

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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

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

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

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	TAMMY RIEDEL 1-26
Doc ID	1467275

Tops

Name	Top	Datum
Top Anhydrite	1848'	+540
Base Anhydrite	1892'	+496
Topeka	3383'	-995
Heebner	3603'	-1215
Toronto	3625'	-1237
LKC	3639'	-1251
BKC	3869'	-1481
Marmaton	3980'	-1592



Services, Inc.

CHARGE TO: Dunning - Nelson
 ADDRESS:
 CITY, STATE, ZIP CODE:

PAGE 1 OF 2
 TICKET 21029

WELL/PROJECT NO. 1-26 LEASE Tammy Ridel COUNTY/PARISH Tulio STATE KS CITY
 SERVICE LOCATIONS Ness City, KS CONTRACTOR Discovery RIG NAME/NO. Rig # 4 SHIPPED VIA CS DELIVERED TO 100471200 ORDER NO. 7-15-19 DATE
 WELLS TYPE Di WELL CATEGORY Development JOB PURPOSE Shallow Surface WELL PERMIT NO. WELL LOCATION

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			MILEAGE	DESCRIPTION	QTY.			UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY.	UM	QTY.		
575					1	30 mi	1	EA	925.00	925.00	
576.5					1	Pump Charge - Shallow Surf	2	Bar	42.00	84.00	
290					1	D-Air	13	SB	2025.00	2025.00	
395					3	Standard Cement	3	SKS	30.00	90.00	
239					2	Bentonite Gel	2	SKS	40.00	80.00	
238					2	Calcium Chloride	1	EA	135.00	135.00	
581					2	Service Charge Cost				277.50	
582					2	Minimum Drayage				250.00	

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED _____ TIME SIGNED _____

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY: OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? YES NO
 WE UNDERSTOOD AND MET YOUR NEEDS? YES NO
 OUR SERVICE WAS PERFORMED WITHOUT DELAY? YES NO
 WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? YES NO
 ARE YOU SATISFIED WITH OUR SERVICES? YES NO
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 4681.50
 TOTAL: 3851.84

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR: David Edgell APPROVAL: _____
 Thank You

SWIFT Services, Inc.

DATE 7-15-19 PAGE NO. _____

JOB LOG

CUSTOMER Downing-Nelson WELL NO. 1-26 LEASE Tanna Reidel JOB TYPE Shallow Surf. TICKET NO. 27629

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1830							On location
								8 5/8 CS9 TD-222 Set c 221.15
	1900							Break Circ on Bottom
	1910	4	5			150		pump wtr spacer
		4	36			150		pump out
		4	0			100		START Disp
		4	2			150		Out Circulating
	1930	4	12.75			200		END Disp
								Circulated 40 sls Out to pit
								Job Complete
								Thanks Darius, Zach, & Kirby

Marc A. Downing
Consulting Petroleum Geologist

Geologic Report
Drilling Time and Sample Log

Operator Downing-Nelson Oil Co., Inc.		Elevation KB 2388 DF 2386 GL 2380	
Lease Tammy Riedel		No. 1-26	
API# 15-195-23089-0000		Casing Record Surface 8 5/8" @ 222'	
Field Wakeoney		Production 5 1/2" @ 4057'	
Location 1555' FNL & 1755' FWL			
Electrical Surveys CNDL, DIL MEL			
Sec. 26	Twp. 11s	Rge. 23w	
County Trego		State Kansas	
Formation	Sample tops	Log Tops	Datum Struct Comp
Top Anhydrite	1847	1848	+540 -12
Base Anhydrite	1889	1892	+496 -14
Topeka	3384	3383	-995 -5
Heebner	3604	3603	-1215 -9
Toronto	3625	3625	-1237 -9
LKC	3639	3639	-1251 -11
BKC	3870	3869	-1481 -9
Marmaton	3980	3980	-1592 -10
Cherokee Sh	4024	NA	-1636 -9
Total Depth	4057	4058	-1670

Drilling Contractor Discovery Drilling, Rig #4		Completed 7-22-19	
Commenced 7-15-19		To RTD	
Samples Saved From 3350		To RTD	
Drilling Time Kept From 3250		To RTD	
Samples Examined From 3350		To RTD	
Geological Supervision From 3350		To RTD	

Reference Well For Structural Comparison **DNOCI - Tammy 'A' #1**
2370' FNL & 2225' FWL, Sec. 26-11s-23w

Respectfully Submitted,
 Marc A. Downing

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 shale, red
 shale, gray
 Limestone Sandstone
 Limestone Chert dark
 Chert white

ACCESSORIES
 Stringer Sandstone
 Stringer Chert dark
 Stringer Chert white

OTHER SYMBOLS
 DST Int
 DST alt
 Core
 Tail pipe
 Even Stn
 Spotted Stn 50 - 75 %
 Spotted Stn 25 - 50 %
 Questionable Stn
 Dead Oil Stn
 Fluorescence

OIL SHOWS
 Even Stn
 Spotted Stn 50 - 75 %
 Spotted Stn 25 - 50 %
 Questionable Stn
 Dead Oil Stn
 Fluorescence

MINERAL
 Chert dark
 Sandy
 Chert white

STRINGER
 Sandstone
 Chert dark
 Chert white

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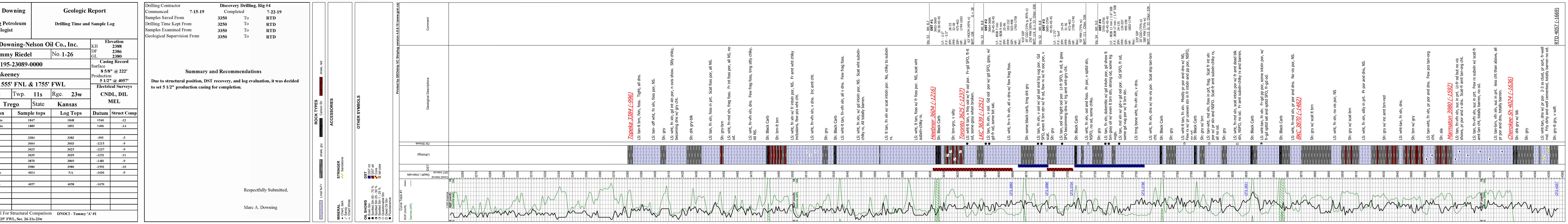
STRINGER
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 Chert dark
 Chert white

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 Core
 Tail pipe

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 Spotted Stn 25 - 50 %
 Questionable Stn
 Dead Oil Stn
 Fluorescence

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 Chert dark
 Sandy
 Chert white

STRINGER
 Sandstone
 Chert dark
 Chert white





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Tammy Riedel #1-26

26-11S-23W Trego,KS

Start Date: 2019.07.21 @ 12:12:04

End Date: 2019.07.21 @ 18:50:25

Job Ticket #: 64484 DST #: 4

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

Printed: 2019.07.23 @ 11:12:00



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64484

DST#: 4

ATTN: Al Dow ning

Test Start: 2019.07.21 @ 12:12:04

GENERAL INFORMATION:

Formation: **LKC "E-G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:40:40

Time Test Ended: 18:50:25

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3705.00 ft (KB) To 3756.00 ft (KB) (TVD)

Reference Elevations: 2388.00 ft (KB)

Total Depth: 3756.00 ft (KB) (TVD)

2380.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8700

Outside

Press@RunDepth: 207.35 psig @ 3706.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.21

End Date:

2019.07.21

Last Calib.:

2019.07.21

Start Time:

12:12:05

End Time:

18:50:25

Time On Btm:

2019.07.21 @ 13:40:25

Time Off Btm:

2019.07.21 @ 16:42:25

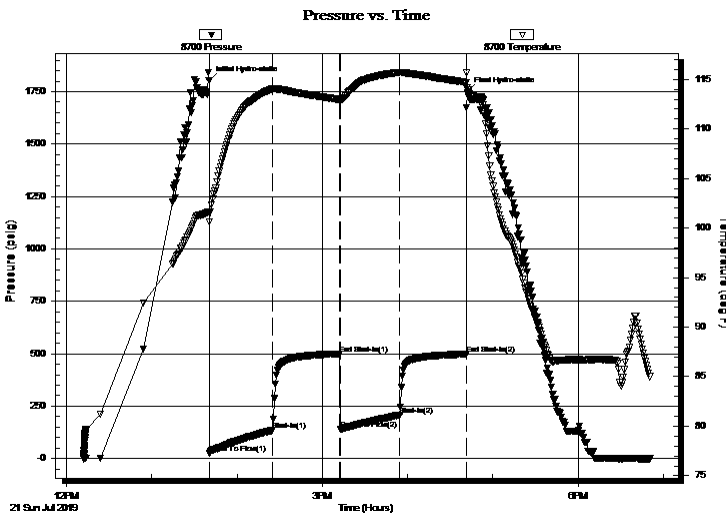
TEST COMMENT: 45- IF- BOB 11 mins. Built to 25.88"

45- IS- Slow ly built to 1.60"

45- FF- BOB 17 mins. Built to 25.89"

45- FS- Slow ly built to 1.42"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1802.07	101.62	Initial Hydro-static
1	24.00	100.62	Open To Flow (1)
45	134.50	114.07	Shut-In(1)
92	499.42	112.94	End Shut-In(1)
93	138.87	112.97	Open To Flow (2)
135	207.35	115.69	Shut-In(2)
181	497.60	114.67	End Shut-In(2)
182	1748.01	113.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
380.00	MW, 25%M 75%W	5.09
30.00	CGO, 25%G 75%O	0.43
0.00	220' 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.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64484

DST#: 4

ATTN: Al Dow ning

Test Start: 2019.07.21 @ 12:12:04

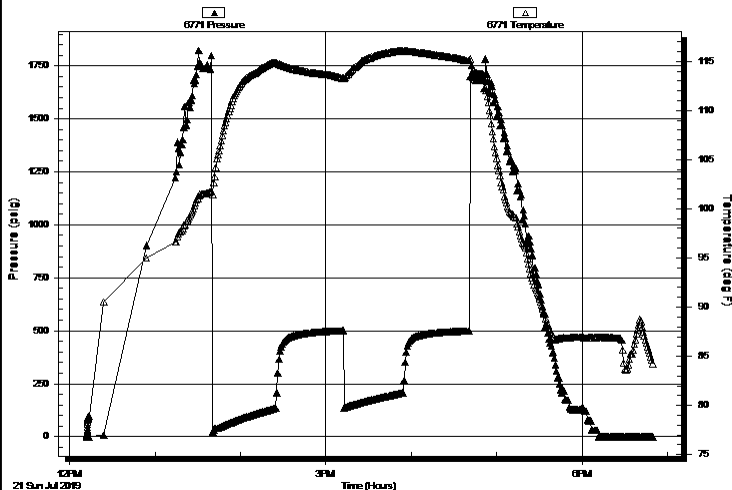
GENERAL INFORMATION:

Formation: **LKC "E-G"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:40:40
Time Test Ended: 18:50:25
Interval: **3705.00 ft (KB) To 3756.00 ft (KB) (TVD)**
Total Depth: 3756.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches
Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Brannan Lonsdale
Unit No: 73
Reference Elevations: 2388.00 ft (KB)
2380.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6771 **Inside**
Press@RunDepth: psig @ 3706.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2019.07.21 End Date: 2019.07.21 Last Calib.: 2019.07.21
Start Time: 12:12:01 End Time: 18:50:06 Time On Btm:
Time Off Btm:

TEST COMMENT: 45- IF- BOB 11 mins. Built to 25.88"
45- IS- Slow ly built to 1.60"
45- FF- BOB 17 mins. Built to 25.89"
45- FS- Slow ly built to 1.42"

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
380.00	MW, 25%M 75%W	5.09
30.00	CGO, 25%G 75%O	0.43
0.00	220' 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.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64484

DST#: 4

ATTN: Al Dow ning

Test Start: 2019.07.21 @ 12:12:04

Tool Information

Drill Pipe:	Length: 3677.00 ft	Diameter: 3.82 inches	Volume: 52.12 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume:</u> - bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3705.00 ft			Final	61000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	51.00 ft				
Tool Length:	71.00 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			3686.00	
Shut In Tool	5.00			3691.00	
Hydraulic tool	5.00			3696.00	
Packer	5.00			3701.00	20.00 Bottom Of Top Packer
Packer	4.00			3705.00	
Stubb	1.00			3706.00	
Recorder	0.00	6771	Inside	3706.00	
Recorder	0.00	8700	Outside	3706.00	
Perforations	13.00			3719.00	
Change Over Sub	1.00			3720.00	
Drill Pipe	32.00			3752.00	
Change Over Sub	1.00			3753.00	
Bullnose	3.00			3756.00	51.00 Bottom Packers & Anchor

Total Tool Length: 71.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64484

DST#: 4

ATTN: Al Dow ning

Test Start: 2019.07.21 @ 12:12:04

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

52000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 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 bbbl
380.00	MW, 25%M 75%W	5.090
30.00	CGO, 25%G 75%O	0.425
0.00	220' GIP	0.000

Total Length: 410.00 ft Total Volume: 5.515 bbl

Num Fluid Samples: 0

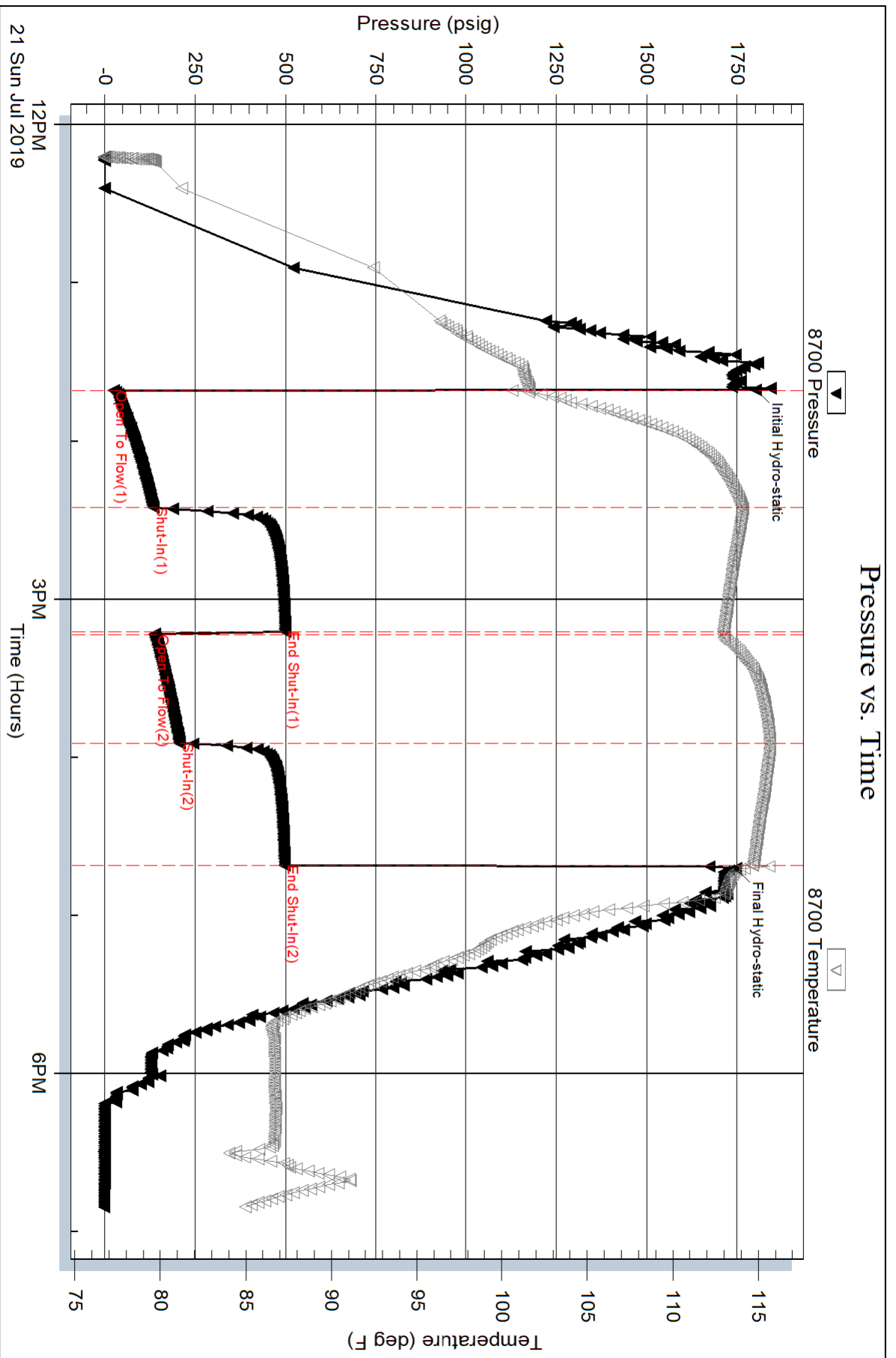
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .12@75deg



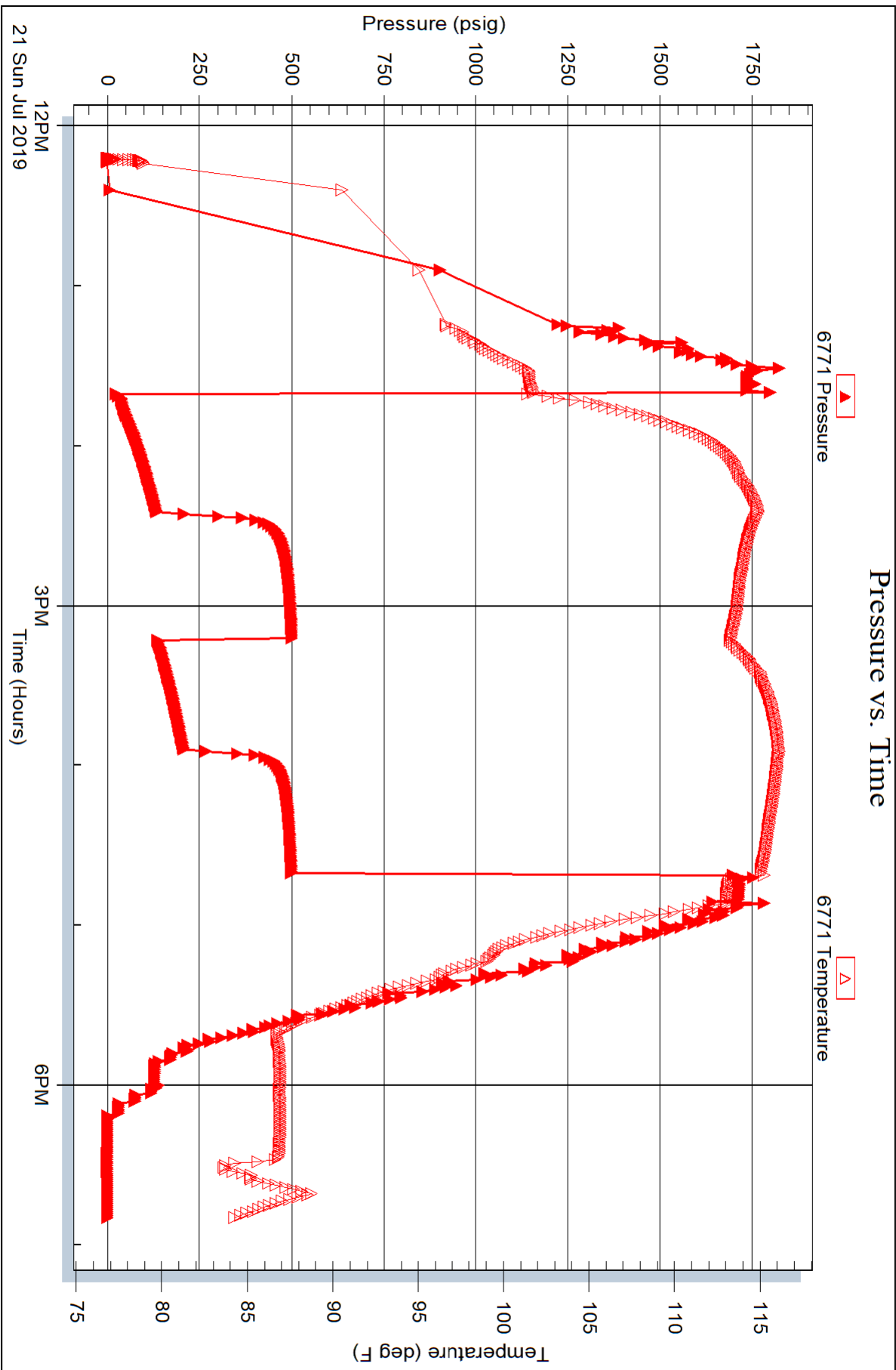
Serial #: 6771

Inside

Dow niny-Nelson Oil Co., Inc.

Tammy Riedel #1-26

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 64484

Printed: 2019.07.23 @ 11:12:01



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Tammy Riedel #1-26

26-11S-23W Trego,KS

Start Date: 2019.07.19 @ 16:11:23

End Date: 2019.07.19 @ 23:34:29

Job Ticket #: 64481 DST #: 1

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

Printed: 2019.07.23 @ 11:15:04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64481

DST#: 1

ATTN: Al Dow ning

Test Start: 2019.07.19 @ 16:11:23

GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:06:44

Time Test Ended: 23:34:29

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **3602.00 ft (KB) To 3660.00 ft (KB) (TVD)**

Reference Elevations: 2388.00 ft (KB)

Total Depth: 3660.00 ft (KB) (TVD)

2380.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8700 Outside

Press@RunDepth: 38.31 psig @ 3603.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.19 End Date: 2019.07.19

Last Calib.: 2019.07.19

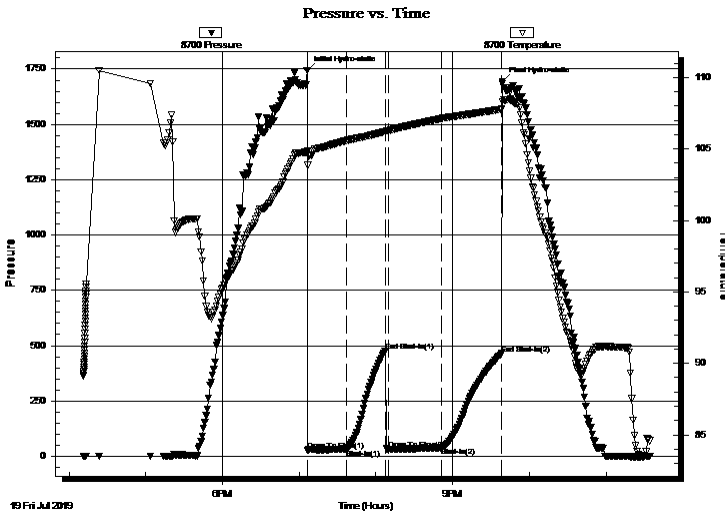
Start Time: 16:11:24 End Time: 23:34:29

Time On Btm: 2019.07.19 @ 19:06:29

Time Off Btm: 2019.07.19 @ 21:38:59

TEST COMMENT: 30- IF- Slow ly built to 2.46"
30- IS- No blow
45- FF- Slow ly built to 5.45"
45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1743.89	104.86	Initial Hydro-static
1	27.86	103.86	Open To Flow (1)
31	32.57	105.58	Shut-In(1)
61	475.46	106.21	End Shut-In(1)
64	32.05	106.29	Open To Flow (2)
105	38.31	107.13	Shut-In(2)
152	463.21	107.78	End Shut-In(2)
153	1692.28	108.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	HOCM, 45%O 55%M	0.60

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

ATTN: Al Dow ning

Job Ticket: 64481

DST#: 1

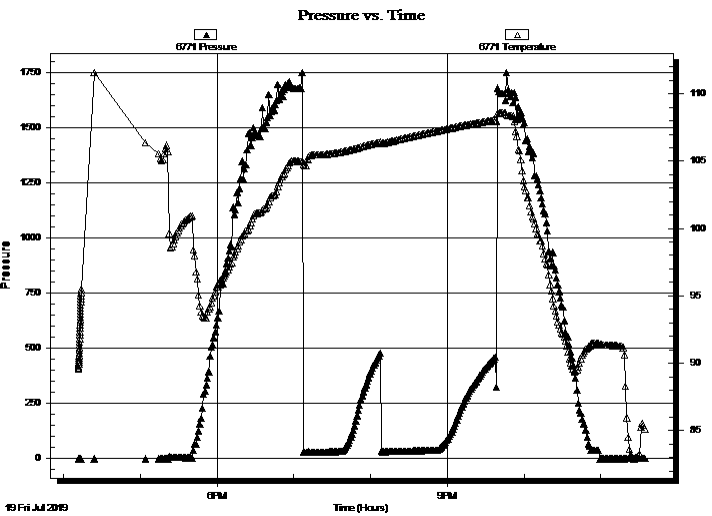
Test Start: 2019.07.19 @ 16:11:23

GENERAL INFORMATION:

Formation: Toronto - LKC "A"			Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock:	ft (KB)		Tester: Brannan Lonsdale
Time Tool Opened: 19:06:44			Unit No: 73
Time Test Ended: 23:34:29			Reference Elevations: 2388.00 ft (KB)
Interval: 3602.00 ft (KB) To 3660.00 ft (KB) (TVD)			2380.00 ft (CF)
Total Depth: 3660.00 ft (KB) (TVD)			KB to GR/CF: 8.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Poor		

Serial #: 6771	Inside		
Press@RunDepth: psig @	3603.00 ft (KB)	Capacity:	8000.00 psig
Start Date: 2019.07.19	End Date: 2019.07.19	Last Calib.:	2019.07.19
Start Time: 16:11:32	End Time: 23:34:37	Time On Btm:	
		Time Off Btm:	

TEST COMMENT: 30- IF- Slow ly built to 2.46"
30- IS- No blow
45- FF- Slow ly built to 5.45"
45- FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	HOCM, 45%O 55%M	0.60

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.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64481

DST#: 1

ATTN: Al Dow ning

Test Start: 2019.07.19 @ 16:11:23

Tool Information

Drill Pipe:	Length: 3582.00 ft	Diameter: 3.82 inches	Volume: 50.78 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3602.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	58.00 ft			
Tool Length:	78.00 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			3583.00	
Shut In Tool	5.00			3588.00	
Hydraulic tool	5.00			3593.00	
Packer	5.00			3598.00	20.00 Bottom Of Top Packer
Packer	4.00			3602.00	
Stubb	1.00			3603.00	
Recorder	0.00	6771	Inside	3603.00	
Recorder	0.00	8700	Outside	3603.00	
Perforations	20.00			3623.00	
Change Over Sub	1.00			3624.00	
Drill Pipe	32.00			3656.00	
Change Over Sub	1.00			3657.00	
Bullnose	3.00			3660.00	58.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64481

DST#: 1

ATTN: Al Dow ning

Test Start: 2019.07.19 @ 16:11:23

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	HOCM, 45%O 55%M	0.597

Total Length: 63.00 ft Total Volume: 0.597 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

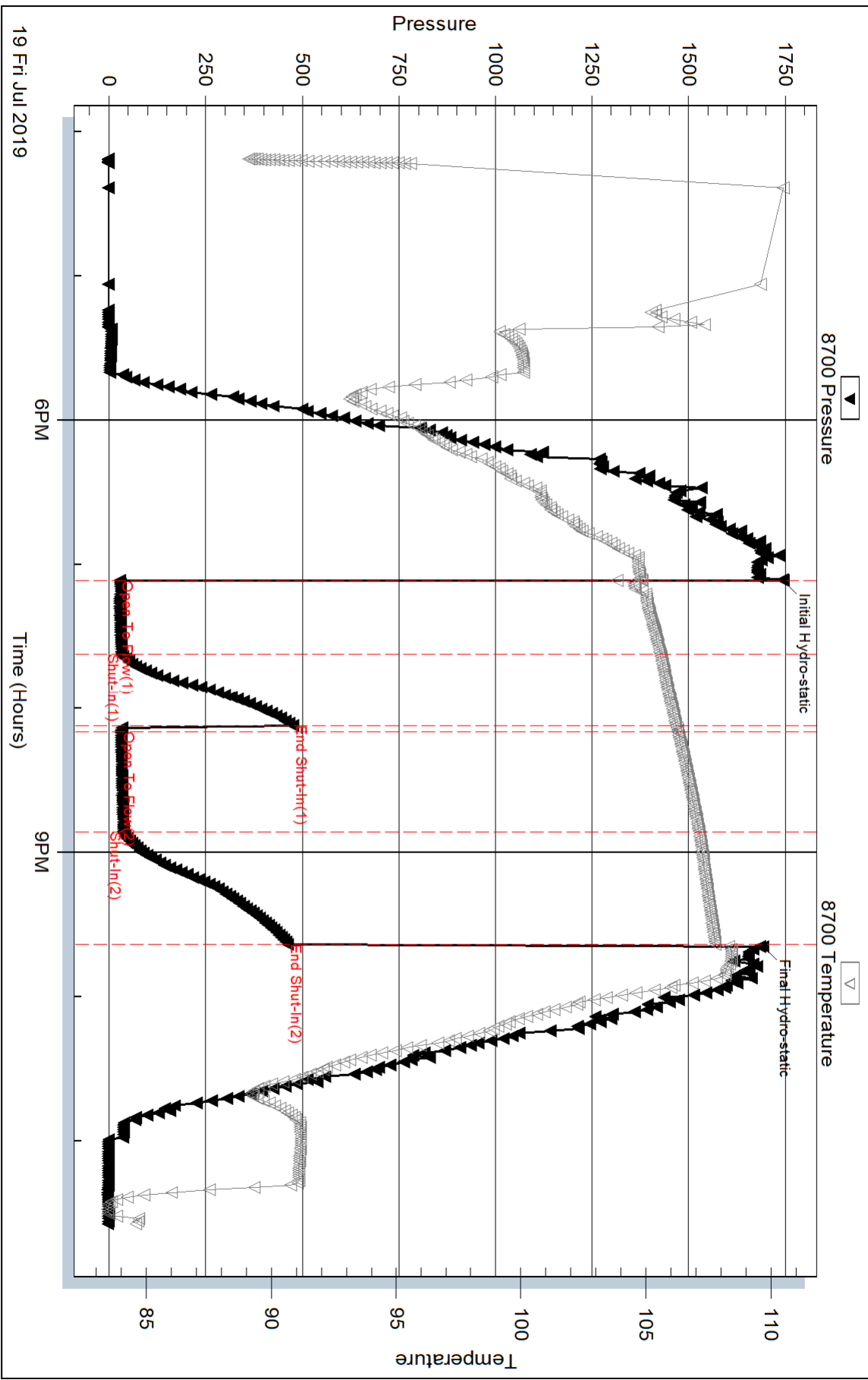
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



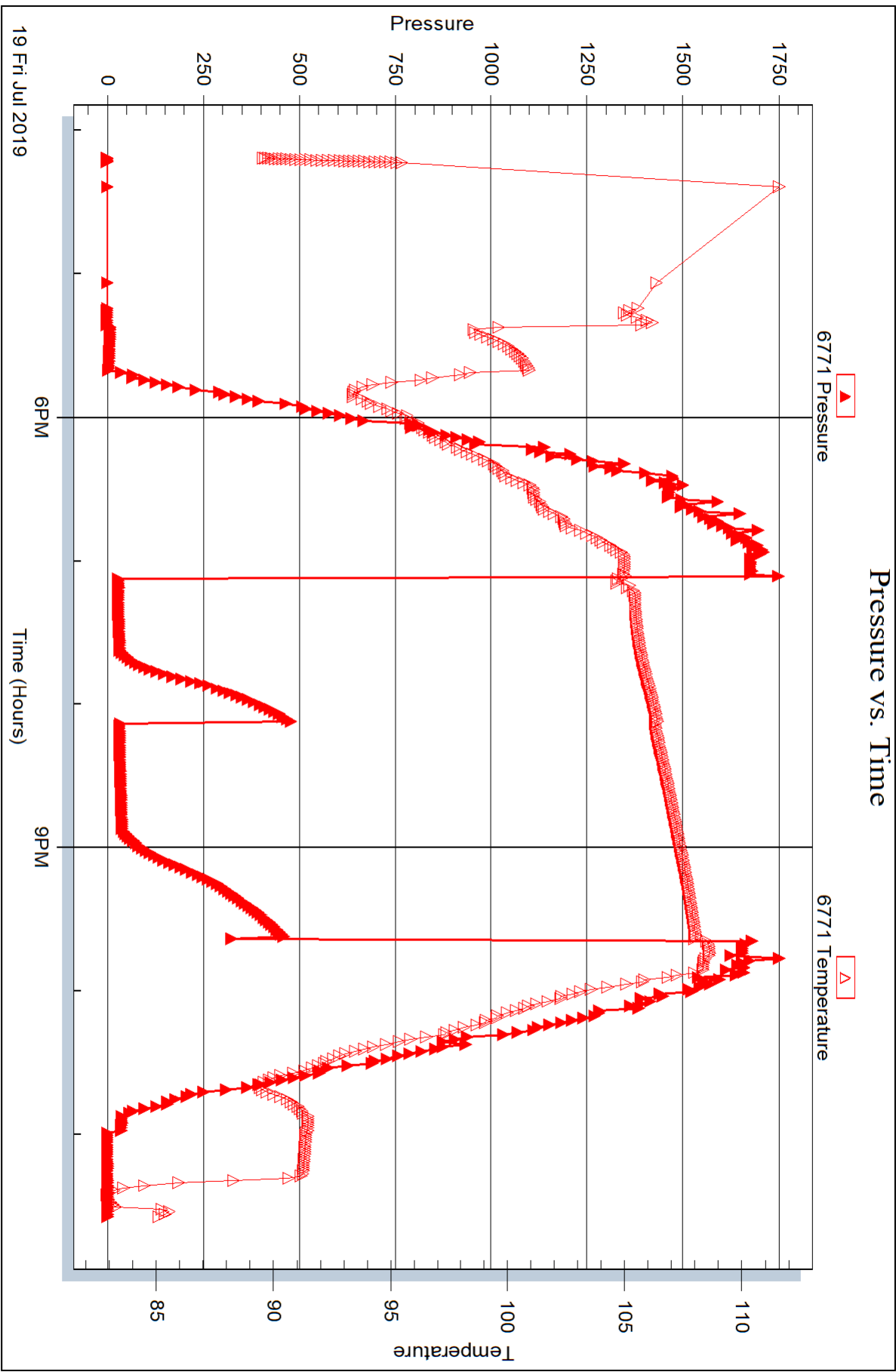
Serial #: 6771

Inside

Dow nting-Nelson Oil Co., Inc.

Tammy Riedel #1-26

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Tammy Riedel #1-26

26-11S-23W Trego,KS

Start Date: 2019.07.20 @ 06:57:24

End Date: 2019.07.20 @ 13:16:15

Job Ticket #: 64482 DST #: 2

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

Printed: 2019.07.23 @ 11:12:53



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

ATTN: Al Dow ning

Job Ticket: 64482

DST#: 2

Test Start: 2019.07.20 @ 06:57:24

GENERAL INFORMATION:

Formation: **LKC "C"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:49:45
 Time Test Ended: 13:16:15
 Interval: **3664.00 ft (KB) To 3686.00 ft (KB) (TVD)**
 Total Depth: 3686.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2388.00 ft (KB)
 2380.00 ft (CF)
 KB to GR/CF: 8.00 ft

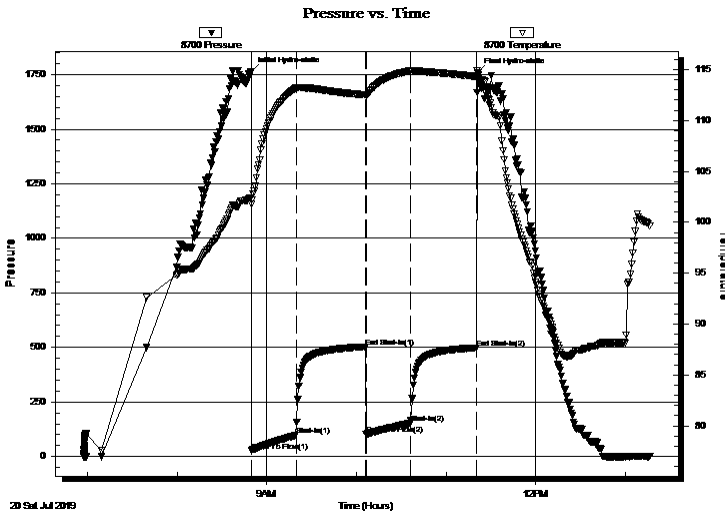
Serial #: 8700

Outside

Press@RunDepth: 152.31 psig @ 3665.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.07.20 End Date: 2019.07.20 Last Calib.: 2019.07.20
 Start Time: 06:57:25 End Time: 13:16:15 Time On Btm: 2019.07.20 @ 08:49:30
 Time Off Btm: 2019.07.20 @ 11:21:15

TEST COMMENT: 30- IF- BOB 7 mins. Built to 30.10"
 45- IS- Slow ly built to 1.76"
 30- FF- BOB 9 mins. Built to 27.29"
 45- FS- Slow ly built to 3.01"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1765.02	102.46	Initial Hydro-static
1	25.29	101.74	Open To Flow (1)
30	96.26	113.19	Shut-In(1)
77	502.86	112.52	End Shut-In(1)
77	102.20	112.47	Open To Flow (2)
107	152.31	114.88	Shut-In(2)
151	498.26	114.33	End Shut-In(2)
152	1758.41	114.11	Final Hydro-static

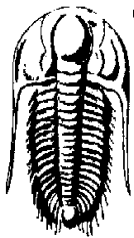
Recovery

Length (ft)	Description	Volume (bbl)
250.00	MW, 10%M 90%W	3.25
30.00	CGO, 15%G 85%O	0.43
0.00	410' 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.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64482

DST#: 2

ATTN: Al Dow ning

Test Start: 2019.07.20 @ 06:57:24

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:49:45

Time Test Ended: 13:16:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3664.00 ft (KB) To 3686.00 ft (KB) (TVD)

Total Depth: 3686.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2388.00 ft (KB)

2380.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 3665.00 ft (KB)

Start Date: 2019.07.20

End Date: 2019.07.20

Start Time: 06:57:37

End Time: 13:16:12

Capacity: 8000.00 psig

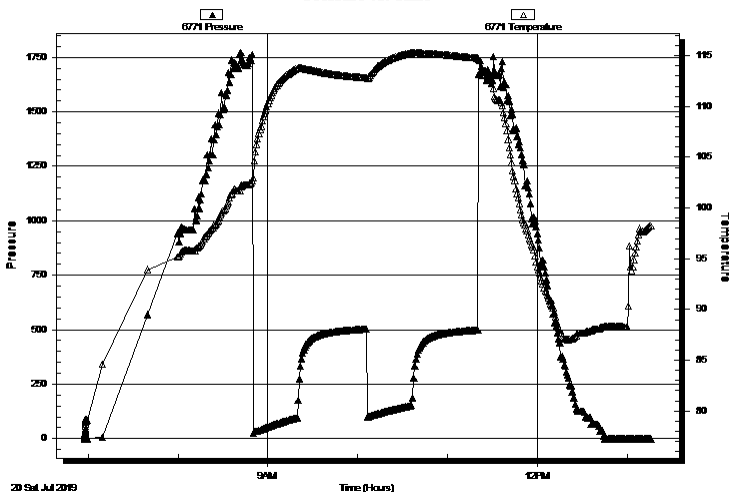
Last Calib.: 2019.07.20

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- IF- BOB 7 mins. Built to 30.10"
45- IS- Slow ly built to 1.76"
30- FF- BOB 9 mins. Built to 27.29"
45- FS- Slow ly built to 3.01"

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
250.00	MW, 10%M 90%W	3.25
30.00	CGO, 15%G 85%O	0.43
0.00	410' 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.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64482

DST#: 2

ATTN: Al Dow ning

Test Start: 2019.07.20 @ 06:57:24

Tool Information

Drill Pipe:	Length: 3614.00 ft	Diameter: 3.82 inches	Volume: 51.23 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	2.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3664.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	22.00 ft			
Tool Length:	42.00 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			3645.00	
Shut In Tool	5.00			3650.00	
Hydraulic tool	5.00			3655.00	
Packer	5.00			3660.00	20.00 Bottom Of Top Packer
Packer	4.00			3664.00	
Stubb	1.00			3665.00	
Recorder	0.00	6771	Inside	3665.00	
Recorder	0.00	8700	Outside	3665.00	
Perforations	18.00			3683.00	
Bullnose	3.00			3686.00	22.00 Bottom Packers & Anchor
Total Tool Length:	42.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64482

DST#: 2

ATTN: Al Dow ning

Test Start: 2019.07.20 @ 06:57:24

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

65000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
250.00	MW, 10%M 90%W	3.248
30.00	CGO, 15%G 85%O	0.425
0.00	410' GIP	0.000

Total Length: 280.00 ft Total Volume: 3.673 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

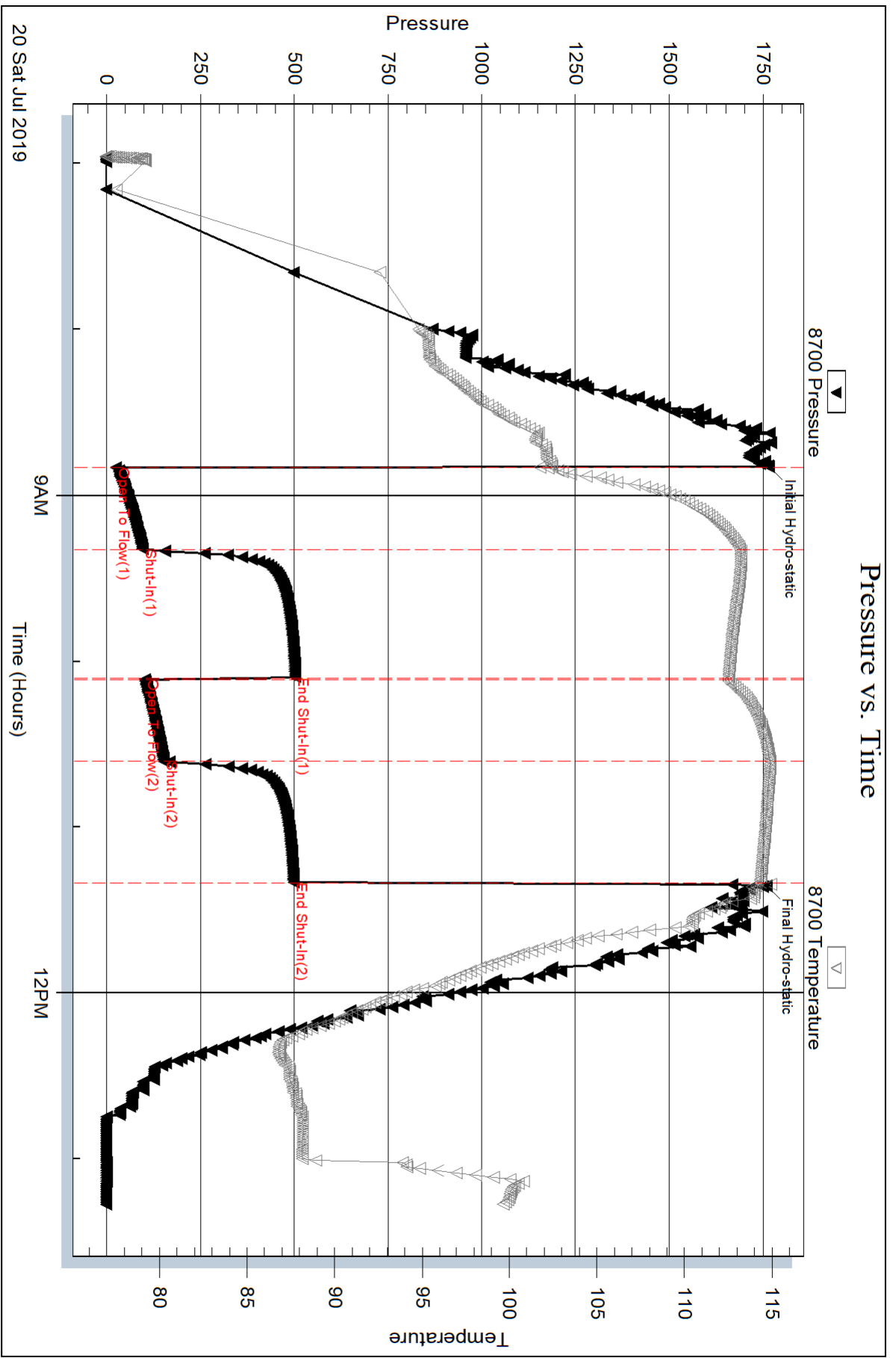
Recovery Comments: RW: .07@98deg

Serial #: 8700

Outside Dow nting-Nelson Oil Co., Inc.

Tammy Riedel #1-26

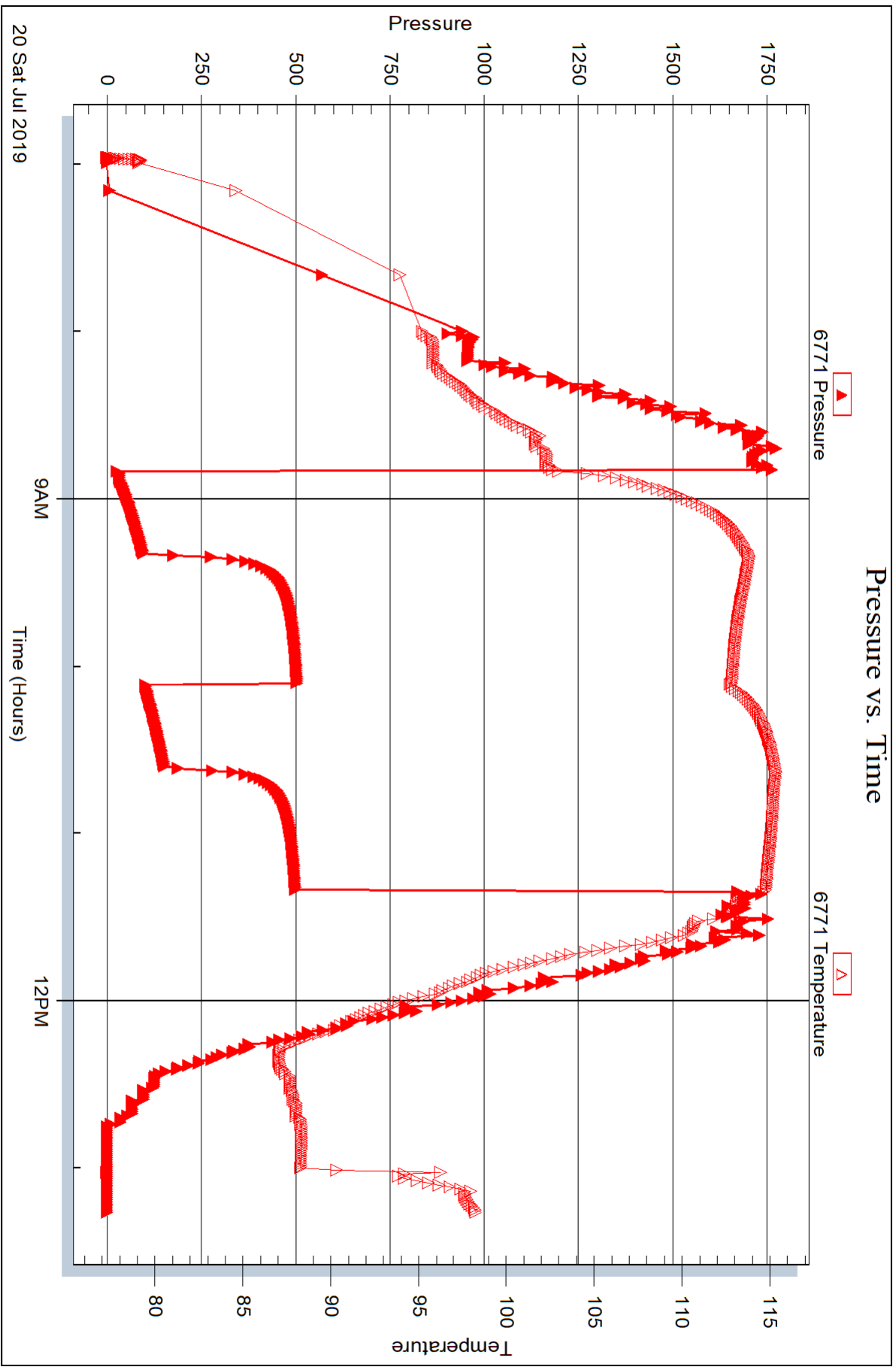
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64482

Printed: 2019.07.23 @ 11:12:55





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Tammy Riedel #1-26

26-11S-23W Trego,KS

Start Date: 2019.07.20 @ 19:50:07

End Date: 2019.07.21 @ 03:19:58

Job Ticket #: 64483 DST #: 3

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

Printed: 2019.07.23 @ 11:12:32



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64483

DST#: 3

ATTN: Al Dow ning

Test Start: 2019.07.20 @ 19:50:07

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:42:43

Time Test Ended: 03:19:58

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3685.00 ft (KB) To 3704.00 ft (KB) (TVD)

Reference Elevations: 2388.00 ft (KB)

Total Depth: 3704.00 ft (KB) (TVD)

2380.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8700

Outside

Press@RunDepth: 35.64 psig @ 3686.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.20

End Date:

2019.07.21

Last Calib.:

2019.07.21

Start Time: 19:50:08

End Time:

03:19:58

Time On Btm:

2019.07.20 @ 22:42:28

Time Off Btm:

2019.07.21 @ 01:43:43

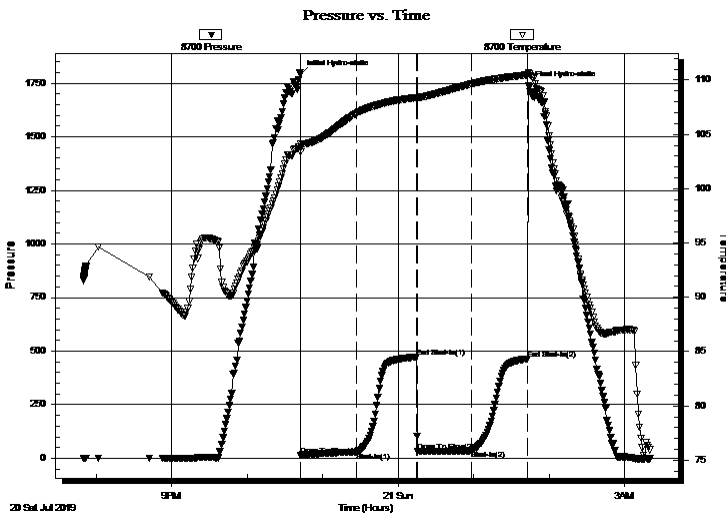
TEST COMMENT: 45- IF- Slow ly built to 2.82"

45- IS- No blow

45- FF- Surface blow

45- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1789.66	104.12	Initial Hydro-static
1	13.94	103.40	Open To Flow (1)
45	28.59	106.95	Shut-In(1)
93	472.30	108.38	End Shut-In(1)
94	31.49	108.41	Open To Flow (2)
136	35.64	109.64	Shut-In(2)
181	463.39	110.47	End Shut-In(2)
182	1739.51	110.71	Final Hydro-static

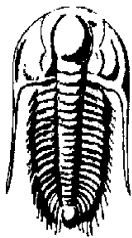
Recovery

Length (ft)	Description	Volume (bbl)
50.00	MW, 25%M 75%W	0.41

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.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

ATTN: Al Dow ning

Job Ticket: 64483

DST#: 3

Test Start: 2019.07.20 @ 19:50:07

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:42:43

Time Test Ended: 03:19:58

Interval: 3685.00 ft (KB) To 3704.00 ft (KB) (TVD)

Total Depth: 3704.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Reference Elevations: 2388.00 ft (KB)

2380.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 3686.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.20 End Date: 2019.07.21

Last Calib.: 2019.07.21

Start Time: 19:50:24 End Time: 03:20:14

Time On Btm:

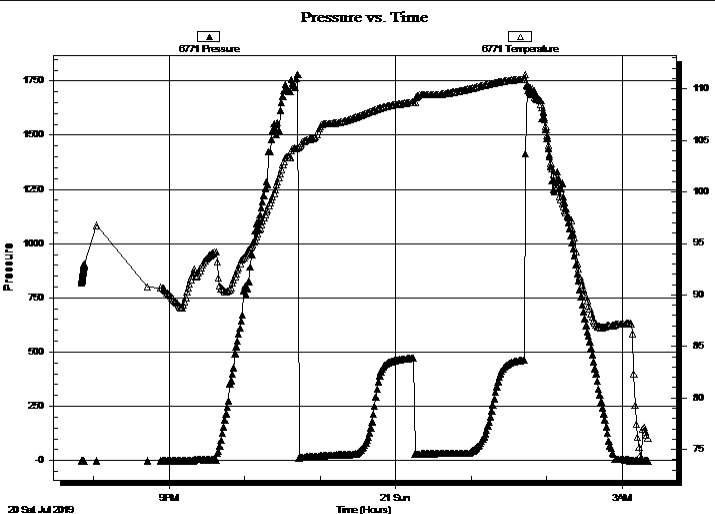
Time Off Btm:

TEST COMMENT: 45- IF- Slow ly built to 2.82"

45- ISl- No blow

45- FF- Surface blow

45- FSl- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
50.00	MW, 25%M 75%W	0.41

* 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.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64483

DST#: 3

ATTN: Al Dow ning

Test Start: 2019.07.20 @ 19:50:07

Tool Information

Drill Pipe:	Length: 3645.00 ft	Diameter: 3.82 inches	Volume: 51.67 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3685.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	19.00 ft			
Tool Length:	39.00 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			3666.00	
Shut In Tool	5.00			3671.00	
Hydraulic tool	5.00			3676.00	
Packer	5.00			3681.00	20.00 Bottom Of Top Packer
Packer	4.00			3685.00	
Stubb	1.00			3686.00	
Recorder	0.00	6771	Inside	3686.00	
Recorder	0.00	8700	Outside	3686.00	
Perforations	15.00			3701.00	
Bullnose	3.00			3704.00	19.00 Bottom Packers & Anchor
Total Tool Length:	39.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

26-11S-23W Trego,KS

PO Box 1019
Hays, KS 67601

Tammy Riedel #1-26

Job Ticket: 64483

DST#: 3

ATTN: Al Dow ning

Test Start: 2019.07.20 @ 19:50:07

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:

55000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	MW, 25%M 75%W	0.413

Total Length: 50.00 ft Total Volume: 0.413 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .12@70deg

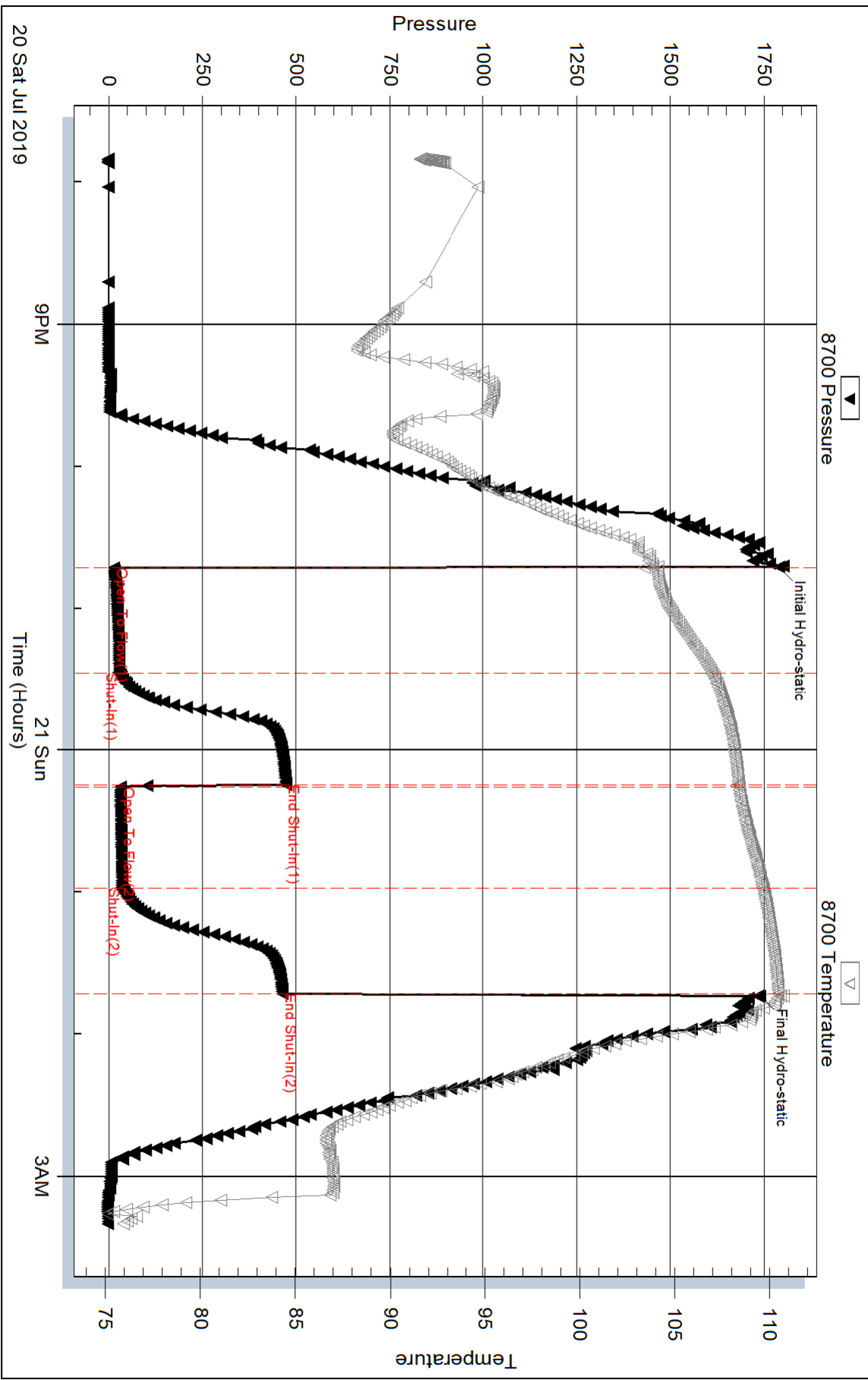
Serial #: 8700

Outside Dow nting-Nelson Oil Co., Inc.

Tammy Riedel #1-26

DST Test Number: 3

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 64483

Printed: 2019.07.23 @ 11:12:33

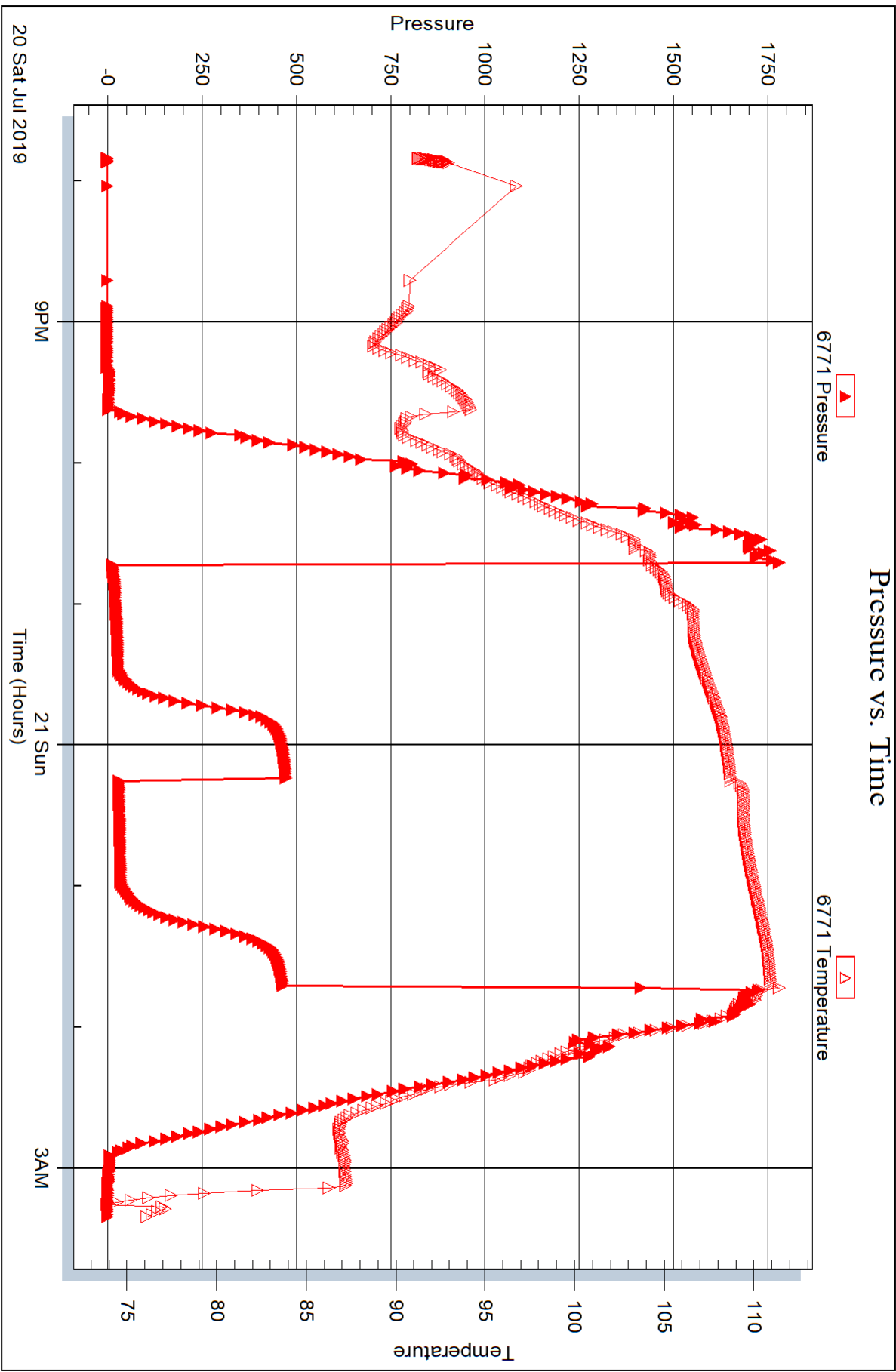
Serial #: 6771

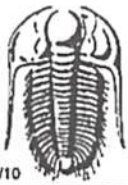
Inside

Dow n/mg-Nelson Oil Co., Inc.

Tammy Riedel #1-26

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64481

Well Name & No. Jammy Riedel #1-26 Test No. 1 Date 7/19/19
 Company Downing-Nelson Oil Co., Inc Elevation 2380 KB 2388 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery 4
 Location: Sec. 26 Twp 11 S Rge. 23 W Co. Trego State KS

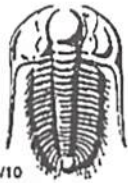
Interval Tested 3602-3660 Zone Tested Toronto + LKC "A"
 Anchor Length 58' Drill Pipe Run 3582 Mud Wt. 8.7
 Top Packer Depth 3597 Drill Collars Run 32 Vis 53
 Bottom Packer Depth 3602 Wt. Pipe Run _____ WL 8.0
 Total Depth 3660 Chlorides 4,000 ppm System LCM 2 1/2"
 Blow Description IF - slowly built to 2.46"
FSI - No blow
FF - slowly built to 5.45"
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>HOCXA</u>		<u>45</u>		<u>55</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 63' BHT 108° Gravity 28 API RW ✓ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1744</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>1545</u>
(B) First Initial Flow <u>28</u>	<input type="checkbox"/> Jars _____	T-Started <u>1611</u>
(C) First Final Flow <u>33</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>1907</u>
(D) Initial Shut-In <u>475</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>2137</u>
(E) Second Initial Flow <u>32</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2336</u>
(F) Second Final Flow <u>38</u>	<input checked="" type="checkbox"/> Mileage <u>84RT</u> 84	Comments _____
(G) Final Shut-In <u>463</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1692</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby _____	Total <u>1284</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1284</u>	

Approved By _____ Our Representative Brannan Longdale
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64482

Well Name & No. Tammy Riedel #1-26 Test No. 2 Date 7/20/19
 Company Downing-Nelson Oil Co, Inc. Elevation 2380 KB 2388 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery 4
 Location: Sec. 26 Twp 11 S Rge. 23 W Co. Trego State KS

Interval Tested 3664-3686 Zone Tested LKC "C"
 Anchor Length 22' Drill Pipe Run 3614 Mud Wt. 8.8
 Top Packer Depth 3659 Drill Collars Run 32 Vis 53
 Bottom Packer Depth 3664 Wt. Pipe Run _____ WL 8.0
 Total Depth 3686 Chlorides 4000 ppm System LCM 2 1/2"

Blow Description IF - BOB 7mins. Built to 30.10"
ISI - Slowly built to 1.76"
FF - BOB 9mins. Built to 27.29"
FSTI - Slowly built to 3.01"

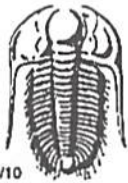
Rec	Feet of	%gas	%oil	%water	%mud
<u>250</u>	<u>MW</u>		<u>90</u>	<u>10</u>	
<u>30</u>	<u>CCO</u>	<u>15</u>	<u>85</u>		
	<u>410' WIP</u>				

Rec Total 280' BHT 114° Gravity 33 API RW 07 @ 98 °F Chlorides 65,000 ppm
 (A) Initial Hydrostatic 1765 Test 1200 T-On Location 0642
 (B) First Initial Flow 25 Jars _____ T-Started 0657
 (C) First Final Flow 96 Safety Joint _____ T-Open 0850
 (D) Initial Shut-In 503 Circ Sub _____ T-Pulled 1120
 (E) Second Initial Flow 102 Hourly Standby _____ T-Out 1318
 (F) Second Final Flow 152 Mileage 84 RT 84 Comments _____
 (G) Final Shut-In 498 Sampler _____
 (H) Final Hydrostatic 1758 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1284
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1284

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45

Approved By _____ Our Representative Braman Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64483

Well Name & No. Tommy Riedel #1-26 Test No. 3 Date 7/20/19
 Company Downing-Nelson Oil Co, Inc Elevation 2388 KB 2380 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery 4
 Location: Sec. 26 Twp 11 S Rge. 23 W Co. Trego State KS

Interval Tested 3685-3704 Zone Tested LKC "D"
 Anchor Length 19' Drill Pipe Run 3645 Mud Wt. 8.8
 Top Packer Depth 3680 Drill Collars Run 37 Vis 52
 Bottom Packer Depth 3685 Wt. Pipe Run --- WL 8.0
 Total Depth 3704 Chlorides 4000 ppm System LCM 2 1/2 #
 Blow Description IF - slowly built to 2.82"
ISF - No blow
FF - Surface blow
FSF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>50</u>	<u>MW</u>			<u>75</u>	<u>25</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 50' BHT 111° Gravity --- API RW 12 @ 70° F Chlorides 55000 ppm
 (A) Initial Hydrostatic 1790 Test 1200 T-On Location 1935
 (B) First Initial Flow 14 Jars --- T-Started 1950
 (C) First Final Flow 29 Safety Joint --- T-Open 2243
 (D) Initial Shut-In 472 Circ Sub --- T-Pulled 7/21 0143
 (E) Second Initial Flow 31 Hourly Standby --- T-Out 0322
 (F) Second Final Flow 36 Mileage 84RT 84 Comments ---
 (G) Final Shut-In 463 Sampler ---
 (H) Final Hydrostatic 1740 Straddle ---
 Ruined Shale Packer ---
 Ruined Packer ---
 Extra Copies ---
 Initial Open 45 Shale Packer ---
 Initial Shut-In 45 Extra Packer ---
 Final Flow 45 Extra Recorder ---
 Final Shut-In 45 Day Standby ---
 Accessibility ---
 Sub Total 1284 Sub Total 0
 Total 1284 MP/DST Disc't ---

Approved By _____ Our Representative Brannan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64484

Well Name & No. Tammy Riedel #1-26 Test No. 4 Date 7/21/19
 Company Downing Nelson Oil Co, Inc. Elevation 2388 KB 2380 GL
 Address 90 Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery 4
 Location: Sec. 26 Twp 11 S Rge. 23 W Co. Trego State KS

Interval Tested 3705-3756 Zone Tested LKC "E-G"
 Anchor Length 51' Drill Pipe Run 3627 Mud Wt. 8.9
 Top Packer Depth 3700 Drill Collars Run 32 Vis 54
 Bottom Packer Depth 3705 Wt. Pipe Run _____ WL 7.6
 Total Depth 3756 Chlorides 5000 ppm System LCM 2 1/2"

Blow Description IF - BOB 11 mins. Built to 25.88"
IST - slowly built to 1.60"
FF - BOB 17 mins. Built to 25.89"
FST - slowly built to 1.42"

Rec	Feet of	%gas	%oil	%water	%mud
<u>380</u>	<u>MMV</u>			<u>75</u>	<u>25</u>
<u>30</u>	<u>CGO</u>	<u>25</u>	<u>75</u>		
	<u>220' GIP</u>				

Rec Total 410' BHT 115° Gravity 33 API RW 12 @ 75° F Chlorides 52,000 ppm

(A) Initial Hydrostatic 1802 Test 1200 T-On Location 1155
 (B) First Initial Flow 24 Jars _____ T-Started 1212
 (C) First Final Flow 135 Safety Joint _____ T-Open 1340
 (D) Initial Shut-In 499 Circ Sub _____ T-Pulled 1640
 (E) Second Initial Flow 139 Hourly Standby _____ T-Out 1850
 (F) Second Final Flow 207 Mileage 84 RT x 2 84+84 Comments Tools loaded
 (G) Final Shut-In 498 Sampler _____ 7/22 @ 2200
 (H) Final Hydrostatic 1748 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 1368
 Total 1368
 MP/DST Disc't _____

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SWIFT Services, Inc.

DATE PAGE NO.

7-23-19

CUSTOMER
Downing-Nelson

WELL NO.
1-26

LEASE
Tammey Riddel

JOB TYPE
Two Stage

TICKET NO.
27634

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	9:30							On location
								Csg - 5 1/2 x 14 #
								TD - 4057
								Set @ 4054, 14
								Shoe JT - 43.12 Baffle - 4011.02
								Centralizers - 1, 3, 5, 7, 9, 11, 52
								Basket - 53
								D.V. TOOL - 53 @ 1815.73
	11:00							Start Running Csg
	12:30							Break Circ on Bottom
	1:30	5	12			200		Pump mud flush - 500 gal
		5	20			200		Pump kcal spacer
		5	36			200		pump CMT - 150 sks @ 15.5 ppm
	1:25	6	0			0		WASH P/L - Drop plug
	1:45	6	98			800/400		START Disp
								land plug - 1/4" - 800 #
								land - 1400 #
		2.5	8			0		Drop D.V. opening tool
		2.5	4			0		plug rat Hole - 30 sks
	1:40					750		plug Mouse Hole - 15 sks
		6.25	0			200		Open D.V. TOOL
		6.25	95			200		START CMT @ 11.2 ppm - 170 sks
		5	105			200		Raise wt to 14 # for 25 sks
								END CMT
		5	0			0		Drop plug
	1:45	5	25			400		START Disp
		5	45			700/1500		Circ Cmt - 40 sks to Pit
								LAND plug - 1/4" - 700 psi
								LAND - 1500 psi
								JOB Complete
								Thanks
								David Zaul & Isaac