

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 Recompletion Date _____ 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	EUHUS 1-24
Doc ID	1329798

All Electric Logs Run

DIL
DUCP
MEL
BHCS



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: Rocky Milford

Euhus #1-24

24-2s-30w Decatur,KS

Start Date: 2017.01.15 @ 21:53:00

End Date: 2017.01.16 @ 06:57:00

Job Ticket #: 61223 DST #: 1

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

Printed: 2017.01.19 @ 09:53:19



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur,KS

Euhus #1-24

Job Ticket: 61223

DST#: 1

Test Start: 2017.01.15 @ 21:53:00

GENERAL INFORMATION:

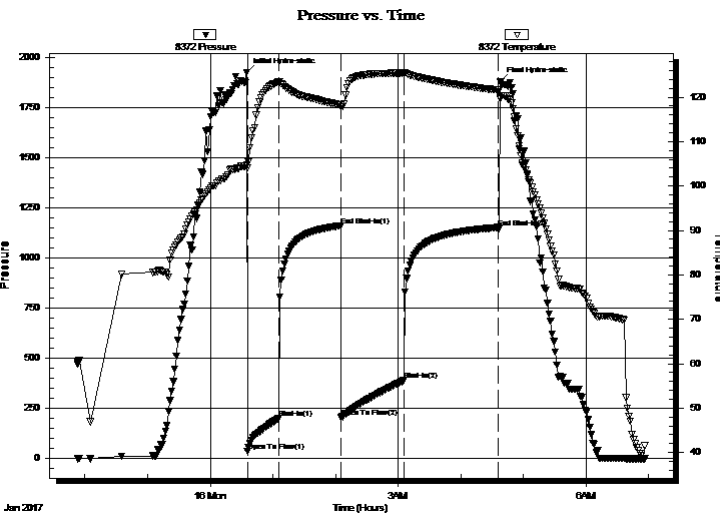
Formation: **LKC " A "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:35:30
 Time Test Ended: 06:57:00
 Interval: **3775.00 ft (KB) To 3832.00 ft (KB) (TVD)**
 Total Depth: 3832.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 2814.00 ft (KB)
 2809.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8372

Outside

Press@RunDepth: 388.50 psig @ 3778.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.01.15 End Date: 2017.01.16 Last Calib.: 2017.01.16
 Start Time: 21:53:01 End Time: 06:56:30 Time On Btm: 2017.01.16 @ 00:35:00
 Time Off Btm: 2017.01.16 @ 04:37:30

TEST COMMENT: 30-IFP- BOB in 5 min.
 60-ISIP- 1"- 10 min. 1 1/2" - 17 min. Died Back in 24 min.
 60-FFP- BOB in 8 min.
 90-FSIP- Surface Blow Building to 1" In 16 min. Died Back in 26 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1924.66	104.72	Initial Hydro-static
1	37.07	104.15	Open To Flow (1)
31	200.46	123.51	Shut-In(1)
90	1159.86	118.24	End Shut-In(1)
91	204.03	117.84	Open To Flow (2)
151	388.50	125.47	Shut-In(2)
241	1151.81	121.61	End Shut-In(2)
243	1880.85	119.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
672.00	MCW 5% <i>m</i> 95% <i>w</i>	7.83
62.00	MCW 20% <i>m</i> 80% <i>w</i> Show of Oil	0.87
45.00	OMCW 20% <i>o</i> 30% <i>m</i> 50% <i>w</i>	0.63
5.00	CO 100%	0.07
0.00	100 GIP	0.00

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 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur,KS
Euhus #1-24
Job Ticket: 61223 **DST#: 1**
Test Start: 2017.01.15 @ 21:53:00

Tool Information

Drill Pipe:	Length: 3584.00 ft	Diameter: 3.80 inches	Volume: 50.27 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: 175.00 ft	Diameter: 2.25 inches	Volume: 0.86 bbl	Weight to Pull Loose: 57000.00 lb
			<u>Total Volume: 51.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3775.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3748.00	
Shut In Tool	5.00			3753.00	
Hydraulic tool	5.00			3758.00	
Jars	5.00			3763.00	
Safety Joint	2.00			3765.00	
Packer	5.00			3770.00	28.00 Bottom Of Top Packer
Packer	5.00			3775.00	
Stubb	1.00			3776.00	
Perforations	1.00			3777.00	
Change Over Sub	1.00			3778.00	
Recorder	0.00	8789	Inside	3778.00	
Recorder	0.00	8372	Outside	3778.00	
Blank Spacing	31.00			3809.00	
Change Over Sub	1.00			3810.00	
Perforations	19.00			3829.00	
Bullnose	3.00			3832.00	57.00 Bottom Packers & Anchor
Total Tool Length:	85.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur,KS
Euhus #1-24
Job Ticket: 61223 **DST#: 1**
Test Start: 2017.01.15 @ 21:53:00

Mud and Cushion Information

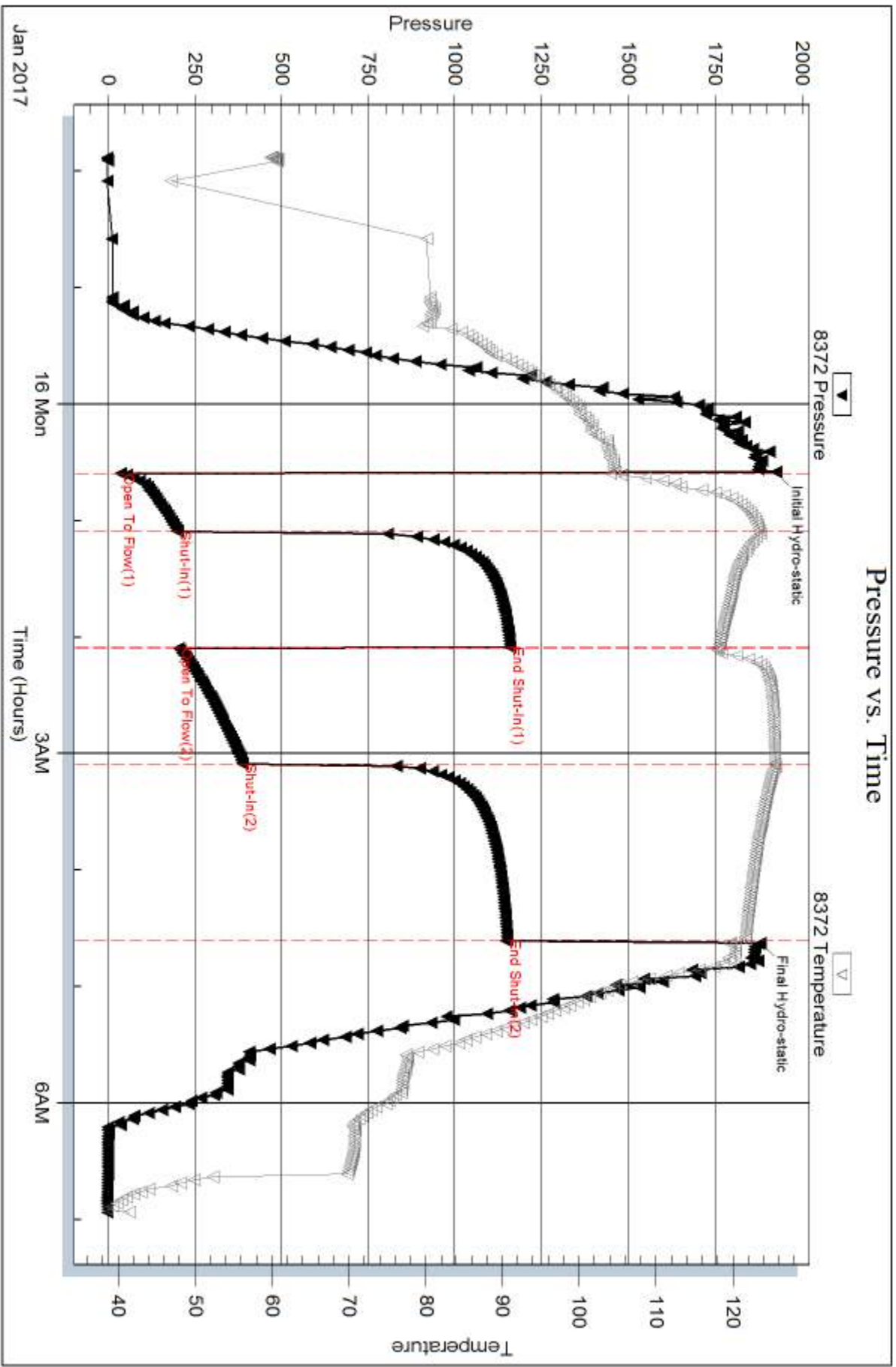
Mud Type: Gel Chem	Cushion Type:	Oil API: 33 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 180000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.96 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 900.00 ppm		
Filter Cake: 6.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
672.00	MCW 5%m 95%w	7.832
62.00	MCW 20%m 80%w Show of Oil	0.870
45.00	OMCW 20%o 30%m 50%w	0.631
5.00	CO 100%	0.070
0.00	100 GIP	0.000

Total Length: 784.00 ft Total Volume: 9.403 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: .115 @ 34



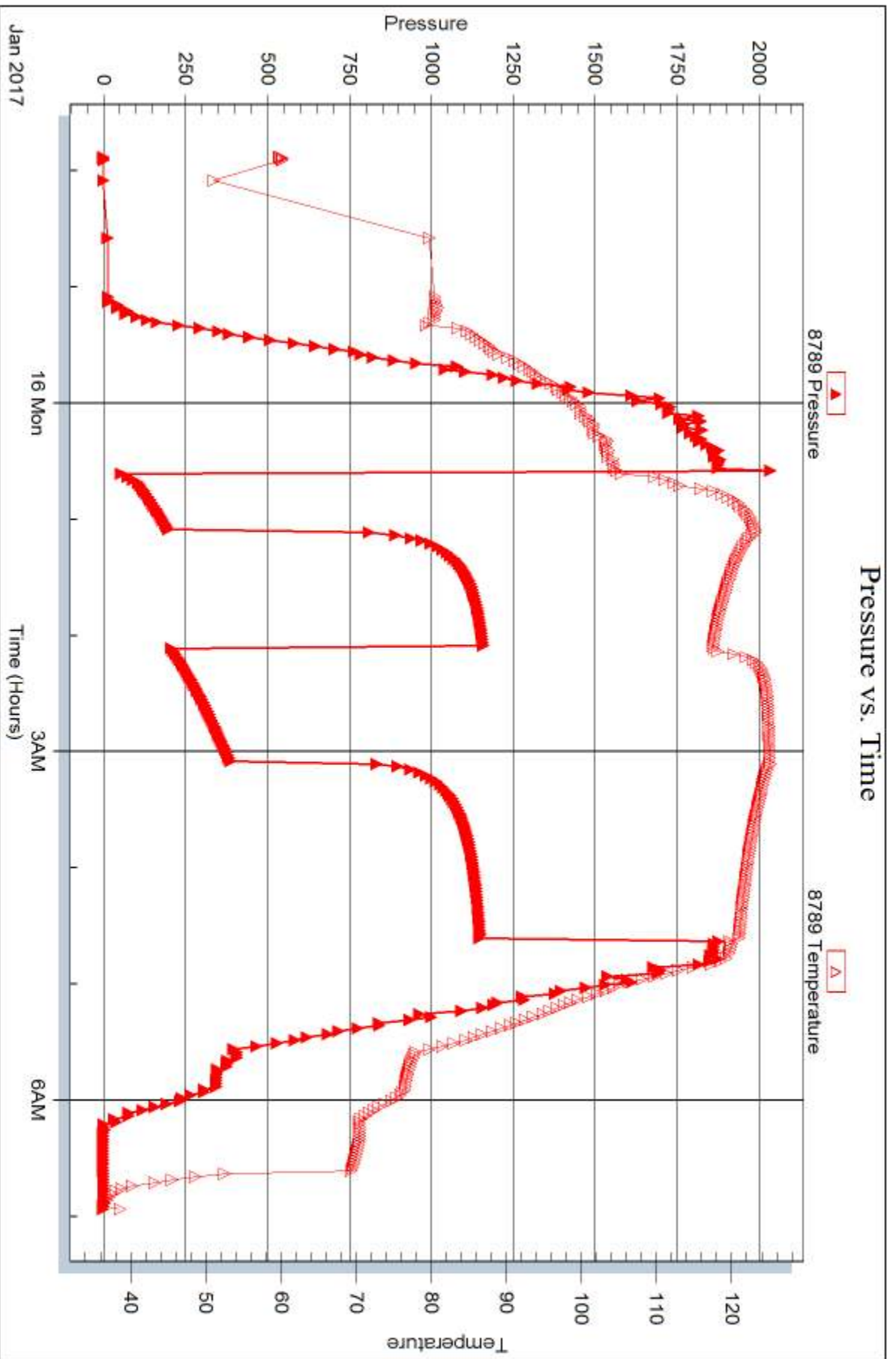
Serial #: 8789

Inside

Murfin Drilling Co Inc

Elhus #1-24

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 61223

Printed: 2017.01.19 @ 09:53:20



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: Rocky Milford

Euhus #1-24

24-2s-30w Decatur,KS

Start Date: 2017.01.16 @ 18:21:00

End Date: 2017.01.17 @ 02:12:00

Job Ticket #: 61224 DST #: 2

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

Printed: 2017.01.19 @ 09:52:59



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur, KS

Euhus #1-24

Job Ticket: 61224

DST#: 2

Test Start: 2017.01.16 @ 18:21:00

GENERAL INFORMATION:

Formation: **LKC " D - G "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:06:00

Time Test Ended: 02:12:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: 3827.00 ft (KB) To 3922.00 ft (KB) (TVD)

Reference Elevations: 2814.00 ft (KB)

Total Depth: 3922.00 ft (KB) (TVD)

2809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8372 Outside

Press@RunDepth: 134.22 psig @ 3831.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.01.16

End Date: 2017.01.17

Last Calib.: 2017.01.17

Start Time: 18:21:01

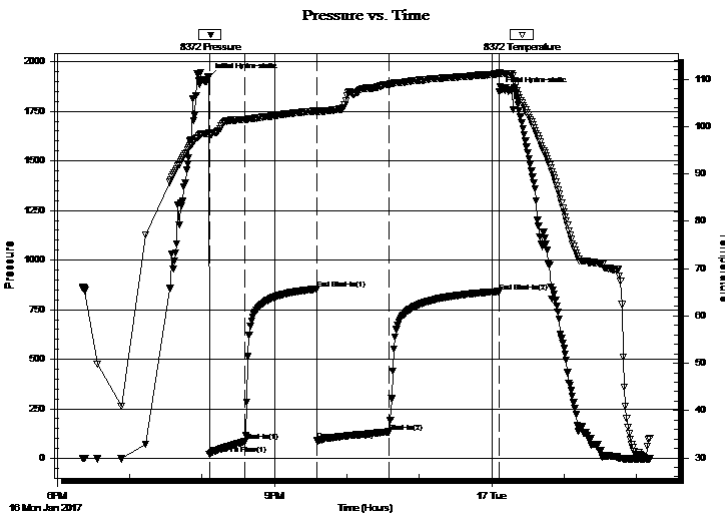
End Time: 02:11:30

Time On Btm: 2017.01.16 @ 20:05:30

Time Off Btm: 2017.01.17 @ 00:06:30

TEST COMMENT: 30-IFP- weak blow built to 7 3/4".
60-ISIP- Surface Blow in 2 min. Dead in 35 min.
60-FFP- BOB in 45 1/2 min.
90-FSIP- Weak Surface Blow in 2 1/2 min. Dead in 20 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1920.27	98.79	Initial Hydro-static
1	22.39	98.37	Open To Flow (1)
30	84.95	101.44	Shut-In(1)
90	854.14	103.36	End Shut-In(1)
90	89.63	102.96	Open To Flow (2)
150	134.22	108.89	Shut-In(2)
241	841.63	111.17	End Shut-In(2)
241	1850.99	111.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
175.00	OWCM 10%o 30%w 60%m	0.86
77.00	OCM 30%o 70%m	1.08
0.00	50 GIP	0.00

* 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
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur,KS
Euhus #1-24
Job Ticket: 61224 **DST#: 2**
Test Start: 2017.01.16 @ 18:21:00

Tool Information

Drill Pipe:	Length: 3646.00 ft	Diameter: 3.80 inches	Volume: 51.14 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: 175.00 ft	Diameter: 2.25 inches	Volume: 0.86 bbl	Weight to Pull Loose: 55000.00 lb
		Total Volume: 52.00 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3827.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	123.00 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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Change Over Sub	1.00			3800.00	
Shut In Tool	5.00			3805.00	
Hydraulic tool	5.00			3810.00	
Jars	5.00			3815.00	
Safety Joint	2.00			3817.00	
Packer	5.00			3822.00	28.00 Bottom Of Top Packer
Packer	5.00			3827.00	
Stubb	1.00			3828.00	
Perforations	3.00			3831.00	
Recorder	0.00	8789	Inside	3831.00	
Recorder	0.00	8372	Outside	3831.00	
Perforations	24.00			3855.00	
Change Over Sub	1.00			3856.00	
Blank Spacing	62.00			3918.00	
Change Over Sub	1.00			3919.00	
Bullnose	3.00			3922.00	95.00 Bottom Packers & Anchor
Total Tool Length:	123.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur,KS
Euhus #1-24
Job Ticket: 61224 **DST#: 2**
Test Start: 2017.01.16 @ 18:21:00

Mud and Cushion Information

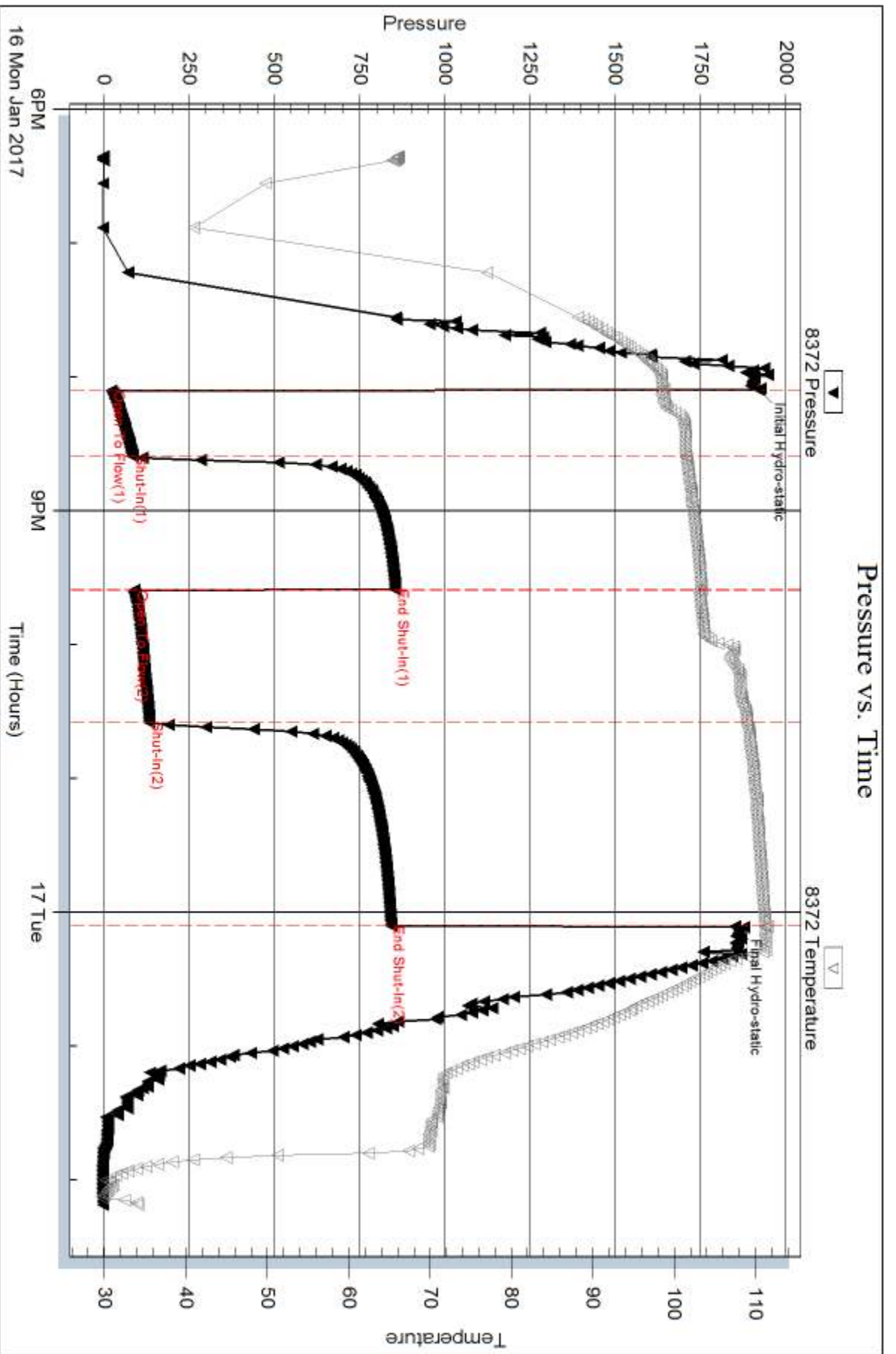
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	58000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.76 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1100.00 ppm			
Filter Cake: 5.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
175.00	OWCM 10%o 30%w 60%m	0.861
77.00	OCM 30%o 70%m	1.080
0.00	50 GIP	0.000

Total Length: 252.00 ft Total Volume: 1.941 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .305 @ 30





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: Rocky Milford

Euhus #1-24

24-2s-30w Decatur,KS

Start Date: 2017.01.17 @ 11:27:00

End Date: 2017.01.17 @ 18:12:00

Job Ticket #: 61225 DST #: 3

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

Printed: 2017.01.19 @ 09:52:35

Murfin Drilling Co Inc
24-2s-30w Decatur,KS
Euhus #1-24
DST # 3
LKC "H-J"
2017.01.17



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita KS 67202-1216
 ATTN: Rocky Milford

24-2s-30w Decatur,KS

Euhus #1-24

Job Ticket: 61225

DST#: 3

Test Start: 2017.01.17 @ 11:27:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:31:30
 Time Test Ended: 18:12:00
 Interval: **3917.00 ft (KB) To 3985.00 ft (KB) (TVD)**
 Total Depth: 3985.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 2814.00 ft (KB)
 2809.00 ft (CF)
 KB to GR/CF: 5.00 ft

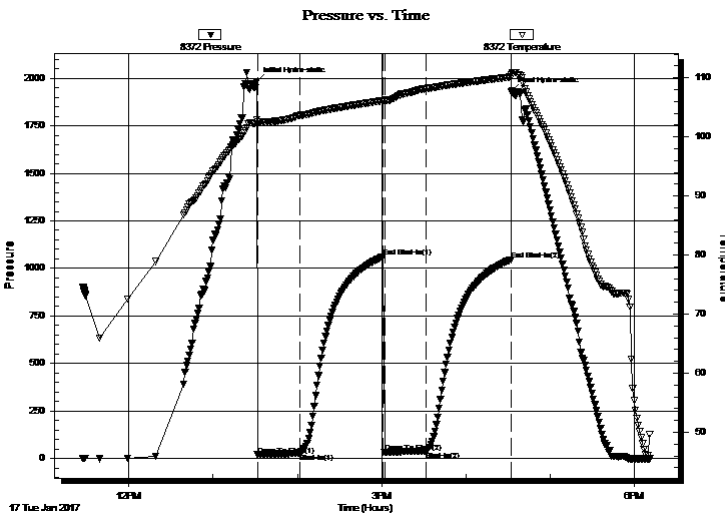
Serial #: 8372

Outside

Press@RunDepth: 39.77 psig @ 3920.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.01.17 End Date: 2017.01.17 Last Calib.: 2017.01.17
 Start Time: 11:27:01 End Time: 18:11:30 Time On Btm: 2017.01.17 @ 13:31:00
 Time Off Btm: 2017.01.17 @ 16:32:30

TEST COMMENT: 30-IFP- Surface Blow Building to 1" in 11 min.
 60-ISIP- No Blow
 30-FFP- Weak Surface Blow Died in 4 min.
 60-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1982.06	102.92	Initial Hydro-static
1	19.72	102.19	Open To Flow (1)
31	28.70	103.63	Shut-In(1)
90	1061.03	106.16	End Shut-In(1)
91	33.32	106.00	Open To Flow (2)
121	39.77	108.19	Shut-In(2)
181	1045.81	110.14	End Shut-In(2)
182	1929.51	110.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	0.07

* 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
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur,KS
Euhus #1-24
Job Ticket: 61225 **DST#: 3**
Test Start: 2017.01.17 @ 11:27:00

Tool Information

Drill Pipe:	Length: 3739.00 ft	Diameter: 3.80 inches	Volume: 52.45 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: 175.00 ft	Diameter: 2.25 inches	Volume: 0.86 bbl	Weight to Pull Loose: 57000.00 lb
			<u>Total Volume: 53.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3917.00 ft			Final 54000.00 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: Recorder 8789 was plugged off in the handling sub.

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3890.00	
Shut In Tool	5.00			3895.00	
Hydraulic tool	5.00			3900.00	
Jars	5.00			3905.00	
Safety Joint	2.00			3907.00	
Packer	5.00			3912.00	28.00 Bottom Of Top Packer
Packer	5.00			3917.00	
Stubb	1.00			3918.00	
Perforations	2.00			3920.00	
Recorder	0.00	8789	Inside	3920.00	
Recorder	0.00	8372	Outside	3920.00	
Perforations	29.00			3949.00	
Change Over Sub	1.00			3950.00	
Blank Spacing	31.00			3981.00	
Change Over Sub	1.00			3982.00	
Bullnose	3.00			3985.00	68.00 Bottom Packers & Anchor
Total Tool Length:	96.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

24-2s-30w Decatur,KS

250 N Water Ste 300
Wichita KS 67202-1216

Euhus #1-24

Job Ticket: 61225

DST#: 3

ATTN: Rocky Milford

Test Start: 2017.01.17 @ 11:27:00

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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 8.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud 100%	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

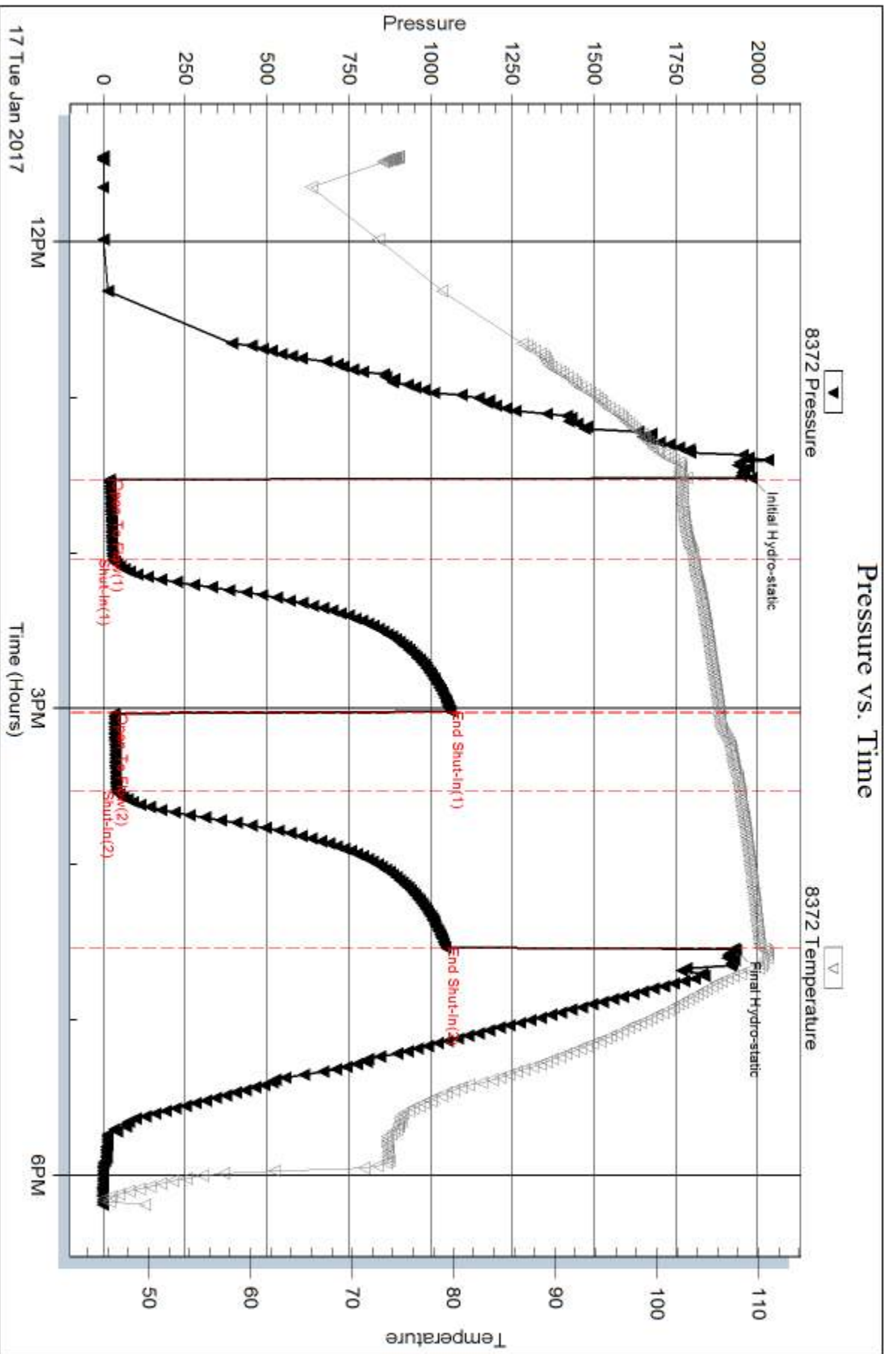
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



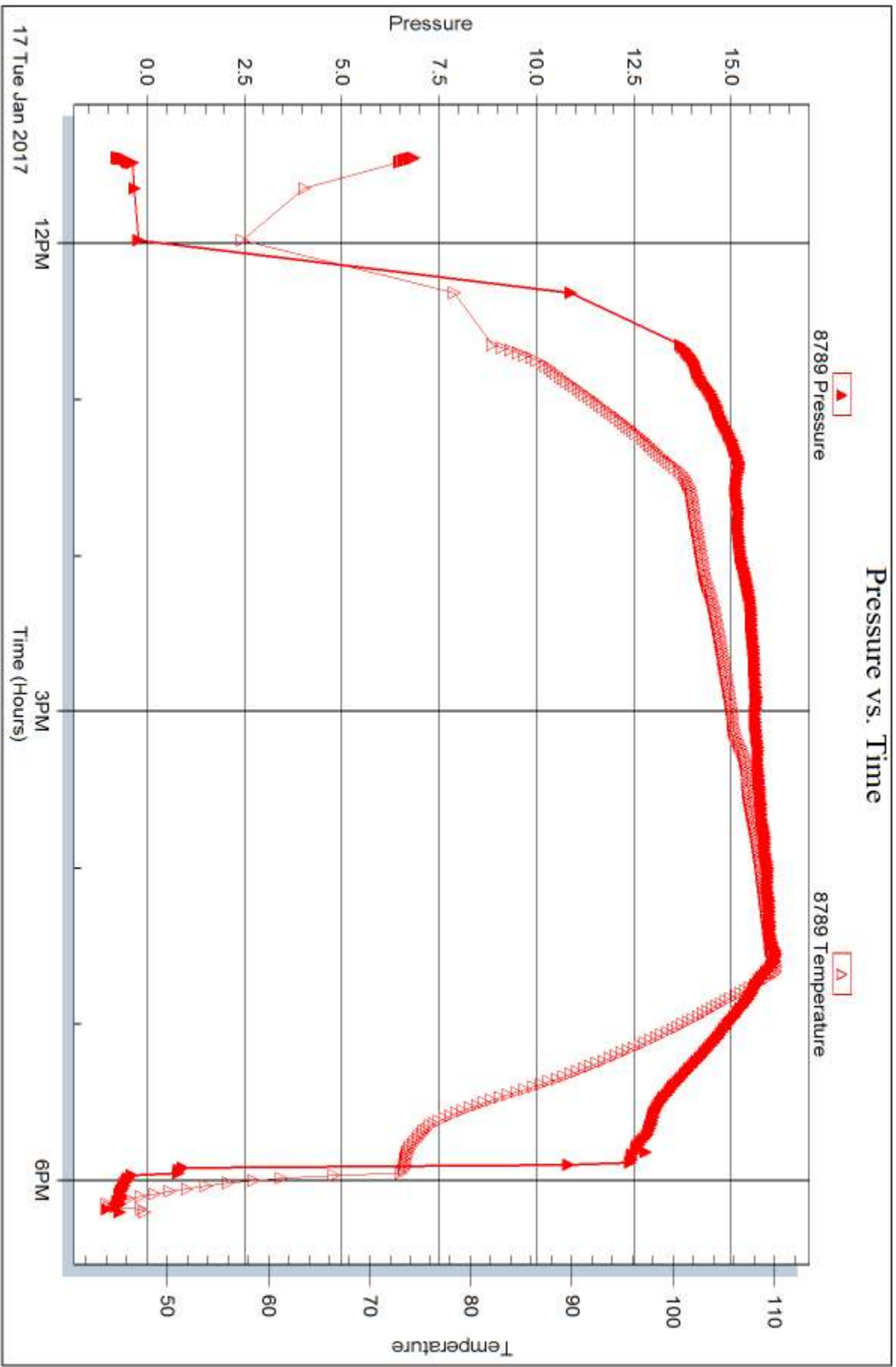
Serial #: 8789

Inside

Murfin Drilling Co Inc

Elhus #1-24

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 61225

Printed: 2017.01.19 @ 09:52:35



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: Rocky Milford

Euhus #1-24

24-2s-30w Decatur,KS

Start Date: 2017.01.18 @ 02:57:00

End Date: 2017.01.18 @ 09:46:00

Job Ticket #: 64051 DST #: 4

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

Printed: 2017.01.19 @ 09:52:10



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur, KS

Euhus #1-24

Job Ticket: 64051

DST#: 4

Test Start: 2017.01.18 @ 02:57:00

GENERAL INFORMATION:

Formation: **LKC " K - L "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:45:30

Time Test Ended: 09:46:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: 3981.00 ft (KB) To 4038.00 ft (KB) (TVD)

Reference Elevations: 2814.00 ft (KB)

Total Depth: 4038.00 ft (KB) (TVD)

2809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8372 Outside

Press@RunDepth: 34.36 psig @ 3984.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.01.18

End Date:

2017.01.18

Last Calib.:

2017.01.18

Start Time: 02:57:01

End Time:

09:45:30

Time On Btm:

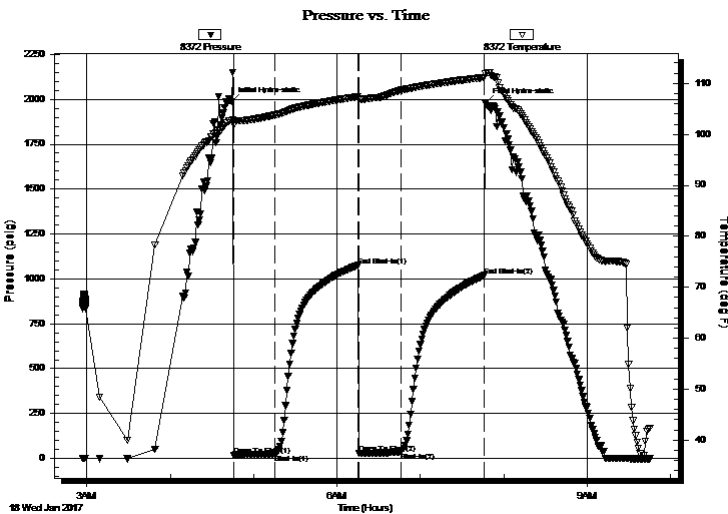
2017.01.18 @ 04:44:30

Time Off Btm:

2017.01.18 @ 07:47:00

TEST COMMENT: 30-IFP- 1" Blow in 6 min. Building to 2"
60-ISIP- No Blow
30-FFP- Surface Blow Building to 1/2"
60-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1985.25	102.72	Initial Hydro-static
1	17.27	101.77	Open To Flow (1)
31	24.60	103.79	Shut-In(1)
91	1074.95	107.40	End Shut-In(1)
92	27.33	106.97	Open To Flow (2)
122	34.36	108.64	Shut-In(2)
182	1018.39	111.14	End Shut-In(2)
183	1978.32	111.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100%	0.05

* 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
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur,KS
Euhus #1-24
Job Ticket: 64051 **DST#: 4**
Test Start: 2017.01.18 @ 02:57:00

Tool Information

Drill Pipe:	Length: 3801.00 ft	Diameter: 3.80 inches	Volume: 53.32 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: 175.00 ft	Diameter: 2.25 inches	Volume: 0.86 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 54.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3981.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Change Over Sub	1.00			3954.00	
Shut In Tool	5.00			3959.00	
Hydraulic tool	5.00			3964.00	
Jars	5.00			3969.00	
Safety Joint	2.00			3971.00	
Packer	5.00			3976.00	28.00 Bottom Of Top Packer
Packer	5.00			3981.00	
Stubb	1.00			3982.00	
Perforations	1.00			3983.00	
Change Over Sub	1.00			3984.00	
Recorder	0.00	8789	Inside	3984.00	
Recorder	0.00	8372	Outside	3984.00	
Blank Spacing	31.00			4015.00	
Change Over Sub	1.00			4016.00	
Perforations	19.00			4035.00	
Bullnose	3.00			4038.00	57.00 Bottom Packers & Anchor
Total Tool Length:	85.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Rocky Milford

24-2s-30w Decatur,KS
Euhus #1-24
Job Ticket: 64051 **DST#: 4**
Test Start: 2017.01.18 @ 02:57:00

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: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3600.00 ppm			
Filter Cake: 8.00 inches			

Recovery Information

Recovery Table

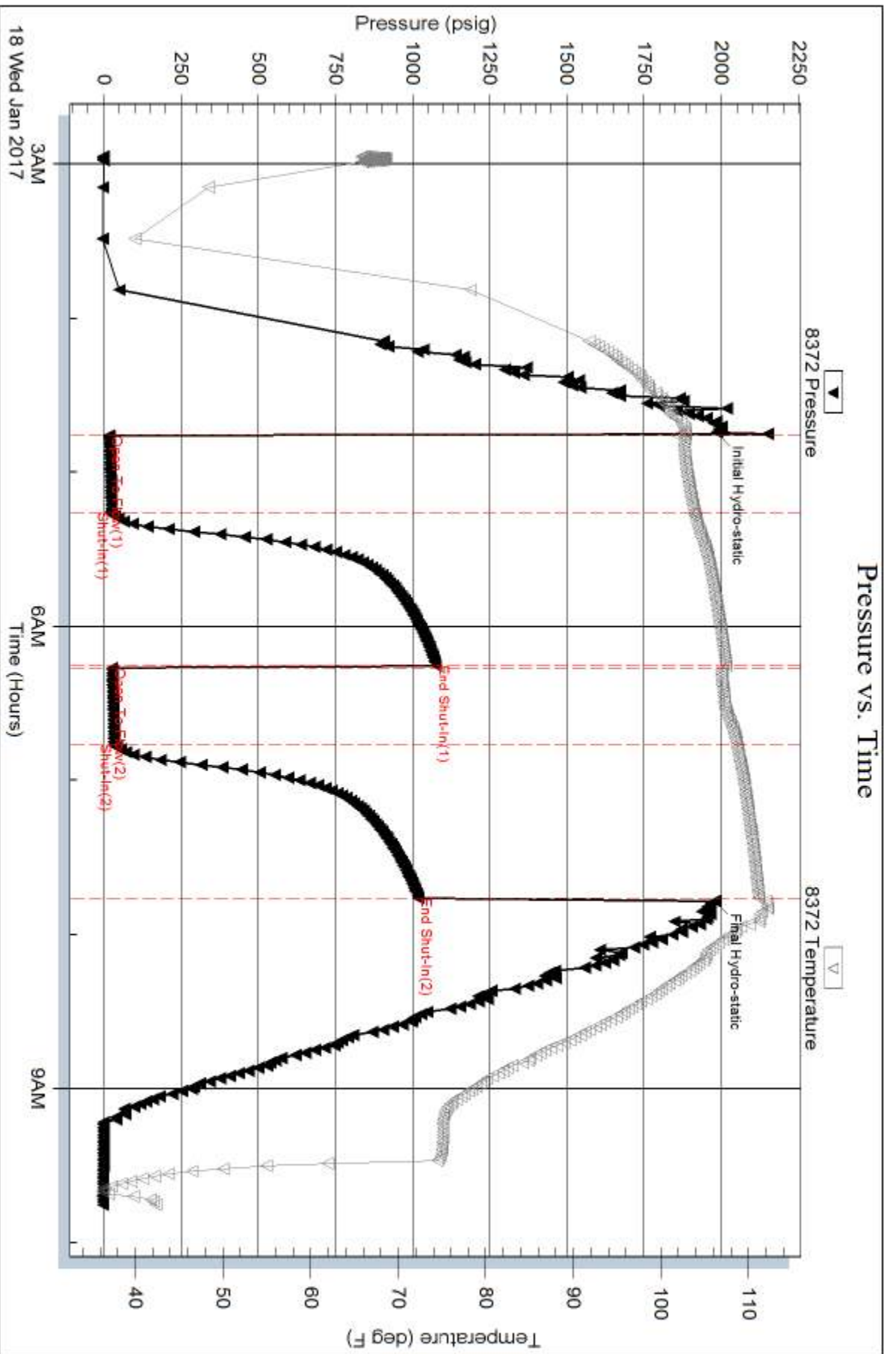
Length ft	Description	Volume bbl
10.00	Mud 100%	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:



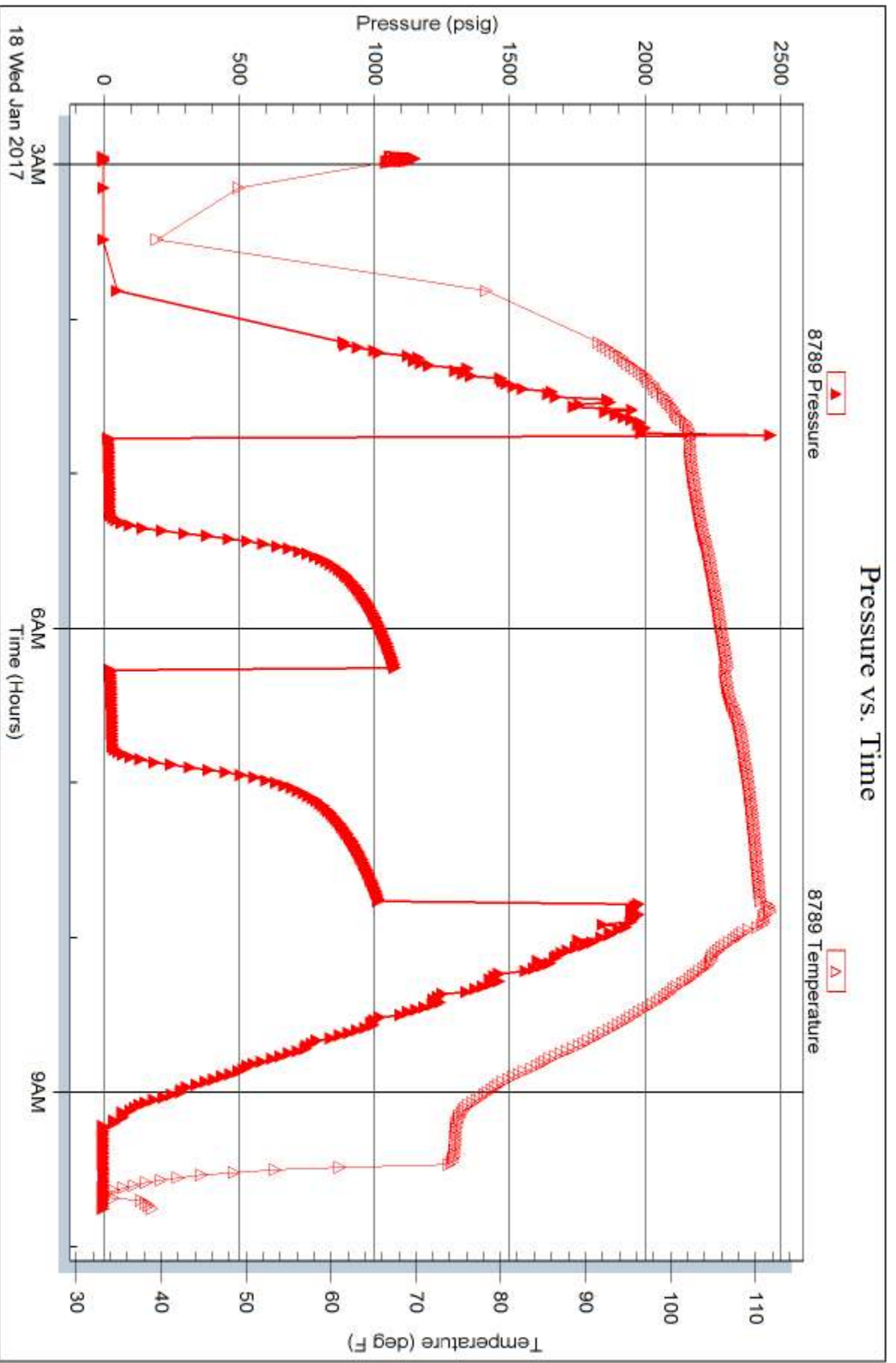
Serial #: 8789

Inside

Murfin Drilling Co Inc

Elhus #1-24

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 64051

Printed: 2017.01.19 @ 09:52:11



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61223

4/10

Well Name & No. Euhus 1-24 Test No. 1 Date 1-15-17
 Company Murfin Drilling Co. Inc. Elevation 2814 KB 2809 GL
 Address 250 N. Water Ste 300 Wichita KS 67202-1216
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 24 Twp. 25 Rge. 30W Co. Decatur State KS

Interval Tested 3775-3832 Zone Tested LKC "A"
 Anchor Length 57 Drill Pipe Run 3584 Mud Wt. 8.8
 Top Packer Depth 3770 Drill Collars Run 175 Vis 55
 Bottom Packer Depth 3775 Wt. Pipe Run 0 WL 6
 Total Depth 3832 Chlorides 900 ppm System LCM 6

Blow Description IFP - BOB in 5min.
ISIP - 1in-10min - 1 1/2 in 17min. Died Back in 24min.
AFP - BOB in 8min.
FSIP - Surface Blow Building to 1in. In 16min. Died Back 26min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>672</u>	<u>mcw</u>		<u>95</u>	<u>5</u>	
<u>62</u>	<u>mcw show of Oil</u>		<u>80</u>	<u>20</u>	
<u>45</u>	<u>0mcw</u>	<u>20</u>	<u>50</u>	<u>30</u>	
<u>5</u>	<u>CO</u>	<u>100</u>			
	<u>100 SIP</u>				

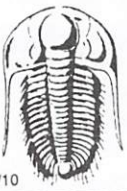
Rec Total 784 BHT 121 Gravity 33 API RW .115 @ 34 °F Chlorides 180,000 ppm

(A) Initial Hydrostatic 1924 Test 1050 T-On Location 19:53
 (B) First Initial Flow 37 Jars 250 T-Started 21:53
 (C) First Final Flow 200 Safety Joint 75 T-Open 00:36
 (D) Initial Shut-In 1159 Circ Sub _____ T-Pulled 04:36
 (E) Second Initial Flow 204 Hourly Standby _____ T-Out 06:57
 (F) Second Final Flow 388 Mileage 13.50 RT 18 Comments _____
 (G) Final Shut-In 1151 Sampler _____
 (H) Final Hydrostatic 1880 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30 Extra Packer _____
 Initial Shut-In 60 Extra Recorder _____
 Final Flow 60 Day Standby _____
 Final Shut-In 90 Accessibility _____
 Sub Total 1638.50 Total 1638.50 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. 61224

Well Name & No. Euhus 1-24 Test No. 2 Date 1-16-17
 Company MurFin Drilling Co., Inc. Elevation 2814 KB 2809 GL
 Address 250 N. Water Ste 300 Wichita KS 67202-1216
 Co. Rep / Geo. Rocky Milford Rig MurFin 3
 Location: Sec. 24 Twp. 25 Rge. 30W Co. Decatur State KS

Interval Tested 3827-3922 Zone Tested LKC "D-2"
 Anchor Length 95 Drill Pipe Run 3646 Mud Wt. 9
 Top Packer Depth 3822 Drill Collars Run 175 Vis 58
 Bottom Packer Depth 3827 Wt. Pipe Run 0 WL 6.8
 Total Depth 3922 Chlorides 1100 ppm System LCM 5

Blow Description I FP - (1-3m) (2"-6 1/2") (3"-10m) (4"-14m) (5"-18m) (6"-22m) (7"-26m) (7 3/4"-30m)
ISIP - Surface Blow in 2min. Dead in 35min.
FFP - BOB in 45 1/2 min.
FSIP - Weak Surface Blow in 2 1/2 min. Dead in 20 min.

Rec <u>175</u>	Feet of <u>0 WCM</u>	%gas <u>10</u>	%oil <u>30</u>	%water <u>60</u>	%mud
Rec <u>77</u>	Feet of <u>0 cm</u>	%gas <u>30</u>	%oil	%water <u>70</u>	%mud
Rec	Feet of <u>50 MIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 252 BHT 111 Gravity _____ API RW 1305 @ 30 ° F Chlorides 58000 ppm

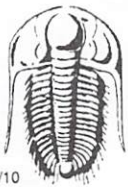
(A) Initial Hydrostatic <u>1920</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>17:00</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>18:21</u>
(C) First Final Flow <u>84</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>20:06</u>
(D) Initial Shut-In <u>854</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>00:06</u>
(E) Second Initial Flow <u>89</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>02:12</u>
(F) Second Final Flow <u>134</u>	<input checked="" type="checkbox"/> Mileage <u>13.50</u>	Comments _____
(G) Final Shut-In <u>841</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1850</u>	<input type="checkbox"/> Straddle	

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

Sub Total 1388.50 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61225

4/10

Well Name & No. Euhus 1-24 Test No. 3 Date 1-17-17
 Company Murfin Drilling Co. Inc. Elevation 2814 KB 2809 GL
 Address 250 N. Water St 300 Wichita KS 67202-1216
 Co. Rep / Geo. Rocky Milford Rig Murfin 3
 Location: Sec. 24 Twp. 2^s Rge. 30^w Co. Decatur State KS

Interval Tested 3917-3985 Zone Tested LKC "H-J"
 Anchor Length 68 Drill Pipe Run 3739 Mud Wt. 9.2
 Top Packer Depth 3912 Drill Collars Run 175 Vis 62
 Bottom Packer Depth 3917 Wt. Pipe Run ⊖ WL 5.6
 Total Depth 3985 Chlorides 3600 ppm System LCM 8
 Blow Description IFP - Surface Blow Building to 11". In 11 min.
ISIP - No Blow
FFP - Weak Surface Blow Died in 4 min.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</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 15 BHT 110 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1982</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>10:49</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:27</u>
(C) First Final Flow <u>28</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:32</u>
(D) Initial Shut-In <u>1061</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>16:32</u>
(E) Second Initial Flow <u>33</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>18:12</u>
(F) Second Final Flow <u>39</u>	<input checked="" type="checkbox"/> Mileage <u>13.50</u>	Comments _____
(G) Final Shut-In <u>1045</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1929</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>1388.50</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1388.50</u>	

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64051**

Well Name & No. Euhas 1-24 Test No. 4 Date 1-18-17
 Company Murfin Drilling Co. Inc. Elevation 2814 KB 2809 GL
 Address 250 N. WATER ST. 300 WICHITA KS. 67202-1216
 Co. Rep / Geo. Rocky Milford Rig Murfin 3
 Location: Sec. 24 Twp. 2S Rge. 30W Co. Decatur State KS

Interval Tested 3981-4038 Zone Tested LKC "K+L"
 Anchor Length 57 Drill Pipe Run 3801 Mud Wt. 9.2
 Top Packer Depth 3976 Drill Collars Run 175 Vis 62
 Bottom Packer Depth 3981 Wt. Pipe Run 0 WL 5.6
 Total Depth 4038 Chlorides 3600 ppm System LCM 8

Blow Description IFP - in Blowline - Building to 2 in.
ISIP - No Blow
FFP - Surface Blow Building to 1/2 in.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</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 10 BHT 112 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1985 Test 1150 T-On Location 02:19
 (B) First Initial Flow 17 Jars 250 T-Started 02:57
 (C) First Final Flow 24 Safety Joint 75 T-Open 04:46
 (D) Initial Shut-In 1074 Circ Sub _____ T-Pulled 07:46
 (E) Second Initial Flow 27 Hourly Standby _____ T-Out 09:46
 (F) Second Final Flow 34 Mileage 27 X2 Comments _____
 (G) Final Shut-In 1018 Sampler _____ loaded tools 1/19 3:51
 (H) Final Hydrostatic 1978 Straddle _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30 Shale Packer _____
 Initial Shut-In 60 Extra Packer _____
 Final Flow 30 Extra Recorder _____
 Final Shut-In 60 Day Standby _____
 Accessibility _____
 Sub Total 1502 Sub Total 1502 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]
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Remit to:
BJ Services LLC
P.O. Box 733585
Dallas, TX 75373-3585

ALLIED OFS, LLC

Tax ID 81-1373543

0/185

68258

SERVICE POINT:

Callahan

DATE <u>1/11/10</u>	SEC <u>24</u>	TWP <u>2</u>	RANGE <u>30</u>	CALLED OUT	ON LOCATION	JOB START <u>11:00</u>	JOB FINISH <u>11:30 P</u>
LEASE <u>Eubank</u>	WELL # <u>1-24</u>	LOCATION <u>Oberlin W 70 600 Rd</u>	COUNTY <u>Lawson</u>	STATE <u>Ky</u>			
OLD OR NEW (Circle one)		<u>3 N</u>					

CONTRACTOR Murfin J
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 271
 CASING SIZE 8 7/8 DEPTH 271
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT

OWNER Same
 CEMENT AMOUNT ORDERED 175 Com 370 CC

EQUIPMENT
 PUMP TRUCK CEMENTER Alan Ryan
 # 506 781 HELPER Kevin Ryan
 BULK TRUCK
 # 377 DRIVER Jade Mitten
 BULK TRUCK
 # DRIVER

COMMON 125 @ 12.00 3152.00
 POZMIX @
 GEL @
 CHLORIDE 494 @ 1.10 543.40
 ASC @
 @
 @
 @
 @
 @
 @

TOTAL 3675.90

DISCOUNT 45% 1654.15

REMARKS:

From City, gravel, mix cement, Displace Cement
Sheet in
Cement did gravel
Alan Ryan
Alan Ryan, KY

SERVICE

HANDLING 184.22 @ 2.20 458.24
 MILEAGE 25 1164.22
 DEPTH OF JOB
 PUMP TRUCK CHARGE 1512.25
 EXTRA FOOTAGE @
 HV MILEAGE 30 @ 12.00 385.00
 LV MILEAGE 50 @ 4.40 220.00
 @
 @

TOTAL 3740.36

DISCOUNT 45% 1683.16

CHARGE TO: Murfin
 STREET
 CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

2 Centralizers @ 25 225.00
 @
 @
 @
 @

TOTAL 225.00

DISCOUNT 0% 0

To:
 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 Klint Farr
 SIGNATURE [Signature]

SALES TAX (If Any)
 TOTAL CHARGES 7641.26
 DISCOUNT 3,337.31 (45%) IF PAID IN 30 DAYS
 NET TOTAL 4,303.94 IF PAID IN 30 DAYS

Bid

TREATMENT REPORT



HURRICANE SERVICES INC

Customer:	Murfin Drilling Co. Inc.	Date:	1/19/2017	Ticket No.:	100715
Field Rep:	Bo Farr				
Address:					
City, State:					
County, Zip:					

Field Order No.:	100715	Open Hole:		Perf Depths (ft)	Perfs
Well Name:	Euhus	Casing Depth:			
Location:	Oberlin, Ks.	Casing Size:			
Formation:		Tubing Depth:	2580'		
Type of Service:	PTA	Tubing Size:			
Well Type:		Liner Depth:			
Age of Well:	New	Liner Size:			
Packer Type:		Liner Top:			
Packer Depth:		Liner Bottom:			
Treatment Via:	Drill Pipe	Total Depth:	4125'		
				Total Perfs	0

TIME	INJECTION RATE FLUID	N2/CO2	PRESSURE STP	ANNULUS	REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
3:30 AM					Called Out			
8:15 AM					On Location W/Trucks Hold Safety Meeting			
					Spot & Set Up Trucks			
					1 St Plug @ 2580' 80 Sx 60/40 4%Gel .25#/Sx Pheno-seal			
					Start Pumping H2O			
9:00 AM	4.0		150.0		Start Mix & Pump 50 Sx @ 13.8 #/Gal			12.84
	4.0		150.0		Start Displacement H2O			3.00
	7.0				Start Displacement Mud W/Rig			30.50
9:30 AM					Shut Down			
					2 Nd Plug @ 1885' 100 Sx 60/40 4% Gel .26 #/Sx Pheno-Seal			
9:55 AM	4.0		125.0		Start Pumping H2O			25.00
	4.0		125.0		Start Mix & Pump 100 Sx @ 13.8 #/Gal			25.29
	4.0		125.0		Start Displacement H2O			20.00
10:15 AM					Shut Down			
					3 Rd Plug @ 320' 60 Sx 60/40 4% Gel .25 #/Sx pheno-Seal			
11:30 AM	4.0		150.0		Start Pumping H2O			5.00
	4.0		150.0		Start Mix & Pump 50 Sx @ 13.8 #/Gal			12.64
	4.0		150.0		Start Displacement H2O			2.00
TOTAL:						-	-	149.98

SUMMARY

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
7.0	3.8	150.0	140.6

PRODUCTS USED

255 Sx 60/40 4% Gel .25#/Sx Pheno-Seal

Treater: Todd Seba

Customer: Bo Farr

MDCI
 Euhus #1-24
 330 FNL 1100 FEL
 Sec. 24-T2S-R30W
 2814' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	2560	+254	+6	2564	+250	+2
B/Anhydrite	2590	+224	+9	2595	+219	+4
Neva	3226	-412	+4	3223	-409	+7
Topeka	3612	-798	+8	3609	-795	+11
Heebner	3772	-958	+5	3768	-954	+9
Lansing	3817	-1003	+4	3812	-998	+9
Stark	3984	-1170	+1	3982	-1168	+3
Mound City	4025	-1211	+3	4022	-1208	+5
RTD	4125	-1311				
LTD				4116	-1302	