Outside**

Press@RunDepth: psig @ 3708.00 ft (KB)
Start Date: 2013.08.12 End Date: 2013.08.13
Start Time: 20:10:05 End Time: 02:45:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.13
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-4" blow
ISI-No blow
FF-4" blow
FSI-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
89.00	Oil spotted MCW 20%M 80%W	0.98
1.00	Free Oil	0.01

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54755 **DST#: 1**

Test Start: 2013.08.12 @ 20:10:00

Tool Information

Drill Pipe:	Length:	3666.00 ft	Diameter:	3.80 inches	Volume:	51.42 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.70 inches	Volume:	- 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
					Total Volume:	- bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		19.00 ft					String Weight:	Initial	51000.00 lb
Depth to Top Packer:		3698.00 ft						Final	51000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		46.00 ft							
Tool Length:		67.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3678.00		
Shut In Tool	5.00			3683.00		
Hydraulic tool	5.00			3688.00		
Packer	5.00			3693.00	21.00	Bottom Of Top Packer
Packer	5.00			3698.00		
Stubb	1.00			3699.00		
Perforations	9.00			3708.00		
Recorder	0.00	6753	Inside	3708.00		
Recorder	0.00	8319	Outside	3708.00		
Change Over Sub	1.00			3709.00		
Drill Pipe	31.00			3740.00		
Change Over Sub	1.00			3741.00		
Bullnose	3.00			3744.00	46.00	Bottom Packers & Anchor
Total Tool Length:	**67.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54755 **DST#: 1**

Test Start: 2013.08.12 @ 20:10:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	8.00 lb/gal	Cushion Length:	ft	Water Salinity:	46000 ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1500.00 ppm				
Filter Cake:	inches				

Recovery Information

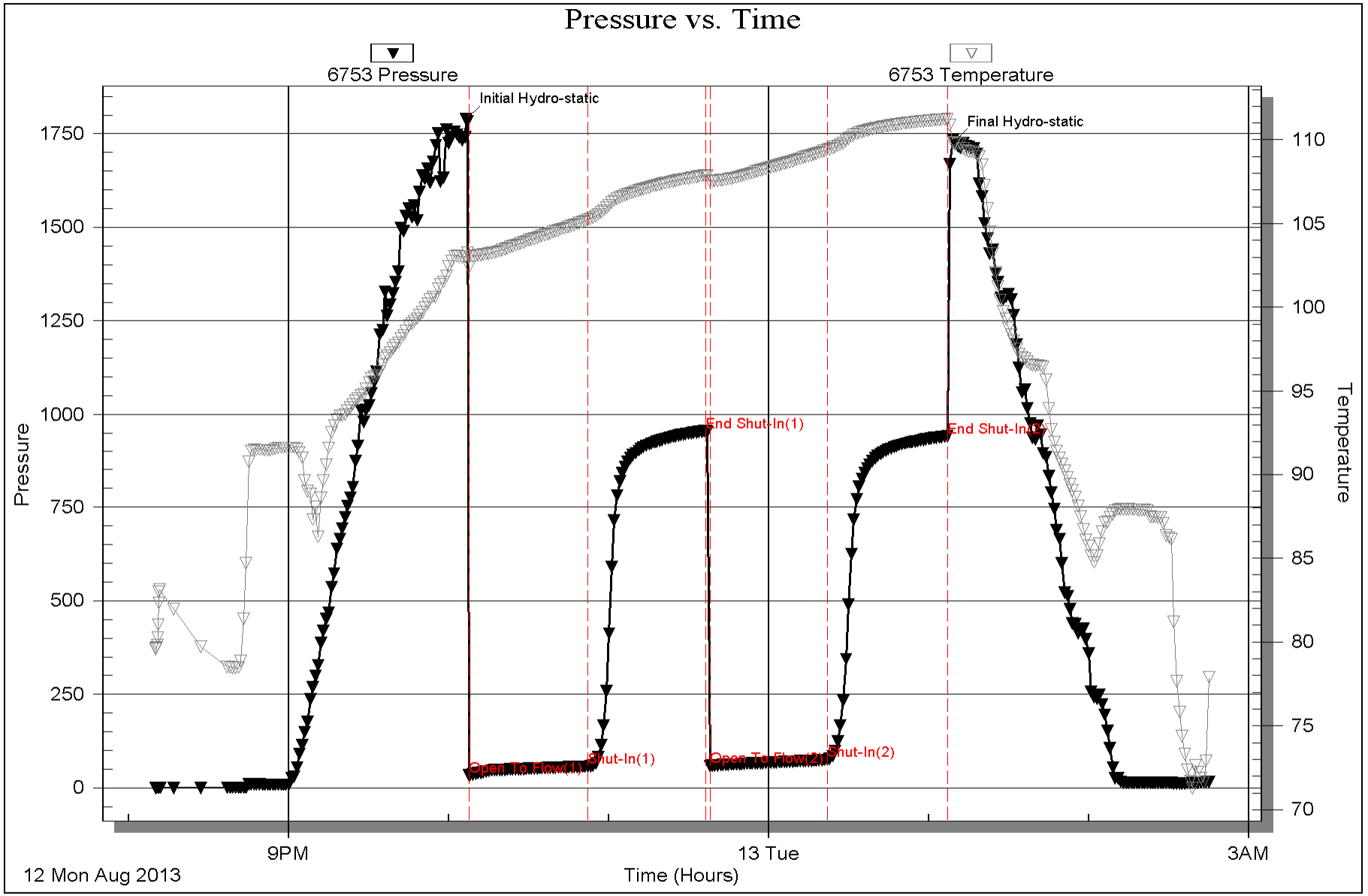
Recovery Table

Length ft	Description	Volume bbl
89.00	Oil spotted MCW 20%M 80%W	0.975
1.00	Free Oil	0.014

Total Length: 90.00 ft Total Volume: 0.989 bbl

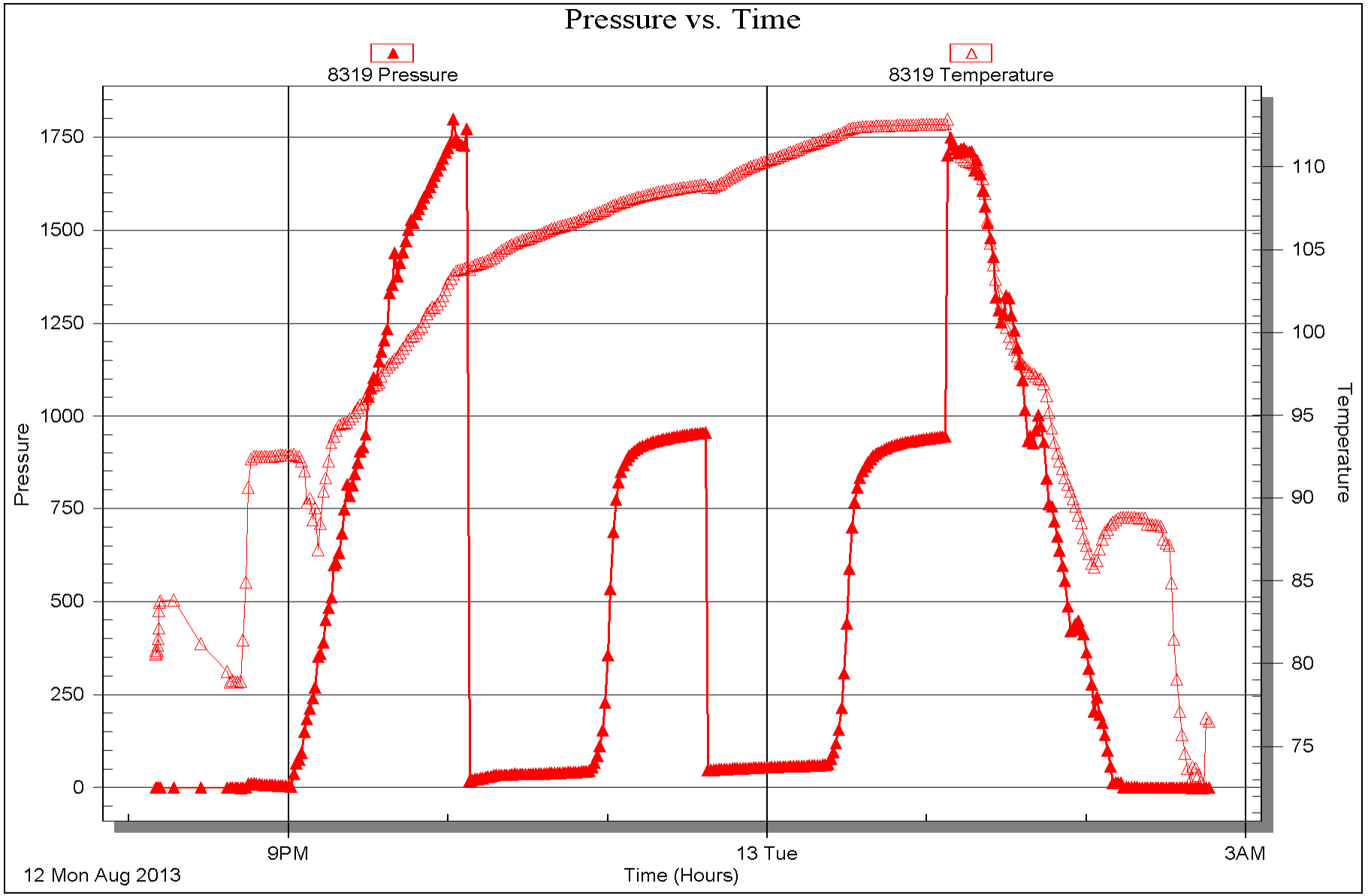
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6753 **Inside** Dow ning Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 1



Trilobite Testing, Inc Ref. No: 54755 Printed: 2013.08.16 @ 08:21:15

Serial #: 8319 **Outside** Dow ning Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 1



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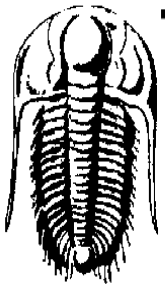


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co.**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

20-12s-22wTrego,KS

Tyler Fabrizius #1-20

Start Date: 2013.08.13 @ 08:35:00
End Date: 2013.08.13 @ 14:37:00
Job Ticket #: 54756 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.16 @ 08:20:36

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54756 **DST#: 2**

Test Start: 2013.08.13 @ 08:35:00

GENERAL INFORMATION:

Formation: **KC"E"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:27:30
Time Test Ended: 14:37:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Brett Dickinson
Unit No: 59

Interval: 3737.00 ft (KB) To 3755.00 ft (KB) (TVD)
Total Depth: 3755.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

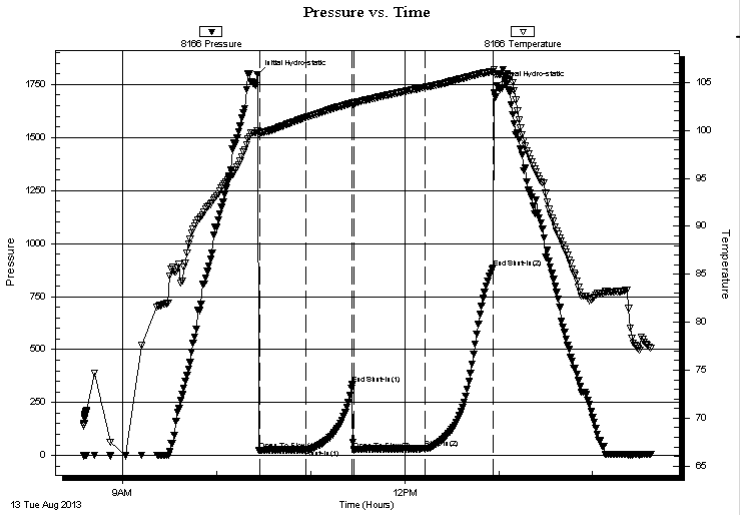
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8166 **Outside**

Press@RunDepth: 32.42 psig @ 3752.00 ft (KB)
Start Date: 2013.08.13 End Date: 2013.08.13
Start Time: 08:35:05 End Time: 14:36:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.13
Time On Btm: 2013.08.13 @ 10:26:00
Time Off Btm: 2013.08.13 @ 12:59:00

TEST COMMENT: IF-2 1/2" blow
ISI-No blow
FF- 2 1/2" bllow built to 5 1/2"
FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1796.28	100.00	Initial Hydro-static
2	25.33	99.76	Open To Flow (1)
31	27.84	101.34	Shut-In(1)
61	336.65	102.84	End Shut-In(1)
62	24.77	102.81	Open To Flow (2)
107	32.42	104.49	Shut-In(2)
151	883.82	106.14	End Shut-In(2)
153	1745.90	105.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	SOCM 15%O 85%M	0.10
20.00	SGO 10%G 90%O	0.19
0.00	80ft GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54756 **DST#: 2**

Test Start: 2013.08.13 @ 08:35:00

GENERAL INFORMATION:

Formation: **KC"E"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:27:30
Time Test Ended: 14:37:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Brett Dickinson
Unit No: 59

Interval: 3737.00 ft (KB) To 3755.00 ft (KB) (TVD)
Total Depth: 3755.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

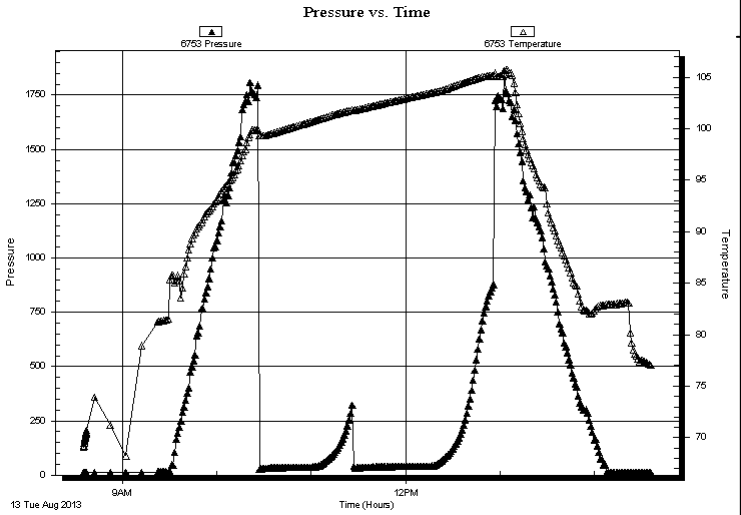
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Inside**

Press@RunDepth: psig @ 3752.00 ft (KB)
Start Date: 2013.08.13 End Date: 2013.08.13
Start Time: 08:35:05 End Time: 14:36:29

Capacity: 8000.00 psig
Last Calib.: 2013.08.13
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-2 1/2" blow
ISI-No blow
FF- 2 1/2" bllow built to 5 1/2"
FSI-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	SOCM 15%O 85%M	0.10
20.00	SGO 10%G 90%O	0.19
0.00	80ft GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54756 **DST#: 2**

Test Start: 2013.08.13 @ 08:35:00

Tool Information

Drill Pipe:	Length:	3696.00 ft	Diameter:	3.80	inches	Volume:	51.85	bbl	
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.70	inches	Volume:	-	bbl	
Drill Collar:	Length:	30.00 ft	Diameter:	2.25	inches	Volume:	0.15	bbl	
						Total Volume:	-	bbl	

Drill Pipe Above KB:	10.00 ft
Depth to Top Packer:	3737.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	18.00 ft
Tool Length:	39.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		25000.00 lb
Weight to Pull Loose:		60000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	51000.00 lb
	Final	52000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3717.00		
Shut In Tool	5.00			3722.00		
Hydraulic tool	5.00			3727.00		
Packer	5.00			3732.00	21.00	Bottom Of Top Packer
Packer	5.00			3737.00		
Stubb	1.00			3738.00		
Perforations	14.00			3752.00		
Recorder	0.00	6753	Inside	3752.00		
Recorder	0.00	8166	Outside	3752.00		
Bullnose	3.00			3755.00	18.00	Bottom Packers & Anchor
Total Tool Length:	**39.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54756 **DST#: 2**

Test Start: 2013.08.13 @ 08:35:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	37 deg API
Mud Weight:	8.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.77 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1500.00 ppm				
Filter Cake:	inches				

Recovery Information

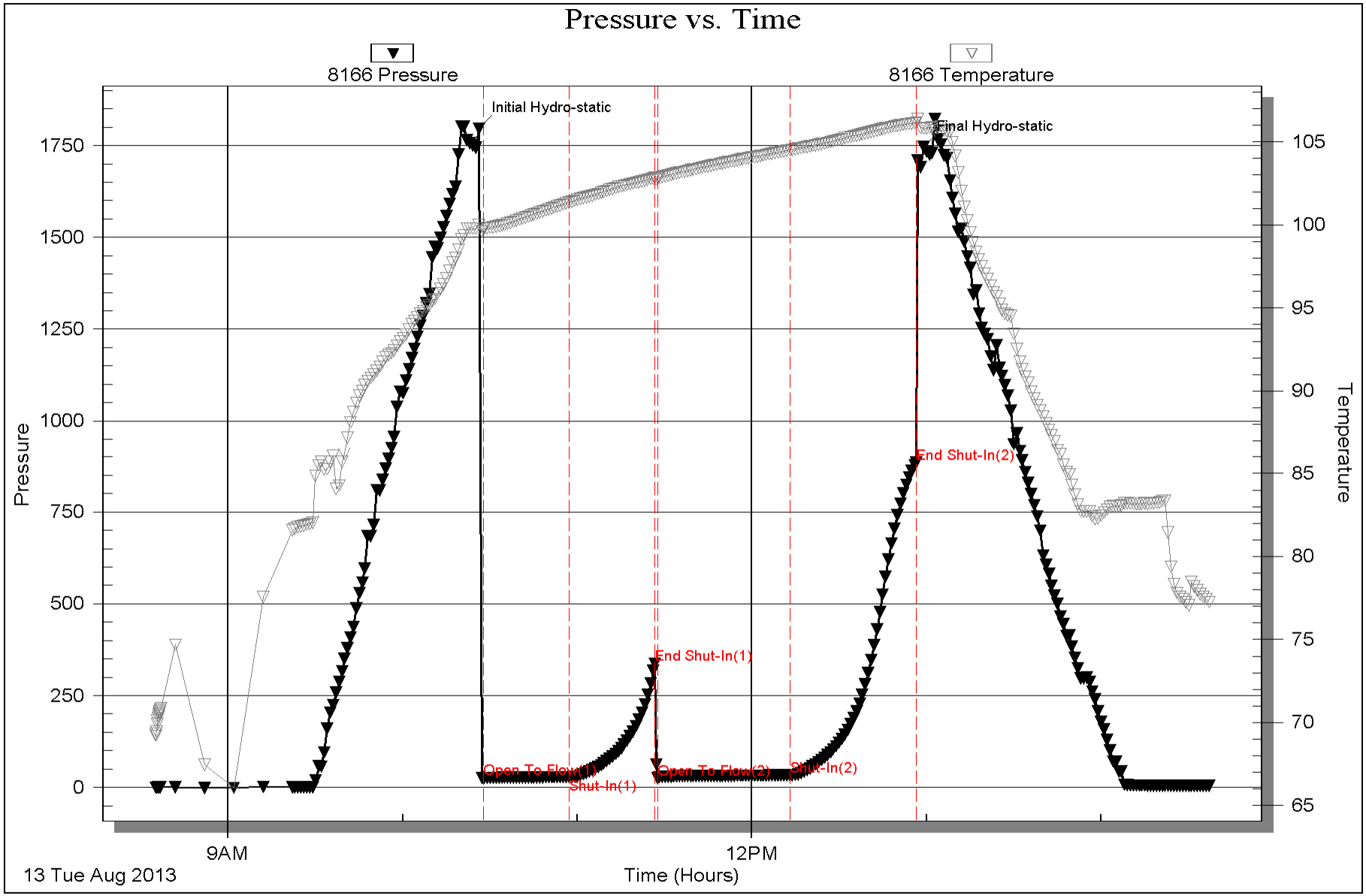
Recovery Table

Length ft	Description	Volume bbl
20.00	SOCM 15%O 85%M	0.098
20.00	SGO 10%G 90%O	0.189
0.00	80ft GIP	0.000

Total Length: 40.00 ft Total Volume: 0.287 bbl

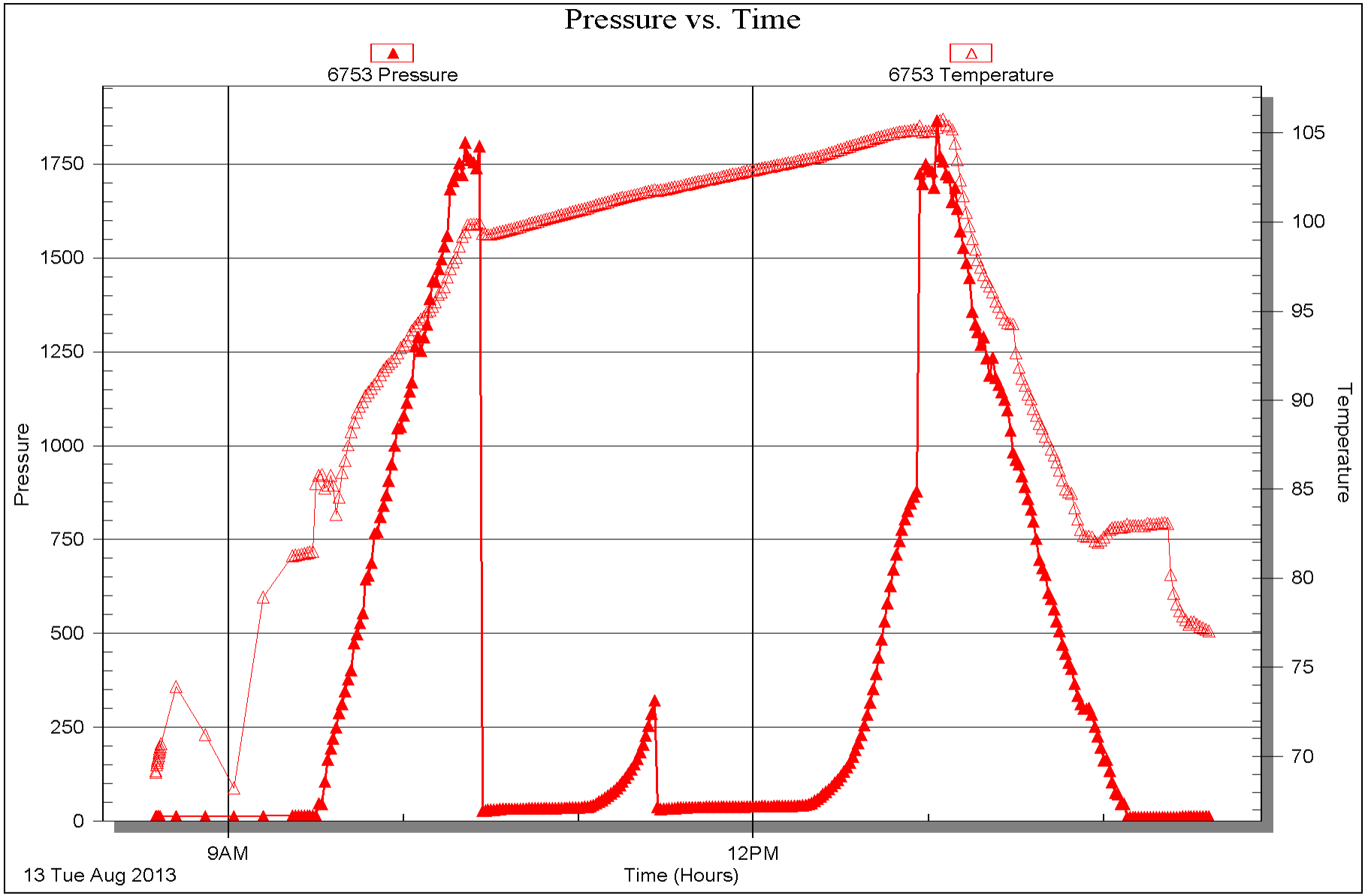
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8166 **Outside** Dow ning Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 2



Trilobite Testing, Inc Ref. No: 54756 Printed: 2013.08.16 @ 08:20:39

Serial #: 6753 **Inside** Dow ning Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 2



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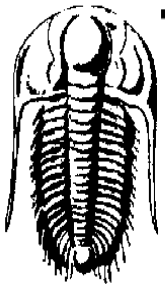


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co.**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

20-12s-22wTrego,KS

Tyler Fabrizius #1-20

Start Date: 2013.08.14 @ 11:57:00
End Date: 2013.08.14 @ 17:21:30
Job Ticket #: 54757 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.16 @ 08:19:56

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54757 **DST#: 3**

Test Start: 2013.08.14 @ 11:57:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:54:30
Time Test Ended: 17:21:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Brett Dickinson
Unit No: 59

Interval: 4010.00 ft (KB) To 4055.00 ft (KB) (TVD)
Total Depth: 4055.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

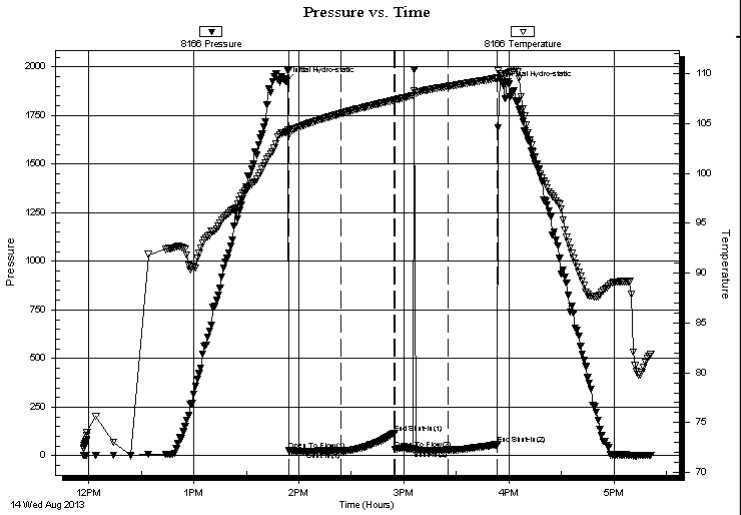
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8166 **Outside**

Press@RunDepth: 29.01 psig @ 4019.00 ft (KB)
Start Date: 2013.08.14 End Date: 2013.08.14
Start Time: 11:57:05 End Time: 17:21:29

Capacity: 8000.00 psig
Last Calib.: 2013.08.14
Time On Btm: 2013.08.14 @ 13:52:30
Time Off Btm: 2013.08.14 @ 15:57:00

TEST COMMENT: IF-3/4" blow
ISI-No blow
FF-No blow Flush tool No blow
FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1925.33	104.13	Initial Hydro-static
2	25.52	103.87	Open To Flow (1)
32	25.07	106.01	Shut-In(1)
62	117.15	107.36	End Shut-In(1)
63	33.46	107.37	Open To Flow (2)
93	29.01	108.74	Shut-In(2)
121	58.21	109.57	End Shut-In(2)
125	1904.92	109.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSOCM 2%O 98%M	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54757 **DST#: 3**

Test Start: 2013.08.14 @ 11:57:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:54:30
Time Test Ended: 17:21:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Brett Dickinson
Unit No: 59

Interval: 4010.00 ft (KB) To 4055.00 ft (KB) (TVD)
Total Depth: 4055.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

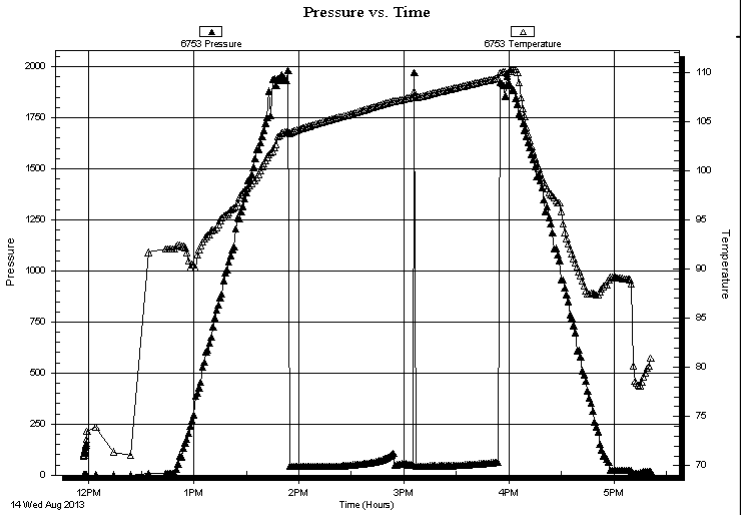
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Inside**

Press@RunDepth: psig @ 4019.00 ft (KB)
Start Date: 2013.08.14 End Date: 2013.08.14
Start Time: 11:57:05 End Time: 17:21:29

Capacity: 8000.00 psig
Last Calib.: 2013.08.14
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-3/4" blow
ISI-No blow
FF-No blow Flush tool No blow
FSI-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSOCM 2%O 98%M	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54757 **DST#: 3**

Test Start: 2013.08.14 @ 11:57:00

Tool Information

Drill Pipe:	Length:	3976.00 ft	Diameter:	3.80 inches	Volume:	55.77 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.70 inches	Volume:	- 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:		60000.00 lb
					Total Volume:	- bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		17.00 ft					String Weight:	Initial	53000.00 lb
Depth to Top Packer:		4010.00 ft						Final	53000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		45.00 ft							
Tool Length:		66.00 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			3990.00		
Shut In Tool	5.00			3995.00		
Hydraulic tool	5.00			4000.00		
Packer	5.00			4005.00	21.00	Bottom Of Top Packer
Packer	5.00			4010.00		
Stubb	1.00			4011.00		
Perforations	8.00			4019.00		
Recorder	0.00	6753	Inside	4019.00		
Recorder	0.00	8166	Outside	4019.00		
Change Over Sub	1.00			4020.00		
Drill Pipe	31.00			4051.00		
Change Over Sub	1.00			4052.00		
Bullnose	3.00			4055.00	45.00	Bottom Packers & Anchor
Total Tool Length:	**66.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54757 **DST#: 3**

Test Start: 2013.08.14 @ 11:57:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	inches				

Recovery Information

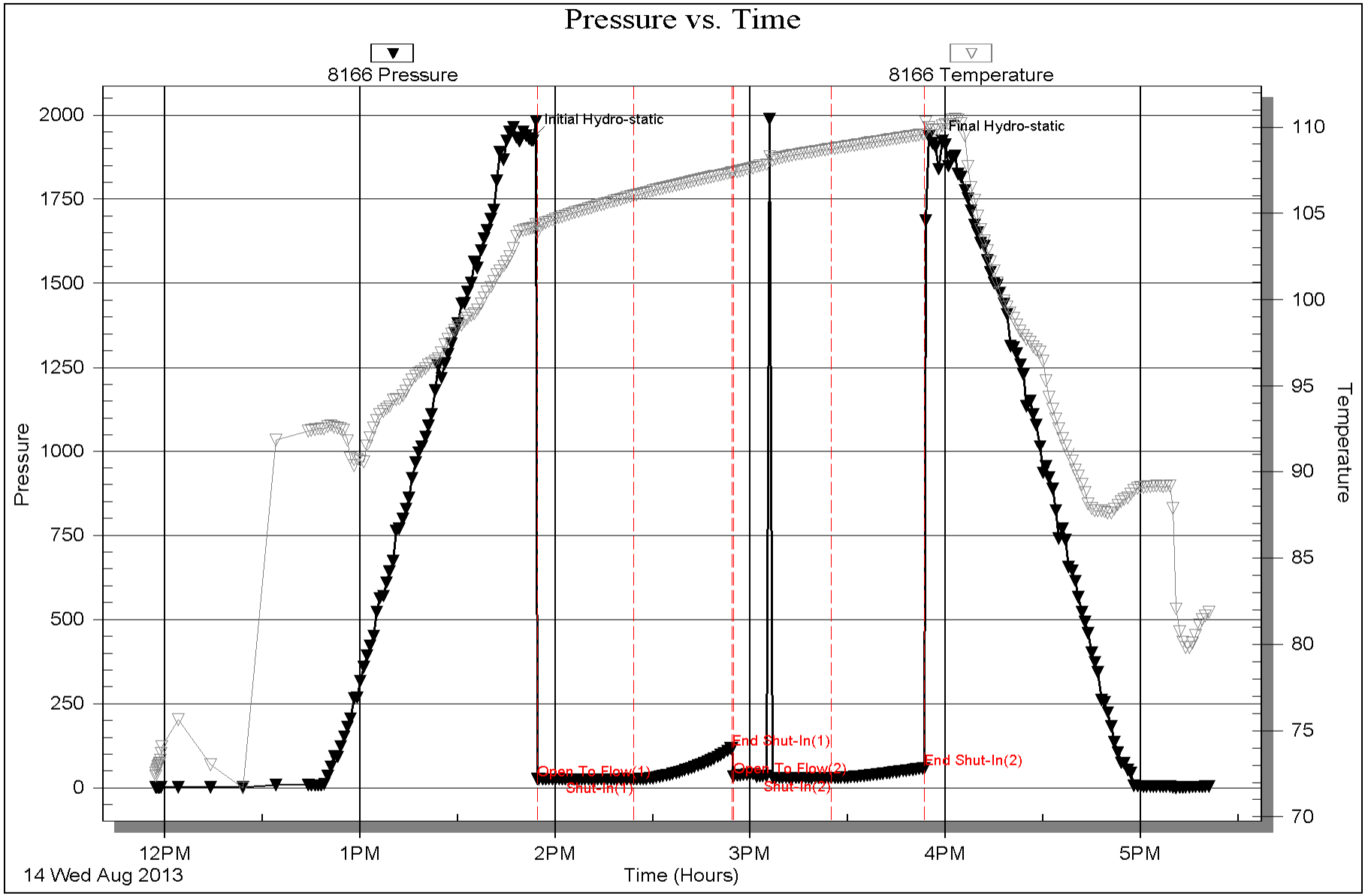
Recovery Table

Length ft	Description	Volume bbl
5.00	VSOCM 2%O 98%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

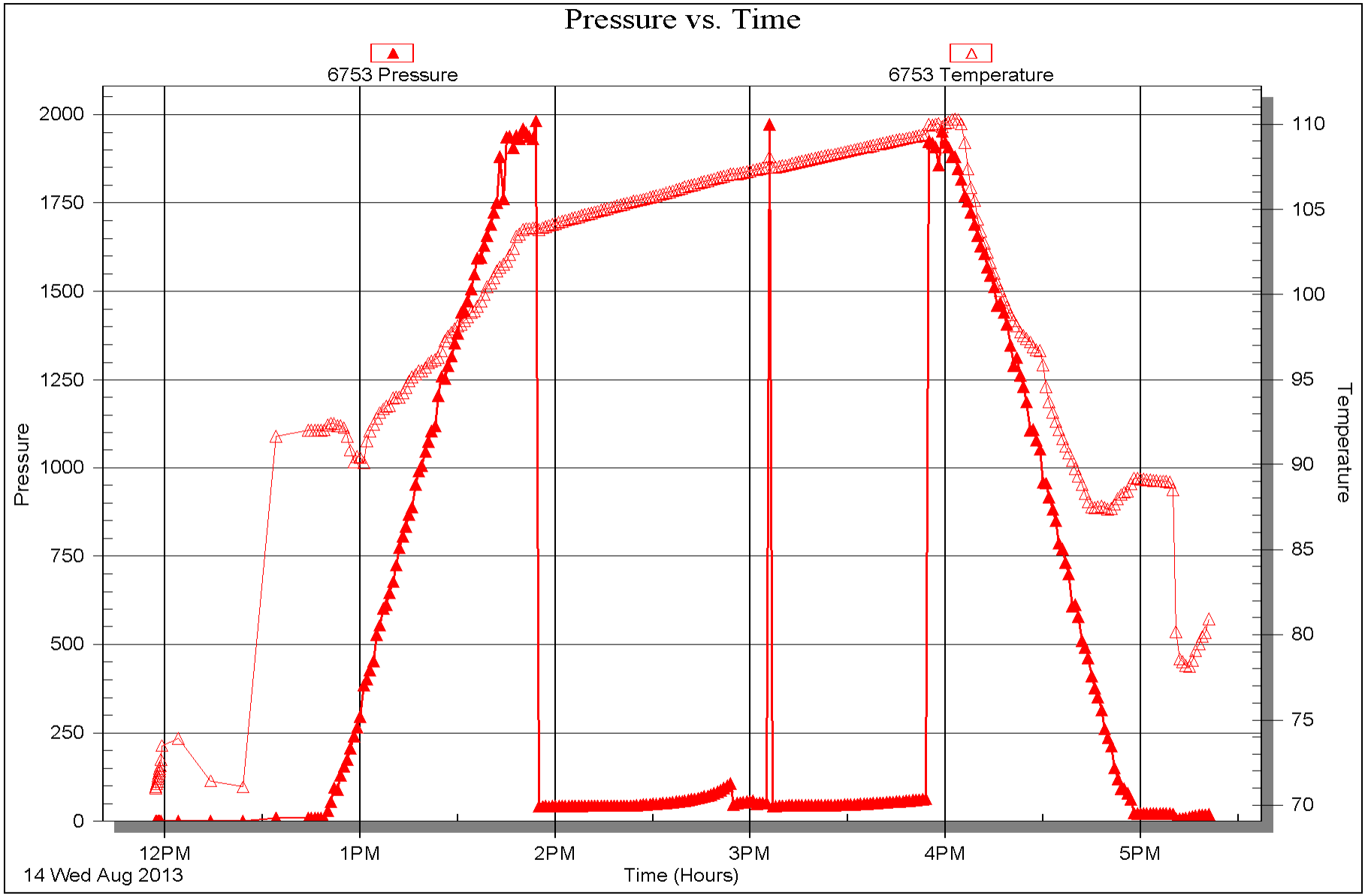
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8166 **Outside** Dow ning Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 3



Trilobite Testing, Inc Ref. No: 54757 Printed: 2013.08.16 @ 08:19:59

Serial #: 6753 **Inside** Downing Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 3



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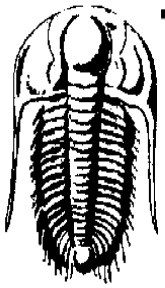


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co.**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

20-12s-22wTrego,KS

Tyler Fabrizius #1-20

Start Date: 2013.08.15 @ 07:25:00
End Date: 2013.08.15 @ 14:04:00
Job Ticket #: 54758 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.16 @ 08:11:19

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54758 **DST#: 4**

Test Start: 2013.08.15 @ 07:25:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:27:00
Time Test Ended: 14:04:00

Test Type: Conventional Straddle (Reset)
Tester: Brett Dickinson
Unit No: 59

Interval: 4122.00 ft (KB) To 4132.00 ft (KB) (TVD)
Total Depth: 4180.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

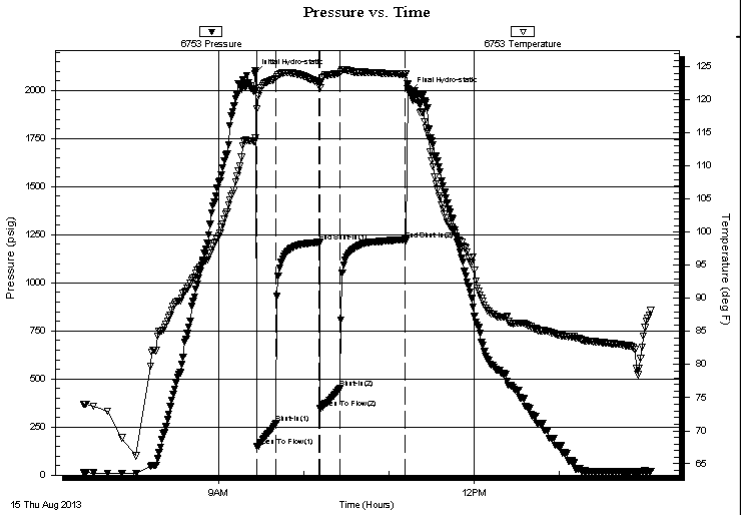
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Outside**

Press@RunDepth: 452.95 psig @ 4128.00 ft (KB)
Start Date: 2013.08.15 End Date: 2013.08.15
Start Time: 07:25:05 End Time: 14:03:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.15
Time On Btm: 2013.08.15 @ 09:25:30
Time Off Btm: 2013.08.15 @ 11:14:30

TEST COMMENT: IF-BOB in 1 1/2 min
ISI-1" blow
FF-BOB in 2 min
FSI-Weak Surface blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2085.80	113.78	Initial Hydro-static
2	148.73	118.59	Open To Flow (1)
15	271.10	123.22	Shut-In(1)
45	1211.86	122.74	End Shut-In(1)
46	346.93	121.87	Open To Flow (2)
60	452.95	124.01	Shut-In(2)
106	1225.31	123.91	End Shut-In(2)
109	1994.92	120.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	SGMCO 10%G 15%M 75%O	0.15
1145.00	GO 20%G 80%O	16.06
0.00	60ft GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54758 **DST#: 4**

Test Start: 2013.08.15 @ 07:25:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:27:00
Time Test Ended: 14:04:00

Test Type: Conventional Straddle (Reset)
Tester: Brett Dickinson
Unit No: 59

Interval: 4122.00 ft (KB) To 4132.00 ft (KB) (TVD)
Total Depth: 4180.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

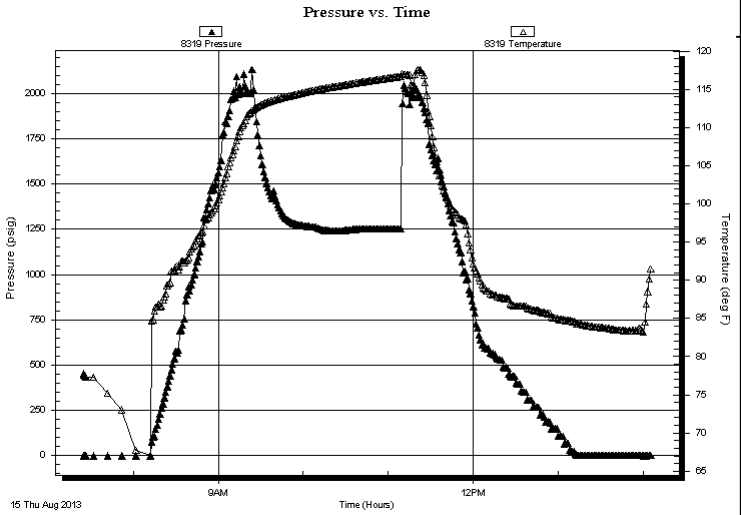
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8319 **Below (Straddle)**

Press@RunDepth: psig @ 4137.00 ft (KB)
Start Date: 2013.08.15 End Date: 2013.08.15
Start Time: 07:25:05 End Time: 14:04:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.15
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-BOB in 1 1/2 min
ISI-1" blow
FF-BOB in 2 min
FSI-Weak Surface blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	SGMCO 10%G 15%M 75%O	0.15
1145.00	GO 20%G 80%O	16.06
0.00	60ft GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54758 **DST#: 4**

Test Start: 2013.08.15 @ 07:25:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:27:00
Time Test Ended: 14:04:00

Test Type: Conventional Straddle (Reset)
Tester: Brett Dickinson
Unit No: 59

Interval: 4122.00 ft (KB) To 4132.00 ft (KB) (TVD)
Total Depth: 4180.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

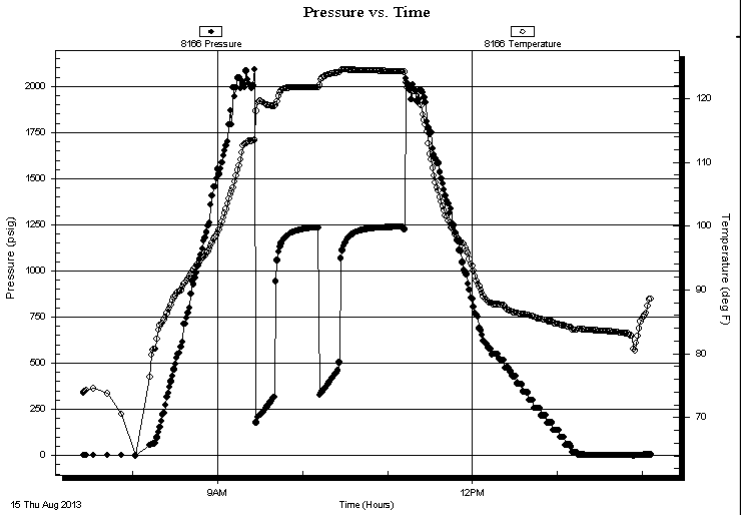
Reference Elevations: 2417.00 ft (KB)
2409.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8166 **Inside**

Press@RunDepth: psig @ 4128.00 ft (KB)
Start Date: 2013.08.15 End Date: 2013.08.15
Start Time: 07:25:05 End Time: 14:05:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.15
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-BOB in 1 1/2 min
ISI-1" blow
FF-BOB in 2 min
FSI-Weak Surface blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	SGMCO 10%G 15%M 75%O	0.15
1145.00	GO 20%G 80%O	16.06
0.00	60ft GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54758 **DST#: 4**

Test Start: 2013.08.15 @ 07:25:00

Tool Information

Drill Pipe:	Length:	4100.00 ft	Diameter:	3.80 inches	Volume:	57.51 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.70 inches	Volume:	- bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:		65000.00 lb
					Total Volume:	- bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		28.00 ft					String Weight:	Initial	55000.00 lb
Depth to Top Packer:		4122.00 ft						Final	59000.00 lb
Depth to Bottom Packer:		4132.00 ft							
Interval between Packers:		10.00 ft							
Tool Length:		81.00 ft							
Number of Packers:		3	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4103.00		
Shut In Tool	5.00			4108.00		
Hydraulic tool	5.00			4113.00		
Packer	4.00			4117.00	20.00	Bottom Of Top Packer
Packer	5.00			4122.00		
Stubb	1.00			4123.00		
Perforations	5.00			4128.00		
Recorder	0.00	8166	Inside	4128.00		
Recorder	0.00	6753	Outside	4128.00		
Blank Off Sub	4.00			4132.00	10.00	Tool Interval
Packer	4.00			4136.00		
Stubb	1.00			4137.00		
Recorder	0.00	8319	Below	4137.00		
perforations	10.00			4147.00		
Change Over Sub	1.00			4148.00		
Blank Spacing	31.00			4179.00		
Change Over Sub	1.00			4180.00		
Bullnose	3.00			4183.00	51.00	Bottom Packers & Anchor
Total Tool Length:	**81.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co.

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

Job Ticket: 54758 **DST#: 4**

Test Start: 2013.08.15 @ 07:25:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	28 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	inches				

Recovery Information

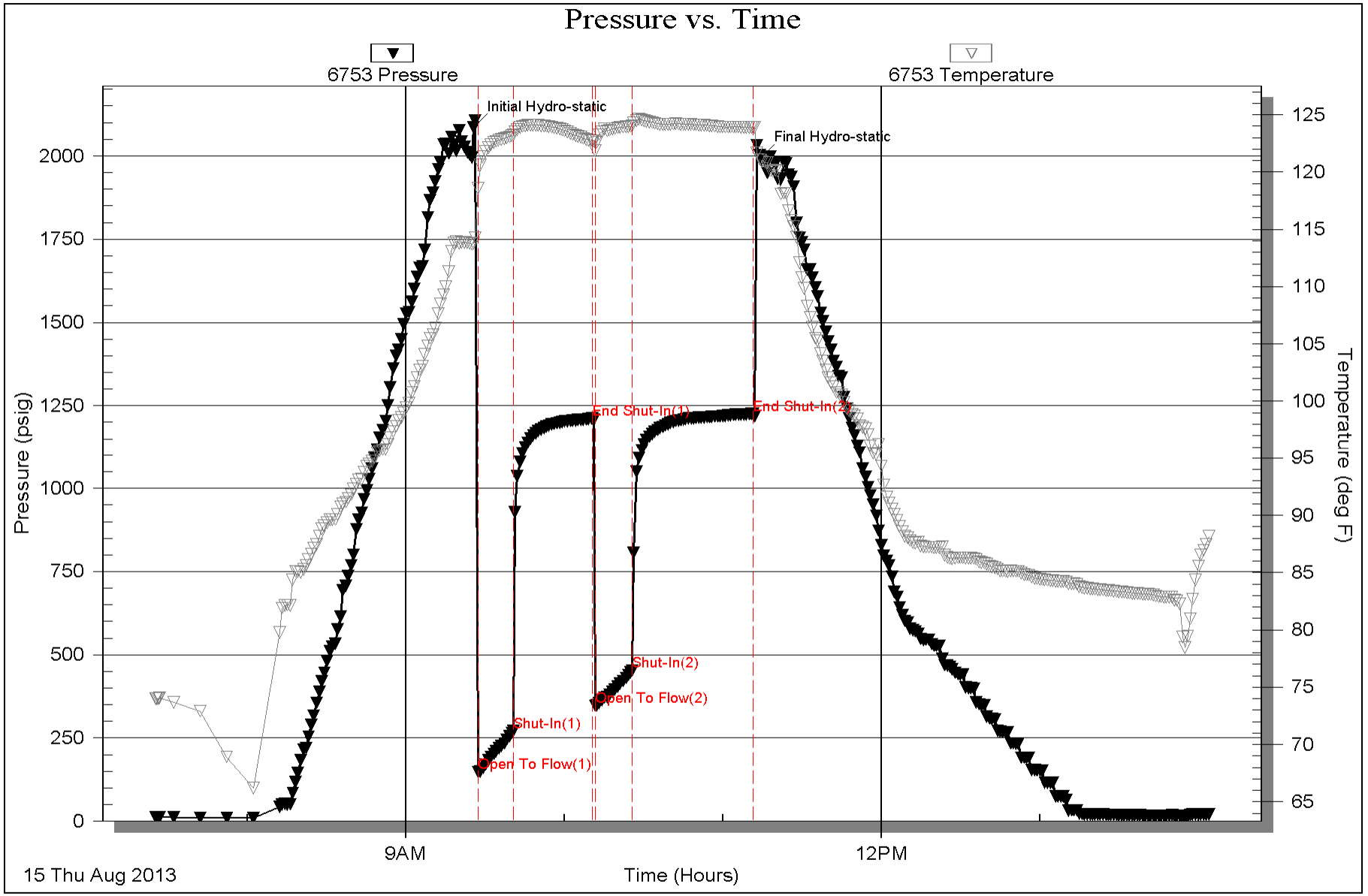
Recovery Table

Length ft	Description	Volume bbl
30.00	SGMCO 10%G 15%M 75%O	0.148
1145.00	GO 20%G 80%O	16.061
0.00	60ft GIP	0.000

Total Length: 1175.00 ft Total Volume: 16.209 bbl

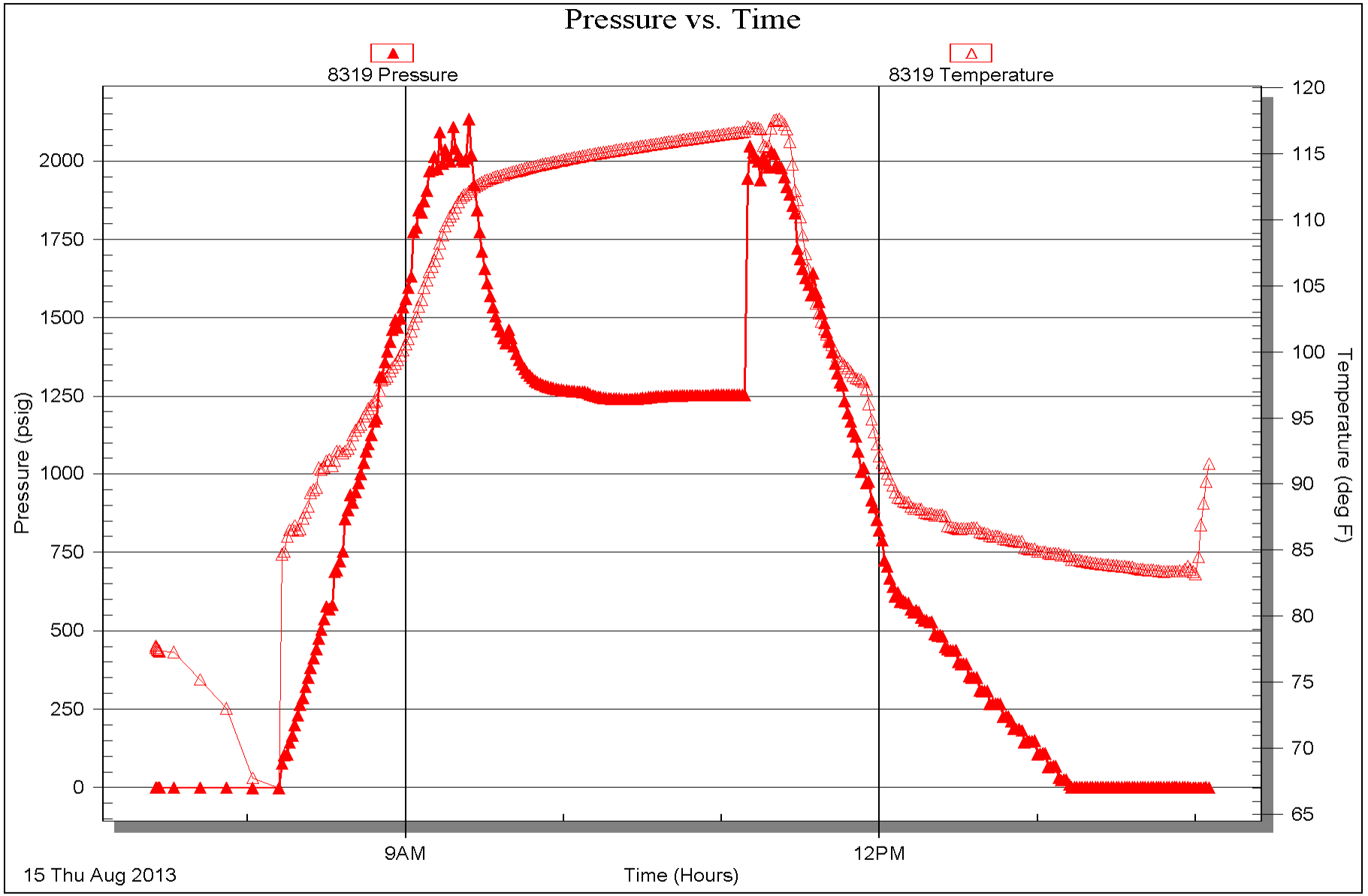
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6753 **Outside** Dow ning Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 4



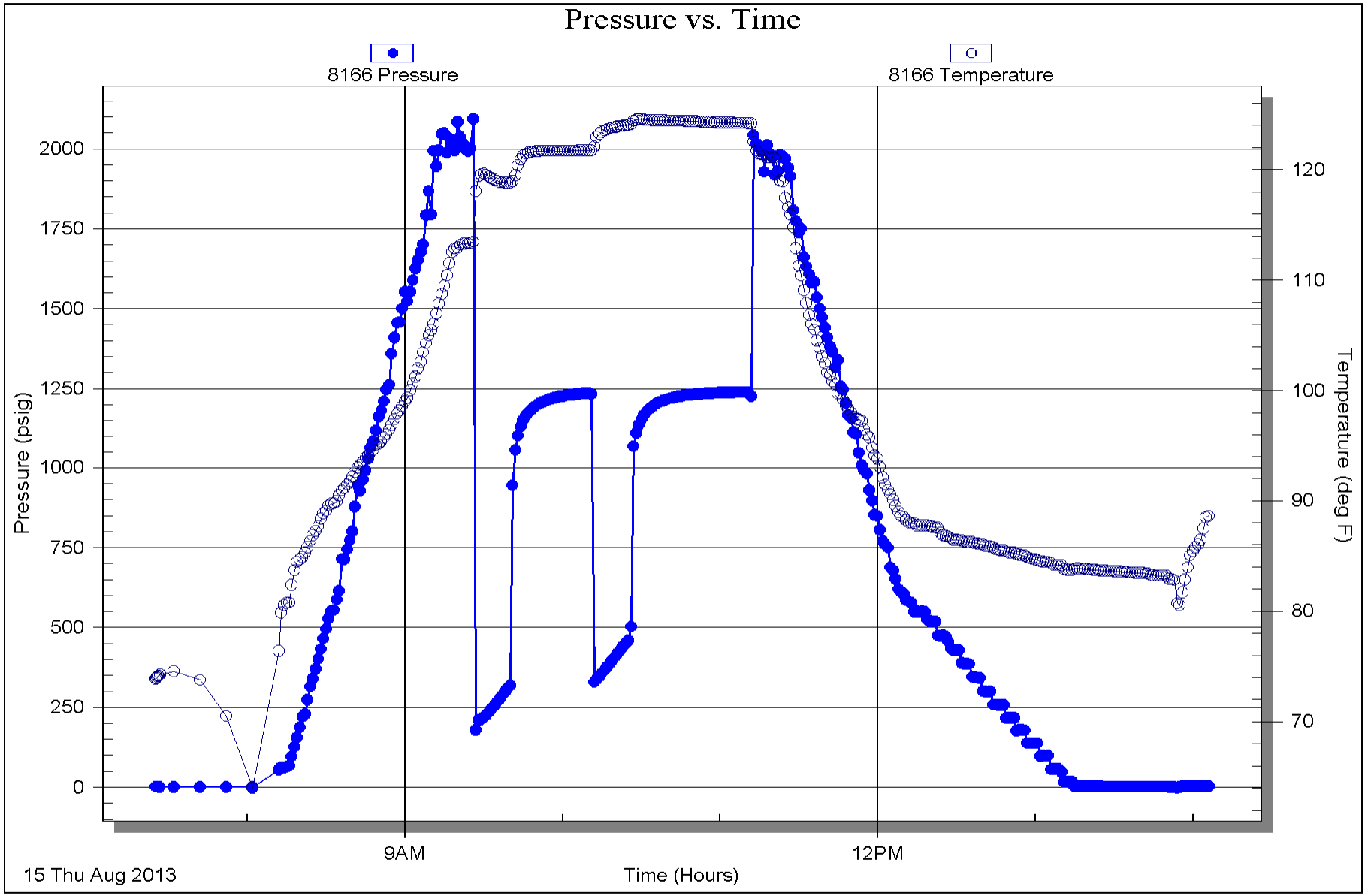
Trilobite Testing, Inc Ref. No: 54758 Printed: 2013.08.16 @ 08:11:22

Serial #: 8319 Below (Straddle) Running Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 4



Trilobite Testing, Inc Ref. No: 54758 Printed: 2013.08.16 @ 08:11:23

Serial #: 8166 **Inside** Downing Nelson Oil Co. 20-12s-22w Trego,KS DST Test Number: 4



Trilobite Testing, Inc Ref. No: 54758 Printed: 2013.08.16 @ 08:11:23

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 54755

Well Name & No. Tyler Fabrizius #1-20 Test No. 1 Date 8/12/13

Company Downing-Nelson Oil Co. Elevation 2417 KB 2409 GL

Address PO Box 1019 Hays KS 67601

Co. Rep / Geo. Marc Downing Rig Discovery #4

Location: Sec. 20 Twp. 12 Rge. 22 Co. Trego State KS

Interval Tested 3698 - 3744 Zone Tested KC "C+D"

Anchor Length 46 Drill Pipe Run 3666 Mud Wt. 8.1

Top Packer Depth 3693 Drill Collars Run 30 Vis 57

Bottom Packer Depth 3698 Wt. Pipe Run — WL 8.8

Total Depth 3744 Chlorides 1,500 ppm System LCM 2

Blow Description IF- 4in blow
ISI- No blow
FF- 4in blow
FSI- No blow

Rec 1	Feet of Free Oil	%gas	%oil	%water	%mud
Rec 89	Feet of oil spotted Mcw	%gas	%oil 80	%water 20	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 90 BHT 111 Gravity ____ API RW .19 @ 60 °F Chlorides 46,000 ppm

(A) Initial Hydrostatic 1,789	☒ Test 1150	T-On Location 18:45
(B) First Initial Flow 33	☐ Jars	T-Started 20:10
(C) First Final Flow 57	☐ Safety Joint	T-Open 22:07
(D) Initial Shut-In 955	☐ Circ Sub	T-Pulled 1:07
(E) Second Initial Flow 58	☐ Hourly Standby	T-Out 2:45
(F) Second Final Flow 75	☒ Mileage 65rt 100.75	Comments
(G) Final Shut-In 941	☐ Sampler	
(H) Final Hydrostatic 1,727	☐ Straddle	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open 45	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 45	☐ Extra Recorder	Sub Total 0
Final Flow 45	☐ Day Standby	Total 1250.75
Final Shut-In 45	☐ Accessibility	MP/DST Disc't
	Sub Total 1250.75	

Approved By ____ Our Representative Bill Downing

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

4/10

Test Ticket

NO. 54756

Well Name & No. Tyler Fabrizius #1-20 Test No. 2 Date 8/13/13

Company Downing-Nelson Oil Co. Elevation 2417 KB 2409 GL

Address PO Box 1019 Hays KS 67601

Co. Rep / Geo. Al Downing Rig Discovery #4

Location: Sec. 20 Twp. 12 Rge. 22 Co. Trego State KS

Interval Tested 3737 - 3755 Zone Tested KC "E"

Anchor Length 18 Drill Pipe Run 3696 Mud Wt. 8.1

Top Packer Depth 3732 Drill Collars Run 30 Vis 57

Bottom Packer Depth 3737 Wt. Pipe Run — WL 8.8

Total Depth 3755 Chlorides 1,500 ppm System LCM 2

Blow Description IF - 2½ in blow
ISI - No blow
FF - 2½ in blow built to 5½ in
FSI - No blow

Rec 20	Feet of SGO	10 %gas	90 %oil	%water	%mud	
Rec 20	Feet of SOCM	%gas	15 %oil	%water 85	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 40 BHT 106 Gravity 37 API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1,796	☒ Test 1150	T-On Location 7:55	
(B) First Initial Flow 25	☐ Jars	T-Started 8:35	
(C) First Final Flow 28	☐ Safety Joint	T-Open 10:27	
(D) Initial Shut-In 337	☐ Circ Sub	T-Pulled 12:57	
(E) Second Initial Flow 25	☐ Hourly Standby	T-Out 14:35	
(F) Second Final Flow 32	☒ Mileage 65rt 100.75	Comments	
(G) Final Shut-In 884	☐ Sampler		
(H) Final Hydrostatic 1,746	☐ Straddle	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 30	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 30	☐ Extra Recorder	Sub Total 0	
Final Flow 45	☐ Day Standby	Total 1250.75	
Final Shut-In 45	☐ Accessibility	MP/DST Disc't	
	Sub Total 1250.75		

Approved By ____ Our Representative Bill Dickinson

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 54757

Well Name & No. Tyler Fabrizius #1-20 Test No. 3 Date 8/14/13

Company Downing-Nelson Oil Co Elevation 2417 KB 2409 GL

Address PO Box 1019 Hays KS 67601

Co. Rep / Geo. Al Downing Rig Discovery #4

Location: Sec. 20 Twp. 12 Rge. 22 Co. Trego State KS

Interval Tested 4010-4055 Zone Tested Marmaton

Anchor Length 45 Drill Pipe Run 3976 Mud Wt. 8.7

Top Packer Depth 4005 Drill Collars Run 30 Vis 59

Bottom Packer Depth 4010 Wt. Pipe Run — WL 8.8

Total Depth 4055 Chlorides 5,000 ppm System LCM 1½ #

Blow Description IF- 3/4 in blow

ISI- No blow

FF- No blow flush tool No blow

FSI- No blow

Rec 5	Feet of 5OCM	%gas	2 %oil	%water	98 %mud	
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 5 BHT 110 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic	1,925	☒ Test 1250	T-On Location 11:40
(B) First Initial Flow	26	☐ Jars	T-Started 11:57
(C) First Final Flow	25	☐ Safety Joint	T-Open 13:55
(D) Initial Shut-In	117	☐ Circ Sub	T-Pulled 15:55
(E) Second Initial Flow	33	☐ Hourly Standby	T-Out 17:20
(F) Second Final Flow	29	☒ Mileage 65 rt 100.75	Comments
(G) Final Shut-In	58	☐ Sampler	
(H) Final Hydrostatic	1,905	☐ Straddle	☐ Ruined Shale Packer
		☐ 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 1350.75
Final Shut-In	30	☐ Accessibility	MP/DST Disc't
		Sub Total 1350.75	

Approved By ____ Our Representative Brett Dickinson

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 54758

Well Name & No. Tyler Fabrizius #1-20 Test No. 4 Date 8/15/13

Company Downing-Nelson Oil Co Elevation 2417 KB 2409 GL

Address PO Box 1019 Hays KS 67601

Co. Rep / Geo. Marc Downing Rig Discovery #4

Location: Sec. 20 Twp. 12 Rge. 22 Co. Trego State KS

Interval Tested 4122 - 4132 Zone Tested Arb.

Anchor Length 10 Drill Pipe Run Mud Wt. 9.7

Top Packer Depth 4117, 4122 Drill Collars Run 30 Vis 59

Bottom Packer Depth 4132 Wt. Pipe Run WL 8.8

Total Depth 4180 Chlorides 5,000 ppm System LCM 1½ #

Blow Description IF - BOB in 1½ min

ISI - ½ in blow

FF - BOB in 2 min

FSI - weak surface blow

Rec 30	Feet of SGMCO	10 %gas	75 %oil	%water	15 %mud	
Rec 1145	Feet of GO	20 %gas	80 %oil	%water	%mud	
Rec	Feet of GOCM GIP	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 1175 BHT Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2,086	☒ Test 1250	T-On Location 7:05	
(B) First Initial Flow 149	☐ Jars	T-Started 7:25	
(C) First Final Flow 271	☐ Safety Joint	T-Open 9:21	
(D) Initial Shut-In 1212	☐ Circ Sub	T-Pulled 11:07	
(E) Second Initial Flow 347	☐ Hourly Standby	T-Out 14:00	
(F) Second Final Flow 453	☒ Mileage 65 rt 100.75	Comments	
(G) Final Shut-In 1225	☐ Sampler		
(H) Final Hydrostatic 1995	☒ Straddle 600	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 15	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 30	☐ Extra Recorder	Sub Total 0	
Final Flow 15	☐ Day Standby	Total 1950.75	
Final Shut-In 45	☐ Accessibility	MP/DST Disc't	
	Sub Total 1950.75		

Approved By Our Representative Brett Dunn

Marc Downing
Consulting Petroleum Geologist
1411 Washington Circle
Hays, Ks 67601
Phone: 620-428-1356 (cell) 785-621-2286

GEOLOGIC REPORT LOG

12s 22w, 20

COMPANY Downing-Nelson Oil Co, Inc
WELL Tyler Fabrizius #1-20
FIELD Wildcat
LOCATION 1900' FNL & 1460' FEL
SEC. 20 TWP. 12s RGE. 22w
COUNTY Trego
STATE Kansas

PRODUCTION Arbuckle
ELEVATION KB 2415 DF GL 2407
Drilling Measured From: KB
Samples Saved From 3500 To: TD
Drilling Time From 3300 To: TD
Samples Examined From 3500 To: TD
Geological Supervision From 3300 To Total Depth
Wellsite Geologist M. Downing, A. Downing
Electrical Surveys Nabors: CNL/CDL, DIL, Sonic

OPERATOR DNOCI
CONTRACTOR Discovery Drilling, Rig #4
COMM: 8-8-13 COMP: 8-15-13

CASING RECORD
SURF: 8 5/8" @ 220' PROD: 5 1/2" @ 4179'
TOTAL DEPTH DRILLERS: 4180'
TOTAL DEPTH LOG: 4180'

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Top Anhydrite	1927	1923	+592	+9
Base Anhydrite	1857	1865	+550	NA
Topeka	3420	3418	-1003	+18
HEEBNER	3639	3636	-1221	+18
Toronto	3658	3654	-1239	+20
LKC	3673	3670	-1255	+19
BKC	3911	3908	-1493	+18
Marmaton	4005	4002	-1587	NA
Arbuckle	4120	4118	-1703	-5

REFERENCE WELL FOR STRUCTURE Martin Drilling Co. Bell-Staab #1 C-N/2-NW-SE Sec. 20-12s-22w

DRILL STEM TESTS

No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	IHP-FHP	RECOVERY

REMARKS AND RECOMMENDATIONS
Perforate "A" zone before abandonment.

LEGEND
Anhydrite, Salt, Sandstone, Shale, Carb sh, Limestone, Ool.Lime, Chert, Dolomite

DRILLING TIME IN MINUTES PER FOOT (Rate of Penetration Decreases →) 5" 10" 15" | DEPTH | LITHOLOGY | SAMPLE DESCRIPTIONS | OIL SHOWS | REMARKS

Sample Descriptions

Sh: gry
LS: wht, fn xln, sme in prt. gd intxln ϕ, 1-2 rx w/ resid stn, NSFO, No Od. Many chlky ϕ.
LS: wht, vfn xln, pr ϕ, NS.
Sh: gry
LS: tan, md xln, pr ϕ
LS: A/A
LS: tan-wht, md xln, Foss. Scat vgd vug ϕ, gd stn, hvy SFO. Rest v chlky, lt Od. Trng pϕ.
LS: tan-wht, md xln, Foss. gd vug ϕ w/ fr-gd sat, gd SFO, sltly hvy, lt Od. Many chlky ϕ
LS: Fr amt rx A/A, poss carry. Trng pr ϕ + dms, scat wht-tan chts.
Sh: Black Carb
LS: wht, fn-md xln, scat fr vug ϕ, fr brn stn, fr SFO, fr-gd Od.
LS: wht-lt tan, md xln, Foss. fr-gd vug ϕ, gd sat stn, fr-gd SFO, fr-gd Od, free oil on cup.
LS: wht, fn xln, trng sub xln. Few rx w/ brn stn, lt Od, wht shp chts.
Sh: drk gry w/ blk
LS: tan-wht, md xln, sltly dolom w/ scat foss. fr intxln ϕ w/ fr-gd vugs. fr-gd sat brn stn, fr SFO, fr Od.
Sh: gry and brn
LS: tan-wht, scat rx A/A, poss carry. Trng pr ϕ, rare stn, org-tan chts.
LS: Tan fxn v. foss w/ gd fossil ϕ. gd SFO - strong odor - 1-2 total sat.
LS: wht lt Tan fxn w/ scatt ool ϕ w/ lite SFO - faint odor - mostly dse
LS: wht fxn - w/ good ool - vug ϕ w/ gd SFO - strong odor in ool ϕ becoming slt subxn -
LS: wht f-vfxn all vdse w/ 1-2 pcs clr Δ chert -
Sh: Black-carb
Sh: gry - Brown
LS: lt-Tan fxn w/ scatt intxln ϕ v.slt SFO - trace odor but mostly all dse No show
Sh: gry
LS: Tan fxn w/ poor intxln ϕ v.spl stn NSFO - No odor mostly all dse
Sh: gry - drk gry
LS: Tan f-vfxn v.dse w/ sou cnia Rxs - NS
Sh: gry - Brown
LS: Tan - off wht fxn w/ few intxln ϕ w/ spl. stn NSFO No odor
Sh: Blk-carb
LS: Bone wht vfxn vdse
Sh: gry - Brown - Red v. silty
LS: wht mxn granular - w/ some free oolites.
Sh: Red - Wash Red v. argillaceous.
LS: wht lt Tan fxn dse w/ some orange Δ chert
Sh: Red - v.chky
Sh: gry
LS: Tan fxn w/ much wht-clr Δ all dse NS
LS: Tan-cm fxn w/ scatt dolo. LS. w/ tite intxln ϕ w/ lots wht Δ w/ scatt edge stn in weathered chert v.spl. SFO - No odor - 1-2 pcs salt pepper SFO - w/ good Fluor.
LS: wht-lt Tan f-vfxn v.dse w/ lots cm Δ chert -
Fr amt tan-wht shp chts, sme in prt. fr brn stn, sptd SFO, lt Od. 2-3 tite ss clust, crs grain, ang. prs, 1 clust w/ fr sat, fr SFO, rest barren.
Mostly shp multicolor chts, wht, yel, tan, org. Scat brn sh.
Sh: brn-red, fr amt multicolor chts.
Dolo: wht, md rhom xln, sme in prt. pr ϕ, tite, pr-fr stn, fr-gd SFO when broken. Many barren rx, lt-fr Od.
Dolo: mostly A/A, tite + pr ϕ, poss frac. Scat pr stn, fr SFO when broken, lt Od.
Dolo: Trng mostly barren, few rx A/A. Fr amt red sh, washes red.
Dolo: wht, md rhom xln, fr intxln ϕ, mostly barren w/ No Od.

Remarks

Vis: 57 Wt: 9.1

DST #1
3698 - 3744
45-45-45-45
I.F.- 4" blow
F.F.- 4" blow
IFP: 33-57
FFP: 58-75
SIP: 985-941
HP: 1789-1727
Rec:
1' FO
89' OSMW 80% w
BHT: 111° Chlor: 46K

DST #2
3737 - 3765
I.F.- 2½" blow
F.F.- 5½" blow
IFP: 25-28
FFP: 25-32
SIP: 337-884
HP: 1746-1746
Rec:
20' GO 90% o
20' OCM 15% o
BHT: 106° G=37

DST #3
4010 - 4055
IFP: 26-25
FFP: 33-29
SIP: 117-59
HP: 1925-1905
Rec:
5' SOCM 2% o
BHT: 110°

DST #4
4122 - 4132
15-30-15-30
I.F.- BOB 1½ min / 1" SIB
F.F.- BOB 2 min / Surf SIB
IFP: 149-271
FFP: 347-453
SIP: 1212-1225
Rec:
60' GIP
1145' GO 80% o
30' GMCO 10% g, 75% o
BHT: 124° G=28

(signature)