



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water St
Wichita, KS 67202

ATTN: Chuck Schmaltz

Goetz #1-32

32-9S-27W Sheridan,KS

Start Date: 2014.03.17 @ 18:48:00

End Date: 2014.03.18 @ 03:47:00

Job Ticket #: 57526 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.03.21 @ 15:03:24



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: 57526

DST#: 1

ATTN: Chuck Schmalz

Test Start: 2014.03.17 @ 18:48:00

GENERAL INFORMATION:

Formation: **LKC A-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:53:30

Time Test Ended: 03:47:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Tim Phillips

Unit No: 59

Interval: 3876.00 ft (KB) To 3922.00 ft (KB) (TVD)

Reference Elevations: 2704.00 ft (KB)

Total Depth: 3922.00 ft (KB) (TVD)

2699.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8934

Inside

Press@RunDepth: 75.89 psig @ 3886.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.17

End Date:

2014.03.18

Last Calib.:

2014.03.18

Start Time: 18:48:05

End Time:

03:46:15

Time On Btm:

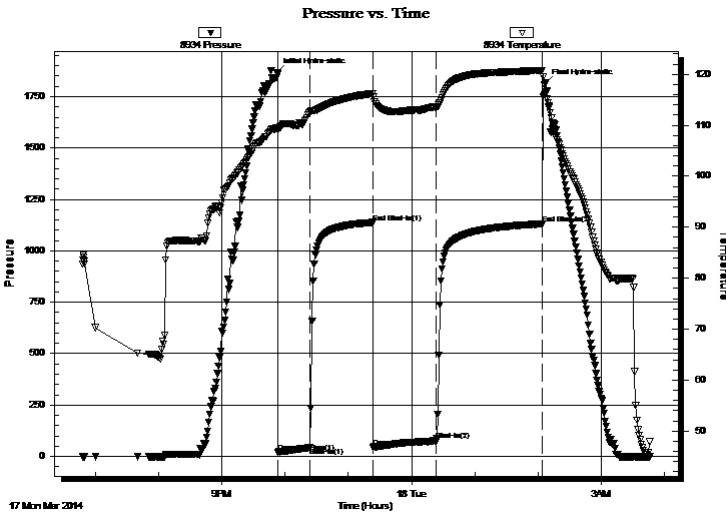
2014.03.17 @ 21:52:30

Time Off Btm:

2014.03.18 @ 02:06:45

TEST COMMENT: IFP- Blow built to 3"
ISI-Dead no blow back
FF- Blow built to 2 1/4"
FSI-Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1865.70	109.39	Initial Hydro-static
1	21.12	109.11	Open To Flow (1)
32	44.18	112.68	Shut-In(1)
91	1138.23	116.23	End Shut-In(1)
92	45.99	115.67	Open To Flow (2)
151	75.89	113.54	Shut-In(2)
252	1129.02	120.76	End Shut-In(2)
255	1814.04	116.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	WCM 40%M, 60%W	0.82

Gas Rates

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



DRILL STEM TEST REPORT

Murfin Drilling Co

250 N. Water St
Wichita, KS 67202

ATTN: Chuck Schmalz

32-9S-27W Sheridian,KS

Goetz #1-32

Job Ticket: 57526 **DST#: 1**

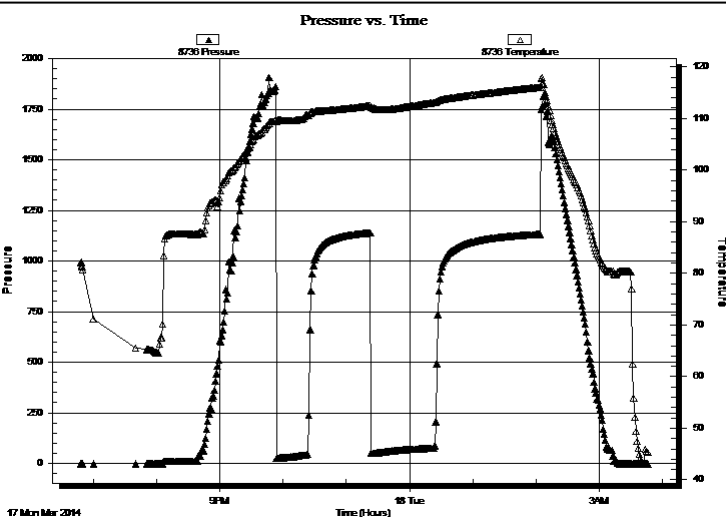
Test Start: 2014.03.17 @ 18:48:00

GENERAL INFORMATION:

Formation: **LKC A-D**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 21:53:30 Tester: Tim Phillips
 Time Test Ended: 03:47:00 Unit No: 59
Interval: 3876.00 ft (KB) To 3922.00 ft (KB) (TVD)
 Total Depth: 3922.00 ft (KB) (TVD) Reference Elevations: 2704.00 ft (KB)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft
 2699.00 ft (CF)

Serial #: 8736 Outside
 Press@RunDepth: psig @ 3886.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.03.17 End Date: 2014.03.18 Last Calib.: 2014.03.18
 Start Time: 18:48:05 End Time: 03:46:15 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP- Blow built to 3"
 IS-Dead no blow back
 FF- Blow built to 2 1/4"
 FS-Dead no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
140.00	WCM 40%M, 60%W	0.82

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: 57526

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2014.03.17 @ 18:48:00

Tool Information

Drill Pipe:	Length: 3740.00 ft	Diameter: 3.80 inches	Volume: 52.46 bbl	Tool Weight: 2000.00 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: 126.00 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 53.08 bbl</u>	Tool Chased 8.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3876.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3854.00	
Hydraulic tool	5.00			3859.00	
Jars	5.00			3864.00	
Safety Joint	2.00			3866.00	
Packer	5.00			3871.00	27.00 Bottom Of Top Packer
Packer	5.00			3876.00	
Stubb	1.00			3877.00	
Perforations	9.00			3886.00	
Recorder	0.00	8934	Inside	3886.00	
Recorder	0.00	8736	Outside	3886.00	
Change Over Sub	1.00			3887.00	
Drill Pipe	31.00			3918.00	
Change Over Sub	1.00			3919.00	
Bullnose	3.00			3922.00	46.00 Bottom Packers & Anchor

Total Tool Length: 73.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: 57526

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2014.03.17 @ 18:48:00

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: 50.00 sec/qt

Cushion Volume: bbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
140.00	WCM 40%M, 60%W	0.816

Total Length: 140.00 ft Total Volume: 0.816 bbl

Num Fluid Samples: 0

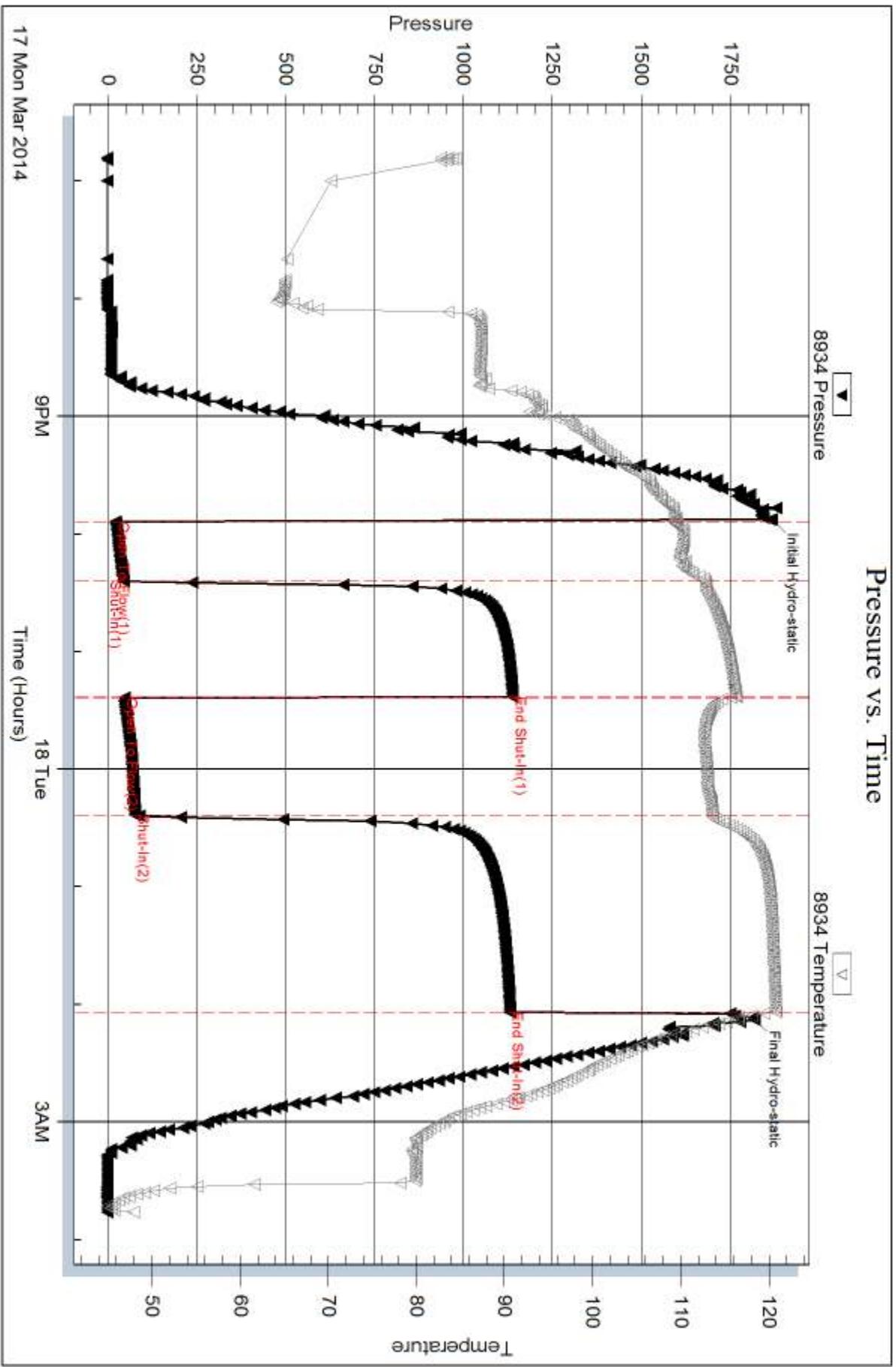
Num Gas Bombs: 0

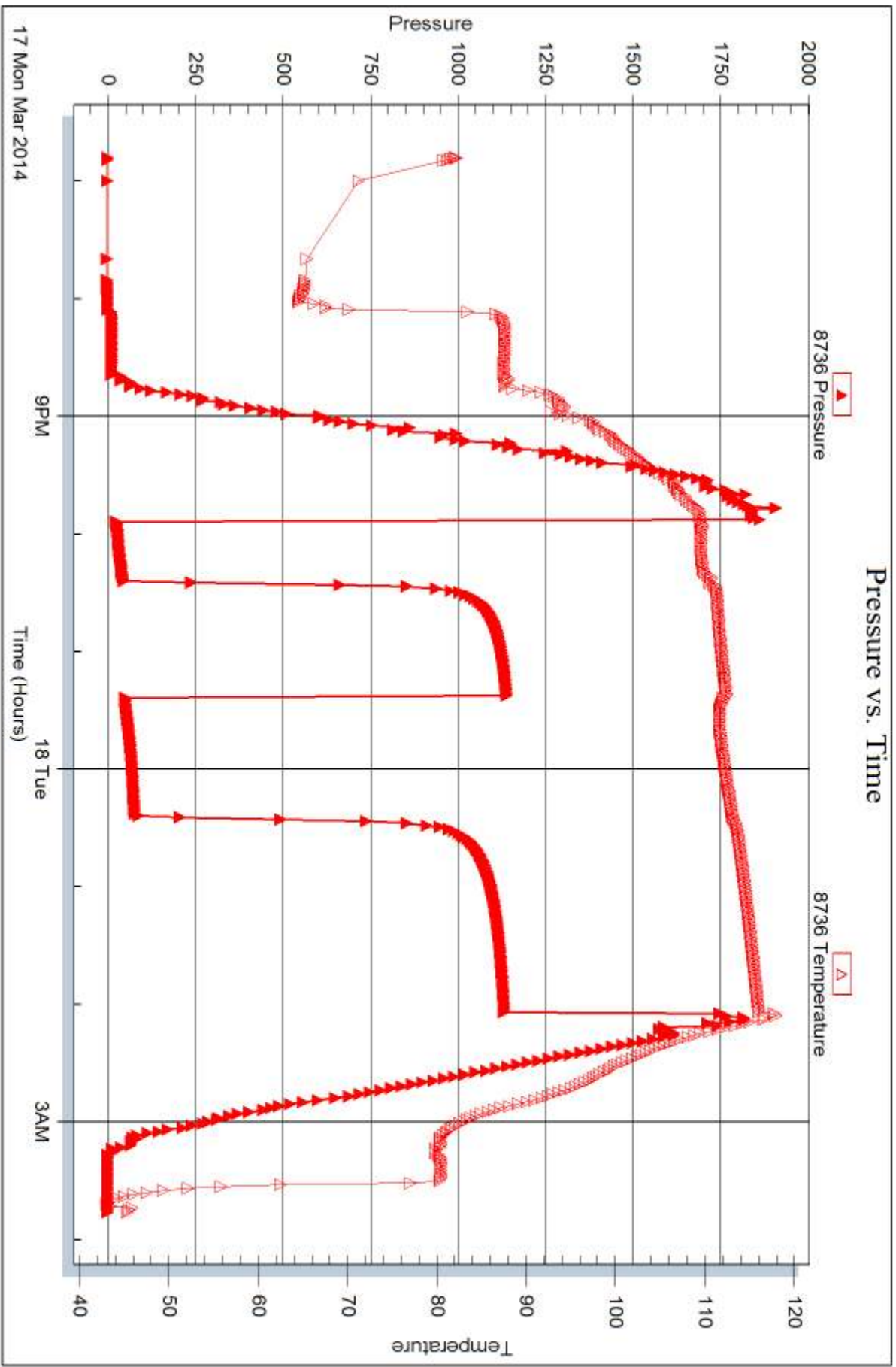
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water St
Wichita, KS 67202

ATTN: Chuck Schmaltz

Goetz #1-32

32-9S-27W Sheridian,KS

Start Date: 2014.03.18 @ 09:55:00

End Date: 2014.03.18 @ 17:18:00

Job Ticket #: 57527 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.03.21 @ 15:09:56



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: 57527

DST#: 2

ATTN: Chuck Schmalz

Test Start: 2014.03.18 @ 09:55:00

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:29:45

Time Test Ended: 17:18:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Tim Phillips

Unit No: 59

Interval: 3919.00 ft (KB) To 3937.00 ft (KB) (TVD)

Reference Elevations: 2704.00 ft (KB)

Total Depth: 3937.00 ft (KB) (TVD)

2699.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8934

Inside

Press@RunDepth: 15.32 psig @ 3934.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.18

End Date:

2014.03.18

Last Calib.:

2014.03.18

Start Time: 09:55:05

End Time:

17:17:44

Time On Btm:

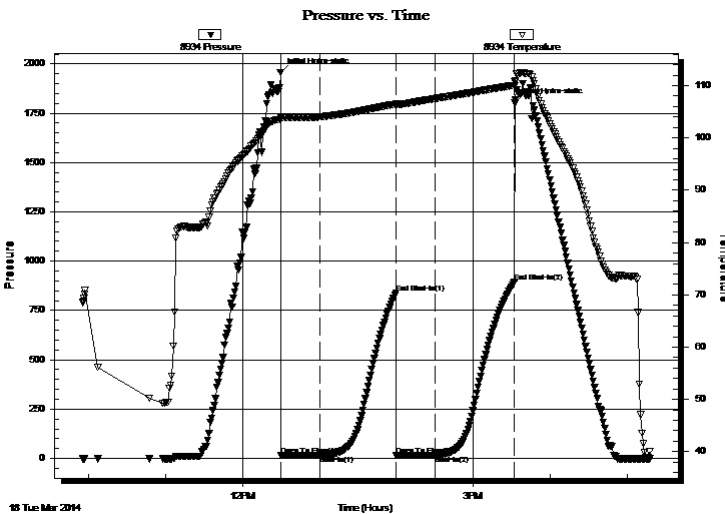
2014.03.18 @ 12:29:30

Time Off Btm:

2014.03.18 @ 15:32:30

TEST COMMENT: IFP- Blow built to 3/4"
ISI- Dead no blow back
FF- Dead no blow
FSI- Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1956.88	104.10	Initial Hydro-static
1	14.01	103.55	Open To Flow (1)
31	14.56	104.02	Shut-In(1)
91	839.86	106.48	End Shut-In(1)
91	14.62	106.13	Open To Flow (2)
121	15.32	107.52	Shut-In(2)
183	895.13	110.07	End Shut-In(2)
183	1801.61	110.69	Final Hydro-static

Recovery

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

* Recovery from multiple tests

Gas Rates

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



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DRILL STEM TEST REPORT

Murfin Drilling Co

32-9S-27W Sheridan, KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: 57527

DST#: 2

ATTN: Chuck Schmalz

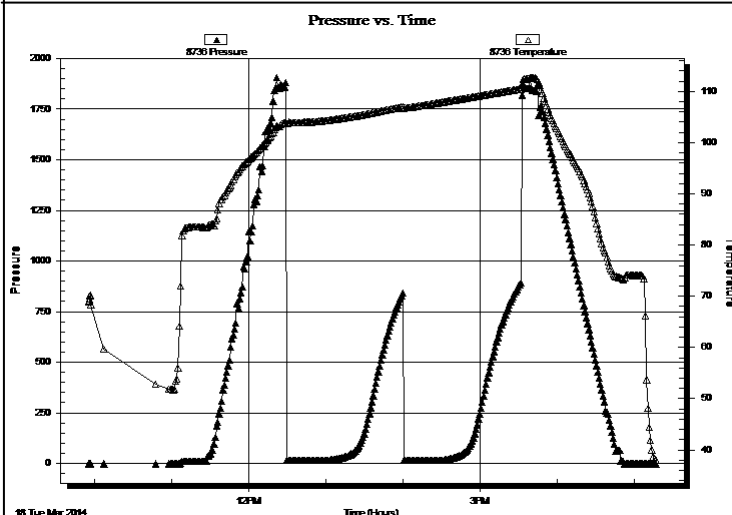
Test Start: 2014.03.18 @ 09:55:00

GENERAL INFORMATION:

Formation: **LKC "F"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 12:29:45 Tester: Tim Phillips
 Time Test Ended: 17:18:00 Unit No: 59
Interval: 3919.00 ft (KB) To 3937.00 ft (KB) (TVD)
 Total Depth: 3937.00 ft (KB) (TVD) Reference Elevations: 2704.00 ft (KB)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 2699.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8736 Outside
 Press@RunDepth: psig @ 3934.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.03.18 End Date: 2014.03.18 Last Calib.: 2014.03.18
 Start Time: 09:55:05 End Time: 17:17:29 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP- Blow built to 3/4"
 IS-Dead no blow back
 FF- Dead no blow
 FS- Dead no blow back



PRESSURE SUMMARY

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

Recovery

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

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: 57527

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2014.03.18 @ 09:55:00

Tool Information

Drill Pipe:	Length: 3792.00 ft	Diameter: 3.80 inches	Volume: 53.19 bbl	Tool Weight: 2000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 53.78 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3919.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	45.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3897.00	
Hydraulic tool	5.00			3902.00	
Jars	5.00			3907.00	
Safety Joint	2.00			3909.00	
Packer	5.00			3914.00	27.00 Bottom Of Top Packer
Packer	5.00			3919.00	
Stubb	1.00			3920.00	
Perforations	14.00			3934.00	
Recorder	0.00	8934	Inside	3934.00	
Recorder	0.00	8736	Outside	3934.00	
Bullnose	3.00			3937.00	18.00 Bottom Packers & Anchor

Total Tool Length: 45.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: 57527

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2014.03.18 @ 09:55:00

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100%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:

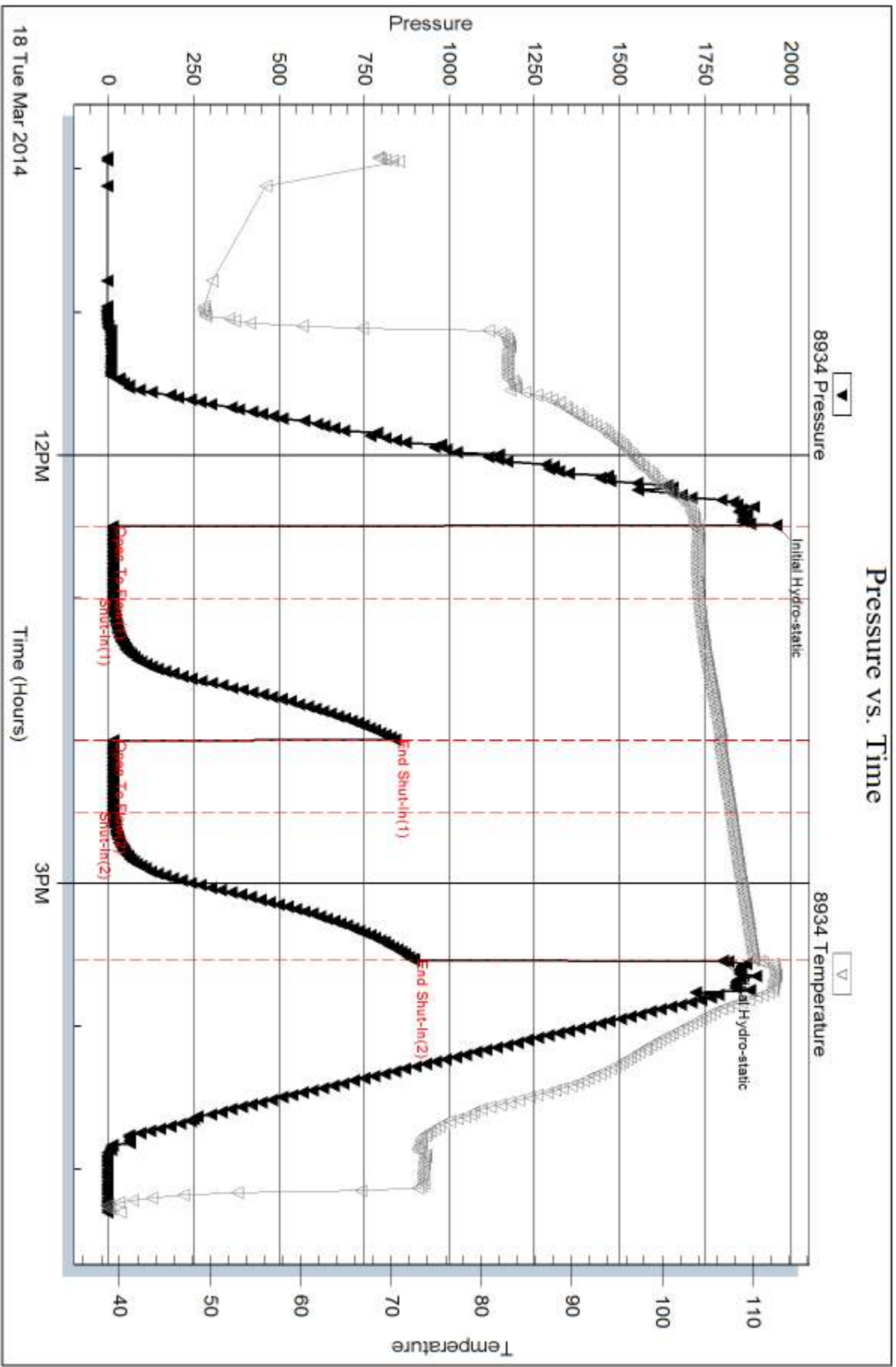
Serial #: 8934

Inside

Murfin Drilling Co

Goeltz #1-32

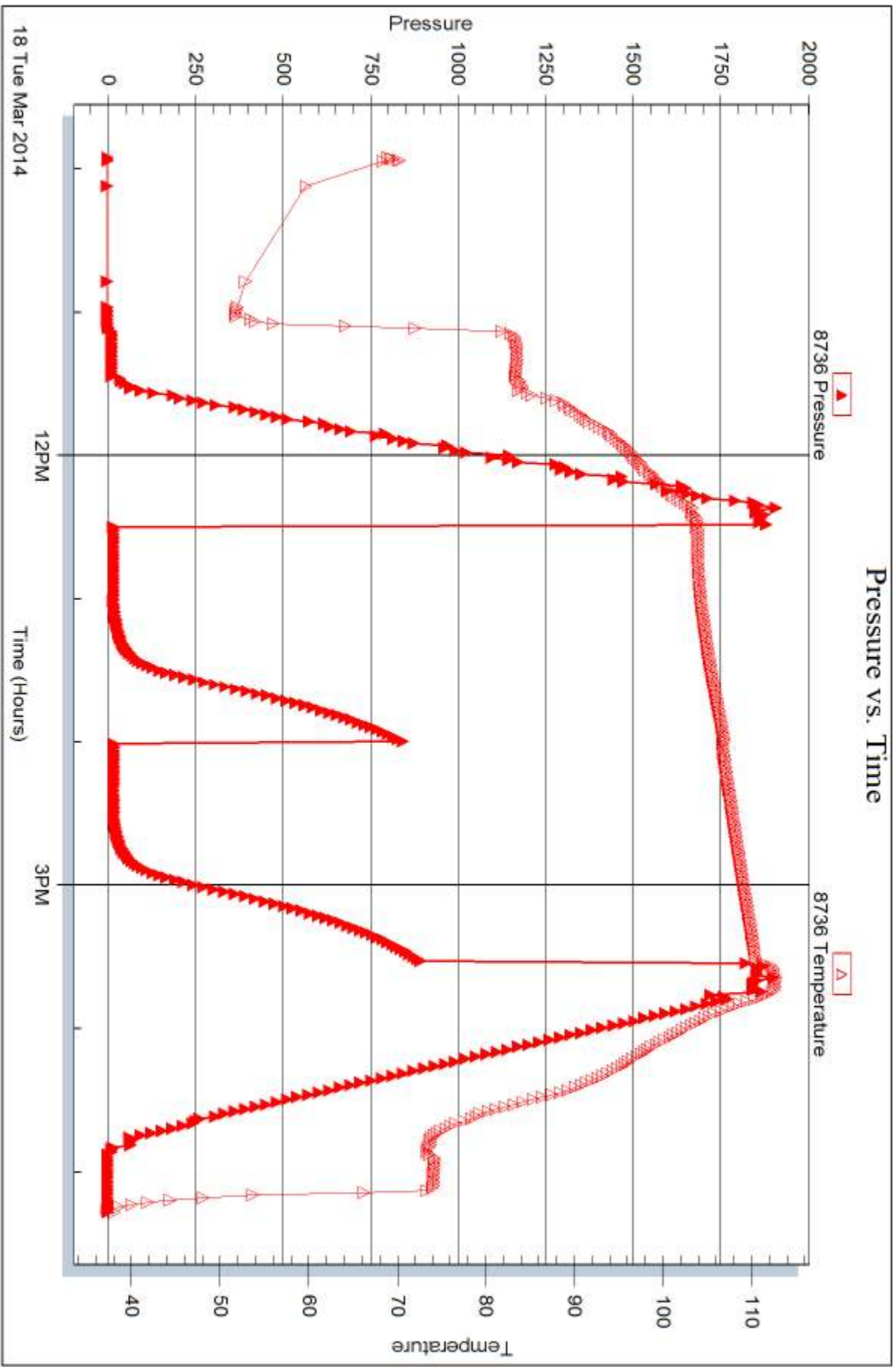
DST Test Number: 2



Tribble Testing, Inc

Ref. No: 57527

Printed: 2014.03.21 @ 15:09:58





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water St
Wichita, KS 67202

ATTN: Chuck Schmaltz

Goetz #1-32

32-9S-27W Sheridian,KS

Start Date: 2014.03.19 @ 10:21:00

End Date: 2014.03.19 @ 19:11:00

Job Ticket #: DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.03.21 @ 15:01:06



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: **DST#: 3**

ATTN: Chuck Schmalz

Test Start: 2014.03.19 @ 10:21:00

GENERAL INFORMATION:

Formation: **LKC J-L**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:13:30
 Time Test Ended: 19:11:00
 Interval: **3998.00 ft (KB) To 4095.00 ft (KB) (TVD)**
 Total Depth: 4095.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Tim Phillips
 Unit No: 59
 Reference Elevations: 2704.00 ft (KB)
 2699.00 ft (CF)
 KB to GR/CF: 5.00 ft

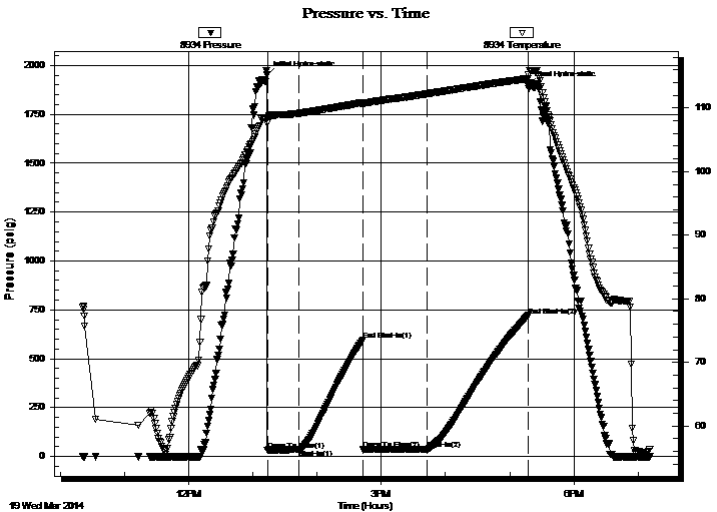
Serial #: 8934

Inside

Press@RunDepth: 37.25 psig @ 4028.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.03.19 End Date: 2014.03.19 Last Calib.: 2014.03.19
 Start Time: 10:21:05 End Time: 19:11:00 Time On Btm: 2014.03.19 @ 13:13:00
 Time Off Btm: 2014.03.19 @ 17:17:30

TEST COMMENT: IFP- Blow built to 2 1/4"
 IS- Dead no blow back
 FF- Blow built to 1/8"
 FS- Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1950.40	108.52	Initial Hydro-static
1	32.90	107.60	Open To Flow (1)
30	34.64	109.17	Shut-In(1)
90	595.85	110.84	End Shut-In(1)
90	35.02	110.58	Open To Flow (2)
150	37.25	112.24	Shut-In(2)
245	720.37	114.64	End Shut-In(2)
245	1894.76	115.21	Final Hydro-static

Recovery

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

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: **DST#: 3**

ATTN: Chuck Schmalz

Test Start: 2014.03.19 @ 10:21:00

GENERAL INFORMATION:

Formation: **LKC J-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:13:30

Time Test Ended: 19:11:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Tim Phillips

Unit No: 59

Interval: 3998.00 ft (KB) To 4095.00 ft (KB) (TVD)

Reference Elevations: 2704.00 ft (KB)

Total Depth: 4095.00 ft (KB) (TVD)

2699.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8736 Outside

Press@RunDepth: psig @ 4028.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.19

End Date:

2014.03.19

Last Calib.:

2014.03.19

Start Time: 10:21:11

End Time:

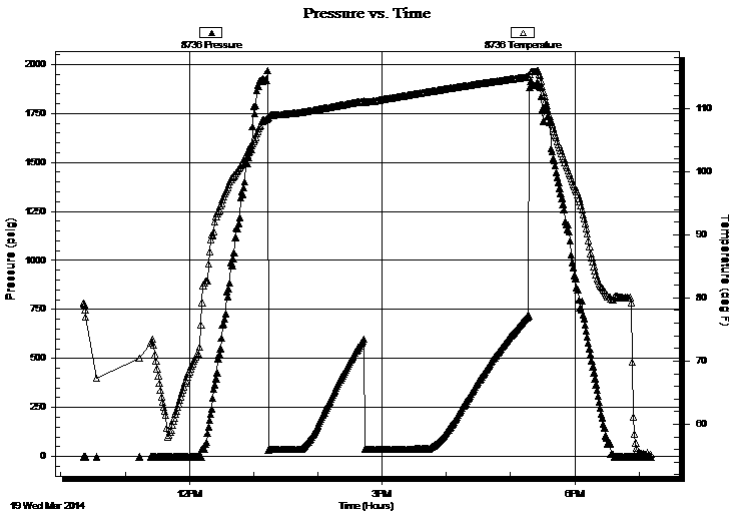
19:11:06

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP- Blow built to 2 1/4"
IS- Dead no blow back
FF- Blow built to 1/8"
FS- Dead no blow back

PRESSURE SUMMARY



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

Recovery

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

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

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket:

DST#: 3

ATTN: Chuck Schmaltz

Test Start: 2014.03.19 @ 10:21:00

Tool Information

Drill Pipe:	Length: 3861.00 ft	Diameter: 3.80 inches	Volume: 54.16 bbl	Tool Weight: 2000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 54.75 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3998.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	97.00 ft			
Tool Length:	124.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3976.00	
Hydraulic tool	5.00			3981.00	
Jars	5.00			3986.00	
Safety Joint	2.00			3988.00	
Packer	5.00			3993.00	27.00 Bottom Of Top Packer
Packer	5.00			3998.00	
Stubb	1.00			3999.00	
Perforations	29.00			4028.00	
Recorder	0.00	8934	Inside	4028.00	
Recorder	0.00	8736	Outside	4028.00	
Change Over Sub	1.00			4029.00	
Drill Pipe	62.00			4091.00	
Change Over Sub	1.00			4092.00	
Bullnose	3.00			4095.00	97.00 Bottom Packers & Anchor

Total Tool Length: 124.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

32-9S-27W Sheridian,KS

250 N. Water St
Wichita, KS 67202

Goetz #1-32

Job Ticket: **DST#: 3**

ATTN: Chuck Schmaltz

Test Start: 2014.03.19 @ 10:21:00

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: ppm

Viscosity: 50.00 sec/qt

Cushion Volume: bbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 2100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	100% Mud	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

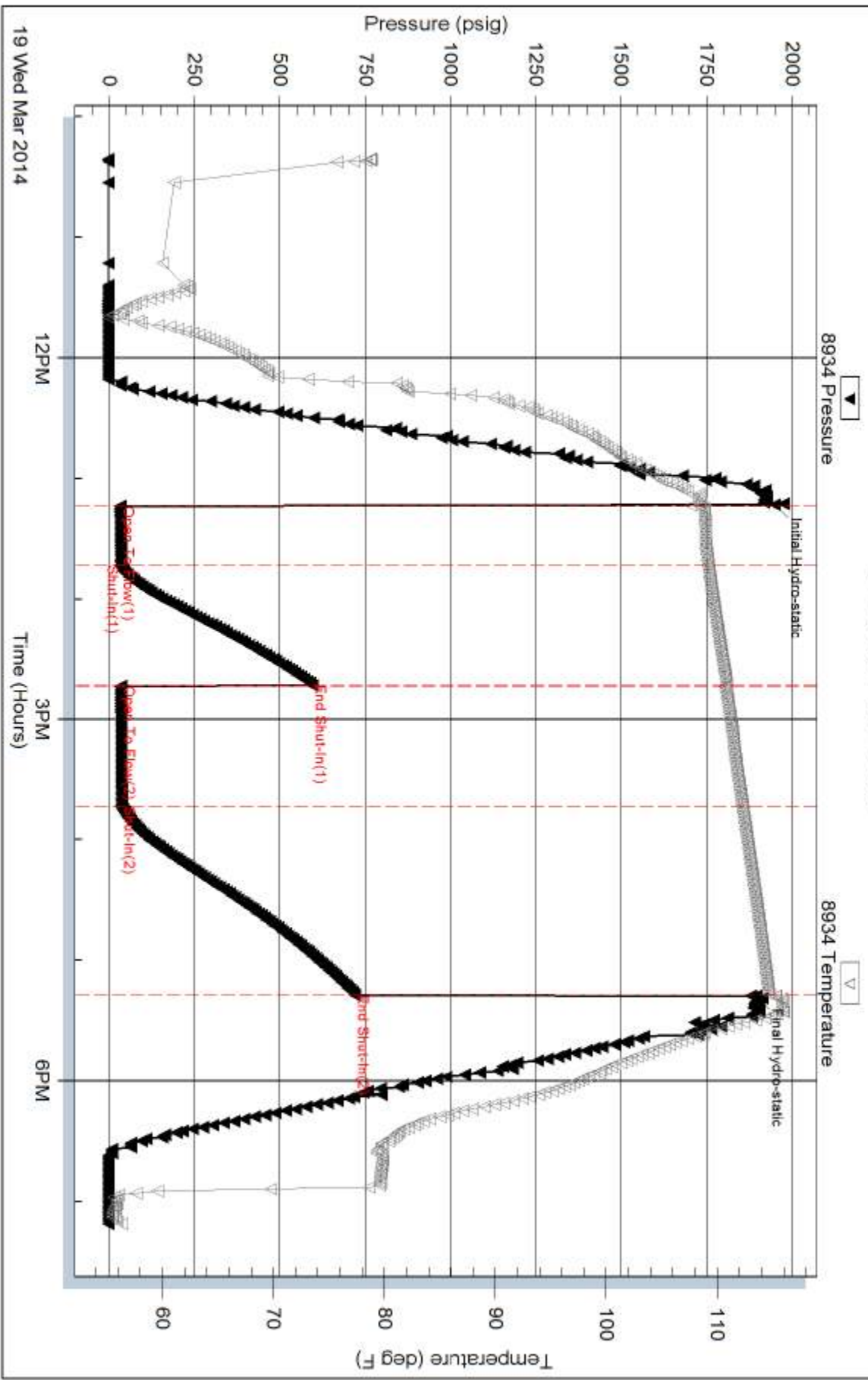
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

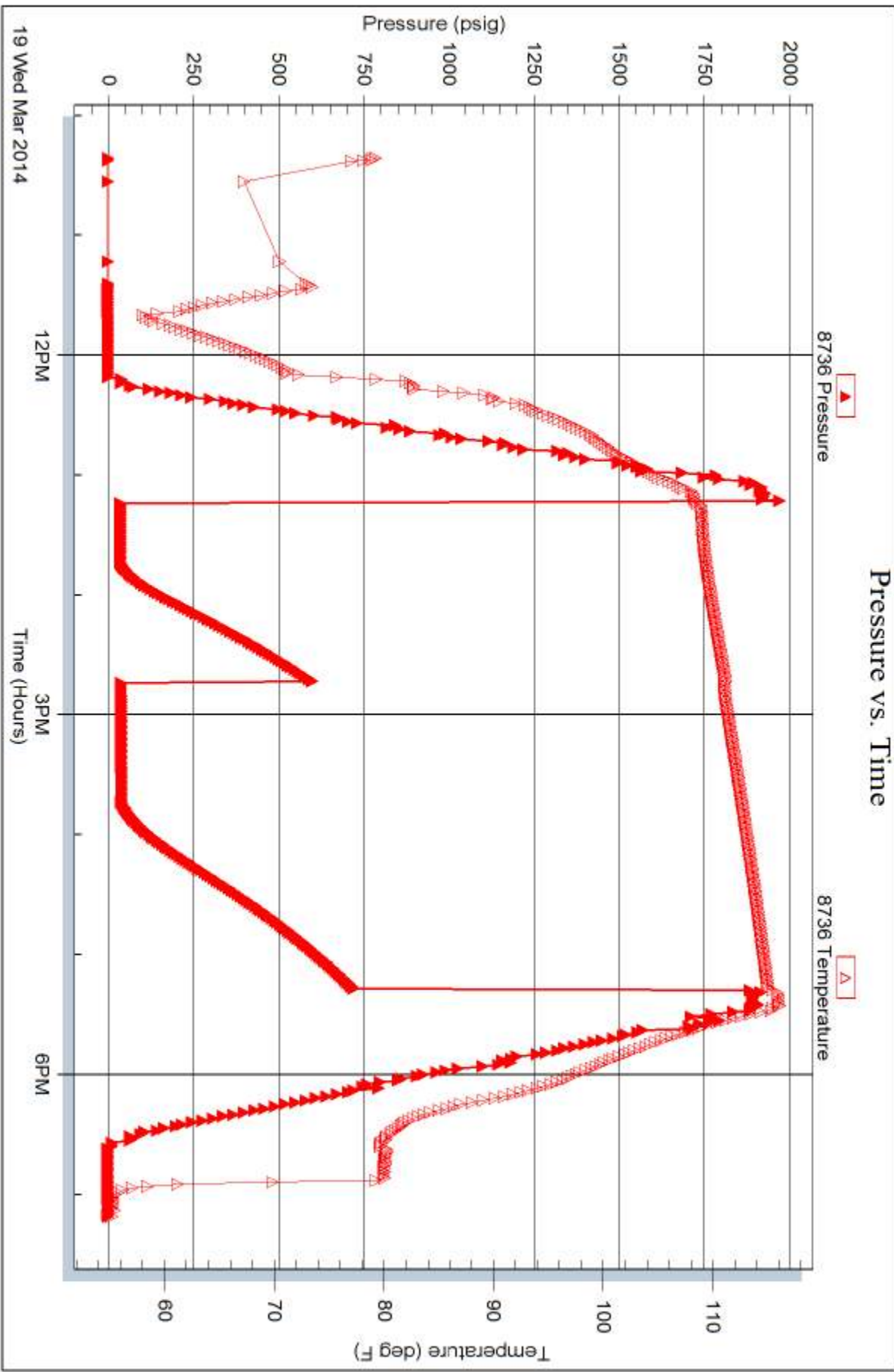


Serial #: 8736

Outside Murfin Drilling Co

Goetz #1-32

DST Test Number: 3



Trilobite Testing, Inc

Ref. No:

Printed: 2014.03.21 @ 15:01:08



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57526

Well Name & No. Goetz #1-32 Test No. 1 Date 03/17/2014
 Company Murfin Drilling Co Elevation 2704 KB 2699 GL
 Address 250 N Water St Wichita, KS 67202
 Co. Rep / Geo. Chuck Schmalz Rig Murfin #24
 Location: Sec. 32 Twp. 9S Rge. 27W Co. Sheeidean State KS

Interval Tested 3876-3922 Zone Tested LKC A-D
 Anchor Length 46 Drill Pipe Run 3740 Mud Wt. 8.9
 Top Packer Depth 3872 Drill Collars Run 126 Vis 50
 Bottom Packer Depth 3876 Wt. Pipe Run 0 WL 6.0
 Total Depth 3922 Chlorides 2000 ppm System LCM 3[#]

Blow Description IFP- Blow built to 3in
ISI- DEAD NO blow back
FF- Blow built to 2.25in
FSI- DEAD NO blow back

Rec	Feet of	%gas	%oil	%water	%mud
140	WCM			60	40

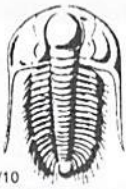
Rec Total 140 BHT 120 Gravity — API RW .19 @ 46 °F Chlorides 62,000 ppm

(A) Initial Hydrostatic 1865 Test 1150 T-On Location 1753
 (B) First Initial Flow 21 Jars 250 T-Started 1848
 (C) First Final Flow 44 Safety Joint 75 T-Open 2154
 (D) Initial Shut-In 1138 Circ Sub _____ T-Pulled 0154
 (E) Second Initial Flow 45 Hourly Standby _____ T-Out 0347
 (F) Second Final Flow 75 Mileage 166 R/T 104rt 161.20 Comments _____
 (G) Final Shut-In 1129 Sampler _____
 (H) Final Hydrostatic 1814 Straddle _____ Ruined Shale Packer _____

Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1636.20
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1636.20

Approved By _____ Our Representative Jim Phillips

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. 57527

Well Name & No. Goetz #1-32 Test No. 2 Date 03/18/2014
 Company Muefin Drilling CO Elevation 2704 KB 2699 GL
 Address 250N. Water ST Wichita, KS 67202
 Co. Rep / Geo. Chuck Schmaltz Rig Muefin #24
 Location: Sec. 32 Twp. 9 S Rge. 27W Co. Sheevidian State KS

Interval Tested 3918 - 3937 Zone Tested LKC "F"
 Anchor Length 18 Drill Pipe Run 3792 Mud Wt. 8.9
 Top Packer Depth 3914 Drill Collars Run 120 Vis 50
 Bottom Packer Depth 3918 Wt. Pipe Run 0 WL 6.0
 Total Depth 3937 Chlorides 2000 ppm System LCM 3#
 Blow Description IFP - Blow built to 3/4 IN
ISI - DEAD NO blow back
FF - DEAD NO blow
FSI - DEAD NO blow back

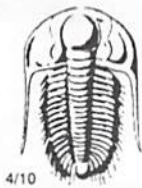
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 110 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1956</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0946</u>
(B) First Initial Flow <u>14</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0955</u>
(C) First Final Flow <u>14</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1230</u>
(D) Initial Shut-In <u>839</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1530</u>
(E) Second Initial Flow <u>14</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1718</u>
(F) Second Final Flow <u>15</u>	<input checked="" type="checkbox"/> Mileage <u>166 R/T</u> 161.20	Comments
(G) Final Shut-In <u>895</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1801</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1636.20</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1636.20</u>	

Approved By _____ Our Representative Jim Phillips

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57528

Well Name & No. Groetz # 1-32 Test No. 3 Date 03/19/2014
 Company Murfin Drilling Co Elevation 2704 KB 2699 GL
 Address 250 N. Water St Wichita, KS 67202
 Co. Rep / Geo. Chuck Schmaltz Rig Murfin # 24
 Location: Sec. 32 Twp. 9 S Rge. 27 W Co. Sheridan State KS

Interval Tested 3998 - 4095 Zone Tested LKC J-L
 Anchor Length 97 Drill Pipe Run 3861 Mud Wt. 9.0
 Top Packer Depth 3994 Drill Collars Run 120 Vis 50
 Bottom Packer Depth 3998 Wt. Pipe Run 0 WL 6.0
 Total Depth 4095 Chlorides 2100 ppm System LCM 3rd

Blow Description IFP- Blow built to 2.25 in
ISI - DEAD NO blow back
FF - DEAD NO blow
FSI - DEAD NO blow back

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 115 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1950 Test 1250 T-On Location 0943
 (B) First Initial Flow 32 Jars 250 T-Started 1022
 (C) First Final Flow 34 Safety Joint 75 T-Open 1313
 (D) Initial Shut-In 595 Circ Sub _____ T-Pulled 1413 1711
 (E) Second Initial Flow 35 Hourly Standby _____ T-Out 1910
 (F) Second Final Flow 37 Mileage 166 R/T 161.20 Comments _____
 (G) Final Shut-In 720 Sampler _____
 (H) Final Hydrostatic 1894 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 40 Day Standby _____ Total 1636.20
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____
 Sub Total 1636.20

Approved By _____ Our Representative Jim Phillips

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