

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1260663  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- 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 ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

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
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1260663



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  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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*  
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR: \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Kacirek 1-8
Doc ID	1260663

All Electric Logs Run

DIL
DUCP
MEL
BHCS



# Saman Sharifaie

## Petroleum Geologist

### GEOLOGIST'S REPORT

#### DRILLING TIME AND SAMPLE LOG

COMPANY: **Martin Drilling Co., Inc.**  
LEASE: **Katreek #1-8**

FIELD: **Wildcat**  
LOCATION: **660' ENL & 1320' F.W.L.**  
SEC: **8** TWP: **2S** RGE: **36W**  
COUNTY: **Randolph** STATE: **Kansas**

CONTRACTOR: **Martin Drilling #8**  
RUD: **07/11/15** COMP: **072/1/15**  
SPUD: **5060'** TYPE MUD: **5063'**

WUD UP: **3.21"** LTP MUD: **Chemical**  
SAMPLER: **4000'** TO RTD  
DRILLING TIME: **4000'** TO RTD

DRILLING TIME KEPT FROM 4000' TO RTD  
SAMPLER EXAMINED FROM 4000' TO RTD

GEOLOGICAL SUPERVISION FROM 3700'  
REFERENCE WELL: **MD/C1-Katreek #1-SWD**

CND: **DLL, MEL, SANC**  
ELECTRICAL SURVEYS: **Fluor/Tron**

FORMATION: **Fluor/Tron**

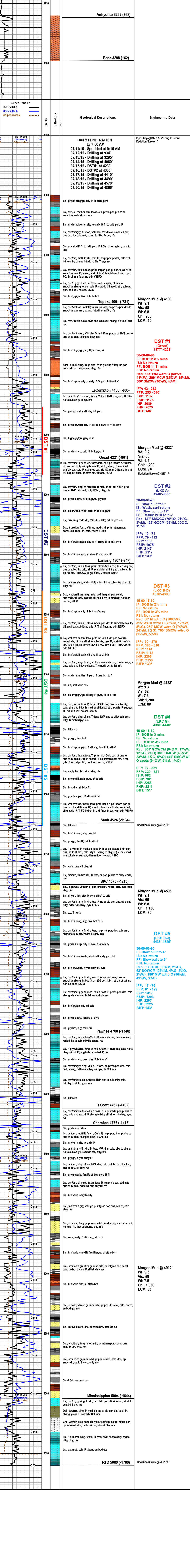
Formation	Sample Tops	E-log Tops	Strat Pos.
Anhydrite	3262 (+98)	3298 (+98)	+6
Base Anhydrite	3295 (+5)	3298 (+5)	+6
Trilobite	4087 (-227)	4091 (-231)	+5
Oolite	4221 (-863)	4221 (-861)	+6
Landing	4308 (-946)	4307 (-947)	+7
Prwnc	4570 (-1210)	4575 (-1215)	+7
BK/C	4704 (-1344)	4700 (-1340)	+2
Cherokee	4774 (-1414)	4776 (-1416)	+9
Mississippian	5002 (-1642)	5004 (-1644)	+8



REMARKS: Due to poor to fair shows of oil in multiple potential pay zones and negative DST results, it is recommended and agreed upon by all parties that this well be plugged and abandoned.

Respectfully Submitted,  
Saman Sharifaie  
Petroleum Geologist

API #15-153-21123  
Tops have been adjusted to electric logs





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Kacirek #1-8**

#### **8-2s-36w Rawlins KS**

Start Date: 2015.07.15 @ 01:05:00

End Date: 2015.07.15 @ 09:52:15

Job Ticket #: 62197                      DST #: 1

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

Printed: 2015.07.21 @ 08:11:07



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62197

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.07.15 @ 01:05:00

## GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:23:30

Time Test Ended: 09:52:15

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 83

**Interval: 4177.00 ft (KB) To 4233.00 ft (KB) (TVD)**

Reference Elevations: 3360.00 ft (KB)

Total Depth: 4233.00 ft (KB) (TVD)

3355.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 509.84 psig @ 4178.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.15

End Date:

2015.07.15

Last Calib.:

2015.07.15

Start Time:

01:05:05

End Time:

09:52:15

Time On Btm:

2015.07.15 @ 03:23:15

Time Off Btm:

2015.07.15 @ 07:26:30

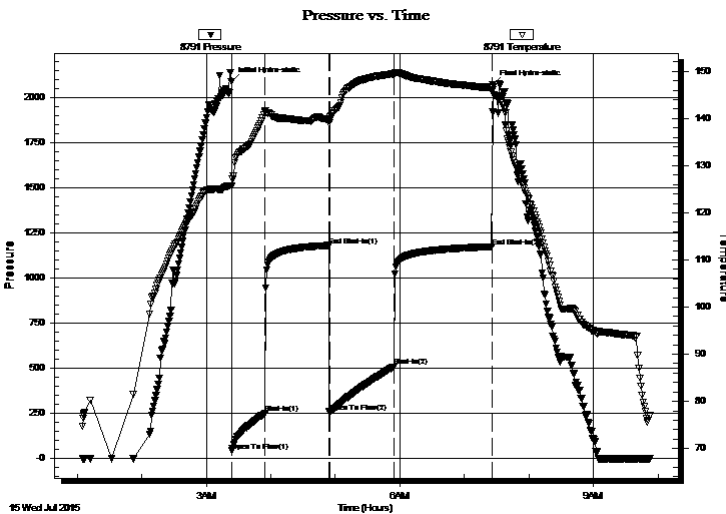
**TEST COMMENT:** 30 - IF: 1 1/2" Surge blow at open, built to BOB (11") at 8 1/2 min.

60 - IS: No blow back

60 - FF: Blow built to BOB at 11 min.

90 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.09	125.78	Initial Hydro-static
1	42.05	125.58	Open To Flow (1)
32	252.22	141.61	Shut-In(1)
91	1182.10	139.61	End Shut-In(1)
92	255.34	139.66	Open To Flow (2)
152	509.84	149.42	Shut-In(2)
243	1175.01	146.47	End Shut-In(2)
244	2074.88	146.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
500.00	SMCW 96%w, 4%m	5.32
260.00	MCW 85%w, 15%m	3.65
325.00	WM w /trace oil 59%m, 41%w	4.56

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water STE 300  
Wichita, KS 67202  
ATTN: Saman Sharifaie

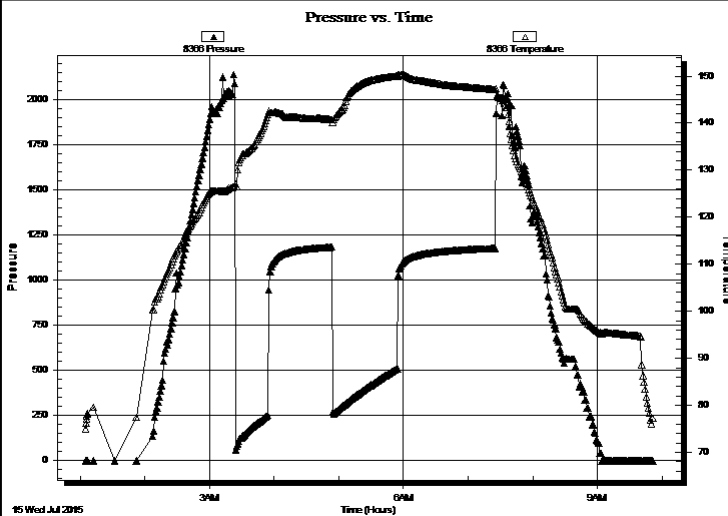
**8-2s-36w Rawlins KS**  
**Kacirek #1-8**  
Job Ticket: 62197 **DST#: 1**  
Test Start: 2015.07.15 @ 01:05:00

## GENERAL INFORMATION:

Formation: **Oread**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 03:23:30  
Time Test Ended: 09:52:15  
Interval: **4177.00 ft (KB) To 4233.00 ft (KB) (TVD)**  
Total Depth: 4233.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches  
Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: James Winder  
Unit No: 83  
Reference Elevations: 3360.00 ft (KB)  
3355.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8366 Outside**  
Press@RunDepth: psig @ 4178.00 ft (KB)  
Start Date: 2015.07.15 End Date: 2015.07.15  
Start Time: 01:05:05 End Time: 09:51:45  
Capacity: 8000.00 psig  
Last Calib.: 2015.07.15  
Time On Btm:  
Time Off Btm:

**TEST COMMENT:** 30 - IF: 1 1/2" Surge blow at open, built to BOB (11") at 8 1/2 min.  
60 - ISI: No blow back  
60 - FF: Blow built to BOB at 11 min.  
90 - FSI: No blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
500.00	SMCW 96%w, 4%m	5.32
260.00	MCW 85%w, 15%m	3.65
325.00	WM w /trace oil 59%m, 41%w	4.56

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62197

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.07.15 @ 01:05:00

## Tool Information

Drill Pipe:	Length: 3980.00 ft	Diameter: 3.80 inches	Volume: 55.83 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 56.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4177.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: lost 5' of mud at initial open, 1 1/2" surge blow at open

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4154.00	
Hydraulic tool	5.00			4159.00	
Jars	5.00			4164.00	
Safety Joint	3.00			4167.00	
Packer	5.00			4172.00	28.00 Bottom Of Top Packer
Packer	5.00			4177.00	
Stubb	1.00			4178.00	
Recorder	0.00	8791	Inside	4178.00	
Recorder	0.00	8366	Outside	4178.00	
Perforations	18.00			4196.00	
Blank Spacing	34.00			4230.00	
Bullnose	3.00			4233.00	56.00 Bottom Packers & Anchor

**Total Tool Length: 84.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62197

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.07.15 @ 01:05:00

## 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:

31000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
500.00	SMCW 96%w , 4%m	5.319
260.00	MCW 85%w , 15%m	3.647
325.00	WMw /trace oil 59%m, 41%w	4.559

Total Length: 1085.00 ft      Total Volume: 13.525 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

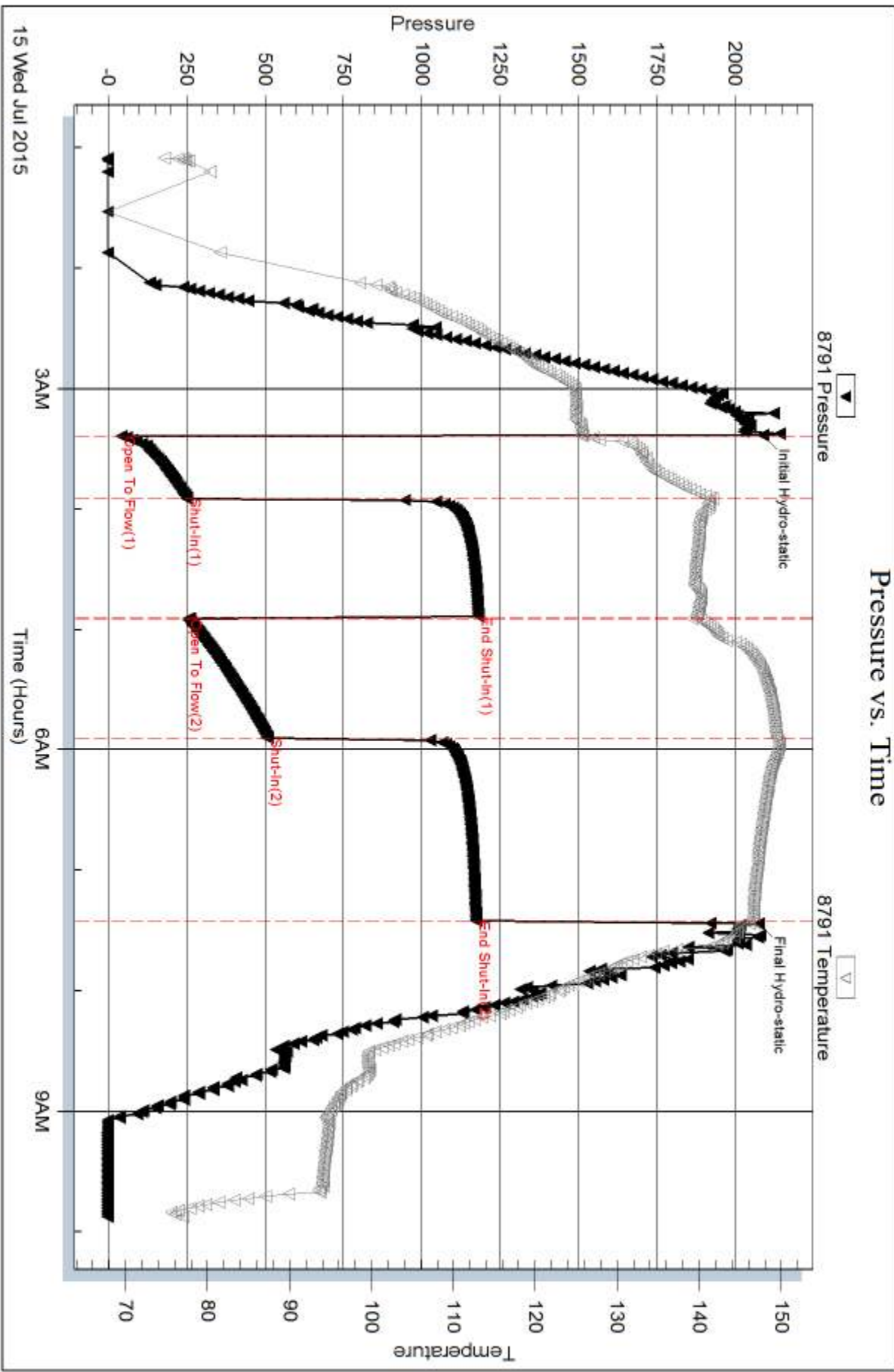
Serial #:

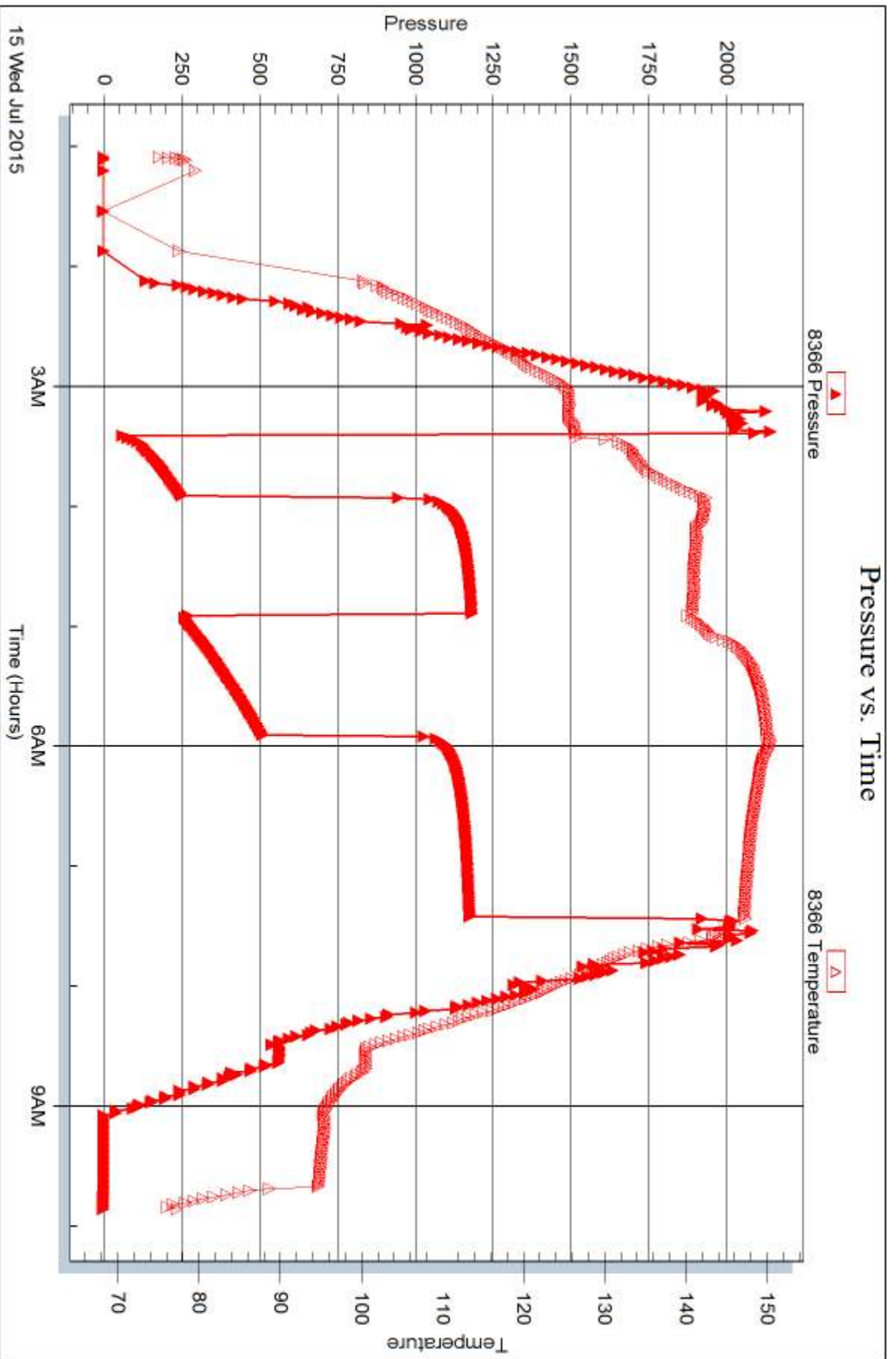
Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .205 ohms @ 77.7 deg F

Chlorides = 31,000 ppm







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Kacirek #1-8**

### **8-2s-36w Rawlins KS**

Start Date: 2015.07.15 @ 22:37:00

End Date: 2015.07.16 @ 07:13:45

Job Ticket #: 62198                      DST #: 2

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

Printed: 2015.07.21 @ 08:10:46



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62198

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.07.15 @ 22:37:00

## GENERAL INFORMATION:

Formation: **LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:45:15  
 Time Test Ended: 07:13:45  
 Interval: **4248.00 ft (KB) To 4330.00 ft (KB) (TVD)**  
 Total Depth: 4330.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3360.00 ft (KB)  
 3355.00 ft (CF)  
 KB to GR/CF: 5.00 ft

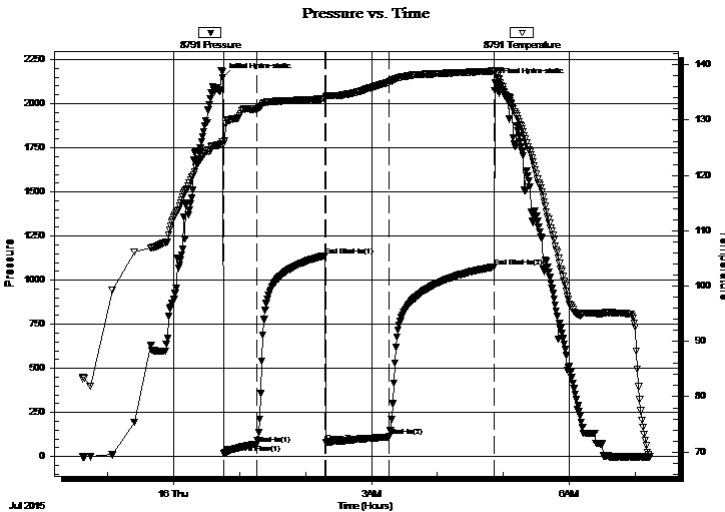
## Serial #: 8791

Inside

Press@RunDepth: 111.98 psig @ 4249.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.07.15 End Date: 2015.07.16 Last Calib.: 2015.07.16  
 Start Time: 22:37:05 End Time: 07:13:45 Time On Btm: 2015.07.16 @ 00:44:45  
 Time Off Btm: 2015.07.16 @ 04:53:00

TEST COMMENT: 30 - IF: Blow built to 9"  
 60 - IS: Weak surface blow back  
 60 - FF: Blow built to BOB (11") at 27 1/2 min.  
 90 - FS: Blow back built to 2 1/2"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2147.26	126.12	Initial Hydro-static
1	18.97	125.73	Open To Flow (1)
31	70.74	131.99	Shut-In(1)
93	1138.29	133.82	End Shut-In(1)
94	79.46	134.22	Open To Flow (2)
152	111.98	136.84	Shut-In(2)
247	1075.24	138.84	End Shut-In(2)
249	2117.20	138.69	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
123.00	GOCM 59% m, 30% o, 11% g	0.60
127.00	SMCGO 76% o, 21% g, 3% m	1.21

\* Recovery from multiple tests

## Gas Rates

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



# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

8-2s-36w Rawlins KS

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62198

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.07.15 @ 22:37:00

## GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:45:15

Time Test Ended: 07:13:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4248.00 ft (KB) To 4330.00 ft (KB) (TVD)**

Reference Elevations: 3360.00 ft (KB)

Total Depth: 4330.00 ft (KB) (TVD)

3355.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8366** Outside

Press@RunDepth: psig @ 4249.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.15

End Date: 2015.07.16

Last Calib.: 2015.07.16

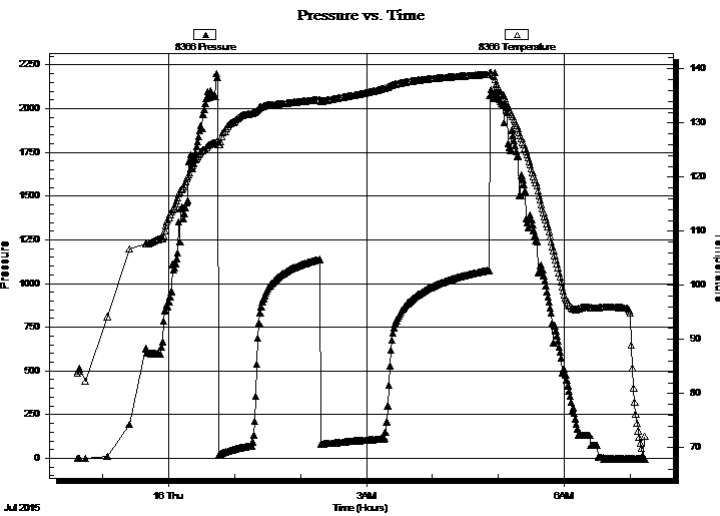
Start Time: 22:37:05

End Time: 07:13:15

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 9"  
60 - ISI: Weak surface blow back  
60 - FF: Blow built to BOB (11") at 27 1/2 min.  
90 - FSI: Blow back built to 2 1/2"



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
123.00	GOCM 59% m, 30% o, 11% g	0.60
127.00	SMCGO 76% o, 21% g, 3% m	1.21

\* 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 Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62198

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.07.15 @ 22:37:00

## Tool Information

Drill Pipe:	Length: 4043.00 ft	Diameter: 3.80 inches	Volume: 56.71 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 57.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4248.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.00 ft			
Tool Length:	110.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4225.00	
Hydraulic tool	5.00			4230.00	
Jars	5.00			4235.00	
Safety Joint	3.00			4238.00	
Packer	5.00			4243.00	28.00 Bottom Of Top Packer
Packer	5.00			4248.00	
Stubb	1.00			4249.00	
Recorder	0.00	8791	Inside	4249.00	
Recorder	0.00	8366	Outside	4249.00	
Perforations	13.00			4262.00	
Blank Spacing	65.00			4327.00	
Bullnose	3.00			4330.00	82.00 Bottom Packers & Anchor

**Total Tool Length: 110.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62198

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.07.15 @ 22:37:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31.4 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
123.00	GOCM 59% <i>m</i> , 30% <i>o</i> , 11% <i>g</i>	0.605
127.00	SMCGO 76% <i>o</i> , 21% <i>g</i> , 3% <i>m</i>	1.208

Total Length: 250.00 ft      Total Volume: 1.813 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

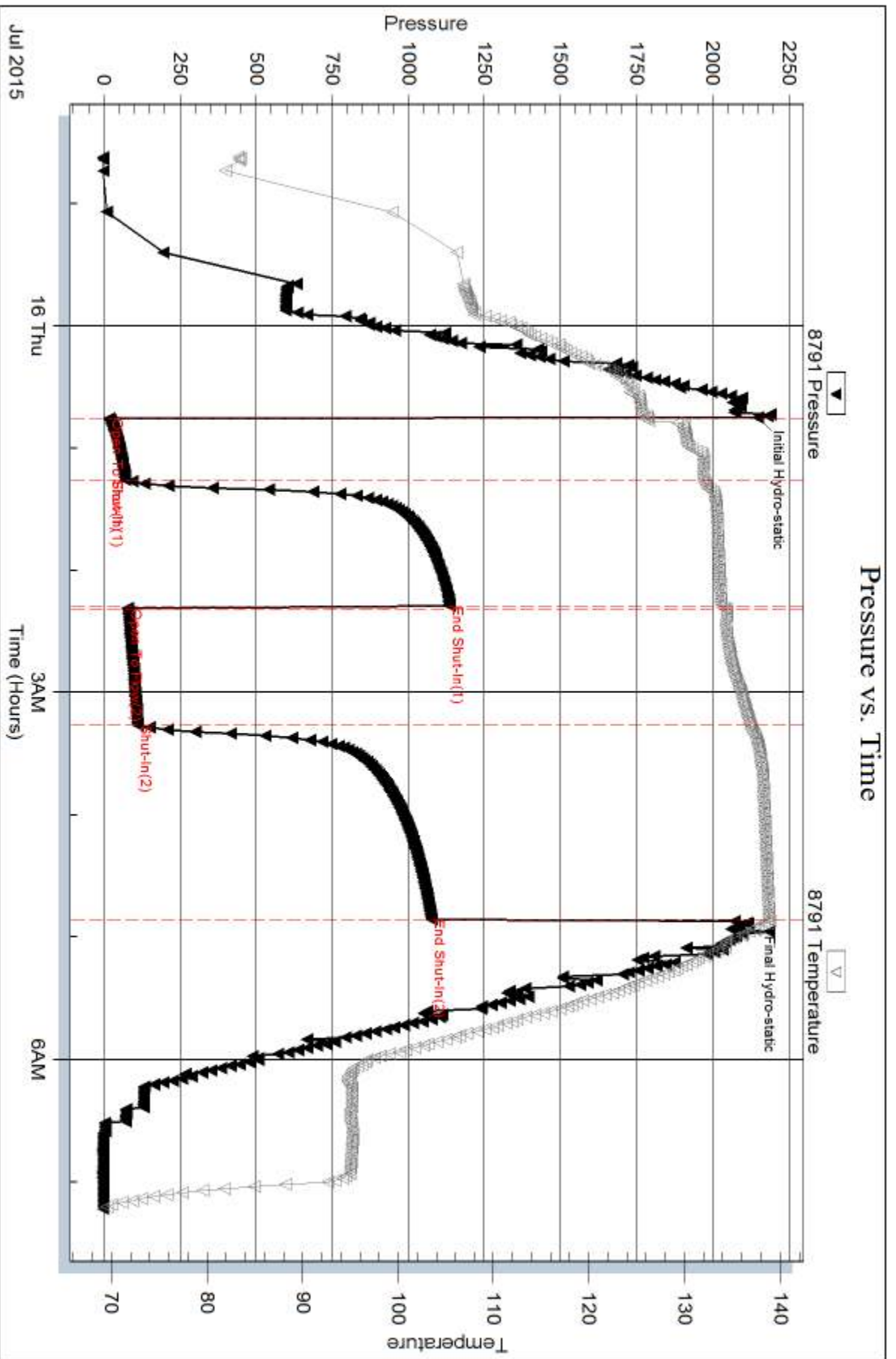
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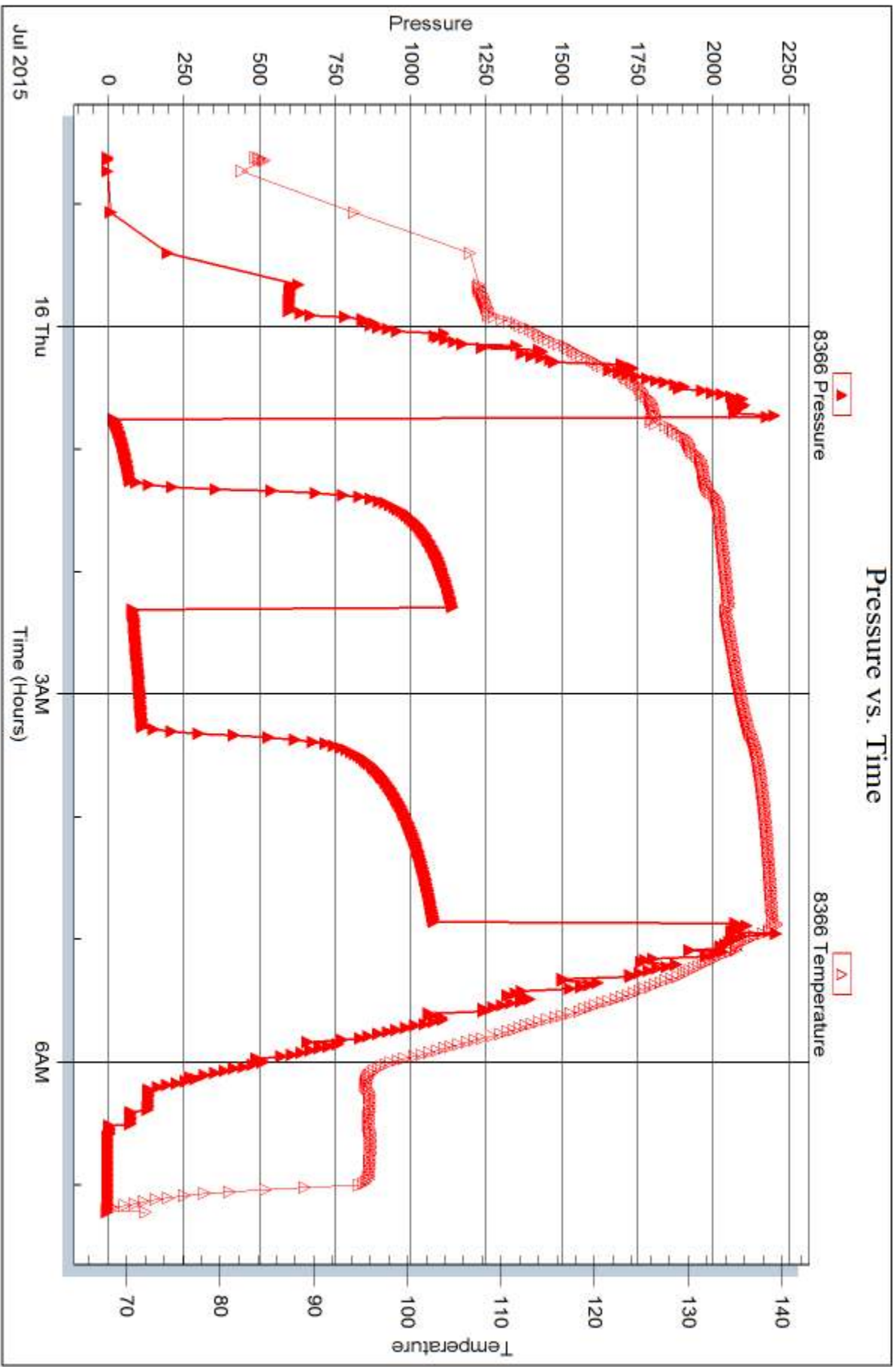
Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 32.2 api @ 68 deg F

Corrected Gravity = 31.4 api







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Kacirek #1-8**

#### **8-2s-36w Rawlins KS**

Start Date: 2015.07.16 @ 16:44:00

End Date: 2015.07.17 @ 00:30:30

Job Ticket #: 62199                      DST #: 3

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

Printed: 2015.07.21 @ 08:10:25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62199

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.07.16 @ 16:44:00

## GENERAL INFORMATION:

Formation: **LKC "B - D"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 19:35:15  
 Tester: James Winder  
 Time Test Ended: 00:30:30  
 Unit No: 83  
**Interval: 4330.00 ft (KB) To 4380.00 ft (KB) (TVD)**  
 Reference Elevations: 3360.00 ft (KB)  
 Total Depth: 4380.00 ft (KB) (TVD) 3355.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

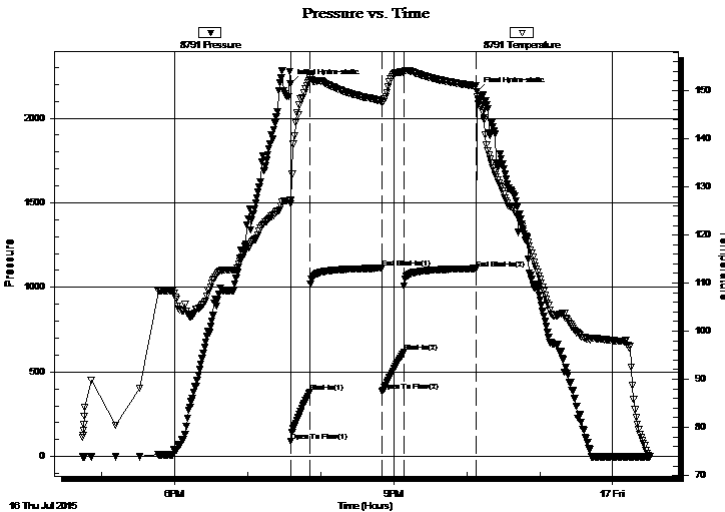
## Serial #: 8791

Inside

Press@RunDepth: 615.99 psig @ 4331.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.07.16 End Date: 2015.07.17 Last Calib.: 2015.07.17  
 Start Time: 16:44:05 End Time: 00:30:29 Time On Btm: 2015.07.16 @ 19:35:00  
 Time Off Btm: 2015.07.16 @ 22:08:15

**TEST COMMENT:** 15 - IF: Blow built to BOB (11") at 2 3/4 min.  
 60 - ISI: No blow back  
 15 - FF: Blow built to BOB at 3 3/4 min.  
 60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2204.50	127.20	Initial Hydro-static
1	89.94	126.41	Open To Flow (1)
16	379.01	152.34	Shut-In(1)
75	1113.31	147.87	End Shut-In(1)
76	385.52	147.57	Open To Flow (2)
93	615.99	153.88	Shut-In(2)
153	1111.09	151.00	End Shut-In(2)
154	2157.66	148.69	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
700.00	SMCW w/trace oil 95%w, 5%m	8.12
250.00	MCW w/trace oil 74%w, 24%m, 2%g	3.51
315.00	WCM w/trace oil 75%m, 17%w, 8%g	4.42
60.00	Mud 100% w/trace oil	0.84

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE**  
**TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

**8-2s-36w Rawlins KS**

**Kacirek #1-8**

Job Ticket: 62199

**DST#: 3**

Test Start: 2015.07.16 @ 16:44:00

## GENERAL INFORMATION:

Formation: **LKC "B - D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:35:15

Time Test Ended: 00:30:30

**Interval: 4330.00 ft (KB) To 4380.00 ft (KB) (TVD)**

Total Depth: 4380.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Reference Elevations: 3360.00 ft (KB)

3355.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8366** Outside

Press@RunDepth: psig @ 4331.00 ft (KB)

Start Date: 2015.07.16

End Date: 2015.07.17

Start Time: 16:44:05

End Time: 00:29:59

Capacity: 8000.00 psig

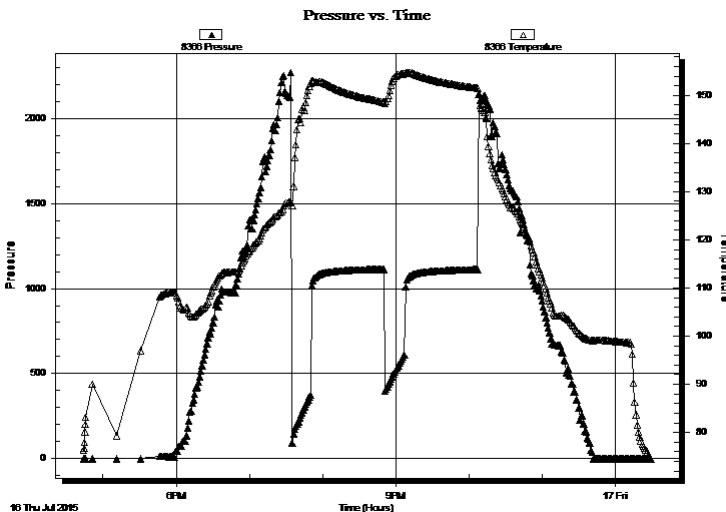
Last Calib.: 2015.07.17

Time On Btm:

Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 2 3/4 min.  
60 - IS: No blow back  
15 - FF: Blow built to BOB at 3 3/4 min.  
60 - FS: No blow back

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
700.00	SMCW w /trace oil 95%w , 5%m	8.12
250.00	MCW w /trace oil 74%w , 24%m, 2%g	3.51
315.00	WCM w /trace oil 75%m, 17%w , 8%g	4.42
60.00	Mud 100% w /trace oil	0.84

## 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 Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62199

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.07.16 @ 16:44:00

## Tool Information

Drill Pipe:	Length: 4138.00 ft	Diameter: 3.80 inches	Volume: 58.05 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 58.96 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4330.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4307.00	
Hydraulic tool	5.00			4312.00	
Jars	5.00			4317.00	
Safety Joint	3.00			4320.00	
Packer	5.00			4325.00	28.00 Bottom Of Top Packer
Packer	5.00			4330.00	
Stubb	1.00			4331.00	
Recorder	0.00	8791	Inside	4331.00	
Recorder	0.00	8366	Outside	4331.00	
Perforations	12.00			4343.00	
Blank Spacing	34.00			4377.00	
Bullnose	3.00			4380.00	50.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62199

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.07.16 @ 16:44:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 55.00 sec/qt  
Water Loss: 6.77 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 1200.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 16000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
700.00	SMCW w /trace oil 95%w , 5%m	8.125
250.00	MCW w /trace oil 74%w , 24%m, 2%g	3.507
315.00	WCM w /trace oil 75%m, 17%w , 8%g	4.419
60.00	Mud 100% w /trace oil	0.842

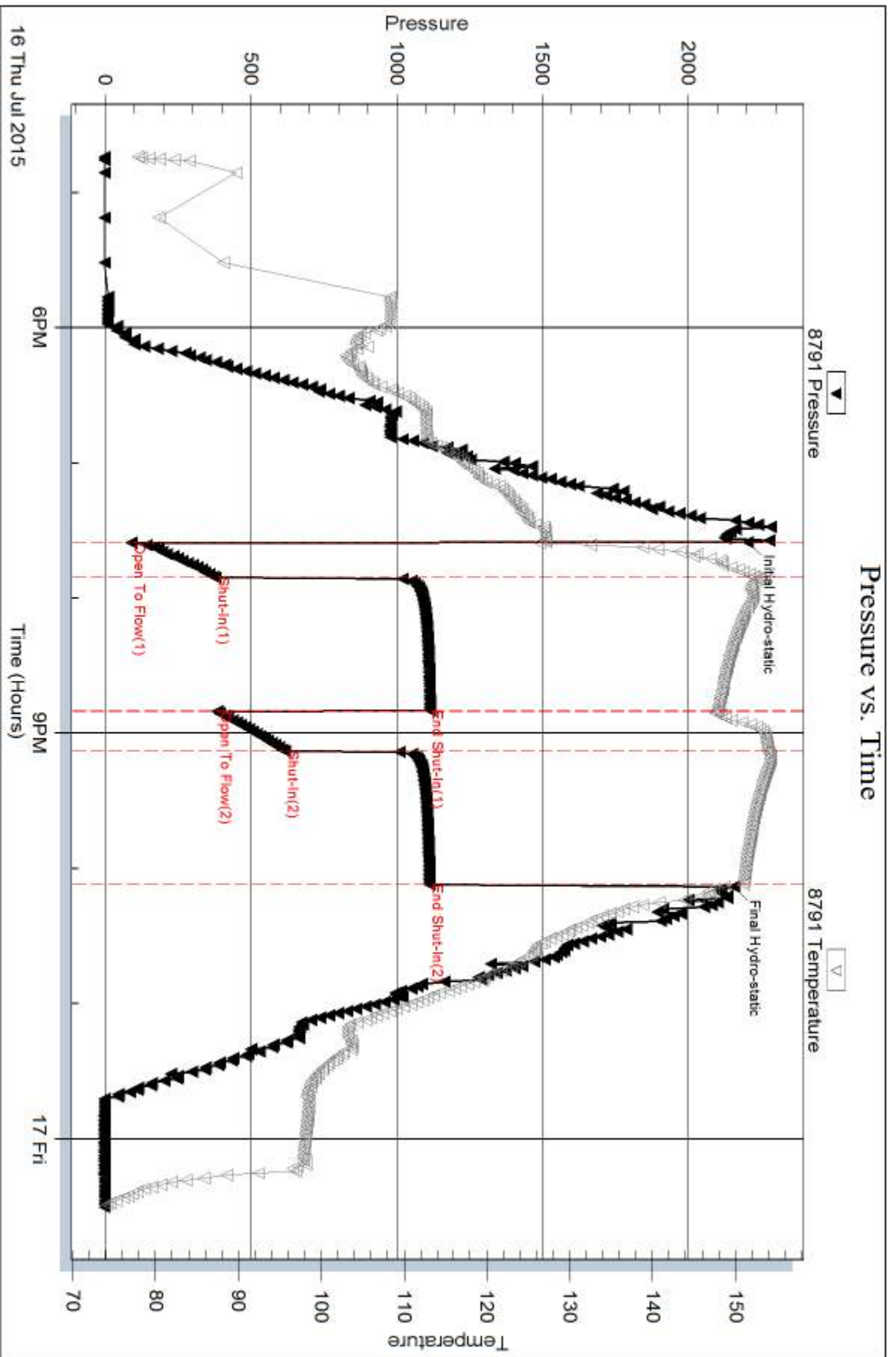
Total Length: 1325.00 ft      Total Volume: 16.893 bbl

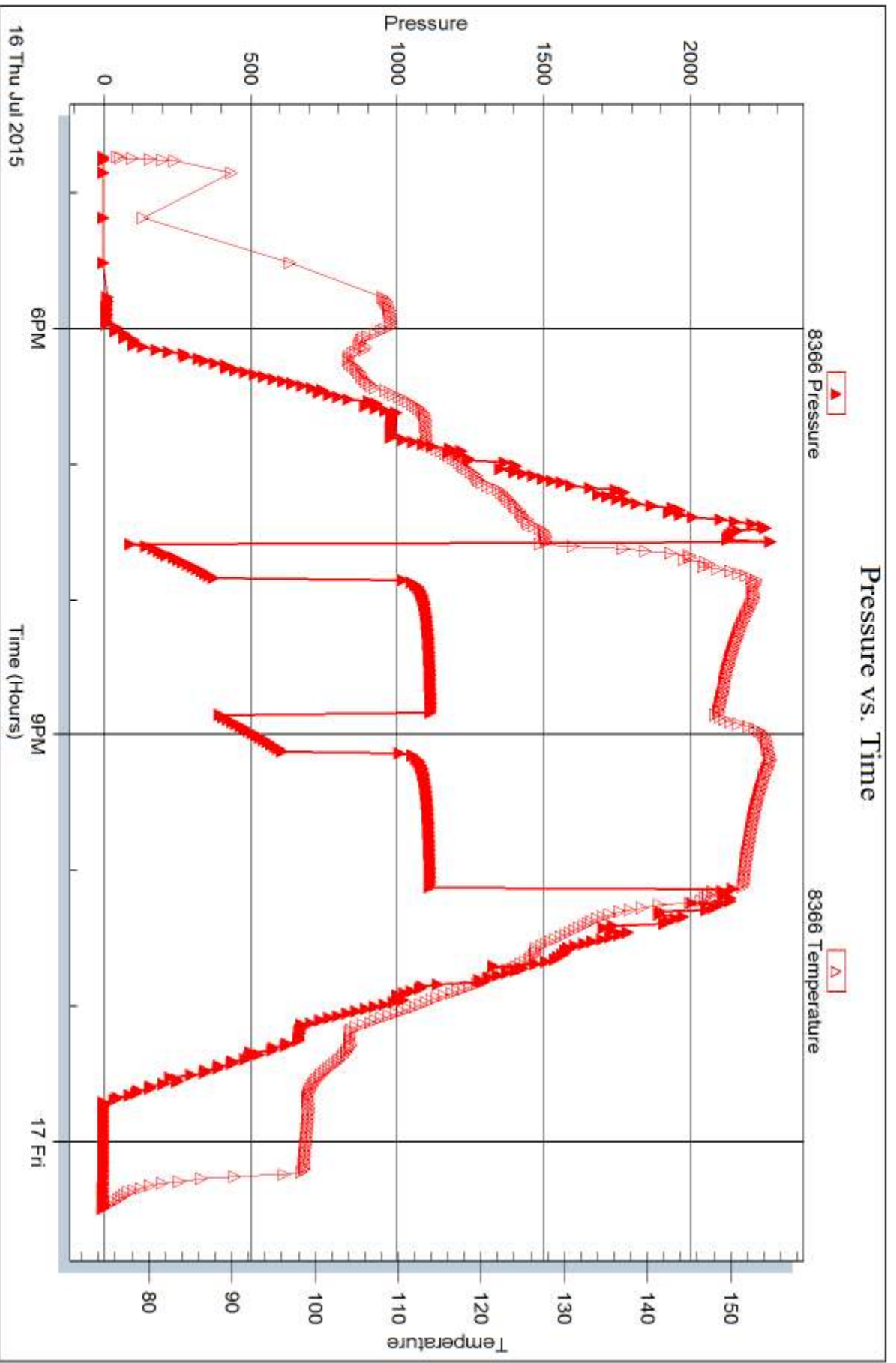
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW = .419 ohms @ 71.7 deg F  
Chlorides = 16,000 ppm









## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Kacirek #1-8**

#### **8-2s-36w Rawlins KS**

Start Date: 2015.07.17 @ 13:42:00

End Date: 2015.07.17 @ 21:54:00

Job Ticket #: 62200                      DST #: 4

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

Printed: 2015.07.21 @ 08:10:00



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62200

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2015.07.17 @ 13:42:00

## GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:13:45

Time Test Ended: 21:54:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4380.00 ft (KB) To 4440.00 ft (KB) (TVD)**

Reference Elevations: 3360.00 ft (KB)

Total Depth: 4440.00 ft (KB) (TVD)

3355.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 520.60 psig @ 4381.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.17

End Date:

2015.07.17

Last Calib.:

2015.07.17

Start Time:

13:42:05

End Time:

21:53:59

Time On Btm:

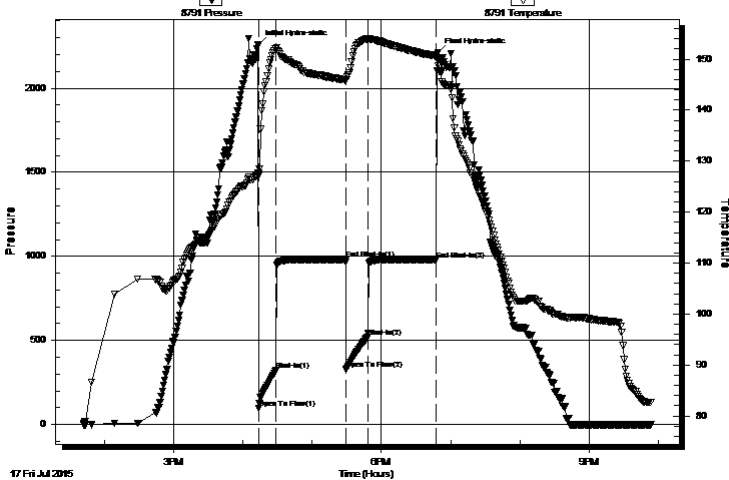
2015.07.17 @ 16:13:30

Time Off Btm:

2015.07.17 @ 18:49:15

**TEST COMMENT:** 15 - IF: Blow built to BOB (11") at 3 min.  
60 - ISI: No blow back  
15 - FF: Blow built to BOB at 4 1/4 min.  
60 - FS: No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2258.44	127.70	Initial Hydro-static
1	96.83	127.25	Open To Flow (1)
15	320.76	152.15	Shut-In(1)
76	981.79	145.79	End Shut-In(1)
76	328.62	146.00	Open To Flow (2)
95	520.60	153.99	Shut-In(2)
154	981.26	150.66	End Shut-In(2)
156	2211.49	148.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
440.00	SMCW w/oil spots 94%w, 5%m, 1%o	4.48
380.00	OMCW 66%w, 23%m, 6%g, 5%o	5.33
305.00	GOWCM 64%m, 17%w, 12%g, 7%o	4.28

Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62200

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2015.07.17 @ 13:42:00

### GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:13:45

Time Test Ended: 21:54:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4380.00 ft (KB) To 4440.00 ft (KB) (TVD)**

Reference Elevations: 3360.00 ft (KB)

Total Depth: 4440.00 ft (KB) (TVD)

3355.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8366** Outside

Press@RunDepth: psig @ 4381.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.17 End Date: 2015.07.17

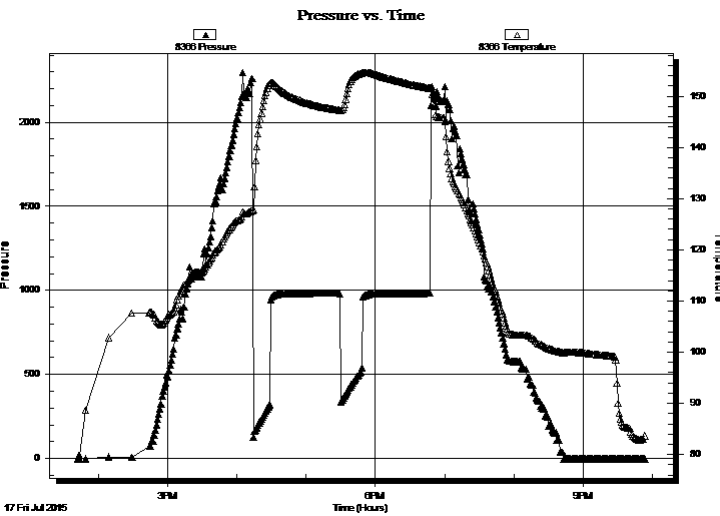
Last Calib.: 2015.07.17

Start Time: 13:42:05 End Time: 21:53:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 3 min.  
60 - ISI: No blow back  
15 - FF: Blow built to BOB at 4 1/4 min.  
60 - FSI: No blow back



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
440.00	SMCW w/oil spots 94%w, 5%m, 1%o	4.48
380.00	OMCW 66%w, 23%m, 6%g, 5%o	5.33
305.00	GOWCM 64%m, 17%w, 12%g, 7%o	4.28

### 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 Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62200

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2015.07.17 @ 13:42:00

## Tool Information

Drill Pipe:	Length: 4173.00 ft	Diameter: 3.80 inches	Volume: 58.54 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 59.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4380.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	88.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4357.00	
Hydraulic tool	5.00			4362.00	
Jars	5.00			4367.00	
Safety Joint	3.00			4370.00	
Packer	5.00			4375.00	28.00 Bottom Of Top Packer
Packer	5.00			4380.00	
Stubb	1.00			4381.00	
Recorder	0.00	8791	Inside	4381.00	
Recorder	0.00	8366	Outside	4381.00	
Perforations	23.00			4404.00	
Blank Spacing	33.00			4437.00	
Bullnose	3.00			4440.00	60.00 Bottom Packers & Anchor

**Total Tool Length: 88.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62200

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2015.07.17 @ 13:42:00

## 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:

12000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
440.00	SMCW w/oil spots 94%w , 5%m, 1%o	4.478
380.00	OMCW 66%w , 23%m, 6%g, 5%o	5.330
305.00	GOWCM 64%m, 17%w , 12%g, 7%o	4.278

Total Length: 1125.00 ft      Total Volume: 14.086 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

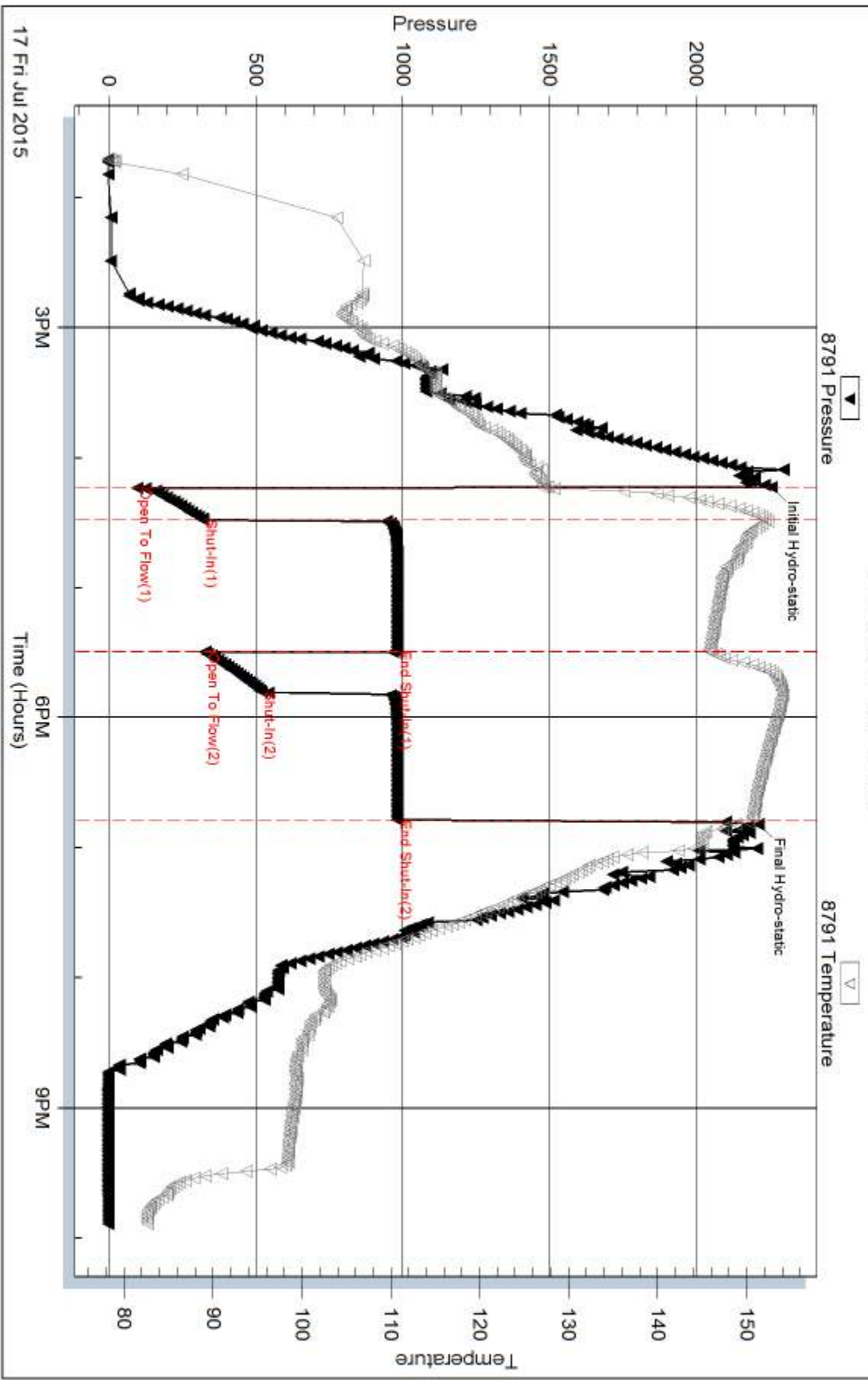
Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .463 ohms @ 83 deg F

Chlorides = 12,000 ppm

### Pressure vs. Time



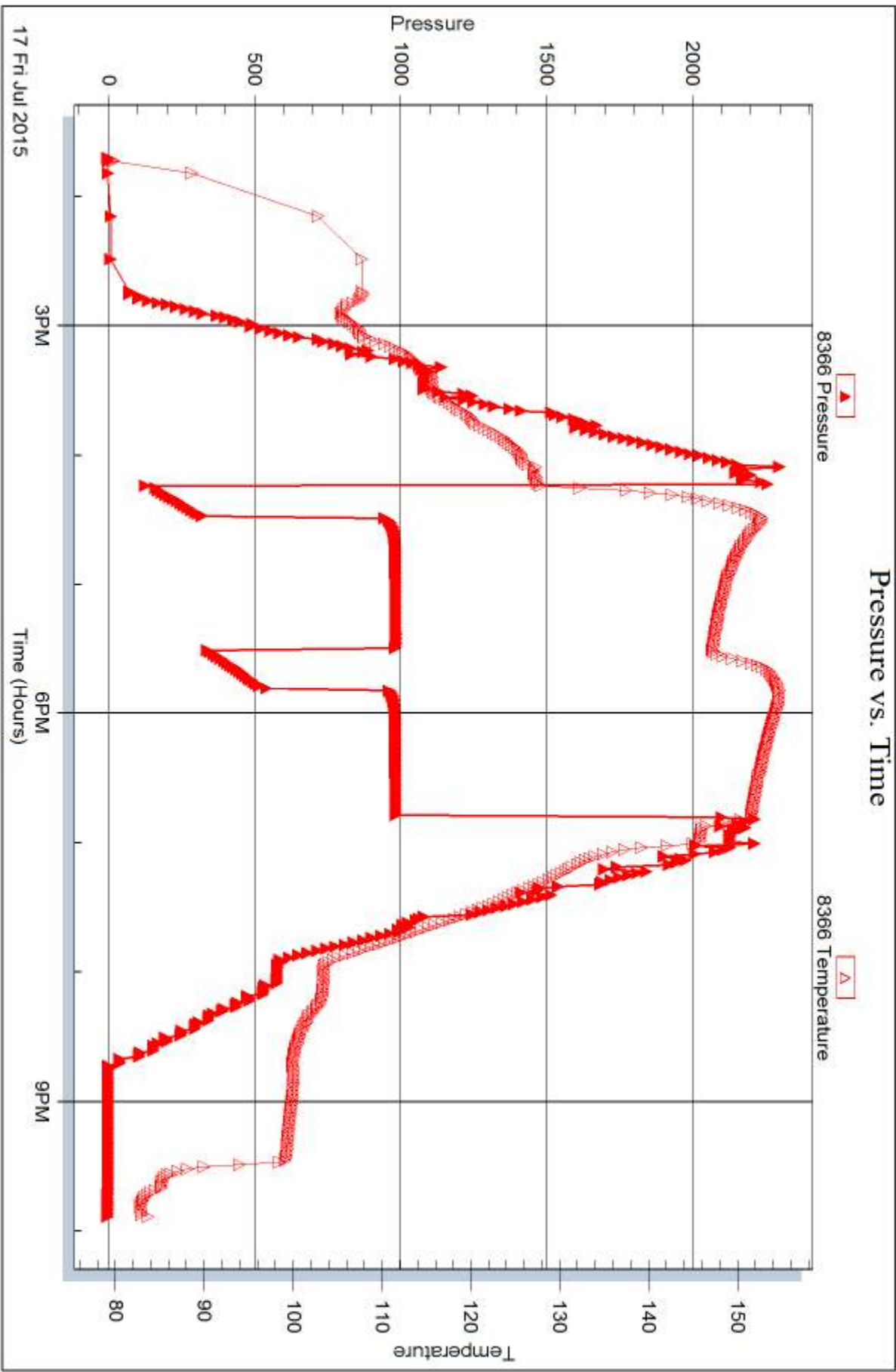


Serial #: 8366

Outside Murfin Drilling Co., Inc.

Kacirek #1-8

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 62200

Printed: 2015.07.21 @ 08:10:01



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Kacirek #1-8**

#### **8-2s-36w Rawlins KS**

Start Date: 2015.07.18 @ 12:46:00

End Date: 2015.07.18 @ 21:40:00

Job Ticket #: 62831                      DST #: 5

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

Printed: 2015.07.21 @ 08:09:24



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62831

**DST#: 5**

ATTN: Saman Sharifaie

Test Start: 2015.07.18 @ 12:46:00

## GENERAL INFORMATION:

Formation: **LKC "H - J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:10:15  
 Time Test Ended: 21:40:00  
 Interval: **4438.00 ft (KB) To 4526.00 ft (KB) (TVD)**  
 Total Depth: 4526.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3360.00 ft (KB)  
 3355.00 ft (CF)  
 KB to GR/CF: 5.00 ft

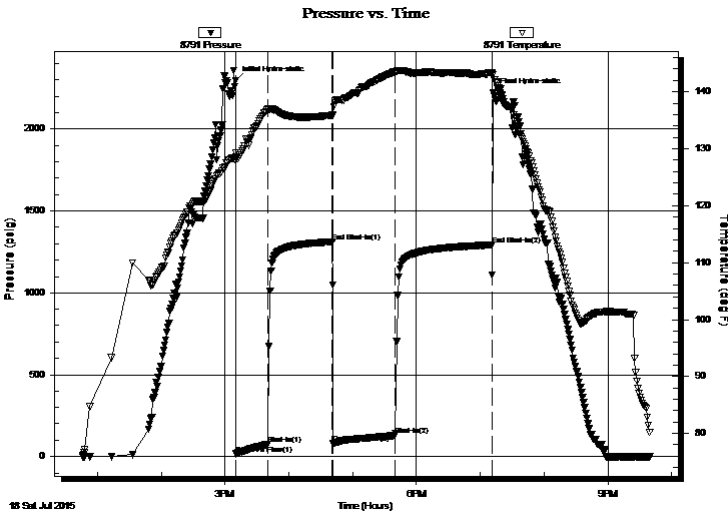
## Serial #: 8791

Inside

Press@RunDepth: 128.86 psig @ 4439.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.07.18 End Date: 2015.07.18 Last Calib.: 2015.07.18  
 Start Time: 12:46:05 End Time: 21:40:00 Time On Btm: 2015.07.18 @ 15:10:00  
 Time Off Btm: 2015.07.18 @ 19:12:15

TEST COMMENT: 30 - IF: Surging blow for 20 min. to 3", then slowly built to 4" at 30 min.  
 60 - ISI: No blow back  
 60 - FF: Blow started at 9 min., built to 5"  
 90 - FSI: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2297.09	129.27	Initial Hydro-static
1	16.61	128.61	Open To Flow (1)
31	75.60	136.98	Shut-In(1)
91	1311.68	135.88	End Shut-In(1)
92	80.79	135.99	Open To Flow (2)
150	128.86	143.27	Shut-In(2)
241	1292.52	143.34	End Shut-In(2)
243	2224.92	142.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
186.00	WM w/trace oil 56% <sub>m</sub> , 41% <sub>w</sub> , 3% <sub>g</sub>	0.91
63.00	SOWCM 92% <sub>m</sub> , 4% <sub>g</sub> , 2% <sub>o</sub> , 2% <sub>w</sub>	0.88
3.00	SOCM 98% <sub>m</sub> , 2% <sub>o</sub>	0.04

\* Recovery from multiple tests

## Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

8-2s-36w Rawlins KS

250 N. Water STE 300  
Wichita, KS 67202

Kacirek #1-8

Job Ticket: 62831

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2015.07.18 @ 12:46:00

GENERAL INFORMATION:

Formation: LKC "H - J"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:10:15

Time Test Ended: 21:40:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4438.00 ft (KB) To 4526.00 ft (KB) (TVD)

Total Depth: 4526.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3360.00 ft (KB)

3355.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: psig @ 4439.00 ft (KB)

Start Date: 2015.07.18

End Date: 2015.07.18

Start Time: 12:46:05

End Time: 21:39:30

Capacity: 8000.00 psig

Last Calib.: 2015.07.18

Time On Btm:

Time Off Btm:

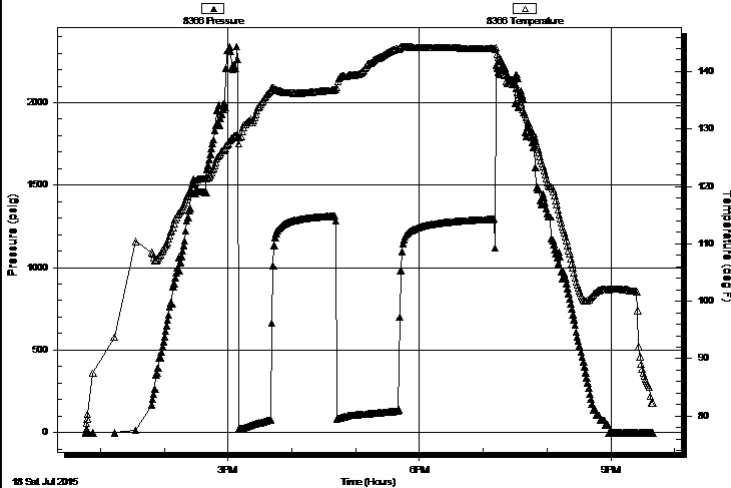
TEST COMMENT: 30 - IF: Surging blow for 20 min. to 3", then slowly built to 4" at 30 min.

60 - ISI: No blow back

60 - FF: Blow started at 9 min., built to 5"

90 - FSI: No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
186.00	WM w/trace oil 56% <i>m</i> , 41% <i>w</i> , 3% <i>g</i>	0.91
63.00	SOWCM 92% <i>m</i> , 4% <i>g</i> , 2% <i>o</i> , 2% <i>w</i>	0.88
3.00	SOCM 98% <i>m</i> , 2% <i>o</i>	0.04

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 Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62831

**DST#: 5**

ATTN: Saman Sharifaie

Test Start: 2015.07.18 @ 12:46:00

## Tool Information

Drill Pipe:	Length: 4232.00 ft	Diameter: 3.80 inches	Volume: 59.36 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4438.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	88.00 ft			
Tool Length:	116.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4415.00	
Hydraulic tool	5.00			4420.00	
Jars	5.00			4425.00	
Safety Joint	3.00			4428.00	
Packer	5.00			4433.00	28.00 Bottom Of Top Packer
Packer	5.00			4438.00	
Stubb	1.00			4439.00	
Recorder	0.00	8791	Inside	4439.00	
Recorder	0.00	8366	Outside	4439.00	
Perforations	19.00			4458.00	
Blank Spacing	65.00			4523.00	
Bullnose	3.00			4526.00	88.00 Bottom Packers & Anchor

**Total Tool Length: 116.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**8-2s-36w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Kacirek #1-8**

Job Ticket: 62831

**DST#: 5**

ATTN: Saman Sharifaie

Test Start: 2015.07.18 @ 12:46:00

### 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:

10000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	WM w /trace oil 56% <i>m</i> , 41% <i>w</i> , 3% <i>g</i>	0.915
63.00	SOWCM 92% <i>m</i> , 4% <i>g</i> , 2% <i>o</i> , 2% <i>w</i>	0.884
3.00	SOCM 98% <i>m</i> , 2% <i>o</i>	0.042

Total Length: 252.00 ft      Total Volume: 1.841 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

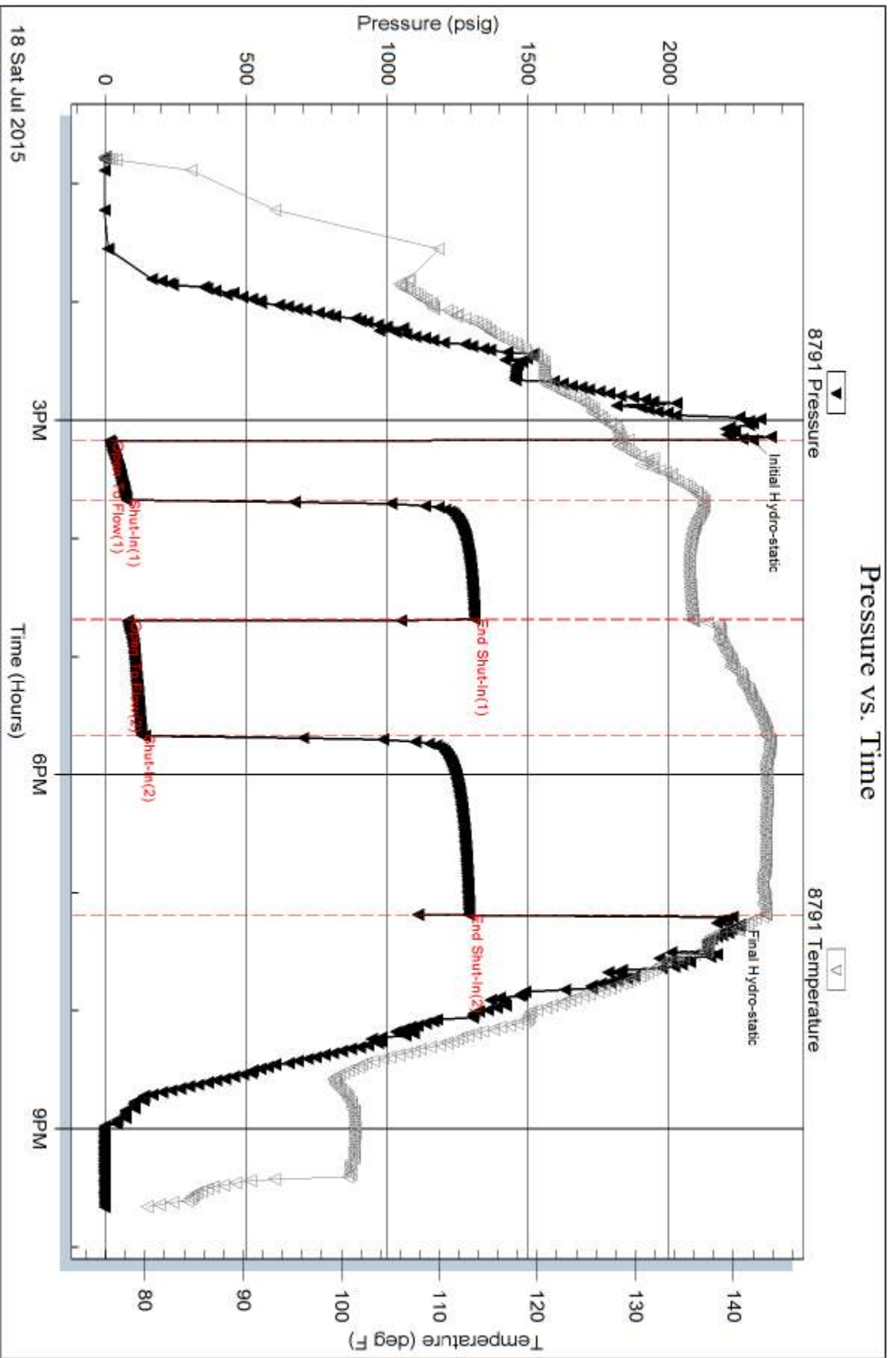
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .540 ohms @ 79 deg F

Chlorides = 10, 000 ppm

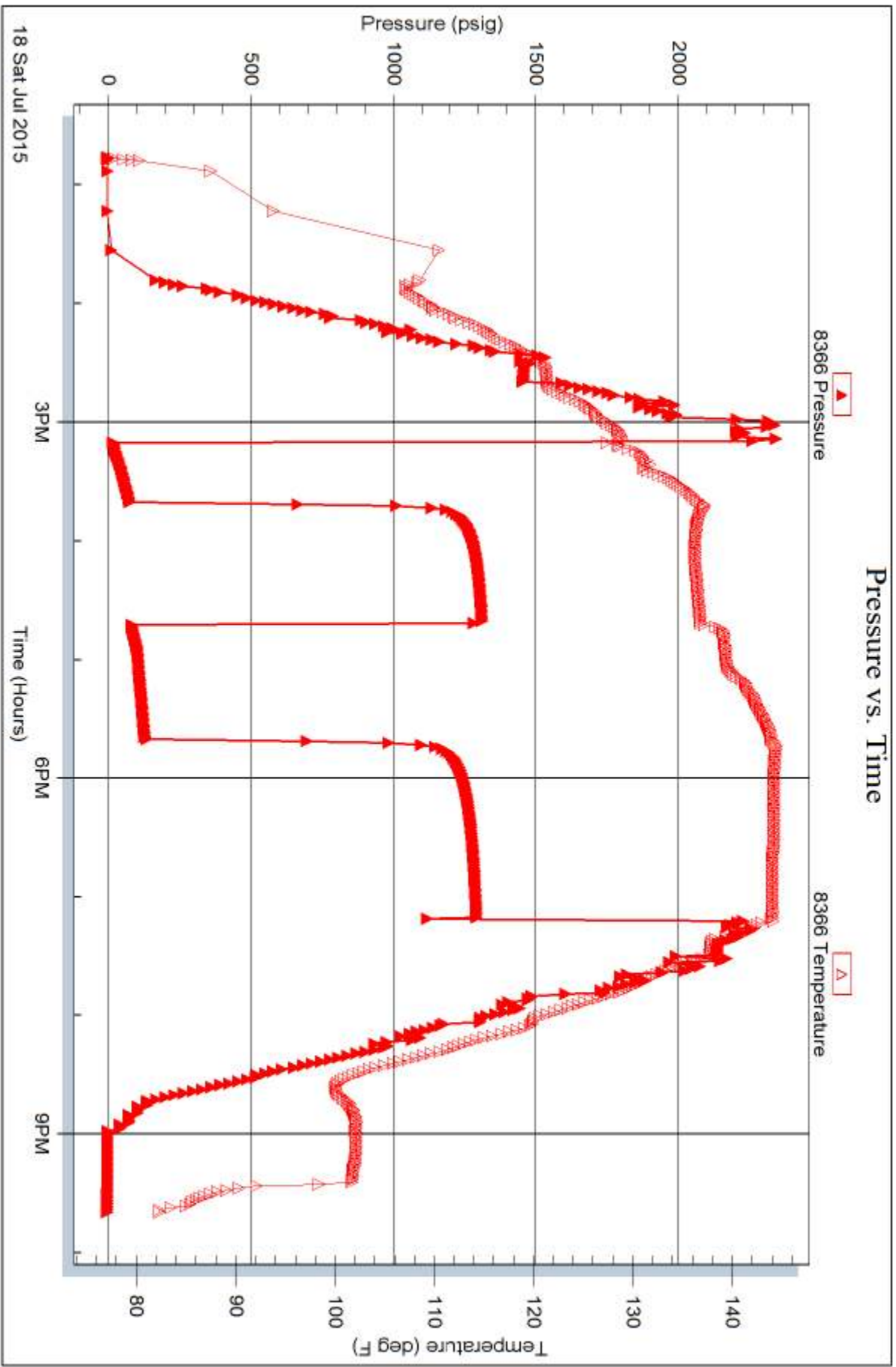


Serial #: 8366

Outside Murfin Drilling Co., Inc.

Kacirek #1-8

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 62831

Printed: 2015.07.21 @ 08:09:25





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62197

Well Name & No. Kacirek #1-8 Test No. 1 Date 7-15-15  
 Company Murfin Drilling Co. Inc. Elevation 3360 KB 3355 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #8  
 Location: Sec. 8 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4177 - 4233 Zone Tested Oread  
 Anchor Length 56 Drill Pipe Run 3980 Mud Wt. 9.1  
 Top Packer Depth 4172 Drill Collars Run 186 Vis 64  
 Bottom Packer Depth 4177 Wt. Pipe Run - WL 6.8  
 Total Depth 4233 Chlorides 900 ppm System LCM 8  
 Blow Description IF: 1 1/2" surge blow at open, built to BOB (11") at 8 1/2 min.  
ISI: No blowback  
FF: Blow built to BOB at 11 min.  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>325</u>	<u>WM w/trace oil</u>	<u>trace</u>	<u>41</u>	<u>59</u>	
<u><del>300</del> 260</u>	<u>M CW</u>		<u>85</u>	<u>15</u>	
<u><del>300</del> 500</u>	<u>S MCW</u>		<u>96</u>	<u>4</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1085 BHT 147 Gravity \_\_\_\_\_ API RW .205 @ 77.7 °F Chlorides 31,000 ppm  
 (A) Initial Hydrostatic 2089  Test 1150 T-On Location 23:00 7/14  
 (B) First Initial Flow 42  Jars 250 T-Started 1:05  
 (C) First Final Flow 252  Safety Joint 75 T-Open 3:23  
 (D) Initial Shut-In 1182  Circ Sub \_\_\_\_\_ T-Pulled 7:25  
 (E) Second Initial Flow 255  Hourly Standby \_\_\_\_\_ T-Out 9:50  
 (F) Second Final Flow 510  Mileage 112 RT 112 Comments told OB at 00:30  
 (G) Final Shut-In 1175  Sampler \_\_\_\_\_ lost 5' mud at open - 1 1/2" surge blow  
 (H) Final Hydrostatic 2075  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1587  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1587

Approved By \_\_\_\_\_ Our Representative James Winkler

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



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62198

Well Name & No. Kacirek #1-8 Test No. 2 Date 7-15-15  
 Company Murfin Drilling Co. Inc Elevation 3360 KB 3355 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #8  
 Location: Sec. 8 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested ~~4280~~ 4248 - 4330 Zone Tested LKC "A"  
 Anchor Length 82 Drill Pipe Run 4043 Mud Wt. 9.2  
 Top Packer Depth 4243 Drill Collars Run 186 Vis 62  
 Bottom Packer Depth 4248 Wt. Pipe Run - WL 6.4  
 Total Depth 4330 Chlorides 1200 ppm System LCM 8  
 Blow Description IF: Blow built to 9"  
ISI: Weak surface blowback  
FF: Blow built to BOB (11") at 27 1/2 min.  
FSI: Blowback built to 2 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
127	SMCGO	21	76	-	3
123	GOCM	11	30	-	59

Rec Total 250 BHT 139 Gravity 31.4 API RW @ °F Chlorides ppm  
 (A) Initial Hydrostatic 2147  Test 1150 T-On Location 21:45 7/15  
 (B) First Initial Flow 19  Jars 250 T-Started 22:37  
 (C) First Final Flow 71  Safety Joint 75 T-Open 00:45  
 (D) Initial Shut-In 1138  Circ Sub \_\_\_\_\_ T-Pulled 4:51  
 (E) Second Initial Flow 79  Hourly Standby \_\_\_\_\_ T-Out 7:10 7/16  
 (F) Second Final Flow 112  Mileage 112 RT 112 Comments \_\_\_\_\_  
 (G) Final Shut-In 1075  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2117  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1587

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Sub Total 1587  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Jean Winkler

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62199

Well Name & No. Kacirek #1-8 Test No. 3 Date 7/16/15  
 Company Murfin Drilling Co. Inc Elevation 3360 KB 3355 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #8  
 Location: Sec. 8 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4330 - 4380 Zone Tested LKC "B-D"  
 Anchor Length 50 Drill Pipe Run 4138 Mud Wt. 9.2  
 Top Packer Depth 4325 Drill Collars Run 186 Vis 55  
 Bottom Packer Depth 4330 Wt. Pipe Run - WL 6.8  
 Total Depth 4380 Chlorides 1200 ppm System LCM 8  
 Blow Description IF: Blow built to BOB (11") at 2 3/4 min.  
ISI: No blowback  
FF: Blow built to BOB at 3 3/4 min  
FSI: No blowback

Rec	Feet of	%gas	trace	%oil	%water	%mud
<u>60</u>	<u>mud w/trace oil</u>				<u>100</u>	
<u>315</u>	<u>wcm w/trace oil</u>	<u>8</u>			<u>17</u>	<u>75</u>
<u>250</u>	<u>mcw w/trace oil</u>	<u>2</u>			<u>74</u>	<u>24</u>
<u>700</u>	<u>smcw w/trace oil</u>				<u>95</u>	<u>5</u>

Rec Total 1325 BHT 151 Gravity \_\_\_\_\_ API RW 419 @ 71.7 °F Chlorides 16,000 ppm  
 (A) Initial Hydrostatic 2205  Test 1150 T-On Location 16:30 7/16  
 (B) First Initial Flow 90  Jars 250 T-Started 16:44  
 (C) First Final Flow 379  Safety Joint 75 T-Open 19:35  
 (D) Initial Shut-In 1113  Circ Sub \_\_\_\_\_ T-Pulled 22:07  
 (E) Second Initial Flow 386  Hourly Standby \_\_\_\_\_ T-Out 00:25 7/17  
 (F) Second Final Flow 616  Mileage 112 Comments \_\_\_\_\_  
 (G) Final Shut-In 1111  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2158  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1587  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1587  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative James Wink  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62200

Well Name & No. Kacirek #1-8 Test No. 4 Date 7-17-15  
 Company Murfin Drilling Co. Inc. Elevation 3360 KB 3355 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #8  
 Location: Sec. 8 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4380 - 4440 Zone Tested LKC "G"  
 Anchor Length 60 Drill Pipe Run 4173 Mud Wt. 9.3  
 Top Packer Depth 4375 Drill Collars Run 186 Vis 62  
 Bottom Packer Depth 4380 Wt. Pipe Run - WL 7.6  
 Total Depth 4440 Chlorides 1200 ppm System LCM 8  
 Blow Description IF: Blow built to BOB at 3 min.  
ISI: No blowback  
FF: Blow built to BOB at 4 1/4 min.  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>305</u>	<u>50wcm</u>	<u>12</u>	<u>7</u>	<u>17</u>	<u>64</u>
<u>380</u>	<u>50wcm</u>	<u>6</u>	<u>5</u>	<u>66</u>	<u>23</u>
<u>440</u>	<u>5mCW w/oil spots.</u>	<u>-</u>	<u>1</u>	<u>94</u>	<u>5</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1125 BHT 151 Gravity \_\_\_\_\_ API RW 463 @ 83 °F Chlorides 12,000 ppm

(A) Initial Hydrostatic 2258  Test 1150 T-On Location 13:05  
 (B) First Initial Flow 97  Jars 250 T-Started 13:42  
 (C) First Final Flow 321  Safety Joint 75 T-Open 16:13  
 (D) Initial Shut-In 982  Circ Sub \_\_\_\_\_ T-Pulled 18:47  
 (E) Second Initial Flow 329  Hourly Standby \_\_\_\_\_ T-Out 21:35  
 (F) Second Final Flow 521  Mileage 112 RT 112 Comments \_\_\_\_\_  
 (G) Final Shut-In 981  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2211  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1587

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1587  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative James Winder  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62831

Well Name & No. Kacirek #1-8 Test No. 5 Date 7-18-2015  
 Company Murfin Drilling Co. Inc Elevation 3360 KB 3355 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Shari faie Rig Murfin #8  
 Location: Sec. 8 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4438 - 4526 Zone Tested LKC "H-J"  
 Anchor Length 88 Drill Pipe Run 4232 Mud Wt. 9.4  
 Top Packer Depth 4433 Drill Collars Run 186 Vis 51  
 Bottom Packer Depth 4438 Wt. Pipe Run - WL 8.8  
 Total Depth 4526 Chlorides 1400 ppm System LCM 6

Blow Description IF: Surging blow for 20 min. to 3" then slow build to 4" at 30 min.  
ISI: No blowback  
FF: Blow started at 9 min., built to 5"  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>50cm</u>	<u>-</u>	<u>2</u>	<u>-</u>	<u>98</u>
<u>63</u>	<u>50wcm</u>	<u>4</u>	<u>2</u>	<u>2</u>	<u>92</u>
<u>186</u>	<u>WM w/trace oil</u>	<u>3</u>	<u>trace</u>	<u>41</u>	<u>56</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 252 BHT 143 Gravity \_\_\_\_\_ API RW .540 @ 79 ° F Chlorides 10,000 ppm

(A) Initial Hydrostatic 2297  
 (B) First Initial Flow 17  
 (C) First Final Flow 76  
 (D) Initial Shut-In 1312  
 (E) Second Initial Flow 81  
 (F) Second Final Flow 129  
 (G) Final Shut-In 1293  
 (H) Final Hydrostatic 2225

Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub \_\_\_\_\_  
 Hourly Standby \_\_\_\_\_  
 Mileage 112 RTx2 112+112  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1699

T-On Location 11:55  
 T-Started 12:46  
 T-Open 15:10  
 T-Pulled 19:11  
 T-Out 21:35

Comments Called to be released @ 8:41 Located @ 11:10

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1699  
 MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Approved By \_\_\_\_\_

Our Representative James Winder

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# ALLIED OIL & GAS SERVICES, LLC

Federal Tax I.D. #20-5976804

067817

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT

Oakley, KS

DATE <u>7-11-15</u>	SEC. <u>8</u>	TWP. <u>2 N</u>	RANGE <u>36 W</u>	CALLED OUT	ON LOCATION <u>11:30 am</u>	JOB START <u>5:00 pm</u>	JOB FINISH <u>5:30 pm</u>
LEASE <u>Kacirek</u>	WELL # <u>1-8</u>	LOCATION <u>McDonald N to Rd W, 1 N,</u>		COUNTY <u>Rawlins</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one) <u>NEW</u>				1 W to sink batt, N through cattle guard, 100 yds N, W, S on lease 4th. <span style="float: right;">8.25</span>			

CONTRACTOR <u>Murkin &amp;</u> TYPE OF JOB <u>Surface</u> HOLE SIZE <u>12 1/4</u> TD. <u>386'</u> CASING SIZE <u>8 5/8</u> DEPTH <u>386'</u> TUBING SIZE DEPTH DRILL PIPE DEPTH TOOL DEPTH PRES. MAX MINIMUM MEAS. LINE SHOE JOINT CEMENT LEFT IN CSG <u>210</u> PERFS. DISPLACEMENT <u>23 bbl H2O</u> EQUIPMENT	OWNER <u>Same</u> CEMENT AMOUNT ORDERED <u>265 sbs Com 3 1/2 CC</u> <u>2 1/2 gal</u> COMMON <u>265 sbs @ 17.90 4743.50</u> POZMIX @ GEL <u>498 # @ .50 249.00</u> CHLORIDE <u>747 # @ 1.10 821.70</u> ASC @ @ @ @ @ @ @ @
--	---

PUMP TRUCK CEMENTER Paul Beaver 1 ✓  
 # 431 HELPER Brandon Wilkinson  
 BULK TRUCK  
 # 891/287 DRIVER Wanna Maghky 2 ✓  
 BULK TRUCK  
 # DRIVER

REMARKS:  
Mix 265 sbs Com 3 1/2  
Displace w/ water  
Cement disp. etc.  
5 bbl to pit  
 Thank You!  
 Paul + Crew

CHARGE TO: Murkin Dr. Inc.  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TOTAL 5,714.20  
 DISCOUNT 50% 2907.10  
 SERVICE  
 HANDLING 286.55 @ 2.48 710.64  
 MILEAGE 13.08 hrs @ 50 mi/hr 275 1498.50  
 DEPTH OF JOB 386'  
 PUMP TRUCK CHARGE 1512.25  
 EXTRA FOOTAGE @  
 HV MILEAGE 50 @ 7.70 385.00  
 LV MILEAGE @ n/c  
surudge @ n/c  
 TOTAL 4406.39  
 DISCOUNT 50% 2203.19

To: Allied Oil & Gas Services, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Travis Martin  
 SIGNATURE Travis Martin

PLUG & FLOAT EQUIPMENT  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_  
 DISCOUNT \_\_\_\_\_ %  
 SALES TAX (If Any) 499.67  
 TOTAL CHARGES 10,220.59  
 DISCOUNT 5,110.29 PAID IN 30 DAYS  
 NET TOTAL 5,110.29 IF PAID IN 30 DAYS

# ALLIED OIL & GAS SERVICES, LLC

Federal Tax I.D. #20-5975804

067779

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:  
Oakley, Ky

DATE: <u>11/15</u>	SEC: <u>8</u>	TWP: <u>2</u>	RANGE: <u>36</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE: <u>Kairak</u>	WELL #: <u>1-8</u>	LOCATION: <u>McDonnell 8 1/2 N W- W- 5 into</u>			COUNTY: <u>Boyle</u>	STATE: <u>KS</u>	
OLD OR NEW (Circle one)							

CONTRACTOR: Mayer 8

TYPE OF JOB: PTA

HOLE SIZE: 7 1/2 T.D.

CASING SIZE: 8 5/8 DEPTH

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT

OWNER: Same

CEMENT

AMOUNT ORDERED: 255 60/40 470 gel  
114 Flt

ALW 60/40 470 gel  
COMMON: 255 SK @ 18.22 = 4624.60

POZMIX @

GEL @

CHLORIDE @

ASC @

Flt Seal 64 16 @ 2.22 = 190.88

TOTAL: 5,014.68

EQUIPMENT

PUMP TRUCK CEMENTER: Alan Ryan

# 495-281 HELPER: Kevin Ryan

BULK TRUCK

# 378 DRIVER: Jason Racette

BULK TRUCK

# DRIVER

REMARKS:

50 SK @ 32.75

100 SK @ 25.00

50 SK @ 4.85

10 SK @ 4.0

15 SK - Mouse Hole

30 SK - Root Hole

SERVICE

HANDLING: 273 @ 2.48 = 679.22

MILEAGE: 225 20/mile 11.44 = 1523.00

DEPTH OF JOB: 3275 FT

PUMP TRUCK CHARGE: 2810.84

EXTRA FOOTAGE @

HV MILEAGE: 50 @ 7.20 = 385.00

LV MILEAGE: 50 @ 4.40 = 220.00

CHARGE TO: Murphy

STREET

CITY STATE ZIP

TOTAL: 5,668.04

DISCOUNT: 50% 2834.02

**PLUG & FLOAT EQUIPMENT**

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL

DISCOUNT %

To: Allied Oil & Gas Services, LLC.

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PRINTED NAME: Travis W. Martin

SIGNATURE: Travis W. Martin

SALES TAX (If Any)

TOTAL CHARGES: 10,682.72

DISCOUNT: 5,341.36 (50%) IF PAID IN 30 DAYS

NET TOTAL: 5,341.36 IF PAID IN 30 DAYS

MDCI  
Kacirek #1-8  
660' FNL 1320' FWL  
Sec. 8-2S-36W  
3360' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	3262	+98	+6	3262	+98	+6
B/Anhydrite	3295	+65	+9	3298	+62	+6
Topeka	4087	-727	+9	4091	-731	+5
Oread	4223	-863	+4	4221	-861	+6
Lansing	4308	-948	+6	4307	-947	+7
Stark	4518	-1158	+15	4524	-1164	+9
BKC	4570	-1210	+10	4575	-1215	+7
Pawnee	4704	-1344	+8	4700	-1340	+12
Cherokee	4774	-1414	+11	4776	-1416	+9
Mississippi	5002	-1642	+10	5004	-1644	+8
RTD	5060	-1700				
LTD				5063	-1703	