

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	WALTER 'A' 3-1
Doc ID	1351003

All Electric Logs Run

DIL
DUCP
MEL
BHCS

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	WALTER 'A' 3-1
Doc ID	1351003

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	4215-4218	300g 15% MCA	
4	4272-4276	300g 15% MCA, 1250g 20% NEFE	
4	4370-4377	300g 15% MCA, 1250g 20% NEFE	



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: Saman Sharifaie

Walter A #3-1

1-1s-36w Rawlins,KS

Start Date: 2017.03.13 @ 07:07:00

End Date: 2017.03.13 @ 16:37:00

Job Ticket #: 6407 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.03.16 @ 11:37:45



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

1-1s-36w Rawlins,KS
Walter A #3-1
 Job Ticket: 6407 **DST#: 1**
 Test Start: 2017.03.13 @ 07:07:00

GENERAL INFORMATION:

Formation: **LKC " A - D "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:45:00
 Time Test Ended: 16:37:00
 Interval: **4144.00 ft (KB) To 4274.00 ft (KB) (TVD)**
 Total Depth: 4274.00 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: 3259.00 ft (KB)
 3254.00 ft (CF)
 KB to GR/CF: 5.00 ft

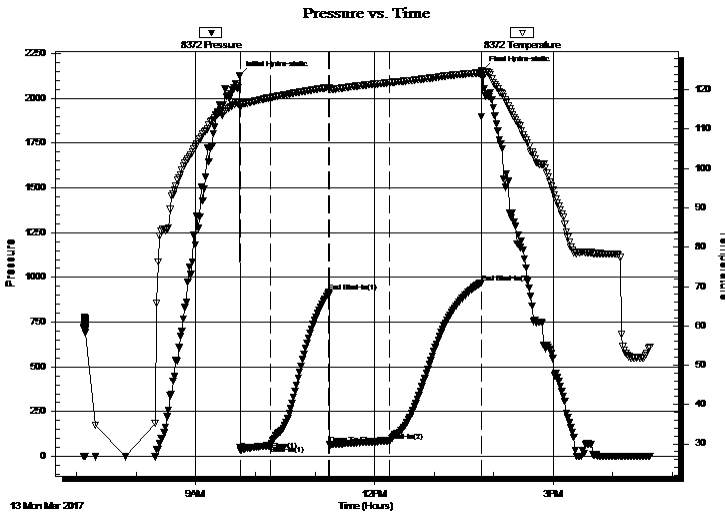
Serial #: 8372

Inside

Press@RunDepth: 86.02 psig @ 4147.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.03.13 End Date: 2017.03.13 Last Calib.: 2017.03.13
 Start Time: 07:07:01 End Time: 16:37:00 Time On Btm: 2017.03.13 @ 09:44:00
 Time Off Btm: 2017.03.13 @ 13:48:30

TEST COMMENT: 30-IFP- Surface Blow Building to 5"
 60-ISIP- No Blow
 60-FFP- Surface Blow Building to 3 3/4"
 90-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2124.67	116.74	Initial Hydro-static
1	32.60	116.33	Open To Flow (1)
31	59.56	118.03	Shut-In(1)
90	916.33	120.62	End Shut-In(1)
91	65.74	120.27	Open To Flow (2)
152	86.02	121.84	Shut-In(2)
243	969.06	124.32	End Shut-In(2)
245	2156.11	124.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
115.00	OCM 15%o 85%m	0.57
40.00	CO 100%	0.20
0.00	20 GIP	0.00

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 67202-1216
 ATTN: Saman Sharifaie

1-1s-36w Rawlins,KS
Walter A #3-1
 Job Ticket: 6407 **DST#: 1**
 Test Start: 2017.03.13 @ 07:07:00

GENERAL INFORMATION:

Formation: **LKC " A - D "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:45:00
 Time Test Ended: 16:37:00
 Interval: **4144.00 ft (KB) To 4274.00 ft (KB) (TVD)**
 Total Depth: 4274.00 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: 3259.00 ft (KB)
 3254.00 ft (CF)
 KB to GR/CF: 5.00 ft

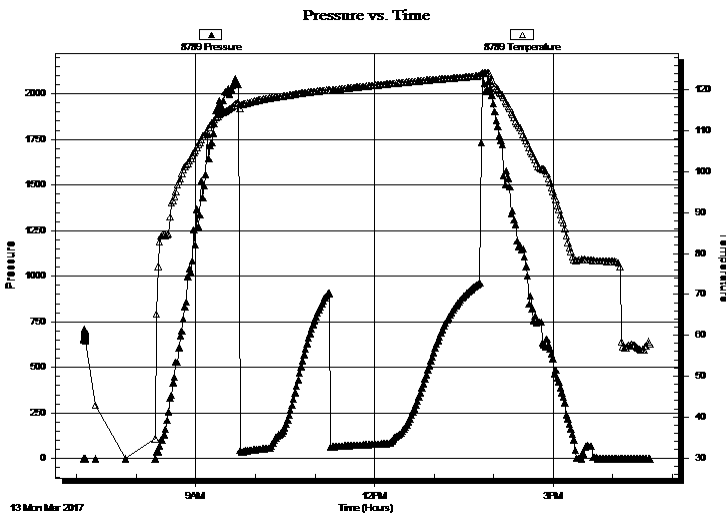
Serial #: 8789

Outside

Press@RunDepth: psig @ 4147.00 ft (KB)
 Start Date: 2017.03.13 End Date: 2017.03.13
 Start Time: 07:07:01 End Time: 16:37:00
 Capacity: 8000.00 psig
 Last Calib.: 2017.03.13
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30-IFP- Surface Blow Building to 5"
 60-ISIP- No Blow
 60-FFP- Surface Blow Building to 3 3/4"
 90-FSIP- No Blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
115.00	OCM 15%o 85%m	0.57
40.00	CO 100%	0.20
0.00	20 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: Saman Sharifaie

1-1s-36w Rawlins,KS
Walter A #3-1
Job Ticket: 6407 **DST#: 1**
Test Start: 2017.03.13 @ 07:07:00

Tool Information

Drill Pipe:	Length: 3932.00 ft	Diameter: 3.80 inches	Volume: 55.16 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: 56.17 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4144.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	130.00 ft			
Tool Length:	158.00 ft			
Number of Packers:	2	Diameter: 7.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4117.00	
Shut In Tool	5.00			4122.00	
Hydraulic tool	5.00			4127.00	
Jars	5.00			4132.00	
Safety Joint	2.00			4134.00	
Packer	5.00			4139.00	28.00 Bottom Of Top Packer
Packer	5.00			4144.00	
Stubb	1.00			4145.00	
Perforations	1.00			4146.00	
Change Over Sub	1.00			4147.00	
Recorder	0.00	8372	Inside	4147.00	
Recorder	0.00	8789	Outside	4147.00	
Blank Spacing	93.00			4240.00	
Change Over Sub	1.00			4241.00	
Perforations	30.00			4271.00	
Bullnose	3.00			4274.00	130.00 Bottom Packers & Anchor
Total Tool Length:	158.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

1-1s-36w Rawlins,KS
Walter A #3-1
Job Ticket: 6407 **DST#: 1**
Test Start: 2017.03.13 @ 07:07:00

Mud and Cushion Information

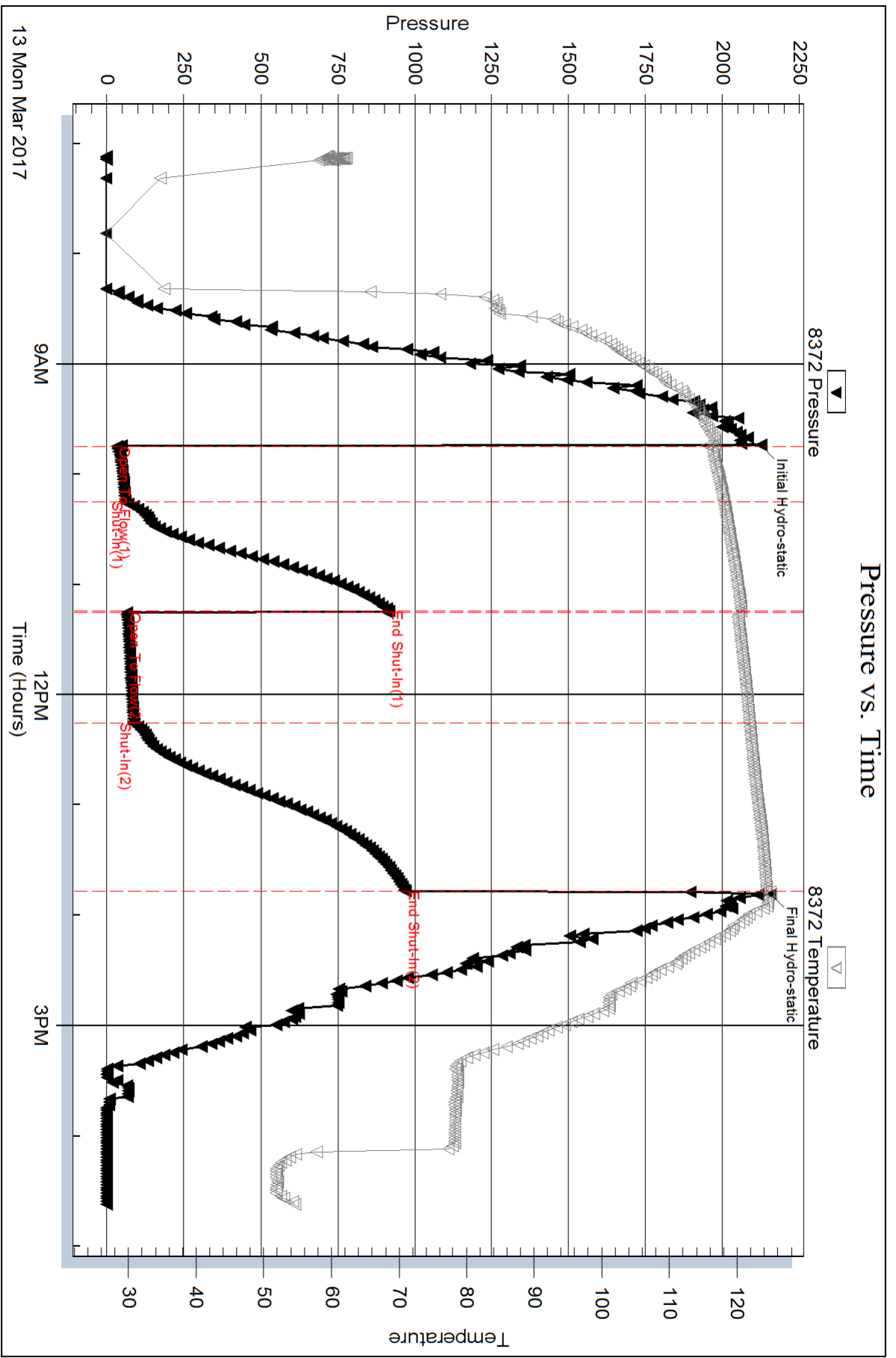
Mud Type: Gel Chem	Cushion Type:	Oil API: 31 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.77 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 600.00 ppm		
Filter Cake: 8.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
115.00	OCM 15%o 85%m	0.566
40.00	CO 100%	0.197
0.00	20 GIP	0.000

Total Length: 155.00 ft Total Volume: 0.763 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

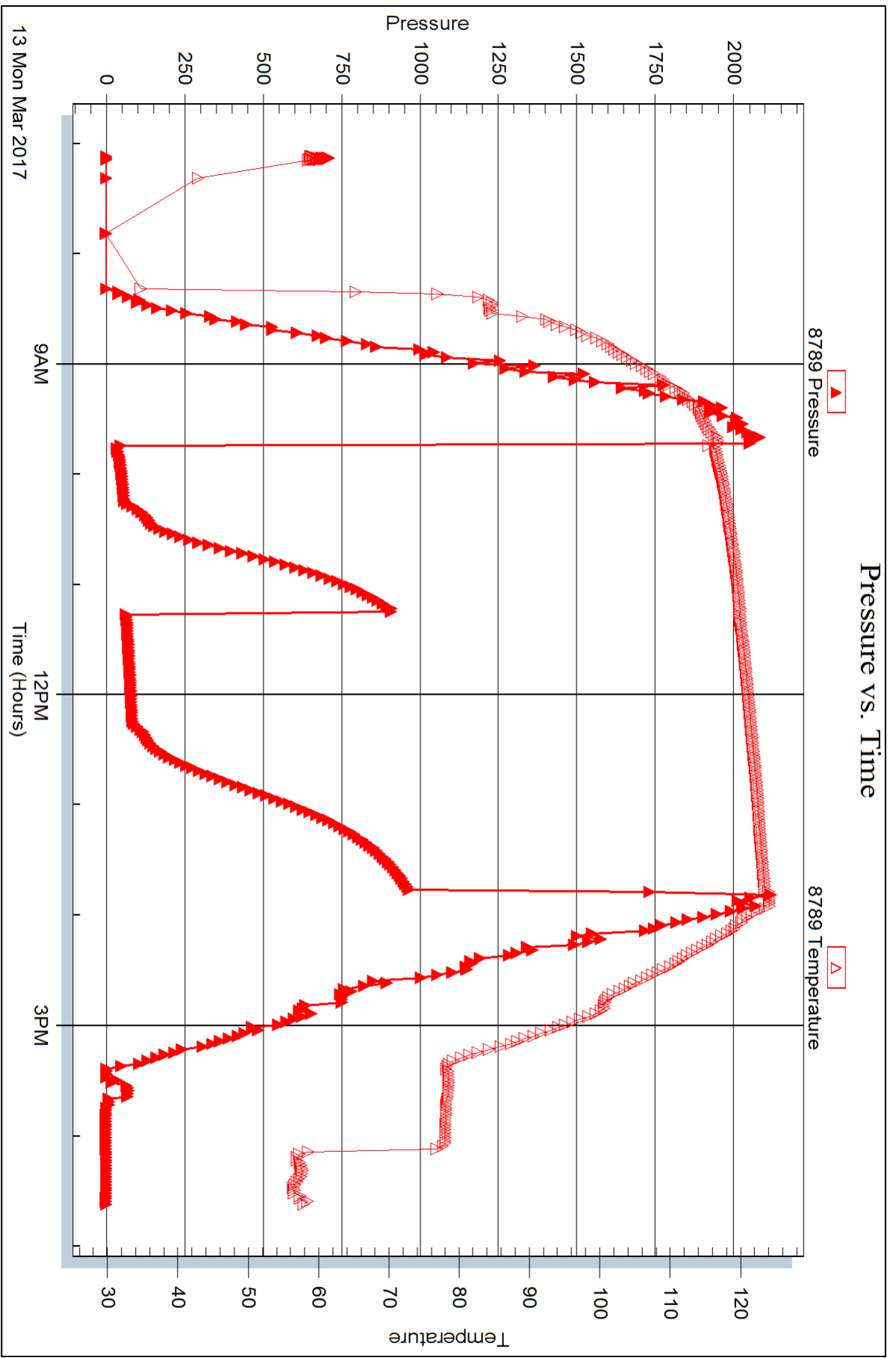


Serial #: 8789

Outside Murfin Drilling Co Inc

Walter A #3-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 6407

Printed: 2017.03.16 @ 11:37:47



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: Saman Sharifaie

Walter A #3-1

1-1s-36w Rawlins,KS

Start Date: 2017.03.14 @ 05:07:00

End Date: 2017.03.14 @ 13:30:00

Job Ticket #: 64073 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.03.16 @ 11:37:09



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

1-1s-36w Rawlins,KS
Walter A #3-1
 Job Ticket: 64073 **DST#: 2**
 Test Start: 2017.03.14 @ 05:07:00

GENERAL INFORMATION:

Formation: **LKC "G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:11:00
 Time Test Ended: 13:30:00
 Interval: **4272.00 ft (KB) To 4330.00 ft (KB) (TVD)**
 Total Depth: 4330.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jim Svaty/Martine Sa
 Unit No: 76
 Reference Elevations: 3259.00 ft (KB)
 3254.00 ft (CF)
 KB to GR/CF: 5.00 ft

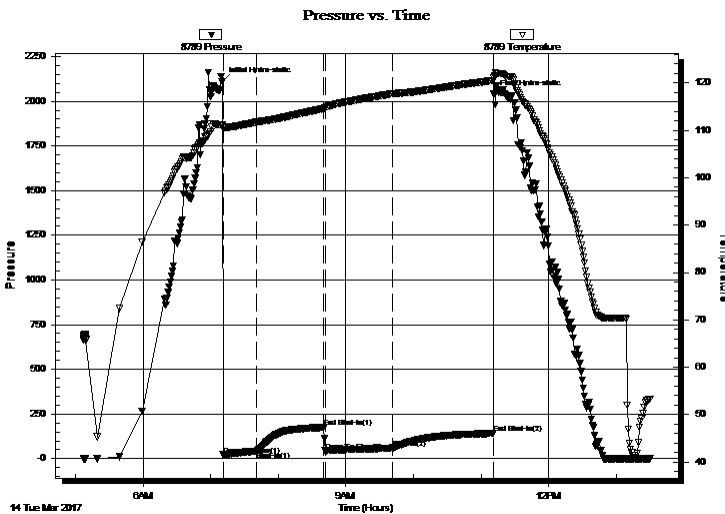
Serial #: 8789

Outside

Press@RunDepth: 59.00 psig @ 4275.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.03.14 End Date: 2017.03.14 Last Calib.: 2017.03.14
 Start Time: 05:07:01 End Time: 13:30:00 Time On Btm: 2017.03.14 @ 07:10:30
 Time Off Btm: 2017.03.14 @ 11:11:30

TEST COMMENT: 30- IFP- Blow built to 3 1/2"
 60- ISIP- No blow
 60- FFP- Blow built to 3"
 90- FSIP- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2109.73	111.09	Initial Hydro-static
1	21.06	110.45	Open To Flow (1)
30	40.15	111.72	Shut-In(1)
90	174.87	114.60	End Shut-In(1)
91	43.84	114.71	Open To Flow (2)
151	59.00	117.74	Shut-In(2)
241	141.20	120.53	End Shut-In(2)
241	2039.92	121.20	Final Hydro-static

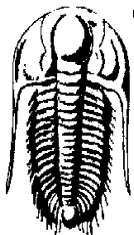
Recovery

Length (ft)	Description	Volume (bbl)
95.00	OCM 20%o 80%M	0.47
2.00	CO 100%	0.01
0.00	30' 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 67202-1216
ATTN: Saman Sharifaie

1-1s-36w Rawlins,KS

Walter A #3-1

Job Ticket: 64073

DST#: 2

Test Start: 2017.03.14 @ 05:07:00

GENERAL INFORMATION:

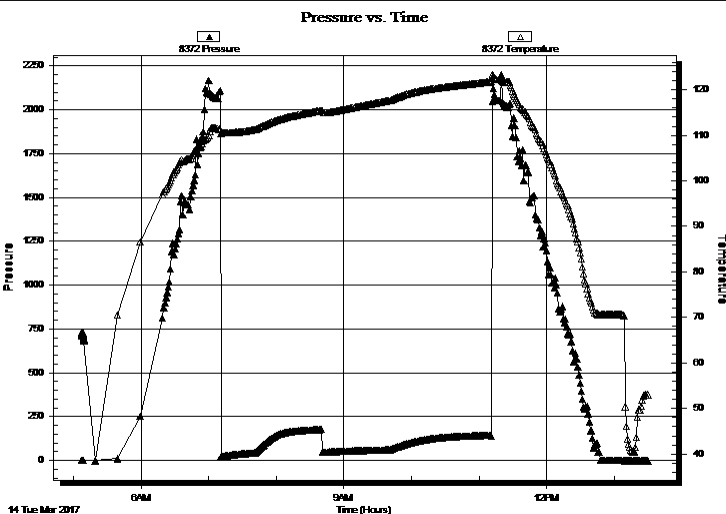
Formation: **LKC "G"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:11:00
Time Test Ended: 13:30:00
Interval: **4272.00 ft (KB) To 4330.00 ft (KB) (TVD)**
Total Depth: 4330.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 3259.00 ft (KB)
3254.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Jim Svaty/Martine Sa
Unit No: 76

Serial #: 8372

Inside

Press@RunDepth: psig @ 4275.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.03.14 End Date: 2017.03.14 Last Calib.: 2017.03.14
Start Time: 05:07:01 End Time: 13:30:00 Time On Btm:
Time Off Btm:

TEST COMMENT: 30- IFP- Blow built to 3 1/2"
60- ISIP- No blow
60- FFP- Blow built to 3"
90- FSIP- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
95.00	OCM 20%o 80%M	0.47
2.00	CO 100%	0.01
0.00	30' 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
250 N Water Ste 300
Wichita KS 67202-1216
ATTN: Saman Sharifaie

1-1s-36w Rawlins,KS
Walter A #3-1
Job Ticket: 64073 **DST#: 2**
Test Start: 2017.03.14 @ 05:07:00

Tool Information

Drill Pipe:	Length: 4056.00 ft	Diameter: 3.80 inches	Volume: 56.90 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: 57.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4272.00 ft			Final 65000.00 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

Change Over Sub	1.00			4245.00	
Shut In Tool	5.00			4250.00	
Hydraulic tool	5.00			4255.00	
Jars	5.00			4260.00	
Safety Joint	2.00			4262.00	
Packer	5.00			4267.00	28.00 Bottom Of Top Packer
Packer	5.00			4272.00	
Stubb	1.00			4273.00	
Perforations	1.00			4274.00	
Change Over Sub	1.00			4275.00	
Recorder	0.00	8372	Inside	4275.00	
Recorder	0.00	8789	Outside	4275.00	
Blank Spacing	31.00			4306.00	
Change Over Sub	1.00			4307.00	
Perforations	20.00			4327.00	
Bullnose	3.00			4330.00	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 67202-1216
ATTN: Saman Sharifaie

1-1s-36w Rawlins,KS
Walter A #3-1
Job Ticket: 64073 **DST#: 2**
Test Start: 2017.03.14 @ 05:07:00

Mud and Cushion Information

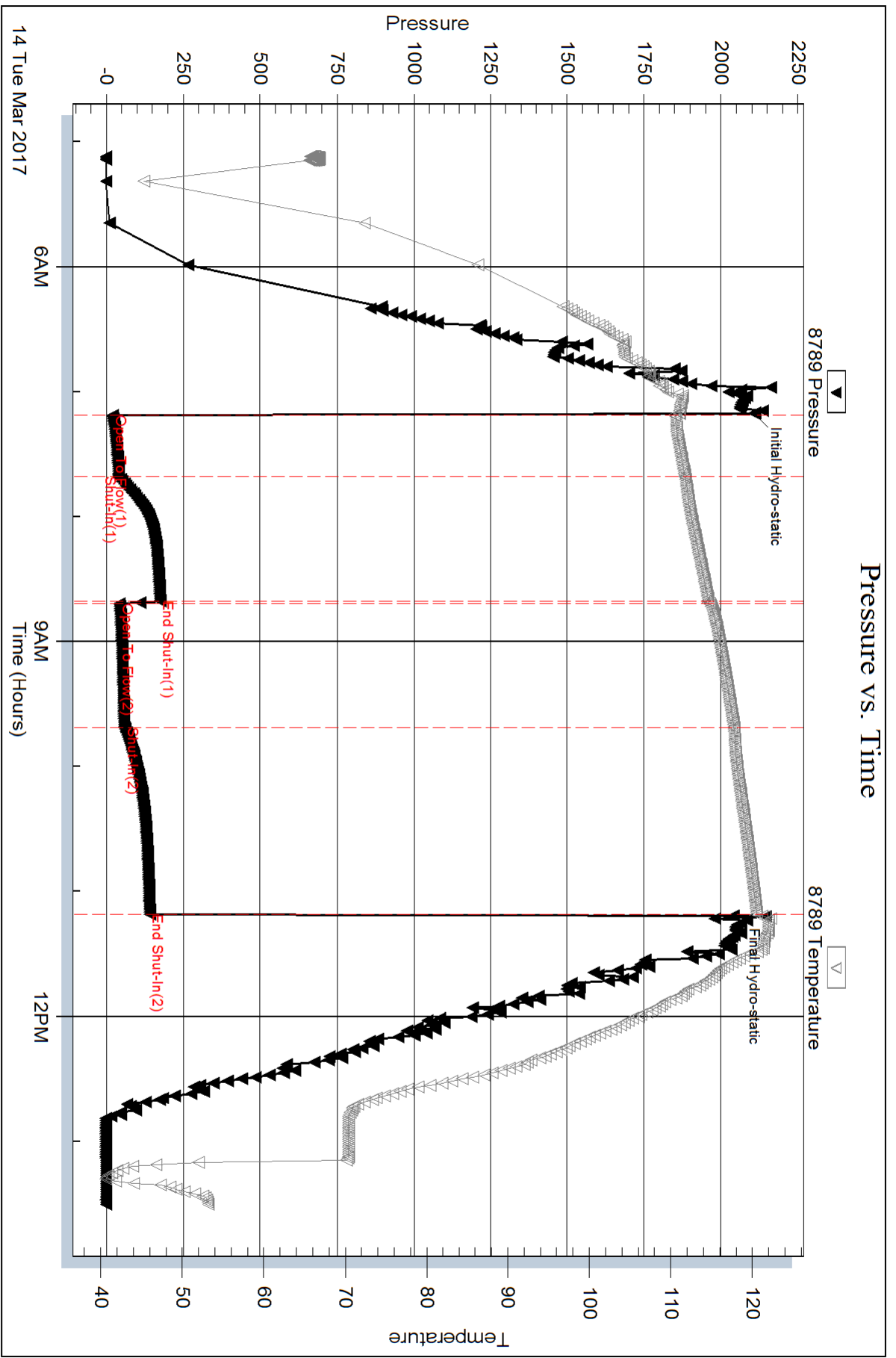
Mud Type: Gel Chem	Cushion Type:	Oil API: 32 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 63.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.58 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 700.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
95.00	OCM 20%o 80%M	0.467
2.00	CO 100%	0.010
0.00	30' GIP	0.000

Total Length: 97.00 ft Total Volume: 0.477 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



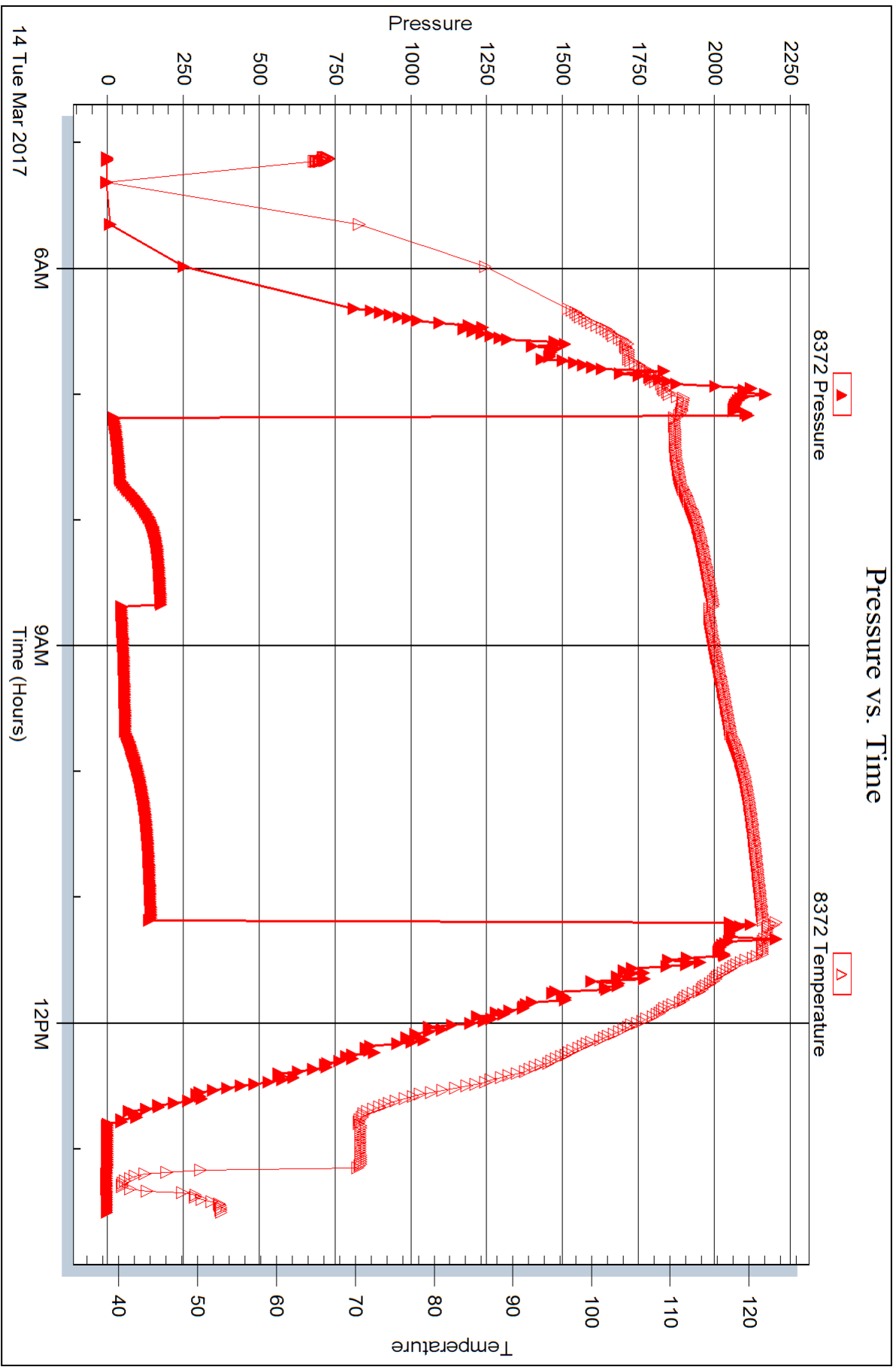
Serial #: 8372

Inside

Murfin Drilling Co Inc

Walter A #3-1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: Saman Sharifaie

Walter A #3-1

1-1s-36w Rawlins,KS

Start Date: 2017.03.15 @ 05:13:00

End Date: 2017.03.15 @ 14:09:00

Job Ticket #: 64074 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.03.16 @ 11:34:41



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

1-1s-36w Rawlins,KS
Walter A #3-1
 Job Ticket: 64074 **DST#: 3**
 Test Start: 2017.03.15 @ 05:13:00

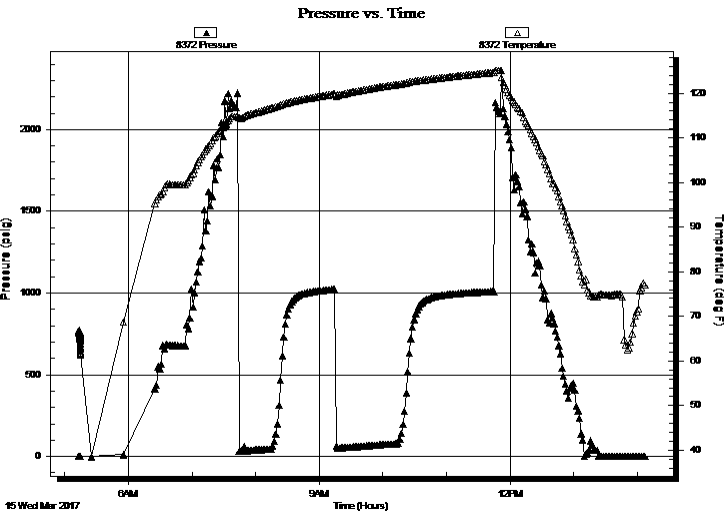
GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 07:43:30
 Tester: Jim Svaty/Martine Sa
 Time Test Ended: 14:09:00
 Unit No: 76
Interval: 4328.00 ft (KB) To 4428.00 ft (KB) (TVD)
 Reference Elevations: 3259.00 ft (KB)
 Total Depth: 4428.00 ft (KB) (TVD)
 3254.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 8372 Inside

Press@RunDepth: psig @ 4330.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.03.15 End Date: 2017.03.15 Last Calib.: 2017.03.15
 Start Time: 05:13:01 End Time: 14:08:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30- IFP- Blow built to 4 1/2"
 60- ISIP- No blow
 60- FFP- B.O.B @ 53 mins
 90- FSIP-Surface blow built to 1/4" @ 5 1/2 mins died @ 62 mins



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
117.00	OCM 40% o, 60%m	0.58
18.00	CO 100%	0.09
0.00	220 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: Saman Sharifaie

1-1s-36w Rawlins,KS
Walter A #3-1
Job Ticket: 64074 **DST#: 3**
Test Start: 2017.03.15 @ 05:13:00

Tool Information

Drill Pipe:	Length: 4117.00 ft	Diameter: 3.80 inches	Volume: 57.75 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: 58.76 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	65000.00 lb
Depth to Top Packer:	4328.00 ft			Final	66000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	100.00 ft				
Tool Length:	128.00 ft				
Number of Packers:	2	Diameter:	7.75 inches		
Tool Comments:					

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

Change Over Sub	1.00			4301.00	
Shut In Tool	5.00			4306.00	
Hydraulic tool	5.00			4311.00	
Jars	5.00			4316.00	
Safety Joint	2.00			4318.00	
Packer	5.00			4323.00	28.00 Bottom Of Top Packer
Packer	5.00			4328.00	
Stubb	1.00			4329.00	
Perforations	1.00			4330.00	
Recorder	0.00	8372	Inside	4330.00	
Recorder	0.00	8789	Outside	4330.00	
perforations	30.00			4360.00	
Change Over Sub	1.00			4361.00	
blank spacing	63.00			4424.00	
Change Over Sub	1.00			4425.00	
Bullnose	3.00			4428.00	100.00 Bottom Packers & Anchor
Total Tool Length:	128.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

1-1s-36w Rawlins,KS

250 N Water Ste 300
Wichita KS 67202-1216

Walter A #3-1

Job Ticket: 64074

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2017.03.15 @ 05:13:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
117.00	OCM 40% o, 60%m	0.575
18.00	CO 100%	0.089
0.00	220 GIP	0.000

Total Length: 135.00 ft

Total Volume: 0.664 bbl

Num Fluid Samples: 0

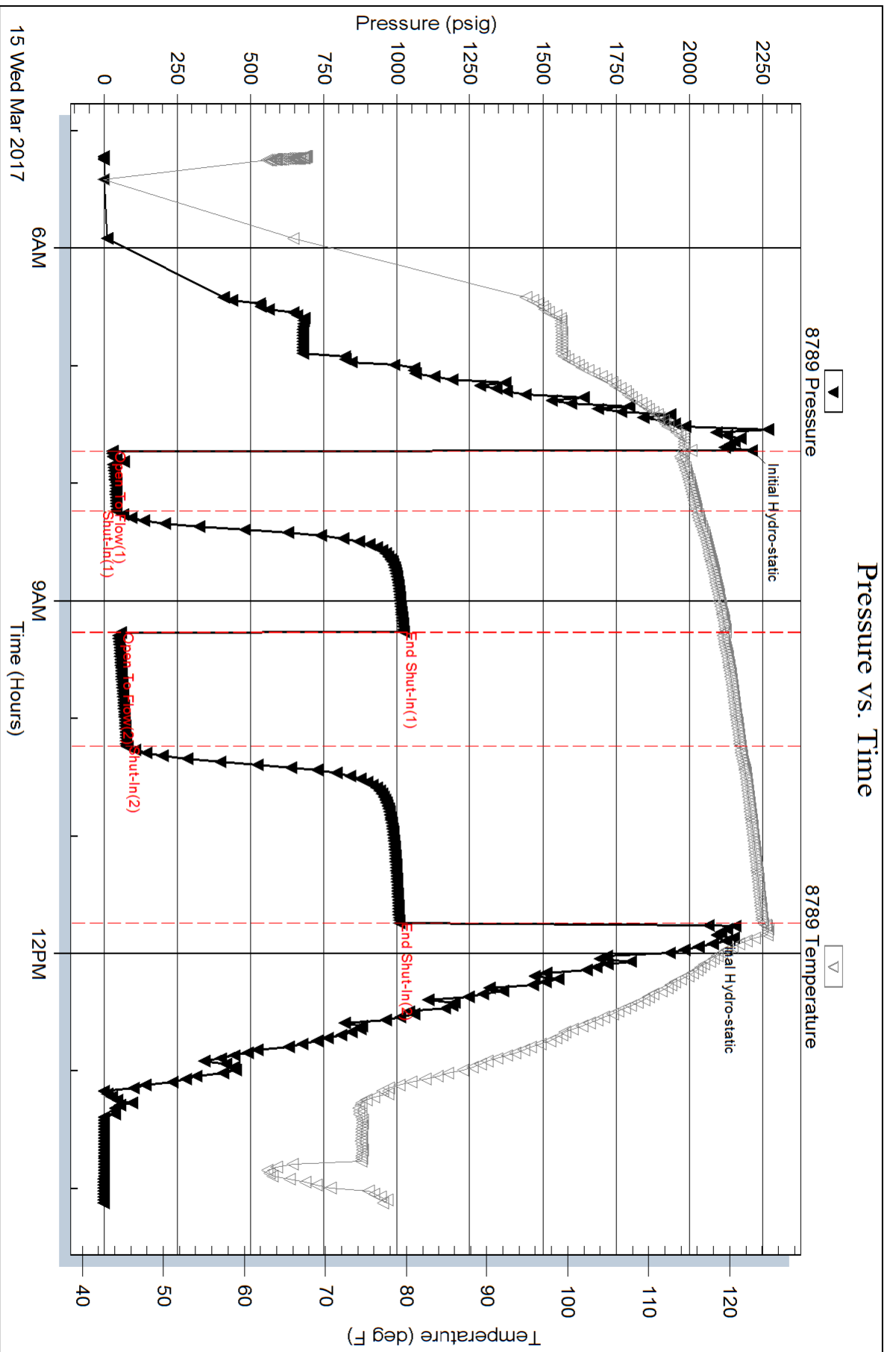
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



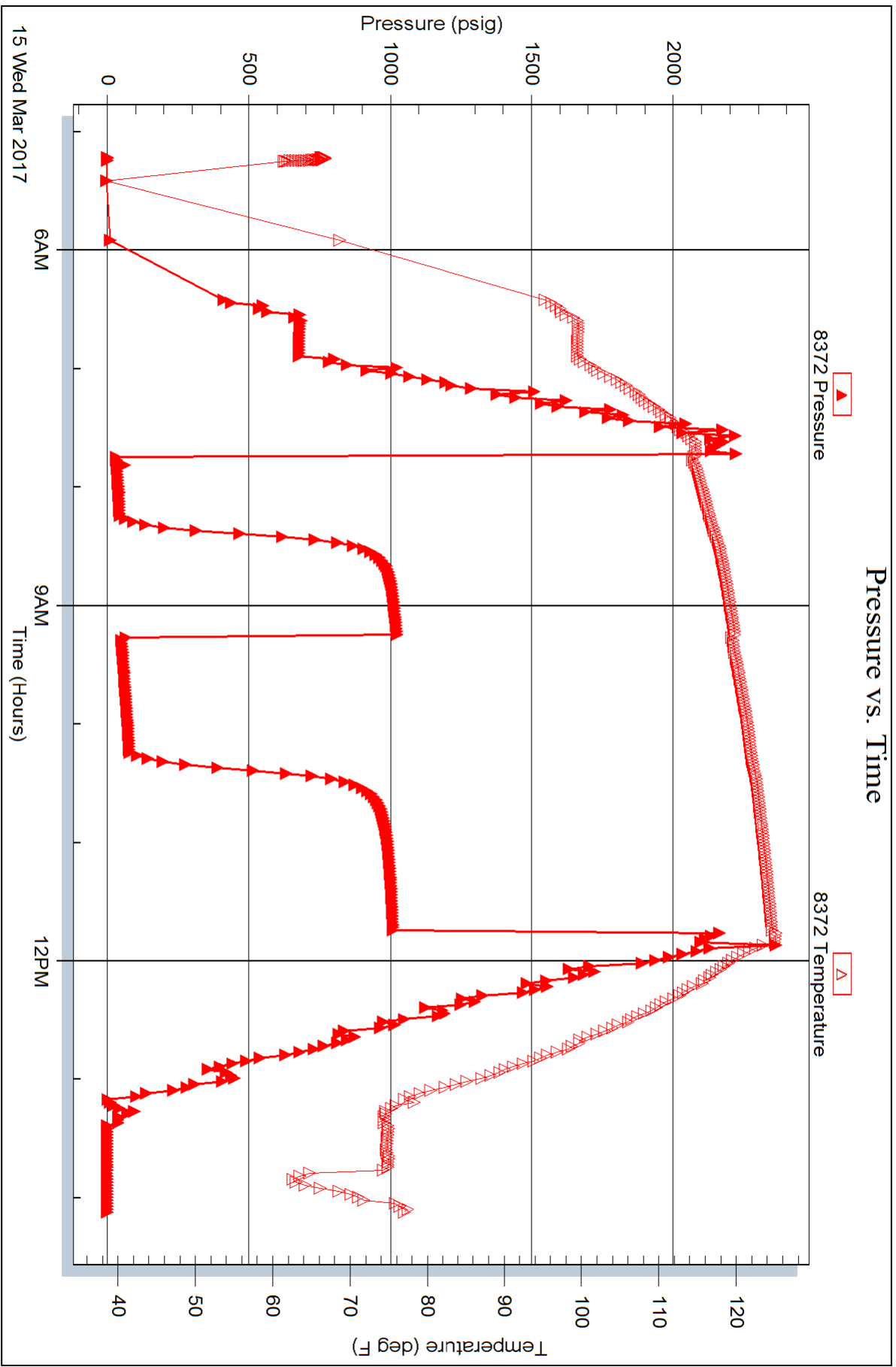
Serial #: 8372

Inside

Murfin Drilling Co Inc

Walter A #3-1

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64072**

Well Name & No. Walter A 3-1 Test No. 1 Date 3-13-17
 Company Murfin Drilling Co Inc. Elevation 3259 KB 3254 GL
 Address 250 N. Water Ste 300 Wichita KS 67202-1216
 Co. Rep / Geo. SAMAN SHARIFAIE Rig MURFIN 24
 Location: Sec. 1 Twp. 1 S Rge. 36 W Co. RAWLINS State KS

Interval Tested 4144 - 4274 Zone Tested LKC "A-D"
 Anchor Length 130 Drill Pipe Run 3932 Mud Wt. 9.3
 Top Packer Depth 4139 Drill Collars Run 205 Vis 58
 Bottom Packer Depth 4144 Wt. Pipe Run 0 WL 6.8
 Total Depth 4274 Chlorides 600 ppm System LCM 8

Blow Description IFP - Surface Blow Building to 5 in.
ISIP - No Blow
FFP - Surface Blow Building to 3 3/4 in.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>115</u>	<u>OCM</u>	<u>15</u>		<u>85</u>	
<u>40</u>	<u>CO</u>	<u>100</u>			
	<u>20 DIP</u>				

Rec Total 155 BHT 124 Gravity 31 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2124</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>05:23</u>
(B) First Initial Flow <u>32</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>07:07</u>
(C) First Final Flow <u>59</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>09:45</u>
(D) Initial Shut-In <u>916</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>13:45</u>
(E) Second Initial Flow <u>65</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>16:37</u>
(F) Second Final Flow <u>86</u>	<input checked="" type="checkbox"/> Mileage <u>99</u> <u>132 RT</u>	Comments _____
(G) Final Shut-In <u>969</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2156</u>	<input type="checkbox"/> Straddle _____	

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

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1574
 MP/DST Disc't _____

Sub Total 1574

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.

78563958647



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64073**

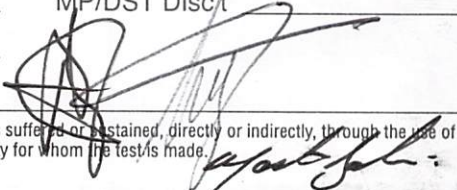
Well Name & No. Walter A 3-1 Test No. 2 Date 3-14-17
 Company Murfin Drilling Co. Inc Elevation 3259 KB 3254 GL
 Address 250 N. Water Ste 300 Wichita KS 67202-1216
 Co. Rep / Geo. Saman Sheritale Rig Murfin 24
 Location: Sec. 1 Twp. 15 Rge. 36w Co. Rawlins State KS

Interval Tested 4272-4330 Zone Tested LKC "G"
 Anchor Length 58' Drill Pipe Run 4056 Mud Wt. 9.1
 Top Packer Depth 4267 Drill Collars Run 206 Vis 63
 Bottom Packer Depth 4272 Wt. Pipe Run — WL 5.6
 Total Depth 4330 Chlorides 700 ppm System LCM 8.0
 Blow Description IFP. Surface blow built to 3 1/2"
ISIP. No Blow
FFP. Surface blow built to 3"
FSIP

Rec	Feet of	%gas	%oil	%water	%mud
<u>95</u>	<u>OCM</u>	<u>20</u>		<u>80</u>	
<u>2</u>	<u>C.O</u>	<u>100</u>			
	<u>30 G.I.P</u>				

Rec Total 97 BHT 121 Gravity 32 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2109 Test 1150 T-On Location 4:51
 (B) First Initial Flow 21 Jars 250 T-Started 5:07
 (C) First Final Flow 40 Safety Joint 75 T-Open 7:12
 (D) Initial Shut-In 174 Circ Sub _____ T-Pulled 11:12
 (E) Second Initial Flow 43 Hourly Standby _____ T-Out 1330
 (F) Second Final Flow 59 Mileage 99 Comments _____
 (G) Final Shut-In 141 Sampler _____
 (H) Final Hydrostatic 2039 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 1574
 Final Flow 60 Accessibility _____ MP/DST Disc _____
 Final Shut-In 90 Sub Total 1574

Approved By _____ Our Representative 

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64074**

Well Name & No. Walker A 3-1 Test No. 3 Date 3-15-16
 Company Murfin Drilling Inc CO Elevation 3259 KB 3254 GL
 Address 250 N Water Ste 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Saman Sheritaie Rig Murfin #24
 Location: Sec. 1 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 4328-4428 Zone Tested LKC "H-J"
 Anchor Length 100' Drill Pipe Run 4117 Mud Wt. 9.2
 Top Packer Depth 4323 Drill Collars Run 205 Vis 62
 Bottom Packer Depth 4328 Wt. Pipe Run — WL 6.0
 Total Depth 4428 Chlorides 700 ppm System LCM 8#
 Blow Description IFP. Blow built to 4 1/2"
ISIP. No blow

FFP. B.O.B @ 53 mins

FSIP. Surface blow built to 1/4" in 5 1/2 mins. dead @ 62 mins

Rec	Feet of	%gas	%oil	%water	%mud
<u>117</u>	<u>OCM 40'</u>	<u>40</u>		<u>60</u>	
<u>18</u>	<u>CO</u>	<u>100</u>			
<u>—</u>	<u>220 GIP</u>				
<u>—</u>	<u>—</u>				
<u>—</u>	<u>—</u>				

Rec Total 135 BHT 124 Gravity 28 API RW — @ — °F Chlorides — ppm

- (A) Initial Hydrostatic 2213
- (B) First Initial Flow 28
- (C) First Final Flow 42
- (D) Initial Shut-In 1021
- (E) Second Initial Flow 56
- (F) Second Final Flow 74
- (G) Final Shut-In 1006
- (H) Final Hydrostatic 2066

- Test 1150
- Jars 250
- Safety Joint 75
- Circ Sub —
- Hourly Standby —
- Mileage 198 X2
- Sampler —
- Straddle —
- Shale Packer —
- Extra Packer —
- Extra Recorder —
- Day Standby —
- Accessibility —

- T-On Location 4:20
- T-Started 5:13
- T-Open 8:15 7:45
- T-Pulled 11:45
- T-Out 14:09

Comments loaded tools 22:06 3/15

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

- Ruined Shale Packer —
- Ruined Packer —
- Extra Copies —
- Sub Total 0
- Total 1673
- MP/DST Disc't —

Approved By _____

Our Representative [Signature]

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Saman Sharifaie

Petroleum Geologist

GEOLOGIST'S REPORT

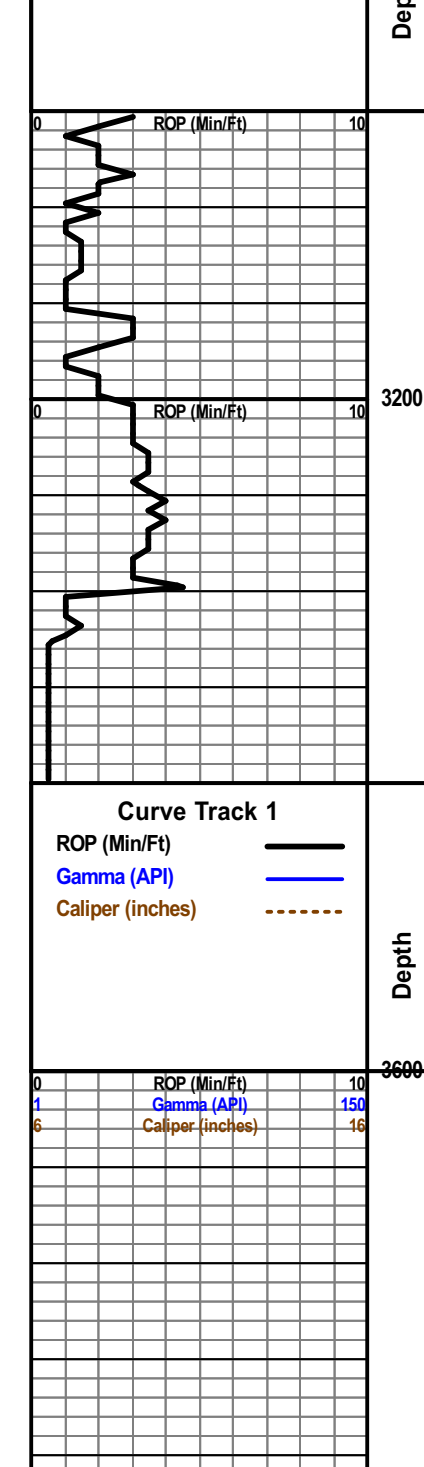
DRILLING TIME AND SAMPLE LOG

COMPANY: **Martin Drilling Co., Inc.**
Walter "A" #1-1
FIELD: SCODA
LOCATION: 9007 FSL & 1300 FEI
SEC: 1 TWSP IS RGE 30W
COUNTY: **Randolph** STATE: **Kansas**
CONTRACTOR: **Martin Drilling #24**
RUD: 03/07/17 COMP: 03/17/17
SPUD: 4/5/80' TYPE MUD: **Chemical**
MUD UP: 3408' TYPE MUD: **Chemical**

ELEVATIONS
KB 3259'
DF _____
GL 325.4'
Measurements Are All From Kelly Bushing
CASING
CONDUCTOR 8-5/8" at 3000'
SURFACE 5-1/2" at 4576'

SAMPLES SAVED FROM 3680' TO RTD
DRILLING TIME KEPT FROM 3680' TO RTD
SAMPLES EXAMINED FROM 3680' TO RTD
GEOLOGICAL SUPERVISION FROM 3380'
REFERENCE WELL: MD/C1 - Walter "A" #1-1
CND/DICL, MEL, Somic
Fluoride/Hydroline

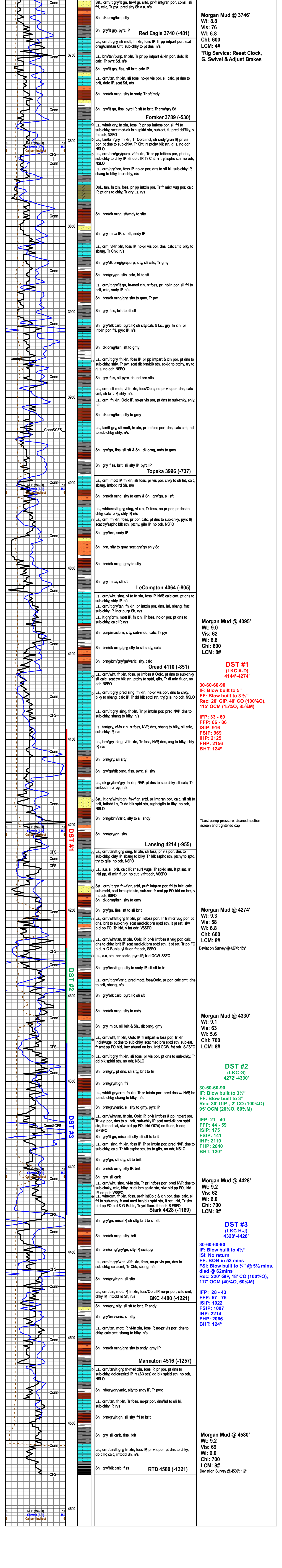
Formation	Sample Tops	E-log Tops	Strat Pos.
Ambydrite	3193 (-66)	3195 (+64)	-2
Base Ambydrite	3221 (-38)	3228 (+31)	5
Red Eagle	3734 (-475)	3740 (-481)	-6
Foraker	3789 (-525)	3799 (-530)	-10
Foraker	3922 (-325)	3906 (-317)	-10
Overled	414 (-855)	410 (-851)	-1
Lansing	4208 (-949)	4214 (-953)	-10
Stark	4426 (-1167)	4428 (-1169)	-10
Mounton City	4480 (-1219)	4480 (-1221)	-12



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

Respectfully Submitted,
Saman Sharifaie
Petroleum Geologist

*Tops have been adjusted to electric logs



Engineering Data
Pipe Strap @ 3595: 0.07' Long to Board
Deviation Survey: 11/2'

Morgan Mud @ 3746'
Wt: 8.8
Vis: 76
WI: 6.8
Chl: 600
LCM: 4#
*Rig Service: Reset Clock, G. Swivel & Adjust Brakes

Morgan Mud @ 4095'
Wt: 9.0
Vis: 62
WI: 6.8
Chl: 600
LCM: 8#
DST #1
(LKC A-D)
4144'-4274'
30-60-60-90
IF: Blow built to 5"
FF: Blow built to 3 1/2"
Rec: 20" GIP, 40" CO (100%O),
115' OCM (15%O, 85%M)
IFP: 33 - 60
FFP: 66 - 86
ISIP: 916
FSIP: 969
IHP: 2125
FHP: 2156
BHT: 124°

*Lost mud pressure, cleaned suction screen and tightened cap

Morgan Mud @ 4274'
Wt: 9.3
Vis: 58
WI: 6.8
Chl: 600
LCM: 8#
Deviation Survey @ 4274: 11/2'

Morgan Mud @ 4330'
Wt: 9.1
Vis: 63
WI: 5.6
Chl: 700
LCM: 8#
DST #2
(LKC G)
4328'-4330'

Morgan Mud @ 4428'
Wt: 9.2
Vis: 62
WI: 6.0
Chl: 700
LCM: 8#

DST #3
(LKC H-J)
4328'-4428'

30-60-60-90
IF: Blow built to 4 1/2"
FSI: No return
FF: BOD in 53 mins
FSI: Blow built to 1/2" @ 5 1/2 mins,
died @ 62mins
Rec: 220" GIP, 18" CO (100%O),
117' OCM (40%O, 60%M)

IFP: 28 - 43
FFP: 57 - 75
ISIP: 1022
FSIP: 1007
IHP: 2214
FHP: 2066
BHT: 124°

Morgan Mud @ 4580'
Wt: 9.2
Vis: 60
WI: 6.0
Chl: 700
LCM: 8#
Deviation Survey @ 4580: 11/2'

MDCI
Walter 'A' #3-1
990' FSL 1320' FEL
Sec. 1-T1S-R36W
3259' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3193	+66	Flat	3195	+64	-2
B/Anhydrite	3221	+38	+2	3228	+31	-5
Neva				3678	-419	-8
Red Eagle	3734	-475	-3	3740	-481	-9
Foraker	3784	-525	-4	3789	-530	-9
Topeka	3992	-733	-6	3996	-737	-10
Oread	4114	-855	-5	4110	-851	-1
Lansing	4208	-949	-4	4214	-955	-10
Stark	4426	-1167	-8	4428	-1169	-10
Mound City	4478	-1219	-10	4480	-1221	-12
RTD	4580	-1321				
LTD				4576	-1317	



Remit to:
 B.J. Services LLC
 P.O. Box 733585
 Dallas, TX 75373-3585

Cement Service

68296

Tax ID 81-1373543

SERVICE POINT:

no key

DATE <u>3-2-17</u>	SEC. <u>1</u>	TWP. <u>15</u>	RANGE <u>36W</u>	CALLED OUT	ON LOCATION <u>1:00 PM</u>	JOB START <u>5:30 AM</u>	JOB FINISH <u>6:00 PM</u>
LEASE <u>Walter A</u>	WELL # <u>3-1</u>	LOCATION <u>Brandsley 2N 36W 3N</u>			COUNTY <u>Woods</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>							

CONTRACTOR Martin 24
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 308'
 CASING SIZE 8 5/8 DEPTH 305'
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT 18.47

OWNER same
 CEMENT
 AMOUNT ORDERED 265 sks com 3800.
2 1/2 gal

EQUIPMENT
 PUMP TRUCK CEMENTER Andrew Farslund
 # 431 HELPER Wayne M. Highby
 BULK TRUCK
 # 890 DRIVER Jade Miller
 BULK TRUCK
 # DRIVER

COMMON 265 sks @ 12.90 4798.50
 FOZ MIX @
 GEL 498 gal @ 1.05 522.90
 CHLORIDE 717 gal @ 1.10 788.70
 ASC @
 @
 @
 @
 @
 @
 @

REMARKS:

Circulated 7 BBL TO PIT
thank you

TOTAL 6088.10

DISCOUNT 30% 1826.43

SERVICE

HANDLING 287 CY/FT @ 2.48 711.76
 MILEAGE 2.25 137.50
 DEPTH OF JOB 305'
 PUMP TRUCK CHARGE 1572.25
 EXTRA FOOTAGE @
 HV MILEAGE 520 miles @ 2.70 1404.00
 LV MILEAGE 520 miles @ 4.40 2292.00
 @
 @

TOTAL 4616.51

DISCOUNT 30% 1384.95

PLUG & FLOAT EQUIPMENT

8 5/8
1 Center Lizer @ 25.00
 @
 @
 @
 @

TOTAL 25.00

DISCOUNT 30% 22.50

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

PRINTED NAME Anna Cabreza

SIGNATURE Anna Cabreza

SALES TAX (if Any)
 TOTAL CHARGES 10,719.61
 DISCOUNT 3,233.88 (30%) IF PAID IN 30 DAYS
 NET TOTAL 7,545.72 IF PAID IN 30 DAYS

3/17/17

Cement on 5.5 production casing: 250 sacks H-Con, with ¼ # per sack floreal, 5# per sack koleal

Completion Report

WALTER A #3-1

Section 1-1S-36W
Rawlins County, KS
15-153-21184

3/17/17

Hurricane Services Inc - 110 jts new 5 ½", 15.5# J-55 csg. Casing Depth 4575. 250 sxs H-Con. With ¼# per sack flo seal, 5# per sack kol seal.