

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
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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	Farmer, John O., Inc.
Well Name	ZEIGLER UNIT 1
Doc ID	1713603

Tops

Name	Top	Datum
Anhydrite	1070'	(+835)
Topeka	2769'	(-864)
Heebner	3001'	(-1096)
Toronto	3021'	(-1116)
Lansing	3044'	(-1139)
Base/KC	3292'	(-1387')
Arbuckle	3412'	(-1507)
L.T.D.	3460'	(-1555)



DRILL STEM TEST REPORT

Prepared For: **John O Farmer**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Zeigler Unit #1

9-10s-16w Rooks,KS

Start Date: 2023.04.08 @ 02:35:00

End Date: 2023.04.08 @ 08:53:00

Job Ticket #: 70317 DST #: 1

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

Printed: 2023.04.12 @ 10:01:12

John O Farmer
9-10s-16w Rooks,KS
Zeigler Unit #1
DST # 1
Toronto
2023.04.08



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70317

DST#: 1

ATTN: Austin Klaus

Test Start: 2023.04.08 @ 02:35:00

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:50:30

Time Test Ended: 08:53:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Terrance

Unit No: 75

Interval: 2994.00 ft (KB) To 3032.00 ft (KB) (TVD)

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3032.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8320

Press@RunDepth: 36.43 psig @ 2997.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.04.08

End Date:

2023.04.08

Last Calib.: 1899.12.30

Start Time: 02:35:05

End Time:

08:52:59

Time On Btm: 2023.04.08 @ 04:50:00

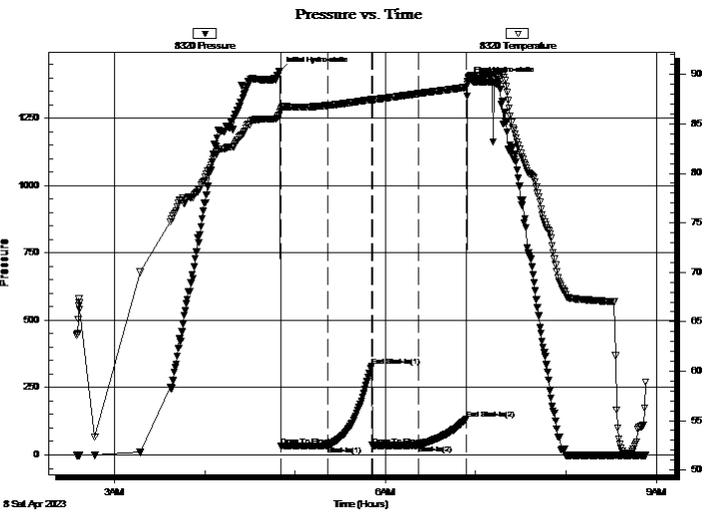
Time Off Btm: 2023.04.08 @ 06:54:15

TEST COMMENT: IF-30- 2 1/2 Inches ,died back to surface blow

IS-30-No return

FF-30-No blow

FS-30-No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1425.31	86.17	Initial Hydro-static
1	32.51	86.31	Open To Flow (1)
32	34.13	86.87	Shut-In(1)
61	330.41	87.48	End Shut-In(1)
62	34.87	87.43	Open To Flow (2)
92	36.43	88.06	Shut-In(2)
124	134.08	88.70	End Shut-In(2)
125	1388.95	89.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	OSM	0.28

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70317

DST#: 1

ATTN: Austin Klaus

Test Start: 2023.04.08 @ 02:35:00

Tool Information

Drill Pipe:	Length: 2969.00 ft	Diameter: 3.75 inches	Volume: 40.56 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume:</u>	Tool Chased	ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	49000.00 lb
Depth to Top Packer:	2994.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	38.00 ft				
Tool Length:	64.00 ft				
Number of Packers:	2	Diameter: 6.88 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			2973.00	
Hydraulic tool	5.00			2978.00	
EM Sub	3.00			2981.00	
Safety Joint	3.00			2984.00	
Packer	5.00			2989.00	26.00 Bottom Of Top Packer
Packer	5.00			2994.00	
Stubb	1.00			2995.00	
Perforations	1.00			2996.00	
Change Over Sub	1.00			2997.00	
Recorder	0.00	8938		2997.00	
Recorder	0.00	8320		2997.00	
Drill Pipe	31.00			3028.00	
Change Over Sub	1.00			3029.00	
Bullnose	3.00			3032.00	38.00 Bottom Packers & Anchor

Total Tool Length: 64.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70317

DST#: 1

ATTN: Austin Klaus

Test Start: 2023.04.08 @ 02:35:00

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: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
40.00	OSM	0.284

Total Length: 40.00 ft Total Volume: 0.284 bbf

Num Fluid Samples: 0

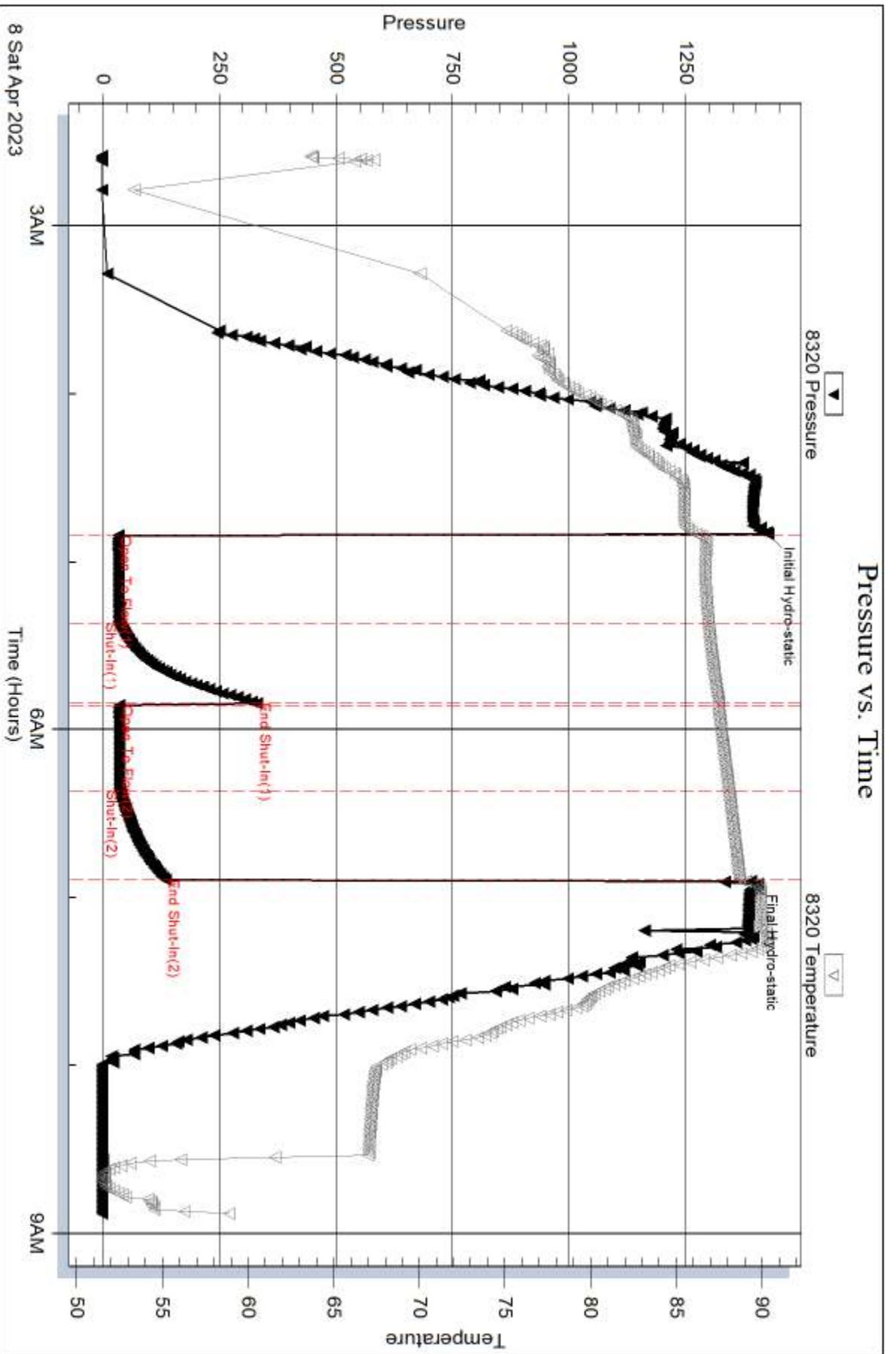
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **John O Farmer**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Zeigler Unit #1

9-10s-16w Rooks,KS

Start Date: 2023.04.08 @ 18:30:00

End Date: 2023.04.08 @ 23:41:30

Job Ticket #: 70318 DST #: 2

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

Printed: 2023.04.12 @ 10:00:41

John O Farmer
9-10s-16w Rooks,KS
Zeigler Unit #1
DST # 2
A-C
2023.04.08



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70318

DST#: 2

ATTN: Austin Klaus

Test Start: 2023.04.08 @ 18:30:00

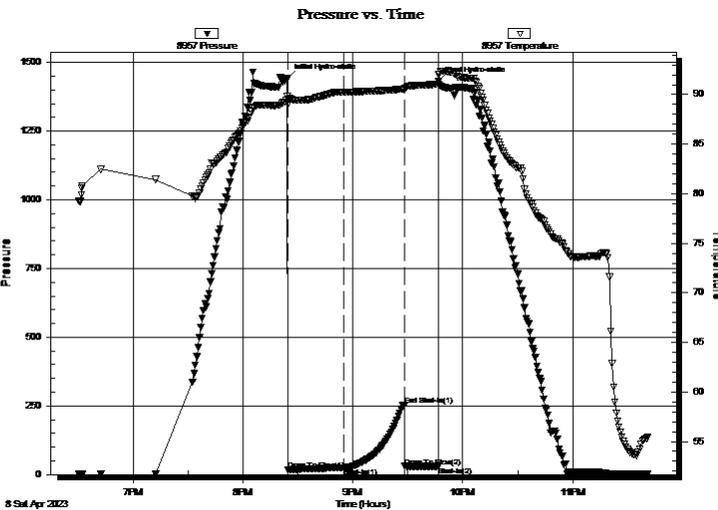
GENERAL INFORMATION:

Formation: **A-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:24:30
 Time Test Ended: 23:41:30
 Interval: **3026.00 ft (KB) To 3092.00 ft (KB) (TVD)**
 Total Depth: 3092.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Terrance
 Unit No: 75
 Reference Elevations: 1905.00 ft (KB)
 1897.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8957

Press@RunDepth: 25.34 psig @ 3027.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2023.04.08 End Date: 2023.04.08 Last Calib.: 2023.04.09
 Start Time: 18:30:05 End Time: 23:41:29 Time On Btm: 2023.04.08 @ 20:24:15
 Time Off Btm: 2023.04.08 @ 21:46:45

TEST COMMENT: IF-30-No blow
 IS-30-No return
 FF-15-No blow , then pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1442.31	89.83	Initial Hydro-static
1	16.93	89.08	Open To Flow (1)
31	25.34	90.27	Shut-In(1)
64	254.21	90.57	End Shut-In(1)
64	29.84	90.49	Open To Flow (2)
83	28.98	91.06	Shut-In(2)
83	1430.21	92.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70318

DST#: 2

ATTN: Austin Klaus

Test Start: 2023.04.08 @ 18:30:00

Tool Information

Drill Pipe:	Length: 3000.00 ft	Diameter: 3.75 inches	Volume: 40.98 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume:</u>	Tool Chased	ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	49000.00 lb
Depth to Top Packer:	3026.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	66.00 ft				
Tool Length:	92.00 ft				
Number of Packers:	2	Diameter: 6.88 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3005.00	
Hydraulic tool	5.00			3010.00	
EM Sub	3.00			3013.00	
Safety Joint	3.00			3016.00	
Packer	5.00			3021.00	26.00 Bottom Of Top Packer
Packer	5.00			3026.00	
Stubb	1.00			3027.00	
Recorder	0.00	8957		3027.00	
Recorder	0.00	8320		3027.00	
Perforations	28.00			3055.00	
Change Over Sub	1.00			3056.00	
Drill Pipe	32.00			3088.00	
Change Over Sub	1.00			3089.00	
Bullnose	3.00			3092.00	66.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70318

DST#: 2

ATTN: Austin Klaus

Test Start: 2023.04.08 @ 18:30:00

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OSM	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

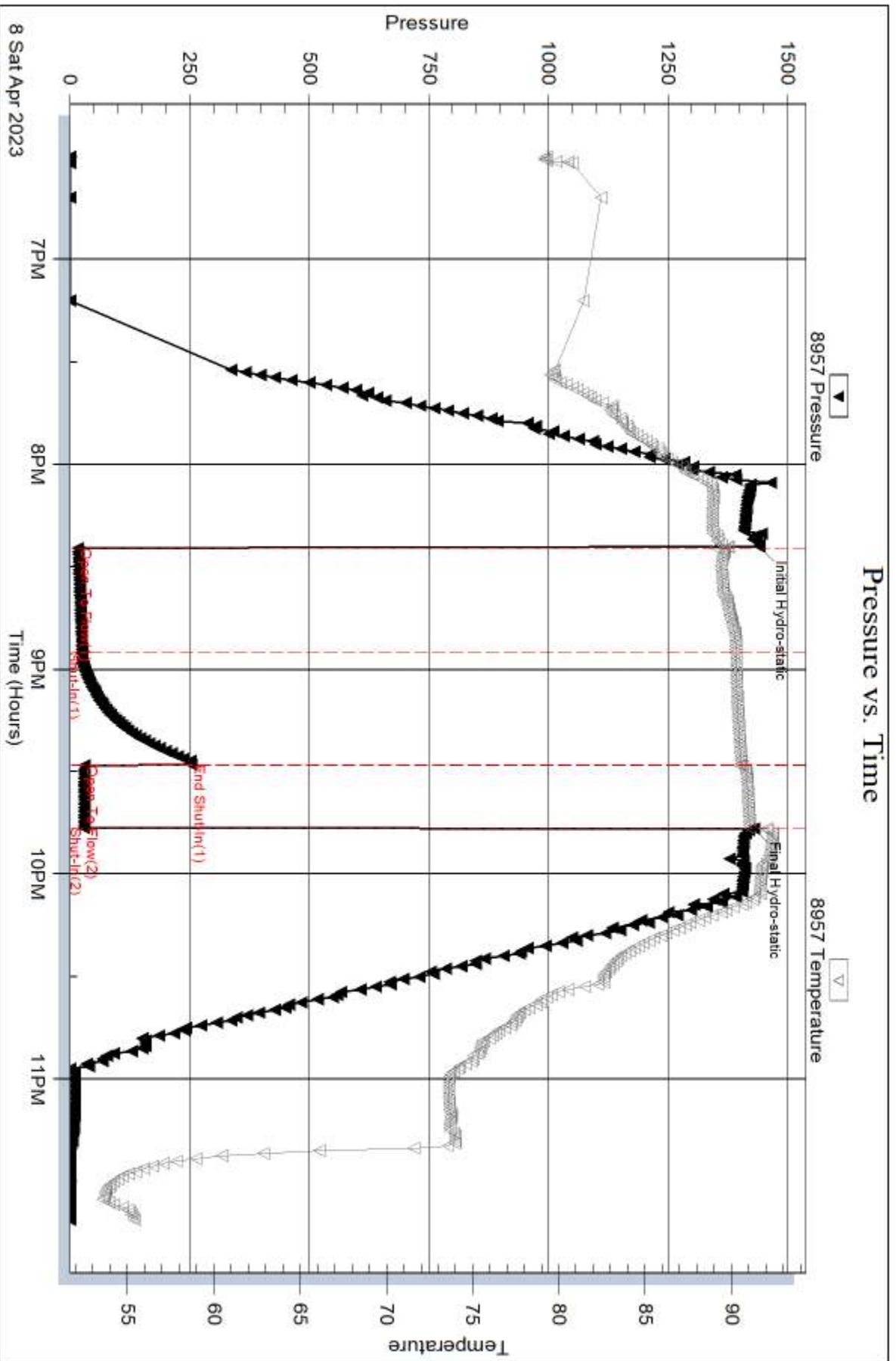
Num Gas Bombs: 0

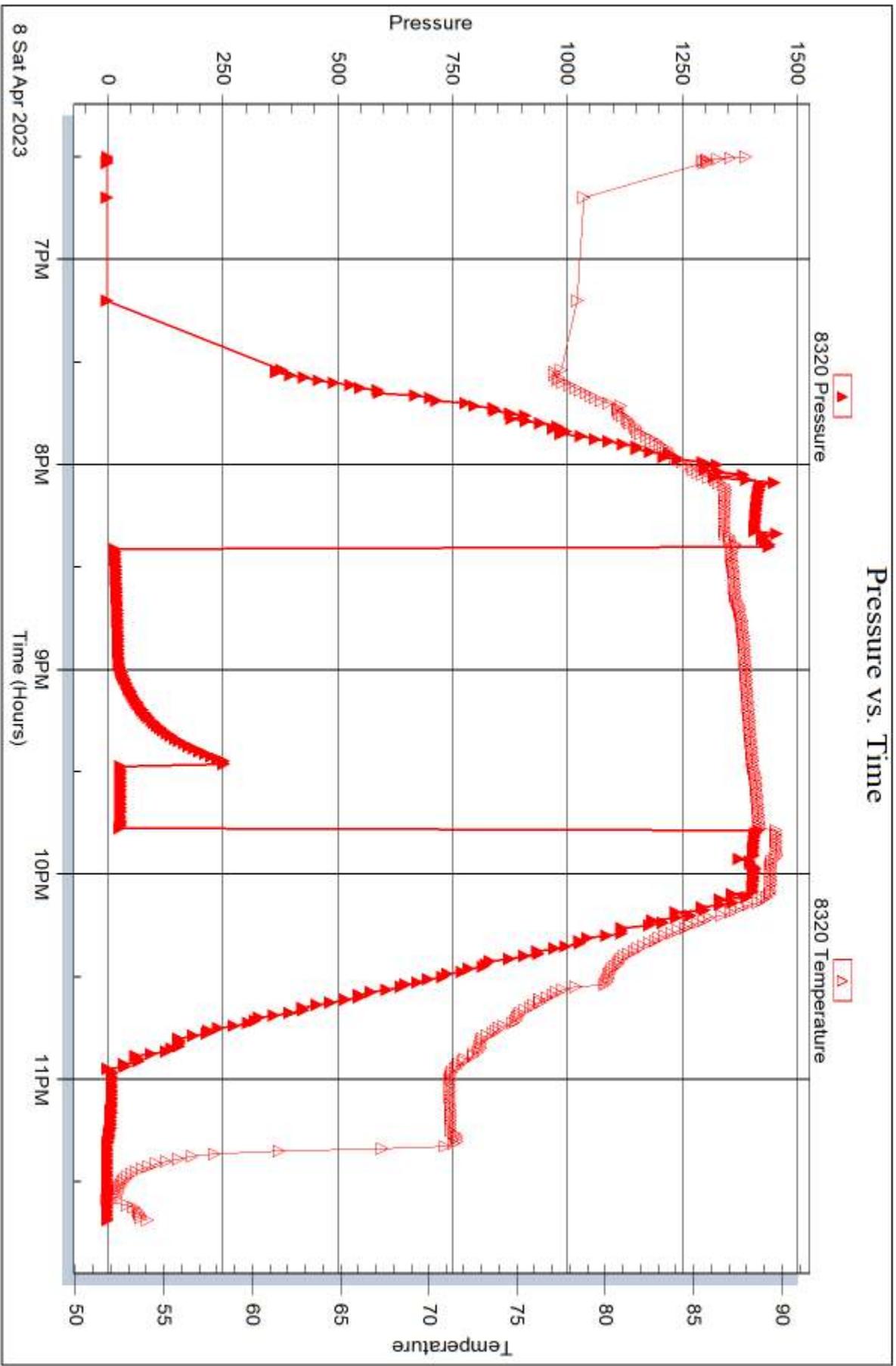
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **John O Farmer**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Zeigler Unit #1

9-10s-16w Rooks,KS

Start Date: 2023.04.09 @ 10:20:00

End Date: 2023.04.09 @ 16:42:45

Job Ticket #: 70319 DST #: 3

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

Printed: 2023.04.12 @ 09:57:11



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70319

DST#: 3

ATTN: Austin Klaus

Test Start: 2023.04.09 @ 10:20:00

GENERAL INFORMATION:

Formation: **Lansing E-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:51:15

Time Test Ended: 16:42:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Terrance

Unit No: 75

Interval: 3104.00 ft (KB) To 3158.00 ft (KB) (TVD)

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3158.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8957

Press@RunDepth: 63.74 psig @ 3105.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.04.09

End Date: 2023.04.09

Last Calib.: 2023.04.09

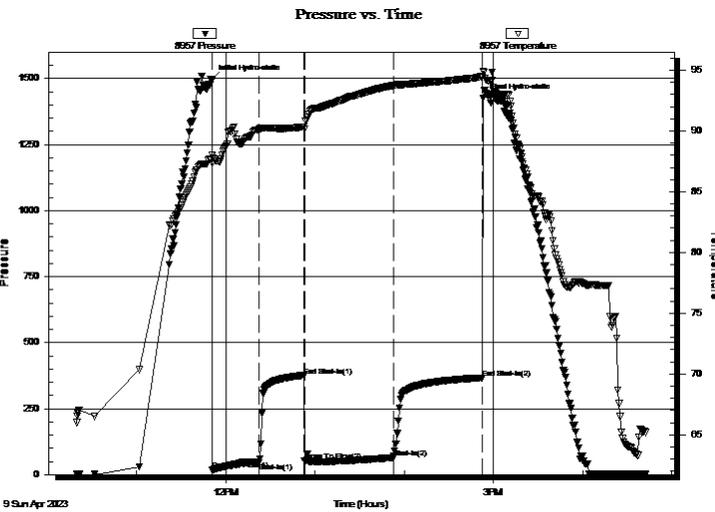
Start Time: 10:20:05

End Time: 16:42:44

Time On Btm: 2023.04.09 @ 11:51:00

Time Off Btm: 2023.04.09 @ 14:53:00

TEST COMMENT: IF-30-3 Inches n
FF-30-No return
FF-60-3 Inches
FSI-60- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1496.44	88.02	Initial Hydro-static
1	16.83	87.37	Open To Flow (1)
32	44.28	90.15	Shut-In(1)
62	374.68	90.36	End Shut-In(1)
62	52.96	90.19	Open To Flow (2)
122	63.74	93.75	Shut-In(2)
182	366.38	94.48	End Shut-In(2)
182	1427.22	94.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	OSM	1.10

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70319

DST#: 3

ATTN: Austin Klaus

Test Start: 2023.04.09 @ 10:20:00

Tool Information

Drill Pipe:	Length: 3066.00 ft	Diameter: 3.75 inches	Volume: 41.88 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	lb
			<u>Total Volume: - bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	lb
Depth to Top Packer:	3104.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	54.00 ft				
Tool Length:	80.00 ft				
Number of Packers:	2	Diameter: 6.88 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3083.00	
Hydraulic tool	5.00			3088.00	
EM Sub	3.00			3091.00	
Safety Joint	3.00			3094.00	
Packer	5.00			3099.00	26.00 Bottom Of Top Packer
Packer	5.00			3104.00	
Stubb	1.00			3105.00	
Recorder	0.00	8957		3105.00	
Recorder	0.00	8320		3105.00	
Perforations	15.00			3120.00	
Change Over Sub	1.00			3121.00	
Drill Pipe	32.00			3153.00	
Change Over Sub	1.00			3154.00	
Perforations	1.00			3155.00	
Bullnose	3.00			3158.00	54.00 Bottom Packers & Anchor

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70319

DST#: 3

ATTN: Austin Klaus

Test Start: 2023.04.09 @ 10:20:00

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	OSM	1.104

Total Length: 100.00 ft

Total Volume: 1.104 bbl

Num Fluid Samples: 0

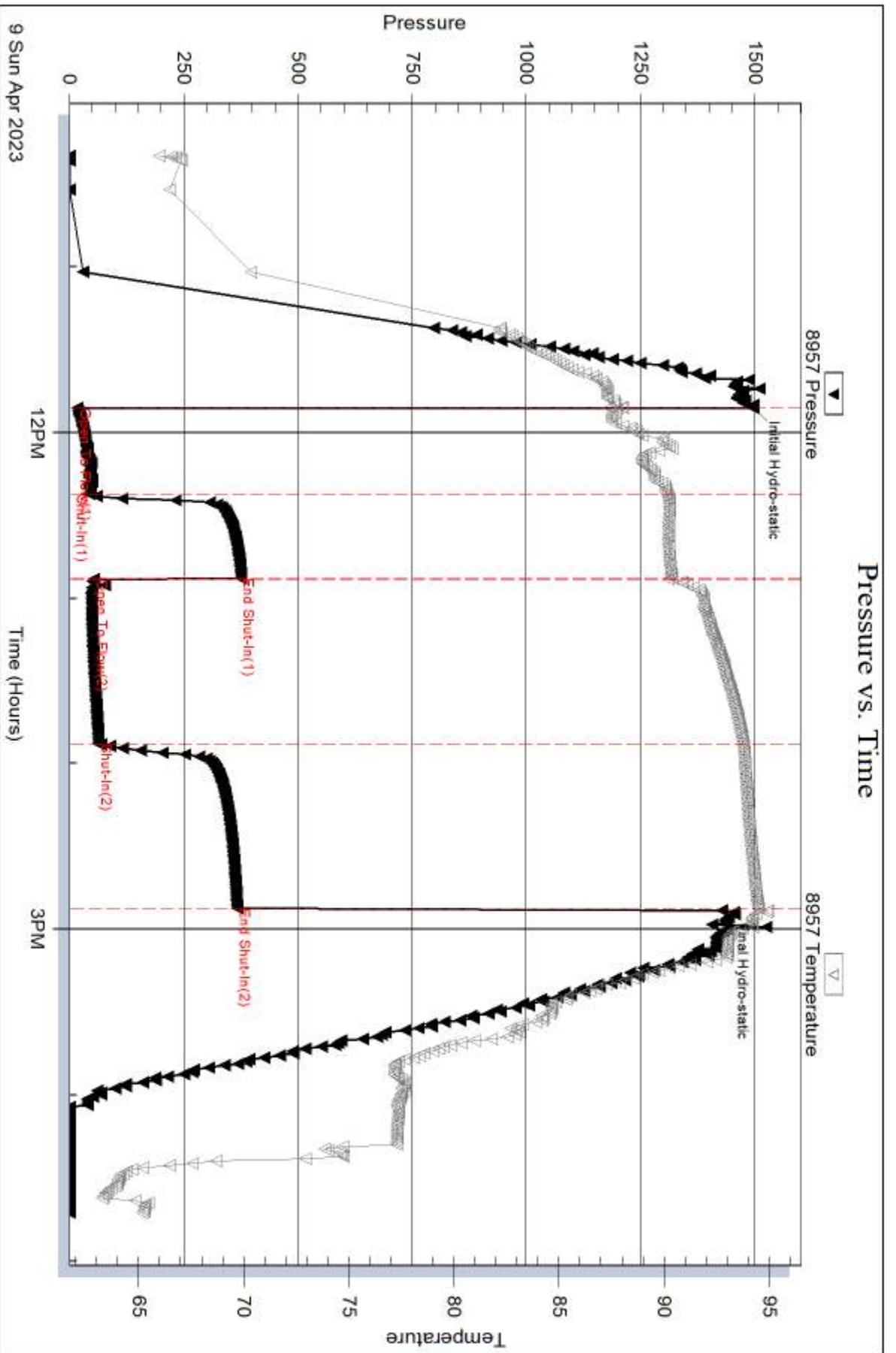
Num Gas Bombs: 0

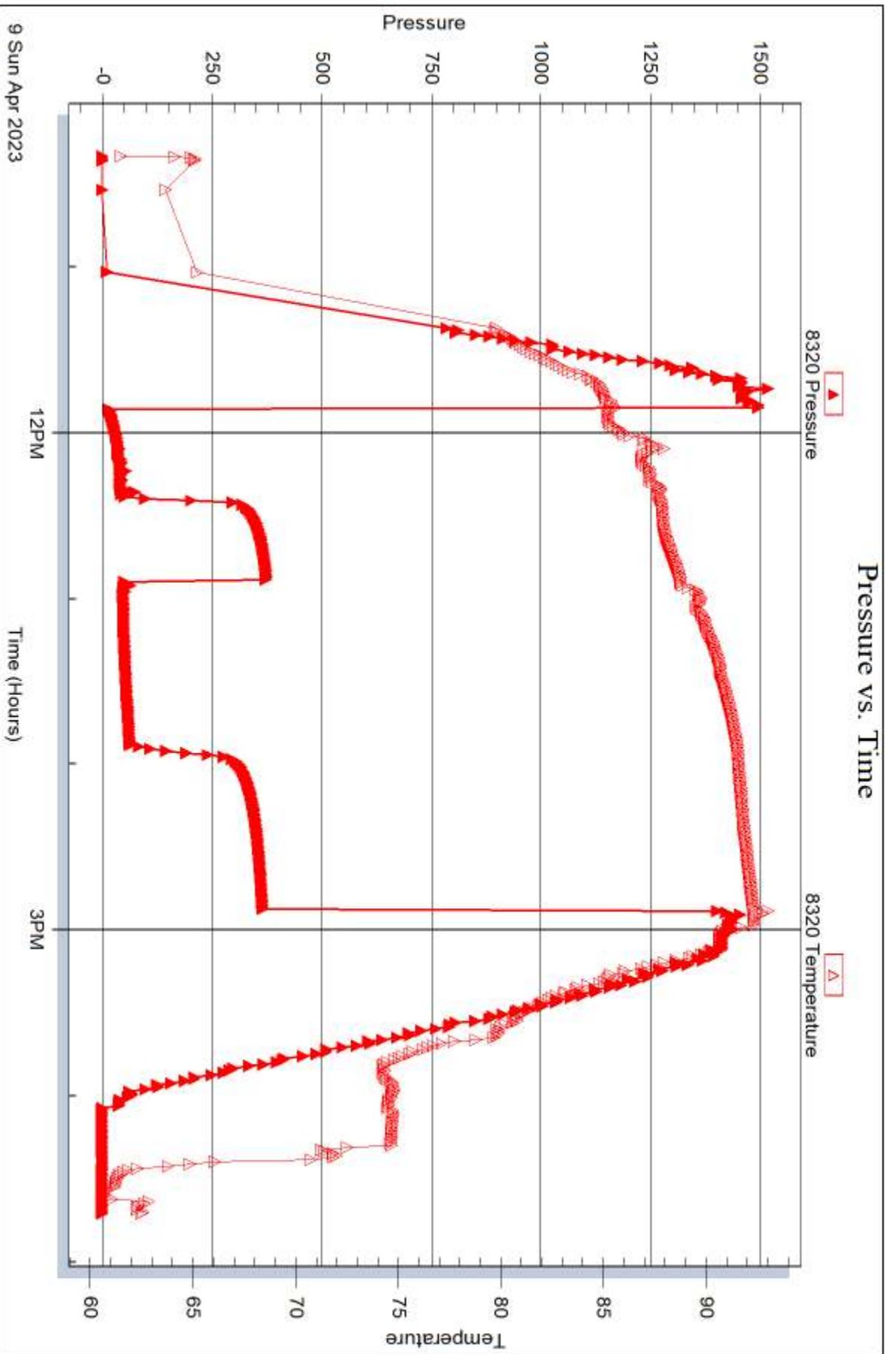
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **John O Farmer**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Zeigler Unit #1

9-10s-16w Rooks,KS

Start Date: 2023.04.10 @ 02:52:00

End Date: 2023.04.10 @ 09:24:15

Job Ticket #: 70320 DST #: 4

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

Printed: 2023.04.12 @ 09:42:51



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer
 PO Box 352
 Russell KS 67665
 ATTN: Austin Klaus

9-10s-16w Rooks,KS
Zeigler Unit #1
 Job Ticket: 70320 **DST#: 4**
 Test Start: 2023.04.10 @ 02:52:00

GENERAL INFORMATION:

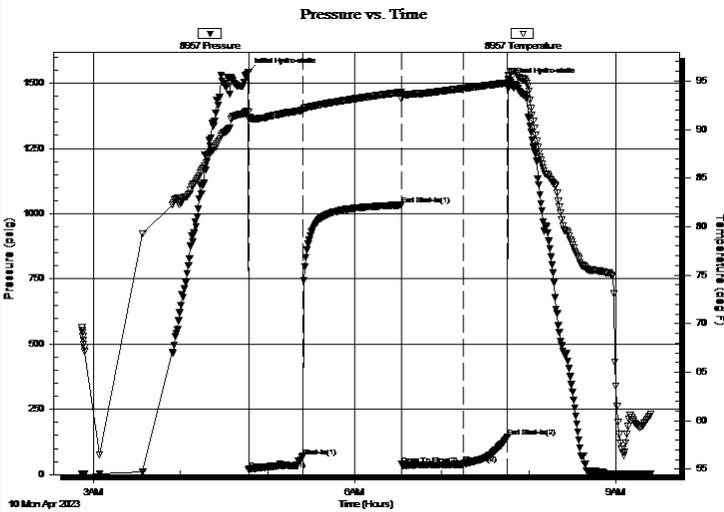
Formation: **H-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:47:00
 Time Test Ended: 09:24:15
 Interval: **3166.00 ft (KB) To 3270.00 ft (KB) (TVD)**
 Total Depth: 3270.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Terrance
 Unit No: 75
 Reference Elevations: 1905.00 ft (KB)
 1897.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8957

Press@RunDepth: 40.43 psig @ 3170.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2023.04.10 End Date: 2023.04.10 Last Calib.: 2023.04.10
 Start Time: 02:52:05 End Time: 09:24:14 Time On Btm: 2023.04.10 @ 04:46:45
 Time Off Btm: 2023.04.10 @ 07:45:45

TEST COMMENT: IF-30-Surface blow
 IS-75-No return
 FF-30-Surface blow
 FS-30-No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1543.00	91.82	Initial Hydro-static
1	19.22	91.09	Open To Flow (1)
38	69.74	92.01	Shut-In(1)
106	1033.54	93.85	End Shut-In(1)
106	38.87	93.14	Open To Flow (2)
149	40.43	94.25	Shut-In(2)
179	145.62	94.82	End Shut-In(2)
179	1502.35	95.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	OSM	0.28

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70320

DST#: 4

ATTN: Austin Klaus

Test Start: 2023.04.10 @ 02:52:00

Tool Information

Drill Pipe:	Length: 3130.00 ft	Diameter: 3.75 inches	Volume: 42.76 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume:</u>	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3166.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	104.00 ft				
Tool Length:	130.00 ft				
Number of Packers:	2	Diameter: 6.88 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3145.00	
Hydraulic tool	5.00			3150.00	
EM Sub	3.00			3153.00	
Safety Joint	3.00			3156.00	
Packer	5.00			3161.00	26.00 Bottom Of Top Packer
Packer	5.00			3166.00	
Stubb	1.00			3167.00	
Perforations	2.00			3169.00	
Change Over Sub	1.00			3170.00	
Recorder	0.00	8957		3170.00	
Recorder	0.00	8320		3170.00	
Drill Pipe	95.00			3265.00	
Change Over Sub	1.00			3266.00	
Perforations	1.00			3267.00	
Bullnose	3.00			3270.00	104.00 Bottom Packers & Anchor

Total Tool Length: 130.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer

9-10s-16w Rooks,KS

PO Box 352
Russell KS 67665

Zeigler Unit #1

Job Ticket: 70320

DST#: 4

ATTN: Austin Klaus

Test Start: 2023.04.10 @ 02:52:00

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	OSM	0.284

Total Length: 40.00 ft Total Volume: 0.284 bbl

Num Fluid Samples: 0

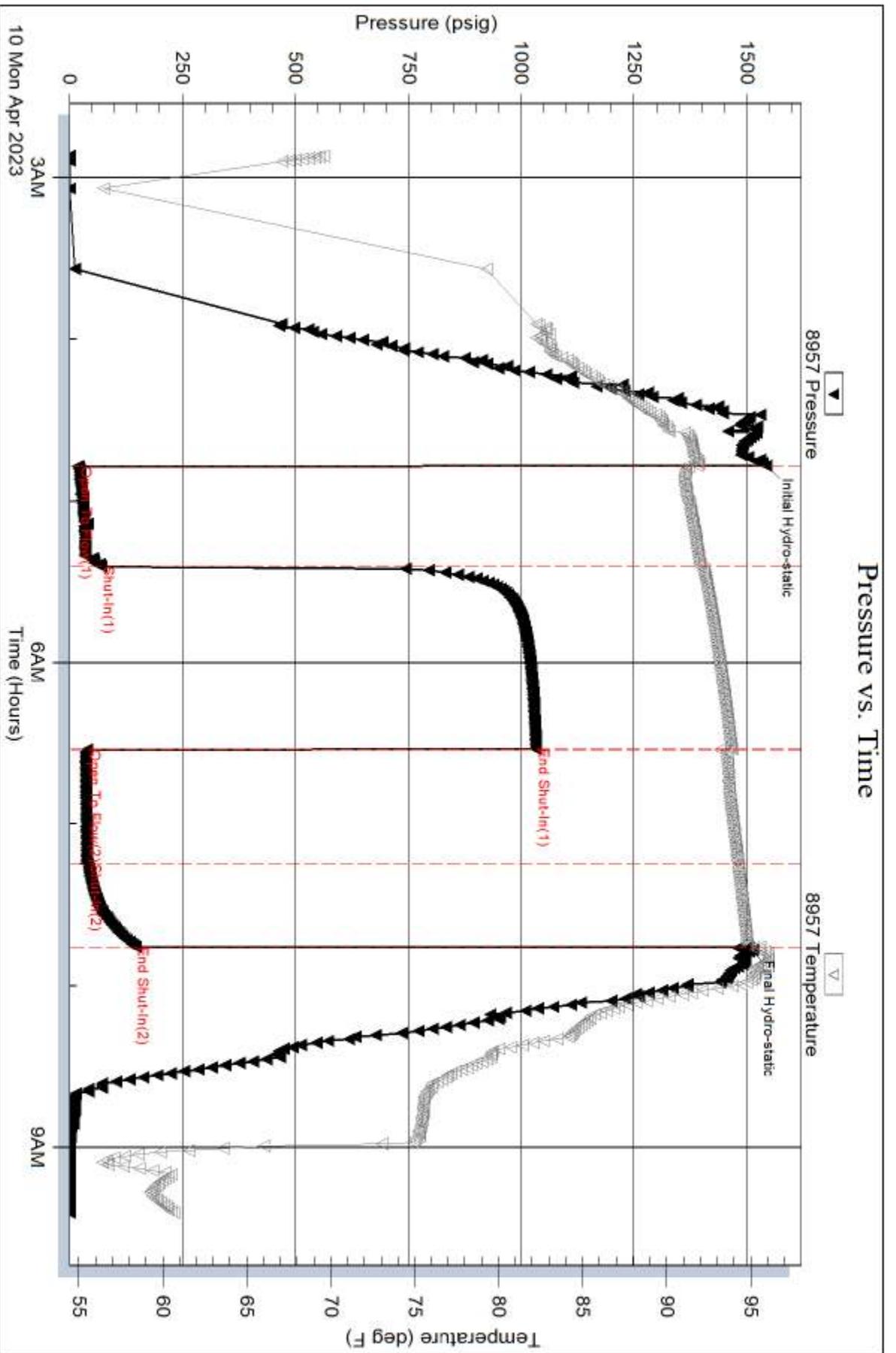
Num Gas Bombs: 0

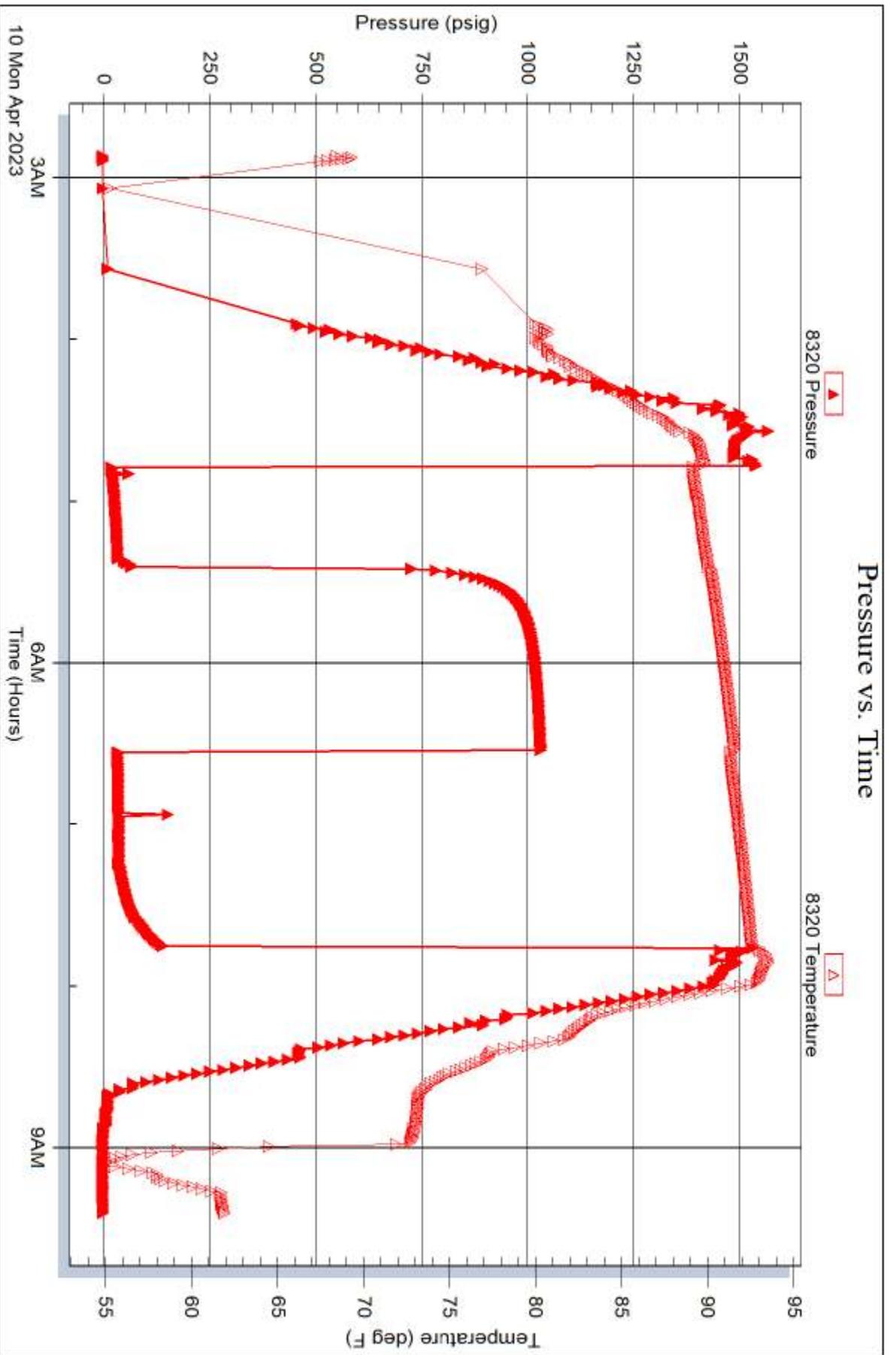
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70317

Well Name & No. Zeigler Unit #1 Test No. 1 Date 4-8-23
 Company John O. Farmer, Inc. Elevation 1905 KB 1897 GL
 Address P.O. Box 352 Russell, KS 67665
 Co. Rep / Geo Austin Klaus Rig Discovery #2
 Location: Sec. 9 Twp 10S Rge. New Co. Reeks State KS

Interval Tested 2994 - 3032 Zone Tested Toronto
 Anchor Length 38' Drill Pipe Run 2969 Mud Wt. 8.4
 Top Packer Depth 2949 Drill Collars Run 30 Vis 50
 Bottom Packer Depth 2994 Wt. Pipe Run — WL 7.2
 Total Depth 3032 Chlorides 2500 ppm System LCM 2#

Blow Description FF-30 - 2 1/2 inches reduced to surface Blow
ISI-30 - No Return
FF-30 - No Blow
FSI-30 - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>OSM</u>			<u>100</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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 89 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 Initial Hydrostatic 1425 Test 1800 Ruined Shale Packer _____
 Initial Flow 33 to 34 Jars _____ Ruined Packer _____
 Initial Shut-In 330 Circ Sub _____ Hotel _____
 Final Flow 35 to 36 Hourly Standby _____ EM Tool Successful _____
 Final Shut-In 134 Mileage 40 x 2 140 Accessibility _____
 Final Hydrostatic 1389 Sampler _____ Gas Sample _____
 T-On Location 01:15 Straddle _____ Sub Total 0
 Initial Flow 30 T-Started 02:35 Shale Packer _____ Total 1940
 Initial Shut-In 30 T-Open 04:51 Extra Packer _____ Tool Loaded _____ @ _____
 Final Flow 30 T-Pulled 06:51 Extra Recorder _____ MP/DST Disc't _____
 Final Shut-In 30 T-Out 08:54 Day Standby _____

Comments _____

Approved By Thanks!! Our Representative Terrance Wickham

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **70318**

Well Name & No. Ziegler Unit #1 Test No. 2 Date 4-8-23
 Company John D. Farmer, Inc. Elevation 1905 KB 1897 GL
 Address P.O. Box 352 Russell, KS 67665
 Co. Rep / Geo Austin Klaus Rig Discovery # 2
 Location: Sec. 9 Twp 10S Rge. 16W Co. Rooks State KS

Interval Tested 3026 - 3092 Zone Tested Lansing A-C
 Anchor Length 66 Drill Pipe Run 3000 Mud Wt. 8.6
 Top Packer Depth 3026 Drill Collars Run 30 Vis 50
 Bottom Packer Depth 3026 Wt. Pipe Run _____ WL 7.2
 Total Depth 3092 Chlorides 2500 ppm System LCM 2#
 Blow Description IF-30 - No Blow
ISI-30 - No Return
FF-15 - No Blow - Pull Tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>OSM</u>			<u>100</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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 92 Gravity _____ API RW _____ @ _____ *F Chlorides _____ ppm
 Initial Hydrostatic 1442 Test 1800 Ruined Shale Packer _____
 Initial Flow 17 to 25 Jars _____ Ruined Packer _____
 Initial Shut-In 254 Circ Sub _____ Hotel _____
 Final Flow 30 to 29 Hourly Standby _____ EM Tool Successful _____
 Final Shut-In _____ Mileage 40 x 2 140 Accessibility _____
 Final Hydrostatic 1430 Sampler _____ Gas Sample _____
 T-On Location 17:30 Straddle _____ Sub Total 0
 Initial Flow 30 T-Started 18:30 Shale Packer _____ Total 1940
 Initial Shut-In 30 T-Open 20:25 Extra Packer _____ Tool Loaded _____ @ _____
 Final Flow 15 T-Pulled 21:40 Extra Recorder _____ MP/DST Disc't _____
 Final Shut-In _____ T-Out 23:40 Day Standby _____

Comments _____

Approved By Thanks!! Our Representative Terrance

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70319

Well Name & No. Zeigler Unit # 1 Test No. 3 Date 4-9-23
 Company John D. Farmer Inc. Elevation 1905 KB 1897 GL
 Address P.O. Box 352 Russell, KS 67665
 Co. Rep / Geo Austin Klaus Rig Discovery #4
 Location: Sec. 9 Twp 10S Rge. 16W Co. Rooks State KS

Interval Tested 3104-3158 Zone Tested Lancing E-6
 Anchor Length 54 Drill Pipe Run 3004 Mud Wt. 8.9
 Top Packer Depth 3099 Drill Collars Run 30 Vis 48
 Bottom Packer Depth 3104 Wt. Pipe Run _____ WL 8
 Total Depth 3158 Chlorides 4,000 ppm System LCM 2#

Blow Description IF-30-3 inches
IS-30-No Return
FF-60-3 inches
FSI-No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>100</u>	<u>OSM</u>			<u>100</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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 100 BHT 93 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 Initial Hydrostatic 1494 Test 1800 Ruined Shale Packer _____
 Initial Flow 17 to 44 Jars _____ Ruined Packer _____
 Initial Shut-In 375 Circ Sub _____ Hotel _____
 Final Flow 53 to 64 Hourly Standby _____ EM Tool Successful _____
 Final Shut-In 366 Mileage 40 x 2 140 Accessibility _____
 Final Hydrostatic 1427 Sampler _____ Gas Sample _____

T-On Location 09:40 Straddle _____ Sub Total 0
 Initial Flow 30 T-Started 10:20 Shale Packer _____ Total 1940
 Initial Shut-In 30 T-Open 11:51 Extra Packer _____ Tool Loaded _____ @ _____
 Final Flow 60 T-Pulled 14:51 Extra Recorder _____ MP/DST Disc't _____
 Final Shut-In 60 T-Out 16:45 Day Standby _____

Comments _____

Approved By Thank You!! Our Representative Terrance W.

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70320

Well Name & No. Zeigler Unit #1 Test No. 4 Date 4-10-23
 Company John D. Farmer, Inc. Elevation 1905 KB 1897 GL
 Address P.O. Box 352, Russell, KS 67665
 Co. Rep / Geo Austin Klaus Rig Discovery 2
 Location: Sec. 9 Twp 10S Rge. 11W Co. Rooks State KS

Interval Tested 3166-3270 Zone Tested H-K
 Anchor Length 104 Drill Pipe Run 3130 Mud Wt. 8.9
 Top Packer Depth 3161 Drill Collars Run 30 Vis 48
 Bottom Packer Depth 3166 Wt. Pipe Run _____ WL 8
 Total Depth 3270 Chlorides 4,000 ppm System LCM 2

Blow Description IF-30 - Surface Blow
ISI-75 - No Return
FF-30 - Surface Blow Died in 15 M:1
FSI-30 - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>05M</u>			<u>100</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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 92 Gravity _____ API RW _____ @ _____ *F Chlorides _____ ppm
 Initial Hydrostatic 1543 Test 1800 Ruined Shale Packer _____
 Initial Flow 19 to 70 Jars _____ Ruined Packer _____
 Initial Shut-In 1033 Circ Sub _____ Hotel _____
 Final Flow 39 to 40 Hourly Standby _____ EM Tool Successful _____
 Final Shut-In 146 Mileage 40x2 140 Accessibility _____
 Final Hydrostatic 1502 Sampler _____ 140 Gas Sample _____
 T-On Location 01:30 Straddle _____ Sub Total 0
 Initial Flow 30 T-Started 07:52 Shale Packer _____ Total 2080
 Initial Shut-In 3075 T-Open 04:50 Extra Packer _____ Tool Loaded 4/10 @ 20:15
 Final Flow 330 T-Pulled 09:45 Extra Recorder _____ MP/DST Disc't _____
 Final Shut-In 30 T-Out 09:25 Day Standby _____

Comments _____

Approved By Thank you!! Our Representative Terrance

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AUSTIN B. KLAUS



Cell 785.650.3629
Work 785.483.3145
Ext 225

PO BOX 352
Russell, KS 67665
austin.klaus@johnofarmer.com

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Zeigler Unit #1
API: 15-163-24478-00-00
Location: Rooks County
License Number: **Region:** Kansas
Spud Date: 4/4/2023 **Drilling Completed:** 4/10/2023
Surface Coordinates: Section 9, Township 10 South, Range 16 West
1,520' FNL & 270' FEL
Bottom Hole Coordinates: Vertical well w/ minimal deviation, same as above
Ground Elevation (ft): 1,897' **K.B. Elevation (ft):** 1,905'
Logged Interval (ft): 2,700' **To:** 3458' **Total Depth (ft):** 3460'
Formation: Topeka - Arbuckle
Type of Drilling Fluid: Chemical (Andy's Mud & Chemical Co.)

Printed by StripLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: John O. Farmer, Inc.
Address: 370 W. Wichita Ave.
Russell, KS 67665

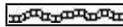
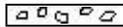
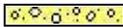
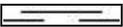
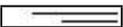
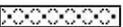
Comments

The Zeigler Unit #1 was drilled by Discovery Drilling Rig #4 (Tool Pusher: Ryan Gaschler).

The location for the Zeigler Unit #1 was discovered via 3D seismic survey. Drill time was recorded, and rock samples were gathered and evaluated from 2,750' - 3,460'. Oil shows were encountered in the Toronto and several Lansing zones (see below). Structurally, the Lansing top was picked 3' high to the comparison well, Leo #1 (Liberty Op. & Comp. Inc., NE NE SW 10-10S-16W). Four bottom-hole drill stem tests were conducted to evaluate the Toronto & Lansing zones (see results below). The Arbuckle was encountered at a low subsea compared to an Arbuckle producer to the north, Conger #1 (Prospect Oil & Gas Inc., SE NE SE 4-10S-16W). Additionally, the Arbuckle contained no show of free oil, therefore, a drill stem test was not conducted. After reaching TD, Compensated Density Neutron, Dual Induction, and Micro Logs were recorded to complete evaluation of the Zeigler Unit #1.

After comprehensive evaluation of oil shows, structural position, electric logs, and drill stem test results, the decision was made to plug and abandon the Zeigler Unit #1 on 4/11/2023.

ROCK TYPES

 Anhy  Bent  Brec  Cht	 Clyst  Coal  Congl  Dol	 Gyp  Igne  Lmst  Meta	 Mrlst  Salt  Shale  Shcol	 Shgy  Slstst  Ss  Till
---	---	---	---	--

OTHER SYMBOLS

POROSITY <input type="checkbox"/> Earthy <input type="checkbox"/> Fenest <input type="checkbox"/> Fracture <input type="checkbox"/> Inter <input type="checkbox"/> Moldic <input type="checkbox"/> Organic <input type="checkbox"/> Pinpoint	<input type="checkbox"/> Vuggy SORTING <input type="checkbox"/> Well <input type="checkbox"/> Moderate <input type="checkbox"/> Poor	ROUNDING <input type="checkbox"/> Rounded <input type="checkbox"/> Subrnd <input type="checkbox"/> Subang <input type="checkbox"/> Angular OIL SHOW <input type="checkbox"/> Even	<input type="checkbox"/> Spotted <input type="checkbox"/> Ques <input type="checkbox"/> Dead INTERVAL <input type="checkbox"/> Core <input type="checkbox"/> Dst	EVENT <input type="checkbox"/> Rft <input type="checkbox"/> Sidewall
--	---	---	--	---

Curve Track 1	MD	Lithology	Geological Descriptions	DST/Mud/Survey															
ROP (min/ft) ——— Gas (units) - - - - - Gamma (API) ———																			
0 ROP (min/ft) 5 0 Gas (units) 500 0 Gamma (API) 150 Daily Rig Activity: 4/3/2023: Move in & rig up 4/4/2023: Spud @ 8:15am 4/5/2023: 1,075', drilling 4/6/2023: 1,935', drilling 4/7/2023: 2,690', drilling 4/8/2023: 3,032', DST #1	2650	Lithology	The open-hole logging was performed by Mr. Gus Pfanenstiel with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density Neutron, Dual Induction, and Microresistivity. Formation tops and datums from the open-hole logs include the following: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Formation</th> <th>E-Log</th> <th>Datum</th> </tr> </thead> <tbody> <tr> <td>Anhydrite</td> <td>1070</td> <td>835</td> </tr> <tr> <td>Topeka</td> <td>2769</td> <td>-864</td> </tr> <tr> <td>Heebner</td> <td>3001</td> <td>-1096</td> </tr> <tr> <td>Toronto</td> <td>3021</td> <td>-1116</td> </tr> </tbody> </table>	Formation	E-Log	Datum	Anhydrite	1070	835	Topeka	2769	-864	Heebner	3001	-1096	Toronto	3021	-1116	Mud Engineer: Brandon Mendez Tester: Terry Wickham
Formation	E-Log	Datum																	
Anhydrite	1070	835																	
Topeka	2769	-864																	
Heebner	3001	-1096																	
Toronto	3021	-1116																	

4/9/2023:
3,153', circulate for samples

4/10/2023:
3,270', DST #4

4/11/2023:
3,460', plugging

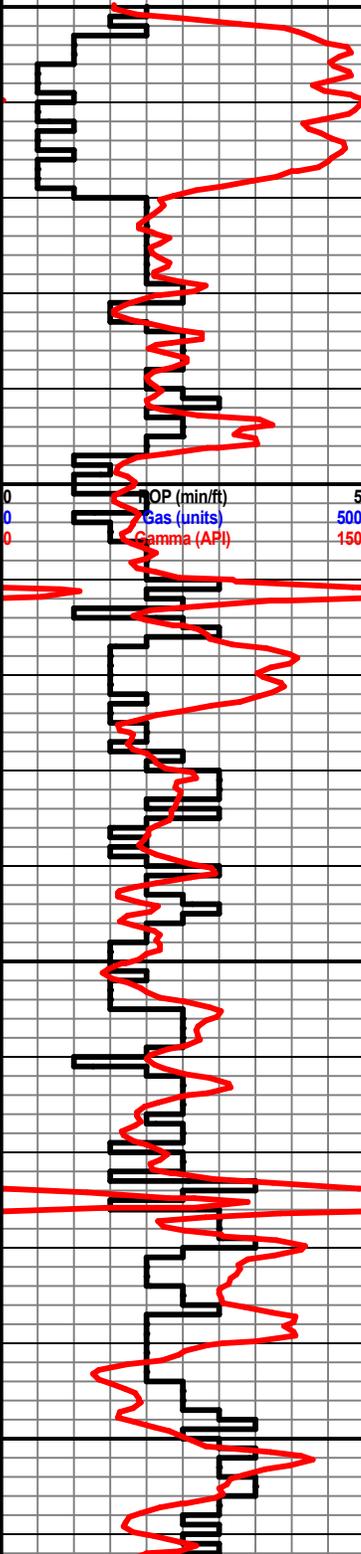
2700

2750

2800 MD

2850

2900



Lansing	3044	-1139
B/KC	3292	-1387
Arbuckle	3412	-1507
LTD	3460	-1555

Sh: lt-drk gry

Topeka 2770' (-865)

Ls: tan-buff, fn-sub xln, mostly DNS

Ls: ala

Ls: off wh-tan, fn xln, scat fair int xln & pp vuggy porosity, scat fair oil strn in cup, SSFO, sl odor

Ls: tan-lt gry, fn xln, poor int xln porosity, NSFO, scat foss

Sh: lt-drk gry

Ls: tan-lt gry, fn-sub xln, mostly DNS, scat foss

Sh: lt-drk gry

Ls: tan-lt gry, fn xln, poor int part porosity, NSFO, scat chalk

Sh: drk gry-blk

Sh: lt-drk gry, scat bm

Ls: tan-lt gry, fn-sub xln, scat int part porosity, NSFO, scat chert

Ls: off wh-tan, fn xln, fair int xln & scat vuggy porosity,

Wt: 8.6
Vis: 50

NSFO, scat chert

Sh: drk gry-blk

Ls: tan-lt gry, fn-sub xln, poor int xln porosity, NSFO, scat foss

2950

Ls: off wh-tan-lt gry, fn xln, fair int xln & vuggy porosity, scat oil stn, NSFO, scat foss

Sh: lt-drk gry

Ls: off wh-tan, fn xln, poor int xln & vuggy porosity, scat oil stn, NSFO, scat chalk

Heebner 3001' (-1096)

Sh: blk, carb, fissile

Sh: lt-drk gry

Toronto 3021' (-1116)

Ls: off wh-tan, fn xln, foss, poor, few pcs fair int foss & int vuggy porosity, scat fair oil stn, SSFO, fair odor

Lansing 3044' (-1139)

Ls: off wh-tan, fn xln, poor int xln porosity, NSFO, scat foss

3050

Sh: lt-drk gry

Ls: off wh-tan, fn xln, mostly poor, few pcs fair int part porosity, fair-good oil stn in porosity, SSFO, sl-fair odor

Sh: lt gry-drk gry-bm

Ls: off wh-tan, fn xln, poor, few rxns w/ fair int xln & pp vuggy porosity, fair-good oil sat, SSFO, fair odor

Sh: lt gry-bm

Ls: off wh-tan, fn xln, poor-fair int xln porosity, sl oil stn, NSFO, no odor, scat foss

3100

Sh: lt-drk gry-bm

Ls: off wh-tan, fn xln, poor int xln porosity, scat oil stn, NSFO, scat foss

Sh: drk gry

DST #1 2,994 - 3,032' Toronto

30"-30"-30"-30"

IF: weak blow built to 2.5" & died back to surface blow

FF: no blow

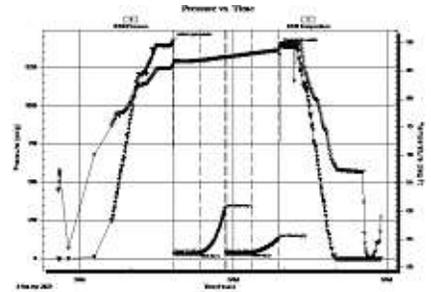
Rec: 40' Oil Spotted Mud

FP: 33-34, 35-36#

SIP: 330-134#

HP: 1,425-1,389#

BHT: 89



Wt: 8.8

Vis: 52

DST #2 3,026 - 3,092' Lansing A-C

30"-30"-15"

IF: No blow

FF: No blow

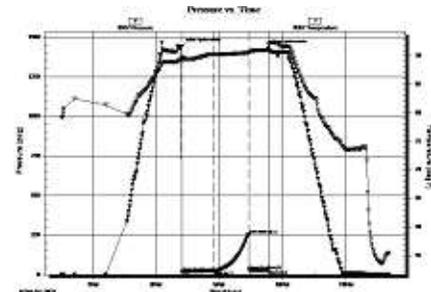
Rec: 5' Oil Spotted Mud

FP: 17-25, 30-29#

SIP: 254#

HP: 1,442-1,430#

BHT: 92

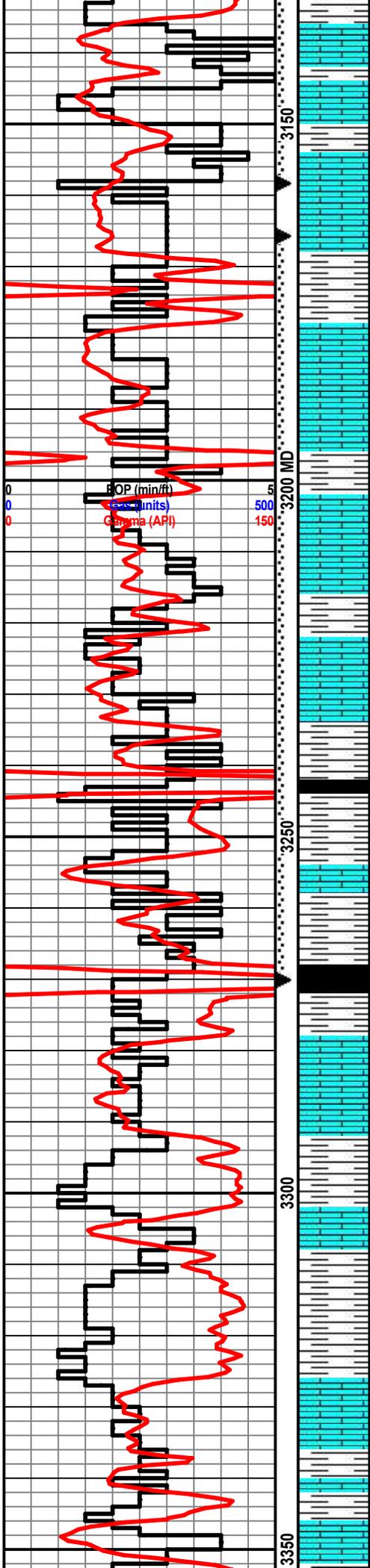


DST #3 3,104 - 3,158' Lansing E-G

30"-30"-60"-60"

IF: weak blow built to 3", no blow back on shut in

FF: weak blow built to 3", no blow back on shut in



Sh: drk gry

Ls: off wh-tan, fn xln, poor, few pcs fair int xln porosity, scat-fair oil sat, SSFO, fair odor

Ls: off wh-tan, fn xln, ool, fair oom porosity, fair-good oil sat, S-FSFO, fair odor

Ls: off wh-tan, fn xln, ool, scat fair oom porosity, scat lt oil str, NSFO, scat foss

Sh: drk gry-blk

Ls: off wh-tan, fn xln, few rxn w/ poor int xln porosity, NSFO, chert-off wh

Sh: lt-drk gry

Ls: off wh-tan, fn xln, poor, few rxn w/ fair int xln & scat pp vuggy porosity, fair-good oil sat, SSFO, fair odor

Sh: lt-drk gry

Ls: off wh-tan, fn xln, poor, few rxn w/ fair int xln & pp vuggy porosity, fair-good oil sat, SSFO, fair odor

Sh: lt-drk gry-bm

Sh: drk gry-blk

Ls: off wh-tan, fn xln, poor int xln porosity, scat fair oil str, VSSFO, sl odor

Sh: lt-drk gry-bm

Sh: drk gry-blk

Ls: off wh-tan, fn xln, poor int xln porosity, NSFO

B/KC 3294' (-1389)

Sh: lt-drk gry-bm

Ls: off wh-tan-lt gry, fn xln, mostly DNS, scat chert-off wh

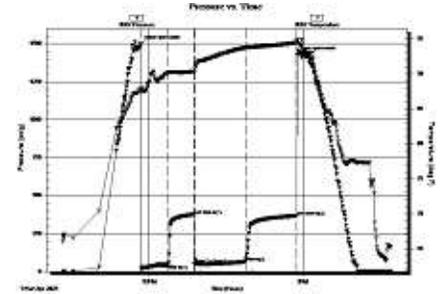
Sh: lt-drk gry-bm

Ls: tan-gry, fn xln, few rxn scat int xln porosity, mostly DNS, chert-off wh, scat sh: lt-drk gry

Ls: tan-gry, fn-sub xln, mostly DNS, no visible porosity, scat cong: off wh-rd, scat chert

Rec: 100' Oil Spotted Mud

FP: 17-44, 53-64#
 SIP: 375-366#
 HP: 1,496-1,427#
 BHT: 95



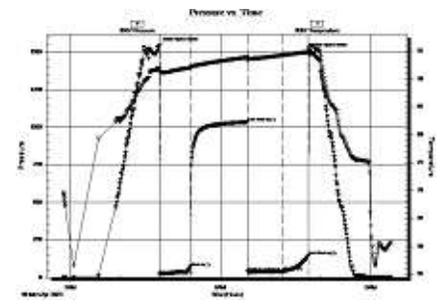
Wt: 8.9
 Vis: 48

DST #4 3,166 - 3,270' Lansing H-K
 30"-75"-30"-30"

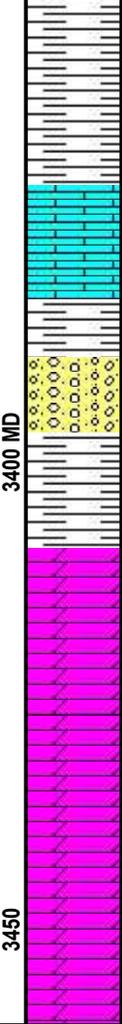
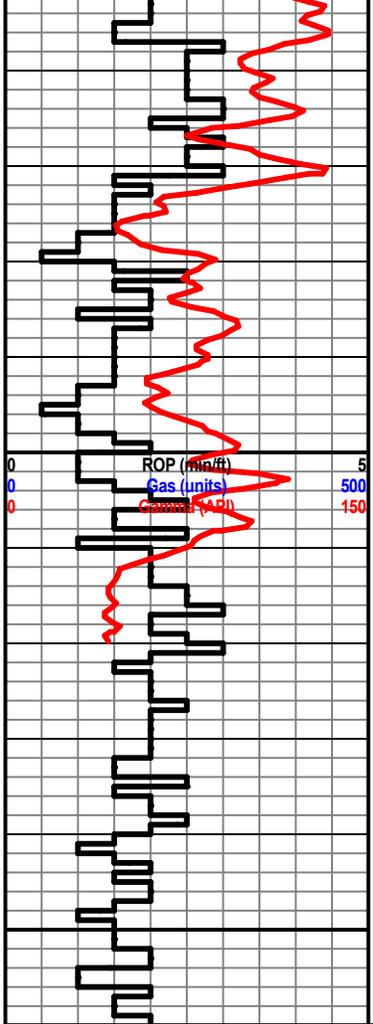
IF: surface blow
 FF: surface blow

Rec: 40' Oil Spotted Mud

FP: 19-70, 39-40#
 SIP: 1,033 - 146#
 HP: 1,543-1,502#
 BHT: 96



Wt: 8.9
 Vis: 50



Sh: lt-drk gry-bm

Ls: off wh-tan-gry, fn xln, poor int xln porosity, scat chert-off wh

Sh: lt-drk gry

Cong: tan-gry-bm-rd, fn-sub xln, DNS, hvy chert-trip, scat ls: tan-gry-bm, sub xln, DNS

Arbuckle 3412' (-1507)

Dolo: off wh-tan-lt gry, fn xln, scat poor int xln porosity, barren, NSFO, scat chert

Dolo: off wh-tan-lt gry, fn xln, scat poor int xln porosity, few rxs fair int xln porosity, barren, NSFO

Dolo: ala

Dolo: off wh-tan-lt gry, fn xln, poor-fair int xln porosity, barren, NSFO, scat chert-off wh

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 3516

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-23	9	10	16	ROOKS	KS		12:45 pm

Location *P.ville 1 1/2 E 6N*

Lease *ZIEGLER UNIT* Well No. *1* Owner
To Quality Oilwell Cementing, Inc.

Contractor *Discovery* Type Job *SURFACE*
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size *12 1/4* T.D. Charge To *J.O. FARMER*

Csg. *8 8* Depth Street

Tbg. Size Depth City State

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

Cement Left in Csg. *1.5* Shoe Joint Cement Amount Ordered *180 8920 3-2*

Meas Line Displace *13 1/4*

EQUIPMENT

Pumptrk	No.	Cementor		Common	<i>145</i>
<i>17</i>		Helper	<i>Bill</i>	Poz. Mix	<i>35</i>
Bulktrk	No.	Driver	<i>Nick</i>	Gel.	<i>3</i>
<i>9</i>		Driver	<i>Bryant</i>	Calcium	<i>7</i>

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
<i>Set e 223</i>	Sand
<i>Cent w/ 180 of</i>	Handling <i>190</i>
<i>pump plug w/ 13 1/4 bbls</i>	Mileage
<i>Cent Tid CIL</i>	

FLOAT EQUIPMENT

Guide Shoe
Centralizer
Baskets
AFU Inserts
Float Shoe
Latch Down

Pumptrk Charge *Surface*
Mileage *31*

Signature *[Signature]* Tax Discount Total Charge

Thanks

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071

Home Office P.O. Box 32 Russell, KS 67665

No. 3551

Cell 785-324-1041

Date	4/11/23	Sec.	27	Twp.	12	Range	21	County	Rooks	State	Kansas	On Location		Finish	9:30am			
Lease	Ziegler Unit		Well No.		5 (#1)		Location Cadell Hwy 18 4 East 1/4 N Winto											
Contractor	Discovery Drilling Rig 4		Owner		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.													
Type Job	Plug		Charge To		John O Farmer													
Hole Size	7 7/8		T.D.		3460													
Csg.	Drill pipe		Depth		3392													
Tbg. Size			Depth															
Tool			Depth															
Cement Left in Csg.			Shoe Joint		Cement Amount Ordered 305 69/40 4/ogel 1/4 flow													
Meas Line			Displace															
EQUIPMENT													Common			183		
Pumptrk	16	No.	Cementer	Jordan	Poz. Mix		122											
Bulktrk	1	No.	Driver	Bryant	Gel.		11											
Bulktrk	PU	No.	Driver	David	Calcium													
JOB SERVICES & REMARKS													Hulls					
Remarks:													Salt					
Rat Hole													Flowseal					
Mouse Hole													Kol-Seal			75#		
Centralizers													Mud CLR 48					
Baskets													CFL-117 or CD110 CAF 38					
DV or Port Collar													Sand					
	3392' - mixed 50 sks												Handling			3/6		
	1125' - mixed 50 sks												Mileage					
	650' - mixed 100 sks												FLOAT EQUIPMENT					
	275' - mixed 50 sks												Guide Shoe					
	40' - mixed 10 sks												Centralizer					
	Rathole - 30 sks												Baskets					
	Mouse hole - 15 sks												AFU Inserts					
													Float Shoe					
													Latch Down					
													1-Dry hole plug					
													Pumptrk Charge			Plug		
	Cement Aired Circulate												Mileage			31		
THANKS													Tax					
Signature Ryan Dasehl													Discount					
													Total Charge					



Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: Discovery Drilling Co., Inc. LIC#31548
370 West Wichita Avenue - P.O. Box 352 PO Box 763
Russell, KS 67665 + 0352 Hays, KS 67601

Lease: Zeigler Unit # 1 Location: 1520 FNL - 270 FEL
NE/NE/SE/NE
Section 9/ 10S/ 16W
Rooks County, KS

Loggers Total Depth: 3460' API#15- 163-24,478-00-00
Rotary Total Depth: 3460' Elevation: 1897 GL - 1905 KB
Commenced: 4/4/2023 Completed: 4/11/2023
Casing: 8 5/8" @ 223'W/180sks Status: D & A
KCC Contact: Case Morris
Plugging Info: (1st Plug @ 3392'W/50sks)(2nd Plug @ 1125'W/50sks)
(3rd Plug @ 650'W/100sks)(4th Plug @ 275'W/50sks)
(5th Plug @ 40'W/10sks)(30sks In Rat Hole)(15sks In
Mouse Hole)(Total 305sks 60/40Poz 4%Gel-1/4# FS/sk-
By Quality Oilwell Cementing)(Completed @ 9:30AM
4/11/2023)

DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shales	<u>0'</u>	Shale	<u>1106'</u>
Dakota Sand	<u>536'</u>	Shale & Lime	<u>1595'</u>
Shale	<u>629'</u>	Shale	<u>1860'</u>
Cedar Hill Sand	<u>720'</u>	Shale & Lime	<u>2230'</u>
Red Bed Shale	<u>942'</u>	Lime & Shale	<u>3006'</u>
Anhydrite	<u>1073'</u>	RTD	<u>3460'</u>
Base Anhydrite	<u>1106'</u>		

STATE OF KANSAS)
) ss
COUNTY OF ELLIS)

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

Thomas H. Alm

Subscribed and sworn to before me on 4-18-2023

My Commission expires: 6-28-2026

(Place stamp or seal below)

Notary Public

