KOLAR Document ID: 1725787

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

07/13/2023 Spud Date or Recompletion Date
07/20/2023 Date Reached TD
09/14/2023 Completion Date or Recompletion Date

API No.: 15-145-21884-00-00
Spot Description:
NW - SE - SE - SE Sec. 8 Twp. 20 S. R. 20 ☐ East ☑ West
400 Feet from ☐ North / ☑ South Line of Section
575 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: Pawnee
Lease Name: BRENDA Well #: 2-8
Field Name:
Producing Formation: Mississippi
Elevation: Ground: 2186 Kelly Bushing: 2194
Total Vertical Depth: 4329 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1191 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: 64000 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** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** David Befort **Date:** 10/17/2023

Page Two

Operator Name: Downing-Nelson Oil Co Inc Lease Name: BRENDA Well #: 2-8

Sec. 8 Twp. 20 S. R. 20 ☐ East ☑ West County: Pawnee

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

Geologist Report / Mud Logs ☑ Yes ☐ No

List All E. Logs Run:

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

Name Top Datum
Attached Attached 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	12.25	8.625	23	1191	SMDC	350	-
Production	7.875	5.5	14	4326	EA/2	125	-

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	-			
	-			

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: 09/22/2023

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

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

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)*

PRODUCTION INTERVAL:

Top	Bottom
4326	4329

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
					500 gallons 15% INS

TUBING RECORD: Size: 2.875 Set At: 4328 Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	BRENDA 2-8
Doc ID	1725787

Tops

Name	Top	Datum
Top Anhydrite	1370'	+825
Base Anhydrite	1400'	+795
Herrington	2315'	-120
Heebner	3695'	-1500
LKC	3742'	-1547
BKC	4049'	-1854
Fort Scott	4226'	-2031
Cherokee Shale	4243'	-2048
Mississippi	4297'	-2102

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	BRENDA 2-8
Doc ID	1725787

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	1191	SMDC	350	-
Production	7.875	5.5	14	4326	EA/2	125	-

JOB LOG

SWIFT Services, Inc.

DATE 7/14/2023 | PAGE NO. 1

CUSTOMER: Downing + Nelson | WELL NO.: 2-8 | LEASE: Brenda | JOB TYPE: Deep Surface | TICKET NO.: 36077

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1015							On Location 8 5/8" 24 lb/ft
								RTD: 1192' TP: 1191'
								SJ: 42.15'
	1215							Start 8 5/8" Csg in Well
	1340							Break Circulation
	1900	4	5		✓		200	Pump 5 bbl H2O Spacer
		6	49		✓		150	Mix 100 sks of SMD @ 11.8 ppg
		6	60		✓		100	Mix 150 sks of SMD @ 12.5 ppg
		6	16		✓		100	Mix 50 sks of SMD @ 13.5 ppg
		6	13		✓		100	Mix 50 sks of SMD @ 14.5 ppg
								Release Top Plug
		6	0		✓		100	Begin Displacement
		6	59		✓		2300	* Circulate Cement to Surface *
								Max lift PSI
	1500	3	73.5		✓		200	Land Top Plug * Shut in *
								350 sks of SMD 1/4# Flo used
								Approx 30 sks to the Pit
								Thanks!
								Gideon Funk
								Tyler
								Jon

JOB LOG

SWIFT Services, Inc.

DATE 07/20/23 | PAGE NO. 1

CUSTOMER: Downing + Nelson | WELL NO.: 2-8 | LEASE: Brenda | JOB TYPE: Long String | TICKET NO.: 36255

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	2115							On location w/float Equipment
								RTD - 4329'
								Total Pipe Ran - 4328' set at 4325'
								5½" x 14#
								Shoe Jt - 26.21' Baffle - 4299'
								Centralizers, 1, 3, 5, 7, 9, 11
								Basket - 6
	0130							Start Casing w/FE
	0330							Break Circulation
							800	Set Packer shoe w/rig.
								Hook up to Swift
	0530	2½	7					Plug Rathole w/30 SKS
		2½	5					Plug Mousehole w/15 SKS
		5	12				500	Pump Mudflush
	0555	5	20				500	Pump KCL Spacer
		4½					500	Start Cement
		4½	36				Vac	Finish Cement
								Drop Plug, Washout Pump + Lines
	0615	8					300	Start Displacement
		¾	60				100	Slow Down, rig ran out of water
		6	85				500	Increase Rate
	0645	6	104				1000	Lift
		6	105				1800	Land Plug
								Release Truck, Dry
								Wash up
								Rack up
	0715							Job Complete
								Thanks
								Jon, Joe + John

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company Inc**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Brenda #2-8

8-20S-20W Pawnee, KS

Start Date: 2023.07.18 @ 19:57:00
End Date: 2023.07.19 @ 03:35:15
Job Ticket #: 70819 DST #: 1

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

Printed: 2023.07.21 @ 11:04:24

DRILL STEM TEST REPORT

Downing Nelson Oil Company Inc

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70819 **DST#: 1**

Test Start: 2023.07.18 @ 19:57:00

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:21:15
Time Test Ended: 03:35:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Day
Unit No: 70

Interval: 4240.00 ft (KB) To 4310.00 ft (KB) (TVD)
Total Depth: 4310.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

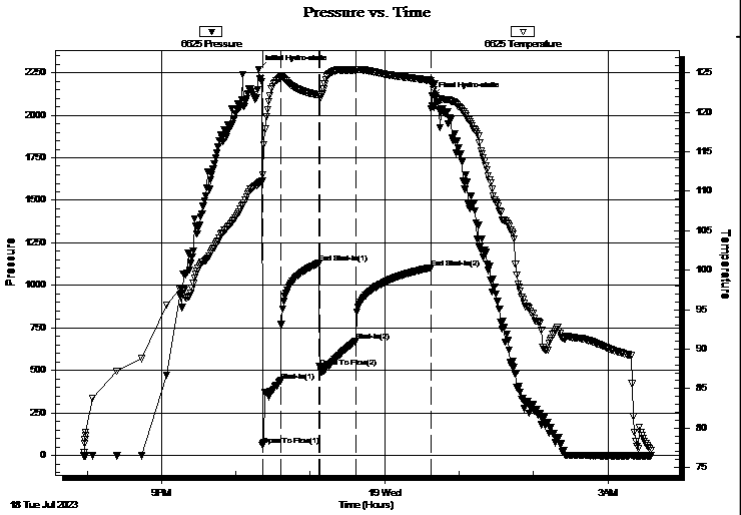
Reference Elevations: 2195.00 ft (KB)
2187.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth: 671.96 psig @ 4241.00 ft (KB)
Start Date: 2023.07.18 End Date: 2023.07.19
Start Time: 19:57:05 End Time: 03:35:14

Capacity: 8000.00 psig
Last Calib.: 2023.07.19
Time On Btm: 2023.07.18 @ 22:18:30
Time Off Btm: 2023.07.19 @ 00:38:15

TEST COMMENT: IF-15- BOB in 2 min, built to 75.77"
SI1-30- No return
FF-30- BOB in 2 min, built to 87.87"
SI2-60- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2269.10	111.01	Initial Hydro-static
3	58.67	111.30	Open To Flow (1)
18	439.28	124.40	Shut-In(1)
49	1130.26	122.19	End Shut-In(1)
49	522.07	121.97	Open To Flow (2)
78	671.96	125.37	Shut-In(2)
139	1101.49	124.05	End Shut-In(2)
140	2111.69	123.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
297.00	MW 50% mud 50% water	4.39
699.00	GMCW 20% gas 30% mud 50% water	10.33
444.00	SMCW 3% mud 97% water	6.56

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Company Inc

PO Box 1019
Hays, KS 67601

ATTN: Marc Dow ning

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70819 **DST#: 1**

Test Start: 2023.07.18 @ 19:57:00

Tool Information

Drill Pipe:	Length:	4230.00 ft	Diameter:	3.90	inches	Volume:	62.50	bbl	
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75	inches	Volume:	-	bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	2.25	inches	Volume:	0.00	bbl	
						Total Volume:	-	bbl	

Drill Pipe Above KB:	21.00 ft
Depth to Top Packer:	4240.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	70.00 ft
Tool Length:	101.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2900.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		75000.00 lb
Tool Chased		ft
String Weight:	Initial	54000.00 lb
	Final	64000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4210.00		
shut In Tool	5.00			4215.00		
hydraulic tool	5.00			4220.00		
Jars	5.00			4225.00		
EM Tool	3.00			4228.00		
Safety Joint	3.00			4231.00		
Packer	5.00			4236.00	31.00	Bottom Of Top Packer
Packer	4.00			4240.00		
Stubb	1.00			4241.00		
Recorder	0.00	6625	Inside	4241.00		
Recorder	0.00	8645	Outside	4241.00		
perforations	1.00			4242.00		
change Over Sub	1.00			4243.00		
drill Pipe	63.00			4306.00		
change Over Sub	1.00			4307.00		
Bullnose	3.00			4310.00	70.00	Bottom Packers & Anchor
Total Tool Length:	**101.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company Inc

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70819 **DST#: 1**

Test Start: 2023.07.18 @ 19:57:00

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:	22000 ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.19 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

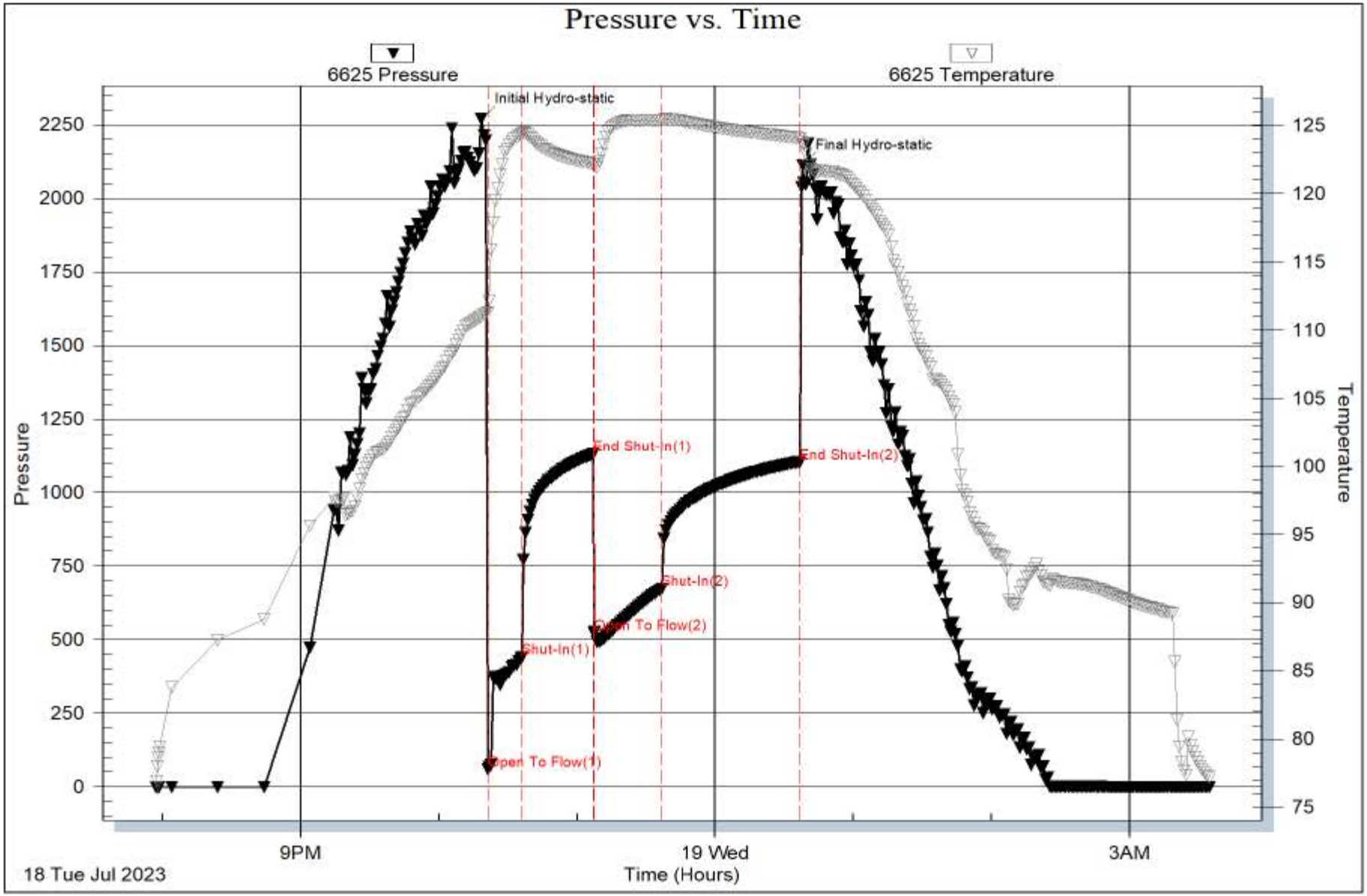
Recovery Table

Length ft	Description	Volume bbl
297.00	MW 50% mud 50% water	4.388
699.00	GMCW 20% gas 30% mud 50% water	10.328
444.00	SMCW 3% mud 97% water	6.560

Total Length: 1440.00 ft Total Volume: 21.276 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 3/4# LCM

Serial #: 6625 **Inside** Dow ning Nelson Oil Company Inc Brenda #2-8 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 70819 Printed: 2023.07.21 @ 11:04:25

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company Inc**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Brenda #2-8

8-20S-20W Pawnee, KS

Start Date: 2023.07.19 @ 12:13:00
End Date: 2023.07.19 @ 17:59:15
Job Ticket #: 70820 DST #: 2

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

Printed: 2023.07.21 @ 11:03:55

DRILL STEM TEST REPORT

Downing Nelson Oil Company Inc

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70820 **DST#: 2**

Test Start: 2023.07.19 @ 12:13:00

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:42:00
Time Test Ended: 17:59:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Dustin Day
Unit No: 70

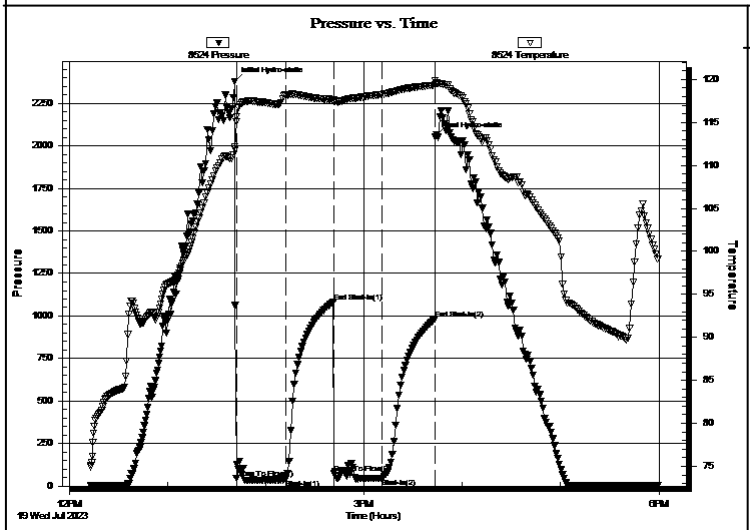
Interval: 4310.00 ft (KB) To 4320.00 ft (KB) (TVD)
Total Depth: 4320.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2195.00 ft (KB)
2187.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8524 **Outside**
Press@RunDepth: 44.84 psig @ 4311.00 ft (KB)
Start Date: 2023.07.19 End Date: 2023.07.19
Start Time: 12:13:05 End Time: 17:59:14

Capacity: 8000.00 psig
Last Calib.: 2023.07.19
Time On Btm: 2023.07.19 @ 13:41:00
Time Off Btm: 2023.07.19 @ 15:43:30

TEST COMMENT: IF-30- slid 5' bled of 1 1/2", built to 2"
SI2-30- No return
FF-30- Built to 1/2"
SI2-30- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2378.98	112.19	Initial Hydro-static
1	45.30	115.09	Open To Flow (1)
31	38.29	118.17	Shut-In(1)
61	1084.86	117.70	End Shut-In(1)
61	76.32	117.38	Open To Flow (2)
90	44.84	118.28	Shut-In(2)
123	982.64	119.33	End Shut-In(2)
123	2050.80	119.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GWOCM 5% Gas 25% oil 15% water 55%	0.89

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Company Inc

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70820 **DST#: 2**

Test Start: 2023.07.19 @ 12:13:00

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:42:00
Time Test Ended: 17:59:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Dustin Day
Unit No: 70

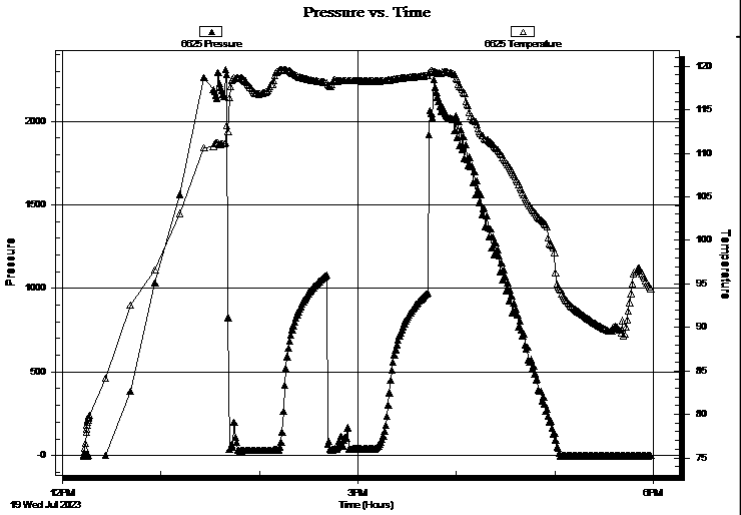
Interval: 4310.00 ft (KB) To 4320.00 ft (KB) (TVD)
Total Depth: 4320.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2195.00 ft (KB)
2187.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**
Press@RunDepth: psig @ 4311.00 ft (KB)
Start Date: 2023.07.19 End Date: 2023.07.19
Start Time: 12:13:05 End Time: 17:58:43

Capacity: 8000.00 psig
Last Calib.: 2023.07.19
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-30- slid 5' bled of 1 1/2", built to 2"
SI2-30- No return
FF-30- Built to 1/2"
SI2-30- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GWOCM 5% Gas 25% oil 15% water 55%	0.89

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Company Inc

PO Box 1019
Hays, KS 67601

ATTN: Marc Dow ning

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70820 **DST#: 2**

Test Start: 2023.07.19 @ 12:13:00

Tool Information

Drill Pipe:	Length:	4293.00 ft	Diameter:	3.90	inches	Volume:	63.43	bbl	
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75	inches	Volume:	-	bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	2.25	inches	Volume:	0.00	bbl	
						Total Volume:	-	bbl	

Drill Pipe Above KB:	14.00 ft
Depth to Top Packer:	4310.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	10.00 ft
Tool Length:	41.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2900.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		76000.00 lb
Tool Chased		5.00 ft
String Weight:	Initial	54000.00 lb
	Final	54000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4280.00		
shut In Tool	5.00			4285.00		
hydraulic tool	5.00			4290.00		
Jars	5.00			4295.00		
EM Tool	3.00			4298.00		
Safety Joint	3.00			4301.00		
Packer	5.00			4306.00	31.00	Bottom Of Top Packer
Packer	4.00			4310.00		
Stubb	1.00			4311.00		
Recorder	0.00	6625	Inside	4311.00		
Recorder	0.00	8524	Outside	4311.00		
perforations	6.00			4317.00		
Bullnose	3.00			4320.00	10.00	Bottom Packers & Anchor
Total Tool Length:	**41.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning Nelson Oil Company Inc

PO Box 1019
Hays, KS 67601

ATTN: Marc Dow ning

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70820 **DST#: 2**

Test Start: 2023.07.19 @ 12:13:00

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:	23000 ppm
Viscosity:	81.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	13.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	12000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

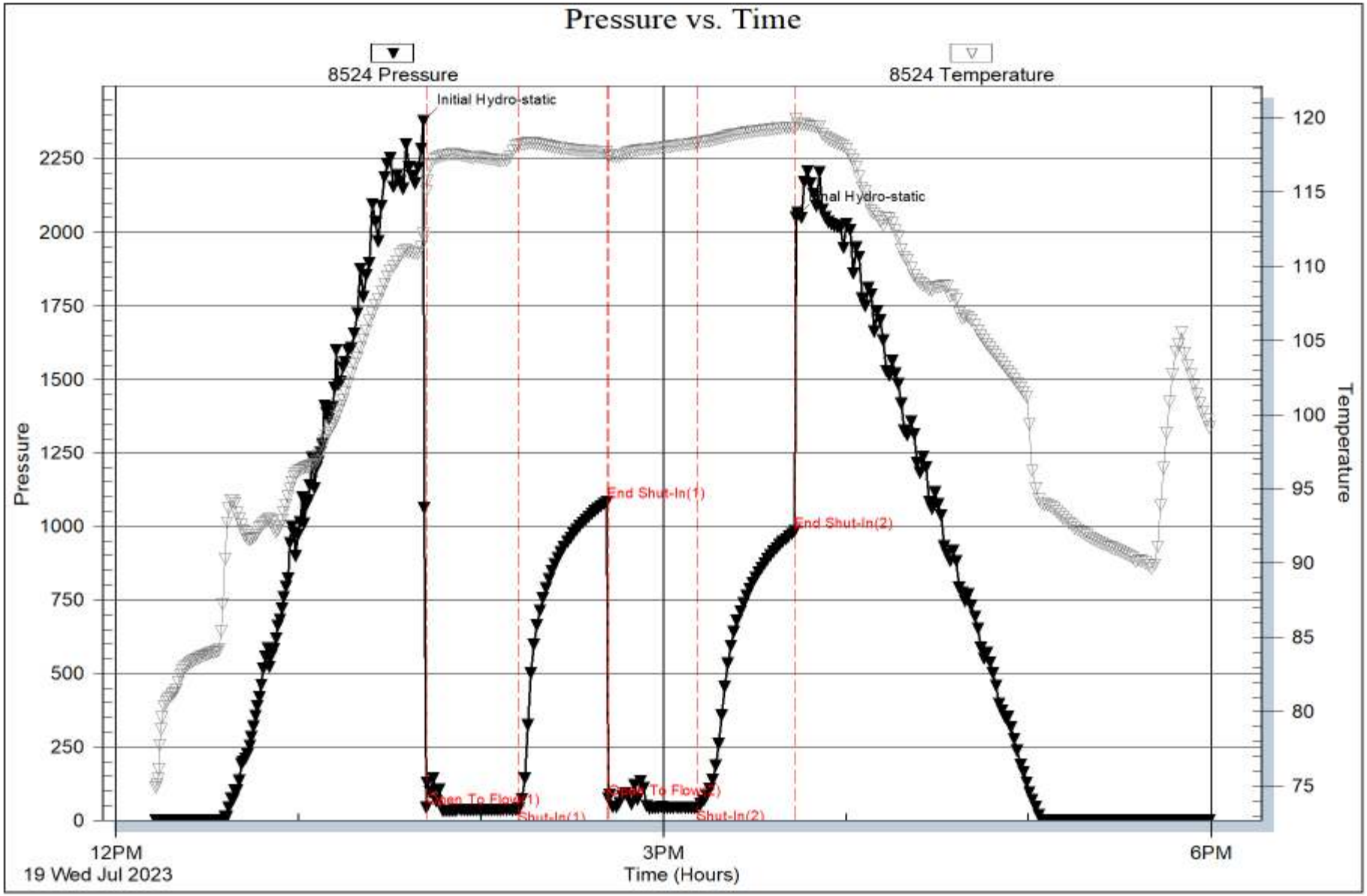
Recovery Table

Length ft	Description	Volume bbl
60.00	GWOCM 5% Gas 25% oil 15% w ater 55% mu	0.887

Total Length: 60.00 ft Total Volume: 0.887 bbl

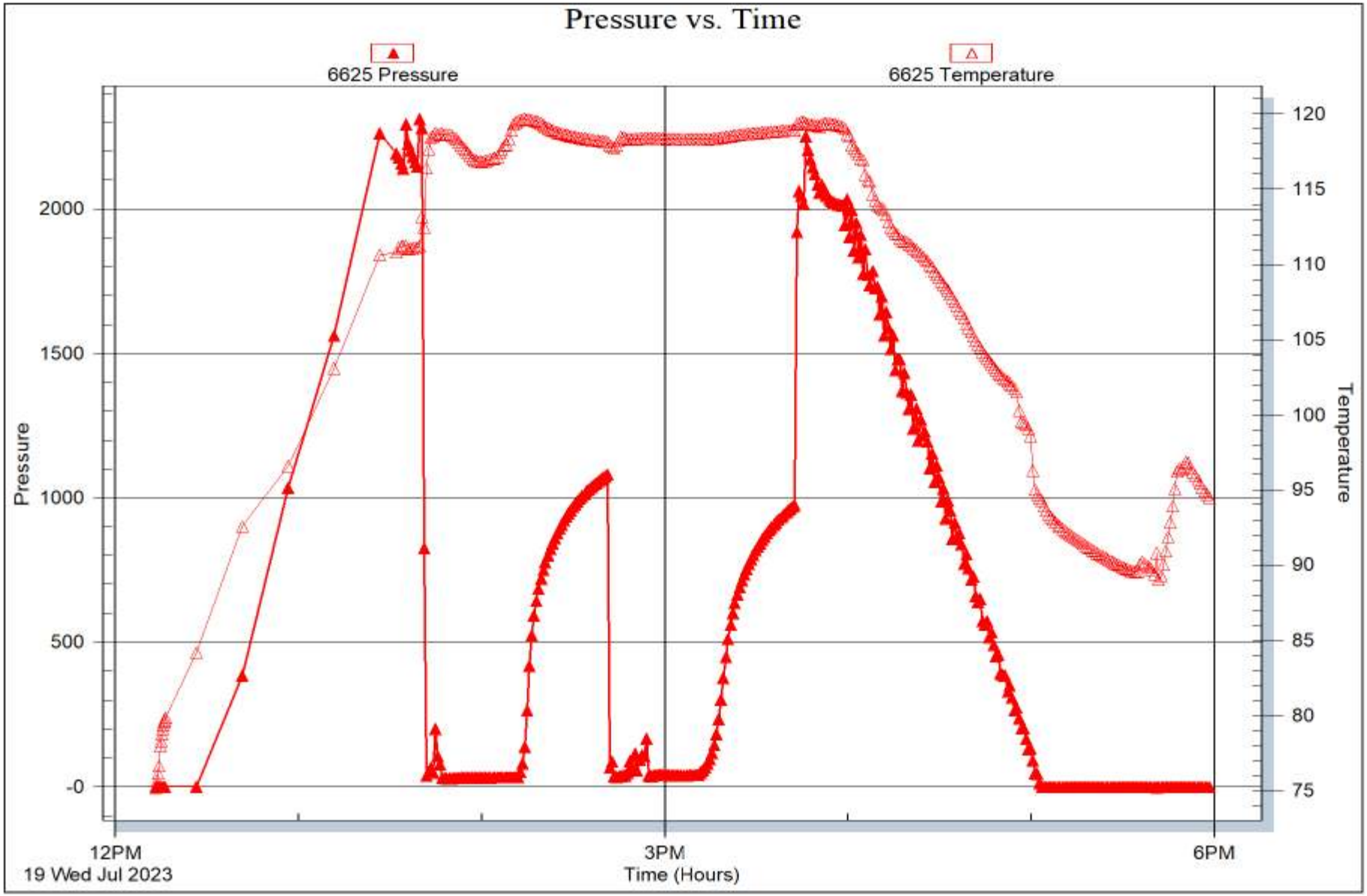
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 2# LCM

Serial #: 8524 **Outside** Dow ning Nelson Oil Company Inc Brenda #2-8 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 70820 Printed: 2023.07.21 @ 11:03:56

Serial #: 6625 **Inside** Downing Nelson Oil Company Inc Brenda #2-8 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 70820 Printed: 2023.07.21 @ 11:03:56

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company INC**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Brenda #2-8

8-20S-20W Pawnee, KS

Start Date: 2023.07.20 @ 05:41:00
End Date: 2023.07.20 @ 13:06:15
Job Ticket #: 70821 DST #: 3

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

Printed: 2023.07.21 @ 11:02:38

DRILL STEM TEST REPORT

Downing Nelson Oil Company INC

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70821 **DST#: 3**

Test Start: 2023.07.20 @ 05:41:00

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:25:30
Time Test Ended: 13:06:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Dustin Day
Unit No: 70

Interval: 4320.00 ft (KB) To 4329.00 ft (KB) (TVD)
Total Depth: 4329.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

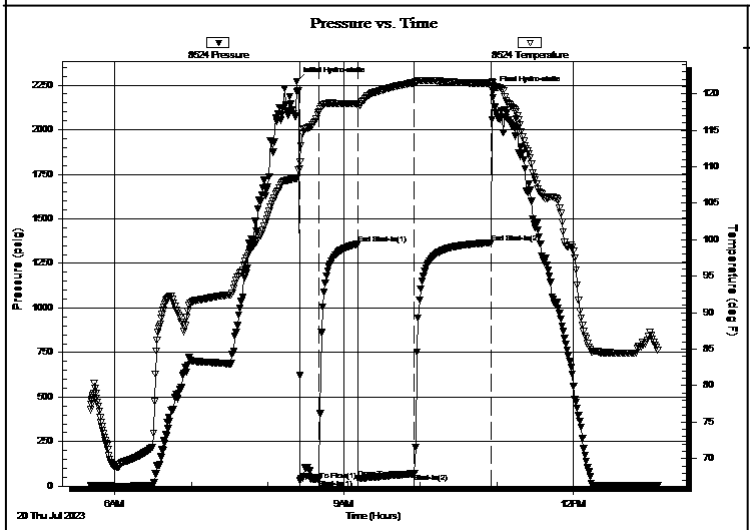
Reference Elevations: 2195.00 ft (KB)
2187.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8524 **Outside**

Press@RunDepth: 70.42 psig @ 4321.00 ft (KB)
Start Date: 2023.07.20 End Date: 2023.07.20
Start Time: 05:41:05 End Time: 13:06:14

Capacity: 8000.00 psig
Last Calib.: 2023.07.20
Time On Btm: 2023.07.20 @ 08:23:00
Time Off Btm: 2023.07.20 @ 10:56:45

TEST COMMENT: IF-30- Built to 4"
SI1-30- No return
FF-45- Built to 8 1/2"
SI1-60- WSB



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2271.66	108.36	Initial Hydro-static
3	33.02	110.70	Open To Flow (1)
17	39.35	117.42	Shut-In(1)
48	1358.37	118.62	End Shut-In(1)
49	43.25	118.33	Open To Flow (2)
93	70.42	121.52	Shut-In(2)
153	1366.07	121.43	End Shut-In(2)
154	2217.33	121.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	GO 15% gas 85% oil	0.15
65.00	GMWCO 10% gas 55% oil 25% water	0.96
50.00	GOMCW 10% gas 15% oil 40% water	0.74

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Company INC

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70821 **DST#: 3**

Test Start: 2023.07.20 @ 05:41:00

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:25:30
Time Test Ended: 13:06:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Dustin Day
Unit No: 70

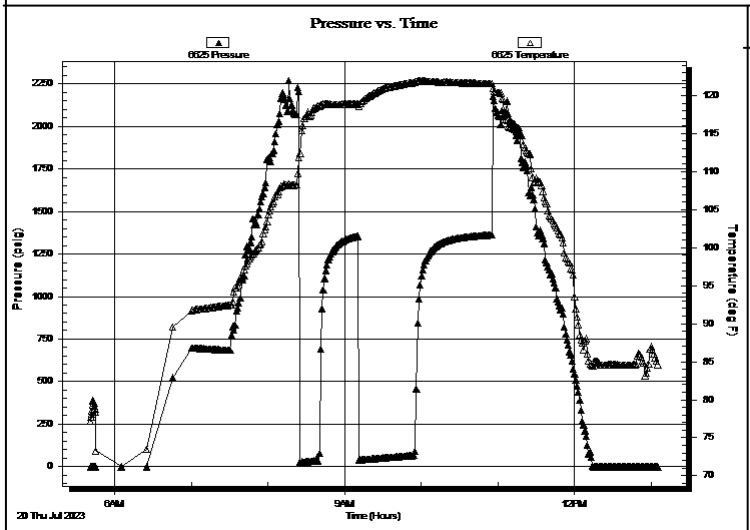
Interval: 4320.00 ft (KB) To 4329.00 ft (KB) (TVD)
Total Depth: 4329.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2195.00 ft (KB)
2187.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**
Press@RunDepth: psig @ 4321.00 ft (KB)
Start Date: 2023.07.20 End Date: 2023.07.20
Start Time: 05:41:05 End Time: 13:06:03

Capacity: 8000.00 psig
Last Calib.: 2023.07.20
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-30- Built to 4"
SI1-30- No return
FF-45- Built to 8 1/2"
SI1-60- WSB



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	GO 15% gas 85% oil	0.15
65.00	GMWCO 10% gas 55% oil 25% water	0.96
50.00	GOMCW 10% gas 15% oil 40% water	0.74

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Company INC

PO Box 1019
Hays, KS 67601

ATTN: Marc Dow ning

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70821 **DST#: 3**

Test Start: 2023.07.20 @ 05:41:00

Tool Information

Drill Pipe:	Length:	4324.00 ft	Diameter:	3.90	inches	Volume:	63.89	bbl	
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75	inches	Volume:	-	bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	2.25	inches	Volume:	0.00	bbl	
						Total Volume:	-	bbl	

Drill Pipe Above KB:	35.00 ft
Depth to Top Packer:	4320.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	9.00 ft
Tool Length:	40.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2900.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		70000.00 lb
Tool Chased		2.00 ft
String Weight:	Initial	54000.00 lb
	Final	54000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4290.00		
shut In Tool	5.00			4295.00		
hydraulic tool	5.00			4300.00		
Jars	5.00			4305.00		
EM Tool	3.00			4308.00		
Safety Joint	3.00			4311.00		
Packer	5.00			4316.00	31.00	Bottom Of Top Packer
Packer	4.00			4320.00		
Stubb	1.00			4321.00		
Recorder	0.00	6625	Inside	4321.00		
Recorder	0.00	8524	Outside	4321.00		
perforations	5.00			4326.00		
Bullnose	3.00			4329.00	9.00	Bottom Packers & Anchor
Total Tool Length:	**40.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company INC

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

8-20S-20W Pawnee, KS

Brenda #2-8

Job Ticket: 70821 **DST#: 3**

Test Start: 2023.07.20 @ 05:41:00

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:	20000 ppm
Viscosity:	40.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	17.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	20000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

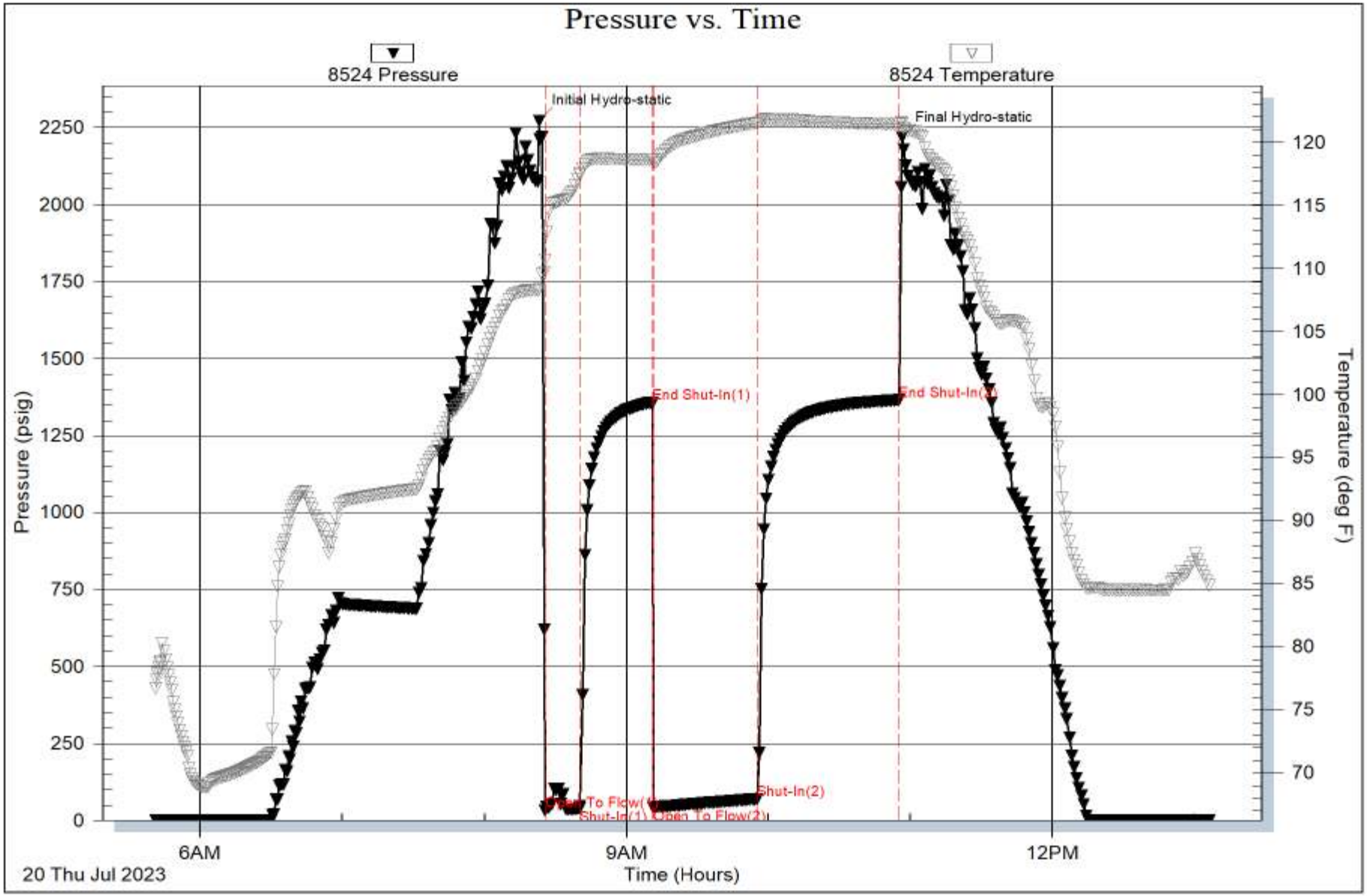
Recovery Table

Length ft	Description	Volume bbl
10.00	GO 15% gas 85% oil	0.148
65.00	GMWCO 10% gas 55% oil 25% water 10% m	0.960
50.00	GOMCW 10% gas 15% oil 40% water 35% m	0.739

Total Length: 125.00 ft Total Volume: 1.847 bbl

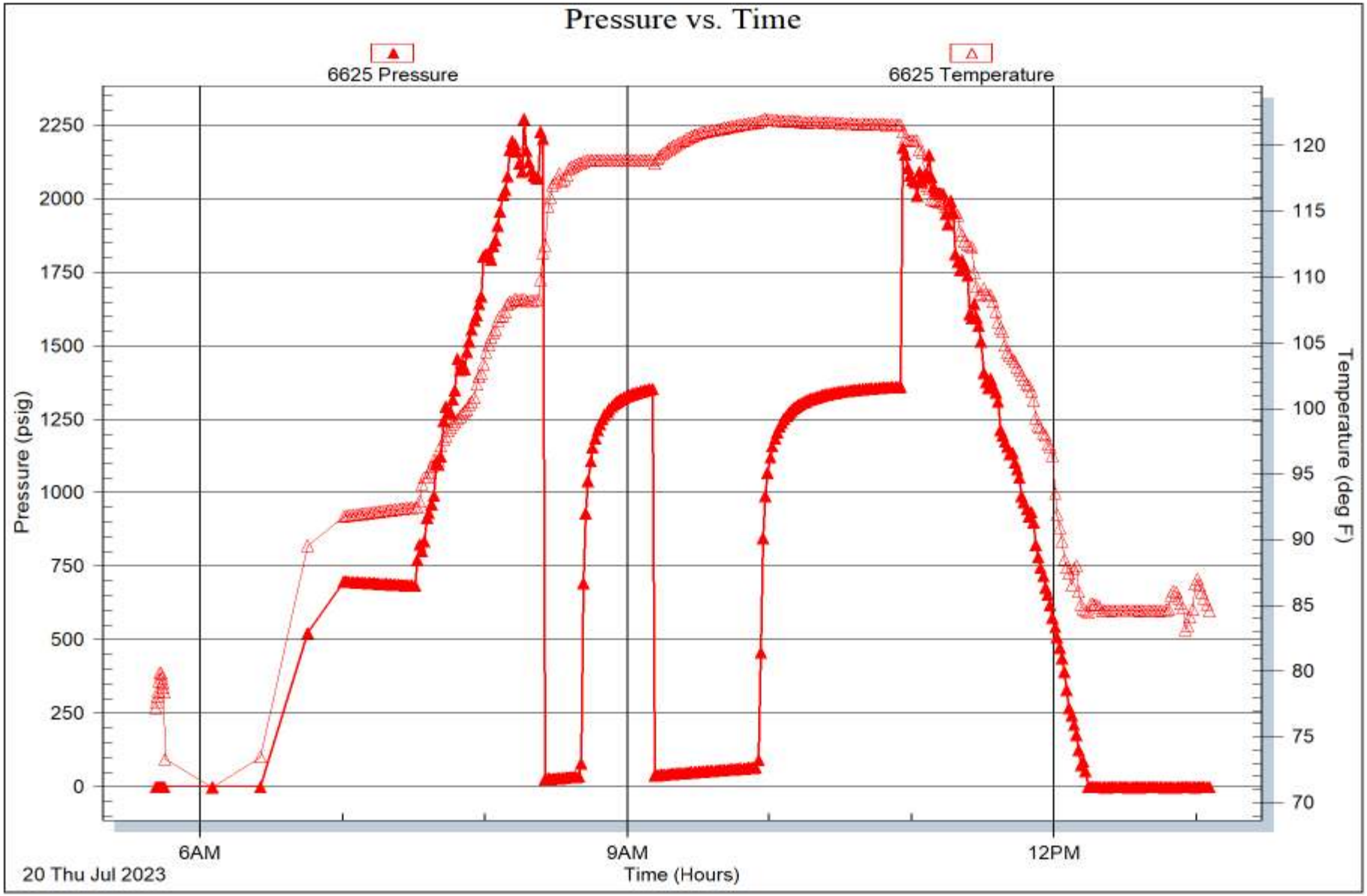
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 3/4# LCM

Serial #: 8524 **Outside** Dow ning Nelson Oil Company INC Brenda #2-8 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 70821 Printed: 2023.07.21 @ 11:02:39

Serial #: 6625 **Inside** Dow ning Nelson Oil Company INC Brenda #2-8 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 70821 Printed: 2023.07.21 @ 11:02:39

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70819

Well Name & No. Brenda #2-8 Test No. 1 Date 7/18/23

Company Downing Nelson Oil Co Inc Elevation 2187 KB 2195 GL

Address PO Box 1019 Hays, KS 67601

Co. Rep / Geo Marc Downing Rig Discovery Rig #2

Location: Sec. 8 Twp 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4240-4310 Zone Tested Miss

Anchor Length 70 Drill Pipe Run 4230 Mud Wt. 9.3

Top Packer Depth 4235 Drill Collars Run 0 Vis 54

Bottom Packer Depth 4240 Wt. Pipe Run 0 WL 9.2

Total Depth 4310 Chlorides 5000 ppm System LCM 3/4#

Blow Description IF- BOBin 2 min. built to 75.77"

SI2- No return

FF- BOBin 2 min. built to 87.87"

SI2- No return

Rec 297	Feet of MW w/oil scum	%gas	%oil	50	%water	50	%mud
Rec 699	Feet of GMCW	20 %gas	%oil	50	%water	30	%mud
Rec 444	Feet of SMCW	%gas	%oil	97	%water	3	%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 1440 BHT 123 Gravity ____ API RW .30 @ 72 °F Chlorides 22000 ppm

Initial Hydrostatic 2269

Initial Flow 59 to 439

Initial Shut-In 1130

Final Flow 522 to 672

Final Shut-In 1101

Final Hydrostatic 2112

T- On Location 18:30

Initial Flow 15 T-Started 19:57

Initial Shut-In 30 T-Open 22:21

Final Flow 30 T-Pulled 00:36

Final Shut-In 60 T-Out 03:30

☒ Test	1950	☐ Ruined Shale Packer	
☒ Jars	300	☐ Ruined Packer	
☐ Circ Sub		☐ Hotel	
☐ Hourly Standby		☒ EM Tool Successful	
☒ Mileage 108	189	☐ Accessibility	
☐ Sampler		☐ Gas Sample	
☐ Straddle		☐ Oversized Hole	
☐ Shale Packer		☐ Sub Total	0
☐ Extra Packer		☐ Total	2439
☐ Extra Recorder		☐ Tool Loaded @	
☐ Day Standby		☐ MP/DST Disc't	

Comments

Approved By ____ Our Representative DWP Dg

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70820

Well Name & No. Brenda #2-8 Test No. 2 Date 7/19/23

Company Downing Nelson Oil Co inc Elevation 2195 KB 2187 GL

Address PO Box 1019 Hays, KS 67601

Co. Rep / Geo Marc Downing Rig Discovery Rig #2

Location: Sec. 8 Twp 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4310-4320 Zone Tested Miss

Anchor Length 10 Drill Pipe Run 4293 Mud Wt. 9.3

Top Packer Depth 4305 Drill Collars Run Ø Vis 81

Bottom Packer Depth 4310 Wt. Pipe Run Ø WL 14

Total Depth 4320 Chlorides 12000 ppm System LCM 2#

Blow Description IF- Slid 5" died off 1½", built to 2"

SI- No return

FF- Built to ½"

SI- No return

Rec 60	Feet of GWOCM	5 %gas	25 %oil	15 %water	55 %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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 60 BHT 119 Gravity ____ API RW .23 @ 90 °F Chlorides 23000 ppm

Initial Hydrostatic 2379

Initial Flow 45 to 38

Initial Shut-In 1085

Final Flow 76 to 45

Final Shut-In 983

Final Hydrostatic 2051

T- On Location 11:50

Initial Flow 30 T-Started 12:13

Initial Shut-In 30 T-Open 13:41

Final Flow 30 T-Pulled 15:41

Final Shut-In 30 T-Out 17:59

☒ Test 1950	☐ Ruined Shale Packer	
☒ Jars 300	☐ Ruined Packer	
☐ Circ Sub	☐ Hotel	
☐ Hourly Standby	☐ EM Tool Successful -350	
☒ Mileage 108 189	☐ Accessibility	
☐ Sampler	☐ Gas Sample	
☐ Straddle	☐ Oversized Hole	
☐ Shale Packer	☐ Sub Total -350	
☐ Extra Packer	☐ Total 2089	
☐ Extra Recorder	☐ Tool Loaded @	
☐ Day Standby	☐ MP/DST Disc't	

Comments

Approved By Our Representative DW

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70821

Well Name & No. Brenda #2-8 Test No. 3 Date 7/20/23

Company Downing Nelson Oil Co Inc Elevation 2195 KB 2187 GL

Address PO Box 1019 Hays, KS 67601

Co. Rep / Geo Marc Downing Rig Discovery Rig #2

Location: Sec. 8 Twp 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4320-4329 Zone Tested Miss

Anchor Length 9 Drill Pipe Run 4324 Mud Wt. 9.1

Top Packer Depth 4315 Drill Collars Run 0 Vis 40

Bottom Packer Depth 4320 Wt. Pipe Run 0 WL 18

Total Depth 4329 Chlorides 20000 ppm System LCM 3/4#

Blow Description IF- Built to 4"

SI- No return

FF- Built to 8½"

SI- WSB

Rec 10	Feet of 60	15 %gas	85 %oil	%water	%mud	
Rec 65'	Feet of GMWCO	10 %gas	55 %oil	35 %water	10 %mud	
Rec 50	Feet of GOMCW	10 %gas	15 %oil	40 %water	35 %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 125 BHT 121 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

Initial Hydrostatic 2272

Initial Flow 33 to 39

Initial Shut-In 1358

Final Flow 43 to 70

Final Shut-In 1366

Final Hydrostatic 2217

T- On Location 04:50

Initial Flow 15 T-Started 05:41

Initial Shut-In 30 T-Open 08:26

Final Flow 45 T-Pulled 10:56

Final Shut-In 60 T-Out ____

☒ Test 1950	☐ Ruined Shale Packer	
☒ Jars 300	☐ Ruined Packer	
☐ Circ Sub	☐ Hotel	
☐ Hourly Standby	☐ EM Tool Successful -350	
☒ Mileage 108 189	☐ Accessibility	
☐ Sampler	☐ Gas Sample	
☐ Straddle	☐ Oversized Hole	
☐ Shale Packer	☐ Sub Total -350	
☐ Extra Packer	☐ Total 2089	
☐ Extra Recorder	☐ Tool Loaded ____ @ ____	
☐ Day Standby	☐ MP/DST Disc't	

Comments ____

Approved By ____ Our Representative Duff Day

Trilobite Testing Inc. shall not be liable for damage of any kind of 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.

Marc A. Downing

Consulting Petroleum Geologist

Geologic Report

Drilling Time and Sample Log

Operator	**Downing-Nelson Oil Co., Inc.**		
Lease	**Brenda**	No.	**2-8**
API #	**15-145-21884-0000**		
Field	**Browns Grove**		
Location	**409' FSL & 577' FEL**		
Sec. **8**	Twp. **20s**	Rge. **20w**	
County	**Pawnee**	State	**Kansas**

Elevation
KB 2195
DF 2193
GL 2187

Casing Record
Surface
8 5/8" @ 1191'
Production
5 1/2" @ 4324'

Electrical Surveys
None

Formation	Sample tops	Log Tops	Datum	Struct Comp
Top Anhydrite	1370		+825	+9
Base Anhydrite	1400		+795	+7
Herrington	2315		-120	-1
Heebner	3695		-1500	+2
LKC	3742		-1547	+6
BKC	4049		-1854	+3
Fort Scott	4226		-2031	+4
Cherokee Sh	4243		-2048	+5
Miss	4297		-2102	+7
Osage	4324		-2129	+12
Total Depth	4329		-2134	

Reference Well For Structural Comparison **Bell Brothers - Ray Miller #1**
SW-SE-SE Sec. 8-20s-20w

Drilling Contractor		**Discovery Drilling, Rig #2**		
Commenced	7-13-23	Completed		7-20-23
Samples Saved From		3700	To	RTD
Drilling Time Kept From		3600	To	RTD
Samples Examined From		3700	To	RTD
Geological Supervision From		3700	To	RTD

Summary and Recommendations

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

Respectfully Submitted,

Marc A. Downing