KOLAR Document ID: 1476974

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: Ron Nelson
Phone: (785) 621-2610
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Jason Alm
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 #:

10/09/2019 Spud Date or Recompletion Date
10/17/2019 Date Reached TD
10/17/2019 Completion Date or Recompletion Date

API No.: 15-023-21523-00-00
Spot Description:
NE - NE - SE - SW Sec. 24 Twp. 5 S. R. 37 ☐ East ☑ West
1298 Feet from ☐ North / ☑ South Line of Section
2562 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: Cheyenne
Lease Name: KRAMER UNIT B Well #: 1-24
Field Name: Tovrea NW
Producing Formation: None
Elevation: Ground: 3253 Kelly Bushing: 3261
Total Vertical Depth: 4865 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 474 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: 6000 ppm Fluid volume: 400 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: 12/10/2019
☐ **Confidential Release Date:** 12/09/2021
☐ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 12/10/2019

Operator Name: Downing-Nelson Oil Co Inc Lease Name: KRAMER UNIT B Well #: 1-24

Sec. 24 Twp. 5 S. R. 37 ☐ East ☑ West County: Cheyenne

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	474	Common	275	2% Gel & 3% CC

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:	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:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top Bottom

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)*

TUBING RECORD: Size: Set At: 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	KRAMER UNIT B 1-24
Doc ID	1476974

Tops

Name	Top	Datum
Top Anhydrite	2978'	+283
Base Anhydrite	3014'	+247
Topeka	3965'	-704
Heebner	4094'	-833
Toronto	4134'	-873
LKC	4148'	-887
Stark	4350'	-1089
BKC	4431'	-1170
Marmaton	4444'	-1183
Pawnee	4538'	-1277
Fort Scott	4594'	-1333
Cherokee	4618'	-1357
Morrow Shale	4753'	-1492
Mississippian	4848'	-1587

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	KRAMER UNIT B 1-24
Doc ID	1476974

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	474	Common	275	2% Gel & 3% CC

LOG

SWIFT Services, Inc.

DATE 10/10/19 | PAGE NO. 1

CUSTOMER Downing + Nelson | WELL NO. 1-24 | LEASE Kramer Unit B | JOB TYPE Surface | TICKET NO. 32593

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	0115							On location, Rig drilling @ 443'
								474' of 8 5/8" x 23#
	0200							Set up trucks
	0245							Rig Running 8 5/8" Casing
	0415							Break Circulation
	0435							Hook up to Swift
	0440	4	5					Start Water ahead
		4						Start Cmt, 275 sks Std, 2% gel, 3% CC
		4	67					Fin Cmt, Start Displacement
	0500	4	28 3/4					Fin Displacement, Cmt Circulated
								Shut in,
								Release Truck
	0505							Wash up Truck
	0515							Rack up
	0520							Job Complete
								Thanks,
								Jon, Austin, Isaac

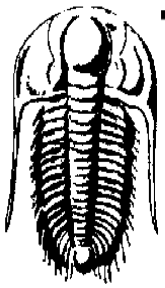
LOG

SWIFT Services, Inc.

DATE 10/17/19 | PAGE NO. 1

CUSTOMER Downing + Nelson | WELL NO. 1-24 | LEASE Kramer Unit B | JOB TYPE PTA | TICKET NO. 32598

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1900							On location, set up trucks,
								1st Plug 50 sks @ 3000'
								2nd Plug 100 sks @ 2050'
								3rd Plug 50 sks @ 525'
								Top off 8 5/8 w/ 10 sks
								Rathole - 30 sks
								Mousehole - 15 sks
	2000	4	10					1st Plug, 10 water,
		4	13					13 Cement
		4	3½					3½ water
								Rig Pump Mud after for 3 min
	2015							Fin
	2050	4	10					2nd Plug, 10 water,
		4	26					26 Cement
	2100	4	6					6 water
	2150	4	5					3rd Plug, 5 water
		4	13					13 Cement
	2200	4	2					2 water
	2310	1	8					Plug Rathole
		1	4					Plug Mousehole
	2330	1	2½					Top off 8 5/8"
								Wash up
								Rack up
								Job Complete,
								Thanks
								Jon, Austin, Kirby



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

Kramer Unit 'B #1-24

24-5s-37w Cheyenne KS

Start Date: 2019.10.15 @ 05:44:00

End Date: 2019.10.15 @ 12:32:00

Job Ticket #: 65590 DST #: 1

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.10.17 @ 11:35:31

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co., Inc.

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

24-5s-37w Cheyenne KS

Kramer Unit 'B #1-24

Job Ticket: 65590 **DST#: 1**

Test Start: 2019.10.15 @ 05:44:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:17:00
Time Test Ended: 12:32:00

Test Type: Conventional Bottom Hole (Initial)
Tester: James Winder
Unit No: 83

Interval: 4273.00 ft (KB) To 4353.00 ft (KB) (TVD)
Total Depth: 4353.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

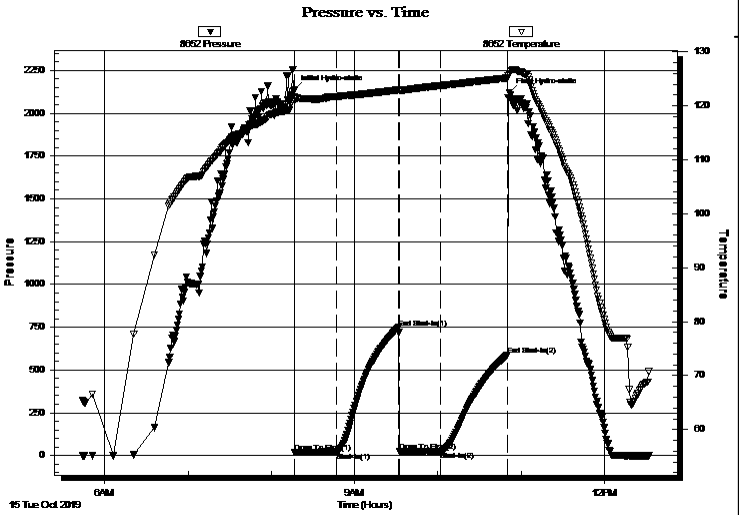
Reference Elevations: 3261.00 ft (KB)
3253.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 **Outside**

Press@RunDepth: 24.77 psig @ 4274.00 ft (KB)
Start Date: 2019.10.15 End Date: 2019.10.15
Start Time: 05:44:05 End Time: 12:31:59

Capacity: 8000.00 psig
Last Calib.: 2019.10.15
Time On Btm: 2019.10.15 @ 08:16:45
Time Off Btm: 2019.10.15 @ 10:51:30

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1" at 10 min., stayed at 1" till close
45 - ISI: No blow back
30 - FF: No blow
45 - FSI: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.46	121.62	Initial Hydro-static
1	18.97	121.02	Open To Flow (1)
31	21.19	121.70	Shut-In(1)
75	746.86	122.95	End Shut-In(1)
76	22.62	122.82	Open To Flow (2)
105	24.77	123.73	Shut-In(2)
154	586.53	125.15	End Shut-In(2)
155	2121.31	125.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w /trace oil 100%m	0.07

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

24-5s-37w Cheyenne KS

Kramer Unit 'B #1-24

Job Ticket: 65590 **DST#: 1**

Test Start: 2019.10.15 @ 05:44:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:17:00
Time Test Ended: 12:32:00

Test Type: Conventional Bottom Hole (Initial)
Tester: James Winder
Unit No: 83

Interval: 4273.00 ft (KB) To 4353.00 ft (KB) (TVD)
Total Depth: 4353.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

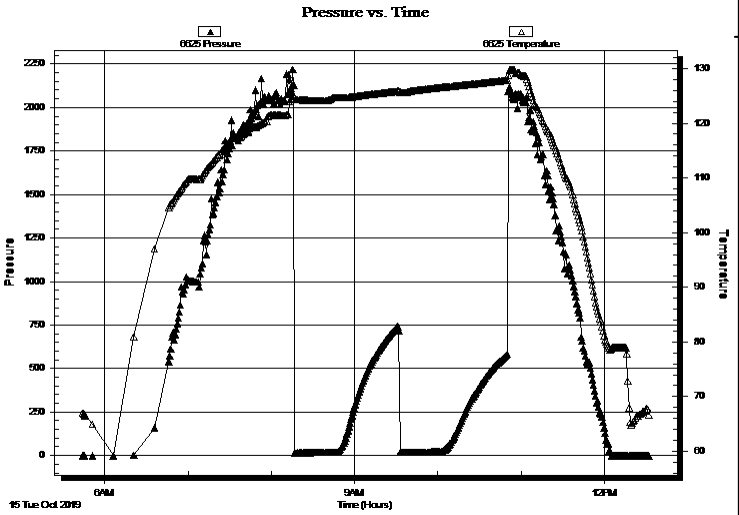
Reference Elevations: 3261.00 ft (KB)
3253.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth: psig @ 4274.00 ft (KB)
Start Date: 2019.10.15 End Date: 2019.10.15
Start Time: 05:44:05 End Time: 12:32:29

Capacity: 8000.00 psig
Last Calib.: 2019.10.15
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1" at 10 min., stayed at 1" till close
45 - ISI: No blow back
30 - FF: No blow
45 - FSI: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w /trace oil 100%m	0.07

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co., Inc.

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

24-5s-37w Cheyenne KS

Kramer Unit 'B #1-24

Job Ticket: 65590 **DST#: 1**

Test Start: 2019.10.15 @ 05:44:00

Tool Information

Drill Pipe:	Length:	4248.00 ft	Diameter:	3.80 inches	Volume:	59.59 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	31.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:		80000.00 lb
					Total Volume:	59.74 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		27.00 ft					String Weight:	Initial	58000.00 lb
Depth to Top Packer:		4273.00 ft						Final	58000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		80.00 ft							
Tool Length:		101.00 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			4253.00		
Shut In Tool	5.00			4258.00		
Hydraulic tool	5.00			4263.00		
Packer	5.00			4268.00	21.00	Bottom Of Top Packer
Packer	5.00			4273.00		
Stubb	1.00			4274.00		
Recorder	0.00	6625	Inside	4274.00		
Recorder	0.00	8652	Outside	4274.00		
Perforations	10.00			4284.00		
Blank Spacing	65.00			4349.00		
Perforations	1.00			4350.00		
Bullnose	3.00			4353.00	80.00	Bottom Packers & Anchor
Total Tool Length:	**101.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning Nelson Oil Co., Inc.

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

24-5s-37w Cheyenne KS

Kramer Unit 'B #1-24

Job Ticket: 65590 **DST#: 1**

Test Start: 2019.10.15 @ 05:44:00

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:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	500.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

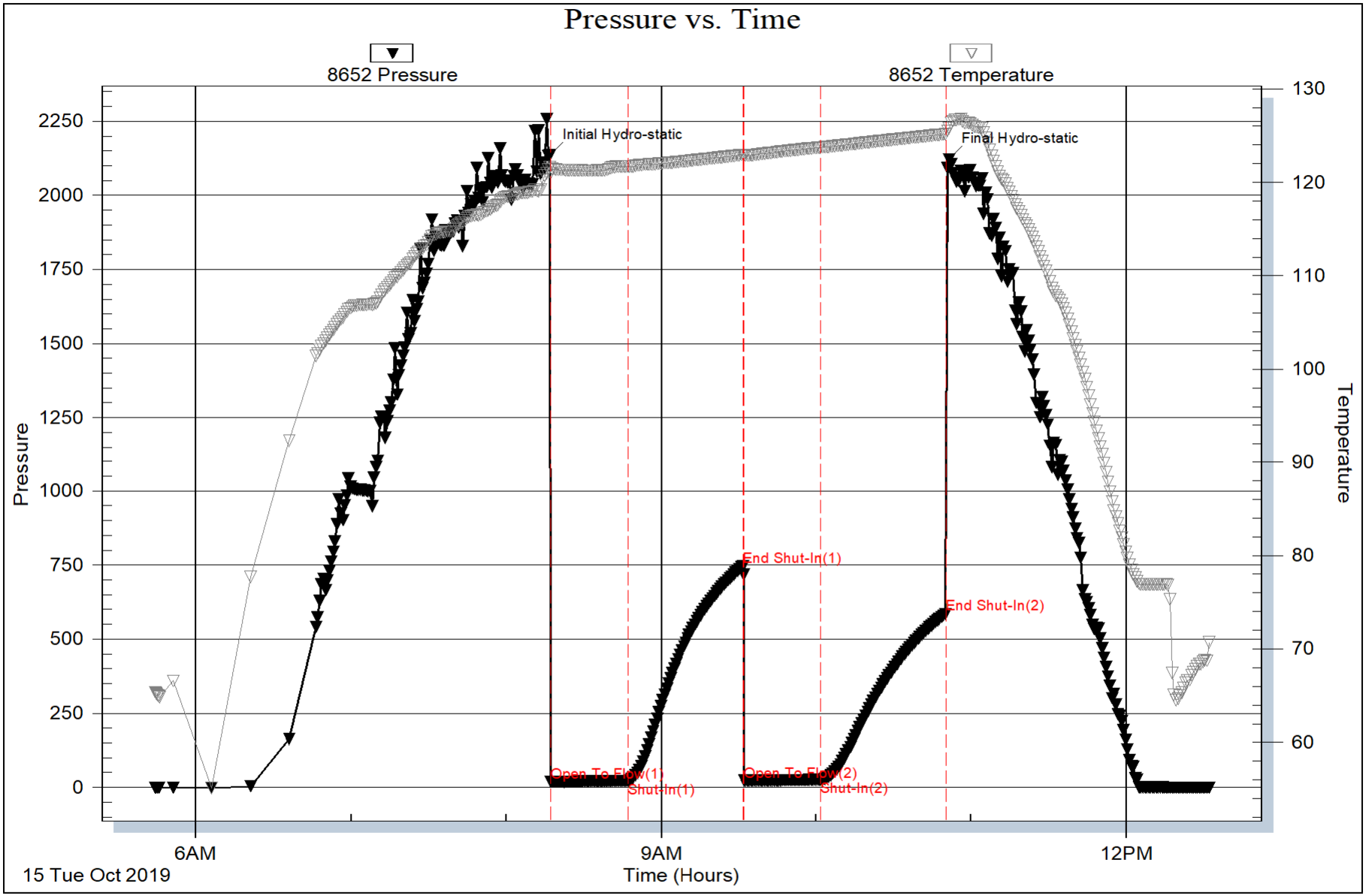
Recovery Table

Length ft	Description	Volume bbl
15.00	Mud w /trace oil 100%m	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

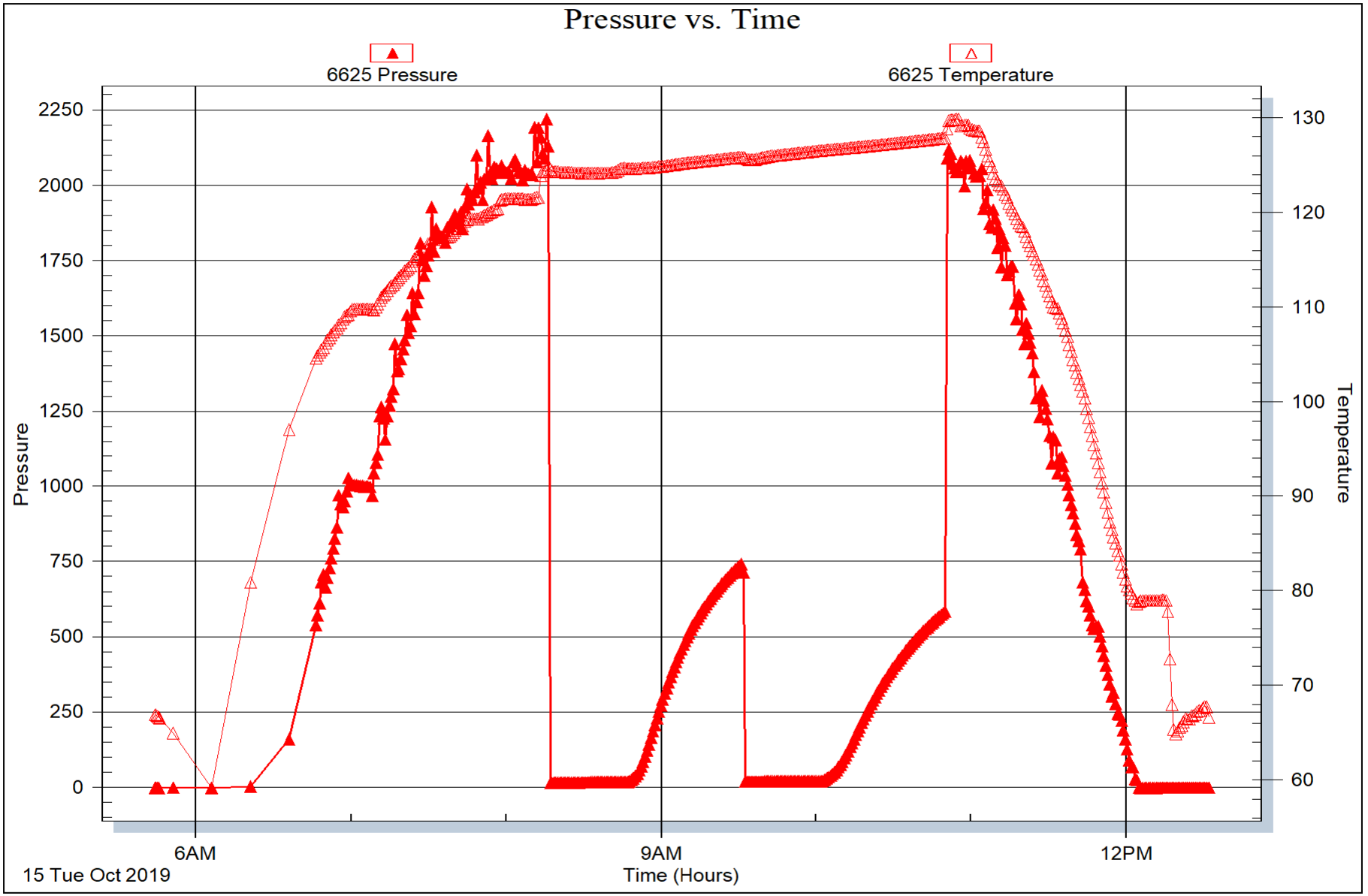
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8652 **Outside** Dow ning Nelson Oil Co., Inc. Kramer Unit 'B #1-24 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65590 Printed: 2019.10.17 @ 11:35:32

Serial #: 6625 **Inside** Dow ning Nelson Oil Co., Inc. Kramer Unit 'B #1-24 DST Test Number: 1



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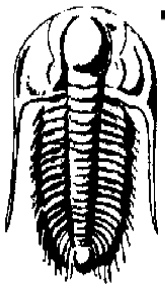


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

Kramer Unit 'B #1-24

24-5s-37w Cheyenne KS

Start Date: 2019.10.16 @ 10:10:00

End Date: 2019.10.16 @ 16:23:30

Job Ticket #: 65591 DST #: 2

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.10.17 @ 11:32:03

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

24-5s-37w Cheyenne KS

Kramer Unit 'B #1-24

Job Ticket: 65591 **DST#: 2**

Test Start: 2019.10.16 @ 10:10:00

GENERAL INFORMATION:

Formation: **Pawnee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:21:45
Time Test Ended: 16:23:30

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83

Interval: 4518.00 ft (KB) To 4560.00 ft (KB) (TVD)
Total Depth: 4560.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

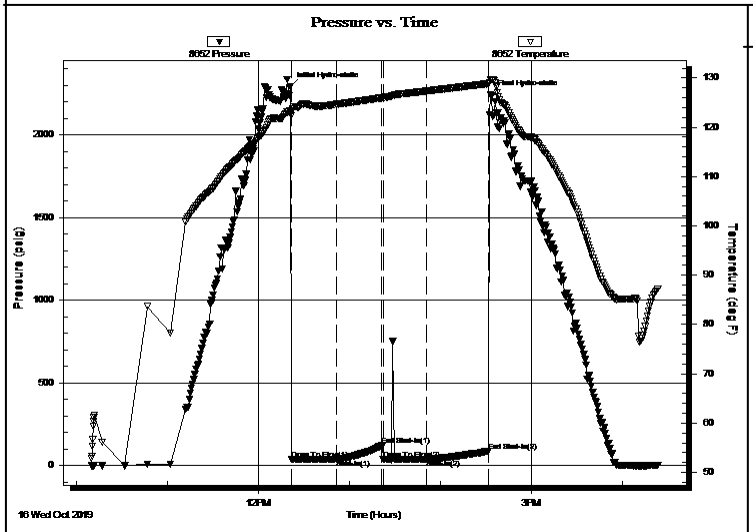
Reference Elevations: 3261.00 ft (KB)
3253.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8652 **Outside**

Press@RunDepth: 38.12 psig @ 4519.00 ft (KB)
Start Date: 2019.10.16 End Date: 2019.10.16
Start Time: 10:10:05 End Time: 16:23:29

Capacity: 8000.00 psig
Last Calib.: 2019.10.16
Time On Btm: 2019.10.16 @ 12:21:30
Time Off Btm: 2019.10.16 @ 14:33:15

TEST COMMENT: 30 - IF: 2" Surge blow at open, built slightly, then died back to 2" again
30 - ISI: No blow back
30 - FF: No blow , flushed tool, surge then no blow
30 - FSI: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2292.85	123.39	Initial Hydro-static
1	36.49	122.39	Open To Flow (1)
31	37.05	124.68	Shut-In(1)
60	120.36	125.98	End Shut-In(1)
61	37.28	125.98	Open To Flow (2)
90	38.12	127.35	Shut-In(2)
131	86.82	128.84	End Shut-In(2)
132	2241.54	129.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%	0.35

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

24-5s-37w Cheyenne KS

Kramer Unit 'B #1-24

Job Ticket: 65591 **DST#: 2**

Test Start: 2019.10.16 @ 10:10:00

GENERAL INFORMATION:

Formation: **Pawnee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:21:45
Time Test Ended: 16:23:30

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83

Interval: 4518.00 ft (KB) To 4560.00 ft (KB) (TVD)
Total Depth: 4560.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

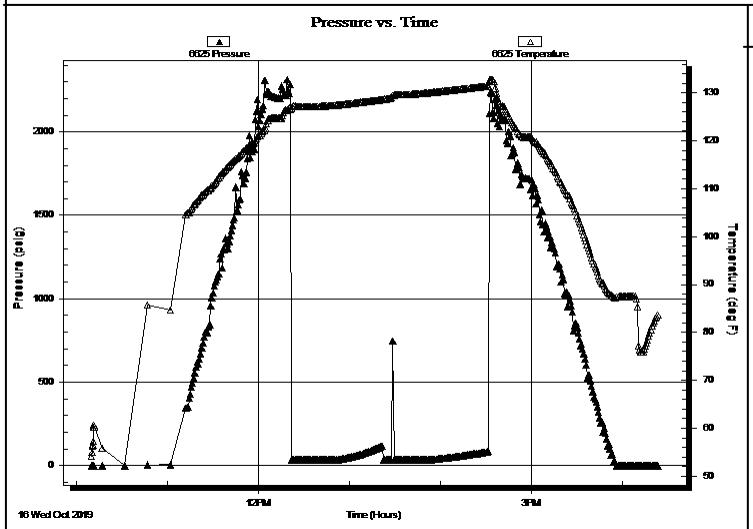
Reference Elevations: 3261.00 ft (KB)
3253.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth: psig @ 4519.00 ft (KB)
Start Date: 2019.10.16 End Date: 2019.10.16
Start Time: 10:10:05 End Time: 16:23:59

Capacity: 8000.00 psig
Last Calib.: 2019.10.16
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF: 2" Surge blow at open, built slightly, then died back to 2" again
30 - ISI: No blow back
30 - FF: No blow , flushed tool, surge then no blow
30 - FSI: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%	0.35

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co., Inc.

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

24-5s-37w Cheyenne KS

Kramer Unit 'B #1-24

Job Ticket: 65591 **DST#: 2**

Test Start: 2019.10.16 @ 10:10:00

Tool Information

Drill Pipe:	Length:	4500.00 ft	Diameter:	3.80 inches	Volume:	63.12 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	31.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	
					Total Volume:	63.27 bbl	

Drill Pipe Above KB:	34.00 ft
Depth to Top Packer:	4518.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	42.00 ft
Tool Length:	63.00 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:		75000.00 lb
Tool Chased		5.00 ft
String Weight:	Initial	60000.00 lb
	Final	60000.00 lb

Tool Comments: tool chased 5' to bottom at open, mud dow n around 5' - 2" surge blow at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4498.00		
Shut In Tool	5.00			4503.00		
Hydraulic tool	5.00			4508.00		
Packer	5.00			4513.00	21.00	Bottom Of Top Packer
Packer	5.00			4518.00		
Stubb	1.00			4519.00		
Recorder	0.00	6625	Inside	4519.00		
Recorder	0.00	8652	Outside	4519.00		
Perforations	5.00			4524.00		
Blank Spacing	33.00			4557.00		
Bullnose	3.00			4560.00	42.00	Bottom Packers & Anchor
Total Tool Length:	**63.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning Nelson Oil Co., Inc.

111 W 10th
Hays, KS 67601

ATTN: Jason T. Alm

24-5s-37w Cheyenne KS

Kramer Unit 'B #1-24

Job Ticket: 65591 **DST#: 2**

Test Start: 2019.10.16 @ 10:10:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	10.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	750.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

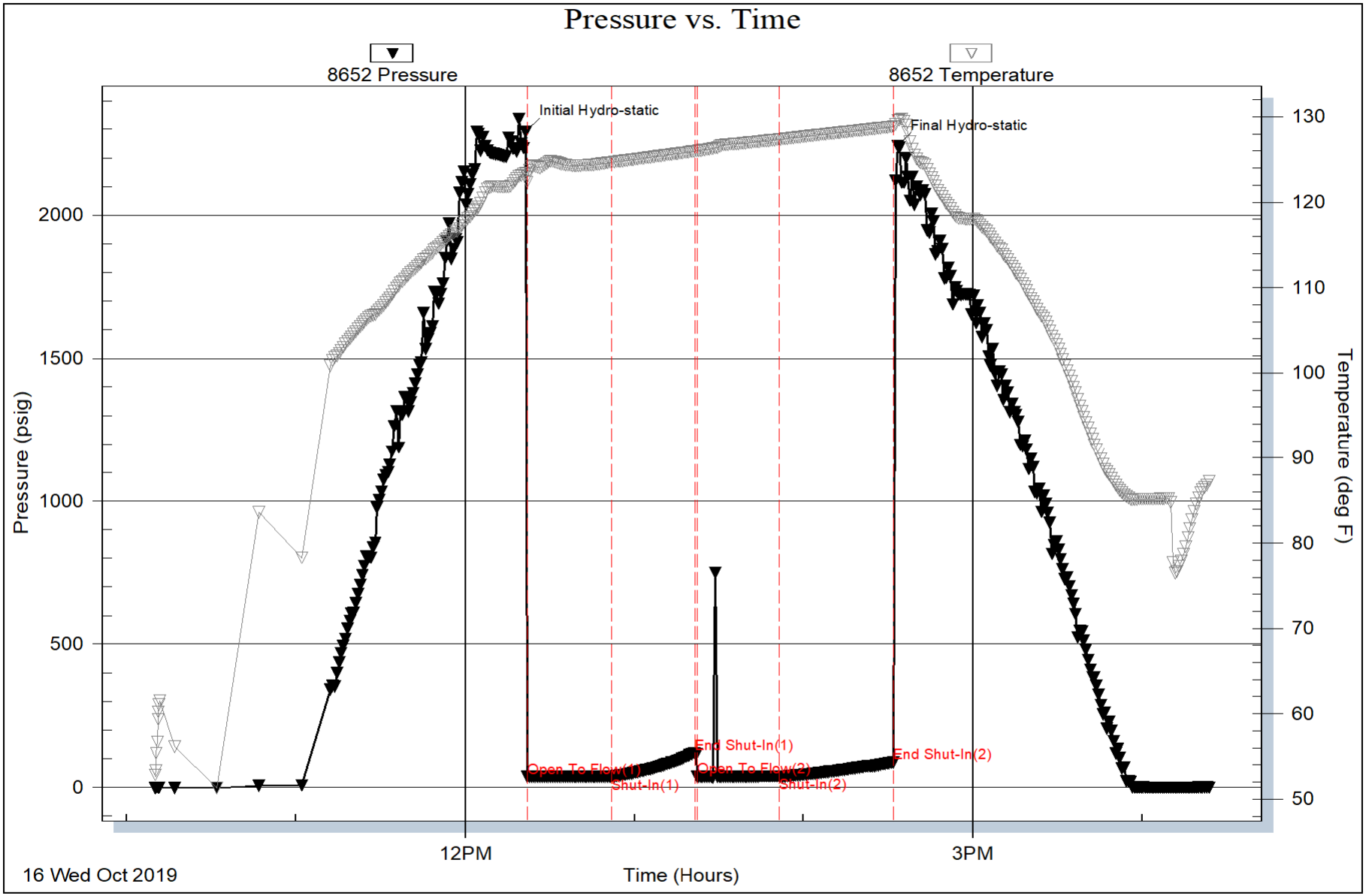
Recovery Table

Length ft	Description	Volume bbl
45.00	Mud 100%	0.349

Total Length: 45.00 ft Total Volume: 0.349 bbl

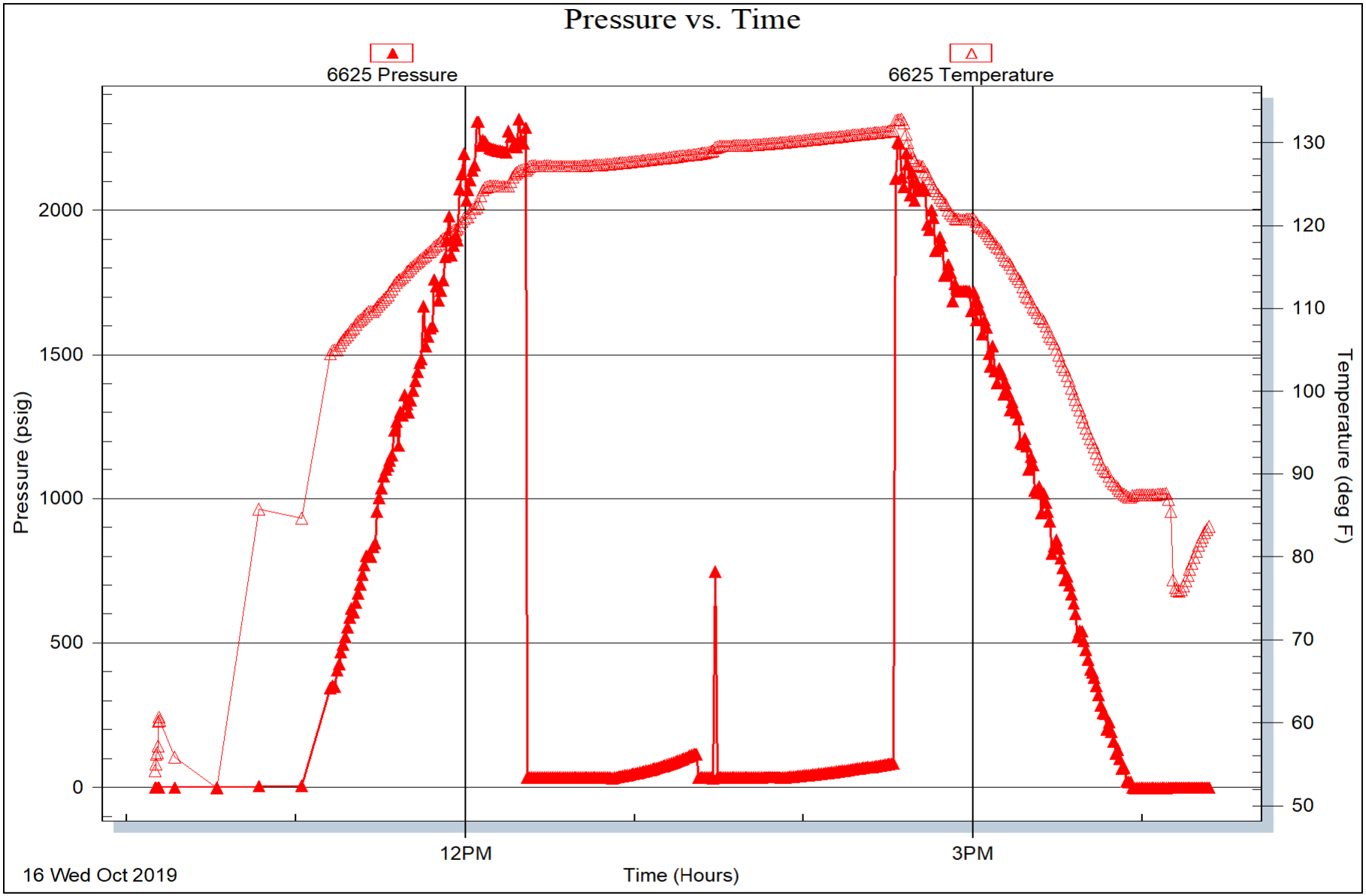
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8652 **Outside** Dow ning Nelson Oil Co., Inc. Kramer Unit 'B #1-24 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65591 Printed: 2019.10.17 @ 11:32:04

Serial #: 6625 **Inside** Dow ning Nelson Oil Co., Inc. Kramer Unit 'B #1-24 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65591 Printed: 2019.10.17 @ 11:32:04

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 65590

Well Name & No. Kramer Unit 'B' #1-24 Test No. 1 Date 10-15-19

Company Downing Nelson Oil Co. Inc Elevation 3261 KB 3253 GL

Address 111 W. 10th Hays, KS 67601

Co. Rep / Geo. Jason Alm Rig Discovery #4

Location: Sec. 24 Twp 5s Rge. 37w Co. Cheyenne State KS

Interval Tested 4273 - 4353 Zone Tested LKC "H-J"

Anchor Length 80 Drill Pipe Run 4248 Mud Wt. 9.2

Top Packer Depth 4268 Drill Collars Run 31 Vis 54

Bottom Packer Depth 4273 Wt. Pipe Run - WL 7.6

Total Depth 4353 Chlorides 500 ppm System LCM 3½

Blow Description IF: ¼" Blow at open, built to 1" at 10 min., stayed at 1" till close

ISI: No blowback

FF: No blow

FSI: No blow

Rec 15	Feet of mud w/trace oil	%gas trace	%oil	%water	100	%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 15 BHT 125 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 2135	☑ Test 1300	T-On Location 3:45	
(B) First Initial Flow 19	☐ Jars	T-Started 5:44	
(C) First Final Flow 21	☐ Safety Joint	T-Open 8:17	
(D) Initial Shut-In 747	☐ Circ Sub	T-Pulled 10:50	
(E) Second Initial Flow 23	☐ Hourly Standby	T-Out 12:30	
(F) Second Final Flow 25	☑ Mileage 124 RT 124	Comments	
(G) Final Shut-In 587	☐ Sampler		
(H) Final Hydrostatic 2121	☐ Straddle	☐ EM Tool	
	☐ Shale Packer	☐ Ruined Shale Packer	
Initial Open 30	☐ Extra Packer	☐ Ruined Packer	
Initial Shut-In ~~30~~ 45	☐ Extra Recorder	☐ Extra Copies	
Final Flow 30	☐ Day Standby	Sub Total 0	
Final Shut-In 45	☐ Accessibility	Total 1424	
	Sub Total 1424	MP/DST Disc't	

Approved By ____ Our Representative James Nunn

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. 65591

Well Name & No. Kramer Unit 'B' #1-24 Test No. 2 Date 10-16-19

Company Downing Nelson Oil Co. Inc Elevation 3261 KB 3253 GL

Address 111 W 10th Hays KS 67601

Co. Rep / Geo. Jason T Alm Rig Discovery #4

Location: Sec. 24 Twp 5s Rge. 37w Co. Cheyenne State KS

Interval Tested 4518 - 4560 Zone Tested Pawnee

Anchor Length 42 Drill Pipe Run 4500 Mud Wt. 9.5

Top Packer Depth 4513 Drill Collars Run 31 Vis 51

Bottom Packer Depth 4518 Wt. Pipe Run - WL 8.0

Total Depth 4560 Chlorides 750 ppm System LCM 3

Blow Description IF: 2" surge blow at open, built slightly then died back to 2"

ISI: No blowback

FF: No blow, Flushed tool, surge then No blow

FSI: No blow

Rec 45	Feet of Mud	%gas	%oil	%water	100	%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 45 BHT 129 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic	2293	☑ Test 1300	T-On Location 9:45
(B) First Initial Flow	36	☐ Jars	T-Started 10:10
(C) First Final Flow	37	☐ Safety Joint	T-Open 12:21
(D) Initial Shut-In	120	☐ Circ Sub	T-Pulled 14:31
(E) Second Initial Flow	37	☐ Hourly Standby	T-Out 16:20
(F) Second Final Flow	38	☑ Mileage 124RTx2 248	Comments Tool chased 5'-6' to bottom @ open Mud down 5'-6'-2" surge blow at open
(G) Final Shut-In	87	☐ Sampler	
(H) Final Hydrostatic	2242	☐ Straddle	
		☐ Shale Packer	☐ EM Tool Tools loaded 16:45 1½
Initial Open	30	☐ Extra Packer	☐ Ruined Shale Packer
Initial Shut-In	30	☐ Extra Recorder	☐ Ruined Packer
Final Flow	30	☐ Day Standby	☐ Extra Copies
Final Shut-In	30	☐ Accessibility	Sub Total 0
		Sub Total 1548	Total 1548
			MP/DST Disc't

Approved By ____ Our Representative James Winkler

Geologic Report

Drilling Time and Sample Log

HARDROCK Consulting, Inc.

Operator Downing-Nelson Oil Co.		Elevation	
		KB	3261'
Lease Kramer Unit B	No. 1-24	DF	
		GL	3253'
API # 15-023-21523-0000		Casing Record	
		Surface	8 5/8" @ 474'
Field Tovrea Northwest		Production	None
Location 1298' FSL & 2562' FWL		Electrical Surveys	
Sec. 24 Twp. 5s Rge. 37w		None	
County Cheyenne	State Kansas		

Formation	Sample tops	Log Tops	Datum	Struct Comp
Anhydrite	2978'		+283	+289 -6
Base	3014'		+247	+255 -8
Topeka	3965'		-704	
Heebner	4094'		-833	-829 -4
Toronto	4134'		-873	-868 -5
Lansing	4148'		-887	-883 -4
Stark	4350'		-1089	-1085 -4
BKC	4431'		-1170	-1163 -7
Marmaton	4444'		-1183	-1175 -8
Pawnee	4538'		-1277	-1269 -8
Fort Scott	4594'		-1333	-1331 -2
Cherokee	4618'		-1357	-1355 -2
Morrow Shale	4753'		-1492	-1490 -2
Mississippian	4848'		-1587	-1579 -8
Total Depth	4865'		-1604	

Reference Well For Structural Comparison Downing-Nelson Oil Co. Kramer Unit #1-24
1085' FWL & 317' FSL Sec. 24 T5s R37w Cheyenne Co. Kansas

Drilling Contractor	Discovery Drilling Co. Inc. Rig #4		
Commenced	10-9-2019	Completed	10-18-2019
Samples Saved From	4050'	To	RTD
Drilling Time Kept From	3900'	To	RTD
Samples Examined From	4050'	To	RTD
Geological Supervision From	4050'	To	RTD
Displacement	3600'		
Mud Type	Chemical		

Summary and Recommendations

The location for the Kramer Unit B #1-24 was found via 3-D seismic survey. The new well as expected via the survey. Two Drill Stem Tests were conducted, both of which were negative. After all gathered data had been examined the decision was made to plug and abandon the Kramer Unit B #1-24 well.

Respectfully Submitted,

Jason T Alm
Hard Rock Consulting, Inc.

ROCK TYPES: Carbon Sh, shale, red, shale, grn, shale, gry, Dolprim, Lmst fw7>, Shcol, Ss, Sltst

ACCESSORIES
MINERAL: Chert, dark; Glauconite; Pyrite; Varicolored chert; Chert White
FOSSIL: Crinoids; Oolite
STRINGER: Chert; Sandstone; Shale; green shale; red shale
TEXTURE: C Chalky

OTHER SYMBOLS
OIL SHOWS: Even Stn; Spotted Stn 50 - 75 %; Spotted Stn 25 - 50 %; Spotted Stn 1 - 25 %; Questionable Stn; Dead Oil Stn; Fluorescence
DST: DST Int; DST alt; Core; tail pipe

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TG, C1 - C5: Total Gas (units), C1 (units), C2 (units), C3 (units), nC4 (units), iC4 (units)

Geological Descriptions

Geo on location 12:30 a.m. 10-13-2019

Topeka 3957'-696

Ls - Tan, fn-subxln, sl fossil, dns, chalky
Sh - Blk, carb
Sh - Gry-brn, few pcs dns sltst
Ls - Offwh, fn xln w/ fair-good interxln por, few rxs w/ scat dead tarry st, nsfo, mostly barren
Heebner 4094' -833
Sh - Blk, carb
Ls - Tan, fn-subxln, mostly dns
Sh - Gry-brn, heavy gry-brn sltst, soft
Sh - Brn, sltst ala
Toronto 4134' -873
Ls - Wht-offwh, fn xln w/ poor scat interxln por, scat tarry dead oil st in por, nsfo, mostly barren
Lansing 4148' -887
Ls - Offwh-tan, fn xln w/ poor interxln por, few pcs w/ tarry dead st, mostly barren, very chalky
Ls - Offwh-lt gry, fn xln, sucrosic in part w/ poor-scat fair interxln por, few pcs w/ very lt tarry dead st, nsfo, mostly barren
Sh - Brn-gry
Ls - Tan, fn xln w/ very poor scat interxln por, few pcs w/ very lt spot tarry dead oil st, mottled w/ gry-wht chert
Sh - Gry-brn
Ls - Offwh-lt gry, fn xln, ool in part w/ poor scat ooc & interxln por, barren, heavy multicolored chert
Ls - ala, dns
Sh - Brn-gry, sl silty
Ls - Offwh-tan, fn-subxln, sl ool in part, dns, chalky
Sh - Gry
Ls - Offwh-lt gry, fn xln, ool pkst in part w/ fair scat ooc & int-ool por, barren, very chalky
Ls - ala, poor por, barren
Sh - Blk, carb
Sh - Brn-gry-grn
Ls - Tan, fn-subxln, ool w/ poor scat ooc por, lt spot dead oil st, nsfo, no odor, very poor yel fluor, lt stream cut
Ls - ala, tan-lt gry, dns
Sh - Gry-brn
Sh - Brn-gry-grn, much dns gry Ls
Ls - Tan, fn-subxln, ool in part w/ poor pinpoint ooc por, lt brn oil st in por, sl sfo when broken, dull yel fluor, lt stream cut, no odor, mostly dns, chalky towards base
Stark 4350' -1089
Sh - Blk-drk gry
Sh - Brn-red
Ls - Tan, fn-subxln, ool in part w/ scat poor pinpoint ooc por, barren, very chalky
Sh - Blk, carb
Sh - Brn-grn-gry
Ls - Tan, fn-subxln w/ scat poor pinpoint interxln por, barren, chalky
Sh - Gry-brn
Ls - Offwh-tan, fn xln w/ poor scat interxln por, lt tarry dead oil st in a few rxs, mostly barren, nsfo, no odor, sl chalky,
BKC 4431' -1170
Sh - Red-brn-grn, clr-orange chert, scat dns sltst
Marmaton 4444' -1183
Ls - Lt gry-tan, subxln, dns, sl fossil in part
Ls - Lt gry, sub-microxln, very dns, sl mottled w/ gry sh in part
Ls - ala
Sh - Gry-brn
Ls - Offwh-tan, fn-subxln, ool in part w/ poor scat ooc por, 1 pc w/ very lt brn oil st, nsfo, no odor, mostly barren
Sh - Red-brn-gry, much sltst mottled w/ brn-red shale
Ls - Tan-lt gry, subxln, dns, sl fossil in part
Ls - ala
Sh - Blk, carb
Sh - Gry
Pawnee 4538' -1277
Ls - Offwh, fn xln, ool pkst in part w/ poor-scat fair ooc por, lt-fair oil st in por, few spots lt sat, fsfo, many gas bubbles, gsfo on cup, lt-fair odor, good yel fluor, good cut
Ls - Tan-lt gry, subxln, dns, much fossil chert-tan-gry
Sh - Blk carb
Ls - Offwh-tan, fn xln w/ poor interxln por, barren, heavy blk chert
Ls - Tan, fn-subxln, ool in part w/ poor scat interxln por, barren, heavy lt gry-wht chert
Sh - Blk, carb
Fort Scott 4594' -1333
Ls - Tan, subxln, ool in part, dns, chert-gry-drk gry
Ls - Tan, subxln, sl ool, dns, chert gry-wht
Cherokee 4618' -1357
Sh - Blk, carb
Ls - Offwh-lt gry, subxln, sl ool in part, dns, very chalky
Ls - ala
Ls - Tan-offwh, fn-subxln, dns, very chalky
Sh - Blk, carb
Sh - Gry-drk gry-brn, many random large qtz gr, barren
Ss - Qtz, fn-course gr, poor sort, fair cement, sub-angular w/ fair inter-gr por, barren, no fluor
Ss - Qtz, md-coarse gr, poor sort, fair cement, sub-rounded w/ fair-good inter-gr por, barren, no fluor, sl pyritic, many random lg qtz gr
Sh - Red-gry-grn, much vari color ang chert
Ss - Qtz, fn-md gr, fair sort, fair cement, sub-rounded w/ poor-fair inter-gr por, heavily mottled w/ red-maroon sh, barren
Sh - Red, many md gr qtz cluster w/ good inter-gr por, barren, no fluor
Ss - Qtz, md-very coarse gr, poor sort, poor-fair cement, well-subround w/ good inter-gr por, barren, mottled w/ vari color chert, sl glauc
Sh - Brn-grn-gry, much vari color chert
Sh - ala
Morrow Shale 4753' -1492
Sh - Blk, carb
Sh - Gry-brn-yel-grn, grn sh sl Glauc, few pcs of coarse gr Ss mottled w/ grn sh, very dns
Ss - Qtz, wht-mottled grn, fn-vfn grn, poor inter-gr por, well cemented, dirty, heavy grn sh, sl glauc
Sh - Grn-gry, much dns Ss clusters heavily mottled w/ grn sh & glauc
Sh - Ss - ala
Sh - Blk-drk gry
Sh - Grn-gry, many coarse gr Ss clusters w/ fair inter-gr por, Ss is mottled w/ grn sh, friable in part
Sh - Gry-grn, much dirty-shaly Ss, Ss clusters are heavily mottled w/ gry-grn sh, barren, glauc in part, heavy clr-orange chert
Sh - Ss - ala
Ls - Tan-lt gry, fn-subxln, ool in part, glauc, very dns
Mississippian 4848' -1587
Dolo - Offwh-lt gry, fn suc xln in part w/ fair-good interxln por, barren
Dolo - ala
Total Depth 4865' -1604

Respectfully Submitted,
Jason T Alm
10-18-2019
AAPG #10134582

Oil Shows | Lithology | DST | Depth | Intervals | DST Interval | Cored Interval | Curve Track #1 ROP (min/ft)