



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Bob Stolzle

### **Fikan #1-5**

#### **5-4s-35w Rawlins KS**

Start Date: 2014.12.06 @ 18:05:00

End Date: 2014.12.07 @ 02:09:45

Job Ticket #: 60828                      DST #: 1

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

Printed: 2014.12.12 @ 15:10:19



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60828

**DST#: 1**

ATTN: Bob Stolzle

Test Start: 2014.12.06 @ 18:05:00

## GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:50:00

Time Test Ended: 02:09:45

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 83

**Interval: 4137.00 ft (KB) To 4205.00 ft (KB) (TVD)**

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4205.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 19.32 psig @ 4138.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.06

End Date:

2014.12.07

Last Calib.:

2014.12.07

Start Time:

18:05:05

End Time:

02:09:44

Time On Btm:

2014.12.06 @ 20:49:45

Time Off Btm:

2014.12.06 @ 23:52:00

## TEST COMMENT:

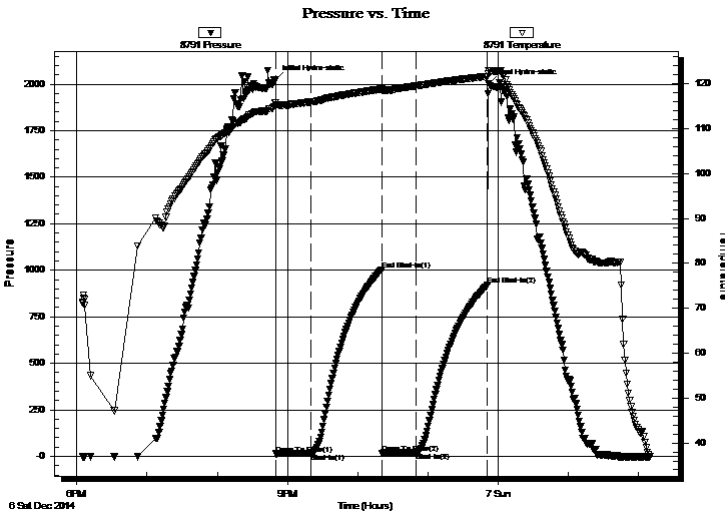
30 - IF: Blow built to 1/2"

60 - IS: No blow back

30 - FF: Surface blow at open, dead at 10 min., weak surface blow last few min. of open

60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2023.31	115.84	Initial Hydro-static
1	13.53	114.88	Open To Flow (1)
31	15.82	116.04	Shut-In(1)
91	1002.40	118.86	End Shut-In(1)
92	17.78	118.45	Open To Flow (2)
121	19.32	119.56	Shut-In(2)
181	919.82	121.68	End Shut-In(2)
183	2002.06	123.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	0.07
0.00	Oil spots in tool	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.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60828

**DST#: 1**

ATTN: Bob Stolzle

Test Start: 2014.12.06 @ 18:05:00

## Tool Information

Drill Pipe:	Length: 3949.00 ft	Diameter: 3.80 inches	Volume: 55.39 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 56.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4137.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4114.00	
Hydraulic tool	5.00			4119.00	
Jars	5.00			4124.00	
Safety Joint	3.00			4127.00	
Packer	5.00			4132.00	28.00 Bottom Of Top Packer
Packer	5.00			4137.00	
Stubb	1.00			4138.00	
Recorder	0.00	8791	Inside	4138.00	
Recorder	0.00	8366	Outside	4138.00	
Perforations	30.00			4168.00	
Blank Spacing	34.00			4202.00	
Bullnose	3.00			4205.00	68.00 Bottom Packers & Anchor

**Total Tool Length: 96.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60828

**DST#: 1**

ATTN: Bob Stolzle

Test Start: 2014.12.06 @ 18:05:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.95 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud 100%	0.074
0.00	Oil spots in tool	0.000

Total Length: 15.00 ft      Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

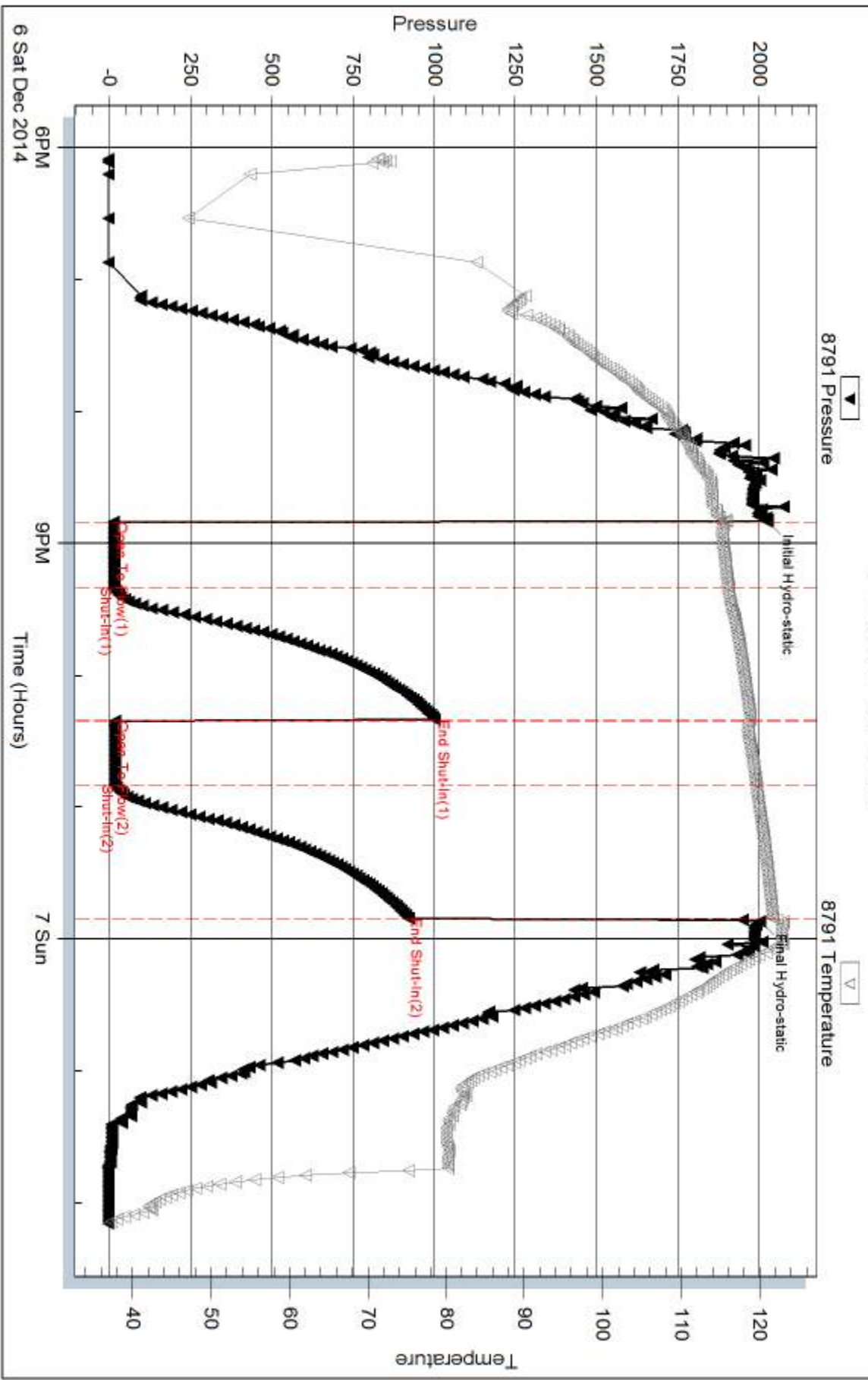
Serial #:

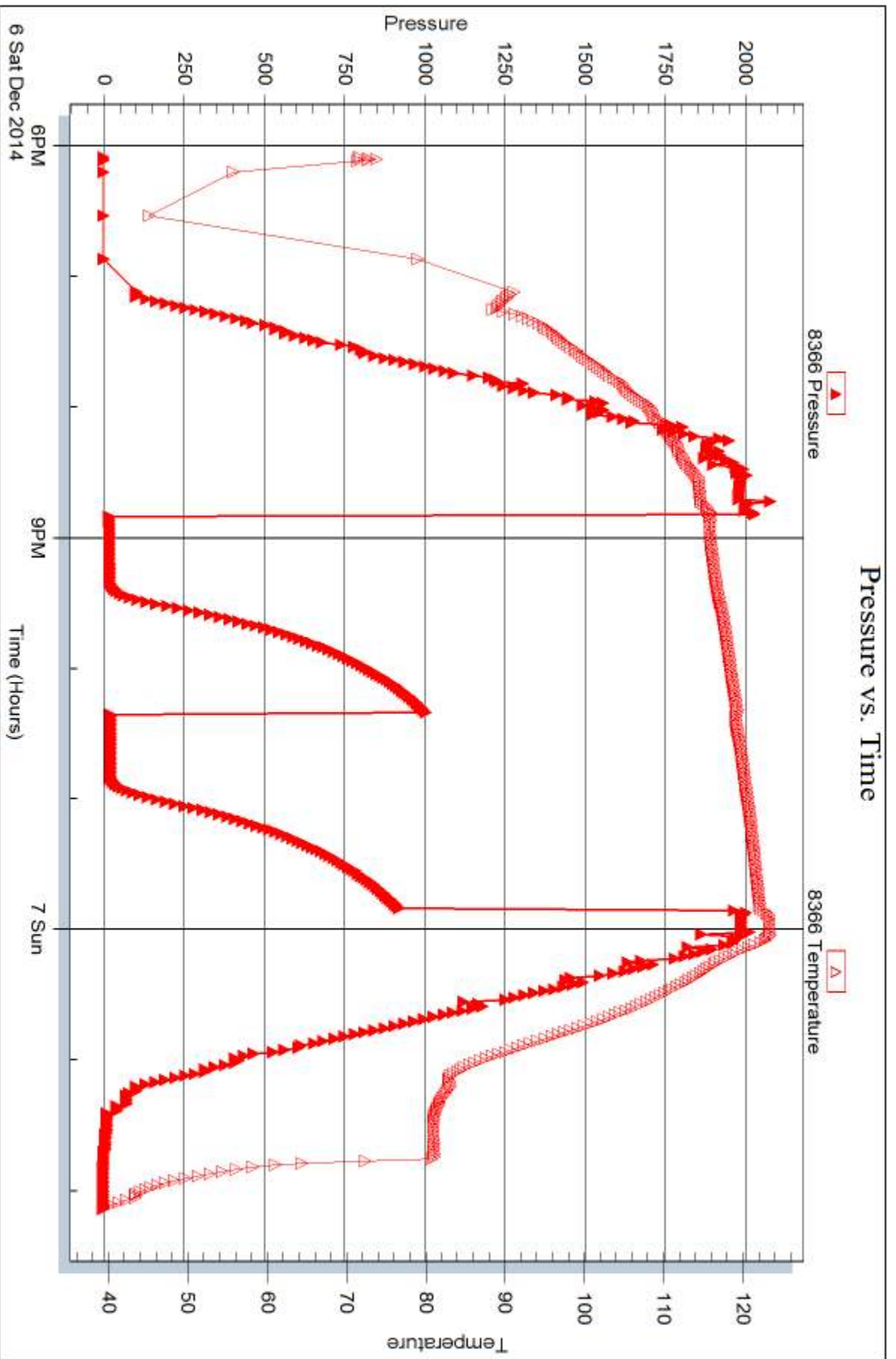
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Bob Stolze

### **Fikan #1-5**

#### **5-4s-35w Rawlins KS**

Start Date: 2014.12.07 @ 14:15:00

End Date: 2014.12.07 @ 21:45:45

Job Ticket #: 60829                      DST #: 2

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

Printed: 2014.12.12 @ 15:09:52





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60829

**DST#: 2**

ATTN: Bob Stolzle

Test Start: 2014.12.07 @ 14:15:00

## GENERAL INFORMATION:

Formation: **LKC "D - F"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:33:15  
 Time Test Ended: 21:45:45  
 Interval: **4202.00 ft (KB) To 4285.00 ft (KB) (TVD)**  
 Total Depth: 4285.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3272.00 ft (KB)  
 3267.00 ft (CF)  
 KB to GR/CF: 5.00 ft

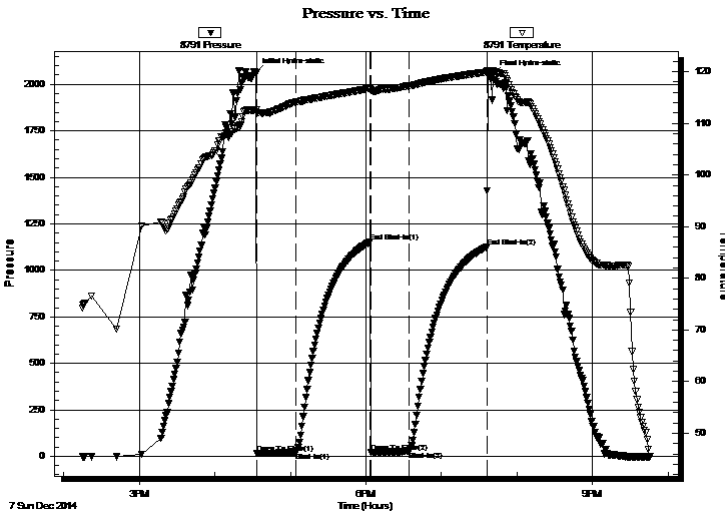
## Serial #: 8791

Inside

Press@RunDepth: 25.67 psig @ 4203.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.12.07 End Date: 2014.12.07 Last Calib.: 2014.12.07  
 Start Time: 14:15:05 End Time: 21:45:44 Time On Btm: 2014.12.07 @ 16:32:45  
 Time Off Btm: 2014.12.07 @ 19:40:45

TEST COMMENT: 30 - IF: 1/8" Blow at open, blow stayed at 1/8" throughout open  
 60 - IS: No blow back  
 30 - FF: No blow  
 60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2061.47	112.59	Initial Hydro-static
1	14.86	112.06	Open To Flow (1)
32	19.68	114.10	Shut-In(1)
91	1153.25	116.75	End Shut-In(1)
92	21.50	116.41	Open To Flow (2)
122	25.67	117.28	Shut-In(2)
184	1125.90	119.95	End Shut-In(2)
188	2053.06	120.12	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100%	0.05
0.00	Oil spots in tool	0.00

\* 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., Inc.  
 250 N. Water STE 300  
 Wichita, KS 67202  
 ATTN: Bob Stolzle

**5-4s-35w Rawlins KS**

**Fikan #1-5**

Job Ticket: 60829

**DST#: 2**

Test Start: 2014.12.07 @ 14:15:00

## GENERAL INFORMATION:

Formation: **LKC "D - F"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:33:15  
 Time Test Ended: 21:45:45  
 Interval: **4202.00 ft (KB) To 4285.00 ft (KB) (TVD)**  
 Total Depth: 4285.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3272.00 ft (KB)  
 3267.00 ft (CF)  
 KB to GR/CF: 5.00 ft

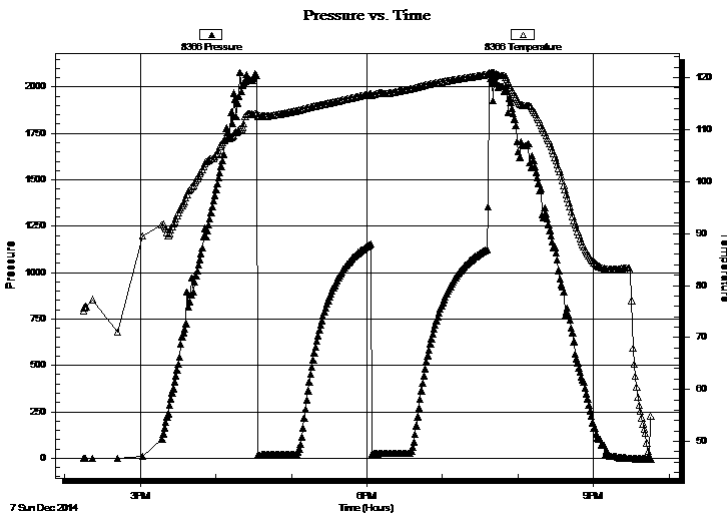
## Serial #: 8366

Outside

Press@RunDepth: psig @ 4203.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.12.07 End Date: 2014.12.07 Last Calib.: 2014.12.07  
 Start Time: 14:15:05 End Time: 21:45:14 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30 - IF: 1/8" Blow at open, blow stayed at 1/8" throughout open  
 60 - IS!: No blow back  
 30 - FF: No blow  
 60 - FS!: No blow back

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100%	0.05
0.00	Oil spots in tool	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.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60829

**DST#: 2**

ATTN: Bob Stolzle

Test Start: 2014.12.07 @ 14:15:00

## Tool Information

Drill Pipe:	Length: 4012.00 ft	Diameter: 3.80 inches	Volume: 56.28 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 57.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4202.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.00 ft			
Tool Length:	111.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4179.00	
Hydraulic tool	5.00			4184.00	
Jars	5.00			4189.00	
Safety Joint	3.00			4192.00	
Packer	5.00			4197.00	28.00 Bottom Of Top Packer
Packer	5.00			4202.00	
Stubb	1.00			4203.00	
Recorder	0.00	8791	Inside	4203.00	
Recorder	0.00	8366	Outside	4203.00	
Perforations	14.00			4217.00	
Blank Spacing	65.00			4282.00	
Bullnose	3.00			4285.00	83.00 Bottom Packers & Anchor

**Total Tool Length: 111.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60829

**DST#: 2**

ATTN: Bob Stolzle

Test Start: 2014.12.07 @ 14:15:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 56.00 sec/qt  
Water Loss: 6.37 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 2600.00 ppm  
Filter Cake: 2.00 inches

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

Oil API: deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100%	0.049
0.00	Oil spots in tool	0.000

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

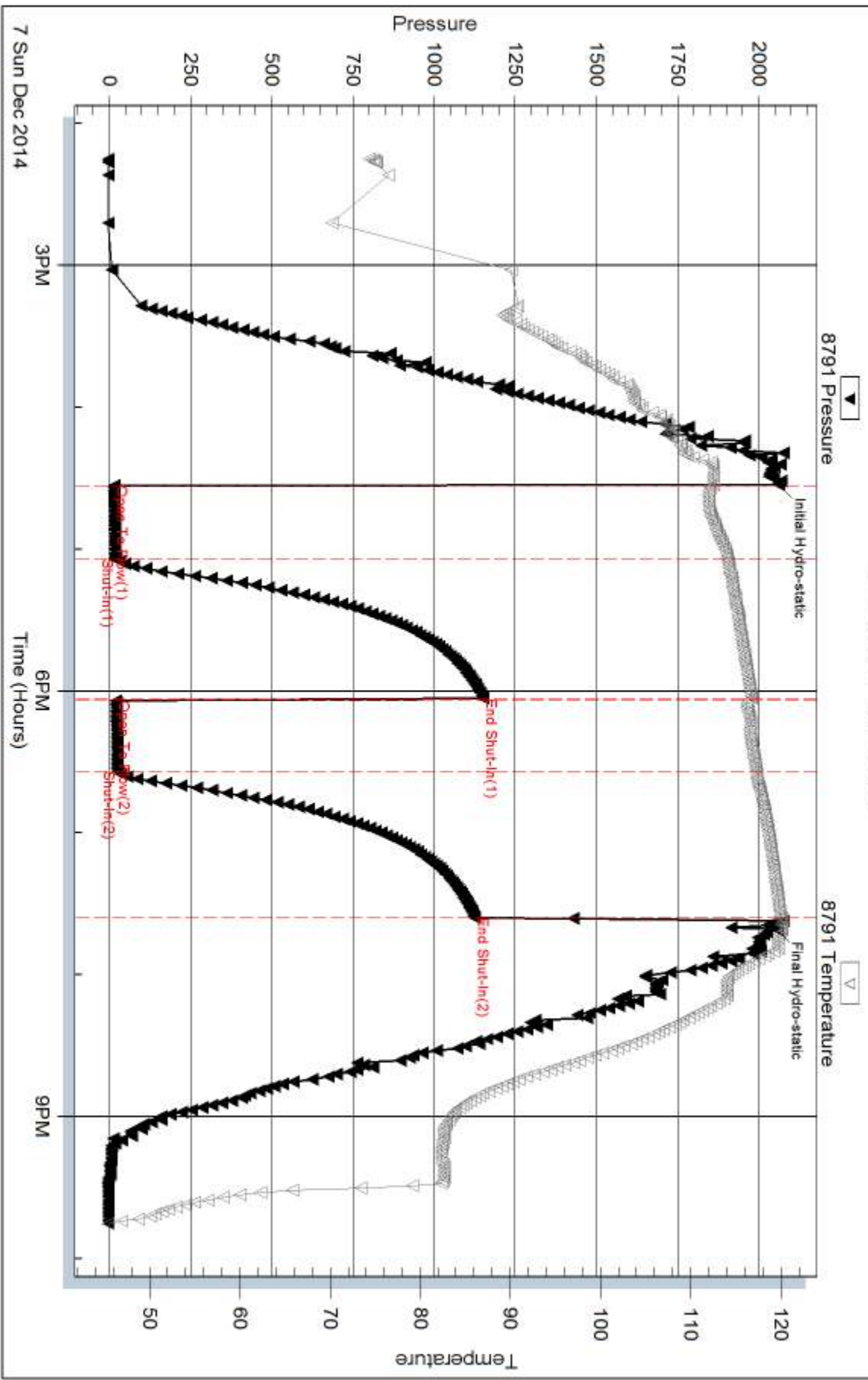
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

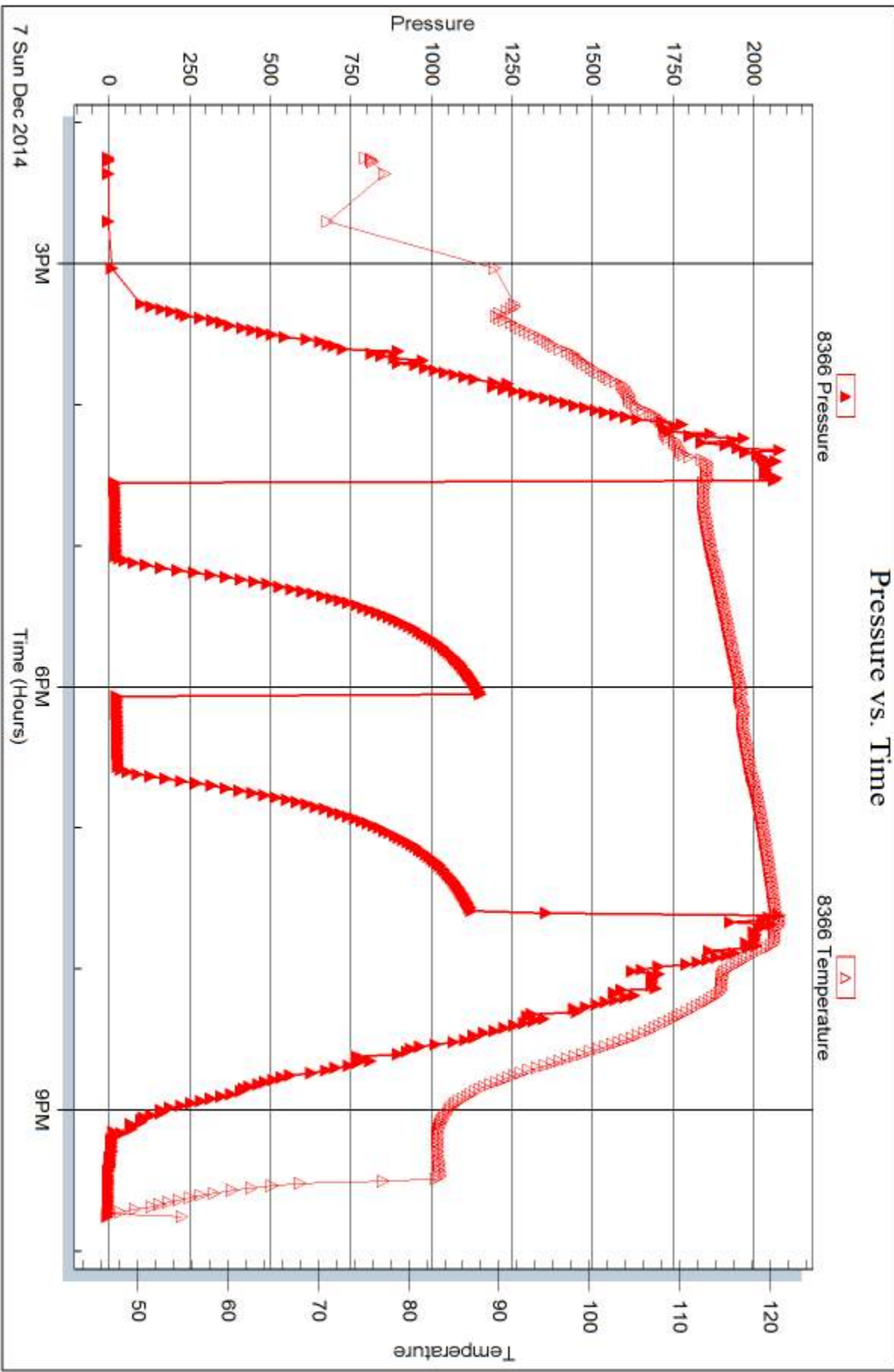


Serial #: 8366

Outside Murfin Drilling Co., Inc.

Fikan #1-5

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 60829

Printed: 2014.12.12 @ 15:09:53



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Bob Stolze

### **Fikan #1-5**

#### **5-4s-35w Rawlins KS**

Start Date: 2014.12.08 @ 18:02:00

End Date: 2014.12.09 @ 02:52:45

Job Ticket #: 60830                      DST #: 3

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

Printed: 2014.12.12 @ 15:09:30



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

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

**5-4s-35w Rawlins KS**

**Fikan #1-5**

Job Ticket: 60830

**DST#: 3**

Test Start: 2014.12.08 @ 18:02:00

## GENERAL INFORMATION:

Formation: **LKC "G - L"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 20:49:45  
 Tester: James Winder  
 Time Test Ended: 02:52:45  
 Unit No: 83  
 Interval: **4256.00 ft (KB) To 4445.00 ft (KB) (TVD)**  
 Reference Elevations: 3272.00 ft (KB)  
 Total Depth: 4445.00 ft (KB) (TVD)  
 3267.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 5.00 ft

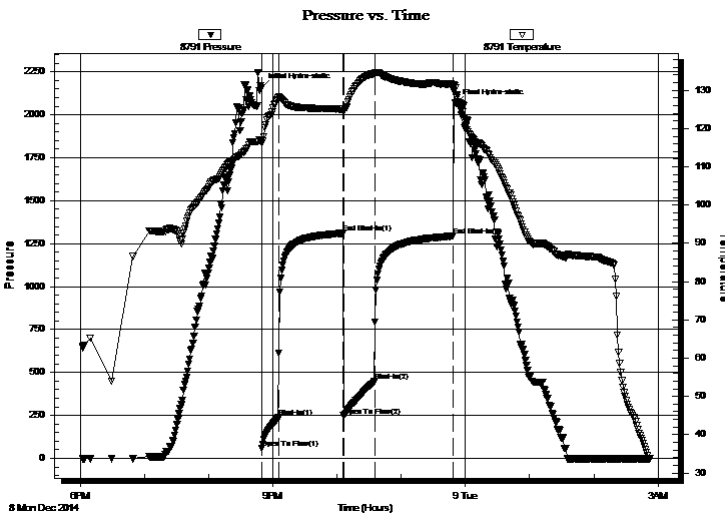
## Serial #: 8791

Inside

Press@RunDepth: 450.11 psig @ 4257.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.12.08 End Date: 2014.12.09 Last Calib.: 2014.12.09  
 Start Time: 18:02:05 End Time: 02:52:45 Time On Btm: 2014.12.08 @ 20:49:30  
 Time Off Btm: 2014.12.08 @ 23:51:00

TEST COMMENT: 15 - IF: Blow built to BOB (11") in 4 min.  
 60 - IS: No blow back  
 30 - FF: Blow built to BOB in 5 min.  
 60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2156.69	117.16	Initial Hydro-static
1	59.67	116.29	Open To Flow (1)
16	237.45	128.02	Shut-In(1)
76	1309.96	125.09	End Shut-In(1)
77	247.78	124.68	Open To Flow (2)
106	450.11	134.36	Shut-In(2)
179	1294.35	131.52	End Shut-In(2)
182	2064.85	130.73	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
444.00	MCW 86%w, 14%m	4.53
440.00	Watery Mud 60%m, 40%w	6.17
62.00	WCM 85%m, 15%w	0.87

\* 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.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60830

**DST#: 3**

ATTN: Bob Stolzle

Test Start: 2014.12.08 @ 18:02:00

## GENERAL INFORMATION:

Formation: **LKC "G - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:49:45

Time Test Ended: 02:52:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4256.00 ft (KB) To 4445.00 ft (KB) (TVD)**

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4445.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8366 Outside**

Press@RunDepth: psig @ 4257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.08

End Date: 2014.12.09

Last Calib.: 2014.12.09

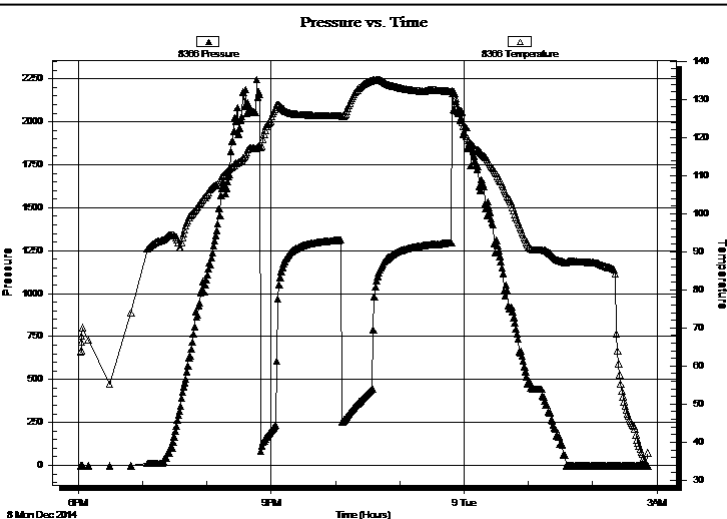
Start Time: 18:02:05

End Time: 02:51:45

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 15 - IF: Blow built to BOB (11") in 4 min.  
60 - ISI: No blow back  
30 - FF: Blow built to BOB in 5 min.  
60 - FSI: No blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
444.00	MCW 86%w, 14%m	4.53
440.00	Watery Mud 60%m, 40%w	6.17
62.00	WCM 85%m, 15%w	0.87

\* 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.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60830

**DST#: 3**

ATTN: Bob Stolzle

Test Start: 2014.12.08 @ 18:02:00

## Tool Information

Drill Pipe:	Length: 4076.00 ft	Diameter: 3.80 inches	Volume: 57.18 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 58.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4256.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	189.00 ft			
Tool Length:	217.00 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			4233.00	
Hydraulic tool	5.00			4238.00	
Jars	5.00			4243.00	
Safety Joint	3.00			4246.00	
Packer	5.00			4251.00	28.00 Bottom Of Top Packer
Packer	5.00			4256.00	
Stubb	1.00			4257.00	
Recorder	0.00	8791	Inside	4257.00	
Recorder	0.00	8366	Outside	4257.00	
Perforations	20.00			4277.00	
Blank Spacing	160.00			4437.00	
Perforations	5.00			4442.00	
Bullnose	3.00			4445.00	189.00 Bottom Packers & Anchor

**Total Tool Length: 217.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60830

**DST#: 3**

ATTN: Bob Stolzle

Test Start: 2014.12.08 @ 18:02:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 58.00 sec/qt  
Water Loss: 6.77 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 2900.00 ppm  
Filter Cake: 2.00 inches

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

Oil API: deg API  
Water Salinity: 60000 ppm

## Recovery Information

Recovery Table

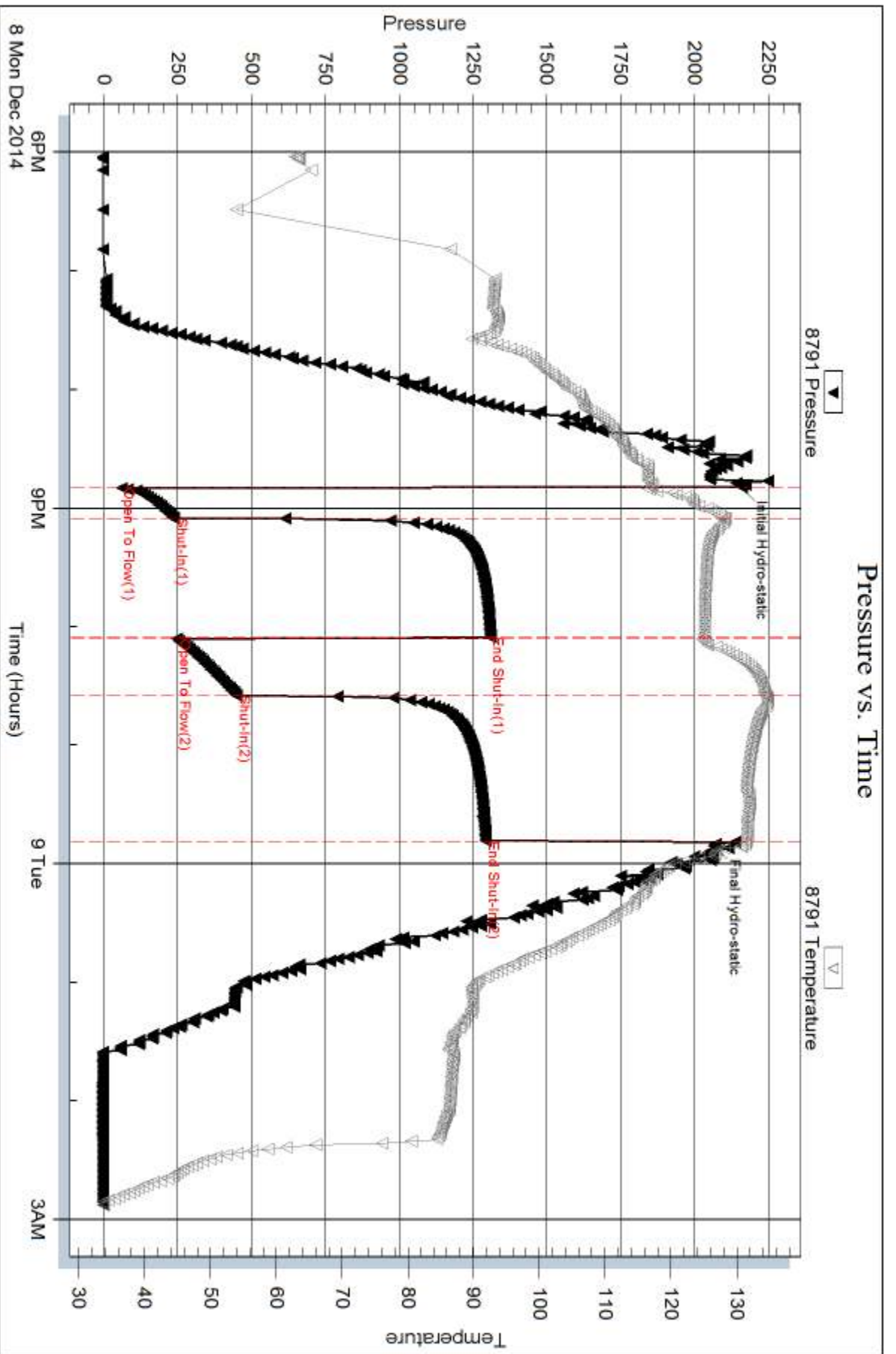
Length ft	Description	Volume bbl
444.00	MCW 86%w , 14%m	4.534
440.00	Watery Mud 60%m, 40%w	6.172
62.00	WCM 85%m, 15%w	0.870

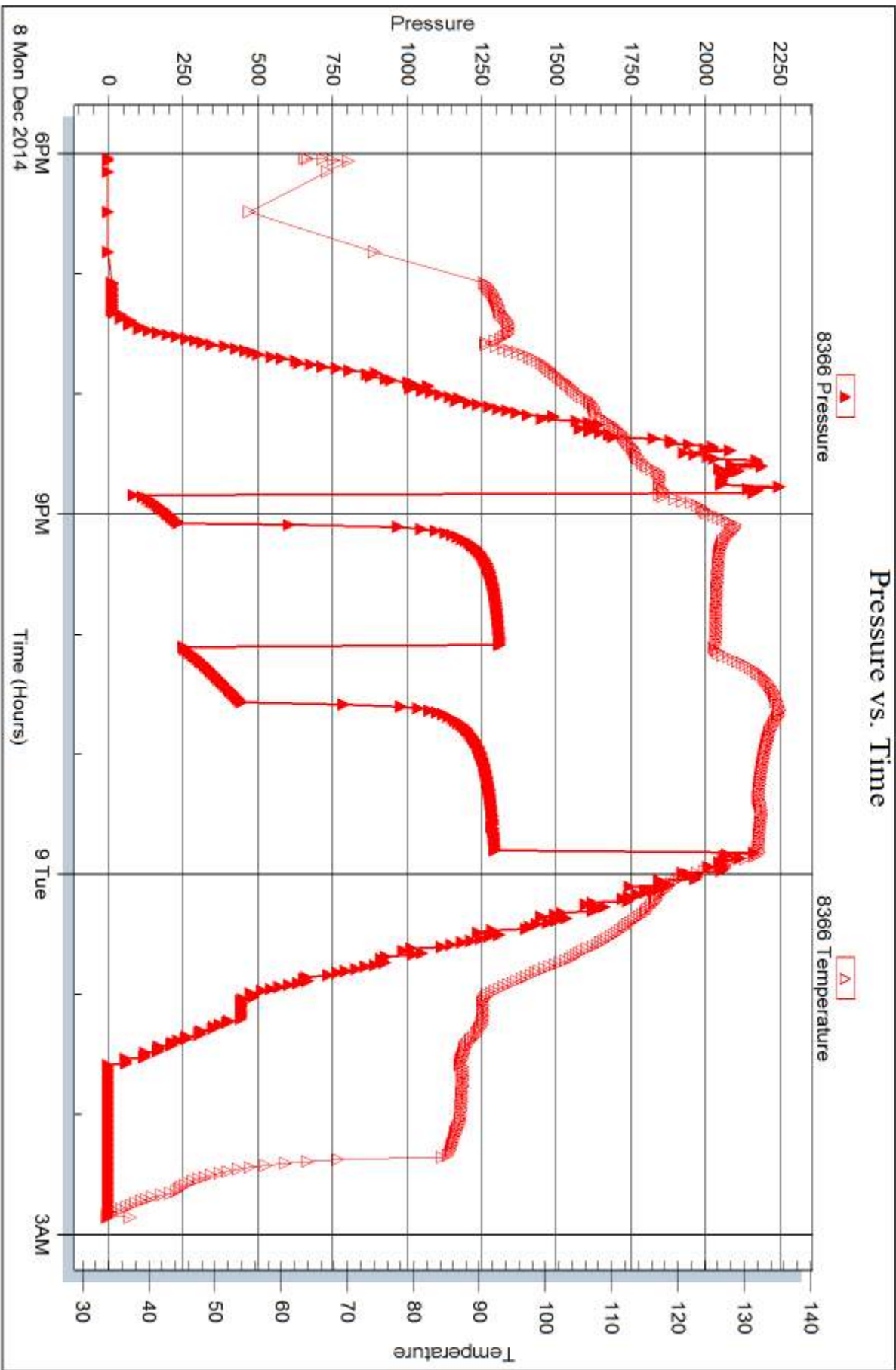
Total Length: 946.00 ft      Total Volume: 11.576 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW = .240 ohms @ 37.3 deg F Chlorides = 60,000 ppm







## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Bob Stolzle

### **Fikan #1-5**

#### **5-4s-35w Rawlins KS**

Start Date: 2014.12.10 @ 03:44:00

End Date: 2014.12.10 @ 12:08:30

Job Ticket #: 60831                      DST #: 4

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

Printed: 2014.12.12 @ 15:09:06



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60831

**DST#: 4**

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 03:44:00

## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:30:30

Time Test Ended: 12:08:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4538.00 ft (KB) To 4620.00 ft (KB) (TVD)**

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4620.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 54.78 psig @ 4539.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.10

End Date:

2014.12.10

Last Calib.: 2014.12.10

Start Time: 03:44:05

End Time:

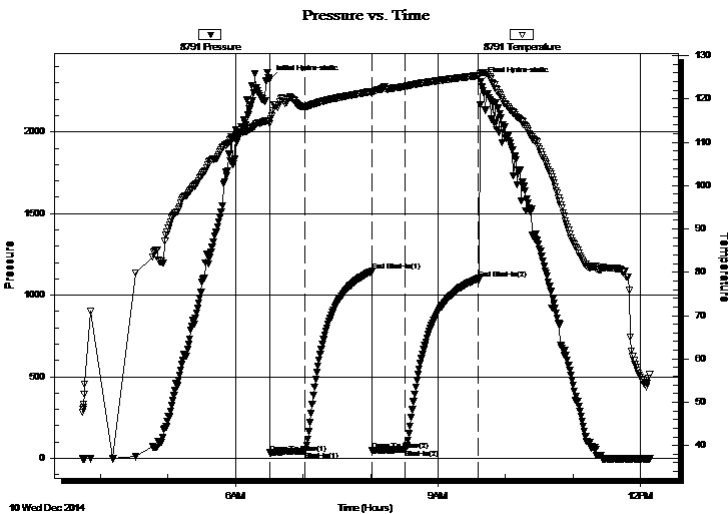
12:08:29

Time On Btm: 2014.12.10 @ 06:30:15

Time Off Btm: 2014.12.10 @ 09:38:15

**TEST COMMENT:** 30 - IF: Blow built 1 1/2"  
60 - ISI: No Blow back  
30 - ISI: Blow built to 1/8", died back, dead at close  
60 - FSI: No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2319.59	115.08	Initial Hydro-static
1	33.49	114.24	Open To Flow (1)
32	44.35	118.20	Shut-In(1)
91	1145.89	121.73	End Shut-In(1)
92	47.27	121.18	Open To Flow (2)
121	54.78	122.91	Shut-In(2)
186	1101.76	125.42	End Shut-In(2)
188	2308.97	126.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	Mud 100%	0.34

\* 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.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60831

**DST#: 4**

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 03:44:00

## Tool Information

Drill Pipe:	Length: 4329.00 ft	Diameter: 3.80 inches	Volume: 60.72 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 61.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4538.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.00 ft			
Tool Length:	110.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4515.00	
Hydraulic tool	5.00			4520.00	
Jars	5.00			4525.00	
Safety Joint	3.00			4528.00	
Packer	5.00			4533.00	28.00 Bottom Of Top Packer
Packer	5.00			4538.00	
Stubb	1.00			4539.00	
Recorder	0.00	8791	Inside	4539.00	
Recorder	0.00	8366	Outside	4539.00	
Perforations	13.00			4552.00	
Blank Spacing	65.00			4617.00	
Bullnose	3.00			4620.00	82.00 Bottom Packers & Anchor

**Total Tool Length: 110.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60831

**DST#: 4**

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 03:44:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Mud 100%	0.344

Total Length: 70.00 ft      Total Volume: 0.344 bbl

Num Fluid Samples: 0

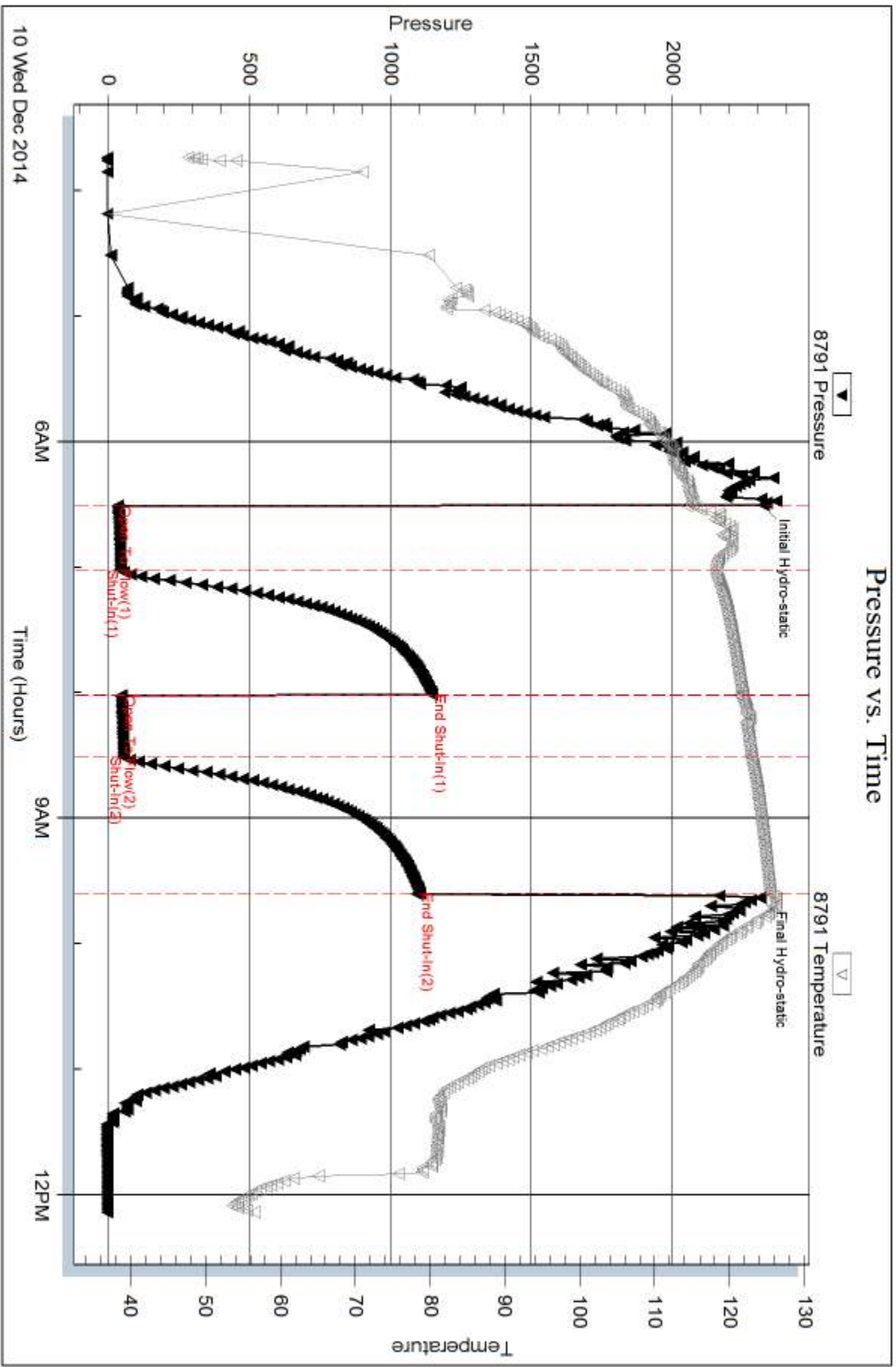
Num Gas Bombs: 0

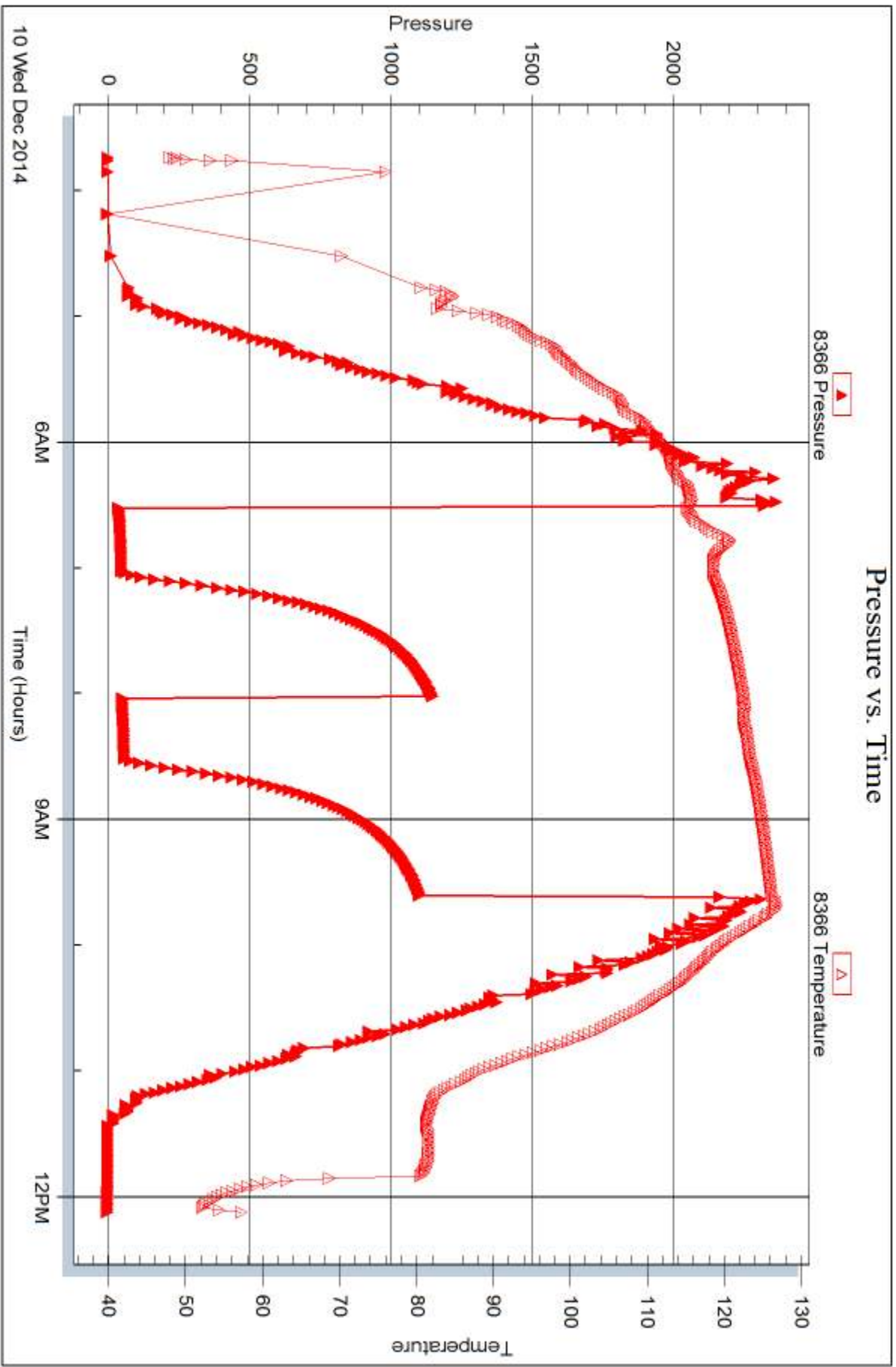
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Bob Stolzle

### **Fikan #1-5**

#### **5-4s-35w Rawlins KS**

Start Date: 2014.12.10 @ 23:06:00

End Date: 2014.12.11 @ 07:30:45

Job Ticket #: 60832                      DST #: 5

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

Printed: 2014.12.12 @ 15:08:27



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60832

**DST#: 5**

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 23:06:00

## GENERAL INFORMATION:

Formation: **Verdigris**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:45:30

Time Test Ended: 07:30:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4610.00 ft (KB) To 4670.00 ft (KB) (TVD)**

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4670.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 19.40 psig @ 4611.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.10

End Date:

2014.12.11

Last Calib.: 2014.12.11

Start Time: 23:06:05

End Time:

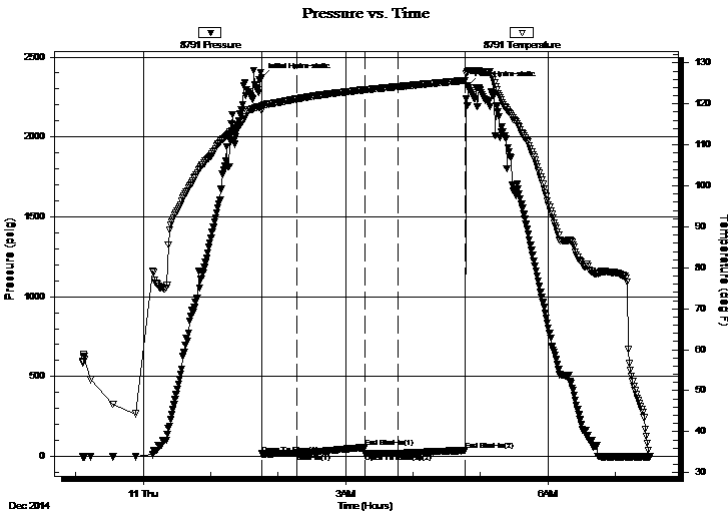
07:30:44

Time On Btm: 2014.12.11 @ 01:45:15

Time Off Btm: 2014.12.11 @ 04:48:30

**TEST COMMENT:** 30 - IF: Blow built to 1"  
60 - ISI: No blow back  
30 - FF: Surface blow at open, dead at 6 min.  
60 - FSI: No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2373.32	119.46	Initial Hydro-static
1	15.38	118.39	Open To Flow (1)
31	17.54	121.19	Shut-In(1)
92	56.20	123.45	End Shut-In(1)
92	17.79	123.43	Open To Flow (2)
121	19.40	124.20	Shut-In(2)
181	37.00	125.72	End Shut-In(2)
184	2319.22	127.93	Final Hydro-static

## Recovery

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

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60832

**DST#: 5**

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 23:06:00

## GENERAL INFORMATION:

Formation: **Verdigris**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:45:30

Time Test Ended: 07:30:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4610.00 ft (KB) To 4670.00 ft (KB) (TVD)**

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4670.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8366**

**Outside**

Press@RunDepth: psig @ 4611.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.10

End Date:

2014.12.11

Last Calib.:

2014.12.11

Start Time: 23:06:05

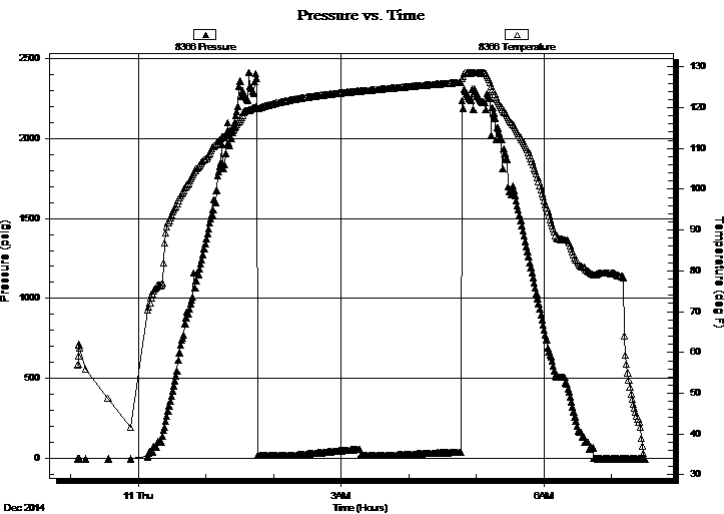
End Time:

07:29:44

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 1"  
60 - ISI: No blow back  
30 - FF: Surface blow at open, dead at 6 min.  
60 - FSI: No blow



## PRESSURE SUMMARY

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

## Recovery

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

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60832

**DST#: 5**

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 23:06:00

## Tool Information

Drill Pipe:	Length: 4422.00 ft	Diameter: 3.80 inches	Volume: 62.03 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 62.94 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4610.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	88.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4587.00	
Hydraulic tool	5.00			4592.00	
Jars	5.00			4597.00	
Safety Joint	3.00			4600.00	
Packer	5.00			4605.00	28.00 Bottom Of Top Packer
Packer	5.00			4610.00	
Stubb	1.00			4611.00	
Recorder	0.00	8791	Inside	4611.00	
Recorder	0.00	8366	Outside	4611.00	
Perforations	22.00			4633.00	
Blank Spacing	34.00			4667.00	
Bullnose	3.00			4670.00	60.00 Bottom Packers & Anchor

**Total Tool Length: 88.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**5-4s-35w Rawlins KS**

250 N. Water STE 300  
Wichita, KS 67202

**Fikan #1-5**

Job Ticket: 60832

**DST#: 5**

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 23:06:00

## 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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

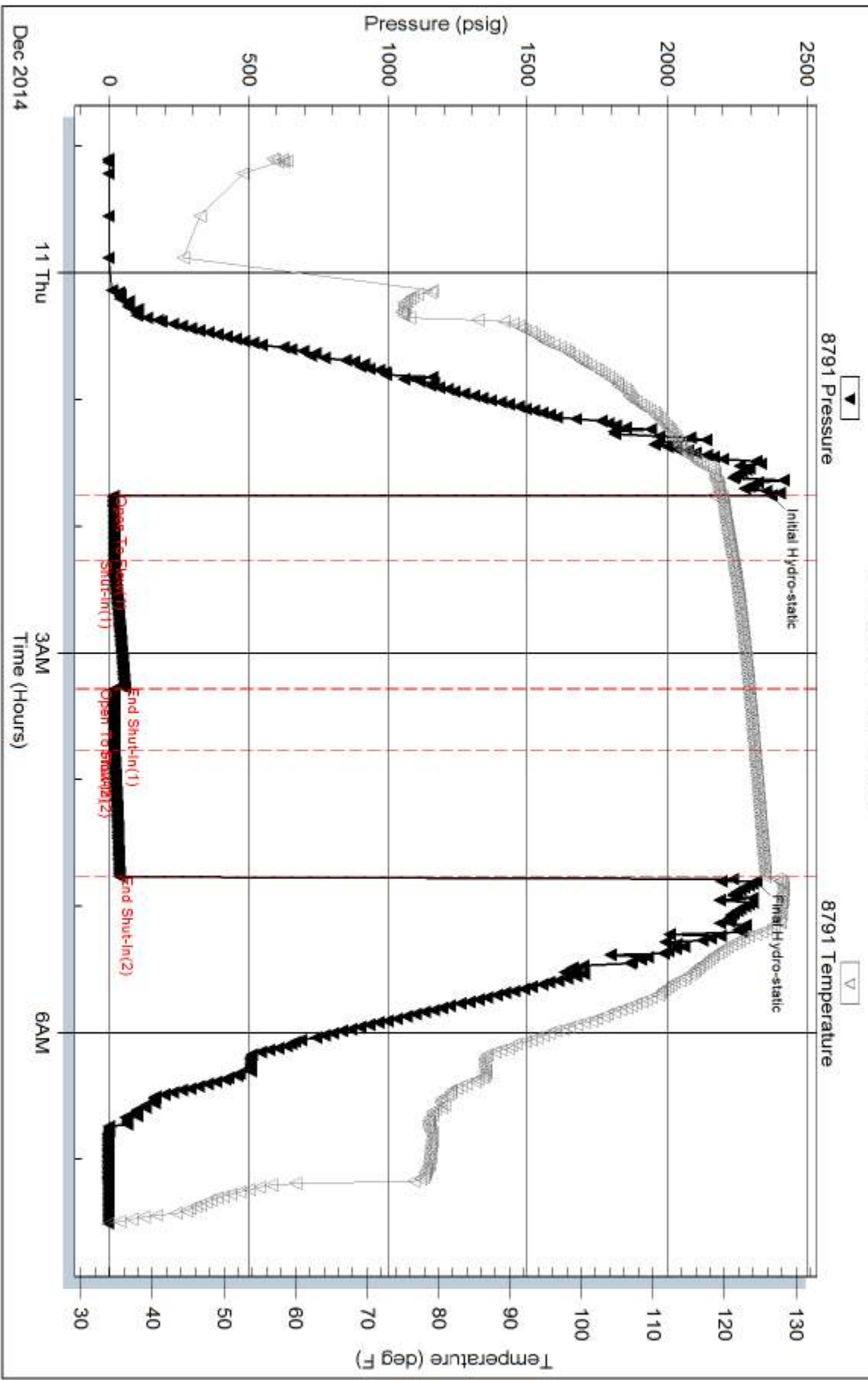
Serial #:

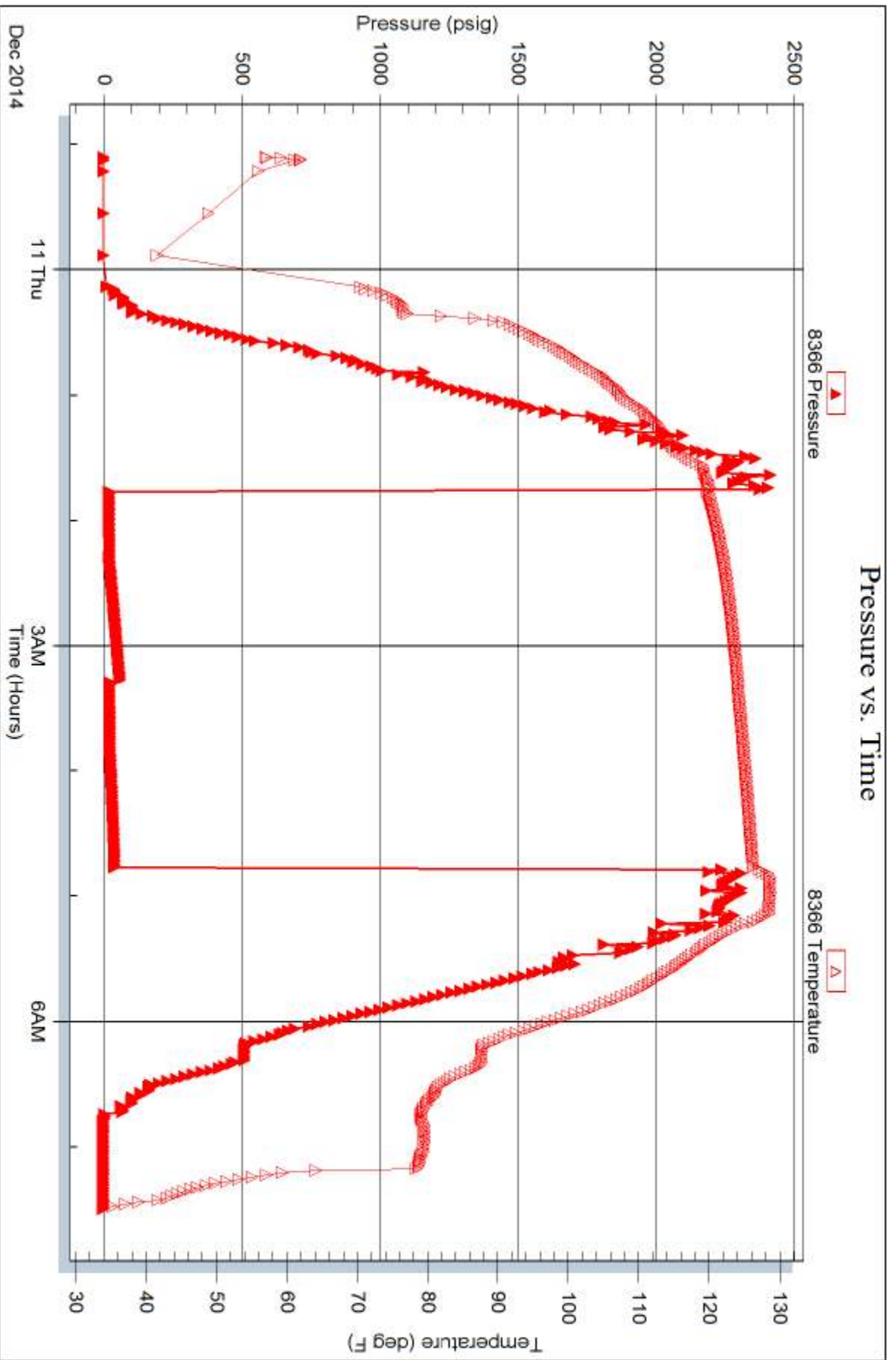
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **60828**

Well Name & No. Fikan #1-5 Test No. 1 Date 12-6-14  
 Company Murfin Drilling Co. Inc Elevation 3272 KB 3267 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Bob Stolzle Rig Murfin #8  
 Location: Sec. 5 Twp. 4s Rge. 35w Co. Rawlins State KS

Interval Tested 4137-4205 Zone Tested LKC "A"  
 Anchor Length 68 Drill Pipe Run 3949 Mud Wt. 8.9  
 Top Packer Depth 4132 Drill Collars Run 186 Vis 55  
 Bottom Packer Depth 4137 Wt. Pipe Run - WL 6.0  
 Total Depth 4205 Chlorides 2400 ppm System LCM 3

Blow Description IF: Blow built to 1/2"  
ISI: No blowback  
FF: Surface blow at open, dead at 10min., ~~and~~ weak surface blow last few minutes of open  
FSI: No blowback

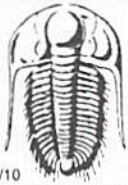
Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>mud</u>				<u>100%</u>
	<u>Oil spots in tool</u>				

Rec Total 15 BHT 122 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2023  Test 1250 T-On Location 17:15 12/6  
 (B) First Initial Flow 14  Jars 250 T-Started 18:05  
 (C) First Final Flow 16  Safety Joint 75 T-Open 20:50  
 (D) Initial Shut-In 1002  Circ Sub \_\_\_\_\_ T-Pulled 23:50  
 (E) Second Initial Flow 18  Hourly Standby \_\_\_\_\_ T-Out 2:05 12/7  
 (F) Second Final Flow 19  Mileage 90RT 139.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 920  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2002  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 1714.50  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1714.50

Approved By \_\_\_\_\_ Our Representative James Winder

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **60829**

4/10

Well Name & No. Fi Kan #1-5 Test No. 2 Date 12-7-14  
 Company Murfin Drilling Co. Inc. Elevation 3272 KB 3267 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Bob Stolze Rig Murfin #8  
 Location: Sec. 5 Twp. 4s Rge. 35w Co. Rawlins State KS

Interval Tested 4202 - 4285 Zone Tested LKC "D-F"  
 Anchor Length 83 Drill Pipe Run 4012 Mud Wt. ~~8.9~~ 9.1  
 Top Packer Depth 4197 Drill Collars Run 186 Vis 55 56  
 Bottom Packer Depth 4202 Wt. Pipe Run - WL 6.4  
 Total Depth 4285 Chlorides 2600 ppm System LCM 2  
 Blow Description IF: 1/8" + Blow at open, blow stayed at 1/8" throughout open  
ISI: No blowback  
FF: No blow  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>mud</u>				<u>100</u>
	<u>oil spots in tool</u>				

Rec Total 10 BHT 120 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2061</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>13:30</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>14:15</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>16:33</u>
(D) Initial Shut-In <u>1153</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>19:36</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>21:40</u>
(F) Second Final Flow <u>26</u>	<input checked="" type="checkbox"/> Mileage <u>90RT</u> 139.50	Comments _____
(G) Final Shut-In <u>1126</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2053</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby _____	Total <u>1714.50</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1714.50</u>	

Approved By \_\_\_\_\_ Our Representative James Winder  
 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. **60830**

4/10

Well Name & No. Fikan #1-5 Test No. 3 Date 12-8-14  
 Company Murfin Drilling Co. Inc Elevation 3272 KB 3267 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Bob Stolzle Rig Murfin #8  
 Location: Sec. 5 Twp. 4s Rge. 35W Co. Rawlins State KS

Interval Tested 4256-4445 Zone Tested LKC "G-L"  
 Anchor Length 189 Drill Pipe Run 4076 Mud Wt. 9.2  
 Top Packer Depth 4251 Drill Collars Run 186 Vis 58  
 Bottom Packer Depth 4256 Wt. Pipe Run - WL 6.8  
 Total Depth 4445 Chlorides 2900 ppm System LCM 2

Blow Description IF: Blow built to BOB (11") in 4min.  
ISI: No blowback  
FF: Blow built to BOB in 5min.  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>WCM</u>		<u>15</u>	<u>85</u>	
<u>440</u>	<u>Watery Mud</u>		<u>40</u>	<u>60</u>	
<u>444</u>	<u>MCW</u>		<u>86</u>	<u>14</u>	

Rec Total 946 BHT 132 Gravity \_\_\_\_\_ API RW .240 @ 37.3 °F Chlorides 60,000 ppm

(A) Initial Hydrostatic 2157  Test 1250 T-On Location 17:30  
 (B) First Initial Flow 60  Jars 250 T-Started 18:02  
 (C) First Final Flow 237  Safety Joint 75 T-Open 20:49  
 (D) Initial Shut-In 1310  Circ Sub \_\_\_\_\_ T-Pulled 23:48  
 (E) Second Initial Flow 248  Hourly Standby \_\_\_\_\_ T-Out 2:45  
 (F) Second Final Flow 450  Mileage 90RT 139.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 1294  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2065  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 30  
 Final Shut-In 60  
 Sub Total 1714.50  
 Total 1714.50  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative James Winder

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. **60831**

4/10

Well Name & No. Fikan # 1-5 Test No. 4 Date 12-10-14  
 Company Murfin Drilling Co. Inc Elevation 3272 KB 3267 GL  
 Address 250 N. Water STE 300 Wichita, KS 67749  
 Co. Rep / Geo. Bob Stolzle Rig Murfin #8  
 Location: Sec. 5 Twp. 4s Rge. 35W Co. Rawlins State KS

Interval Tested 4538 - 4620 Zone Tested Pawnee  
 Anchor Length 82 Drill Pipe Run 4329 Mud Wt. 9.1  
 Top Packer Depth 4533 Drill Collars Run 186 Vis 60  
 Bottom Packer Depth 4538 Wt. Pipe Run - WL 6.8  
 Total Depth 4620 Chlorides 4500 ppm System LCM 5

Blow Description IF: Blow built to 1 1/2"  
ISI: No blowback  
FF: Blow built to 1/8", died back, dead at close  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</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 70 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2320</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>3:00</u>
(B) First Initial Flow <u>33</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>3:44</u>
(C) First Final Flow <u>44</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>6:30</u>
(D) Initial Shut-In <u>1146</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>9:36</u>
(E) Second Initial Flow <u>47</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>12:05</u>
(F) Second Final Flow <u>55</u>	<input checked="" type="checkbox"/> Mileage <u>90 RT</u> <u>139.50</u>	Comments _____
(G) Final Shut-In <u>1102</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2309</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
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>2034.50</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1714.50</u>	

Approved By \_\_\_\_\_ Our Representative James Winder

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. **60832**

4/10

Well Name & No. Fikan #1-5 Test No. 5 Date 12-10-14  
 Company Murfin Drilling Co. Inc Elevation 3272 KB 3267 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Bob Stolzle Rig Murfin #8  
 Location: Sec. 5 Twp. 4s Rge. 35w Co. Rawlins State KS

Interval Tested 4610 - 4670 Zone Tested Verdigris  
 Anchor Length 60 Drill Pipe Run 4422 Mud Wt. 9.2  
 Top Packer Depth 4605 Drill Collars Run 186 Vis 61  
 Bottom Packer Depth 4610 Wt. Pipe Run - WL 6.4  
 Total Depth 4670 Chlorides 3800 ppm System LCM 3

Blow Description IF: Blow built to 1"  
ISI: No blowback  
FF: Surface blow at open, dead at 6 min.  
FSI: No blow

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

Rec Total 5 BHT 126 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 (A) Initial Hydrostatic 2373  Test 1250 T-On Location ~~22:00~~ 22:00 12/10  
 (B) First Initial Flow 15  Jars 250 T-Started 23:06  
 (C) First Final Flow 18  Safety Joint 75 T-Open 1:45  
 (D) Initial Shut-In 56  Circ Sub \_\_\_\_\_ T-Pulled 4:46  
 (E) Second Initial Flow 18  Hourly Standby \_\_\_\_\_ T-Out 7:30 12/11  
 (F) Second Final Flow 19  Mileage 90RT 139.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 37  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2319  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 1714.50  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1714.50

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