

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	MEARS 1-16
Doc ID	1367260

All Electric Logs Run

DIL
DUCP
MEL
BHCS
CBL

TREATMENT REPORT



COPY

HURRICANE SERVICES INC

Customer: Murfin Drilling Company Inc.	Date: 7/15/2017	Ticket No.: 100771
Field Rep: Ben Simminger		
Address:		
City, State:		
County, Zip:		

Field Order No.: 100771	Open Hole:	Perf Depths (ft)	Perfs
Well Name: Mears # 1-16	Casing Depth: 4897'		
Location: McDonald	Casing Size: 5.5 15.5 Lb		
Formation:	Tubing Depth:		
Type of Service: Longstring	Tubing Size:		
Well Type: Oil	Liner Depth:		
Age of Well: New	Liner Size:		
Packer Type:	Liner Top:		
Packer Depth:	Liner Bottom:		
Treatment Via: Casing	Total Depth: 4900'		
		Total Perfs	0

TIME	INJECTION RATE		PRESSURE		REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
	FLUID	N2/CO2	STP	ANNULUS				
7:00 PM					Called Out			
10:45 PM					On Location With Float Equipment			
					Run 117 Jt's 5.5 15.5 Lb			
					TD= 4900' TP= 4897' SJ= 21.43 AFU Float Shoe & LD			
					Turbolizers on Jt's 1-2-3-4-5-6-7-8-9-10-11-12-14-16-40-65			
					Cement Baskets Jt's 14-40-65- Scratcher 18			
12:45 AM					Trucks On Location			
11:00 PM					Start Casing			
1:00 AM					Casing On Bottom Drop Ball			
1:15 AM					Hook Up To Casing Break Circulation W/Rig Rotate 1 Hr			
					Start Pumping Preflushes			
2:30 AM	4.0		150.0		5 BBL's H2O			5.00
	4.0		150.0		12 BBL's Mud Flush			12.00
	4.0		150.0		5 BBL's H2O			5.00
2:40 AM	2.0		100.0		Plug Rat & Mouse Holes 50 Sacks Lead			
2:45 AM	4.3		320.0		Start Mix & Pump Lead @ 12 Lb/Gal Yield 2.61			116.00
	4.3				Start Mix & Pump Tai @ 14.8 Lb/Gal Yield 1.50			53.43
3:40 AM					Shut Down Clear Pump & Lines Drop LD Plug			15.00
TOTAL:						-	-	458.43

SUMMARY

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
6.5	4.0	2,000.0	596.7

PRODUCTS USED

300 Sacks H-Con 200 Sacks H-Long

Treater: Todd Seba

Customer: Ben Simminger

TREATMENT REPORT



HURRICANE SERVICES INC

Customer: Murfin Drilling Company Inc.	Date: 7/5/2017	Ticket No.: 100762
Field Rep: Arturo		
Address:		
City, State:		
County, Zip:		

Field Order No.: 100762	Open Hole:	Perf Depths (ft)	Perfs
Well Name: Mears # 1-16	Casing Depth: 344'		
Location: McDonald	Casing Size: 8.625 23 Lb		
Formation:	Tubing Depth:		
Type of Service: 8 5/8 Surface	Tubing Size:		
Well Type: Oil	Liner Depth:		
Age of Well: New	Liner Size:		
Packer Type:	Liner Top:		
Packer Depth:	Liner Bottom:		
Treatment Via: Casing	Total Depth: 345'		
		Total Perfs	0

TIME	INJECTION RATE		PRESSURE		REMARKS	PROP (lbs)	HCL (g/s)	FLUID (bbls)
	FLUID	N2/CO2	STP	ANNULUS				
6:00 PM					Called Out			
8:45 PM					On location with Trucks Hold Safety Meeting			
					Spot & Set Up Trucks			
					TD= 345' TP= 344.79 SJ=20'			
					Run 8 Jt's 23 Lb Csg Set @ 344' Centralizers Jt 1/2 1 Jt 4			
9:30 PM					Start Casing			
					Casing On Bottom			
10:45 PM					Hook Up To Casing & Break Circulation W/RIg			
11:00 PM	4.0		100.0		Start Pumping H2O			6.00
	4.0		160.0		Start Mix 285 Sacks Common 2% Gel 3% C.C. @ 15 Lb/Gal			69.03
	4.0		145.0		Start Displacement H2O			20.74
11:45 PM			200.0		Shut Down			
					Good Circulation Thru Job			
					Circulate 6 Bbl's Cement To PII			
					Off Location			
					Thank You			
					Please Call Again			
					Todd Cody Sheldon			
TOTAL:						-	-	94.77

SUMMARY

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
4.0	4.0	200.0	151.3

PRODUCTS USED

285 Sacks Common 2%Gel 3% Calcium Chloride

Treater: todd Seba

Customer: Arturo Cabezas

MDCI
Mears #1-16
2140FNL 660FWL
Sec. 16-T2S-R37W
3371' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3266	+105	-3	3266	+105	-3
B/Anhydrite	3298	+73	Flat	3293	+78	+5
Topeka	4074	-703	+1	4071	-700	+4
Oread	4216	-845	+2	4216	-845	+2
Lansing	4293	-922	-1	4291	-920	+1
Stark	4522	-1151	+3	4518	-1147	+7
Mound City	4572	-1201	+4	4570	-1199	+6
Ft Scott	4698	-1327	+1	4704	-1333	-5
Oakley	4778	-1407	Flat	4776	-1405	+2
RTD	4900	-1529				
LTD				4899		



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. INC**

250 N. Water,
STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Mears # 1-16

16- 2S -37W Cheyenne,KS

Start Date: 2017.07.08 @ 22:56:00

End Date: 2017.07.09 @ 06:07:50

Job Ticket #: 64189 DST #: 1

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

Printed: 2017.07.14 @ 10:31:50



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64189

DST#: 1

Test Start: 2017.07.08 @ 22:56:00

GENERAL INFORMATION:

Formation: **Oread**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:16:00
 Tester: Martine Salinas
 Time Test Ended: 06:07:50
 Unit No: 82
 Interval: **4164.00 ft (KB) To 4240.00 ft (KB) (TVD)**
 Reference Elevations: 3371.00 ft (KB)
 Total Depth: 4240.00 ft (KB) (TVD)
 3366.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

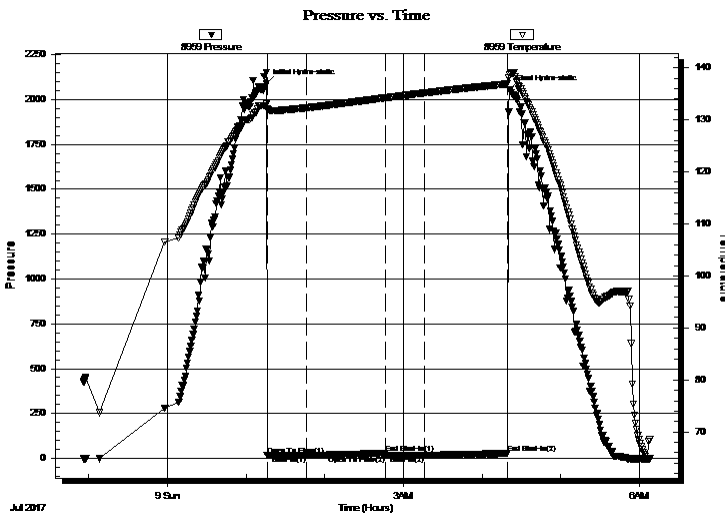
Serial #: 8959

Inside

Press@RunDepth: 17.49 psig @ 4165.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.07.08 End Date: 2017.07.09 Last Calib.: 2017.07.09
 Start Time: 22:56:01 End Time: 06:07:50 Time On Btm: 2017.07.09 @ 01:15:40
 Time Off Btm: 2017.07.09 @ 04:20:50

TEST COMMENT: 30-IF-Surface blow built to 1/4" & died back to surface blow
 60-ISI-No blow
 30-FF-No blow
 60-FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2090.20	133.01	Initial Hydro-static
1	16.43	132.06	Open To Flow (1)
31	16.22	132.33	Shut-In(1)
91	29.15	134.23	End Shut-In(1)
91	17.40	134.23	Open To Flow (2)
121	17.49	135.19	Shut-In(2)
184	28.40	136.91	End Shut-In(2)
186	2056.59	138.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	100% Mud	0.01

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64189

DST#: 1

Test Start: 2017.07.08 @ 22:56:00

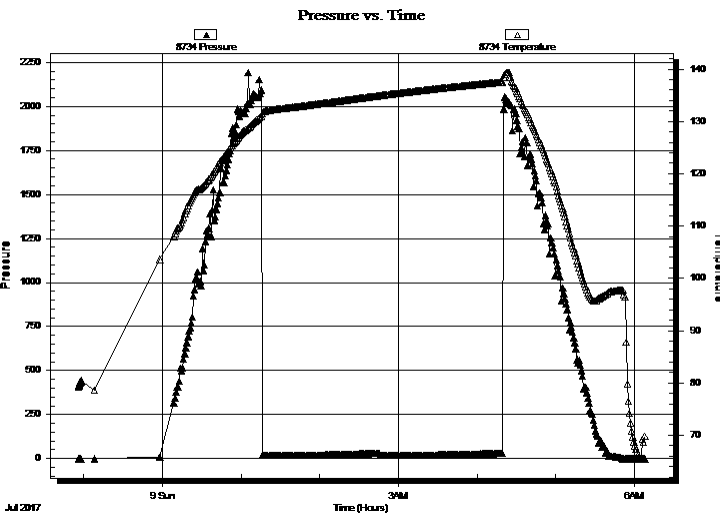
GENERAL INFORMATION:

Formation: **Oread**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:16:00
 Time Test Ended: 06:07:50
 Interval: **4164.00 ft (KB) To 4240.00 ft (KB) (TVD)**
 Total Depth: 4240.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Martine Salinas
 Unit No: 82
 Reference Elevations: 3371.00 ft (KB)
 3366.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8734 Outside

Press@RunDepth: psig @ 4165.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.07.08 End Date: 2017.07.09 Last Calib.: 2017.07.09
 Start Time: 22:56:01 End Time: 06:07:50 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30-IF-Surface blow built to 1/4" & died back to surface blow
 60-ISI-No blow
 30-FF-No blow
 60-FSI-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
3.00	100% Mud	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

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

16- 2S -37W Cheyenne,KS
Mears # 1-16
Job Ticket: 64189 **DST#: 1**
Test Start: 2017.07.08 @ 22:56:00

Tool Information

Drill Pipe:	Length: 3936.00 ft	Diameter: 3.80 inches	Volume: 55.21 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 56.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4164.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	104.00 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			4141.00	
Hydraulic tool	5.00			4146.00	
Jars	5.00			4151.00	
Safety Joint	3.00			4154.00	
Packer	5.00			4159.00	28.00 Bottom Of Top Packer
Packer	5.00			4164.00	
Stubb	1.00			4165.00	
Recorder	0.00	8959	Inside	4165.00	
Recorder	0.00	8734	Outside	4165.00	
Perforations	37.00			4202.00	
Change Over Sub	1.00			4203.00	
Drill Pipe	31.00			4234.00	
Change Over Sub	1.00			4235.00	
Bullnose	5.00			4240.00	76.00 Bottom Packers & Anchor

Total Tool Length: 104.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. INC

16- 2S -37W Cheyenne,KS

250 N. Water,
STE 300
Wichita, KS 67202
ATTN: Saman Sharifaie

Mears # 1-16

Job Ticket: 64189

DST#: 1

Test Start: 2017.07.08 @ 22:56:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	100% Mud	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

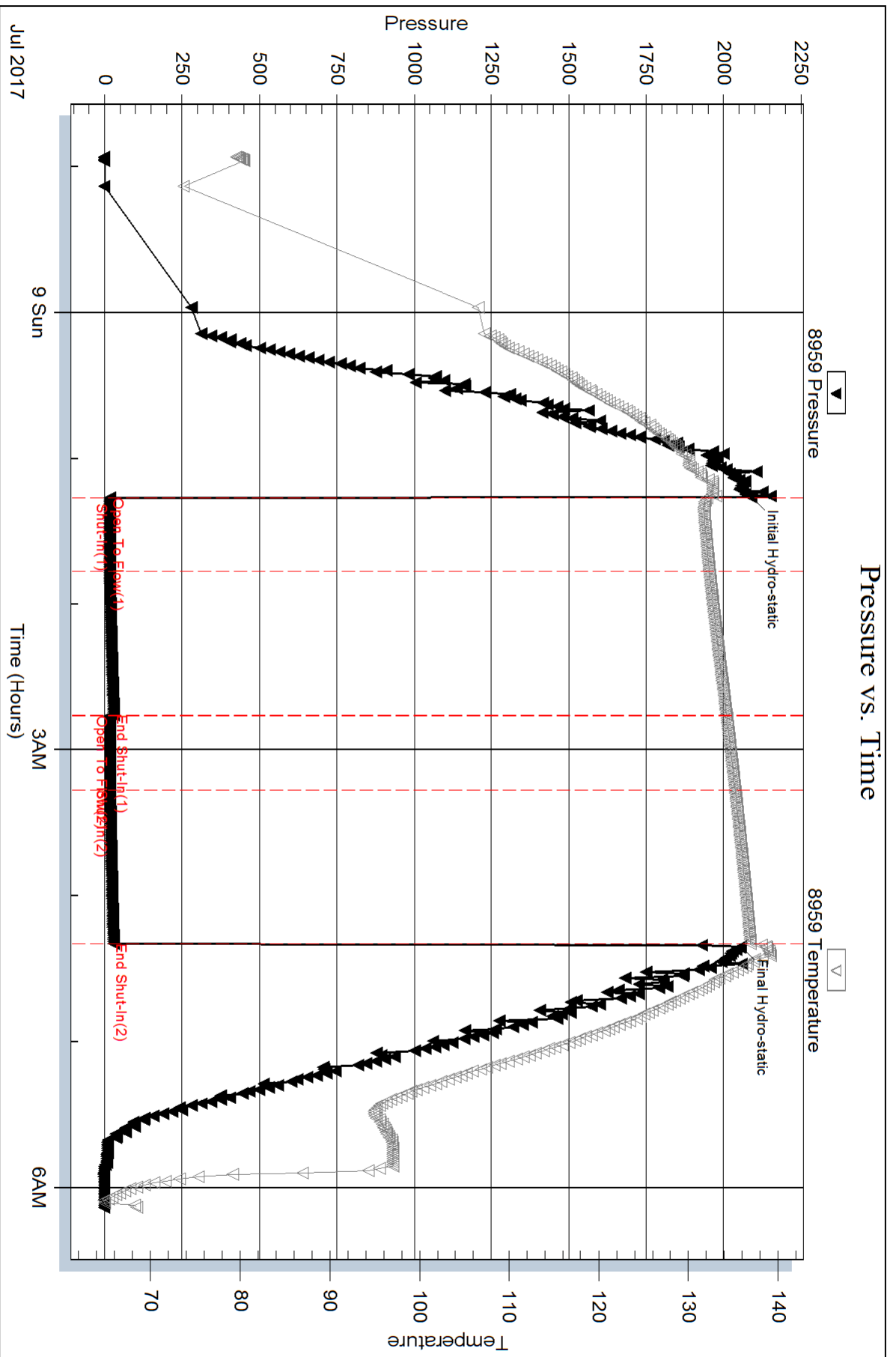
Num Gas Bombs: 0

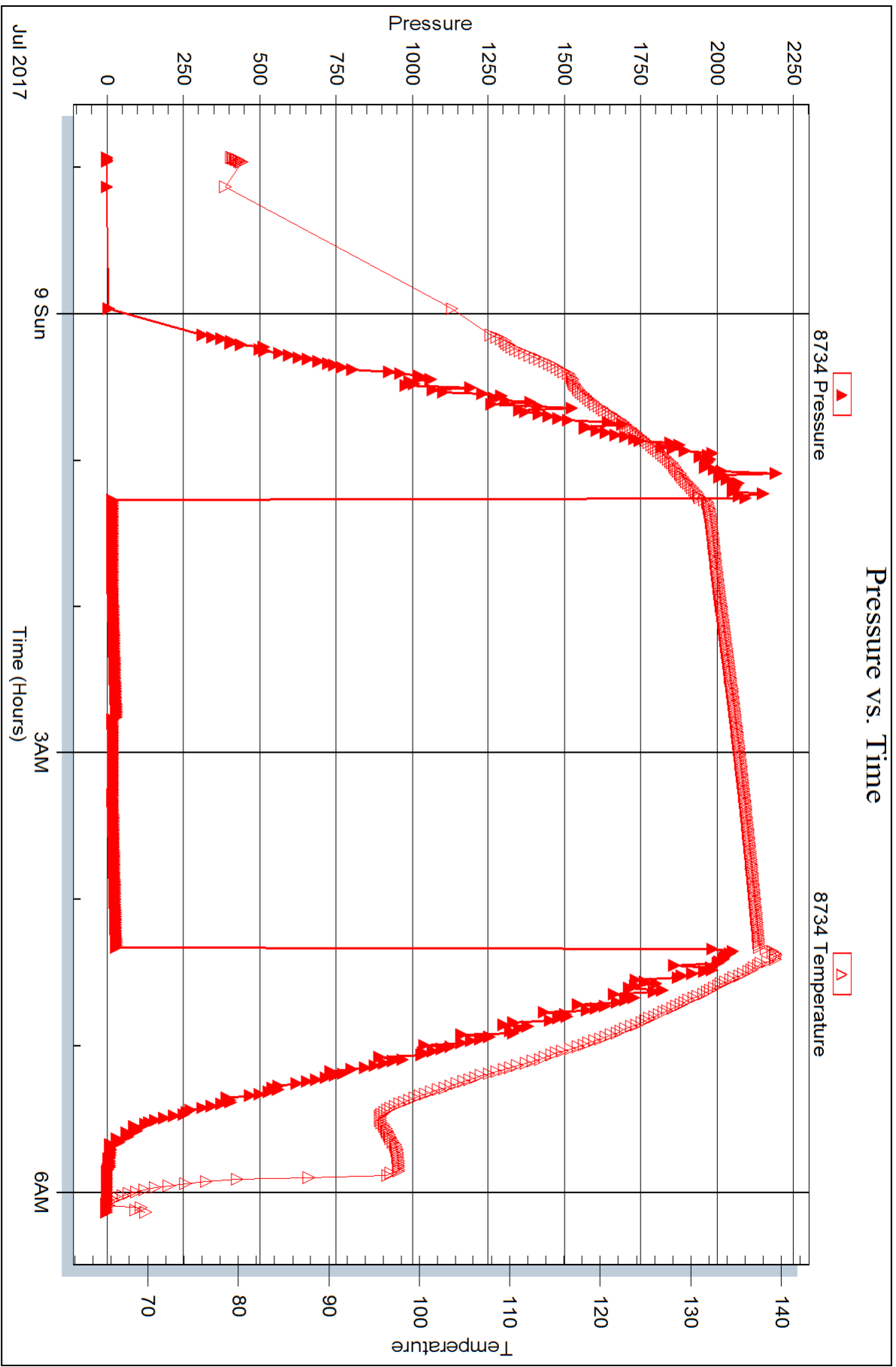
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. INC**

250 N. Water,
STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Mears # 1-16

16- 2S -37W Cheyenne,KS

Start Date: 2017.07.09 @ 16:19:00

End Date: 2017.07.09 @ 23:34:09

Job Ticket #: 64191 DST #: 2

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

Printed: 2017.07.14 @ 10:31:23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64191

DST#: 2

Test Start: 2017.07.09 @ 16:19:00

GENERAL INFORMATION:

Formation: **LKC "A"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:30:10
 Time Test Ended: 23:34:09
 Interval: **4242.00 ft (KB) To 4310.00 ft (KB) (TVD)**
 Total Depth: 4310.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Martine Salinas
 Unit No: 82
 Reference Elevations: 3371.00 ft (KB)
 3366.00 ft (CF)
 KB to GR/CF: 5.00 ft

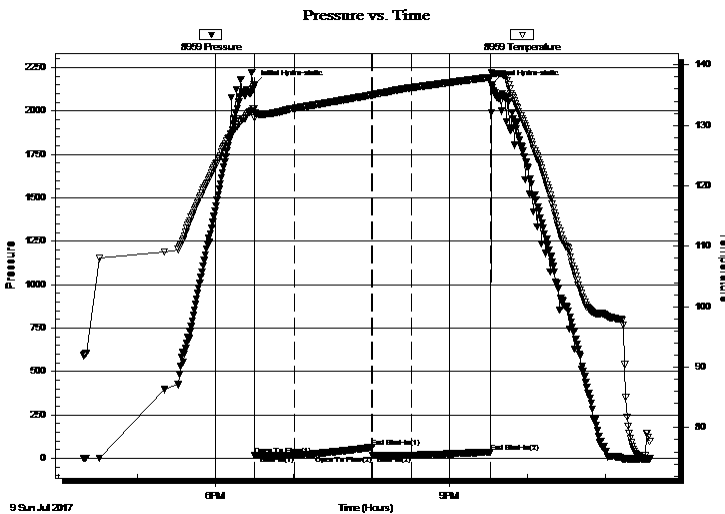
Serial #: 8959

Inside

Press@RunDepth: 17.44 psig @ 4243.00 ft (KB)
 Start Date: 2017.07.09 End Date: 2017.07.09
 Start Time: 16:19:01 End Time: 23:34:10
 Capacity: 8000.00 psig
 Last Calib.: 2017.07.09
 Time On Btm: 2017.07.09 @ 18:30:00
 Time Off Btm: 2017.07.09 @ 21:32:50

TEST COMMENT: 30-IF-Weak blow died @ 18 mins
 60-ISI-No blow
 30-FF-No blow
 60-FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2149.48	132.79	Initial Hydro-static
1	17.28	131.21	Open To Flow (1)
31	16.38	132.82	Shut-In(1)
91	63.85	135.01	End Shut-In(1)
92	17.35	135.01	Open To Flow (2)
121	17.44	136.21	Shut-In(2)
182	36.19	137.94	End Shut-In(2)
183	2153.32	138.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOSM 1%O, 99%M	0.02

* 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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64191

DST#: 2

Test Start: 2017.07.09 @ 16:19:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:30:10

Time Test Ended: 23:34:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: 4242.00 ft (KB) To 4310.00 ft (KB) (TVD)

Reference Elevations: 3371.00 ft (KB)

Total Depth: 4310.00 ft (KB) (TVD)

3366.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8734 Outside

Press@RunDepth: psig @ 4243.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.09 End Date: 2017.07.09

Last Calib.: 2017.07.09

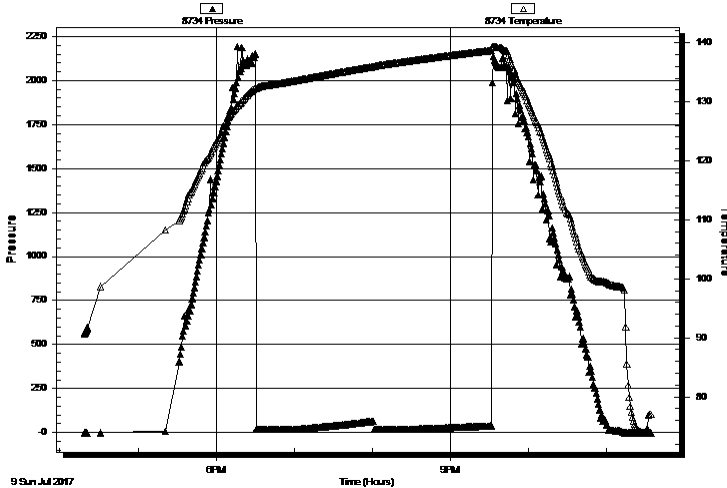
Start Time: 16:19:01 End Time: 23:34:20

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-Weak blow died @ 18 mins
 60-ISI-No blow
 30-FF-No blow
 60-FSI-No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOSM 1%O, 99%M	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

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

16- 2S -37W Cheyenne,KS
Mears # 1-16
Job Ticket: 64191 **DST#: 2**
Test Start: 2017.07.09 @ 16:19:00

Tool Information

Drill Pipe:	Length: 4028.00 ft	Diameter: 3.80 inches	Volume: 56.50 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose:	68000.00 lb
			<u>Total Volume: 57.51 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	66000.00 lb
Depth to Top Packer:	4242.00 ft			Final	66000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	68.00 ft				
Tool Length:	96.00 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			4219.00	
Hydraulic tool	5.00			4224.00	
Jars	5.00			4229.00	
Safety Joint	3.00			4232.00	
Packer	5.00			4237.00	28.00 Bottom Of Top Packer
Packer	5.00			4242.00	
Stubb	1.00			4243.00	
Recorder	0.00	8959	Inside	4243.00	
Recorder	0.00	8734	Outside	4243.00	
Perforations	29.00			4272.00	
Change Over Sub	1.00			4273.00	
Drill Pipe	31.00			4304.00	
Change Over Sub	1.00			4305.00	
Bullnose	5.00			4310.00	68.00 Bottom Packers & Anchor

Total Tool Length: 96.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64191

DST#: 2

Test Start: 2017.07.09 @ 16:19:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 60.00 sec/qt
Water Loss: 5.98 in³
Resistivity: ohm.m
Salinity: 600.00 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: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	SOSM 1%O, 99%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

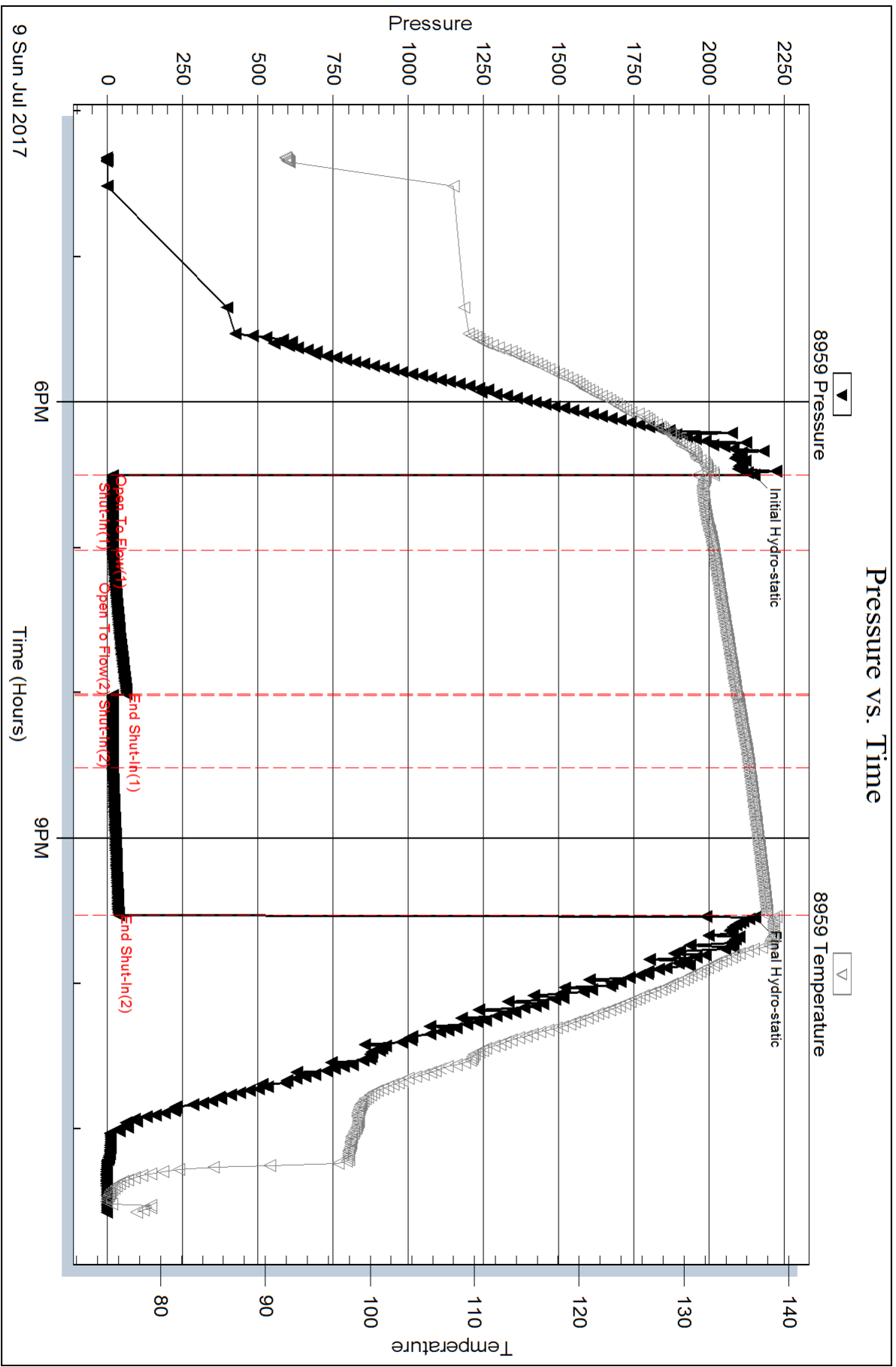
Serial #: 8959

Inside

Murfin Drilling Co. INC

Mears # 1-16

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64191

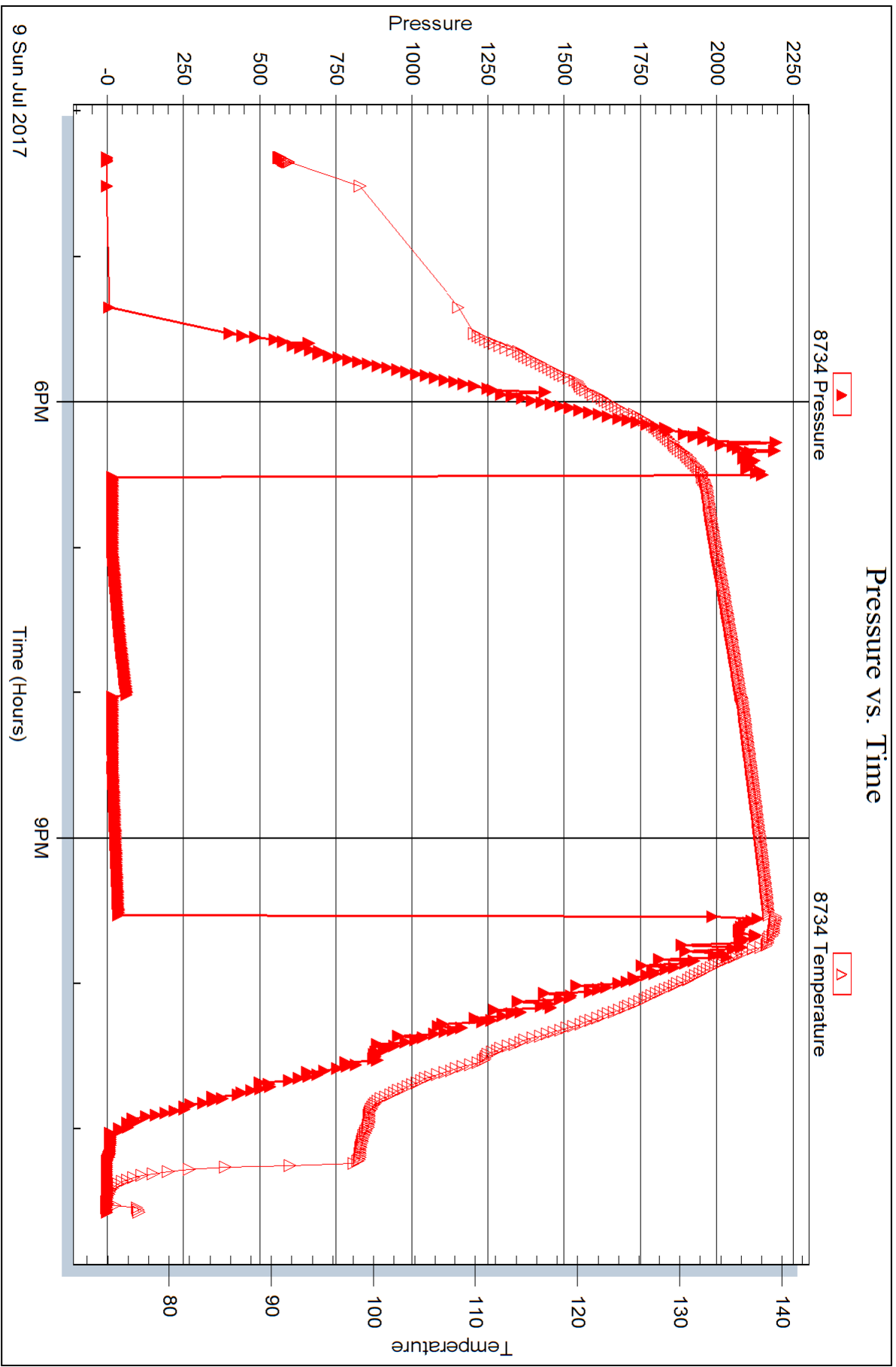
Printed: 2017.07.14 @ 10:31:26

Serial #: 8734

Outside Murfin Drilling Co. INC

Mears # 1-16

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. INC**

250 N. Water,
STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Mears # 1-16

16- 2S -37W Cheyenne,KS

Start Date: 2017.07.10 @ 11:13:00

End Date: 2017.07.10 @ 17:55:20

Job Ticket #: 64192 DST #: 3

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

Printed: 2017.07.14 @ 10:31:03

Murfin Drilling Co. INC

16- 2S -37W Cheyenne,KS

Mears # 1-16

DST # 3

LKC "B-D"

2017.07.10



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64192

DST#: 3

Test Start: 2017.07.10 @ 11:13:00

GENERAL INFORMATION:

Formation: **LKC "B-D"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 13:02:10
 Tester: Martine Salinas
 Time Test Ended: 17:55:20
 Unit No: 82
 Interval: **4312.00 ft (KB) To 4370.00 ft (KB) (TVD)**
 Reference Elevations: 3371.00 ft (KB)
 Total Depth: 4370.00 ft (KB) (TVD)
 3366.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

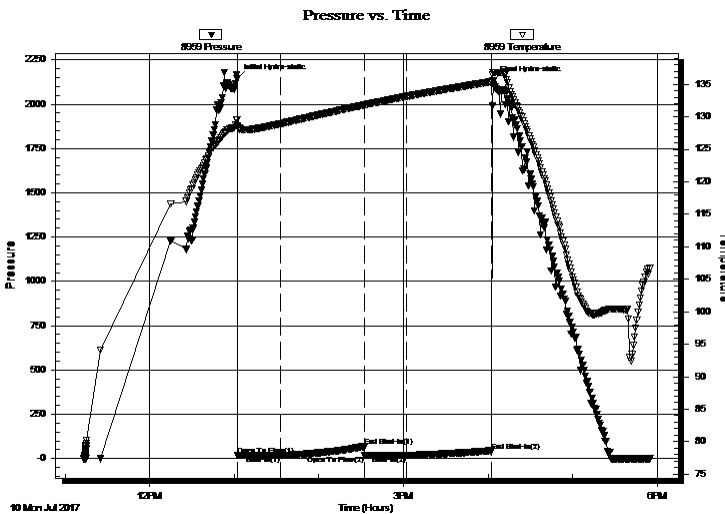
Serial #: 8959

Inside

Press@RunDepth: 17.27 psig @ 4313.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.07.10 End Date: 2017.07.10 Last Calib.: 2017.07.10
 Start Time: 11:13:01 End Time: 17:55:20 Time On Btm: 2017.07.10 @ 13:02:00
 Time Off Btm: 2017.07.10 @ 16:03:39

TEST COMMENT: 30-IF-Surface blow built to 1/4" and died back to surface blow
 60-ISI-No blow
 30-FF-No blow
 60-FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2145.04	129.52	Initial Hydro-static
1	16.21	128.50	Open To Flow (1)
31	15.98	128.91	Shut-In(1)
91	67.81	131.81	End Shut-In(1)
91	17.84	131.79	Open To Flow (2)
121	17.27	133.14	Shut-In(2)
181	43.16	135.39	End Shut-In(2)
182	2131.24	136.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

* 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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64192

DST#: 3

Test Start: 2017.07.10 @ 11:13:00

GENERAL INFORMATION:

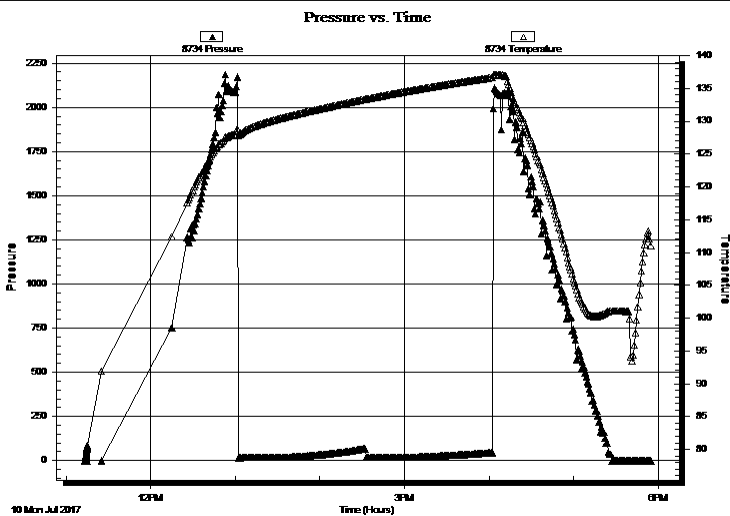
Formation: **LKC "B-D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:02:10
Time Test Ended: 17:55:20
Interval: **4312.00 ft (KB) To 4370.00 ft (KB) (TVD)**
Total Depth: 4370.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Martine Salinas
Unit No: 82
Reference Elevations: 3371.00 ft (KB)
3366.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8734

Outside

Press@RunDepth: psig @ 4313.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.07.10 End Date: 2017.07.10 Last Calib.: 2017.07.10
Start Time: 11:13:01 End Time: 17:55:30 Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Surface blow built to 1/4" and died back to surface blow
60-ISI- No blow
30-FF-No blow
60-FSI-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

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

16- 2S -37W Cheyenne,KS
Mears # 1-16
Job Ticket: 64192 **DST#: 3**
Test Start: 2017.07.10 @ 11:13:00

Tool Information

Drill Pipe:	Length: 4091.00 ft	Diameter: 3.80 inches	Volume: 57.39 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 72000.00 lb
		Total Volume: 58.40 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4312.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 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			4289.00	
Hydraulic tool	5.00			4294.00	
Jars	5.00			4299.00	
Safety Joint	3.00			4302.00	
Packer	5.00			4307.00	28.00 Bottom Of Top Packer
Packer	5.00			4312.00	
Stubb	1.00			4313.00	
Recorder	0.00	8959	Inside	4313.00	
Recorder	0.00	8734	Outside	4313.00	
Perforations	19.00			4332.00	
Change Over Sub	1.00			4333.00	
Drill Pipe	31.00			4364.00	
Change Over Sub	1.00			4365.00	
Bullnose	5.00			4370.00	58.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64192

DST#: 3

Test Start: 2017.07.10 @ 11:13:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.58 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 600.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100% Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

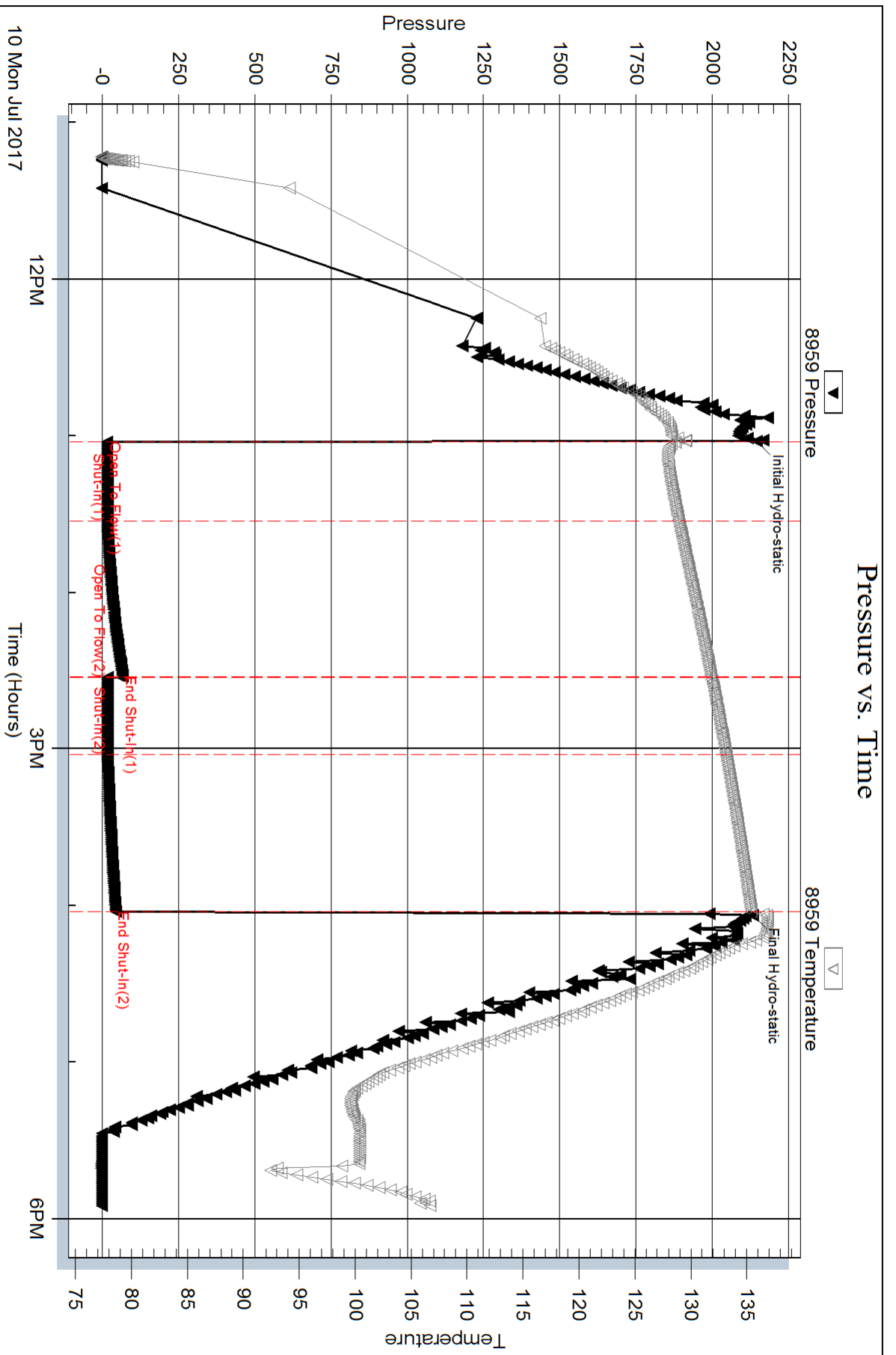
Serial #: 8959

Inside

Murfin Drilling Co. INC

Mears # 1-16

DST Test Number: 3

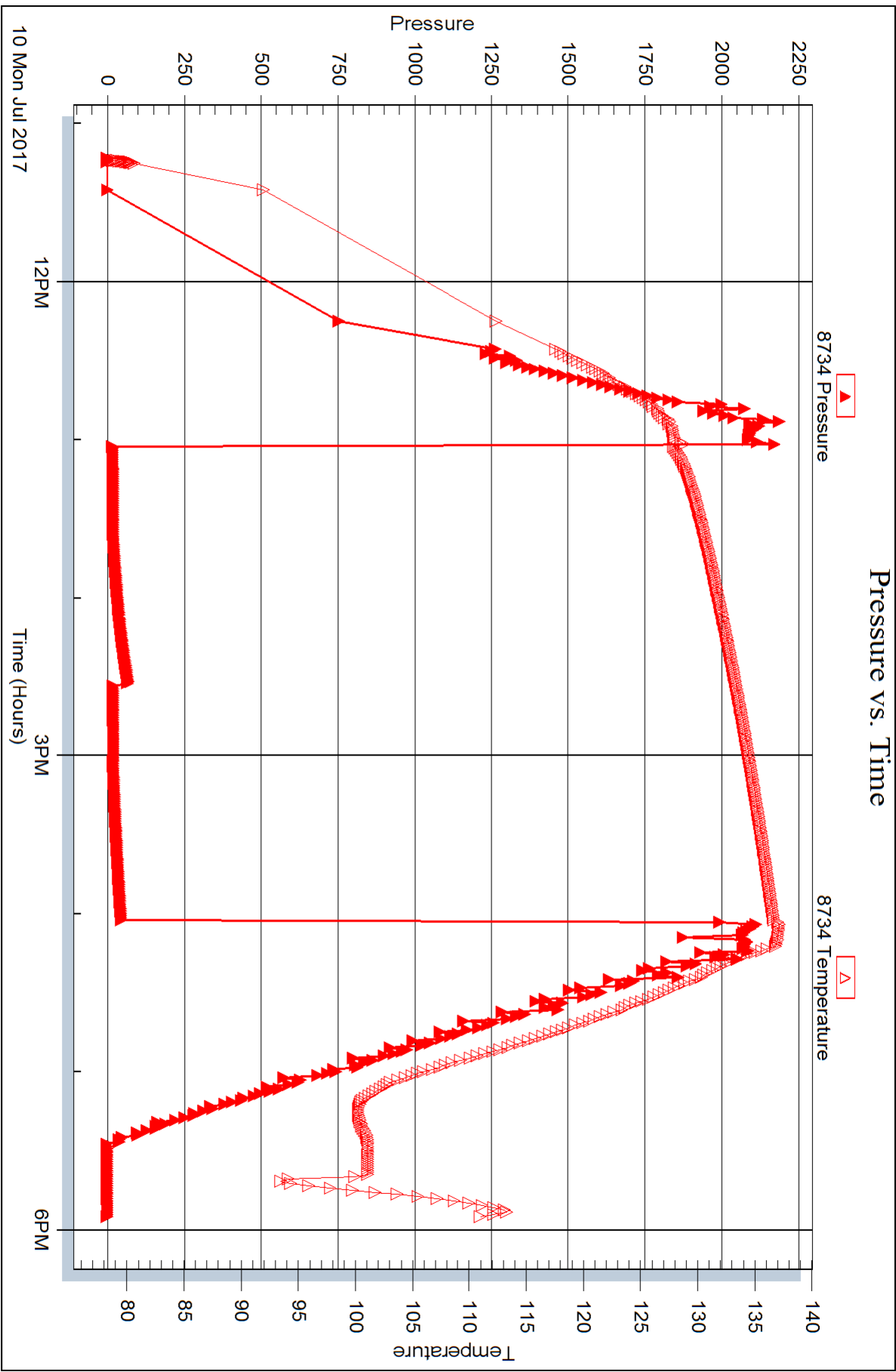


Serial #: 8734

Outside Murfin Drilling Co. INC

Mears # 1-16

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. INC**

250 N. Water,
STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Mears # 1-16

16- 2S -37W Cheyenne,KS

Start Date: 2017.07.11 @ 05:07:00

End Date: 2017.07.11 @ 11:45:09

Job Ticket #: 64193 DST #: 4

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

Printed: 2017.07.14 @ 10:25:33

Murfin Drilling Co. INC
16- 2S -37W Cheyenne,KS
Mears # 1-16
DST # 4
LKC " G "
2017.07.11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64193

DST#: 4

Test Start: 2017.07.11 @ 05:07:00

GENERAL INFORMATION:

Formation: **LKC " G "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:44:50
 Time Test Ended: 11:45:09
 Interval: **4368.00 ft (KB) To 4440.00 ft (KB) (TVD)**
 Total Depth: 4440.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Martine Salinas
 Unit No: 82
 Reference Elevations: 3371.00 ft (KB)
 3366.00 ft (CF)
 KB to GR/CF: 5.00 ft

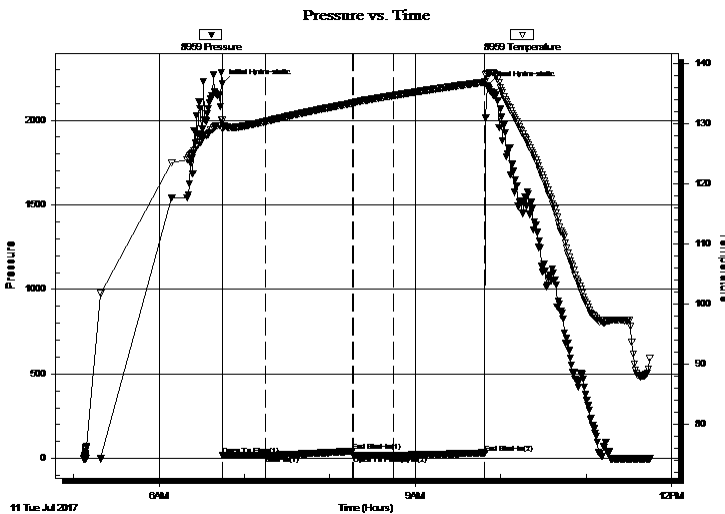
Serial #: 8959

Inside

Press@RunDepth: 18.68 psig @ 4369.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.07.11 End Date: 2017.07.11 Last Calib.: 2017.07.11
 Start Time: 05:07:01 End Time: 11:45:10 Time On Btm: 2017.07.11 @ 06:44:40
 Time Off Btm: 2017.07.11 @ 09:50:20

TEST COMMENT: 30-IF-Surface blow built to 1/2" and died back to 1/4" @ shut in
 60-ISI-No blow
 30-FF-No blow
 60-FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2216.47	130.60	Initial Hydro-static
1	17.17	129.17	Open To Flow (1)
31	17.46	130.38	Shut-In(1)
92	42.75	133.42	End Shut-In(1)
92	18.85	133.42	Open To Flow (2)
121	18.68	134.70	Shut-In(2)
185	31.88	136.92	End Shut-In(2)
186	2206.20	138.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 5%O, 95%M	0.02

* 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

16- 2S -37W Cheyenne,KS

250 N. Water,
STE 300
Wichita, KS 67202
ATTN: Saman Sharifaie

Mears # 1-16

Job Ticket: 64193

DST#: 4

Test Start: 2017.07.11 @ 05:07:00

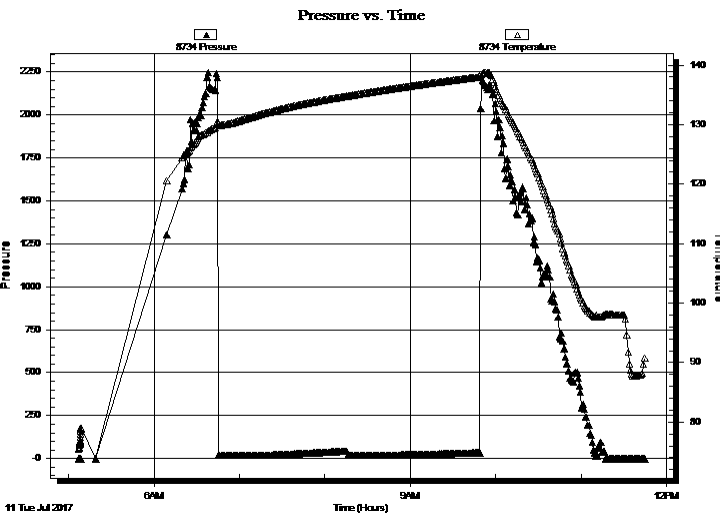
GENERAL INFORMATION:

Formation: **LKC " G "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:44:50
Time Test Ended: 11:45:09
Interval: 4368.00 ft (KB) To 4440.00 ft (KB) (TVD)
Total Depth: 4440.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Martine Salinas
Unit No: 82
Reference Elevations: 3371.00 ft (KB)
3366.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8734 Outside

Press@RunDepth: psig @ 4369.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.07.11 End Date: 2017.07.11 Last Calib.: 2017.07.11
Start Time: 05:07:01 End Time: 11:45:20 Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Surface blow built to 1/2" and died back to 1/4" @ shut in
60-ISI-No blow
30-FF-No blow
60-FSI-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 5%O, 95%M	0.02

* 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

16- 2S -37W Cheyenne,KS

250 N. Water,
STE 300
Wichita, KS 67202
ATTN: Saman Sharifaie

Mears # 1-16

Job Ticket: 64193

DST#: 4

Test Start: 2017.07.11 @ 05:07:00

Tool Information

Drill Pipe:	Length: 4154.00 ft	Diameter: 3.80 inches	Volume: 58.27 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4368.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.00 ft			
Tool Length:	100.00 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			4345.00	
Hydraulic tool	5.00			4350.00	
Jars	5.00			4355.00	
Safety Joint	3.00			4358.00	
Packer	5.00			4363.00	28.00 Bottom Of Top Packer
Packer	5.00			4368.00	
Stubb	1.00			4369.00	
Recorder	0.00	8959	Inside	4369.00	
Recorder	0.00	8734	Outside	4369.00	
Perforations	33.00			4402.00	
Change Over Sub	1.00			4403.00	
Drill Pipe	31.00			4434.00	
Change Over Sub	1.00			4435.00	
Bullnose	5.00			4440.00	72.00 Bottom Packers & Anchor

Total Tool Length: 100.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64193

DST#: 4

Test Start: 2017.07.11 @ 05:07:00

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: 70.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 600.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

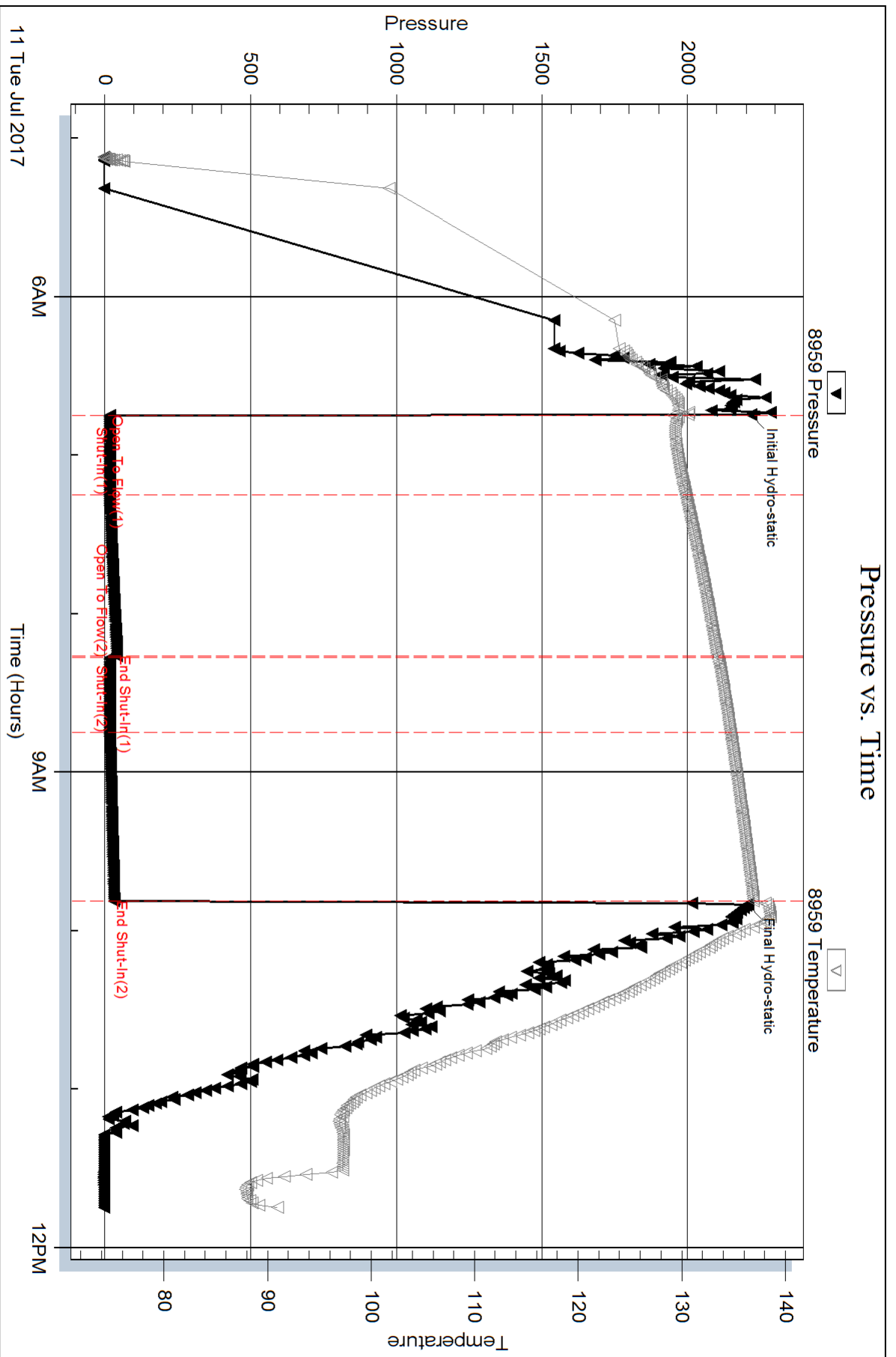
Length ft	Description	Volume bbl
5.00	OSM 5%O, 95%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

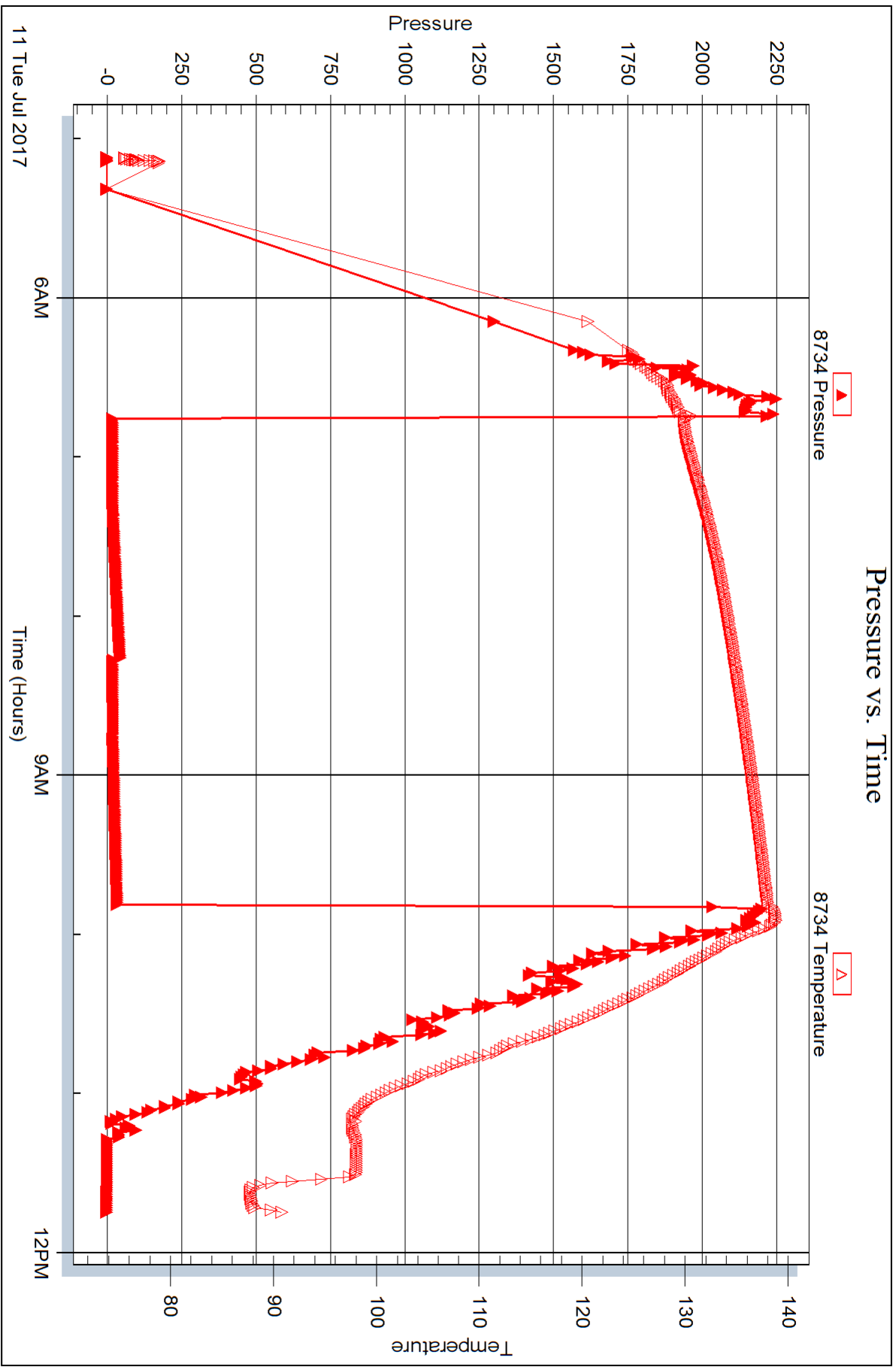


Serial #: 8734

Outside Murfin Drilling Co. INC

Mears # 1-16

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. INC**

250 N. Water,
STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Mears # 1-16

16- 2S -37W Cheyenne,KS

Start Date: 2017.07.12 @ 01:07:00

End Date: 2017.07.12 @ 09:53:10

Job Ticket #: 64194 DST #: 5

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

Printed: 2017.07.14 @ 10:25:08



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64194

DST#: 5

Test Start: 2017.07.12 @ 01:07:00

GENERAL INFORMATION:

Formation: **LKC " H - J "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:24:00

Time Test Ended: 09:53:10

Test Type: Conventional Bottom Hole (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: 4428.00 ft (KB) To 4520.00 ft (KB) (TVD)

Reference Elevations: 3371.00 ft (KB)

Total Depth: 4520.00 ft (KB) (TVD)

3366.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8959

Inside

Press@RunDepth: 184.63 psig @ 4429.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.12

End Date:

2017.07.12

Last Calib.:

2017.07.12

Start Time:

01:07:01

End Time:

09:53:10

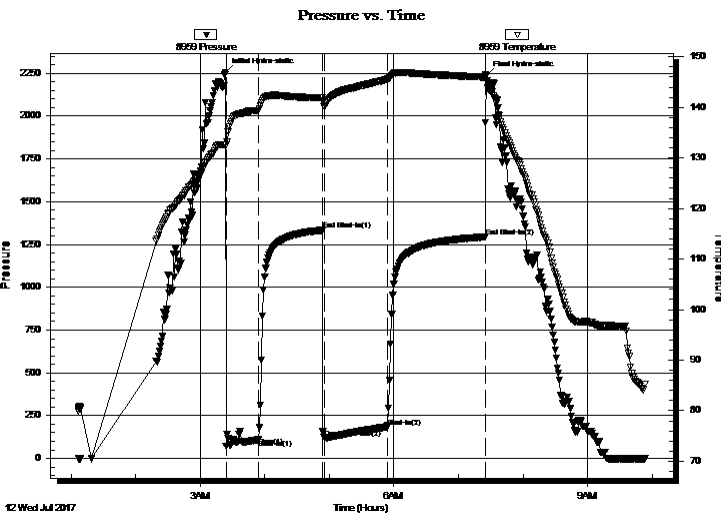
Time On Btm:

2017.07.12 @ 03:23:10

Time Off Btm:

2017.07.12 @ 07:26:00

TEST COMMENT: 30-IF-BOB @ 10 mins 15 seconds
 60-ISI-Blow back built to 7 1/2"
 60-FF-BOB @ 7mins 45 seconds
 90-FSI-Blow back built to 9 3/4" @ 19 1/2 mins & died back to 7 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2255.43	132.62	Initial Hydro-static
1	72.11	132.59	Open To Flow (1)
31	108.79	139.37	Shut-In(1)
91	1333.28	141.90	End Shut-In(1)
93	119.79	140.20	Open To Flow (2)
151	184.63	145.58	Shut-In(2)
242	1294.17	145.98	End Shut-In(2)
243	2238.15	145.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
183.00	GOCM 41%G, 22%O, 37%M	0.90
303.00	CGO 7%G, 93%O	4.05
0.00	1556' 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 Co. INC
 250 N. Water,
 STE 300
 Wichita, KS 67202
 ATTN: Saman Sharifaie

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64194

DST#: 5

Test Start: 2017.07.12 @ 01:07:00

GENERAL INFORMATION:

Formation: **LKC " H - J "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:24:00

Time Test Ended: 09:53:10

Test Type: Conventional Bottom Hole (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: 4428.00 ft (KB) To 4520.00 ft (KB) (TVD)

Reference Elevations: 3371.00 ft (KB)

Total Depth: 4520.00 ft (KB) (TVD)

3366.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8734 Outside

Press@RunDepth: psig @ 4429.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.12

End Date:

2017.07.12

Last Calib.:

2017.07.12

Start Time: 01:07:01

End Time:

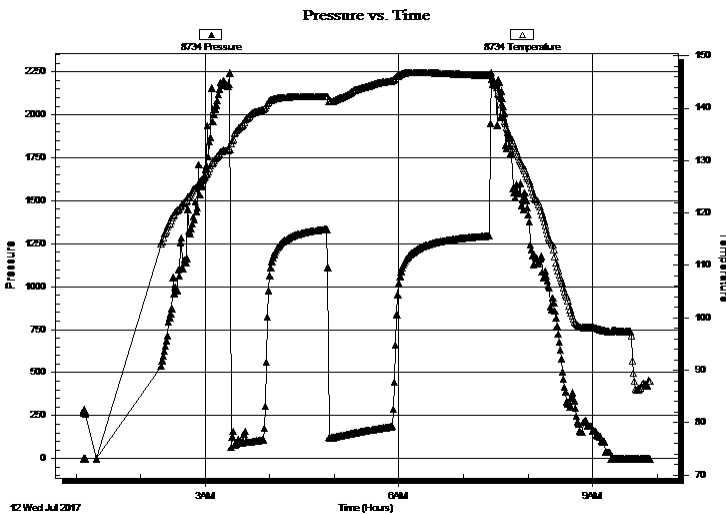
09:53:10

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-BOB @ 10 mins 15 seconds
 60-ISI-Blow back built to 7 1/2"
 60-FF-BOB @ 7mins 45 seconds
 90-FSI-Blow back built to 9 3/4" @ 19 1/2 mins & died back to 7 1/2"

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
183.00	GOCM 41%G, 22%O, 37%M	0.90
303.00	CGO 7%G, 93%O	4.05
0.00	1556' 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 Co. INC

16- 2S -37W Cheyenne,KS

250 N. Water,
STE 300
Wichita, KS 67202
ATTN: Saman Sharifaie

Mears # 1-16

Job Ticket: 64194

DST#: 5

Test Start: 2017.07.12 @ 01:07:00

Tool Information

Drill Pipe:	Length: 4216.00 ft	Diameter: 3.80 inches	Volume: 59.14 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4428.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	92.00 ft			
Tool Length:	120.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4405.00	
Hydraulic tool	5.00			4410.00	
Jars	5.00			4415.00	
Safety Joint	3.00			4418.00	
Packer	5.00			4423.00	28.00 Bottom Of Top Packer
Packer	5.00			4428.00	
Stubb	1.00			4429.00	
Recorder	0.00	8959	Inside	4429.00	
Recorder	0.00	8734	Outside	4429.00	
Perforations	22.00			4451.00	
Change Over Sub	1.00			4452.00	
Drill Pipe	62.00			4514.00	
Change Over Sub	1.00			4515.00	
Bullnose	5.00			4520.00	92.00 Bottom Packers & Anchor

Total Tool Length: 120.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64194

DST#: 5

Test Start: 2017.07.12 @ 01:07:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 35.6 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 70.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.98 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 600.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

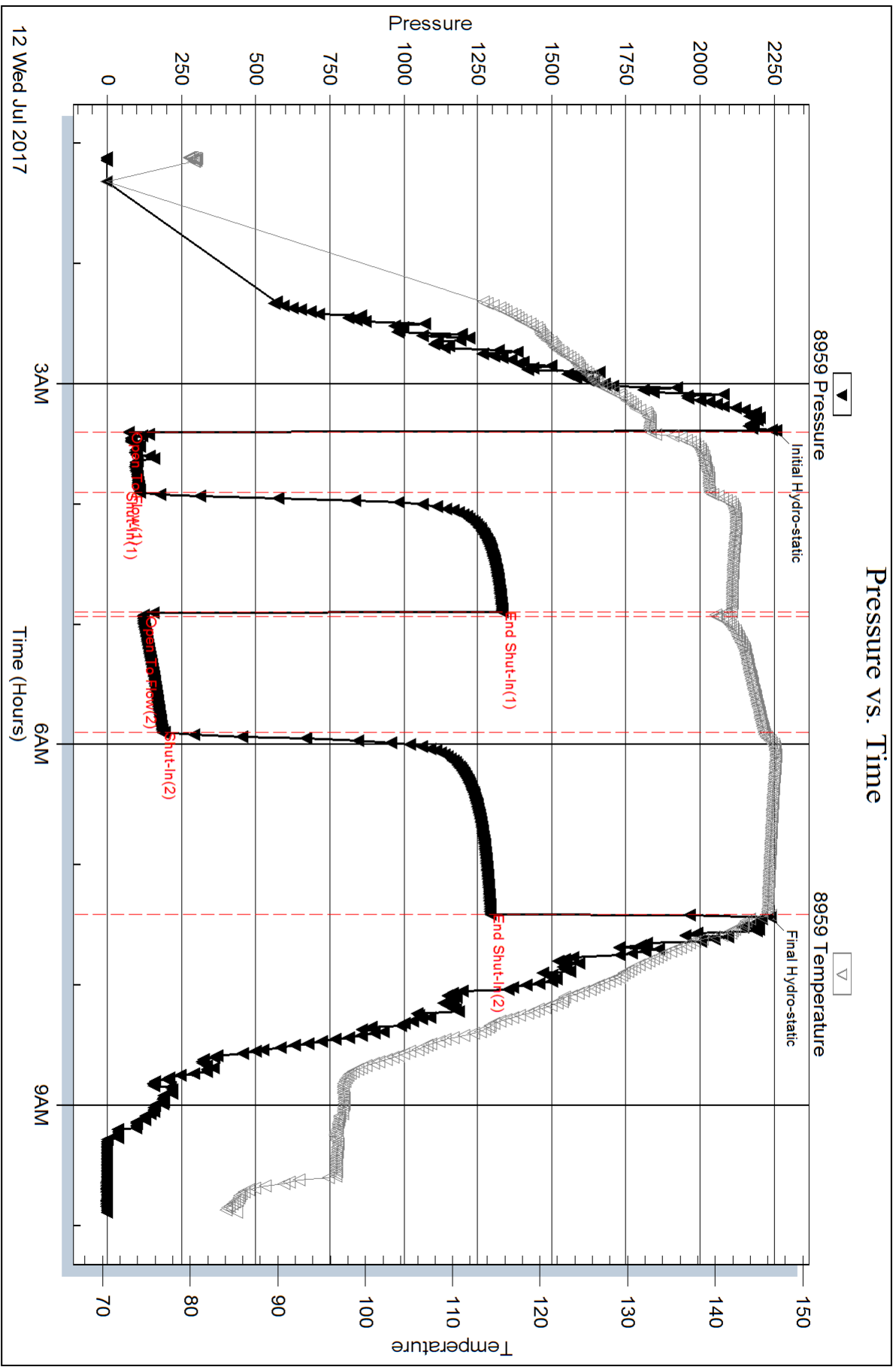
Length ft	Description	Volume bbl
183.00	GOCM 41%G, 22%O, 37%M	0.900
303.00	CGO 7%G, 93%O	4.050
0.00	1556' GIP	0.000

Total Length: 486.00 ft Total Volume: 4.950 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity of oil = 38 @ 84degs
Gravity corrected to 35.6 @ 60 degs

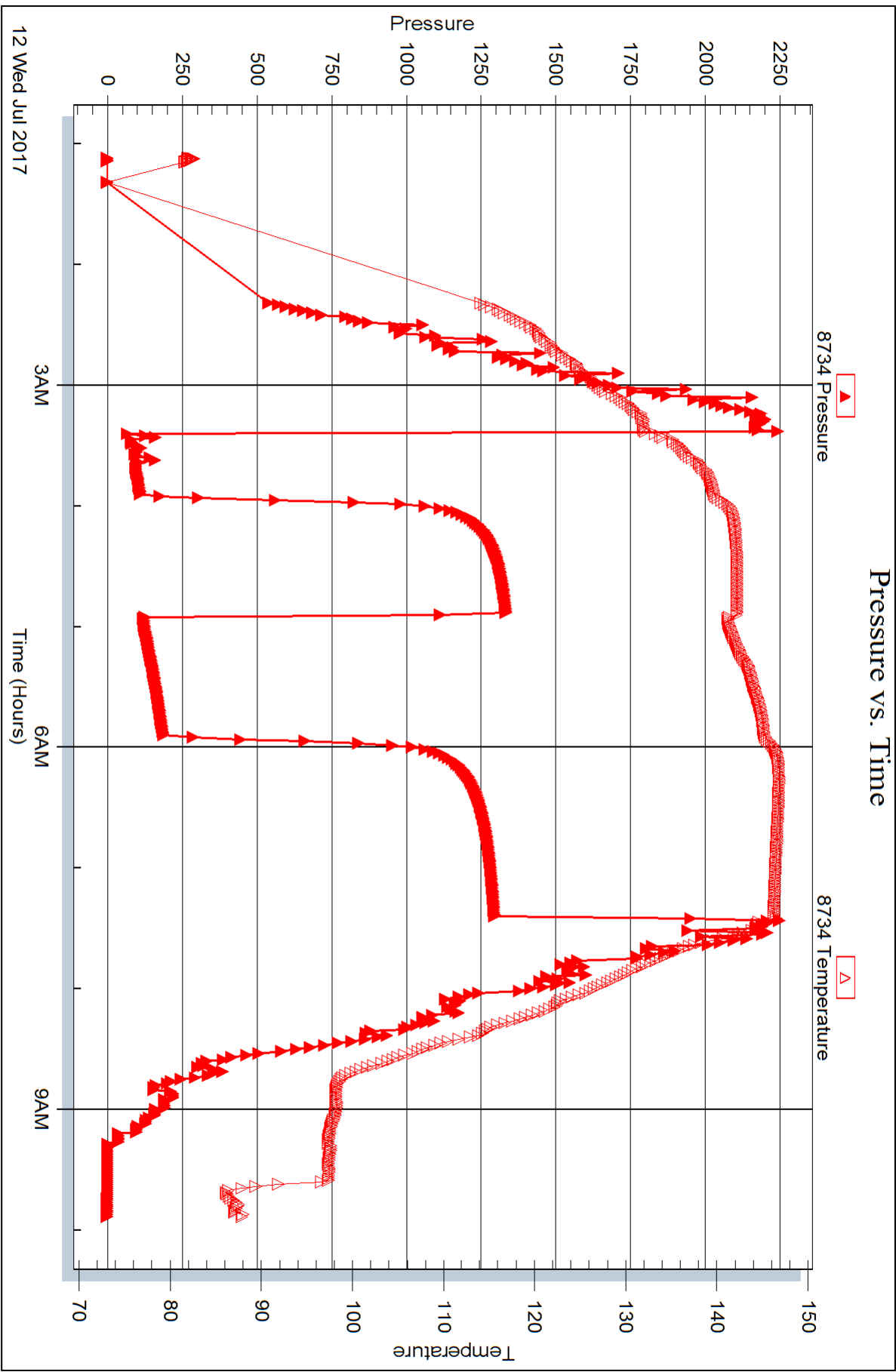


Serial #: 8734

Outside Murfin Drilling Co. INC

Mears # 1-16

DST Test Number: 5





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. INC**

250 N. Water,
STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Mears # 1-16

16- 2S -37W Cheyenne,KS

Start Date: 2017.07.13 @ 11:56:00

End Date: 2017.07.13 @ 17:50:09

Job Ticket #: 64195 DST #: 6

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

Printed: 2017.07.14 @ 10:24:40



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

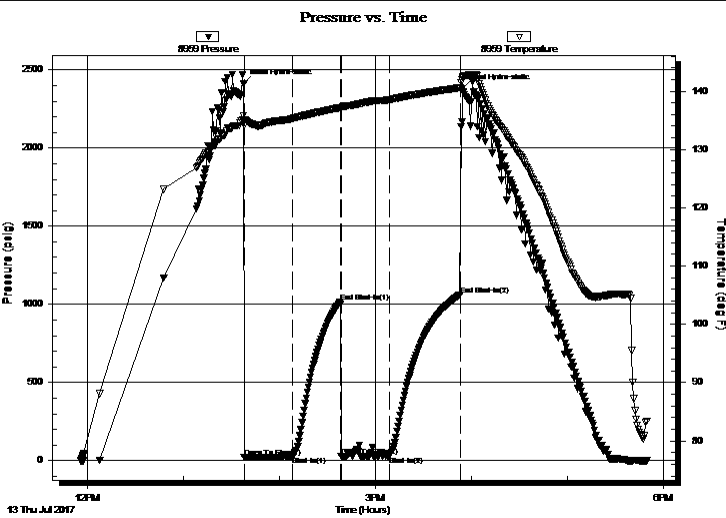
16- 2S -37W Cheyenne,KS
Mears # 1-16
 Job Ticket: 64195 **DST#: 6**
 Test Start: 2017.07.13 @ 11:56:00

GENERAL INFORMATION:

Formation: **Ft.Scott - Breezy Hi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:38:10
 Time Test Ended: 17:50:09
 Interval: **4677.00 ft (KB) To 4770.00 ft (KB) (TVD)**
 Total Depth: 4770.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Martine Salinas
 Unit No: 82
 Reference Elevations: 3371.00 ft (KB)
 3366.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8959 **Inside**
 Press@RunDepth: 29.51 psig @ 4678.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.07.13 End Date: 2017.07.13 Last Calib.: 2017.07.13
 Start Time: 11:56:01 End Time: 17:50:10 Time On Btm: 2017.07.13 @ 13:38:00
 Time Off Btm: 2017.07.13 @ 15:54:40

TEST COMMENT: 30-IF-Surface.blow built to 1/4"
 60-ISI-No blow
 30-FF-No blow
 60-FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2410.77	135.75	Initial Hydro-static
1	19.52	134.15	Open To Flow (1)
31	27.18	135.29	Shut-In(1)
61	1015.53	137.16	End Shut-In(1)
61	25.99	137.00	Open To Flow (2)
91	29.51	138.52	Shut-In(2)
136	1060.98	140.58	End Shut-In(2)
137	2379.43	142.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

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
250 N. Water,
STE 300
Wichita, KS 67202
ATTN: Saman Sharifaie

16- 2S -37W Cheyenne,KS

Mears # 1-16

Job Ticket: 64195

DST#: 6

Test Start: 2017.07.13 @ 11:56:00

GENERAL INFORMATION:

Formation: **Ft.Scott - Breezy Hi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:38:10

Time Test Ended: 17:50:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: **4677.00 ft (KB) To 4770.00 ft (KB) (TVD)**

Reference Elevations: 3371.00 ft (KB)

Total Depth: 4770.00 ft (KB) (TVD)

3366.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8734 Outside

Press@RunDepth: psig @ 4678.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.13

End Date: 2017.07.13

Last Calib.: 2017.07.13

Start Time: 11:56:01

End Time: 17:50:10

Time On Btm:

Time Off Btm:

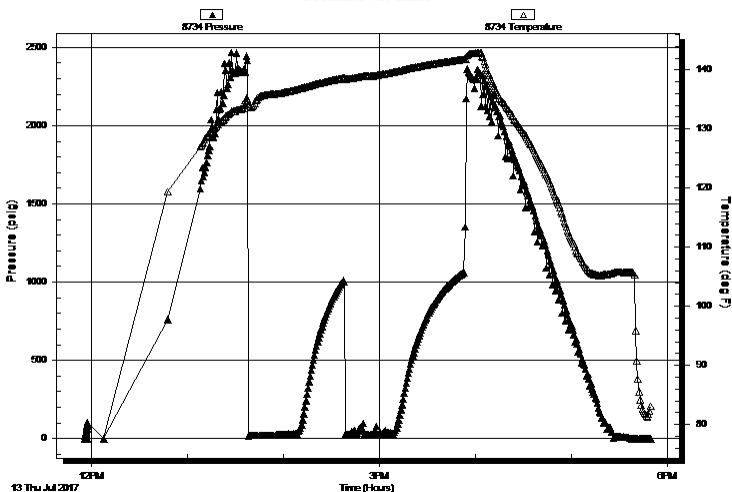
TEST COMMENT: 30-IF-Surface.blow built to 1/4"

60-ISI-No blow

30-FF-No blow

60-FSI-No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

* 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

16- 2S -37W Cheyenne,KS

250 N. Water,
STE 300
Wichita, KS 67202
ATTN: Saman Sharifaie

Mears # 1-16

Job Ticket: 64195

DST#: 6

Test Start: 2017.07.13 @ 11:56:00

Tool Information

Drill Pipe:	Length: 4464.00 ft	Diameter: 3.80 inches	Volume: 62.62 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 205.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose:	72000.00 lb
			<u>Total Volume: 63.63 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	72000.00 lb
Depth to Top Packer:	4677.00 ft			Final	72000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	93.00 ft				
Tool Length:	121.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4654.00	
Hydraulic tool	5.00			4659.00	
Jars	5.00			4664.00	
Safety Joint	3.00			4667.00	
Packer	5.00			4672.00	28.00 Bottom Of Top Packer
Packer	5.00			4677.00	
Stubb	1.00			4678.00	
Recorder	0.00	8959	Inside	4678.00	
Recorder	0.00	8734	Outside	4678.00	
Perforations	23.00			4701.00	
Change Over Sub	1.00			4702.00	
Drill Pipe	62.00			4764.00	
Change Over Sub	1.00			4765.00	
Bullnose	5.00			4770.00	93.00 Bottom Packers & Anchor

Total Tool Length: 121.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

16- 2S -37W Cheyenne,KS
Mears # 1-16
Job Ticket: 64195 **DST#: 6**
Test Start: 2017.07.13 @ 11:56:00

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: 79.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 600.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100% Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

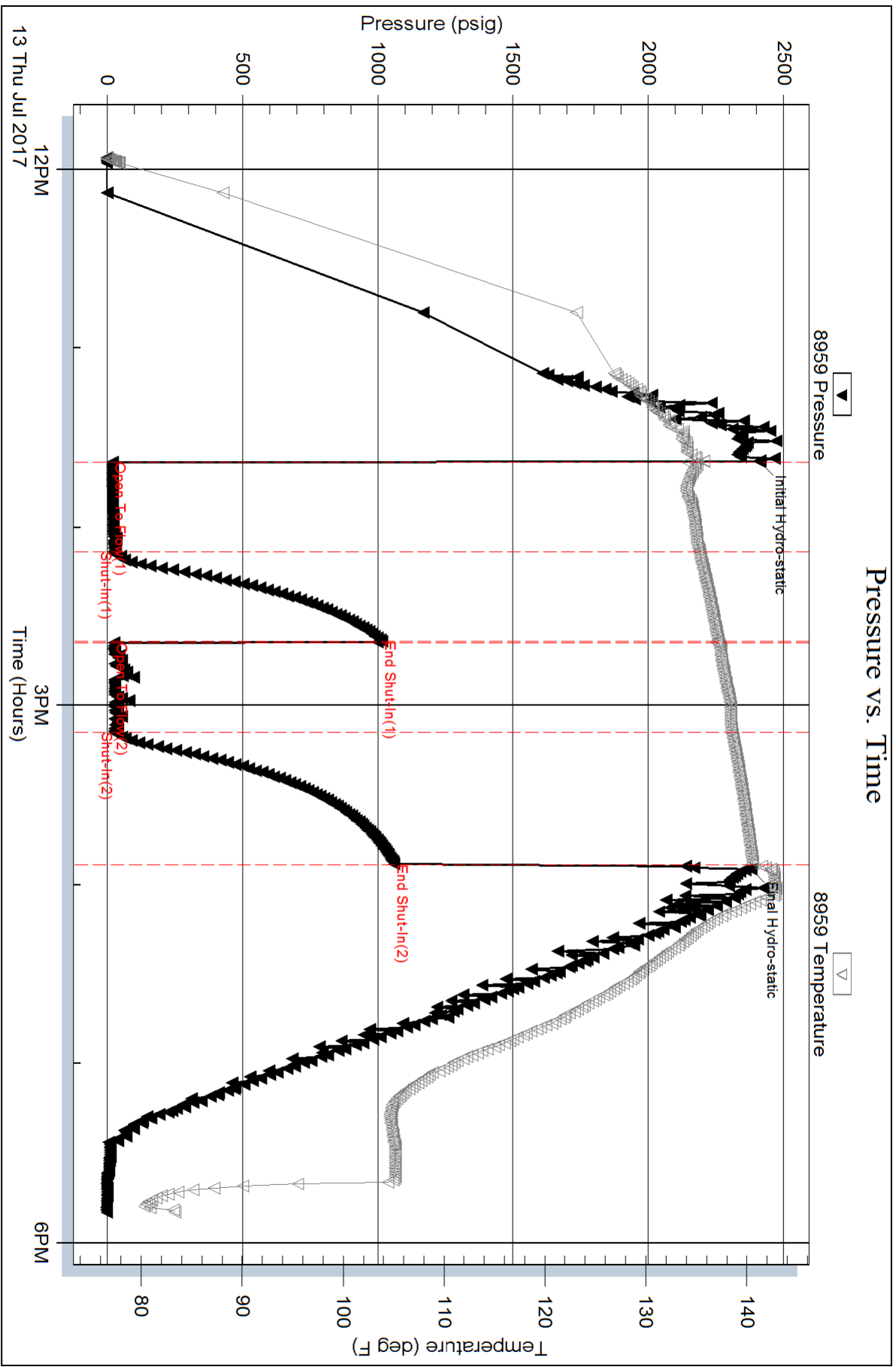
Serial #: 8959

Inside

Murfin Drilling Co. INC

Mears # 1-16

DST Test Number: 6



Triobite Testing, Inc

Ref. No: 64195

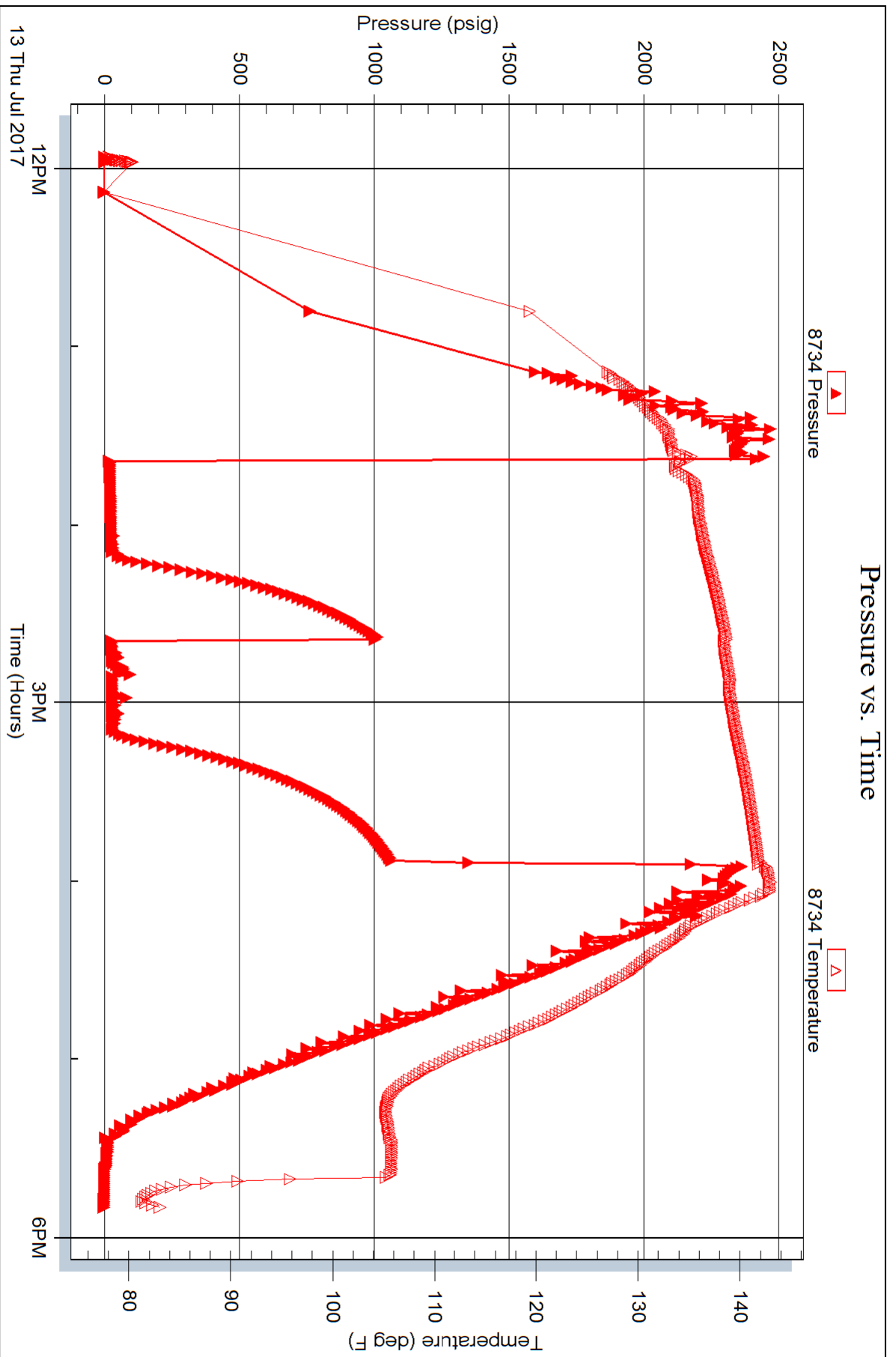
Printed: 2017.07.14 @ 10:24:41

Serial #: 8734

Outside Murfin Drilling Co. INC

Mears # 1-16

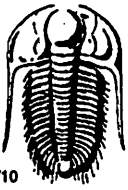
DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 64195

Printed: 2017.07.14 @ 10:24:41



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64189

Well Name & No. Mears # 1-16 Test No. 1 Date 7-8-17
 Company Murfin Drilling Co Inc Elevation 3371 KB 3366 GL
 Address 250 N. Water, STE 300, Wichita, KS 67202
 Co. Rep / Geo. Suzanne Sharifaie Rig Murfin #24
 Location: Sec. 16 Twp. 25. Rge. 37W. Co. Cheyenne State KS.

Interval Tested 4164-4240 Zone Tested Oread
 Anchor Length 76' Drill Pipe Run 3936 Mud Wt. 9.2
 Top Packer Depth 4159 Drill Collars Run 205 Vis 60
 Bottom Packer Depth 4164 Wt. Pipe Run — WL 5.6
 Total Depth 4240 Chlorides 600 ppm System LCM 4H

Blow Description IF. S. blow built to 1/4" & diled back to weak S. blow @shut in
ISI. No blow
FF. No blow
FSI. No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>Mad</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 3 BHT 139 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

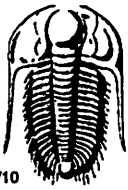
(A) Initial Hydrostatic 2090 Test 1150 T-On Location 20:56 7-8-17
 (B) First Initial Flow 16 Jars 250 T-Started 22:56
 (C) First Final Flow 16 Safety Joint 75 T-Open 01:16
 (D) Initial Shut-In 29 Circ Sub _____ T-Pulled 04:16
 (E) Second Initial Flow 17 Hourly Standby _____ T-Out 06:08 7-19-17
 (F) Second Final Flow 17 Mileage 198 RT. 148.50 Comments _____
 (G) Final Shut-In 28 Sampler _____
 (H) Final Hydrostatic 2057 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1623.50 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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. 64191

Well Name & No. Mears # 1-16 Test No. 2 Date 7-9-17
 Company Murfin Drilling Co Inc Elevation 3371 KB 3366 GL
 Address 250 N. Water, STE 300, Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaic Rig Murfin #24
 Location: Sec. 16 Twp. 25. Rge. 37W Co. Cheyenne State KS

Interval Tested 4242-4310 Zone Tested Lansing "A"
 Anchor Length 68' Drill Pipe Run 4028 Mud Wt. 9.1
 Top Packer Depth 4237 Drill Collars Run 205 Vis 60
 Bottom Packer Depth 4242 Wt. Pipe Run — WL 6.0
 Total Depth 4310 Chlorides 600 ppm System LCM 4#

Blow Description IF: Fair S. blow dead @ 18 mins
ISI: No blow
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>505M</u>		<u>1</u>	<u>99</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 139 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

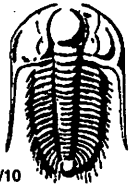
(A) Initial Hydrostatic 2149 Test 1150 T-On Location 15:45
 (B) First Initial Flow 17 Jars 250 T-Started 16:19
 (C) First Final Flow 16 Safety Joint 75 T-Open 18:31
 (D) Initial Shut-In 64 Circ Sub _____ T-Pulled 21:31
 (E) Second Initial Flow 17 Hourly Standby _____ T-Out 23:35
 (F) Second Final Flow 17 Mileage 198 RT 148.50 Comments _____
 (G) Final Shut-In 36 Sampler _____
 (H) Final Hydrostatic 2153 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1623.50

MP/DST Disc't _____

Approved By _____ Our Representative [Signature]
 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. 64192

Well Name & No. Mears # 1-16 Test No. 3 Date 7-10-17
 Company Murfin Drilling Co Inc Elevation 3371 KB 3366 GL
 Address 250 N. Water, STE 300, Wichita, KS 67202
 Co. Rep / Geo. Saman Sherifaie Rig Murfin #24
 Location: Sec. 16 Twp. 25. Rge. 37W Co. Cheyenne State KS

Interval Tested 4312-4370 Zone Tested LKC "B-D"
 Anchor Length 58 Drill Pipe Run 4091 Mud Wt. 9.0
 Top Packer Depth 4307 Drill Collars Run 205 Vis 60
 Bottom Packer Depth 4312 Wt. Pipe Run — WL 5.6
 Total Depth 4370 Chlorides 600 ppm System LCM 4#

Blow Description IF. S. blow built to 114" & diled back to s. blow @ shut in
ESI - No blow
FF - No blow
FSI - No blow

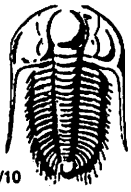
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 137 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2145</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>11:10</u>
(B) First Initial Flow <u>16</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:13</u>
(C) First Final Flow <u>16</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:02</u>
(D) Initial Shut-In <u>68</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>16:02</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>17:56</u>
(F) Second Final Flow <u>17</u>	<input checked="" type="checkbox"/> Mileage <u>198RT</u> 148.50	Comments _____
(G) Final Shut-In <u>43</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2131</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1623.50</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1623.50</u>	

Approved By _____ Our Representative [Signature]

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. 64193

Well Name & No. Mears #1-1b Test No. 4 Date 7-11-17
 Company Murfin Drilling Co Inc Elevation 3371 KB 3366 GL
 Address 250 N. Water STE 300, Wichita, KS 67202
 Co. Rep / Geo. Saman Sherif Rig Murfin #24
 Location: Sec. 16 Twp. Z.S. Rge. 37W Co. Cheyenne State KS

Interval Tested 4368-4440 Zone Tested LKL "G"
 Anchor Length 72' Drill Pipe Run 4154 Mud Wt. 9.0
 Top Packer Depth 4363 Drill Collars Run 205 Vis 70
 Bottom Packer Depth 4368 Wt. Pipe Run — WL 5.6
 Total Depth 4440 Chlorides 600 ppm System LCM 44

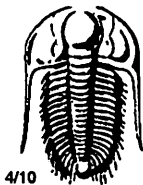
Blow Description IF. S. blow built to 1/2" & died back to 1/4" @ shut in
ISI. No blow
FF. No blow
FSI. No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>OSM</u>		<u>5</u>	<u>95</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 138 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2216 Test 1150 T-On Location 04:55
 (B) First Initial Flow 17 Jars 250 T-Started 05:07
 (C) First Final Flow 17 Safety Joint 75 T-Open 06:45
 (D) Initial Shut-In 43 Circ Sub _____ T-Pulled 09:45
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 11:46
 (F) Second Final Flow 19 Mileage 198 RT 148.50 Comments _____
 (G) Final Shut-In 32 Sampler _____
 (H) Final Hydrostatic 2206 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1623.50
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1623.50

Approved By _____ Our Representative [Signature]
 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. 64194

Well Name & No. Mears # 1-16 Test No. 5 Date 7-12-17
 Company Murfin Drilling Co Inc Elevation 3371 KB 3366 GL
 Address 250 N. Water, STE 360, Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifai Rig Murfin #24
 Location: Sec. 16 Twp. 25. Rge. 37W Co. Cherokee State KS

Interval Tested 4428-4520 Zone Tested LKC "H-5"
 Anchor Length 92' Drill Pipe Run 4216 Mud Wt. 9.0
 Top Packer Depth 4423 Drill Collars Run 205 Vis 70
 Bottom Packer Depth 4428 Wt. Pipe Run — WL 6.0
 Total Depth 4520 Chlorides 600 ppm System LCM 44

Blow Description IF · S. blow built to B.O.B (12 inches) @ 10 mins 15 seconds.
ISI · Blowback built to 7 1/2 inches
FF · S. blow built to B.O.B (12 inches) @ 7 mins 45 seconds
FSI · Blowback built to 9 3/4" @ 19 1/2 mins + died back to 7 1/2"

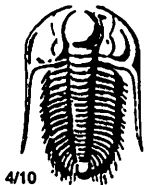
Rec	Feet of	%gas	%oil	%water	%mud
<u>183</u>	<u>Feet of GOCM</u>	<u>41</u>	<u>22</u>	<u>37</u>	
<u>303</u>	<u>Feet of CGO</u>	<u>7</u>	<u>93</u>		
<u>0</u>	<u>Feet of 1556' GIP</u>	<u>100</u>			

Rec Total 486 BHT 145 Gravity 35.6 API RW @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2255 Test 1150 T-On Location 00:19
 (B) First Initial Flow 72 Jars 250 T-Started 01:07
 (C) First Final Flow 109 Safety Joint 75 T-Open 03:24
 (D) Initial Shut-In 1333 Circ Sub — T-Pulled 07:24
 (E) Second Initial Flow 120 Hourly Standby — T-Out 09:53
 (F) Second Final Flow 185 Mileage 198RT 148.50
 (G) Final Shut-In 1294 Sampler —
 (H) Final Hydrostatic 2238 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder — Sub Total 0
 Day Standby — Total 1623.50
 Accessibility — MP/DST Disc't —
 Sub Total 1623.50

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64195

Well Name & No. Mears #1-16 Test No. 6 Date 7-13-17
 Company Murfin Drilling Co Inc Elevation 3371 KB 3366 GL
 Address 250 N. Water, STE 300, Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #24
 Location: Sec. 16 Twp. 2S. Rge. 37W. Co. Cheyenne State KS

Interval Tested 4677-4770 Zone Tested Ft Scott, Breezy Hill
 Anchor Length 93' Drill Pipe Run 4464 Mud Wt. 9.1
 Top Packer Depth 4672 Drill Collars Run 205 Vis 79
 Bottom Packer Depth 4677 Wt. Pipe Run — WL 5.6
 Total Depth 4770 Chlorides 600 ppm System LCM 4#

Blow Description IF - S. blow built to 1/4"
ISI - No blow
FF - No blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total	<u>5</u>	BHT	<u>142</u>	Gravity	API RW @ <u>—</u> °F Chlorides <u>—</u> ppm

(A) Initial Hydrostatic 2411 Test 1150 T-On Location 11:10
 (B) First Initial Flow 26 Jars 250 T-Started 11:56
 (C) First Final Flow 27 Safety Joint 75 T-Open 13:31
 (D) Initial Shut-In 1016 Circ Sub — T-Pulled 15:54
 (E) Second Initial Flow 26 Hourly Standby — T-Out 17:51
 (F) Second Final Flow 30 Mileage 198 RT 148.50 Comments —
 (G) Final Shut-In 1061 Sampler —
 (H) Final Hydrostatic 2379 Straddle —
 Shale Packer —
 Extra Packer —
 Extra Recorder —
 Day Standby —
 Accessibility —
 Sub Total 1623.50

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 45

Ruined Shale Packer —
 Ruined Packer —
 Extra Copies —
 Sub Total 0
 Total 1623.50
 MP/DST Disc't —

Approved By _____ Our Representative [Signature]

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Saman Sharifaie

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

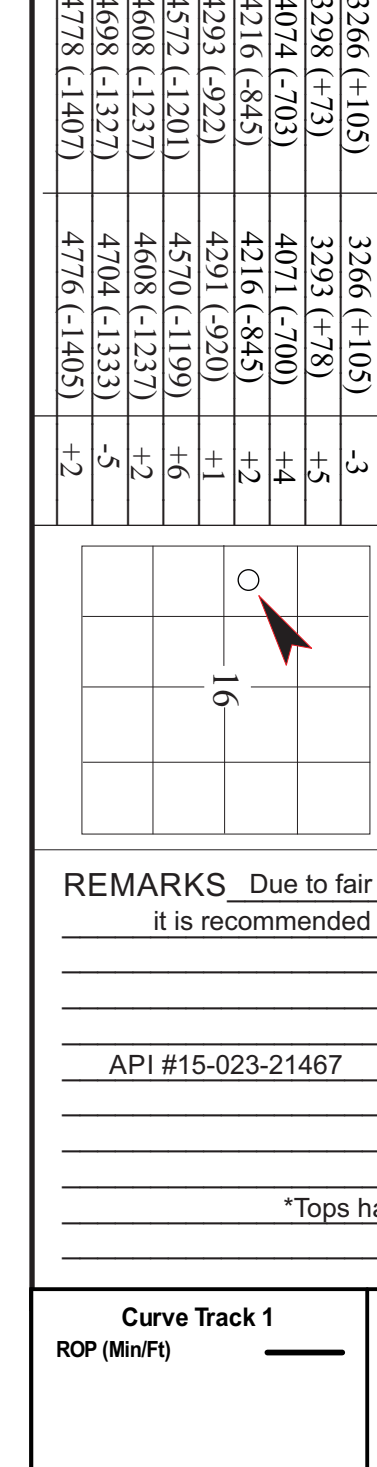
COMPANY: **Martin Drilling Co., Inc.**
LEASE: **Mears #1-16**

FIELD: **Kern**
LOCATION: **2140 FNL & 660 F.W.L.**
SEC: **16 TWSP 2S RGE 31W**
COUNTY: **Cherokee STATE Kansas**
CONTRACTOR: **Martin Drilling #24**
SPUD: **07/05/17 COMP 07/11/17**
RTD: **4900' TYPE MUD 4899'**
MUD UP: **3300' LIME MUD Chemical**

DEFS: **GL 3366'**
MEASUREMENTS ARE ALL FROM KELLY BUSHING
CASING CONDUCTOR: **8-5/8" at 345'**
SURFACE: **5-1/2" at 4899'**
PRODUCTION: **5-1/2" at 4899'**

SAVES: **3970' TO RTD**
DRILLING TIME KEPT FROM: **3970' TO RTD**
SAMPLES EXAMINED FROM: **3970' TO RTD**
GEOLOGICAL SUPERVISION FROM: **3670'**
CND: **D.L. MEL. Somic**
REFERENCE WELL: **Berexco - Ardene #1-17**
Porter Well

Formation	Sample Tops	E-log Tops	Strat Pos.
Anhydrite	3366 (+105)	3366 (+105)	-3
Base Anhydrite	3393 (+78)	3393 (+78)	-5
TUSKIN	4072 (-203)	4071 (-200)	-4
Levelling	4216 (-845)	4216 (-845)	-2
Levelling	4293 (-923)	4291 (-920)	-2
Marathon	4372 (-1201)	4370 (-1199)	+6
Marathon	4608 (-1237)	4608 (-1237)	+2
FT SCOT	4698 (-1337)	4704 (-1333)	+2
ORLEY	4778 (-1407)	4776 (-1405)	-2



REMARKS Due to fair to good shows of oil in several potential pay zones and positive DST results in LKC H & J zones, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,

API #15-023-21467

Saman Sharifaie
Petroleum Geologist

*Tops have been adjusted to electric logs

