

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](mailto: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) (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	Murfin Drilling Co., Inc.
Well Name	RUSCO-DAVIS 7-36
Doc ID	1636198

All Electric Logs Run

DIL
DUCP
MEL
BHCS





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water  
Wichita, KS 67202-1216

ATTN: Kent Matson

### **Rusco-Davis #7-36**

### **36-11s-20w Ellis,KS**

Start Date: 2022.01.27 @ 01:00:00

End Date: 2022.01.27 @ 10:37:47

Job Ticket #: 68459                      DST #: 1

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

Printed: 2022.02.01 @ 10:53:31

Murfin Drilling Company Inc. 36-11s-20w Ellis,KS Rusco-Davis #7-36 DST # 1 LKC A -D 2022.01.27



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68459

**DST#: 1**

ATTN: Kent Matson

Test Start: 2022.01.27 @ 01:00:00

## GENERAL INFORMATION:

Formation: **LKC A -D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:10:47

Time Test Ended: 10:37:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Webster

Unit No: 72

**Interval: 3288.00 ft (KB) To 3370.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3370.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 3.00 ft

**Serial #: 8365**

**Inside**

Press@RunDepth: 206.52 psig @ 3289.00 ft (KB)

Capacity: psig

Start Date: 2022.01.27

End Date:

2022.01.27

Last Calib.:

2022.01.27

Start Time: 01:00:01

End Time:

10:37:47

Time On Btm:

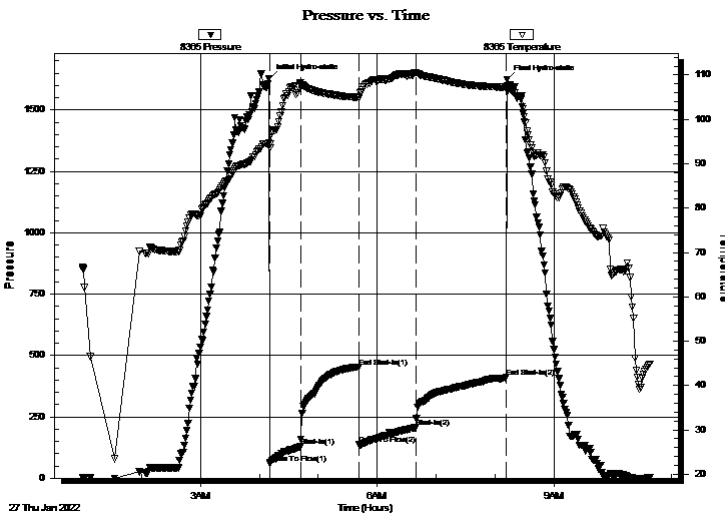
2022.01.27 @ 04:10:02

Time Off Btm:

2022.01.27 @ 08:12:02

**TEST COMMENT:** IF-30- Strong blow , BOB 7 min  
IS-60- Returns built to 2"  
FF-60- Strong blow , BOB 10 min  
FS-90- Returns built to 2"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1627.14	94.64	Initial Hydro-static
1	59.65	93.68	Open To Flow (1)
32	128.92	108.25	Shut-In(1)
91	453.75	104.99	End Shut-In(1)
92	136.41	104.82	Open To Flow (2)
150	206.52	110.51	Shut-In(2)
241	411.05	107.31	End Shut-In(2)
242	1625.48	107.60	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
124.00	GOMCW 10%G 15% O 55% W 20% M	1.47
231.00	GWMCO 5%G 65% O 5% W 25% M	3.24

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68459

**DST#: 1**

ATTN: Kent Matson

Test Start: 2022.01.27 @ 01:00:00

## Tool Information

Drill Pipe:	Length: 3246.00 ft	Diameter: 3.80 inches	Volume: 45.53 bbl	Tool Weight:	200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 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:	70000.00 lb
			<u>Total Volume: 45.68 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3288.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	82.00 ft				
Tool Length:	109.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3262.00	
Shut In Tool	5.00			3267.00	
Hydraulic tool	5.00			3272.00	
Jars	5.00			3277.00	
Safety Joint	2.00			3279.00	
Packer	5.00			3284.00	27.00 Bottom Of Top Packer
Packer	4.00			3288.00	
Stubb	1.00			3289.00	
Recorder	0.00	8365	Inside	3289.00	
Recorder	0.00	6752	Outside	3289.00	
Perforations	14.00			3303.00	
Change Over Sub	1.00			3304.00	
Drill Pipe	62.00			3366.00	
Change Over Sub	1.00			3367.00	
Bullnose	3.00			3370.00	82.00 Bottom Packers & Anchor

**Total Tool Length: 109.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68459

**DST#: 1**

ATTN: Kent Matson

Test Start: 2022.01.27 @ 01:00:00

### 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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
124.00	GOMCW 10%G 15% O 55% W 20% M	1.466
231.00	GWMCO 5%G 65% O 5% W 25% M	3.240

Total Length: 355.00 ft

Total Volume: 4.706 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

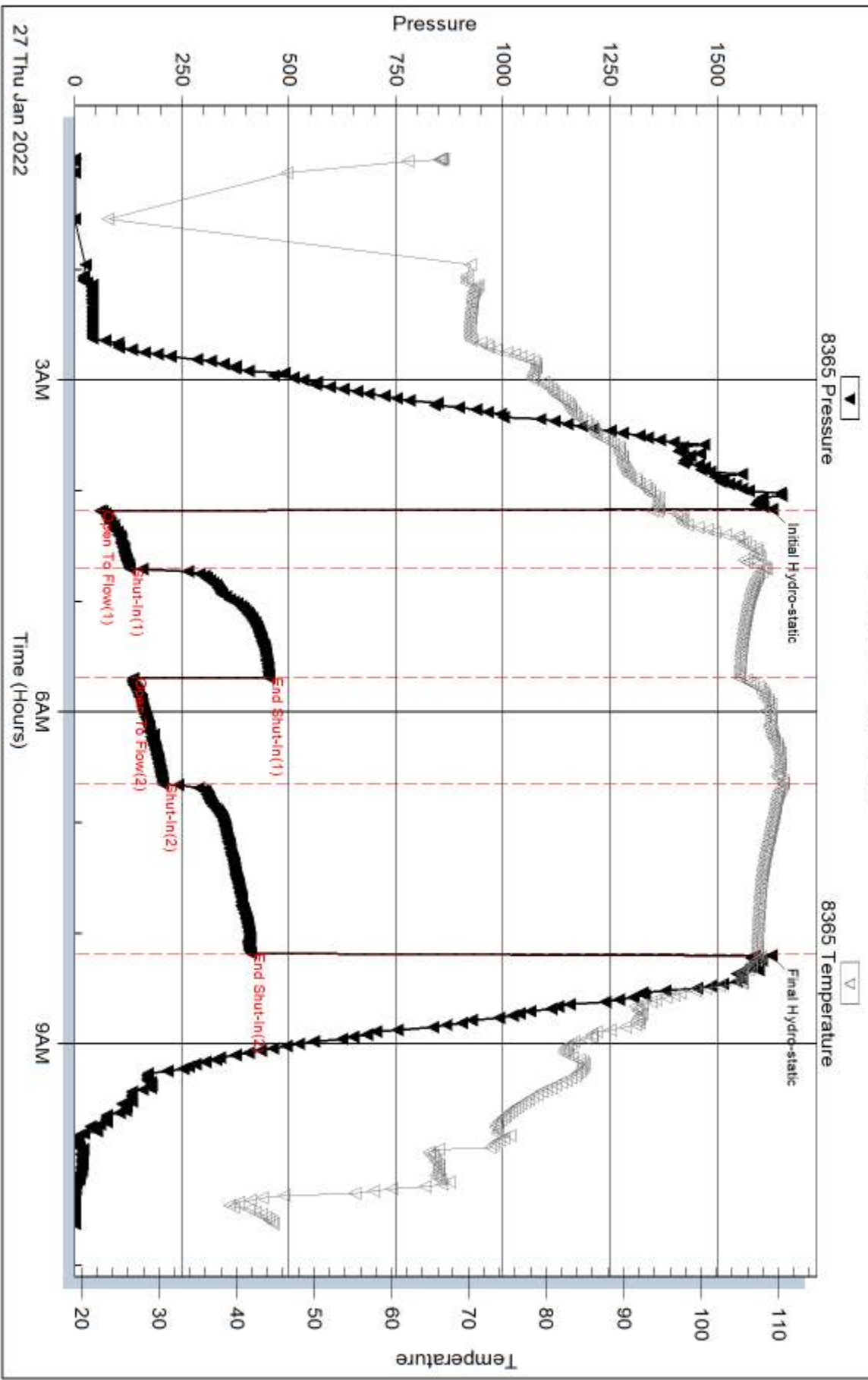
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2#Lcm

### Pressure vs. Time

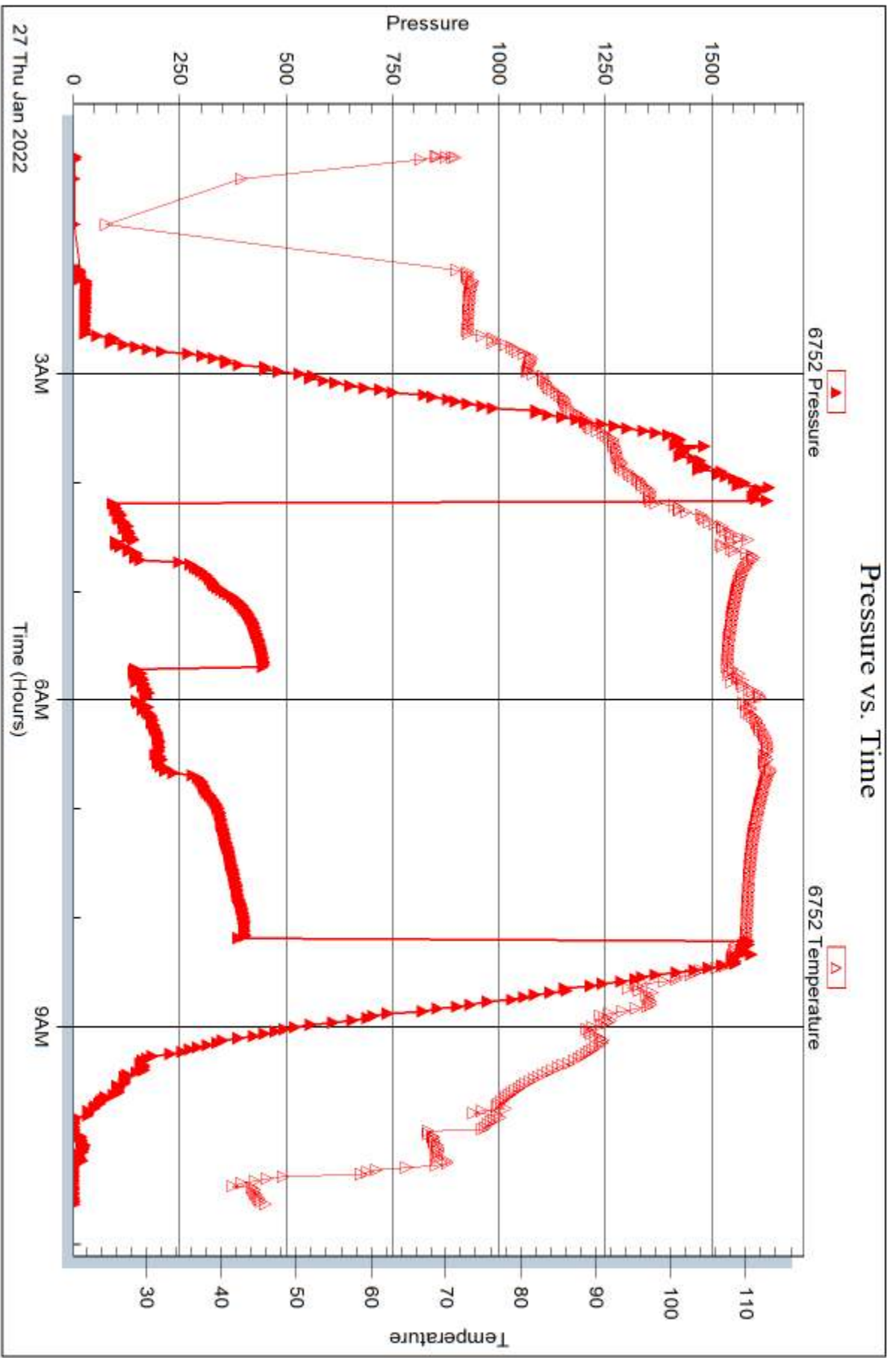


Serial #: 6752

Outside Murfin Drilling Company Inc.

Rusco-Davis #7-36

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 68459

Printed: 2022.02.01 @ 10:53:31



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water  
Wichita, KS 67202-1216

ATTN: Kent Matson

### **Rusco-Davis #7-36**

### **36-11s-20w Ellis,KS**

Start Date: 2022.01.28 @ 20:00:00

End Date: 2022.01.29 @ 03:34:02

Job Ticket #: 68460                      DST #: 2

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

Printed: 2022.02.01 @ 10:52:52

Murfin Drilling Company Inc. 36-11s-20w Ellis,KS Rusco-Davis #7-36 DST # 2 LKC E - G 2022.01.28



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68460

**DST#: 2**

ATTN: Kent Matson

Test Start: 2022.01.28 @ 20:00:00

## GENERAL INFORMATION:

Formation: **LKC E - G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:09:47

Time Test Ended: 03:34:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Webster

Unit No: 72

**Interval: 3364.00 ft (KB) To 3405.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3405.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 3.00 ft

**Serial #: 8365**

**Inside**

Press@RunDepth: 444.56 psig @ 3365.00 ft (KB)

Capacity: psig

Start Date: 2022.01.28

End Date:

2022.01.29

Last Calib.:

2022.01.28

Start Time: 20:00:01

End Time:

03:34:02

Time On Btm:

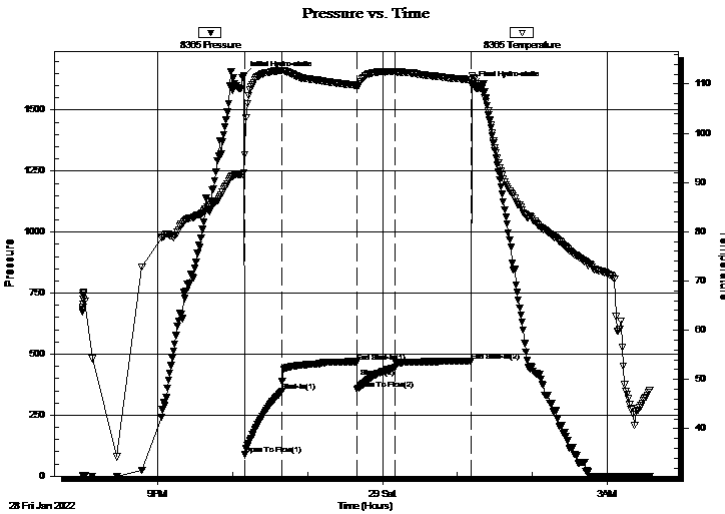
2022.01.28 @ 22:09:02

Time Off Btm:

2022.01.29 @ 01:11:47

**TEST COMMENT:** IF-30- Strong blow , BOB 2 min  
IS-60- Returns built to 2"  
FF-30-Strong blow , BOB 5 min  
FS-60- WSB

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1640.40	92.09	Initial Hydro-static
1	87.57	95.69	Open To Flow (1)
31	347.79	112.75	Shut-In(1)
91	469.03	109.71	End Shut-In(1)
91	355.66	109.66	Open To Flow (2)
121	444.56	112.47	Shut-In(2)
182	471.91	110.95	End Shut-In(2)
183	1599.97	111.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
744.00	SOMCW 5% O 90% W 5% M	10.16
124.00	SOCMW 5% O 45% W 40% M	1.74

## Gas Rates

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



# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

36-11s-20w Ellis, KS

250 N. Water  
Wichita, KS 67202-1216

Rusco-Davis #7-36

Job Ticket: 68460

DST#: 2

ATTN: Kent Matson

Test Start: 2022.01.28 @ 20:00:00

## GENERAL INFORMATION:

Formation: **LKC E - G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:09:47

Time Test Ended: 03:34:02

Interval: **3364.00 ft (KB) To 3405.00 ft (KB) (TVD)**

Total Depth: 3405.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Webster

Unit No: 72

Reference Elevations: 2022.00 ft (KB)

2019.00 ft (CF)

KB to GR/CF: 3.00 ft

Serial #: **6752** Outside

Press@RunDepth: psig @ 3365.00 ft (KB)

Start Date: 2022.01.28

End Date:

2022.01.29

Start Time: 20:00:01

End Time:

03:34:02

Capacity: psig

Last Calib.:

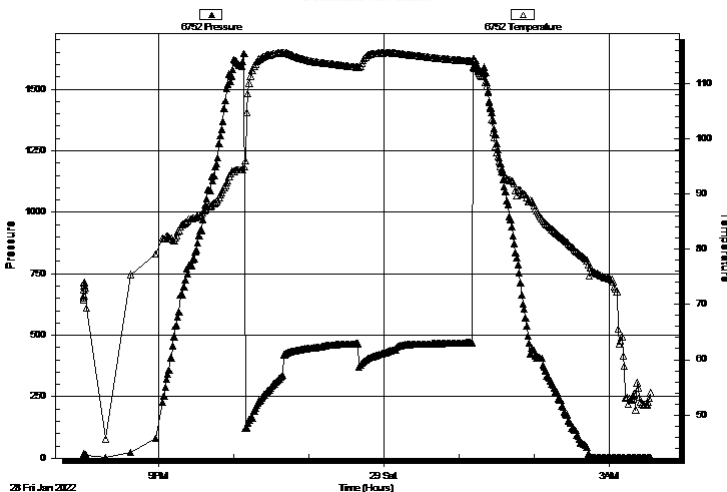
2022.01.28

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-30- Strong blow , BOB 2 min  
IS-60- Returns built to 2"  
FF-30- Strong blow , BOB 5 min  
FS-60- WSB

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
744.00	SOMCW 5% O 90% W 5% M	10.16
124.00	SOCMW 5% O 45% W 40% M	1.74

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68460

**DST#: 2**

ATTN: Kent Matson

Test Start: 2022.01.28 @ 20:00:00

## Tool Information

Drill Pipe:	Length: 3338.00 ft	Diameter: 3.80 inches	Volume: 46.82 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 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: 46.97 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	57000.00 lb
Depth to Top Packer:	3364.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	41.00 ft				
Tool Length:	68.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3338.00	
Shut In Tool	5.00			3343.00	
Hydraulic tool	5.00			3348.00	
Jars	5.00			3353.00	
Safety Joint	2.00			3355.00	
Packer	5.00			3360.00	27.00 Bottom Of Top Packer
Packer	4.00			3364.00	
Stubb	1.00			3365.00	
Recorder	0.00	8365	Inside	3365.00	
Recorder	0.00	6752	Outside	3365.00	
Perforations	4.00			3369.00	
Change Over Sub	1.00			3370.00	
Drill Pipe	31.00			3401.00	
Change Over Sub	1.00			3402.00	
Bullnose	3.00			3405.00	41.00 Bottom Packers & Anchor

**Total Tool Length: 68.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68460

**DST#: 2**

ATTN: Kent Matson

Test Start: 2022.01.28 @ 20:00:00

### 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: 125000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
744.00	SOMCW 5% O 90% W 5% M	10.163
124.00	SOCMW 5% O 45% W 40% M	1.739

Total Length: 868.00 ft

Total Volume: 11.902 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

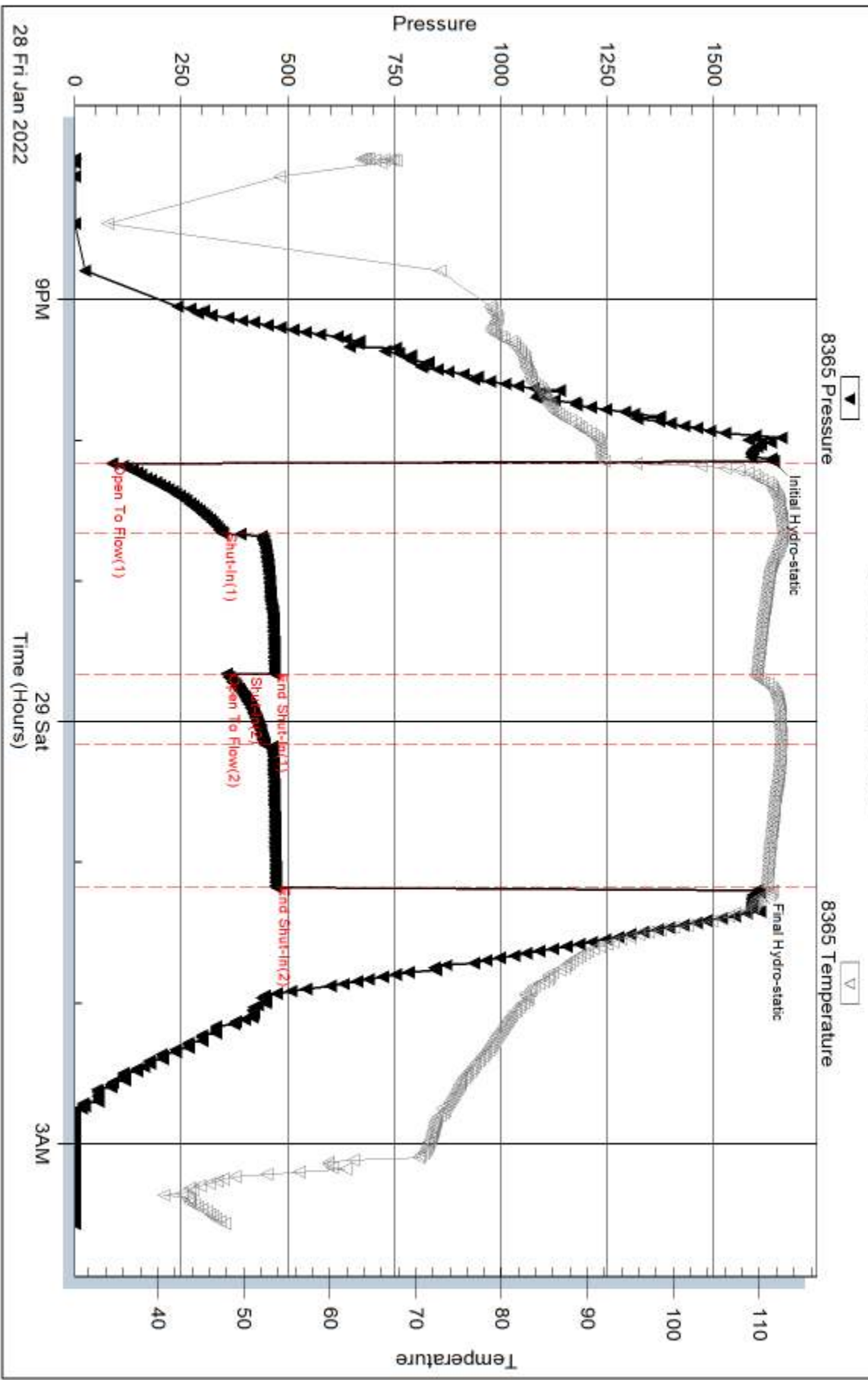
Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM



### Pressure vs. Time

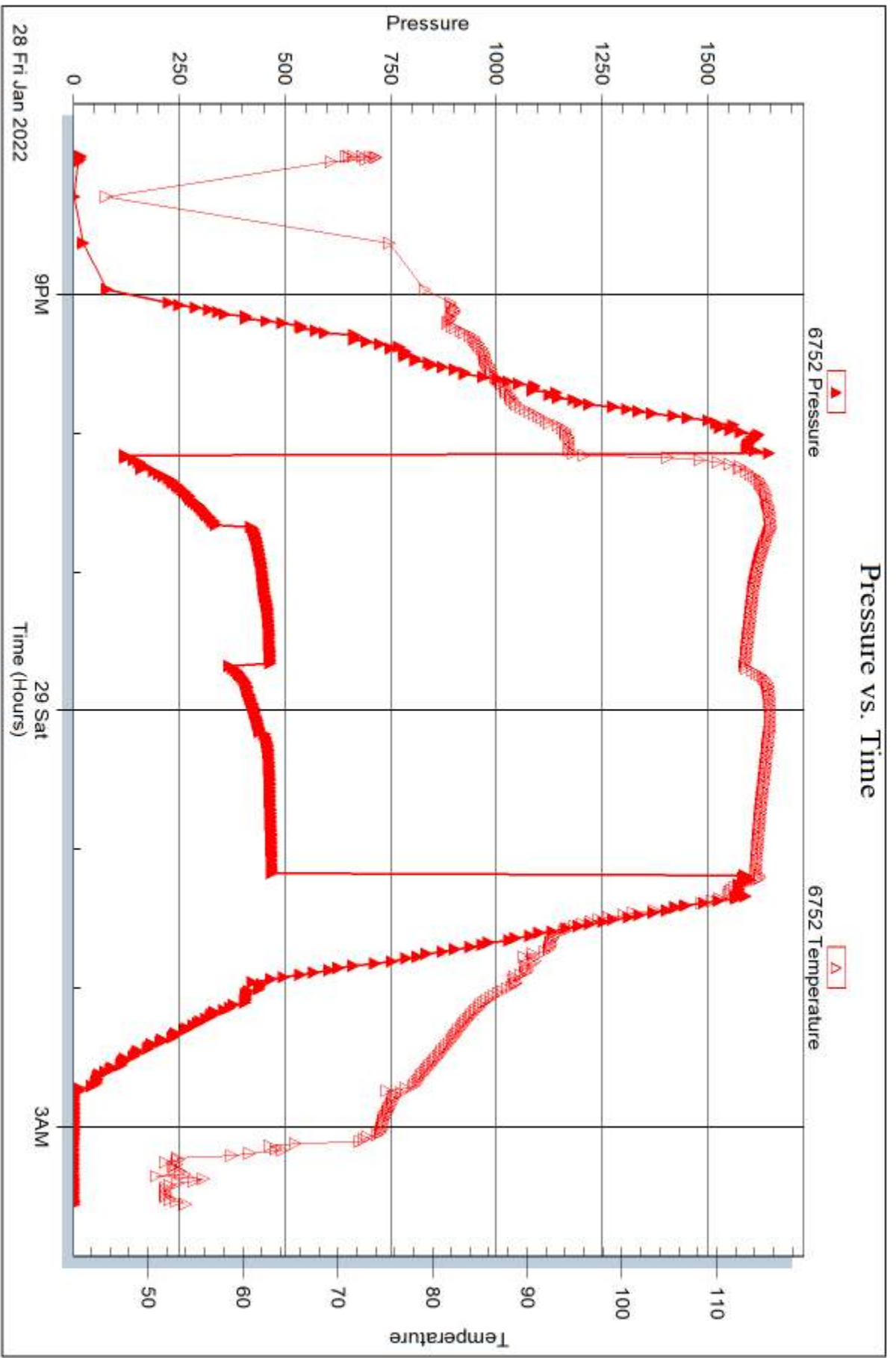


Serial #: 6752

Outside Murfin Drilling Company Inc.

Rusco-Davis #7-36

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water  
Wichita, KS 67202-1216

ATTN: Kent Matson

### **Rusco-Davis #7-36**

### **36-11s-20w Ellis,KS**

Start Date: 2022.01.28 @ 15:16:00

End Date: 2022.01.28 @ 21:28:02

Job Ticket #: 68461                      DST #: 3

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

Printed: 2022.02.01 @ 10:51:16

Murfin Drilling Company Inc.

36-11s-20w Ellis,KS

Rusco-Davis #7-36

DST # 3

LKC H - J

2022.01.28



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68461

**DST#: 3**

ATTN: Kent Matson

Test Start: 2022.01.28 @ 15:16:00

## GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:37:02

Time Test Ended: 21:28:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Kevin Webster

Unit No: 72

**Interval: 3416.00 ft (KB) To 3480.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3480.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 3.00 ft

**Serial #: 8365**

**Inside**

Press@RunDepth: 61.81 psig @ 3417.00 ft (KB)

Capacity: psig

Start Date: 2022.01.28

End Date: 2022.01.28

Last Calib.: 2022.01.28

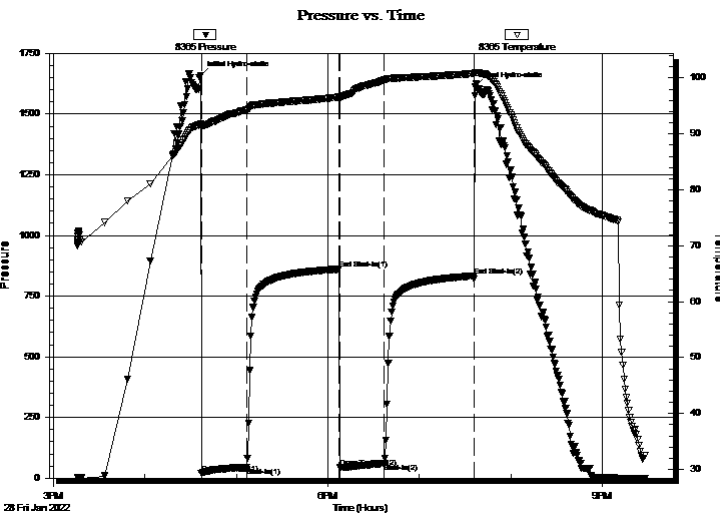
Start Time: 15:16:01

End Time: 21:28:02

Time On Btm: 2022.01.28 @ 16:36:32

Time Off Btm: 2022.01.28 @ 19:36:17

**TEST COMMENT:** IF-30- WSB built to 5"  
IS-60- WSB  
FF-30- WSB built to 3"  
FS-60- WSB



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1658.50	91.76	Initial Hydro-static
1	20.01	91.38	Open To Flow (1)
31	42.80	94.25	Shut-In(1)
91	861.02	96.56	End Shut-In(1)
92	43.80	96.32	Open To Flow (2)
121	61.81	99.65	Shut-In(2)
179	833.65	100.79	End Shut-In(2)
180	1611.10	100.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
72.00	1% Oil 99% Mud	0.74

## Gas Rates

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

\* Recovery from multiple tests



# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

250 N. Water  
Wichita, KS 67202-1216

ATTN: Kent Matson

36-11s-20w Ellis, KS

Rusco-Davis #7-36

Job Ticket: 68461 **DST#: 3**

Test Start: 2022.01.28 @ 15:16:00

## GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:37:02

Time Test Ended: 21:28:02

**Interval: 3416.00 ft (KB) To 3480.00 ft (KB) (TVD)**

Total Depth: 3480.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Kevin Webster

Unit No: 72

Reference Elevations: 2022.00 ft (KB)

2019.00 ft (CF)

KB to GR/CF: 3.00 ft

**Serial #: 6752 Outside**

Press@RunDepth: psig @ 3417.00 ft (KB)

Start Date: 2022.01.28 End Date: 2022.01.28

Start Time: 15:16:01 End Time: 21:28:02

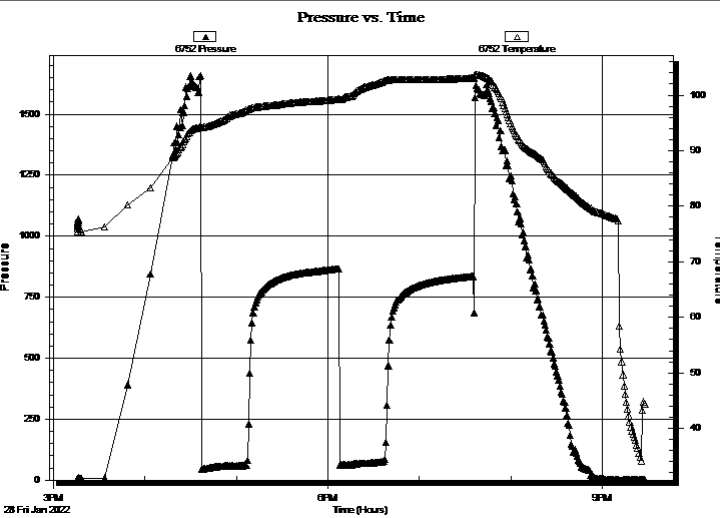
Capacity: psig

Last Calib.: 2022.01.28

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-30- WSB built to 5"  
IS-60- WSB  
FF-30- WSB built to 3"  
FS-60- WSB



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
72.00	1% Oil 99% Mud	0.74

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68461

**DST#: 3**

ATTN: Kent Matson

Test Start: 2022.01.28 @ 15:16:00

## Tool Information

Drill Pipe:	Length: 3369.00 ft	Diameter: 3.80 inches	Volume: 47.26 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 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: 58000.00 lb
			<u>Total Volume: 47.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3416.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	91.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3390.00	
Shut In Tool	5.00			3395.00	
Hydraulic tool	5.00			3400.00	
Jars	5.00			3405.00	
Safety Joint	2.00			3407.00	
Packer	5.00			3412.00	27.00 Bottom Of Top Packer
Packer	4.00			3416.00	
Stubb	1.00			3417.00	
Recorder	0.00	8365	Inside	3417.00	
Recorder	0.00	6752	Outside	3417.00	
Perforations	27.00			3444.00	
Change Over Sub	1.00			3445.00	
Drill Pipe	31.00			3476.00	
Change Over Sub	1.00			3477.00	
Bullnose	3.00			3480.00	64.00 Bottom Packers & Anchor

**Total Tool Length: 91.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68461

**DST#: 3**

ATTN: Kent Matson

Test Start: 2022.01.28 @ 15:16:00

### 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: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
72.00	1% Oil 99% Mud	0.737

Total Length: 72.00 ft      Total Volume: 0.737 bbl

Num Fluid Samples: 0

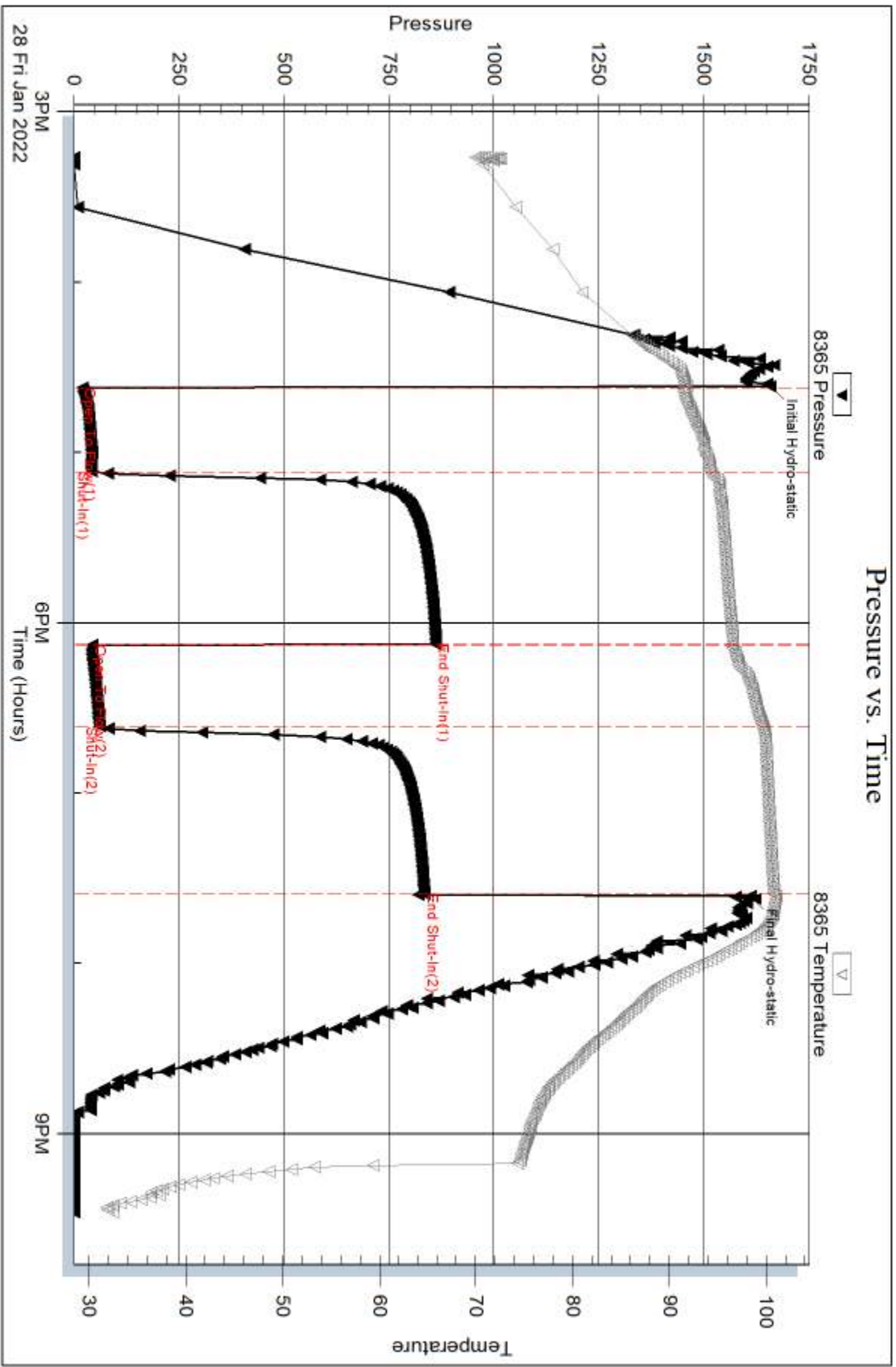
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2#LCM



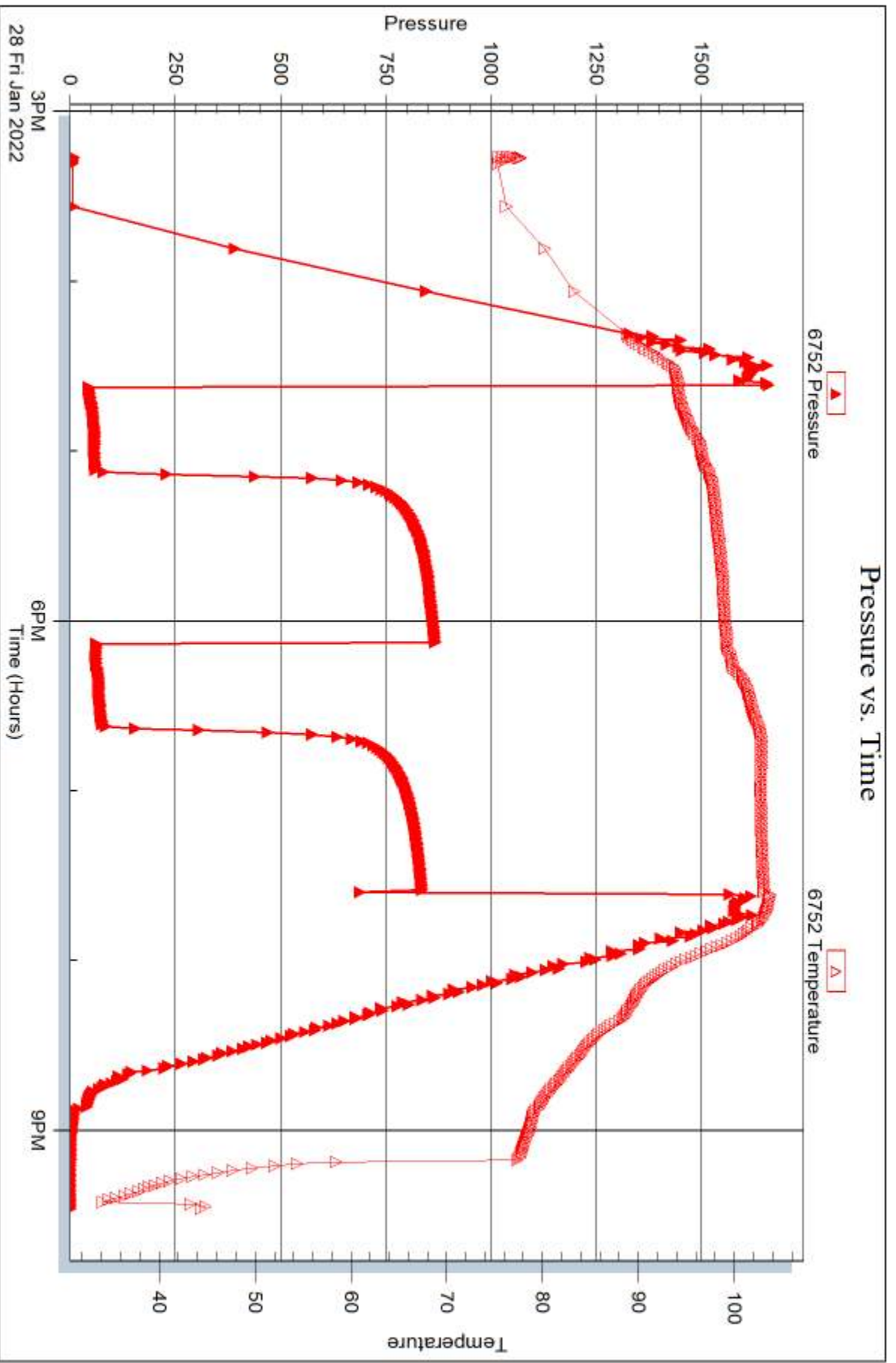


Serial #: 6752

Outside Murfin Drilling Company Inc.

Rusco-Davis #7-36

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 68461

Printed: 2022.02.01 @ 10:51:17



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water  
Wichita, KS 67202-1216

ATTN: Kent Matson

### **Rusco-Davis #7-36**

### **36-11s-20w Ellis,KS**

Start Date: 2022.01.29 @ 05:12:00

End Date: 2022.01.29 @ 12:44:02

Job Ticket #: 68462                      DST #: 4

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

Printed: 2022.02.01 @ 10:50:41

Murfin Drilling Company Inc. 36-11s-20w Ellis,KS Rusco-Davis #7-36 DST # 4 LKC K 2022.01.29



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68462

**DST#: 4**

ATTN: Kent Matson

Test Start: 2022.01.29 @ 05:12:00

## GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:21:02

Time Test Ended: 12:44:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Kevin Webster

Unit No: 72

**Interval: 3484.00 ft (KB) To 3510.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3510.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 3.00 ft

**Serial #: 8365 Inside**

Press@RunDepth: 39.09 psig @ 3485.00 ft (KB)

Capacity: psig

Start Date: 2022.01.29

End Date:

2022.01.29

Last Calib.:

2022.01.29

Start Time: 05:12:01

End Time:

12:44:02

Time On Btm:

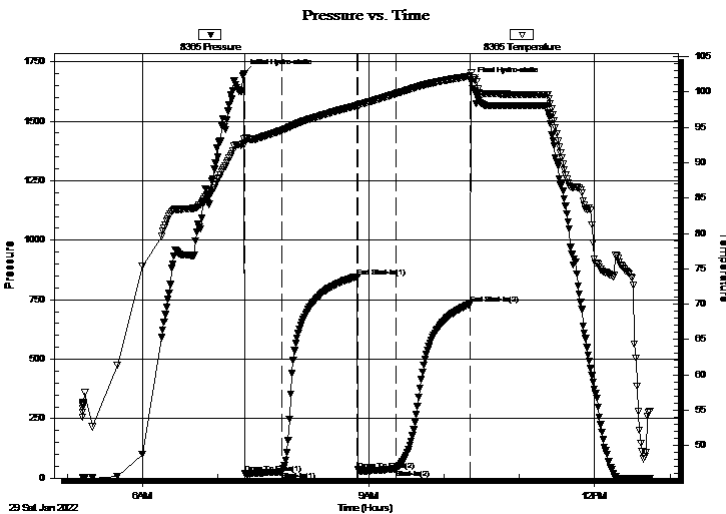
2022.01.29 @ 07:20:47

Time Off Btm:

2022.01.29 @ 10:21:47

**TEST COMMENT:** IF-30- WSB built to 3.5"  
IS-60- WSB  
FF-30- WSB built to 3"  
FS-60- WSB

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1701.53	93.40	Initial Hydro-static
1	18.14	92.77	Open To Flow (1)
30	26.75	94.56	Shut-In(1)
90	846.86	98.09	End Shut-In(1)
91	34.62	97.90	Open To Flow (2)
121	39.09	99.78	Shut-In(2)
180	732.39	102.30	End Shut-In(2)
181	1667.68	102.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	WMCO 55% O 10% W 35% M	0.36

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

ATTN: Kent Matson

Job Ticket: 68462

**DST#: 4**

Test Start: 2022.01.29 @ 05:12:00

**GENERAL INFORMATION:**

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:21:02

Time Test Ended: 12:44:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Kevin Webster

Unit No: 72

**Interval: 3484.00 ft (KB) To 3510.00 ft (KB) (TVD)**

Total Depth: 3510.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2022.00 ft (KB)

2019.00 ft (CF)

KB to GR/CF: 3.00 ft

**Serial #: 6752 Outside**

Press@RunDepth: psig @ 3485.00 ft (KB)

Start Date: 2022.01.29 End Date: 2022.01.29

Start Time: 05:12:01 End Time: 12:44:02

Capacity: psig

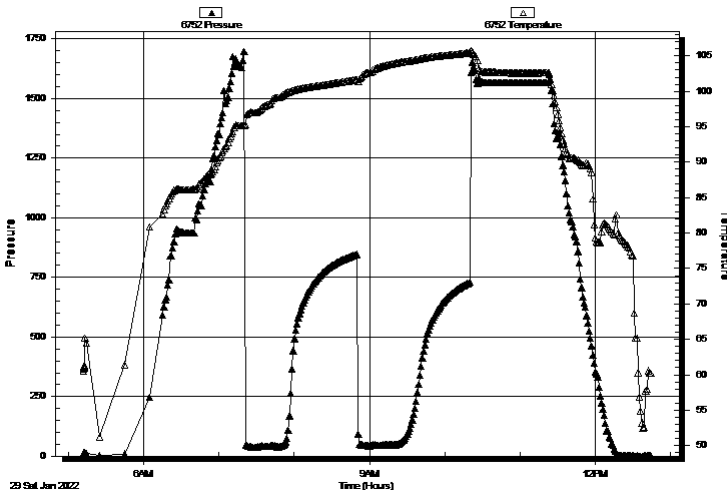
Last Calib.: 2022.01.29

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-30- WSB built to 3.5"  
ISI-60- WSB  
FF-30- WSB built to 3"  
FSI-60- WSB

**Pressure vs. Time**



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
45.00	WMCO 55% O 10% W 35% M	0.36

**Gas Rates**

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68462

**DST#: 4**

ATTN: Kent Matson

Test Start: 2022.01.29 @ 05:12:00

## Tool Information

Drill Pipe:	Length: 3432.00 ft	Diameter: 3.80 inches	Volume: 48.14 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 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: 56000.00 lb
			<u>Total Volume: 48.29 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3484.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3458.00	
Shut In Tool	5.00			3463.00	
Hydraulic tool	5.00			3468.00	
Jars	5.00			3473.00	
Safety Joint	2.00			3475.00	
Packer	5.00			3480.00	27.00 Bottom Of Top Packer
Packer	4.00			3484.00	
Stubb	1.00			3485.00	
Recorder	0.00	8365	Inside	3485.00	
Recorder	0.00	6752	Outside	3485.00	
Perforations	22.00			3507.00	
Bullnose	3.00			3510.00	26.00 Bottom Packers & Anchor

**Total Tool Length: 53.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68462

**DST#: 4**

ATTN: Kent Matson

Test Start: 2022.01.29 @ 05:12:00

### 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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
45.00	WMCO 55% O 10% W 35% M	0.358

Total Length: 45.00 ft      Total Volume: 0.358 bbl

Num Fluid Samples: 0

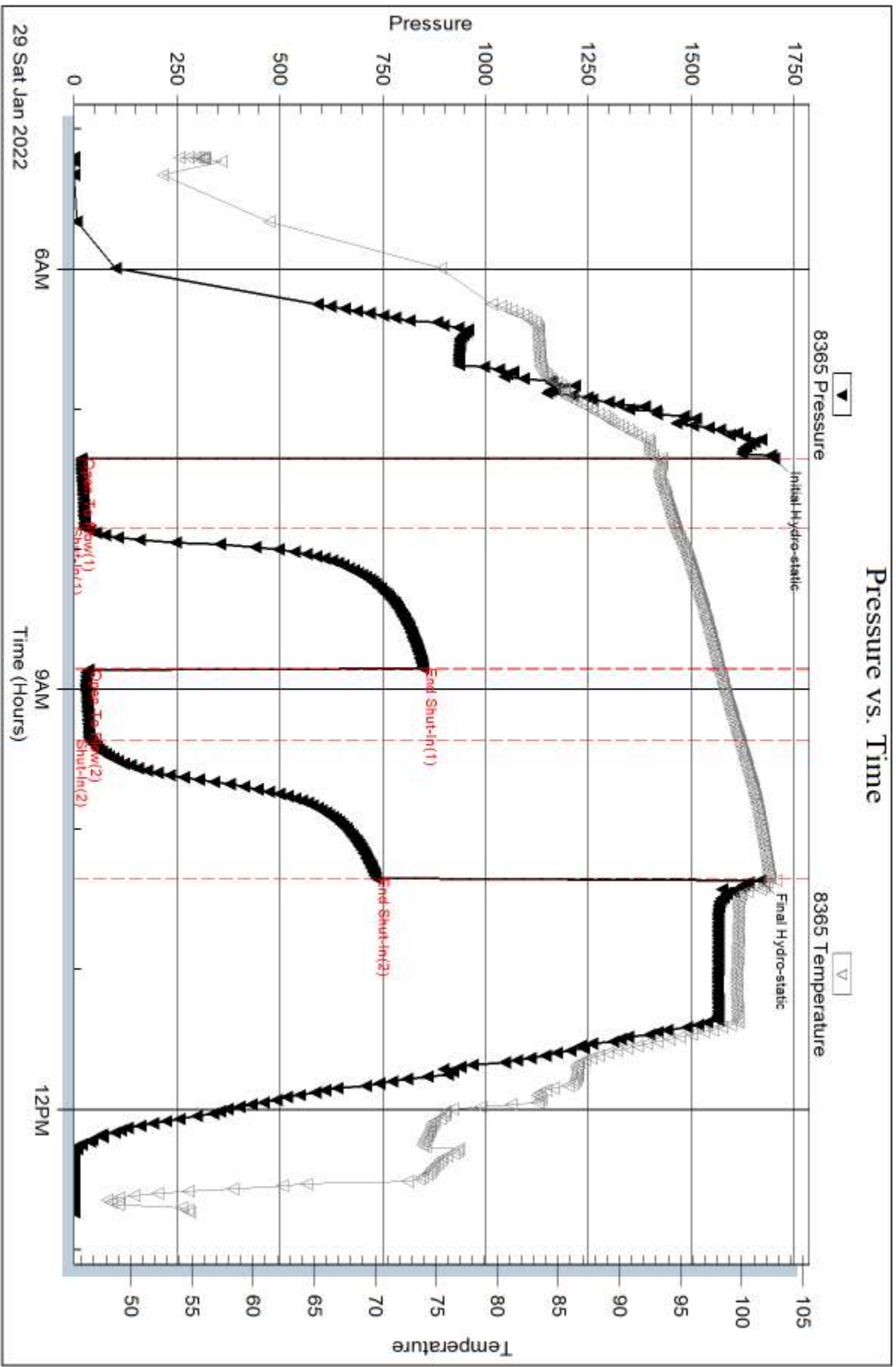
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

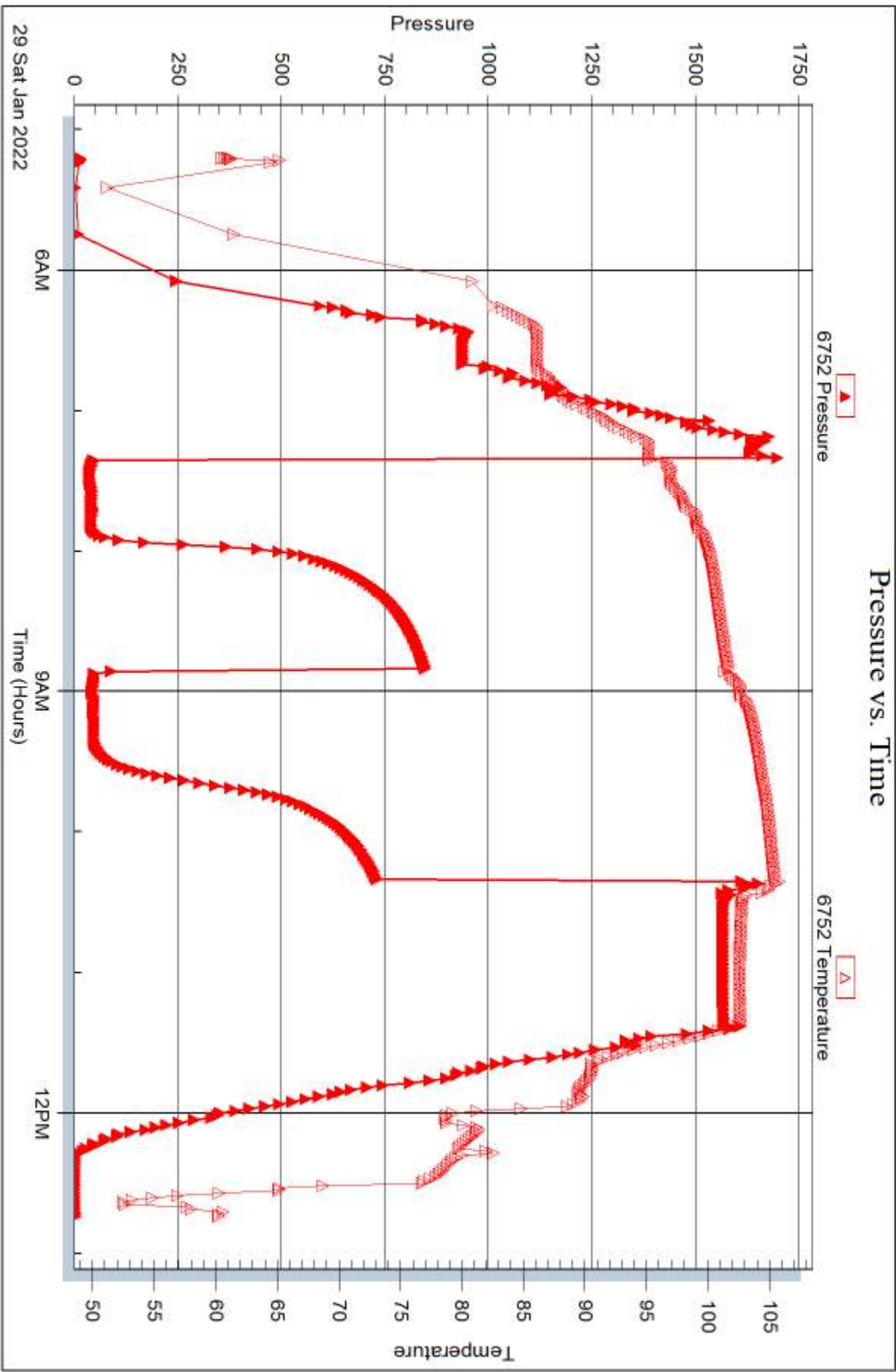


Serial #: 6752

Outside Murfin Drilling Company Inc.

Rusco-Davis #7-36

DST Test Number: 4







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N. Water  
Wichita, KS 67202-1216

ATTN: Kent Matson

### **Rusco-Davis #7-36**

### **36-11s-20w Ellis,KS**

Start Date: 2022.01.30 @ 00:20:00

End Date: 2022.01.30 @ 09:40:02

Job Ticket #: 68463                      DST #: 5

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

Printed: 2022.02.01 @ 10:46:30



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68463

**DST#: 5**

ATTN: Kent Matson

Test Start: 2022.01.30 @ 00:20:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:56:47

Time Test Ended: 09:40:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Kevin Webster

Unit No: 72

**Interval: 3580.00 ft (KB) To 3610.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3610.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 3.00 ft

**Serial #: 8365**

**Inside**

Press@RunDepth: 270.26 psig @ 3581.00 ft (KB)

Capacity: psig

Start Date: 2022.01.30

End Date:

2022.01.30

Last Calib.: 2022.01.30

Start Time: 00:20:01

End Time:

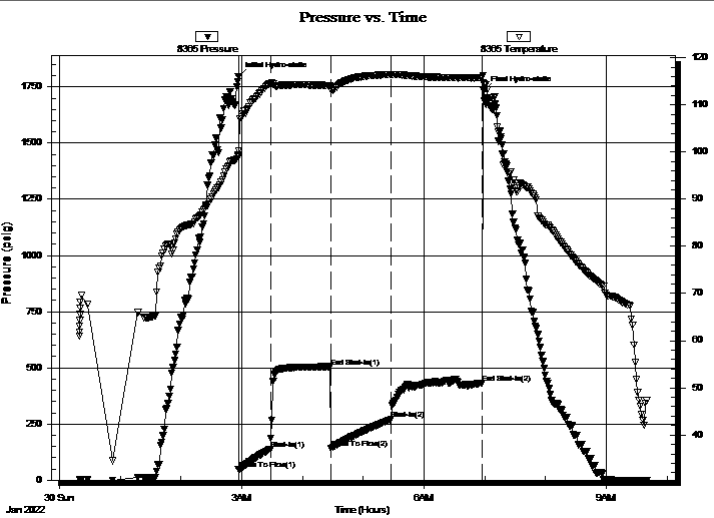
09:40:02

Time On Btm: 2022.01.30 @ 02:56:32

Time Off Btm: 2022.01.30 @ 06:58:47

**TEST COMMENT:** IF-30- Strong blow , BOB 9 min  
IS-60- WSB  
FF-60- Strong blow , BOB 16 min  
FS-90- Built to 11"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1797.21	99.48	Initial Hydro-static
1	46.44	98.97	Open To Flow (1)
32	138.02	114.56	Shut-In(1)
91	504.67	114.08	End Shut-In(1)
92	142.90	113.77	Open To Flow (2)
151	270.26	116.46	Shut-In(2)
241	432.21	115.75	End Shut-In(2)
243	1734.21	114.39	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
248.00	SGOMCW 5% G 5% O 80% W 10% M	3.21
496.00	10% Gas 40% Oil 25% Water 25% Mud	6.96
0.00	1240 GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68463

**DST#: 5**

ATTN: Kent Matson

Test Start: 2022.01.30 @ 00:20:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:56:47

Time Test Ended: 09:40:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Kevin Webster

Unit No: 72

**Interval: 3580.00 ft (KB) To 3610.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3610.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 3.00 ft

**Serial #: 6752 Outside**

Press@RunDepth: psig @ 3581.00 ft (KB)

Capacity: psig

Start Date: 2022.01.30

End Date: 2022.01.30

Last Calib.: 2022.01.30

Start Time: 00:20:01

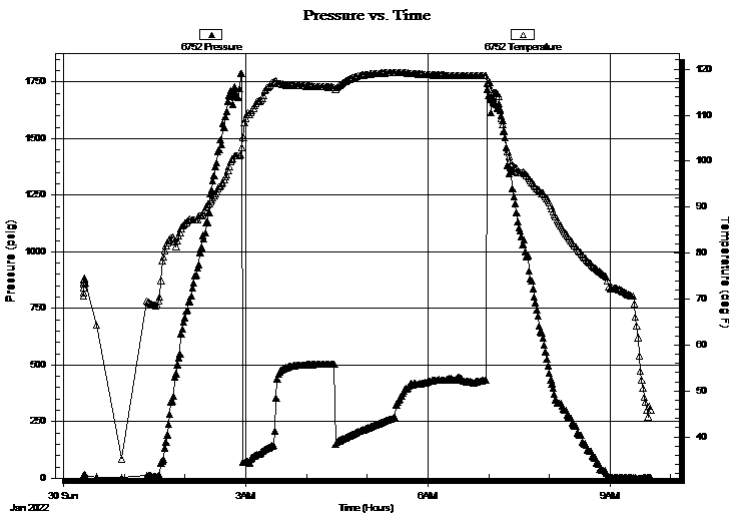
End Time: 09:40:02

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-30- Strong blow , BOB 9 min  
IS-60- WSB  
FF-60- Strong blow , BOB 16 min  
FS-90- Built to 11"

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
248.00	SGOMCW 5% G 5% O 80% W 10% M	3.21
496.00	10% Gas 40% Oil 25% Water 25% Mud	6.96
0.00	1240 GIP	0.00

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68463

**DST#: 5**

ATTN: Kent Matson

Test Start: 2022.01.30 @ 00:20:00

## Tool Information

Drill Pipe:	Length: 3530.00 ft	Diameter: 3.80 inches	Volume: 49.52 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 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: 49.67 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3580.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 ft				
Tool Length:	57.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3554.00	
Shut In Tool	5.00			3559.00	
Hydraulic tool	5.00			3564.00	
Jars	5.00			3569.00	
Safety Joint	2.00			3571.00	
Packer	5.00			3576.00	27.00 Bottom Of Top Packer
Packer	4.00			3580.00	
Stubb	1.00			3581.00	
Recorder	0.00	8365	Inside	3581.00	
Recorder	0.00	6752	Outside	3581.00	
Perforations	26.00			3607.00	
Bullnose	3.00			3610.00	30.00 Bottom Packers & Anchor

**Total Tool Length: 57.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company Inc.

**36-11s-20w Ellis,KS**

250 N. Water  
Wichita, KS 67202-1216

**Rusco-Davis #7-36**

Job Ticket: 68463

**DST#: 5**

ATTN: Kent Matson

Test Start: 2022.01.30 @ 00:20:00

### 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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	SGOMCW 5% G 5% O 80% W 10% M	3.206
496.00	10% Gas 40% Oil 25% Water 25% Mud	6.958
0.00	1240 GIP	0.000

Total Length: 744.00 ft

Total Volume: 10.164 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

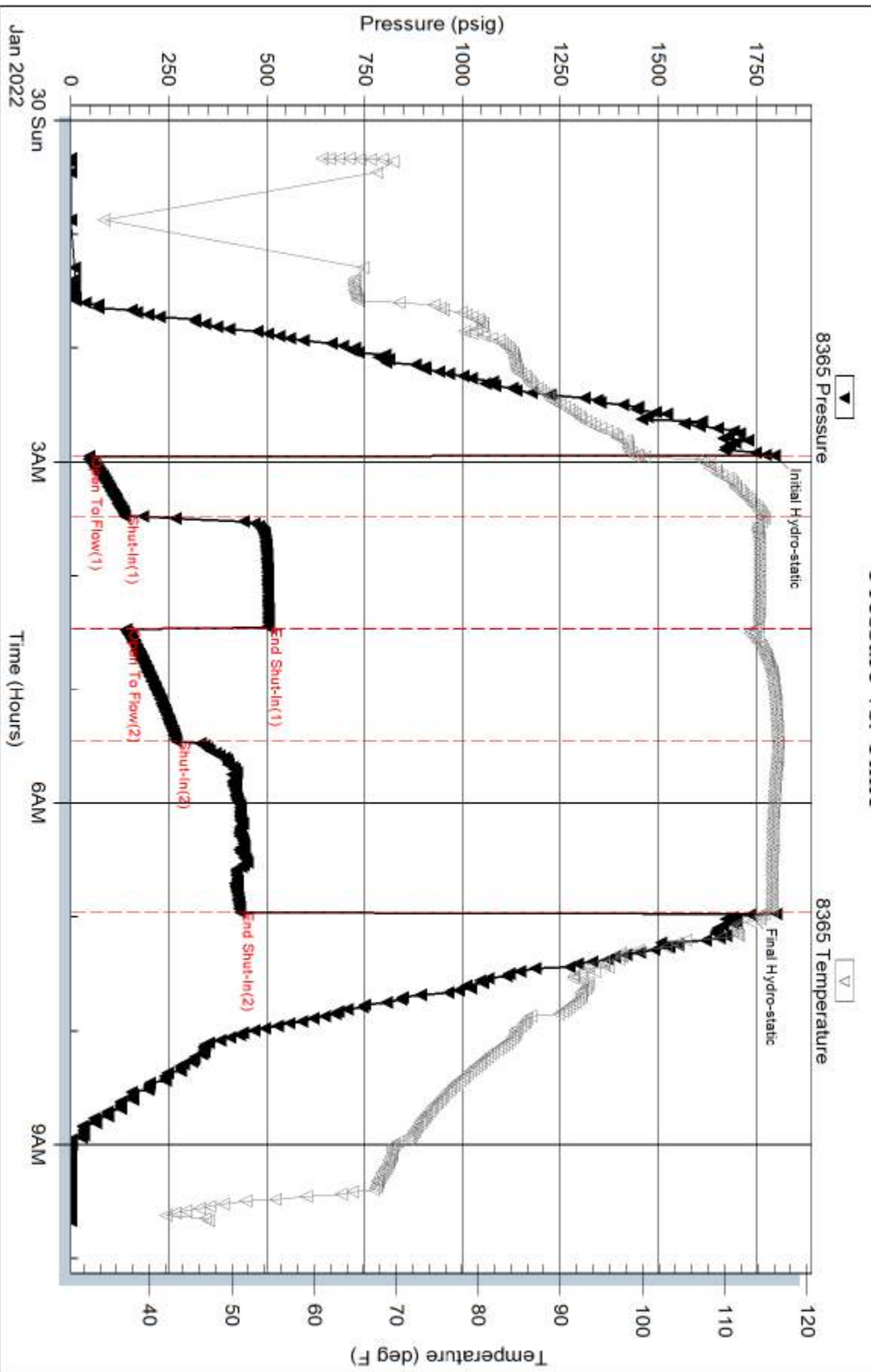
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 3# LCM

### Pressure vs. Time

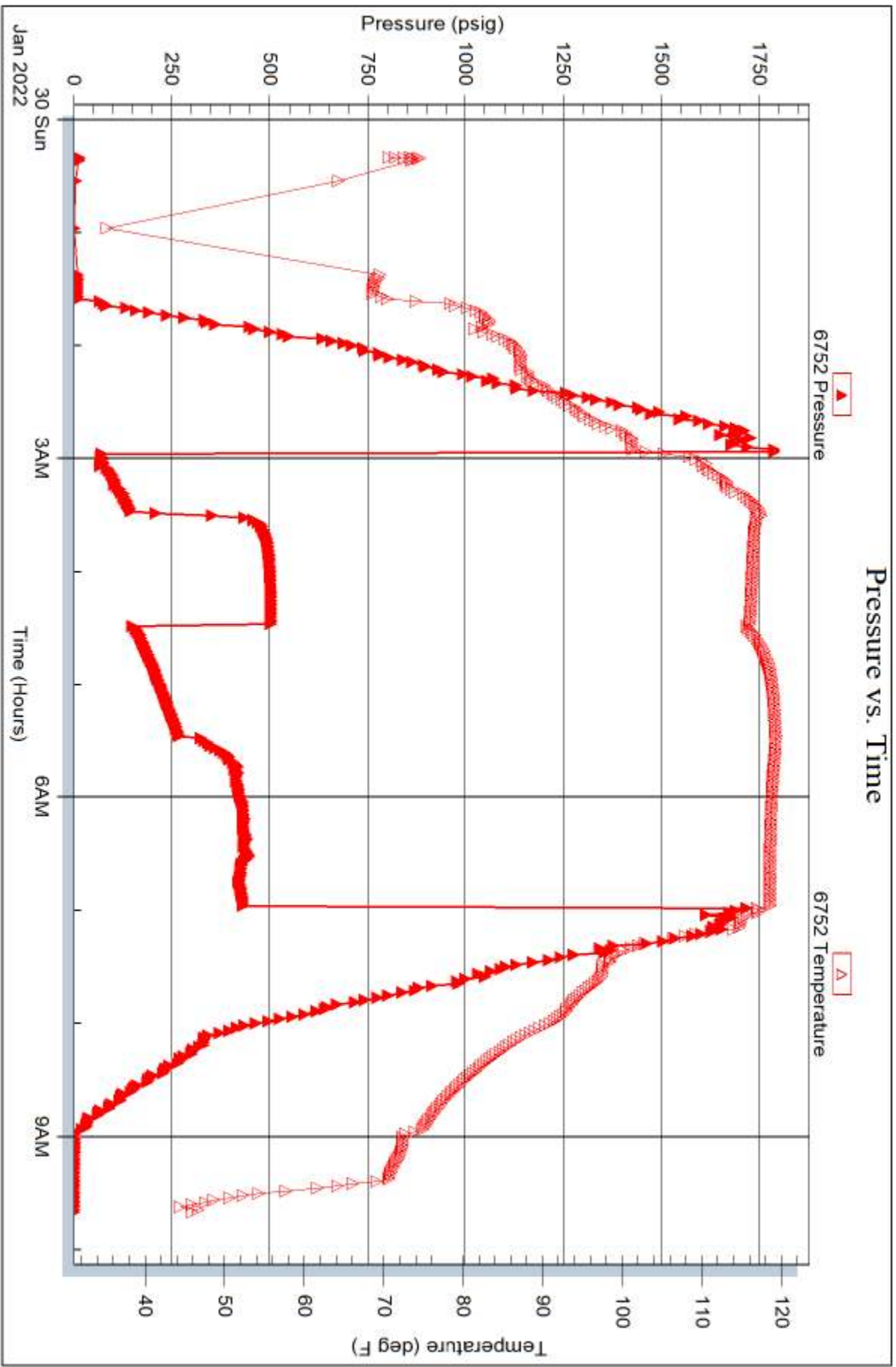


Serial #: 6752

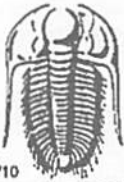
Outside Murfin Drilling Company Inc.

Rusco-Davis #7-36

DST Test Number: 5







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68459

Well Name & No. Rusca-Davis #7-36 Test No. 1 Date 1/27/22  
 Company Murkin Drilling Company Inc Elevation 2022 KB 2019 GL  
 Address 250 N. Water Wichita, KS 67202-1216  
 Co. Rep / Geo. Kent Matson Rig Murkin 16  
 Location: Sec. 36 Twp 11S Rge. 24W Co. Ellis State KS

Interval Tested 3288 + 3370 Zone Tested Lansing A-D  
 Anchor Length 92' Drill Pipe Run 3246 Mud Wt. 9.0  
 Top Packer Depth 3283 Drill Collars Run 30 Vis 55  
 Bottom Packer Depth 3298 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3370 Chlorides 4900 ppm System LCM 2

Blow Description IF- strong blow, bob in 7 min  
ISF- Returns built to 2"  
FF- strong blow bob in 10 min  
FSF- Returns built to 2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>231</u>	<u>60w cm</u>	<u>5</u>	<u>65</u>	<u>5</u>	<u>25</u>
<u>124</u>	<u>60m cm</u>	<u>10</u>	<u>15</u>	<u>55</u>	<u>20</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 353 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1627</u>	<input checked="" type="checkbox"/> Test 1300	T-On Location <u>11:00</u>
(B) First Initial Flow <u>59</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>01:00</u>
(C) First Final Flow <u>128</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>04:12</u>
(D) Initial Shut-In <u>453</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>08:12</u>
(E) Second Initial Flow <u>136</u>	<input checked="" type="checkbox"/> Hourly Standby 1.75h 175	T-Out <u>1045</u>
(F) Second Final Flow <u>206</u>	<input checked="" type="checkbox"/> Mileage 42rt 52.50	Comments _____
(G) Final Shut-In <u>411</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1625</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool 350 No signal

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 60

Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

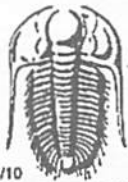
Ruined Shale Packer  
 Ruined Packer  
 Extra Copies

Sub Total 0  
 Total 1852.50  
 Sub Total 1852.50 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Kevin Webster

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68460

Well Name & No. Rusco-Davis #7-36 Test No. 2 Date 1/27/27  
 Company Murkin Drilling Company Inc Elevation 2022 KB 2019 GL  
 Address 290 N. Water Wichita, KS 67202-1216  
 Co. Rep / Geo. Keat Matson Rig Murkin 10  
 Location: Sec. 36 Twp 119 Rge. 20W Co. Ellis State KS

Interval Tested 3364 - 3405 Zone Tested Lansing E, F, G  
 Anchor Length 41 Drill Pipe Run 3338 Mud Wt. 9.9  
 Top Packer Depth 3359 Drill Collars Run 30 Vis 55  
 Bottom Packer Depth 3364 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3405 Chlorides 4900 ppm System LCM 2

Blow Description IF - STRONG blow bob 2 min  
ISF - Returns built to 2"  
FF - STRONG blow bob 5 min  
FSE - WSB

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>		<u>5</u>	<u>45</u>	<u>40</u>	
<u>744</u>		<u>5</u>	<u>90</u>	<u>5</u>	

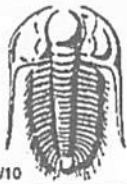
Rec Total 868 BHT 119 Gravity \_\_\_\_\_ API RW .197 @ 26 °F Chlorides 125,000 ppm

(A) Initial Hydrostatic 1640  Test 1300 T-On Location 19:30  
 (B) First Initial Flow 87  Jars 250 T-Started 20:00  
 (C) First Final Flow 347  Safety Joint 75 T-Open 22:09  
 (D) Initial Shut-In 469  Circ Sub T-Pulled 1:09  
 (E) Second Initial Flow 355  Hourly Standby T-Out 03:30  
 (F) Second Final Flow 444  Mileage 52.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 471  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1599  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  EM Tool \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Shut-In 60  Day Standby \_\_\_\_\_ Sub Total 0  
 Sub Total 1677.50  Accessibility \_\_\_\_\_ Total 1677.50  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Kevin Webster

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68461

Well Name & No. husco-davis #7-36 Test No. 3 Date 1/28/22  
 Company Murkin Drilling company, INC Elevation 2022 KB 2019 GL  
 Address 250 N. Water Wichita, KS 67202-1216  
 Co. Rep / Geo. Kent Matson Rig Murkin 16  
 Location: Sec. 36 Twp 11 S Rge. 20 W Co. Ellis State Ks

Interval Tested 3416 - 3480 Zone Tested Lansing "HFJ"  
 Anchor Length 64' Drill Pipe Run 3369 Mud Wt. 9.0  
 Top Packer Depth 3411 Drill Collars Run 30 Vis 56  
 Bottom Packer Depth 3416 Wt. Pipe Run 0 WL 9.4  
 Total Depth 3480 Chlorides 4800 ppm System LCM 2

Blow Description IF-WSB built to 5"  
ISF-WSB  
FF-WSB built to 3"  
FST-WSB

Rec	Feet of	%gas	%oil	%water	%mud
<u>702</u>	<u>VSOCM</u>			<u>90</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

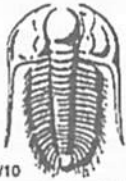
Rec Total 72 BHT 103 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1658</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>14:15</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>15:16</u>
(C) First Final Flow <u>42</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:37</u>
(D) Initial Shut-In <u>861</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>19:37</u>
(E) Second Initial Flow <u>43</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>21:30</u>
(F) Second Final Flow <u>61</u>	<input checked="" type="checkbox"/> Mileage <u>52.50</u>	Comments _____
(G) Final Shut-In <u>833</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1611</u>	<input type="checkbox"/> Straddle _____	
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> EM Tool _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Ruined Packer _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Accessibility _____	Sub Total <u>0</u>
	Sub Total <u>1677.50</u>	Total <u>1677.50</u>

Approved By \_\_\_\_\_ Our Representative Kevin Websta

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68462

Well Name & No. Rusco-Davis #7-36 Test No. 4 Date 1/29/22  
 Company Multin Drilling Company Inc Elevation 2022 KB 2019 GL  
 Address 250 N. Water Witchita KS 67202-1216  
 Co. Rep / Geo. Kent Matson Rig Multin 10  
 Location: Sec. 36 Twp 119 Rge. 20w Co. Ellis State KS

Interval Tested 3484 - 3510 Zone Tested Lansing K  
 Anchor Length 26' Drill Pipe Run 3432 Mud Wt. 9.0  
 Top Packer Depth 1474 Drill Collars Run 30 Vis 60  
 Bottom Packer Depth 3484 Wt. Pipe Run 6 WL 5.8  
 Total Depth 3510 Chlorides 5200 ppm System LCM 3

Blow Description IF - WSB built to 3.5"  
IF - WSB  
FF - WSB built to 3"  
FSI - WSB

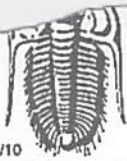
Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>w mco</u>	<u>55</u>	<u>10</u>	<u>35</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 45 BHT 103 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1701</u>	<input checked="" type="checkbox"/> Test 1300	T-On Location <u>04:45</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>05:12</u>
(C) First Final Flow <u>26</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>07:23</u>
(D) Initial Shut-In <u>846</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>10:27</u>
(E) Second Initial Flow <u>34</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:45</u>
(F) Second Final Flow <u>39</u>	<input checked="" type="checkbox"/> Mileage 52.50	Comments _____
(G) Final Shut-In <u>732</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>1667</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> EM Tool
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1677.50</u>
	Sub Total <u>1677.50</u>	MP/DST Disc't _____

Approved By \_\_\_\_\_ Our Representative Kevin Webster

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68463

Well Name & No. Rusco-Davis #7-36 Test No. 5 Date 1/29/22  
 Company Murfin Drilling Company Inc Elevation 2622 KB 2019 GL  
 Address 250 N. Water Wichita, KS 67202-1216  
 Co. Rep / Geo. Kent Matson Rig Murfin 16  
 Location: Sec. 36 Twp 11S Rge. 20W Co. Ellis State KS

Interval Tested 3580-3610 Zone Tested Arbuckle  
 Anchor Length 30' Drill Pipe Run 3530 Mud Wt. 9.0  
 Top Packer Depth 2575 Drill Collars Run 30 Vls 55  
 Bottom Packer Depth 3580 Wt. Pipe Run 300 WL 5.74  
 Total Depth 3610 Chlorides 4900 ppm System LCM 3#

Blow Description IF- strong blow bob 9min  
ISI- WSB  
FF- strong blow bob 16min  
FSI- Built to 11"

Rec	Feet of	%gas	%oil	%water	%mud
<u>496</u>		<u>10</u>	<u>40</u>	<u>25</u>	<u>25</u>
<u>248</u>		<u>5</u>	<u>5</u>	<u>80</u>	<u>10</u>
<u>1240</u>	<u>Grp</u>	<u>100</u>		<u>0</u>	<u>0</u>
		%gas	%oil	%water	%mud
		%gas	%oil	%water	%mud

Rec Total 744 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1797</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>2330</u>
(B) First Initial Flow <u>46</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>00:20</u>
(C) First Final Flow <u>138</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0258</u>
(D) Initial Shut-In <u>504</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0658</u>
(E) Second Initial Flow <u>142</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0930</u>
(F) Second Final Flow <u>270</u>	<input checked="" type="checkbox"/> Mileage <u>52.50</u>	Comments _____
(G) Final Shut-In <u>432</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1734</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> EM Tool _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>1677.50</u>
	Sub Total <u>1677.50</u>	MP/DST Disc't _____

Approved By \_\_\_\_\_ Our Representative Kevin Webster

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

Well Name: RUSCO-DAVIS  
Well Id: #7-36  
Location: 2430' FSL, 1330' FEL, SE 1/4 Sec 36-T11S-R20W, Ellis County, Kansas  
License Number: API: 15-051-27023 Region: Ellis County  
Spud Date: 01/22/2022 Drilling Completed: 01/30/2022  
Surface Coordinates: NAD83  
Lat: 39.0517245, Long: -99.4870207  
Bottom Hole Vertical hole  
Coordinates:  
Ground Elevation (ft): 2017' K.B. Elevation (ft): 2022'  
Logged Interval (ft): 2940' To: RTD Total Depth (ft): 3701'  
Formation: Arbuckle at RTD  
Type of Drilling Fluid: Chemical

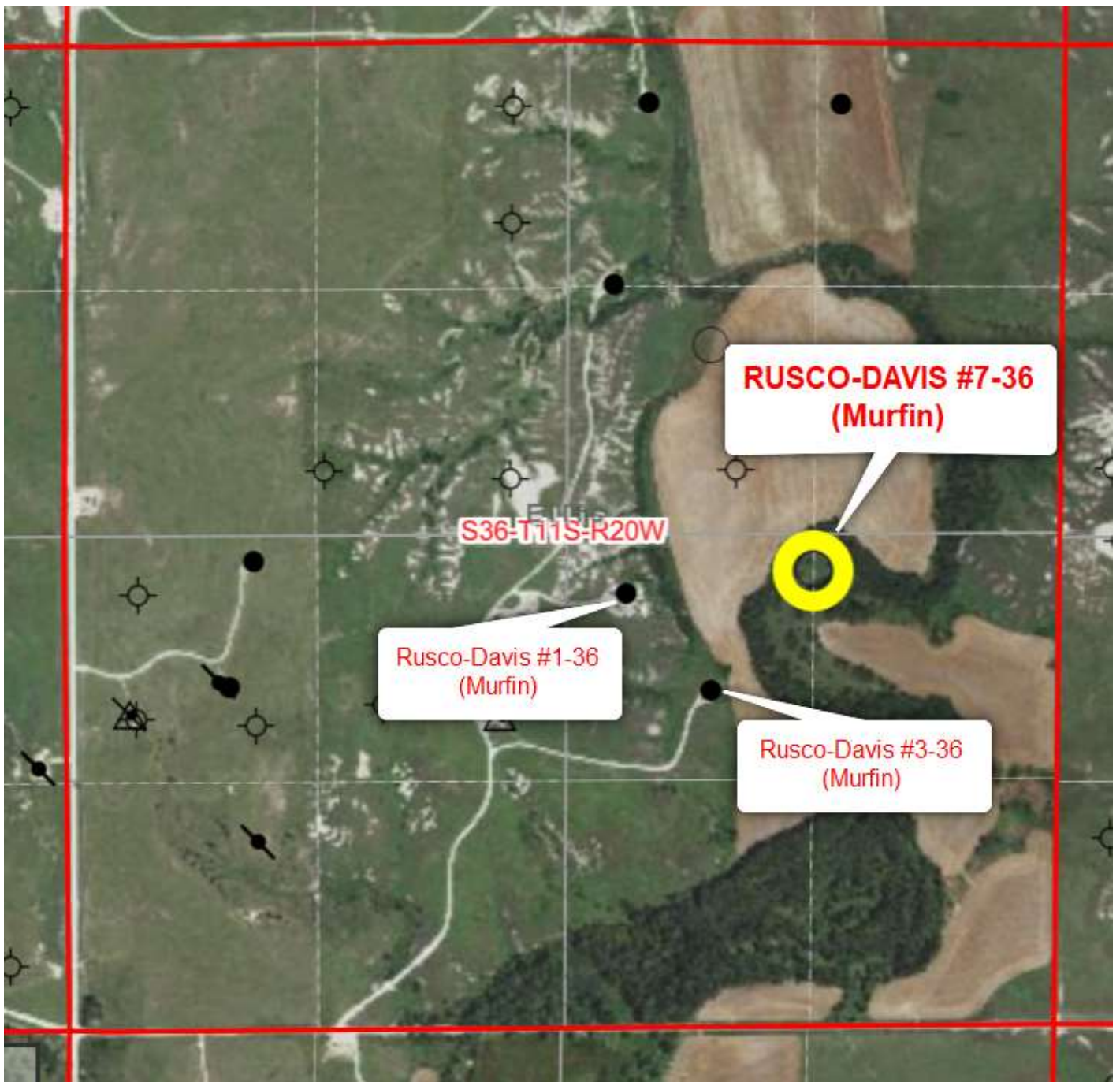
Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

**OPERATOR**

Company: Murfin Drilling Company, Inc.  
Address: 250 N. Water; Suite 300  
Wichita, KS 67202  
316-267-3241

**WELLSITE GEOLOGIST**

Name: Kent R. Matson  
Company: Matson Geological Services, LLC  
Address: 33300 W. 15th Street S.  
Garden Plain, Kansas 67050  
316-644-1975; kent4m@hotmail.com



#### COMMENTS

Murfin Drilling Company Geologist: Bo Beins, 316-371-8114 (cell).

Contractor: Murfin Drilling Company, Rig #16.

Tool Pusher: Andy Dinkel, 785-443-2379 (cell).

Surface Casing: 8 5/8" set at 262' (KB) w/185sx cement.

Production Casing: Based on field observations of drill cuttings, DST results and electric log evaluation, 5 1/2" production casing was installed.

Mud by: Mud-Co/Service Mud, Inc., Gary Schmidtberger, 785-259-2757 (cell).

DST's by: Trilobite Testing, Kevin Webster, 785-656-3620 (cell).

Logs by: Midwest Wireline (DI w/GR, CND, Micro, and Sonic), Tim Martin, 785-625-3858 (office).

RTD= 3701'

LTD= 3700'

## FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Topeka	3041'	-1019	3038'	-1016
Heebner Shale	3262'	-1240	3258'	-1236
Lansing	3298'	-1276	3295'	-1273
Stark Shale	3487'	-1465	3482'	-1460
Base of KC	3529'	-1507	3525'	-1503
Arbuckle	3599'	-1577	3594'	-1572
RTD	3701'	-1679		
LTD			3700'	-1678

## ROCK TYPES

### LITHOLOGY

	Anhy
	Cht
	Coal
	Congl
	Dol
	Gyp
	Lmst
	Salt
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Carb sh
	Dol
	Dtd
	Gry sh
	Sandy lms
	Shale
	Sltstn
	Shlyslts

	Sitysh
	Sdy dolo
	Silty dolo
	Shy dolo
	Shaly ls

### FOSSIL

	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral
	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite

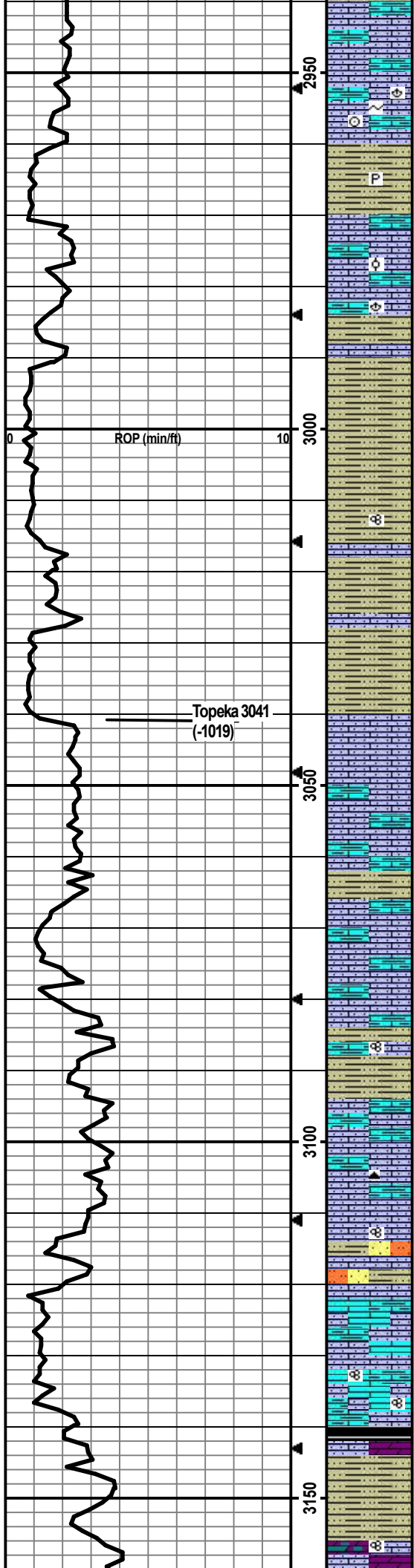
### MINERAL

	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom
	Fuss
	Oomold
	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	Dol
	Feldspar

	Ferrpel
	Ferr
	Glau
	Gyp
	Hvymin
	Kaol
	Marl
	Minxl
	Nodule
	Phos
	Pyr
	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff
	Chlorite
	Dol
	Sand
	Sly

Rate of Penetration (ROP) ROP (min/ft)	DEPTH	Lithology	CFS Point	Oil Shows	Geological Descriptions	Remarks
	27				<p><b>Morning Report Depth/Activity (7:00 am)</b></p> <p>01/22/2022: MIRU/Spud; set surface casing @ 265'KB.  01/23: Drilling @ 385'.  01/24: Drilling @ 1900'.  01/25: Drilling @ 2680'.  01/26: Drilling @ 3205'.  01/27: On bottom w/tool for DST #1 @ 3370'.  01/28: CTCH after DST #2 @ 3405'.  01/29: DST#4 @ 3510'.  01/30: TOH w/tool for DST#5 @ 3610'. 04:33pm TD @ 3701'; Electric logged.  01/31: Completed electric logging @ 03:00am.</p> <p>Drilling was conducted with a 7 7/8" tri-cone button bit.</p>	<p>Mud-Co/Service Mud Inc. Check #1 @ 0' predrilling instructions.</p> <p>Mud-Co/Service Mud Inc. Check #2 @ 789' 01/23/22 10:10am  wt vis pH chl  8.7 28 11.0 300  Filt LCM  n/a 0</p> <p>Mud-Co/Service Mud Inc. Check #3 @ 2095' 01/24/22 11:00am  wt vis pH chl  9.7 28 7.0 71200  Filt LCM  n/a 0</p>
	2800				<p><b>Anhydrite: Top @ 1392' (+630), Base @ 1432' (+590)</b> (based on drill time).</p> <p>Geologist on location @ 2730', 01/25/2022.</p>	<p><b>Displaced drilling mud @ 2730'.</b></p> <p>Mud-Co/Service Mud Inc. Check #4 @ 2746' 01/25/22 12:20pm  wt vis pH chl  8.7 60+ 11.5 5800  Filt LCM  6.2 2</p> <p>Mud-Co/Service Mud Inc. Check #5 @ 3180' 01/26/22 04:30am  wt vis pH chl  9.0 55 11.0 4900  Filt LCM  5.8 2</p>
	2850				<p><b>1-FT ROP Data begins @ 2850' on 01/25/2022.</b>  Recorded from drillers geograph record and geologist's auto-reader switch on geograph.</p> <p><b>Formation tops and lithologies have been adjusted to correlate to the electric log.</b></p>	<p>Mud-Co/Service Mud Inc. Check #6 @ 3370' 01/27/22 04:35am  wt vis pH chl  9.1 60+ 11.0 5000  Filt LCM  6.0 2</p> <p>Mud-Co/Service Mud Inc. Check #7 @ 3405' 01/28/22 04:15am  wt vis pH chl  9.0 56 10.0 4800  Filt LCM  5.4 2</p> <p>Mud-Co/Service Mud Inc. Check #8 @ 3510' 01/29/22 04:30am  wt vis pH chl  9.0 60+ 10.0 5200  Filt LCM  5.8 3</p>
	2900				<p>Oil Shows indicator: Left Block 0-10 tray pcs w/show, Middle Block 10-20 tray pcs w/show, Right Block 20+ tray pcs w/show.</p> <p><b>Drill cutting samples at 10' intervals start at 2940'.</b></p>	<p>Mud-Co/Service Mud Inc. Check #9 @ 3610' 01/30/22 04:30am  wt vis pH chl  9.0 58 10.0 5200  Filt LCM  6.8 2</p>
					<p>LS: lt-med gry/lt-med bm, vf-m xtal, silty/sndy, arg, chalky, foss frags, no vis por, no odor, ns.  SH: lt-dk gry, some vry silty/sndy, pyritic, slt carb, soft-firm.</p>	<p><b>Survey Record</b>  <b>Deg @ Ft</b>  <b>0.25 @ 265'</b>  <b>1.00 @ 3370'</b>  <b>1.00 @ 3710'</b></p>





LS: cm/lt bm/lt-m gry, micro-m xtal, some silty/sndy/arg/chalky, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/lt-m gry, vf-m xtal, silty/sndy/arg/chalky, min glauc, foss frags/brac/crin, no vis por, no odor, ns.

SH: lt-dk gry/lt green, some vry silty/sndy, pyritic, slt carb, soft-firm.

LS: cm/lt-m gry/lt-m bm, micro-m xtal, some silty/sndy/arg/chalky, foss frags/ool, no vis por, no odor, ns.

LS: cm/lt-m gry/lt-m brn, vf-m xtal, vry silty/sndy/arg/chalky, foss frags/brac, no vis por, no odor, ns.

SH: lt-dk gry, vry silty/sndy, slt carb, soft-firm.

SH: lt-dk gry/lt green, some vry silty/sndy, slt carb, soft-firm.

SH: lt-dk gry, some vry silty/sndy, carb, min fusin, soft-firm.

No sample collected.

No sample collected.

Topeka 3041 (-1019)

LS: cm/lt-m bm/lt gry, vf-m xtal, some silty/sndy, some chalky, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, vf-m xtal, silty/sndy/arg/chalky, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/maroon-red, some silty/sndy, slt carb, soft-firm.

LS: cm/lt-m bm/gry, vf-m xtal, silty/sndy/arg/chalky, abund foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, vf-m xtal, some silty/sndy/arg/chalky, foss frags/fusln, no vis por, no odor, ns.

SH: lt-dk gry/min maroon-red, some vry silty, slt carb, soft-firm.

LS: cm/lt gry/lt bm, vf-m xtal, some vry silty, arg/chalky, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, vf-m xtal, some vry silty/sndy/arg/chalky, min dk gry chert, foss frags, 4 pcs w/sfo w/ppt-vf in-xtal por, no fluor w/slt yel cut, slt odor, ssfo.

LS: cm/lt-m brn/lt gry, vf-m xtal, some vry silty/sndy/arg/chalky, foss frags/fusln, no vis por, no odor, ns.

SH: lt-dk gry/lt green, some vry silty/sndy, some carb; some lt gry sltstn/SS, no odor, ns.

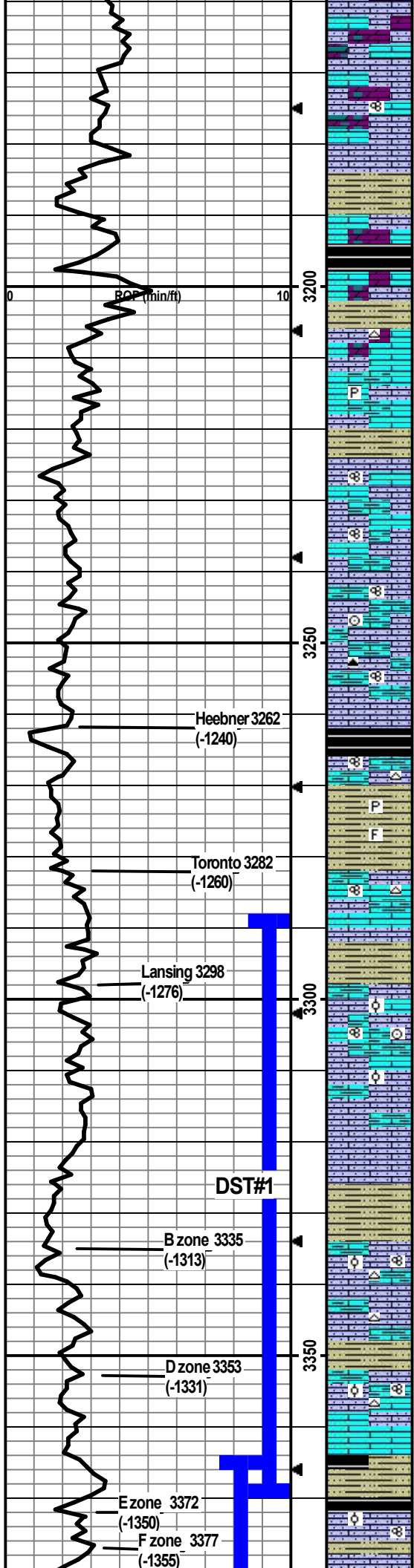
LS: cm/lt-m bm/lt-m gry, micro-m xtal, some silty/sndy/arg/chalky, foss frags, no vis por, 1 pce w/sfo w/ppt in-xtal por, slt yel cut, no odor, ssfo.

LS: lt-m brn/lt-m gry, vf-m xtal, some vry silty/sndy/arg/chalky, foss frags/fusln, no vis por, 3 pcs w/sfo w/ppt-vf in-xtal por, no fluor w/slt yel cut, no odor, ssfo.

LS: cm/lt-m bm, vf-m xtal, some silty, some dolomitic, no vis por, 1 pcs w/sfo w/ppt in-xtal por, fo on break w/odor, ssfo.

SH: lt-dk gry, some vry silty/sndy, slt carb, soft-firm.

LS: lt gry/lt-m bm, vf-m xtal, some silty/arg/chalky, some dolomitic, foss frags/fusln, min ppt in-xtal por, no odor, ns.



LS: cm/lt-m bm/lt-m gry, micro-m xtal, some silty, some dolomitic, foss frags, min ppt in-xtal por, no odor, ns.

LS: cm/lt-m bm/lt gry, micro-m xtal, some silty, min dolo, foss frags/fusln, min ppt in-xtal por, no odor, ns.

SH: lt-dk gry/lt gry-bm, some vry silty, slt carb, soft-firm.

LS: cm/lt gry-bm/lt-m bm, micro-m xtal, some silty/sndy, some dolomitic, foss frags, min ppt-vf in-xtal por, no odor, ns.

SH: lt-dk gry/blk, some silty/sndy, slt carb, soft-firm.

LS: cm/lt bm/lt gry-bm, micro-m xtal, some silty, some dolomitic, lt gry chert, no vis por, no odor, ns.

SH: lt-dk gry/lt gry-bm, some silty, slt carb, soft-firm.

LS: wht/cm/lt gry-bm/lt-m bm/gry mottling, micro-m xtal, some vry silty/arg, chalky, min pyritic, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/lt green-gry/bm, some vry silty/sndy, carb, soft-firm.

LS: cm/lt-m bm/lt gry-bm, vf-m xtal, some vry silty/sndy, chalky, foss frags/fusln, min ppt in-xtal por, no odor, ns.

LS: cm/lt-m gry/lt bm, vf-m xtal, some silty/sndy/arg, chalky, foss frags/fusln, 3 pcs w/sfo w/ppt in-xtal por, slt yel cut, slt odor, ssfo.

LS: cm/lt gry-bm/lt-m bm, vf-m xtal, vry silty/sndy/arg/chalky, foss frags/fusln/crin, 4 pcs w/sfo w/vf-m in-xtal por, yel fluor, slt odor, ssfo.

LS: cm/lt-dk gry/lt-dk bm, vf-m xtal, some vry silty/sndy/arg, chalky, dk gry chert, foss frags/fusln, no vis por, no odor, ns.

SH: m-dk gry/blk, some silty, slt carb, fissile, firm.

LS: cm/lt gry/lt-m bm, vf-m xtal, some vry silty/sndy/arg, chalky, lt bm/lt gry chert, foss frags/fusln, no vis por, no odor, ns.

SH: m-dk gry/blk, some silty, carb, some foss frags, min pyritic, fissile, firm.

LS: cm/lt gry-bm/lt bm, vf-m xtal, some silty/sndy, arg/chalky, gry/bm chert, foss frags/fusln, no vis por, no odor, ns.

SH: m-dk gry/blk, some silty, carb, fissile, firm.

LS: cm/lt-m bm/lt-m gry, vf-m xtal, some silty/sndy/arg, chalky, foss frags/fusln/crin/ool, 1 ool pce w/sfo w/vf-f in-ool por, no fluor, no odor, ssfo.

LS: cm/lt bm/lt gry, vf-f xtal, some silty/min arg, chalky, min foss frags/min dense ool, no vis por, no odor, 3 ool pcs w/staining w/fo on break, no fluor, ssfo.

SH: lt-dk gry/gry-bm, some vry silty, carb, soft-firm.

LS: cm/lt bm/lt gry, micro-m xtal, some vry silty/sndy/arg, chalky, lt bm/lt yel chert, foss frags/min fusln/min dense ool, 3 pcs w/staining w/ppt-m in-xtal por, no odor, sso.

LS: cm/lt bm/lt gry-bm, vf-m xtal, some vry silty/sndy/arg, chalky, min lt brn/lt yel chert, foss frags, 3 pcs w/staining min fo on break, ppt-vf in-xtal por, dul yel fluor, no odor, ssfo. 40min smpl had slt odor w/2 pcs w/fo w/ppt-f in-xtal por.

LS: cm/lt-m gry/lt bm, micro-m xtal, some silty/arg, chalky, cm/lt bm chert, foss frags/fusln/grainy/ool, 11 pcs w/sfo w/ppt-m in-xtal/in-ool por, dul yel fluor, slt odor, sfo.

LS: cm/lt bm/lt gry, micro-m xtal, some silty/chalky, foss frags/fusln/ool, 21 pcs w/sfo w/ppt-m/min crs in-xtal/oo-castic por, dul yel fluor, some sat pcs, gd odor, gd sfo.

SH: lt-dk gry/blk/min maroon, some silty, slt carb, soft-firm.

LS: cm/lt-m bm/lt gry, micro-m xtal, silty/sndy, some chalky, foss frags/fusln/dense ool, 13 pcs w/sfo w/ppt-f in-xtal por, slt yel fluor, slt odor, sfo.

CFS @ 3180'  
Stop/20"/40"

CFS @ 3220'  
Stop/20"/40"

CFS @ 3260'  
Stop/20"/40"

**DST1) 3288-3370  
Lansing A-D zones**

30/60/60/90  
1st stg SB built to BOB in 7min;  
BB built to 2".  
2nd stg SB built to BOB in 10min; BB built to 2".  
IFP 60-129#  
ISIP 454#  
FFP 136-207#  
FSIP 411#  
HP 1627-1625#  
Recvd: 231' GWMCO (5%G, 65%O, 5%W, 25%M), 124' GOMCW (10%G, 15%O, 20%M, 55%W).

CFS @ 3290'  
Stop/20"/40"

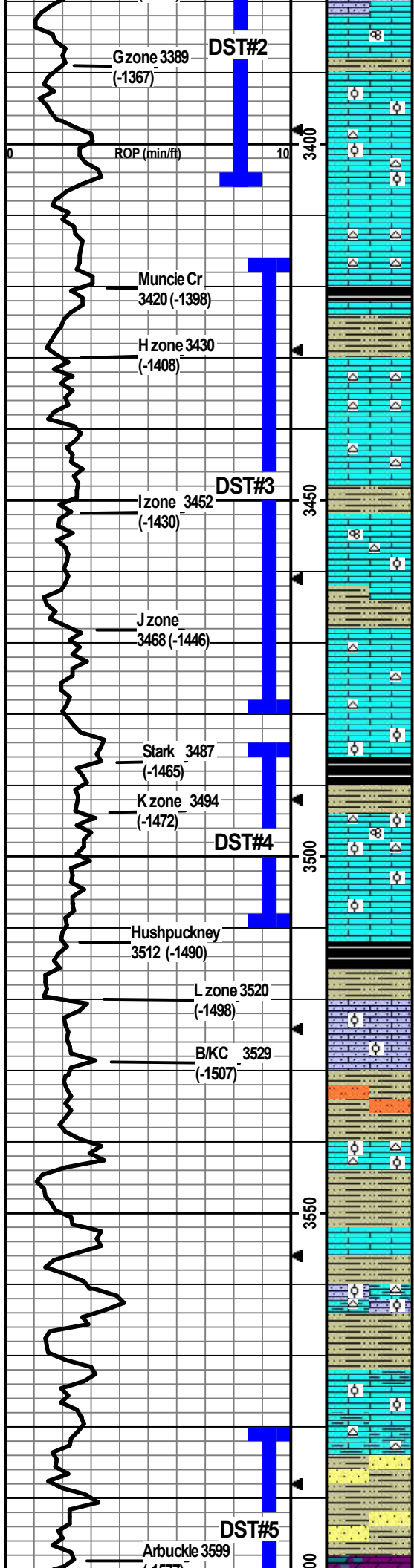
CFS @ 3320'  
Stop/20"/40"

CFS @ 3350'  
Stop/20"/40"

Made 25 std wiper trip prior to DST#1.  
Pipe strap TOH for DST #1 at 3370' was 1.75' short to the board.

CFS @ 3370'  
Stop/20"/40"

CFS @ 3380'



LS: cm/lt-m bm, micro-m xtal, min chalky, foss frags/min fusln, 8 pcs w/sfo w/mostly ppt-f w/some m-crs in-xtal por, dul yel fluor, slit odor, sfo.

CFS @ 3390  
Stop/20"/40"

LS: cm/lt bm, micro-m xtal, chalky, some dolomitic, foss frags/ool, 26 pcs w/sfo w/vf-crs/vug in-xtal/oo-castic por, dul yel fluor, gd odor, gd sfo. 20min smpl vry chalky.

CFS @ 3405  
Stop/20"/40"

LS: cm/lt bm, micro-m xtal, smpl vry chalky, min wht/crm chert, foss frags/ool, 28 pcs w/sfo, ppt-m in-xtal/in-ool por, dul yel fluor, gd odor, gsfo.

**DST2) 3364-3405  
Lansing E, F & G-zones**  
30/60/30/60  
1st Stg blow built to BOB in 2min; BB built to 2".  
2nd Stg blow built to BOB in 5min; BB WSB.  
IFP 88-348#  
ISIP 469#  
FFP 356-445#  
FSIP 472#  
HP 1640-1600#  
Recvd: 124' OMW (5%O, 40%M, 45%W), 744' OMW (5%O, 5% M, 90%W).

AA: w/oil show.

LS: cm/lt-m bm, micro-m xtal, some chalky, min dolomitic, abund wht/lt gry/bm chert, foss frags, 8 pcs w/sfo w/vf-m in-xtal por, dul yel fluoro, slit odor, sfo.

SH: m-dk gry/blk/min lt gry-green, slit carb, fissile, firm. (Few pcs LS w/sfo assume from above, no odor).

CFS @ 3448  
Stop/20"/40"

LS: cm/lt bm, micro-m xtal, smpl vry chalky, dolomitic, abund wht/bm chert, min foss frags, 8 pcs w/sfo, ppt-f in-xtal por, dul yel fluor, slit crush odor, sfo.

LS: cm/lt-m bm/lt gry-bm, micro-m xtal w/2ndary xtals, some chalky, lt gry/lt bm/lt yel chert, min foss frags, 5 pcs w/sfo/staining, ppt-crs/vug in-xtal por, dul yel fluor, no odor, ssfo.

CFS @ 3461  
Stop/20"/40"

LS: cm/lt gry/lt bm, micro-m xtal w/2ndary xtals, chalky, wht/lt bm/lt gry chert, foss frags/min fusln/min ool, 7 pcs w/staining/sfo w/vf-m in-xtal/in-ool por, no fluor, gd odor, sfo.

SH: lt-dk gry/blk, some silty, slit carb, fissile, soft-firm.

LS: cm/lt-m bm, micro-m xtal w/some 2ndary crs xtals, some chalky, wht/lt brn/lt yel chert, foss frags/some grainy, 10 pcs w/staining/sfo w/ppt-vug in-xtal por, dul yel fluor, gd odor, ns.

CFS @ 3480  
Stop/20"/40"

LS: cm/lt-m brn, micro-m xtal, some chalky, lt brn/lt yel chert, min foss frags, 8 pcs mostly w/staining 2 pcs w/o, mostly ppt por w/2 pcs w/f-m in-xtal por, dul yel fluor, slit odor, sfo.

**DST3) 3416-3480  
Lansing H, I & J-zones**  
30/60/30/60  
1st WSB built to 5"; BB-WSB.  
2nd) WSB built to 3"; BB-WSB.  
IFP 20-43#  
ISIP 861#  
FFP 44-62#  
FSIP 834#  
HP 1659-1611#  
Recvd: 72' OM (1%O, 99%M).

LS: cm/lt bm, micro-m xtal, chalky, foss frags/ool, 20 pcs w/staining/fo, vf-m in-xtal por w/crs-vug ool-castic por, dul yel fluor, gd odor, sfo.

SH: lt-dk gry/blk/maroon, vry silty, carb, firm.

LS: wht/cm/lt bm, micro-m xtal, chalky, lt bm chert, foss frags/fusln/fn ool, 29 pcs w/mostly staining, few pcs w/fo, ppt-m in-xtal por w/crs-vug ool-castic por, dul yel fluor, gd odor, gd sfo.

CFS @ 3510  
Stop/20"/40"

LS: wht/cm/lt-m bm, micro-m xtal, chalky, foss frags/fn ool, 10-15% of smpl w/sfo, oil drplets on rx chips and water, f-crs in-xtal por w/crs-vug ool-castic por, dul yel fluor, stg odor, gd sfo.

SH: lt-dk gry/lt green/red-bm, some vry silty/sndy, some pyritic, slit carb, soft-firm.

LS: wht/cm/lt-m bm/lt gry, vf-m xtal, silty, chalky, min pyritic, foss frags/dense ool, 11 pcs w/staining w/fo on break, ppt-vf in-xtal por, slit odor, sfo.

CFS @ 3530  
Stop/20"/40"

SH: lt-dk gry/red-bm/lt green, some vry silty/sndy, slit carb, soft-firm. Few pcs of bm slitstn, 1 pcs w/fo when crushed. Few pcs of LS w/so assumed from above. Smpl had odor.

**DST4) 3484-3510  
Lansing K-zone**  
30/60/30/60  
1st WSB built to 3.5"; BB-WSB.  
2nd) WSB built to 3"; BB-WSB.  
IFP 18-27#  
ISIP 847#  
FFP 35-39#  
FSIP 732#  
HP 1701-1668#  
Recvd: 45' WMCO (55%O, 10%W, 35%M).

LS: wht/cm/lt bm/lt gry, micro-m xtal, chalky, cm/lt bm chert, foss frags/ool, 8 pcs w/fo w/vf-crs in-xtal por, dul yel fluor, slit odor, sfo.

SH: lt-dk gry/red-brn, some vry silty/sndy, carb, soft-firm.

LS: wht/cm/lt bm/lt gry, micro-m xtal, chalky, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/maroon/red-bm, some silty, slit carb, soft-firm.

LS: wht/cm/lt gry, micro-m xtal, some silty/arg, crm chert, foss frags/ool, no vis por, no odor, ns.

SH: m-dk gry/red-bm, some vry silty/sndy, carb, soft-firm.

**DST5) 3580-3610  
Arbuckle**  
30/60/60/90  
1st Stg blow, BOB in 9 min; WSB.  
2nd) Stg blow, BOB in 16 min; BB built to 11".  
IFP 46-138#  
ISIP 505#  
FFP 143-270#  
FSIP 432#  
HP 1797-1734#  
Recvd: 1240' GIP, 744' total fluid:

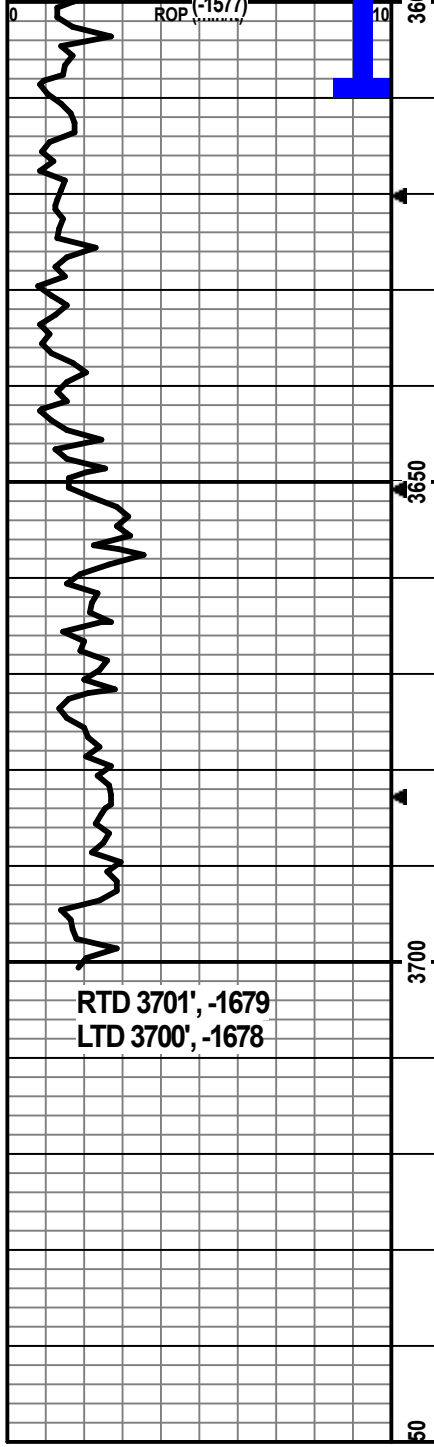
LS: cm/lt bm/lt gry, micro-m xtal, some chalky, some red arg, ool, no vis por, no odor, ns.

SH: lt-dk gry/green-gry/red-bm, some vry silty/sndy, slit carb, soft-firm. Few SS cluster w/blk dead oil. Some cm/wht LS pcs w/orange/bm/yel chert. No odor.

SH as above, w/few SS clusters. Some LS as above w/chert.

Dolo: wht/cm/lt-m brn, vf-fxtal, sucrosic, sndy, oolitic/granular tex, orange/yel chert, 9 pcs





RTD 3701', -1679  
LTD 3700', -1678

w/staining, slit cut on break, ppt por, slit odor, sfo. 6 pcs LS w/sfo, m-crs por, dul yel fluor.

Dolo: cm/lt bm/lt gry, vf-crs xtal, ool/granular tex, sndy, sucrosic, cm/lt bm/lt yel/orange chert, 23 pcs w/staining and sfo, ppt-m in-xtal por, dul yel fluor, gd odor, sfo.

Dolo: cm/lt gry/lt bm, vf-m xtal, sndy, sucrosic, wht/cm/lt bm/lt yel/orange/gry chert, ~25% dolo w/staining/sfo, no fluor, ppt-m in-xtal por; gd odor, sfo. (Cont flood SH).

Dolo: wht/cm/lt bm, vf-f xtal, sndy, sucrosic, cont varied color chert, 14 pcs dolo w/staining/sfo, mostly ppt-f in-xtal por w/min med, no fluor, gd odor, sfo. (Cont flood SH).

Dolo: wht/cm/lt bm, micro-m xtal, sndy/sucrosic, cont varied color chert, 32 pcs w/sfo, ppt-crs in-xtal por, dul yel fluor, gd odor, sfo. (Cont flood SH).

Dolo: wht/cm/lt bm, micro-m xtal, sndy/sucrosic/ool, cont chert, 21 pcs w/sfo, some blk tar oil, ppt-crs in-xtal por, dul yel fluor, gd odor, sfo. (Lesser SH amt).

Dolo: wht/cm/lt bm, micro-m xtal, sndy/sucrosic/ool, cont chert, 18 pcs w/sfo mostly blk tar oil, ppt-m in-xtal por, dul yel fluor, slit odor, sfo.

Dolo/Chert as above, 19 pcs w/sfo mostly blk tar oil, dul yel fluor, slit odor, sfo.

Dolo: wht/cm/lt bm/lt pink, micro-m xtal, sndy/sucrosic/ool, cont chert, 7 pcs w/blk tar oil, ppt-m in-xtal por, no odor.

Dolo/chert: as above, 8 pcs w/blk tar oil, no odor.

TD @3701'

496' GWMC0 (10%G, 40%O, 25%W, 25%M), 248' GOMCW (5%G, 5%O, 10%M, 80%W).

CFS @ 3610'  
Stop/20"/40

CFS @ 3620'  
Stop/30"/60

CFS @ 3701'  
Stop/30"/60"  
Conducted 2-std ST, CTCH 1 hr,  
TOH for logging.





## DRILLING REPORT - LOG TOPS - RUSCO-DAVIS 7-36

Rusco-Davis #7-36 2430' FSL 1330' FEL Sec. 36-T11S-R20W 2022' KB						
Formation	Sample tops	Datum	Ref	Log Tops	Datum	Ref
Anhydrite	1392	+630	-2	1385	+637	+5
B/Anhydrite	1432	+590	-4	1429	+593	-1
Topeka	3041	-1019	-4	3038	-1016	-1
Heebner	3262	-1240	-5	3258	-1236	-1
Lansing	3298	-1276	-2	3295	-1273	+1
Stark	3487	-1465	-5	3482	-1460	Flat
Arbuckle	3599	-1577	-1	3594	-1572	+4
RTD	3701					
LTD				3700		