



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Braun #1-36**

**36-15s-19w Ellis.KS**

Start Date: 2013.01.09 @ 06:55:00

End Date: 2013.01.09 @ 15:35:00

Job Ticket #: 50252                      DST #: 1

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

Printed: 2013.01.15 @ 13:22:11

Murfin Drilling Co. 36-15s-19w Ellis.KS Braun #1-36 DST # 1 Oread-KC "B" 2013.01.09



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50252

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.01.09 @ 06:55:00

## GENERAL INFORMATION:

Formation: **Oread-KC "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:34:00

Time Test Ended: 15:35:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

**Interval: 3205.00 ft (KB) To 3333.00 ft (KB) (TVD)**

Reference Elevations: 1991.00 ft (KB)

Total Depth: 3333.00 ft (KB) (TVD)

1980.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8166 Outside**

Press @ Run Depth: 117.17 psig @ 3206.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.09

End Date:

2013.01.09

Last Calib.:

2013.01.09

Start Time: 06:55:05

End Time:

15:35:00

Time On Btm:

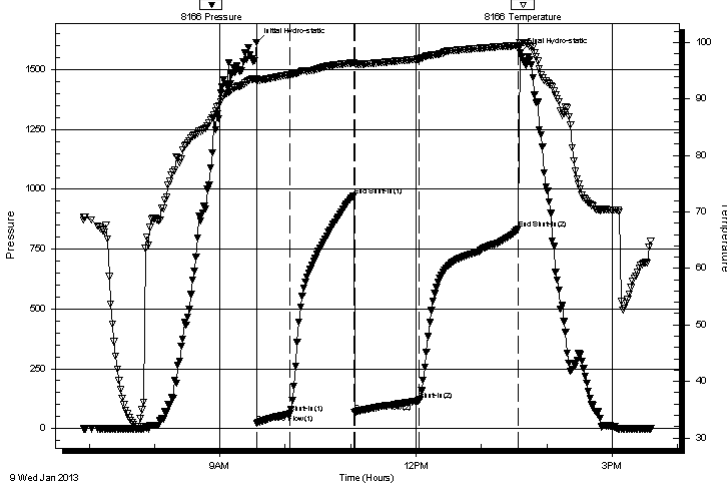
2013.01.09 @ 09:33:30

Time Off Btm:

2013.01.09 @ 13:35:30

**TEST COMMENT:** IF-7" blow  
IS-No blow  
FF-6 1/2" blow  
FSI-weak surface blow

Pressure vs. Time



## PRESSURE SUMMARY

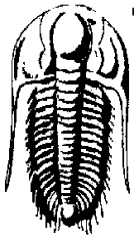
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1614.25	93.60	Initial Hydro-static
1	22.93	93.27	Open To Flow (1)
31	62.37	94.27	Shut-In(1)
90	973.51	96.40	End Shut-In(1)
90	67.13	96.18	Open To Flow (2)
150	117.17	97.09	Shut-In(2)
240	834.71	99.48	End Shut-In(2)
242	1570.11	99.94	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	V SOMCW 5%O 35%M 60%W	0.59
90.00	V SOCM 5%O 95%M	0.44

## Gas Rates

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



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TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**36-15s-19w Ellis.KS**

**Braun #1-36**

Job Ticket: 50252

**DST#: 1**

Test Start: 2013.01.09 @ 06:55:00

## GENERAL INFORMATION:

Formation: **Oread-KC "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:34:00

Time Test Ended: 15:35:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

**Interval: 3205.00 ft (KB) To 3333.00 ft (KB) (TVD)**

Reference Elevations: 1991.00 ft (KB)

Total Depth: 3333.00 ft (KB) (TVD)

1980.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6753** **Inside**

Press @RunDepth: psig @ 3206.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.09

End Date: 2013.01.09

Last Calib.: 2013.01.09

Start Time: 06:55:05

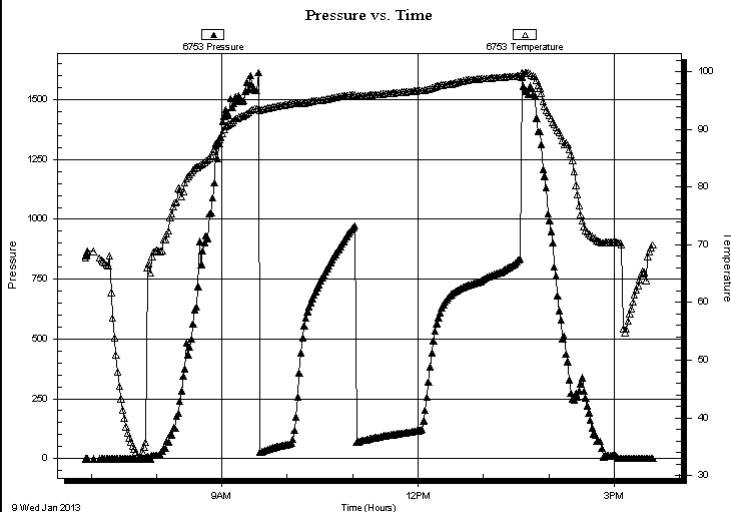
End Time: 15:35:00

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-7" blow  
ISI-No blow  
FF-6 1/2" blow  
FSI-weak surface blow

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	V SOMCW 5%O 35%M 60%W	0.59
90.00	V SOCM 5%O 95%M	0.44

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50252

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.01.09 @ 06:55:00

## Tool Information

Drill Pipe:	Length: 2970.00 ft	Diameter: 3.80 inches	Volume: 41.66 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 42.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3205.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	128.00 ft			
Tool Length:	156.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3178.00	
Shut In Tool	5.00			3183.00	
Hydraulic tool	5.00			3188.00	
Jars	5.00			3193.00	
Safety Joint	2.00			3195.00	
Packer	5.00			3200.00	28.00 Bottom Of Top Packer
Packer	5.00			3205.00	
Stubb	1.00			3206.00	
Recorder	0.00	6753	Inside	3206.00	
Recorder	0.00	8166	Outside	3206.00	
Perforations	5.00			3211.00	
Change Over Sub	1.00			3212.00	
Drill Pipe	95.00			3307.00	
Change Over Sub	1.00			3308.00	
Perforations	22.00			3330.00	
Bullnose	3.00			3333.00	128.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>156.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50252

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.01.09 @ 06:55:00

## 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:

92000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	VSOMCW 5%O 35%M 60%W	0.590
90.00	VSOCM 5%O 95%M	0.443

Total Length: 210.00 ft      Total Volume: 1.033 bbl

Num Fluid Samples: 0

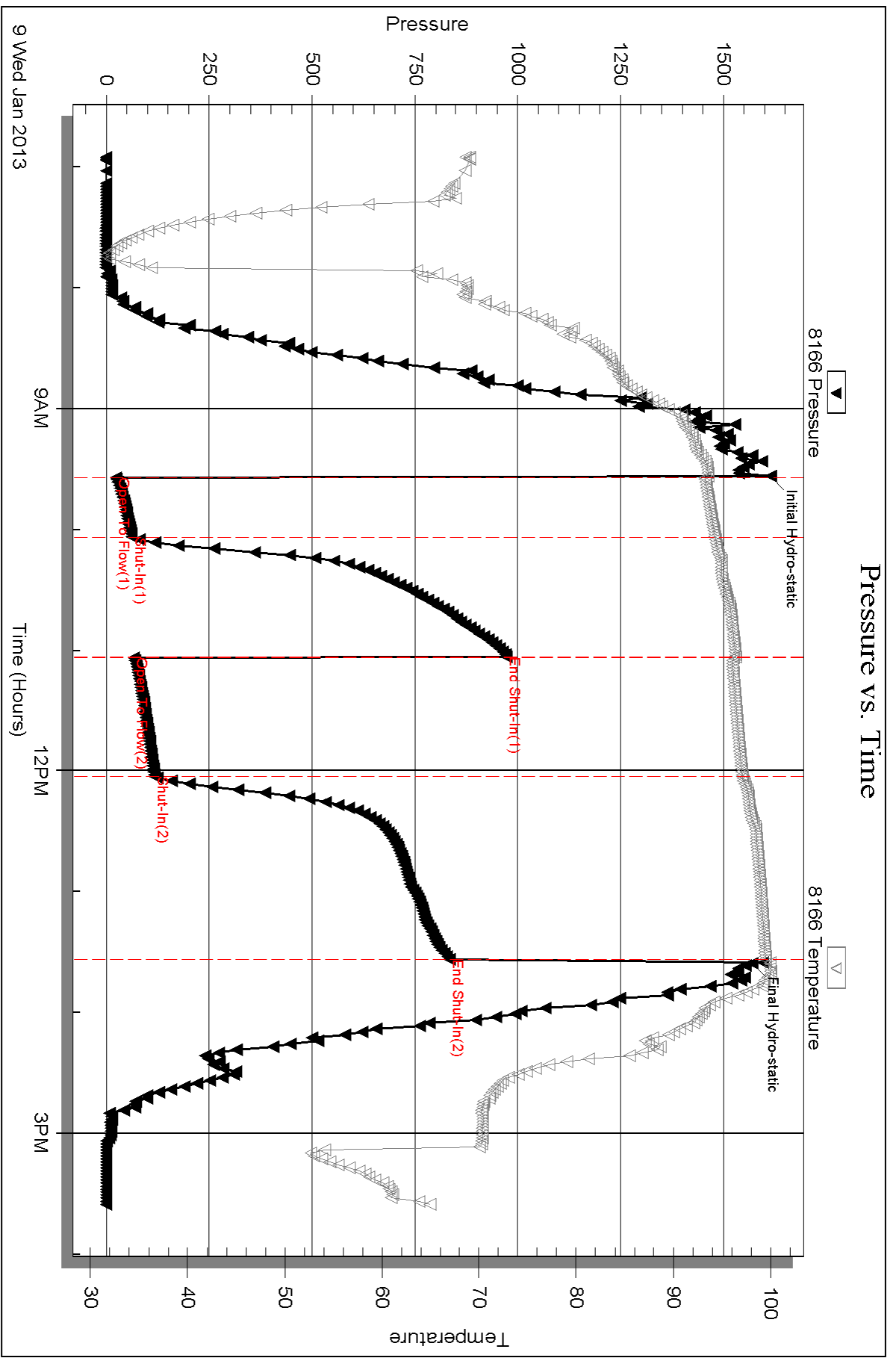
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



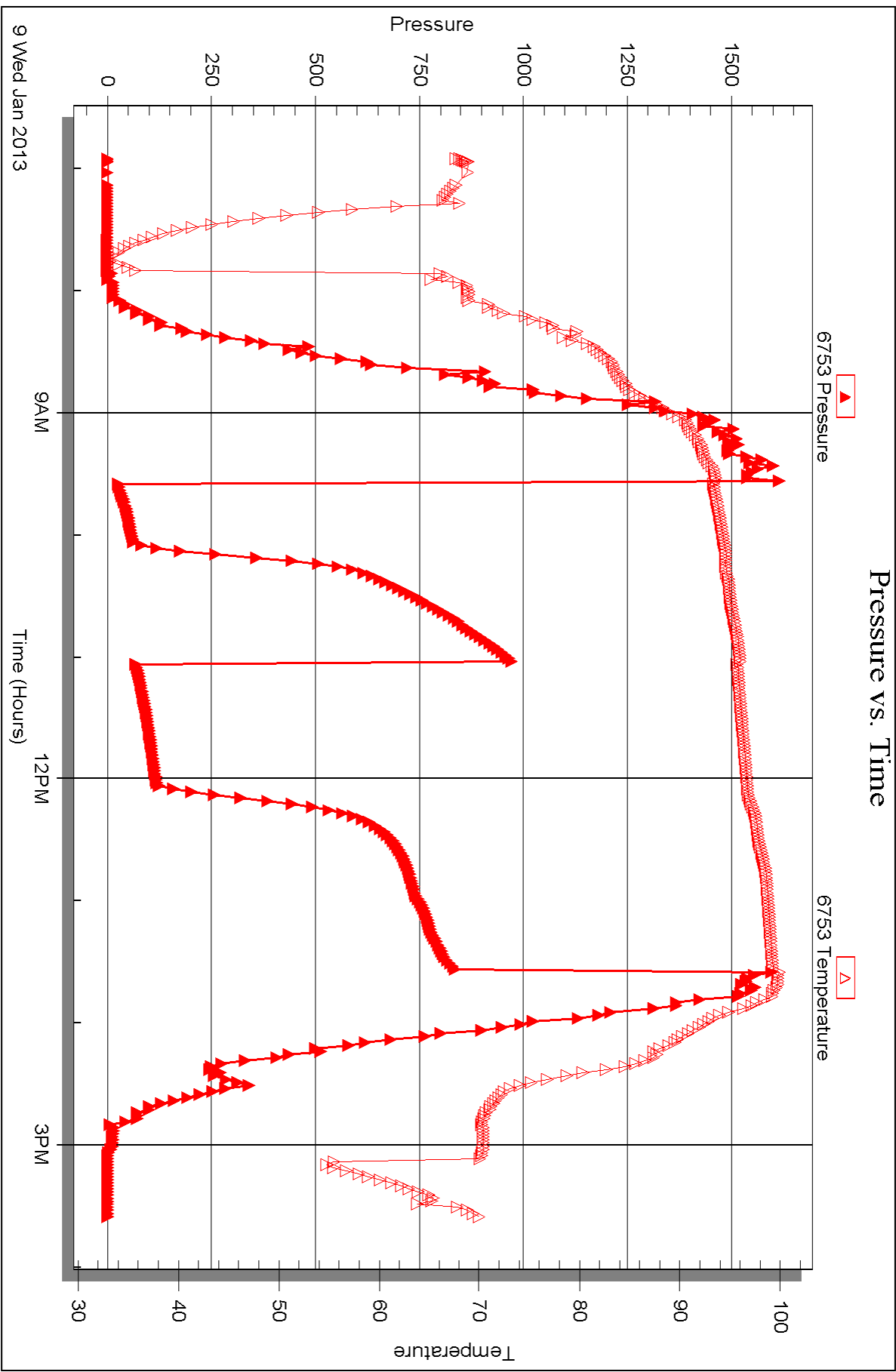
Serial #: 6753

Inside

Murfin Drilling Co.

Braun #1-36

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Braun #1-36**

**36-15s-19w Ellis.KS**

Start Date: 2013.01.10 @ 08:35:00

End Date: 2013.01.10 @ 16:33:00

Job Ticket #: 50253                      DST #: 2

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

Printed: 2013.01.15 @ 13:21:25

Murfin Drilling Co. 36-15s-19w Ellis.KS Braun #1-36 DST # 2 KC "H-K" 2013.01.10





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50253

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.01.10 @ 08:35:00

## GENERAL INFORMATION:

Formation: **KC "H-K"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:29:30  
 Time Test Ended: 16:33:00  
 Interval: **3399.00 ft (KB) To 3490.00 ft (KB) (TVD)**  
 Total Depth: 3490.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brett Dickinson  
 Unit No: 59  
 Reference Elevations: 1991.00 ft (KB)  
 1980.00 ft (CF)  
 KB to GR/CF: 11.00 ft

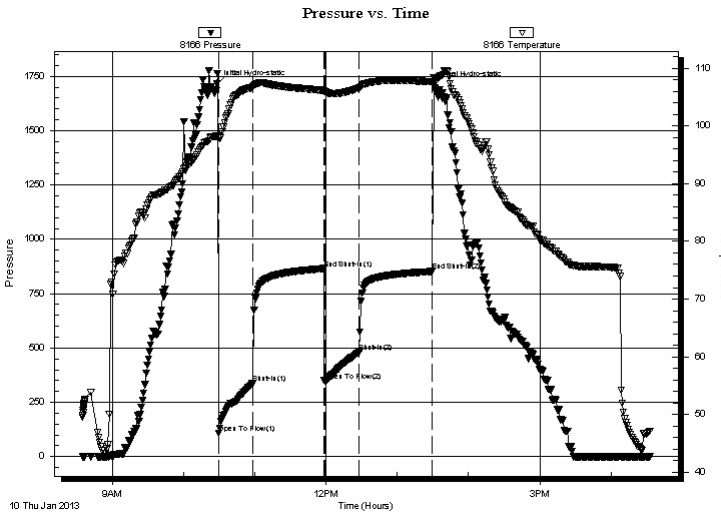
## Serial #: 8166

**Outside**

Press @ Run Depth: 479.66 psig @ 3400.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.01.10 End Date: 2013.01.10 Last Calib.: 2013.01.10  
 Start Time: 08:35:05 End Time: 16:32:59 Time On Btm: 2013.01.10 @ 10:28:00  
 Time Off Btm: 2013.01.10 @ 13:31:00

**TEST COMMENT:** IF-BOB in 1 1/2 min  
 ISI-BOB in 2 1/2 min  
 FF-BOB in 2 min  
 FSI-BOB in 2 min GTS

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1714.01	98.22	Initial Hydro-static
2	108.39	97.90	Open To Flow (1)
30	336.96	106.67	Shut-In(1)
90	866.07	106.15	End Shut-In(1)
91	347.71	105.91	Open To Flow (2)
120	479.66	106.57	Shut-In(2)
182	852.16	107.68	End Shut-In(2)
183	1707.81	108.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
300.00	GO 20%G 80%O	2.07
125.00	GO 40%G 60%O	1.75
315.00	GOCM 30%G 30%O 40%M	4.42
125.00	GSMCO 35%G 55%O 10%M	1.75
265.00	GO 35%G 65%O	3.72
0.00	2360 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.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50253

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.01.10 @ 08:35:00

## Tool Information

Drill Pipe:	Length: 3161.00 ft	Diameter: 3.80 inches	Volume: 44.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 45.50 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3399.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	91.00 ft			
Tool Length:	119.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3372.00	
Shut In Tool	5.00			3377.00	
Hydraulic tool	5.00			3382.00	
Jars	5.00			3387.00	
Safety Joint	2.00			3389.00	
Packer	5.00			3394.00	28.00 Bottom Of Top Packer
Packer	5.00			3399.00	
Stubb	1.00			3400.00	
Recorder	0.00	6753	Inside	3400.00	
Recorder	0.00	8166	Outside	3400.00	
Perforations	5.00			3405.00	
Change Over Sub	1.00			3406.00	
Drill Pipe	63.00			3469.00	
Change Over Sub	1.00			3470.00	
Perforations	17.00			3487.00	
Bullnose	3.00			3490.00	91.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>119.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50253

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.01.10 @ 08:35:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
300.00	GO 20%G 80%O	2.067
125.00	GO 40%G 60%O	1.753
315.00	GOCM 30%G 30%O 40%M	4.419
125.00	GSMCO 35%G 55%O 10%M	1.753
265.00	GO 35%G 65%O	3.717
0.00	2360 GIP	0.000

Total Length: 1130.00 ft

Total Volume: 13.709 bbl

Num Fluid Samples: 0

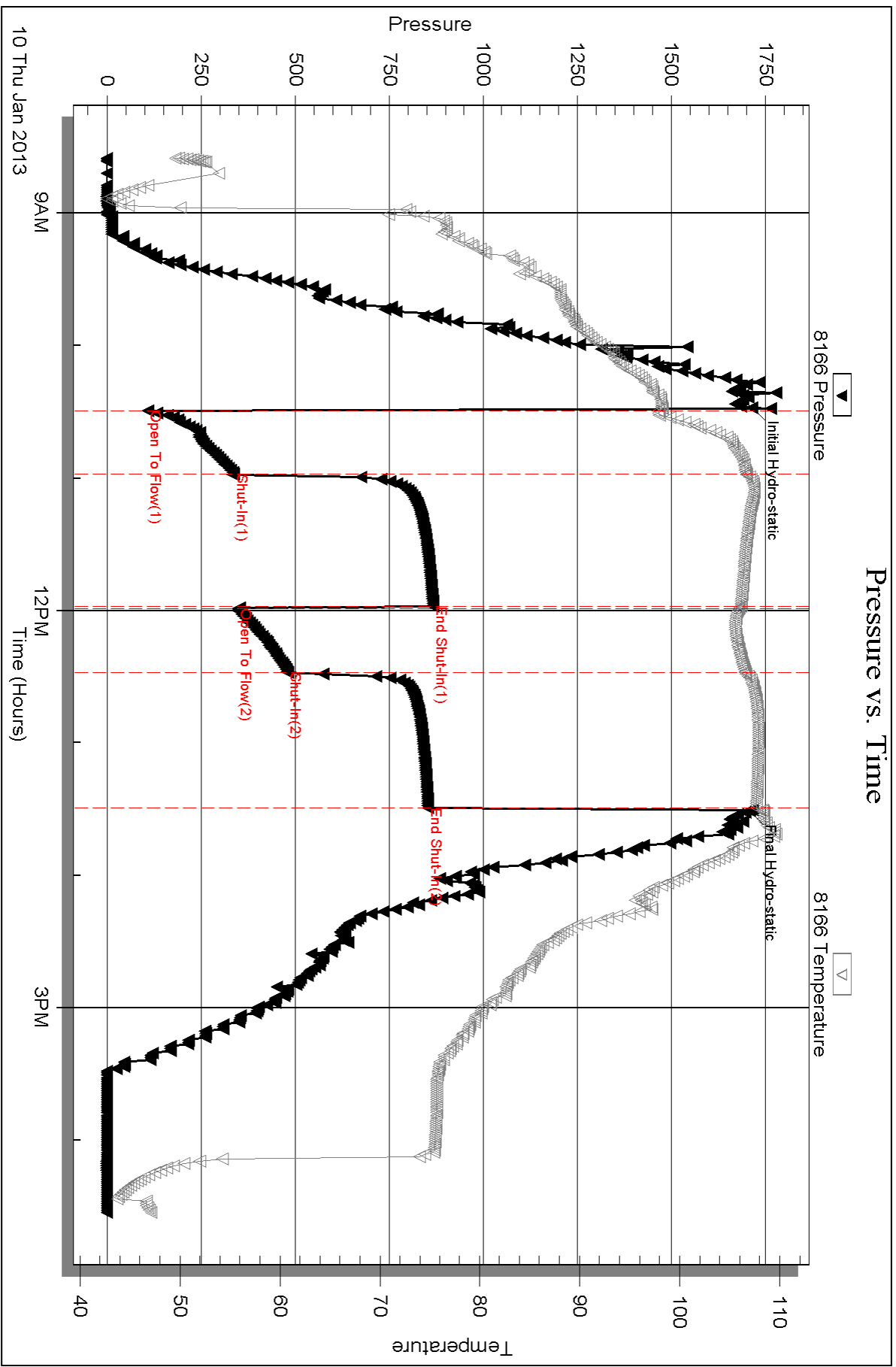
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



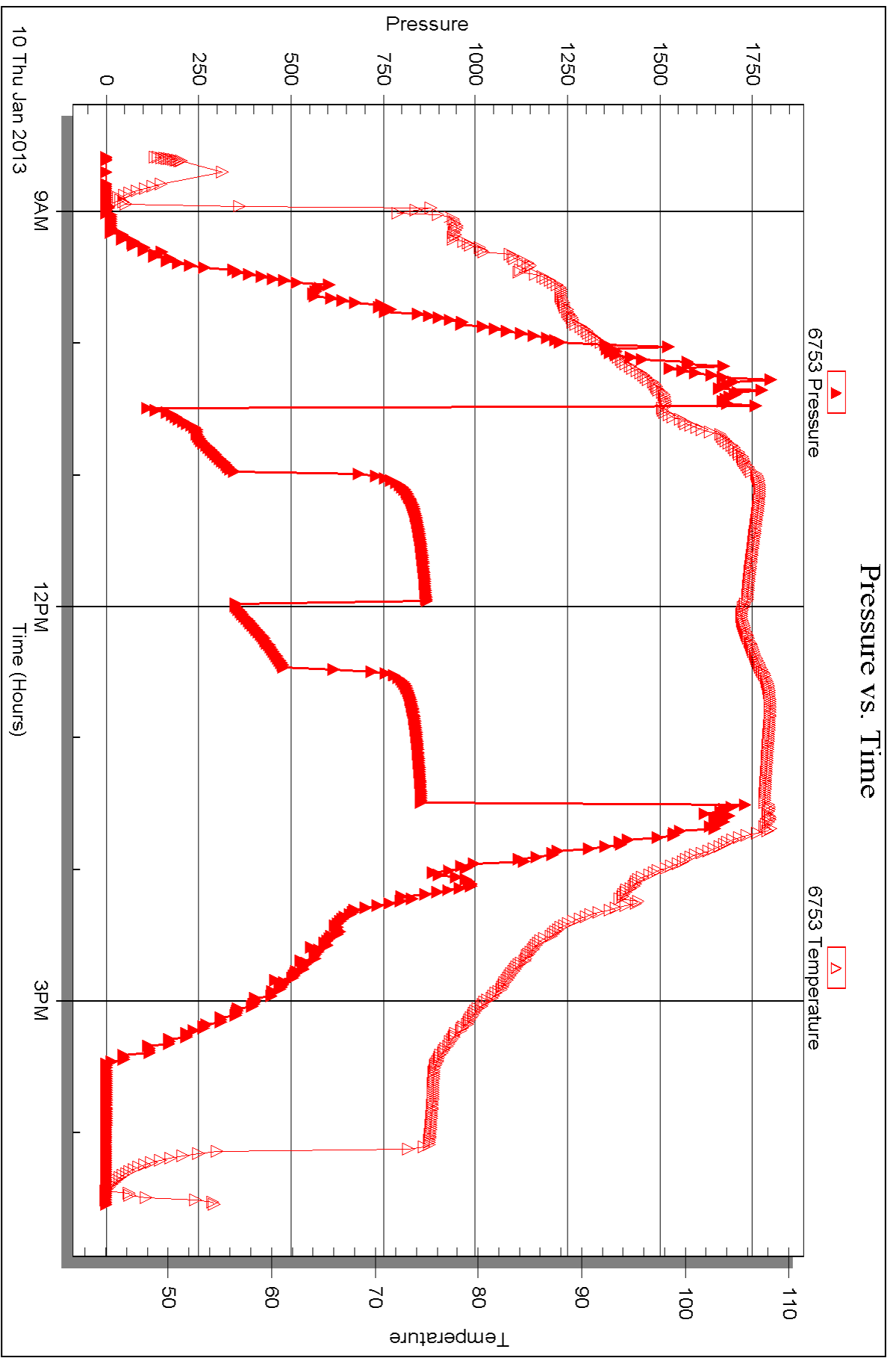
Serial #: 6753

Inside

Murfin Drilling Co.

Braun #1-36

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Braun #1-36**

**36-15s-19w Ellis.KS**

Start Date: 2013.01.11 @ 02:30:00

End Date: 2013.01.11 @ 09:58:00

Job Ticket #: 51574                      DST #: 3

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

Printed: 2013.01.15 @ 13:15:10

Murfin Drilling Co. 36-15s-19w Ellis.KS Braun #1-36 DST # 3 Arbuckle 2013.01.11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 51574

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.01.11 @ 02:30:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:16:00

Time Test Ended: 09:58:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 59

**Interval: 3559.00 ft (KB) To 3569.00 ft (KB) (TVD)**

Reference Elevations: 1991.00 ft (KB)

Total Depth: 3569.00 ft (KB) (TVD)

1980.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6753 Inside**

Press @ Run Depth: 103.50 psig @ 3560.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.11

End Date:

2013.01.11

Last Calib.:

2013.01.11

Start Time: 02:30:05

End Time:

09:57:59

Time On Btm:

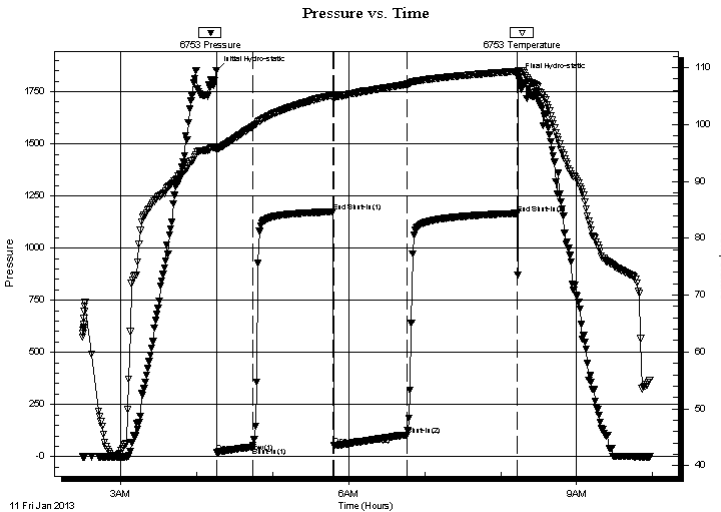
2013.01.11 @ 04:15:30

Time Off Btm:

2013.01.11 @ 08:14:00

**TEST COMMENT:** 30 - IF- 3" blow .  
60 - IS- No blow back.  
60 - FF- 2 1/2" blow  
90 - FS- No blow back.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1852.04	96.01	Initial Hydro-static
1	21.25	95.58	Open To Flow (1)
29	46.22	99.58	Shut-In(1)
92	1174.75	105.16	End Shut-In(1)
93	52.65	104.81	Open To Flow (2)
151	103.50	107.04	Shut-In(2)
238	1166.61	109.32	End Shut-In(2)
239	1815.49	109.50	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	OCM, 20%O, 80%M	0.30
186.00	GO, 50%G, 50%O	1.03
0.00	372' of G.I.P.	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.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 51574

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.01.11 @ 02:30:00

## Tool Information

Drill Pipe:	Length: 3318.00 ft	Diameter: 3.80 inches	Volume: 46.54 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose:	64000.00 lb
			<u>Total Volume: 47.70 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3559.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	38.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3532.00	
Shut In Tool	5.00			3537.00	
Hydraulic tool	5.00			3542.00	
Jars	5.00			3547.00	
Safety Joint	2.00			3549.00	
Packer	5.00			3554.00	28.00 Bottom Of Top Packer
Packer	5.00			3559.00	
Stubb	1.00			3560.00	
Recorder	0.00	6753	Inside	3560.00	
Recorder	0.00	8166	Outside	3560.00	
Perforations	6.00			3566.00	
Bullnose	3.00			3569.00	10.00 Bottom Packers & Anchor

**Total Tool Length: 38.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 51574

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.01.11 @ 02:30:00

## 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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7600.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	OCM, 20%O, 80%M	0.305
186.00	GO, 50%G, 50%O	1.033
0.00	372' of G.I.P.	0.000

Total Length: 248.00 ft      Total Volume: 1.338 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

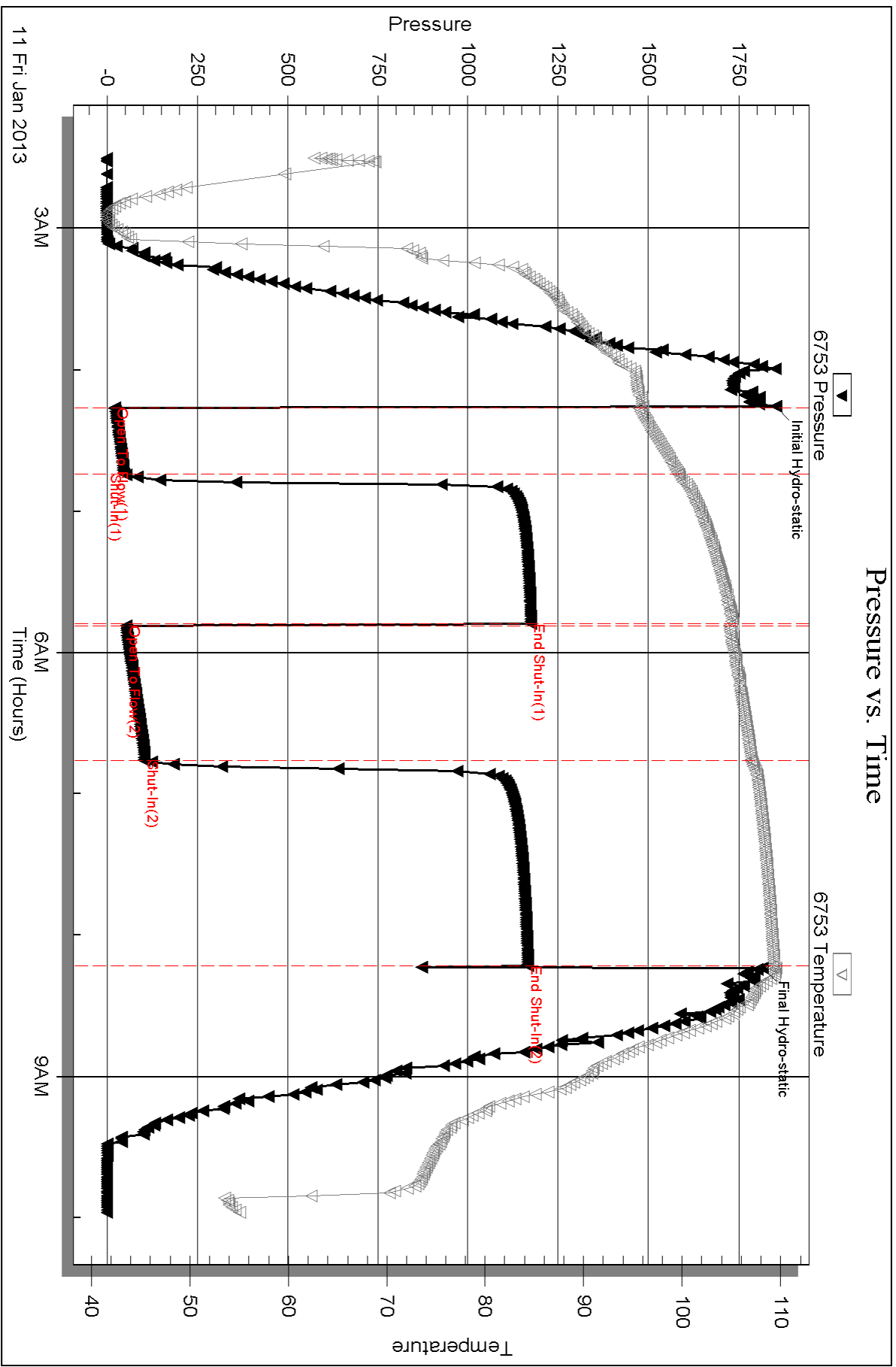
Serial #: 6753

Inside

Murfin Drilling Co.

Braun #1-36

DST Test Number: 3

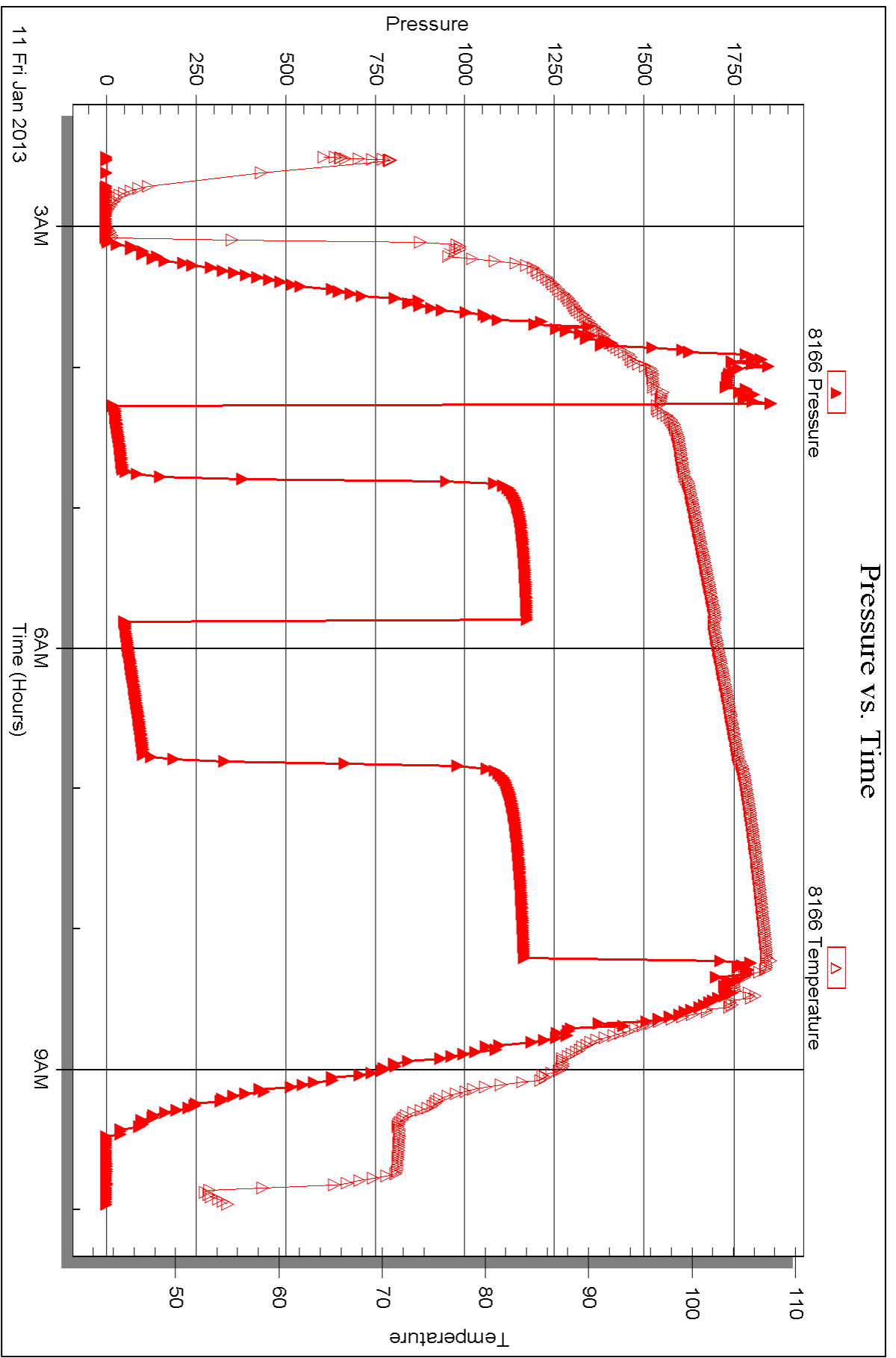


Serial #: 8166

Outside Murfin Drilling Co.

Braun #1-36

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 51574

Printed: 2013.01.15 @ 13:15:15



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Braun #1-36**

**36-15s-19w Ellis.KS**

Start Date: 2013.01.11 @ 16:35:00

End Date: 2013.01.12 @ 00:20:30

Job Ticket #: 51575                      DST #: 4

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

Printed: 2013.01.15 @ 13:13:46



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 51575

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.01.11 @ 16:35:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:21:00

Time Test Ended: 00:20:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 59

**Interval: 3569.00 ft (KB) To 3579.00 ft (KB) (TVD)**

Reference Elevations: 1991.00 ft (KB)

Total Depth: 3579.00 ft (KB) (TVD)

1980.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6753 Inside**

Press @ RunDepth: 164.89 psig @ 3570.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.11

End Date:

2013.01.12

Last Calib.:

2013.01.12

Start Time: 16:35:05

End Time:

00:20:29

Time On Btm:

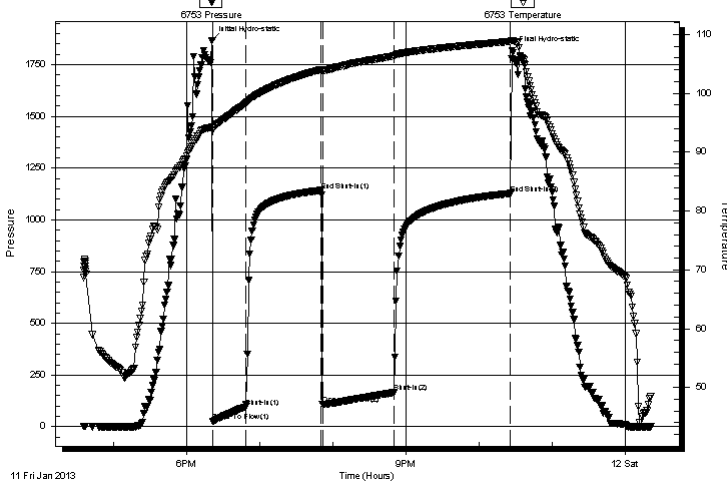
2013.01.11 @ 18:20:30

Time Off Btm:

2013.01.11 @ 22:27:00

**TEST COMMENT:** 30 - IF- B.O.B. in 11 Minutes  
60 - IS- Surface blow .  
60 - FF- B.O.B. in 17 Minutes  
90 - FS- Surface blow .

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1867.69	94.34	Initial Hydro-static
1	26.42	93.73	Open To Flow (1)
28	95.37	98.25	Shut-In(1)
90	1142.91	104.04	End Shut-In(1)
91	107.25	103.81	Open To Flow (2)
149	164.89	106.32	Shut-In(2)
245	1127.70	108.80	End Shut-In(2)
247	1819.71	109.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	GO, 10%G, 90%O	0.30
310.00	GO, 50%G, 50%O	2.77
62.00	OCM, 20%O, 80%M	0.87
0.00	124' of G.I.P.	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.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 51575

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.01.11 @ 16:35:00

## Tool Information

Drill Pipe:	Length: 3320.00 ft	Diameter: 3.80 inches	Volume: 46.57 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose:	66000.00 lb
			<u>Total Volume: 47.73 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3569.00 ft			Final	62000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	38.00 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			3542.00	
Shut In Tool	5.00			3547.00	
Hydraulic tool	5.00			3552.00	
Jars	5.00			3557.00	
Safety Joint	2.00			3559.00	
Packer	5.00			3564.00	28.00 Bottom Of Top Packer
Packer	5.00			3569.00	
Stubb	1.00			3570.00	
Recorder	0.00	6753	Inside	3570.00	
Recorder	0.00	8166	Outside	3570.00	
Perforations	6.00			3576.00	
Bullnose	3.00			3579.00	10.00 Bottom Packers & Anchor

**Total Tool Length: 38.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 51575

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.01.11 @ 16:35:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8700.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	GO, 10%G, 90%O	0.305
310.00	GO, 50%G, 50%O	2.773
62.00	OCM, 20%O, 80%M	0.870
0.00	124' of G.I.P.	0.000

Total Length: 434.00 ft

Total Volume: 3.948 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

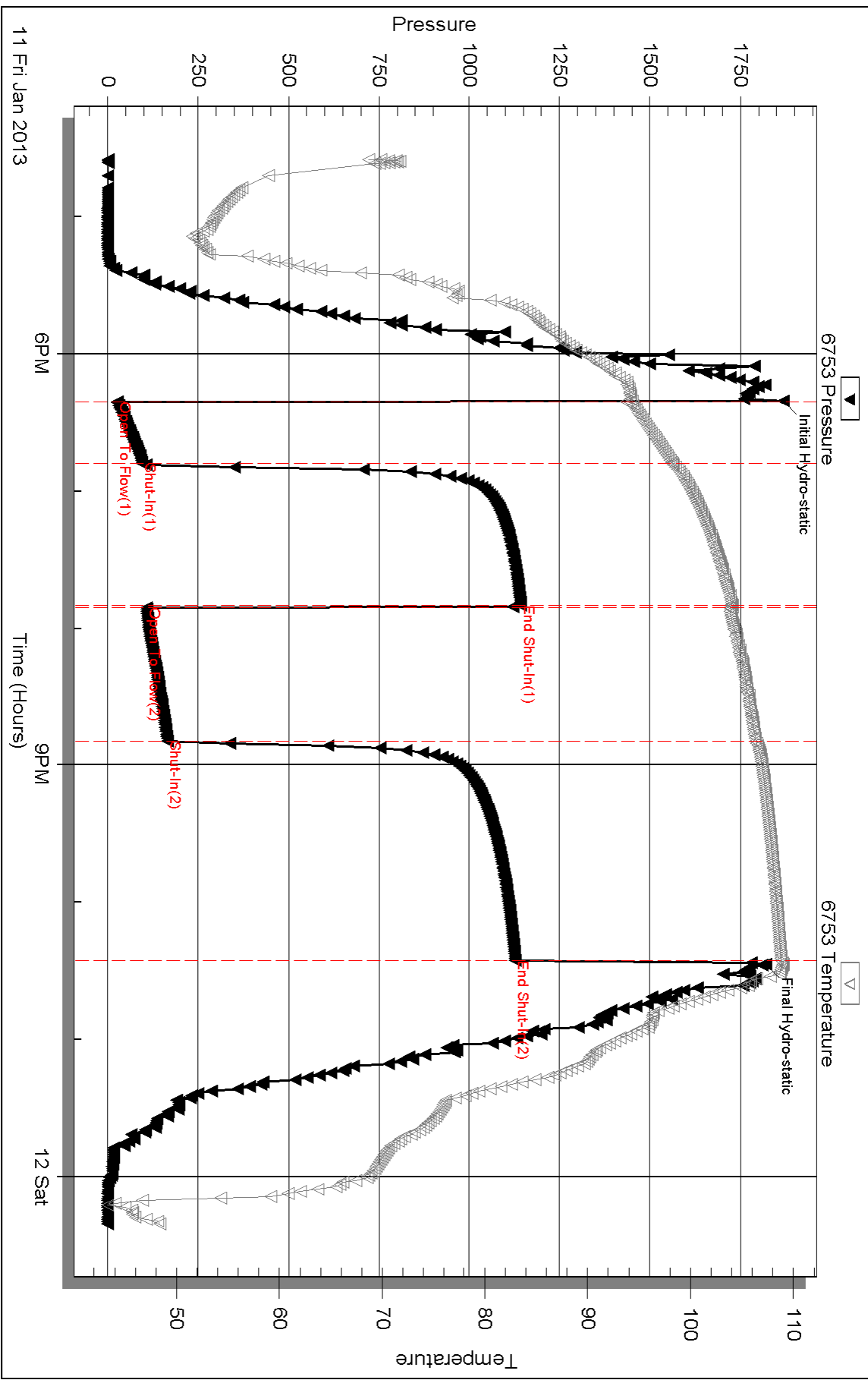
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

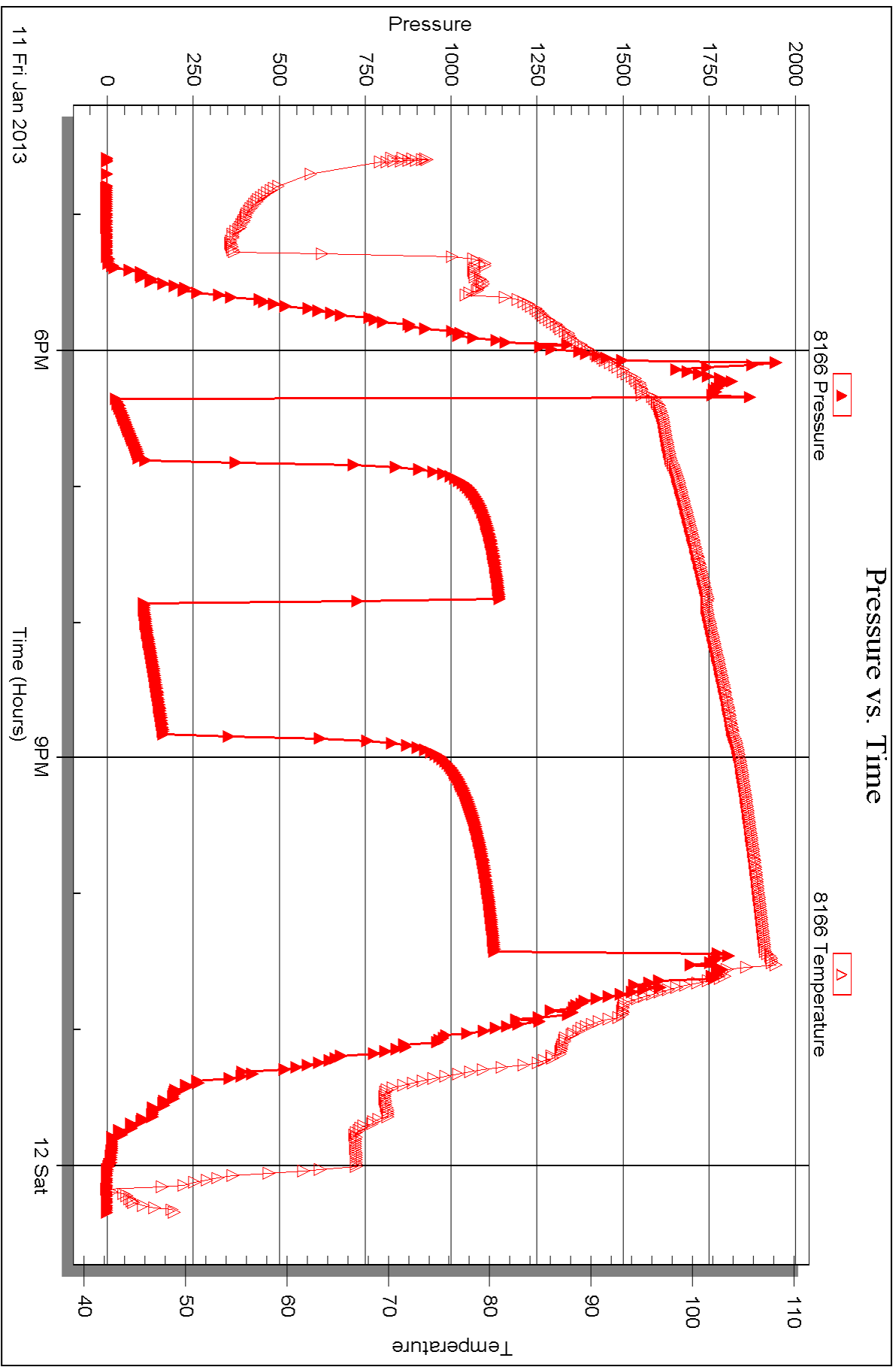


Serial #: 8166

Outside Murfin Drilling Co.

Braun #1-36

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Braun #1-36**

**36-15s-19w Ellis.KS**

Start Date: 2013.01.12 @ 07:31:00

End Date: 2013.01.12 @ 15:53:00

Job Ticket #: 50254                      DST #: 5

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

Printed: 2013.01.15 @ 13:12:18

Murfin Drilling Co. 36-15s-19w Ellis.KS Braun #1-36 DST # 5 Reagan Sand 2013.01.12



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50254

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2013.01.12 @ 07:31:00

## GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:51:30

Time Test Ended: 15:53:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 59

**Interval: 3592.00 ft (KB) To 3600.00 ft (KB) (TVD)**

Reference Elevations: 1991.00 ft (KB)

Total Depth: 3600.00 ft (KB) (TVD)

1980.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6753**

**Inside**

Press @ Run Depth: 1156.10 psig @ 3593.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.12

End Date:

2013.01.12

Last Calib.:

2013.01.12

Start Time:

07:31:05

End Time:

15:52:59

Time On Btm:

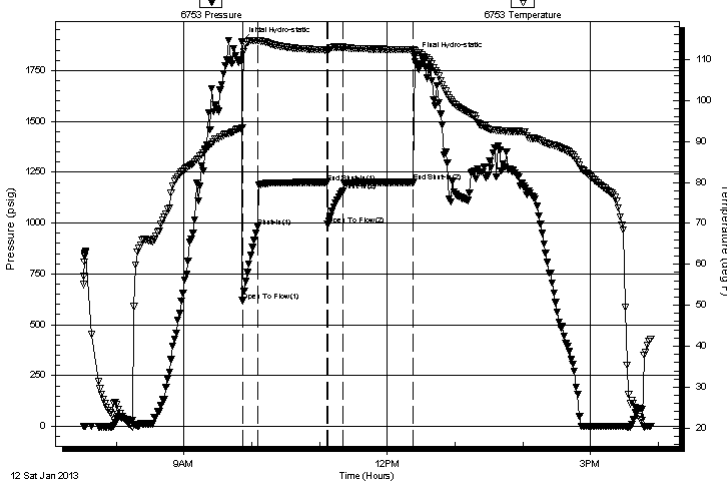
2013.01.12 @ 09:51:00

Time Off Btm:

2013.01.12 @ 12:24:00

**TEST COMMENT:** 15 - IF- B.O.B. instantly  
60 - IS- Weak surface blow back  
15 - FF- B.O.B. instantly  
60 - FS- No blow back.

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1890.31	93.27	Initial Hydro-static
1	618.46	93.43	Open To Flow (1)
14	981.05	114.64	Shut-In(1)
76	1200.47	112.32	End Shut-In(1)
76	993.60	112.22	Open To Flow (2)
90	1156.10	113.01	Shut-In(2)
152	1200.73	112.41	End Shut-In(2)
153	1819.20	112.10	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2294.00	Water	30.04

## 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.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50254

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2013.01.12 @ 07:31:00

## Tool Information

Drill Pipe:	Length: 3351.00 ft	Diameter: 3.80 inches	Volume: 47.01 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 48.17 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3592.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	36.00 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			3565.00	
Shut In Tool	5.00			3570.00	
Hydraulic tool	5.00			3575.00	
Jars	5.00			3580.00	
Safety Joint	2.00			3582.00	
Packer	5.00			3587.00	28.00 Bottom Of Top Packer
Packer	5.00			3592.00	
Stubb	1.00			3593.00	
Recorder	0.00	6753	Inside	3593.00	
Recorder	0.00	8166	Outside	3593.00	
Perforations	4.00			3597.00	
Bullnose	3.00			3600.00	8.00 Bottom Packers & Anchor

**Total Tool Length: 36.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**36-15s-19w Ellis.KS**

250 N Water STE 300  
Wichita KS 67202

**Braun #1-36**

Job Ticket: 50254

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2013.01.12 @ 07:31:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8700.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2294.00	Water	30.038

Total Length: 2294.00 ft      Total Volume: 30.038 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

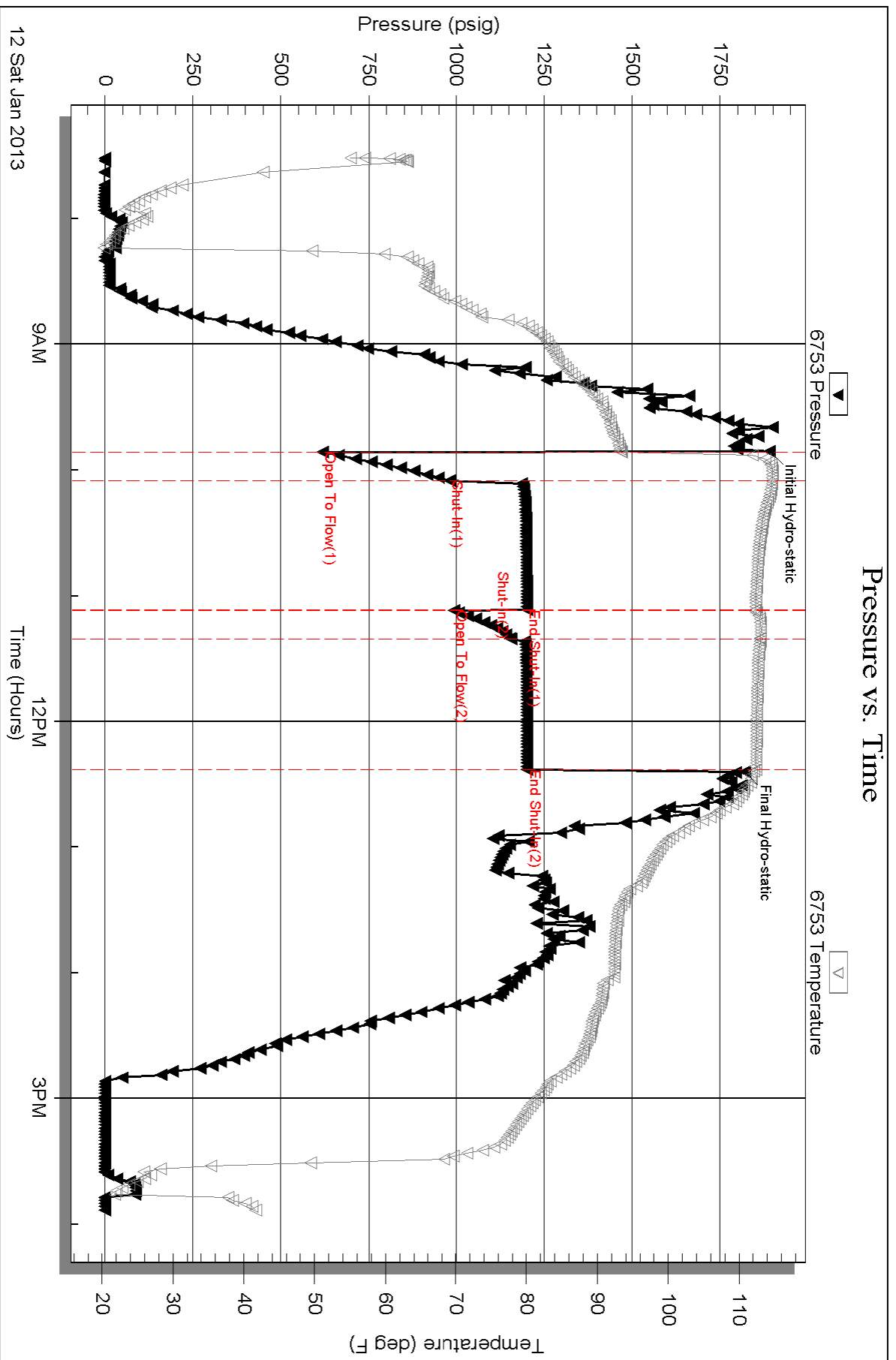
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time

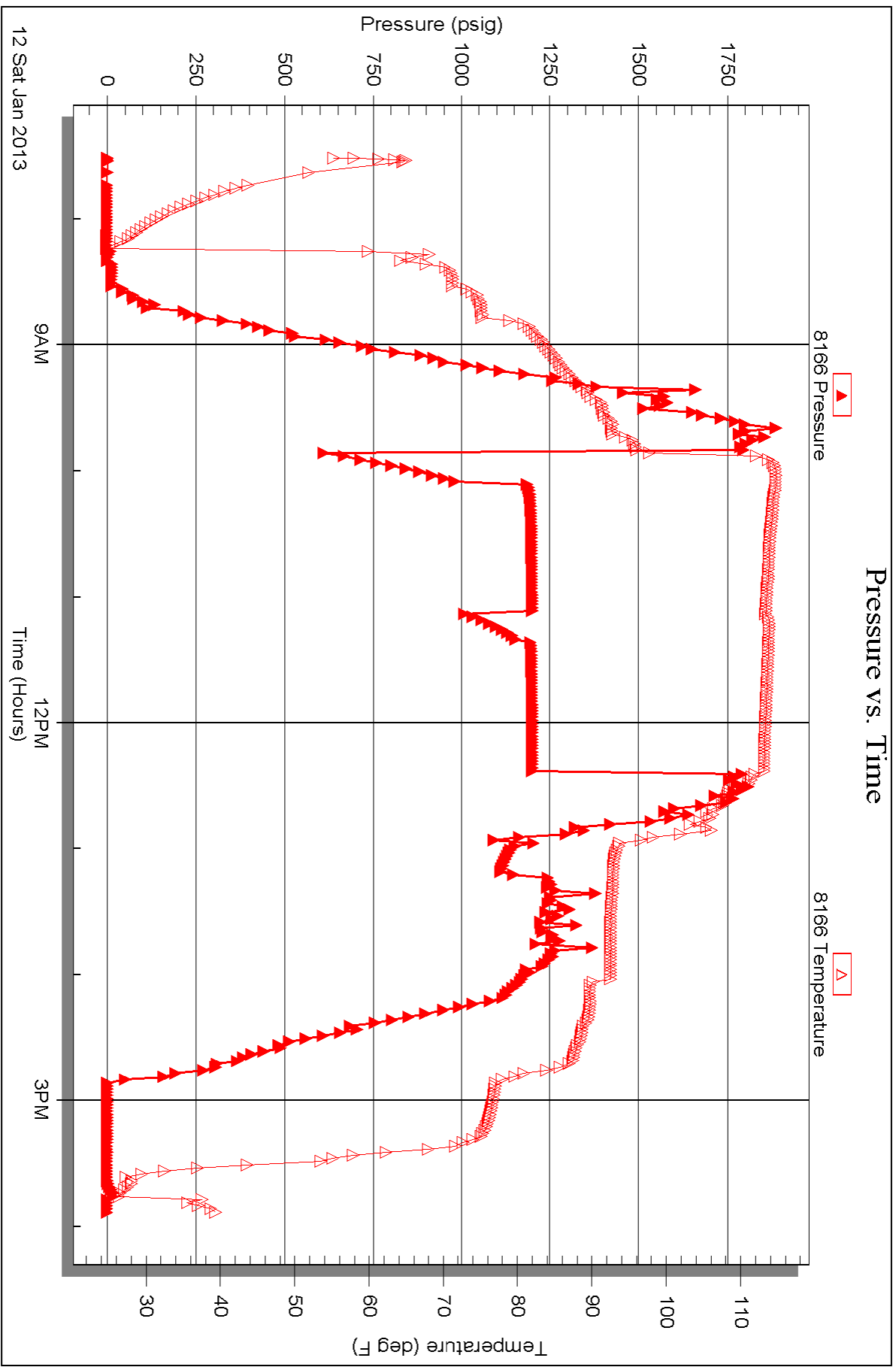


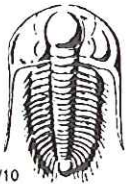
Serial #: 8166

Outside Murfin Drilling Co.

Braun #1-36

DST Test Number: 5





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50252

Well Name & No. Braun #1-36 Test No. 1 Date 1/9/13  
 Company Murfin Drilling Co. Elevation 1991 KB 1980 GL  
 Address 250 N Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 36 Twp. 15s Rge. 19w Co. Ellis State KS

Interval Tested 3205 - 3333 Zone Tested Oread - AC "D"  
 Anchor Length 128 Drill Pipe Run 2970 Mud Wt. 8.9  
 Top Packer Depth 3200 Drill Collars Run 235 Vis 60  
 Bottom Packer Depth 3205 Wt. Pipe Run — WL 7.6  
 Total Depth 3333 Chlorides 5,500 ppm System LCM  
 Blow Description FF - 7 in blow  
ISI - No blow  
FF - 6 1/2 in blow  
FST - weak surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>VSOCM</u>	<u>5</u>	<u>5</u>	<u>95</u>	<u>—</u>
<u>120</u>	<u>VSOCM</u>	<u>5</u>	<u>60</u>	<u>35</u>	<u>—</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 210 BHT 99 Gravity \_\_\_\_\_ API RW 11 @ 65 °F Chlorides 92,000 ppm

(A) Initial Hydrostatic <u>4614</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>4:45</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>6:55</u>
(C) First Final Flow <u>62</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>9:33</u>
(D) Initial Shut-In <u>974</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>13:33</u>
(E) Second Initial Flow <u>67</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>15:35</u>
(F) Second Final Flow <u>117</u>	<input checked="" type="checkbox"/> Mileage <u>38RT</u> 58.90	Comments _____
(G) Final Shut-In <u>835</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>1,570</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

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

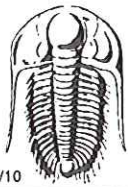
Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Sub Total 1533.90

Total 1533.90  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Bruce D...

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. 50253

Well Name & No. Braun #1-36 Test No. 2 Date 1/10/13  
 Company Murkin Drilling Co. Elevation 1991 KB 1980 GL  
 Address 250 N Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murkin #2  
 Location: Sec. 36 Twp. 15S Rge. 19W Co. Ellis State KS

Interval Tested 3999 - 3490 Zone Tested KC "H-K"  
 Anchor Length 91 Drill Pipe Run \_\_\_\_\_ Mud Wt. \_\_\_\_\_  
 Top Packer Depth 3994 Drill Collars Run 235 Visc \_\_\_\_\_  
 Bottom Packer Depth 3399 Wt. Pipe Run \_\_\_\_\_ WL \_\_\_\_\_  
 Total Depth 3490 Chlorides \_\_\_\_\_ ppm System LCM \_\_\_\_\_  
 Blow Description IF-BOB in 1 1/2 min  
ISI-BOB in 2 1/2 min  
FF-BOB in 2 min  
FSI-BOB in 2 min GTS

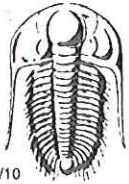
Rec	Feet of	%gas	%oil	%water	%mud
300	60	20	80		
125	60	40	60		
315	60 CM	30	30		40
125	65 MLO	35	55		10
265	60	35	85		

Rec Total 1130 BHT 108 Gravity 34 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,714  Test 1150 T-On Location 8:00  
 (B) First Initial Flow 108  Jars 250 T-Started 8:35  
 (C) First Final Flow 337  Safety Joint 75 T-Open 10:25  
 (D) Initial Shut-In 866  Circ Sub \_\_\_\_\_ T-Pulled 13:25  
 (E) Second Initial Flow 348  Hourly Standby \_\_\_\_\_ T-Out 16:30  
 (F) Second Final Flow 480  Mileage 38.7 58.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 852  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,708  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 1533.90  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1533.90

Approved By \_\_\_\_\_ Our Representative Bill Dickman  
 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. 51574

Well Name & No. Bracon #1-36 Test No. 3 Date 1-11-13  
 Company Murfin Drilling Co Elevation 1991 KB 180 GL  
 Address 250 N. Water STE 300, Wichita KS, 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 36 Twp. 15S Rge. 19W Co. Ellis State KS

Interval Tested 3559-3569 Zone Tested Arbuckle  
 Anchor Length 10' Drill Pipe Run 3318 Mud Wt. 9.4  
 Top Packer Depth 3554 Drill Collars Run 235' Vis 49  
 Bottom Packer Depth 3559 Wt. Pipe Run — WL 8.0  
 Total Depth 3569 Chlorides 7.600 ppm System LCM —

Blow Description IF- 3" blow.  
ISI- No blow back.  
FF- 2 1/2" blow.  
FSI- No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>OCM</u>	<u>20</u>	<u>80</u>		
<u>186</u>	<u>GO</u>	<u>50</u>	<u>50</u>		
	<u>372' of G.I.P.</u>				

Rec Total 248' BHT 109° Gravity — API RW — @ — °F Chlorides — ppm

- (A) Initial Hydrostatic 1852
- (B) First Initial Flow 21
- (C) First Final Flow 46
- (D) Initial Shut-In 1174
- (E) Second Initial Flow 52
- (F) Second Final Flow 103
- (G) Final Shut-In 1166
- (H) Final Hydrostatic 1815

- Test 1150
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 38 RT 58.90
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1533.90

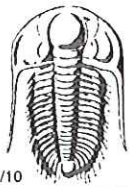
- T-On Location 2:00am
- T-Started 2:30am
- T-Open 4:16am
- T-Pulled 8:16am
- T-Out 10:00am

- Comments
- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total 0
- Total 1533.90
- MP/DST Disc't

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

Approved By \_\_\_\_\_ Our Representative Cody Bloss

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. 51575

4/10

Well Name & No. Braun 1-36 Test No. 4 Date 1-11-13  
 Company Murfin Drilling Co Elevation 1991 KB 1980 GL  
 Address 250 N. Water STE 300, Wichita KS, 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin # 2  
 Location: Sec. 36 Twp. 15S Rge. 19W Co. Ellis State KS

Interval Tested 3569-3579 Zone Tested Arbuckle  
 Anchor Length 10' Drill Pipe Run 3320' Mud Wt. 9.2  
 Top Packer Depth 3564 Drill Collars Run 235' Vis 57  
 Bottom Packer Depth 3569 Wt. Pipe Run — WL 8.0  
 Total Depth 3579 Chlorides 8,700 ppm System LCM —

Blow Description IF - B.O.B. in 11 Minutes  
1st - Surface blow  
FF - B.O.B. in 17 Minutes  
1st - Surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>60</u>	<u>10</u>	<u>90</u>		
<u>310</u>	<u>60</u>	<u>50</u>	<u>50</u>		
<u>62</u>	<u>OCM</u>		<u>20</u>		<u>80</u>
	<u>124' of G.I.P.</u>				

Rec Total 434' BHT 1080 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1867</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>4:15pm</u>
(B) First Initial Flow <u>26</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>4:35pm</u>
(C) First Final Flow <u>95</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>6:22pm</u>
(D) Initial Shut-In <u>1142</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>10:22pm</u>
(E) Second Initial Flow <u>107</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:23am</u>
(F) Second Final Flow <u>164</u>	<input checked="" type="checkbox"/> Mileage <u>38 RT</u> 58.90	Comments
(G) Final Shut-In <u>1127</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1819</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

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

Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

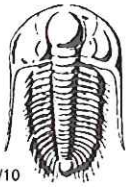
Sub Total 1533.90

MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Cody Riley

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. 50254

Well Name & No. Braun 1-36 Test No. 5 Date 1-12-13  
 Company Murfin Drilling Co Elevation 1991 KB 1980 GL  
 Address 250 N. Water STE 300, Wichita KS, 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 31 Twp. 15s Rge. 19w Co. Ellis State KS

Interval Tested 3592-3600 Zone Tested Reagan Sand  
 Anchor Length 8' Drill Pipe Run 3351' Mud Wt. 9.2  
 Top Packer Depth 3587 Drill Collars Run 235' Vis 57  
 Bottom Packer Depth 3592 Wt. Pipe Run — WL 8.0  
 Total Depth 3600 Chlorides 8,700 ppm System LCM —

Blow Description IF- B.O.B. instantly  
ISI- Weak surface return  
FF- B.O.B. instantly  
FST- No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>2,294</u>	<u>Water</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 2,294' BHT 112° Gravity — API RW .82 @ 63 °F Chlorides 43000 ppm

(A) Initial Hydrostatic <u>1890</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>7:10am</u>
(B) First Initial Flow <u>618</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>7:31am</u>
(C) First Final Flow <u>981</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>9:52am</u>
(D) Initial Shut-In <u>1200</u>	<input checked="" type="checkbox"/> Circ Subdropped bar <u>50</u>	T-Pulled <u>12:22pm</u>
(E) Second Initial Flow <u>993</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>3:55pm</u>
(F) Second Final Flow <u>1156</u>	<input checked="" type="checkbox"/> Mileage <u>38 RT</u> 58.90	Comments
(G) Final Shut-In <u>1200</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1819</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60

Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Sub Total 1583.90

MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Cody [Signature]

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