



## DRILL STEM TEST REPORT

Prepared For: **Meridian Energy, Inc.**

1475 Ward Dr.  
Franktown, CO 80116

ATTN: Neal LaFon

### **Hunt Unit #1**

#### **23-9s-21w Graham,KS**

Start Date: 2016.05.27 @ 02:05:08

End Date: 2016.05.27 @ 10:24:08

Job Ticket #: 58082                      DST #: 1

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

Printed: 2016.06.02 @ 15:00:16



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Meridian Energy, Inc.  
 1475 Ward Dr.  
 Franktown, CO 80116  
 ATTN: Neal LaFon

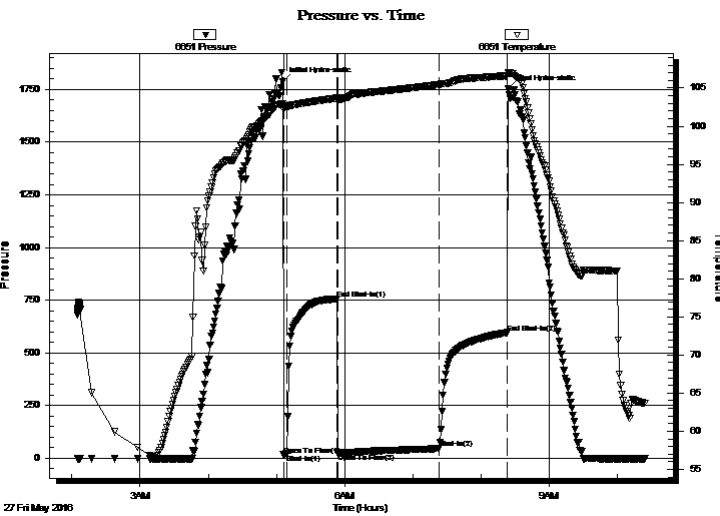
**23-9s-21w Graham, KS**  
**Hunt Unit #1**  
 Job Ticket: 58082 **DST#: 1**  
 Test Start: 2016.05.27 @ 02:05:08

## GENERAL INFORMATION:

Formation: **LKC "C-G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 05:06:08  
 Time Test Ended: 10:24:08  
 Interval: **3500.00 ft (KB) To 3572.00 ft (KB) (TVD)**  
 Total Depth: 3572.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Brannan Lonsdale  
 Unit No: 73  
 Reference Elevations: 2275.00 ft (KB)  
 2270.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6651 Inside**  
 Press@RunDepth: 46.55 psig @ 3507.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.05.27 End Date: 2016.05.27 Last Calib.: 2016.05.27  
 Start Time: 02:05:09 End Time: 10:24:08 Time On Btm: 2016.05.27 @ 05:05:38  
 Time Off Btm: 2016.05.27 @ 08:23:38

TEST COMMENT: 02- IF- 1/4" blow  
 45- IS- No blow  
 90- FF- Slowly built to 1"  
 60- FS- No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1788.96	102.95	Initial Hydro-static
1	16.12	102.19	Open To Flow (1)
3	20.46	102.43	Shut-In(1)
48	755.29	103.68	End Shut-In(1)
48	21.92	103.45	Open To Flow (2)
137	46.55	105.46	Shut-In(2)
197	596.13	106.60	End Shut-In(2)
198	1751.74	107.06	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	SWM, 1%W 99%M	0.89

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58082

**DST#: 1**

ATTN: Neal LaFon

Test Start: 2016.05.27 @ 02:05:08

## Tool Information

Drill Pipe:	Length: 3489.00 ft	Diameter: 3.82 inches	Volume: 49.46 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 46000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3500.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.00 ft			
Tool Length:	102.00 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			3471.00	
Shut In Tool	5.00			3476.00	
Sampler	3.00			3479.00	
Hydraulic tool	5.00			3484.00	
Jars	5.00			3489.00	
Safety Joint	2.00			3491.00	
Packer	5.00			3496.00	30.00 Bottom Of Top Packer
Packer	4.00			3500.00	
Stubb	1.00			3501.00	
Perforations	5.00			3506.00	
Change Over Sub	1.00			3507.00	
Recorder	0.00	6651	Inside	3507.00	
Recorder	0.00	6839	Outside	3507.00	
Drill Pipe	61.00			3568.00	
Change Over Sub	1.00			3569.00	
Bullnose	3.00			3572.00	72.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>102.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58082

**DST#: 1**

ATTN: Neal LaFon

Test Start: 2016.05.27 @ 02:05:08

## 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:

35000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	SWM, 1%W 99%M	0.893

Total Length: 63.00 ft      Total Volume: 0.893 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler: 1800mL W & 200mL M @ 130PSI

rW: .21 @ 62 degrees

Serial #: 6651

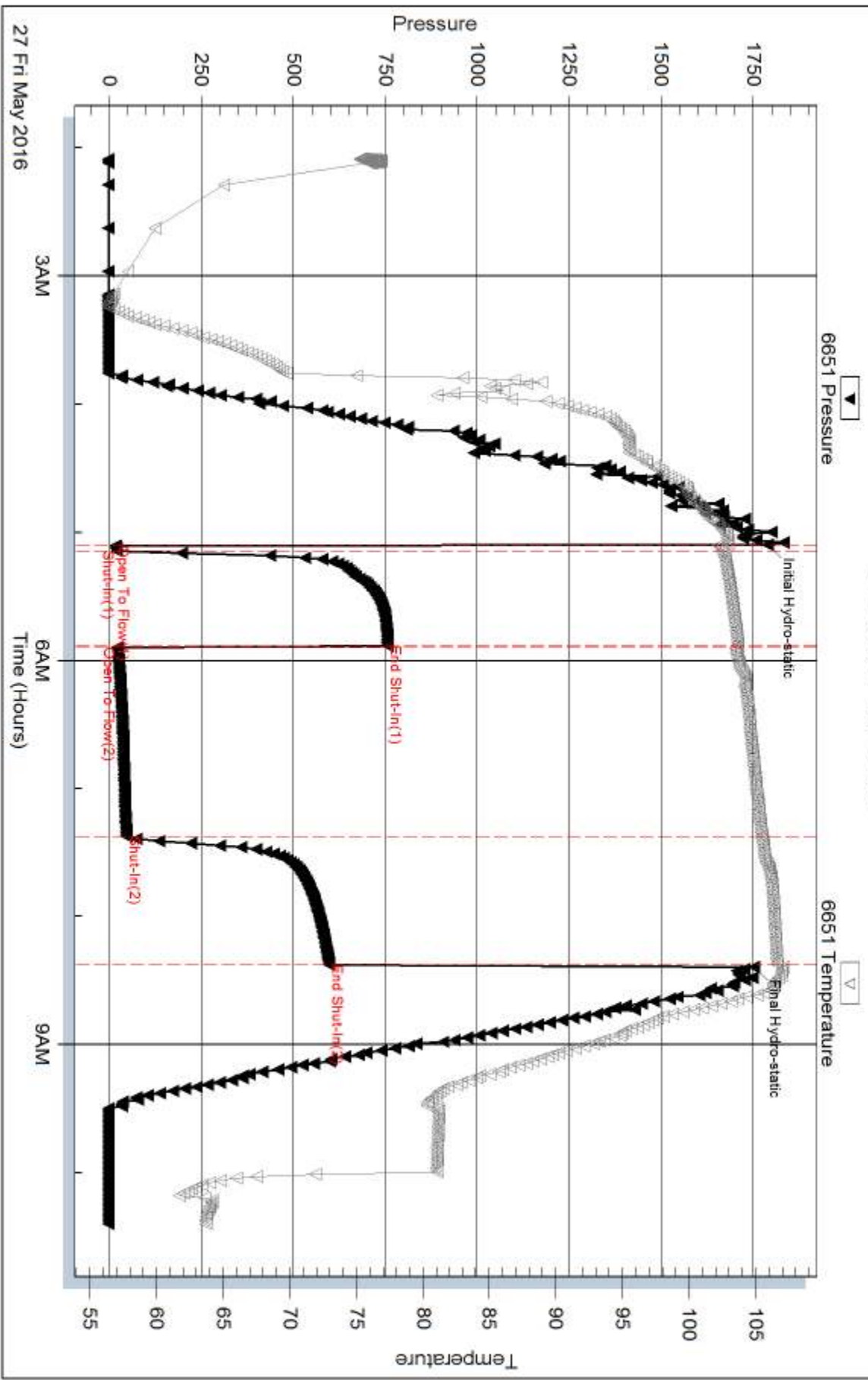
Inside

Meridian Energy, Inc.

Hunt Unit #1

DST Test Number: 1

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 58082

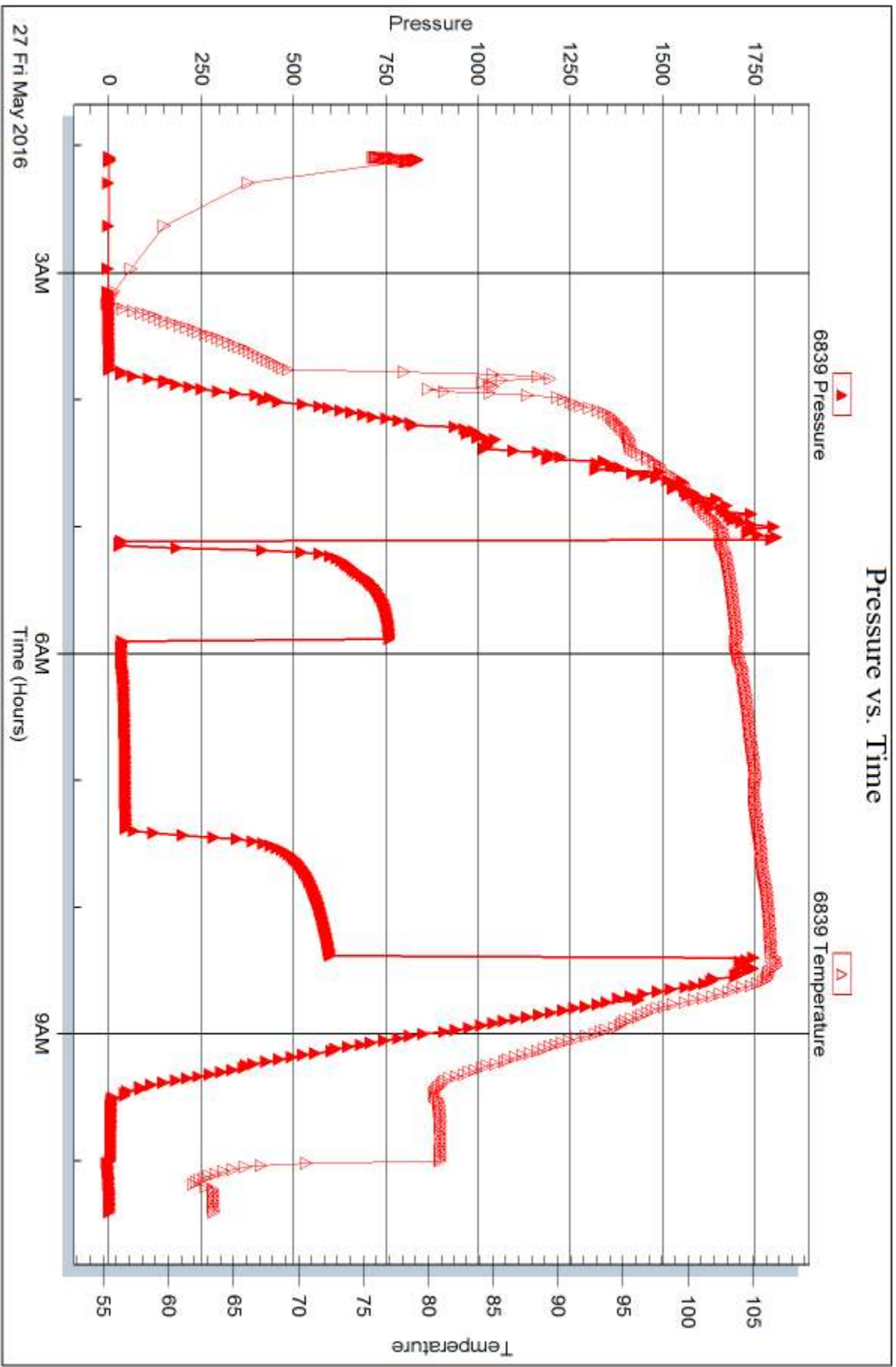
Printed: 2016.06.02 @ 15:00:17

Serial #: 6839

Outside Meridian Energy, Inc.

Hunt Unit #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Meridian Energy, Inc.**

1475 Ward Dr.  
Franktown, CO 80116

ATTN: Neal LaFon

### **Hunt Unit #1**

#### **23-9s-21w Graham,KS**

Start Date: 2016.05.28 @ 07:28:24

End Date: 2016.05.28 @ 10:38:53

Job Ticket #: 58083                      DST #: 2

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

Printed: 2016.05.31 @ 10:15:36





**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Meridian Energy, Inc.  
1475 Ward Dr.  
Franktown, CO 80116  
ATTN: Neal LaFon

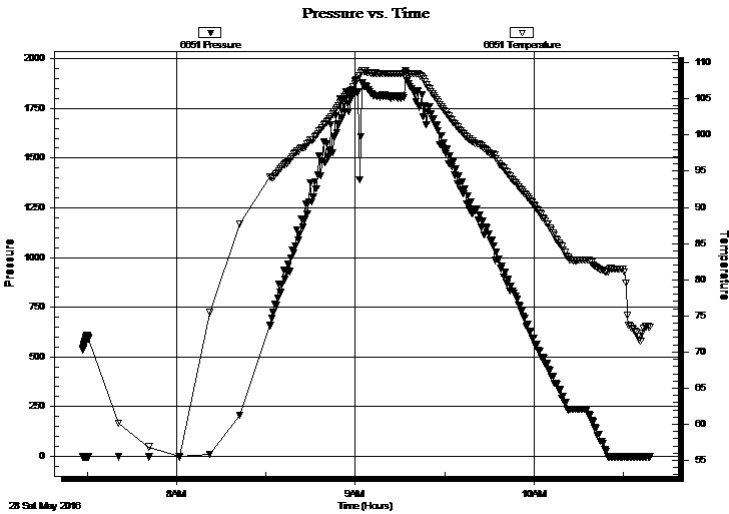
**23-9s-21w Graham,KS**  
**Hunt Unit #1**  
Job Ticket: 58083 **DST#: 2**  
Test Start: 2016.05.28 @ 07:28:24

**GENERAL INFORMATION:**

Formation: **Arbuckle**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened:  
Time Test Ended: 10:38:53  
Interval: **3761.00 ft (KB) To 3793.00 ft (KB) (TVD)**  
Total Depth: 3793.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition:  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Brannan Lonsdale  
Unit No: 73  
Reference Elevations: 2275.00 ft (KB)  
2270.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 6651 Inside**  
Press@RunDepth: psig @ 3790.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2016.05.28 End Date: 2016.05.28 Last Calib.: 2016.05.28  
Start Time: 07:28:24 End Time: 10:38:53 Time On Btm:  
Time Off Btm:

TEST COMMENT: Mis-run. Tool was 90' off bottom



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Meridian Energy, Inc.  
1475 Ward Dr.  
Franktown, CO 80116  
ATTN: Neal LaFon

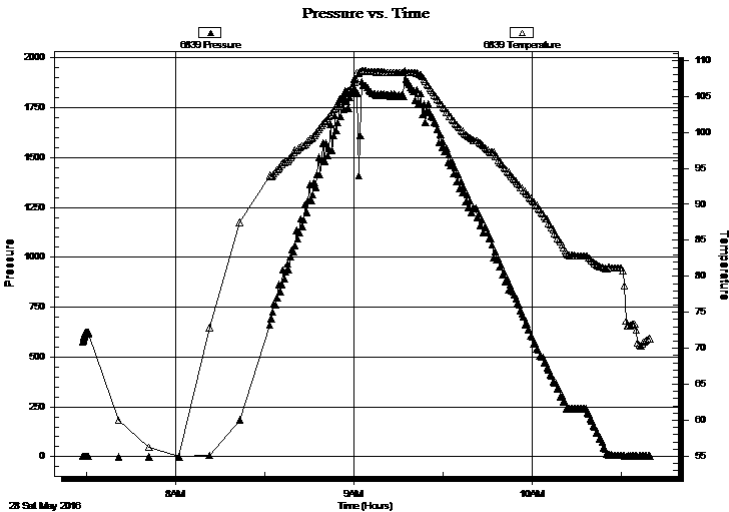
**23-9s-21w Graham,KS**  
**Hunt Unit #1**  
Job Ticket: 58083 **DST#: 2**  
Test Start: 2016.05.28 @ 07:28:24

## GENERAL INFORMATION:

Formation: <b>Arbuckle</b>			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)	
Time Tool Opened:		Tester: Brannan Lonsdale	
Time Test Ended: 10:38:53		Unit No: 73	
<b>Interval: 3761.00 ft (KB) To 3793.00 ft (KB) (TVD)</b>		Reference Elevations: 2275.00 ft (KB)	
Total Depth: 3793.00 ft (KB) (TVD)		2270.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition:	KB to GR/CF: 5.00 ft	

<b>Serial #: 6839</b>	<b>Outside</b>				
Press@RunDepth:	psig @	3790.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2016.05.28	End Date:	2016.05.28	Last Calib.:	2016.05.28
Start Time:	07:28:43	End Time:	10:39:42	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: Mis-run. Tool was 90' off bottom



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58083

**DST#: 2**

ATTN: Neal LaFon

Test Start: 2016.05.28 @ 07:28:24

## Tool Information

Drill Pipe:	Length: 3741.00 ft	Diameter: 3.82 inches	Volume: 53.03 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: lb
			<u>Total Volume: - bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial lb
Depth to Top Packer:	3761.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	57.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3737.00	
Shut In Tool	5.00			3742.00	
Sampler	3.00			3745.00	
Hydraulic tool	5.00			3750.00	
Safety Joint	2.00			3752.00	
Packer	5.00			3757.00	25.00 Bottom Of Top Packer
Packer	4.00			3761.00	
Stubb	1.00			3762.00	
Perforations	28.00			3790.00	
Recorder	0.00	6651	Inside	3790.00	
Recorder	0.00	6839	Outside	3790.00	
Bullnose	3.00			3793.00	32.00 Bottom Packers & Anchor

**Total Tool Length: 57.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58083

**DST#: 2**

ATTN: Neal LaFon

Test Start: 2016.05.28 @ 07:28:24

## 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: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl

Total Length:                      ft      Total Volume:                      bbl

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

Laboratory Name:                      Laboratory Location:

Recovery Comments:

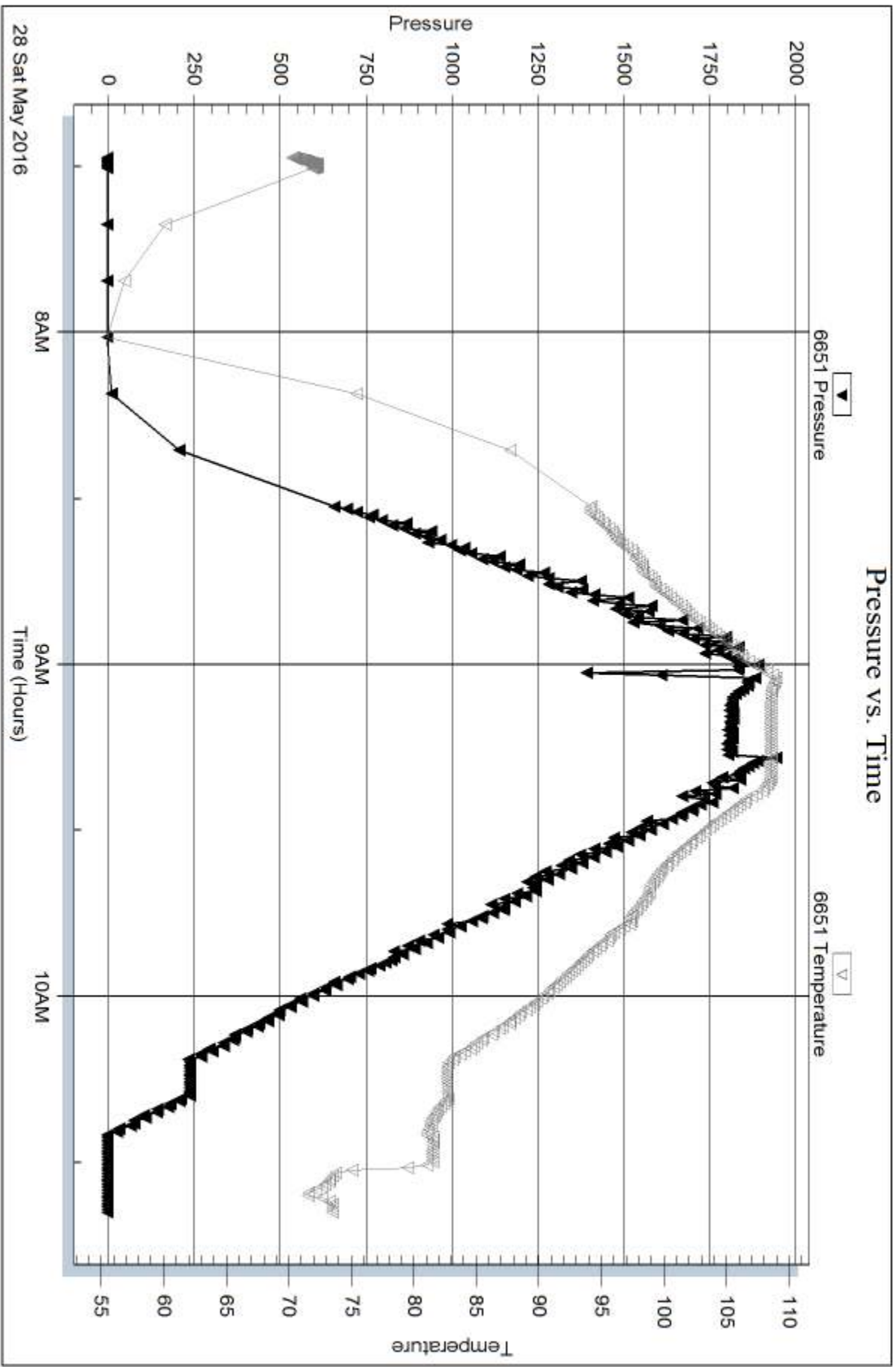
Serial #: 6651

Inside

Meridian Energy, Inc.

Hunt Unit #1

DST Test Number: 2

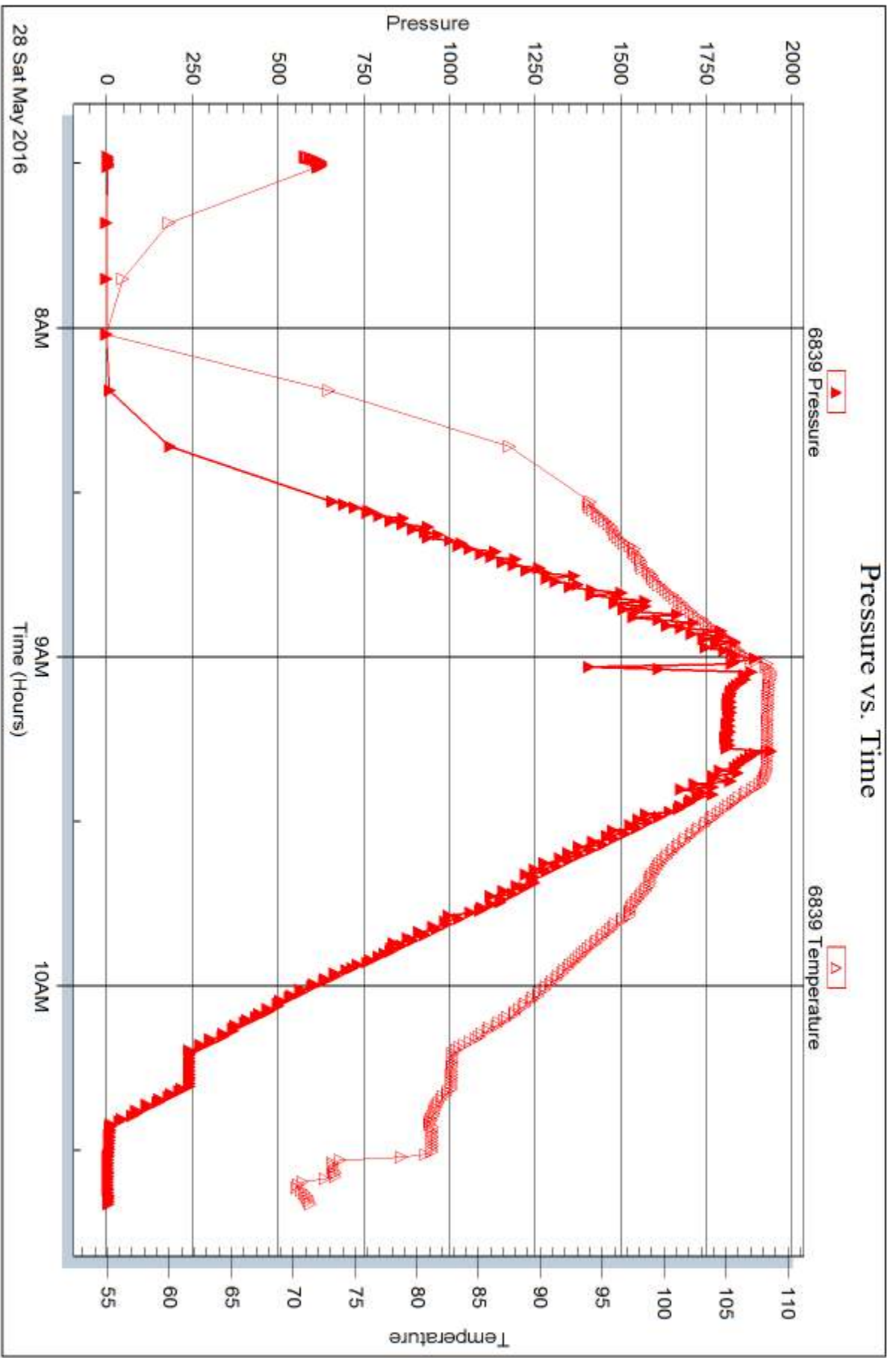


Serial #: 6839

Outside Meridian Energy, Inc.

Hunt Unit #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 58083

Printed: 2016.05.31 @ 10:15:38



## DRILL STEM TEST REPORT

Prepared For: **Meridian Energy, Inc.**

1475 Ward Dr.  
Franktown, CO 80116

ATTN: Neal LaFon

### **Hunt Unit #1**

#### **23-9s-21w Graham,KS**

Start Date: 2016.05.28 @ 15:19:46

End Date: 2016.05.28 @ 19:19:45

Job Ticket #: 58084                      DST #: 3

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

Printed: 2016.05.31 @ 10:15:03



TRILOBITE  
TESTING, INC.

# DRILL STEM TEST REPORT

Meridian Energy, Inc.

23-9s-21w Graham, KS

1475 Ward Dr.  
Franktown, CO 80116

Hunt Unit #1

Job Ticket: 58084

DST#: 3

ATTN: Neal LaFon

Test Start: 2016.05.28 @ 15:19:46

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 19:19:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **3761.00 ft (KB) To 3793.00 ft (KB) (TVD)**

Reference Elevations: 2275.00 ft (KB)

Total Depth: 3793.00 ft (KB) (TVD)

2270.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 5.00 ft

Serial #: **6651** Inside

Press@RunDepth: psig @ 3790.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.05.28

End Date:

2016.05.28

Last Calib.:

2016.05.28

Start Time: 15:19:46

End Time:

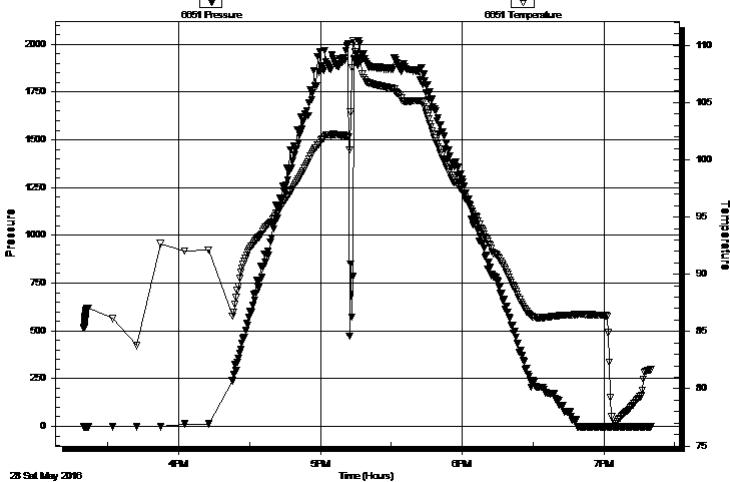
19:19:45

Time On Btm:

Time Off Btm:

TEST COMMENT: PACKER FAILURE

Pressure vs. Time



## PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
442.00	M	6.27

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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\* Recovery from multiple tests





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Meridian Energy, Inc.  
1475 Ward Dr.  
Franktown, CO 80116  
ATTN: Neal LaFon

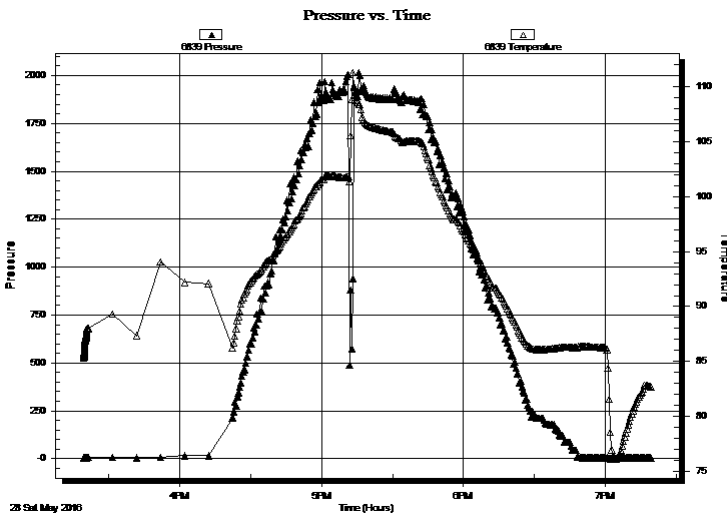
**23-9s-21w Graham, KS**  
**Hunt Unit #1**  
Job Ticket: 58084 **DST#: 3**  
Test Start: 2016.05.28 @ 15:19:46

## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened:  
Time Test Ended: 19:19:45  
Interval: **3761.00 ft (KB) To 3793.00 ft (KB) (TVD)**  
Total Depth: 3793.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition:  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Brannan Lonsdale  
Unit No: 73  
Reference Elevations: 2275.00 ft (KB)  
2270.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 6839 Outside**  
Press@RunDepth: psig @ 3790.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2016.05.28 End Date: 2016.05.28 Last Calib.: 2016.05.28  
Start Time: 15:19:18 End Time: 19:19:17 Time On Btm:  
Time Off Btm:

TEST COMMENT: PACKER FAILURE



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
442.00	M	6.27

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58084

**DST#: 3**

ATTN: Neal LaFon

Test Start: 2016.05.28 @ 15:19:46

## Tool Information

Drill Pipe:	Length: 3741.00 ft	Diameter: 3.82 inches	Volume: 53.03 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3761.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	57.00 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			3737.00	
Shut In Tool	5.00			3742.00	
Sampler	3.00			3745.00	
Hydraulic tool	5.00			3750.00	
Safety Joint	2.00			3752.00	
Packer	5.00			3757.00	25.00 Bottom Of Top Packer
Packer	4.00			3761.00	
Stubb	1.00			3762.00	
Perforations	28.00			3790.00	
Recorder	0.00	6651	Inside	3790.00	
Recorder	0.00	6839	Outside	3790.00	
Bullnose	3.00			3793.00	32.00 Bottom Packers & Anchor

**Total Tool Length: 57.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58084

**DST#: 3**

ATTN: Neal LaFon

Test Start: 2016.05.28 @ 15:19:46

## 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: 48.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
442.00	M	6.266

Total Length: 442.00 ft

Total Volume: 6.266 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

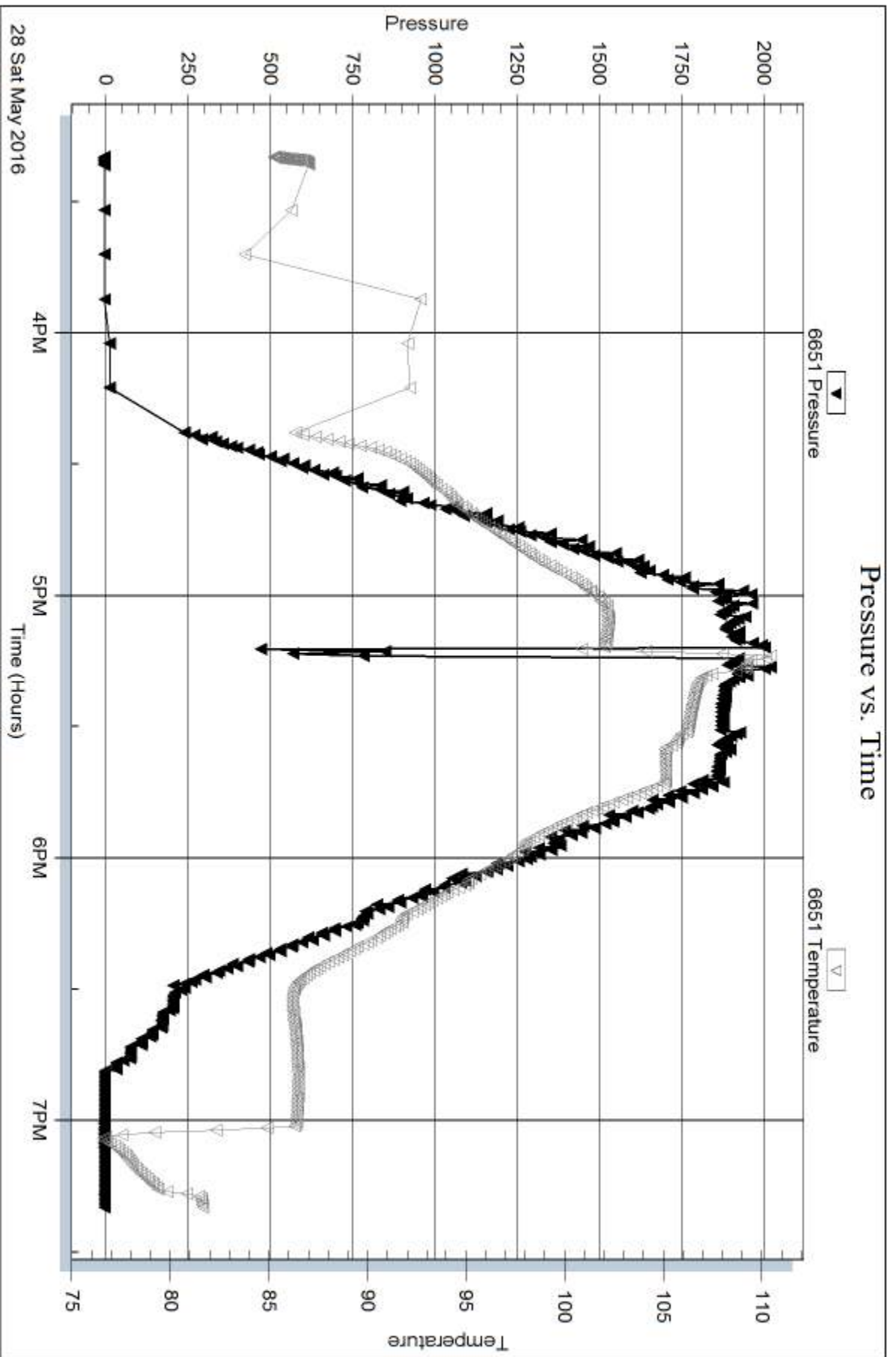
Serial #: 6651

Inside

Meridian Energy, Inc.

Hunt Unit #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 58084

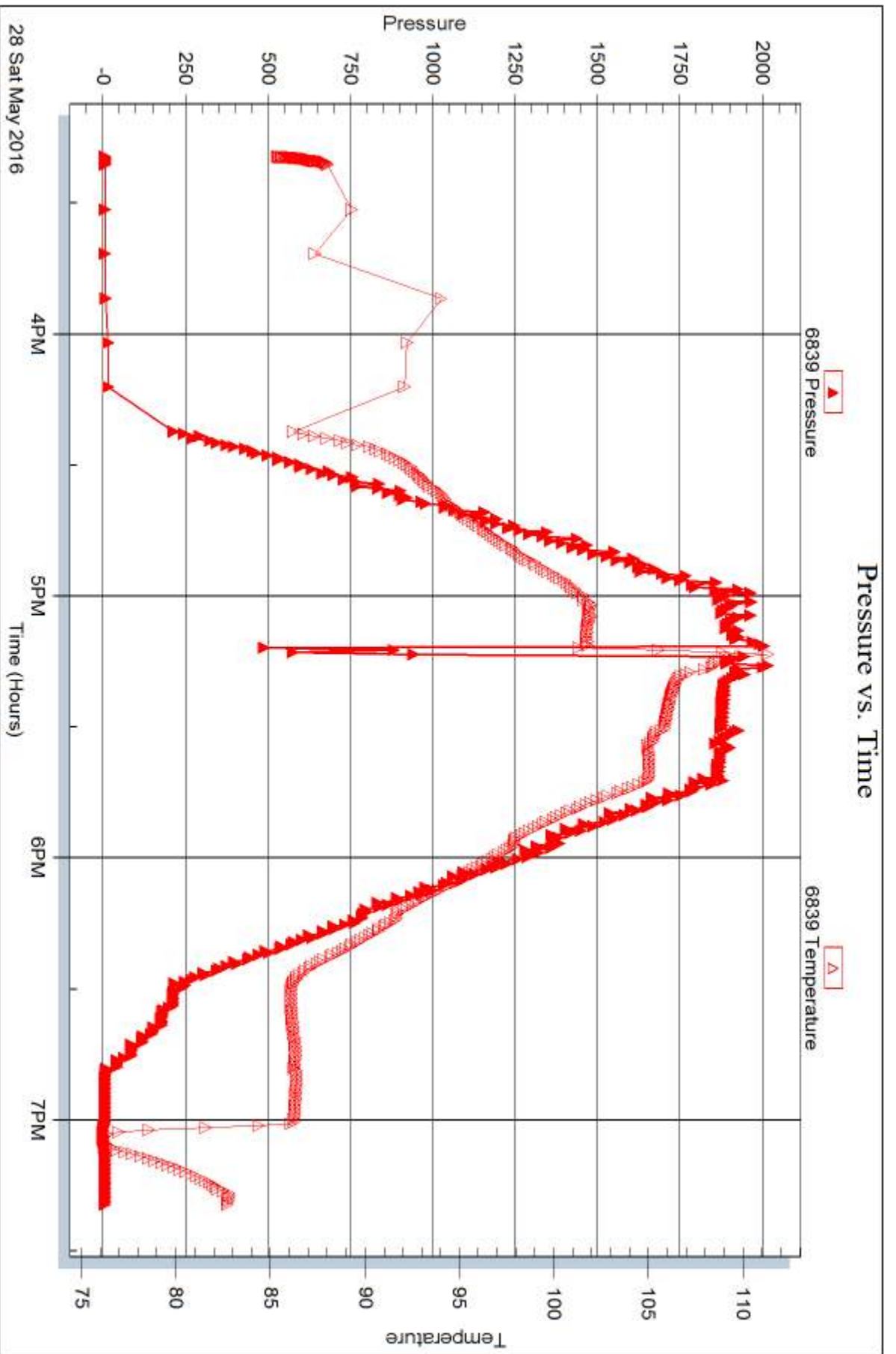
Printed: 2016.05.31 @ 10:15:05

Serial #: 6839

Outside Meridian Energy, Inc.

Hunt Unit #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 58084

Printed: 2016.05.31 @ 10:15:05



## DRILL STEM TEST REPORT

Prepared For: **Meridian Energy, Inc.**

1475 Ward Dr.  
Franktown, CO 80116

ATTN: Neal LaFon

### **Hunt Unit #1**

#### **23-9s-21w Graham,KS**

Start Date: 2016.05.28 @ 19:34:20

End Date: 2016.05.29 @ 02:42:50

Job Ticket #: 58085                      DST #: 4

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

Printed: 2016.06.02 @ 14:58:57



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Meridian Energy, Inc.  
 1475 Ward Dr.  
 Franktown, CO 80116  
 ATTN: Neal LaFon

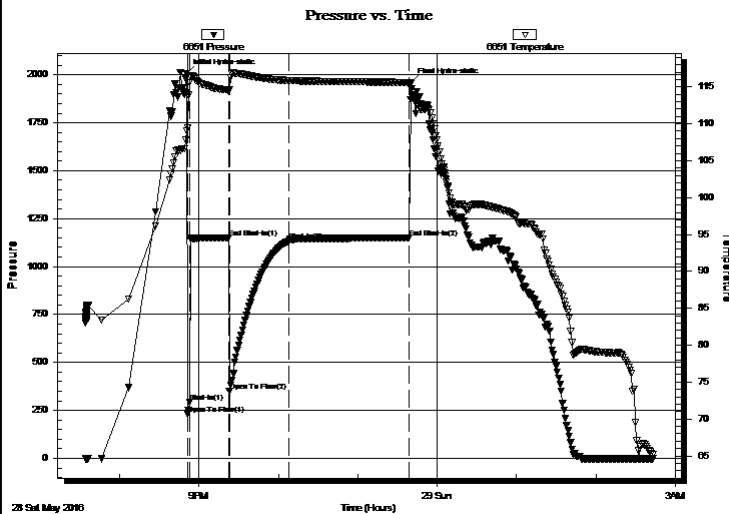
**23-9s-21w Graham,KS**  
**Hunt Unit #1**  
 Job Ticket: 58085 **DST#: 4**  
 Test Start: 2016.05.28 @ 19:34:20

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:51:20  
 Time Test Ended: 02:42:50  
 Interval: **3785.00 ft (KB) To 3793.00 ft (KB) (TVD)**  
 Total Depth: 3793.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brannan Lonsdale  
 Unit No: 73  
 Reference Elevations: 2275.00 ft (KB)  
 2270.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6651 Inside**  
 Press@RunDepth: 1131.83 psig @ 3790.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.05.28 End Date: 2016.05.29 Last Calib.: 2016.05.29  
 Start Time: 19:34:21 End Time: 02:42:50 Time On Btm: 2016.05.28 @ 20:50:50  
 Time Off Btm: 2016.05.28 @ 23:40:20

TEST COMMENT: 02- IF- BOB 1 min  
 30- IS- Surface blow  
 45- FF- BOB 1 min  
 90- FSI- No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2008.05	109.06	Initial Hydro-static
1	229.65	109.41	Open To Flow (1)
2	291.09	115.54	Shut-In(1)
32	1150.39	114.56	End Shut-In(1)
32	350.30	114.64	Open To Flow (2)
77	1131.83	115.86	Shut-In(2)
168	1149.64	115.62	End Shut-In(2)
170	1959.00	114.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2496.00	SOCMW, 6%O 15%M 79%W	35.38

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Meridian Energy, Inc.  
1475 Ward Dr.  
Franktown, CO 80116  
ATTN: Neal LaFon

**23-9s-21w Graham, KS**

**Hunt Unit #1**

Job Ticket: 58085

**DST#: 4**

Test Start: 2016.05.28 @ 19:34:20

## GENERAL INFORMATION:

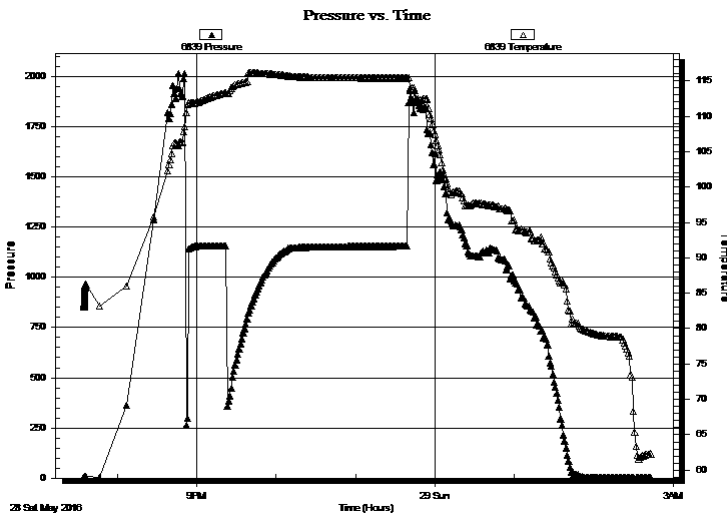
Formation: <b>Arbuckle</b>		Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock:	ft (KB)	Tester: Brannan Lonsdale
Time Tool Opened: 20:51:20		Unit No: 73
Time Test Ended: 02:42:50		
<b>Interval: 3785.00 ft (KB) To 3793.00 ft (KB) (TVD)</b>		Reference Elevations: 2275.00 ft (KB)
Total Depth: 3793.00 ft (KB) (TVD)		2270.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 5.00 ft

**Serial #: 6839**

**Outside**

Press@RunDepth: psig @ 3790.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2016.05.28	End Date: 2016.05.29
Start Time: 19:34:26	End Time: 02:42:55
	Last Calib.: 2016.05.29
	Time On Btm:
	Time Off Btm:

TEST COMMENT: 02- IF- BOB 1 min  
30- IS- Surface blow  
45- FF- BOB 1 min  
90- FSI- No blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
2496.00	SOCMW, 6%O 15%M 79%W	35.38

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58085

**DST#: 4**

ATTN: Neal LaFon

Test Start: 2016.05.28 @ 19:34:20

## Tool Information

Drill Pipe:	Length: 3772.00 ft	Diameter: 3.82 inches	Volume: 53.47 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
			- bbl	String Weight: Initial	45000.00 lb
Drill Pipe Above KB:	12.00 ft			Final	52000.00 lb
Depth to Top Packer:	3785.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	8.00 ft				
Tool Length:	33.00 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			3761.00	
Shut In Tool	5.00			3766.00	
Sampler	3.00			3769.00	
Hydraulic tool	5.00			3774.00	
Safety Joint	2.00			3776.00	
Packer	5.00			3781.00	25.00 Bottom Of Top Packer
Packer	4.00			3785.00	
Stubb	1.00			3786.00	
Perforations	4.00			3790.00	
Recorder	0.00	6651	Inside	3790.00	
Recorder	0.00	6839	Outside	3790.00	
Bullnose	3.00			3793.00	8.00 Bottom Packers & Anchor

**Total Tool Length: 33.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58085

**DST#: 4**

ATTN: Neal LaFon

Test Start: 2016.05.28 @ 19:34:20

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

34000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2496.00	SOCMW, 6%O 15%M 79%W	35.382

Total Length: 2496.00 ft      Total Volume: 35.382 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

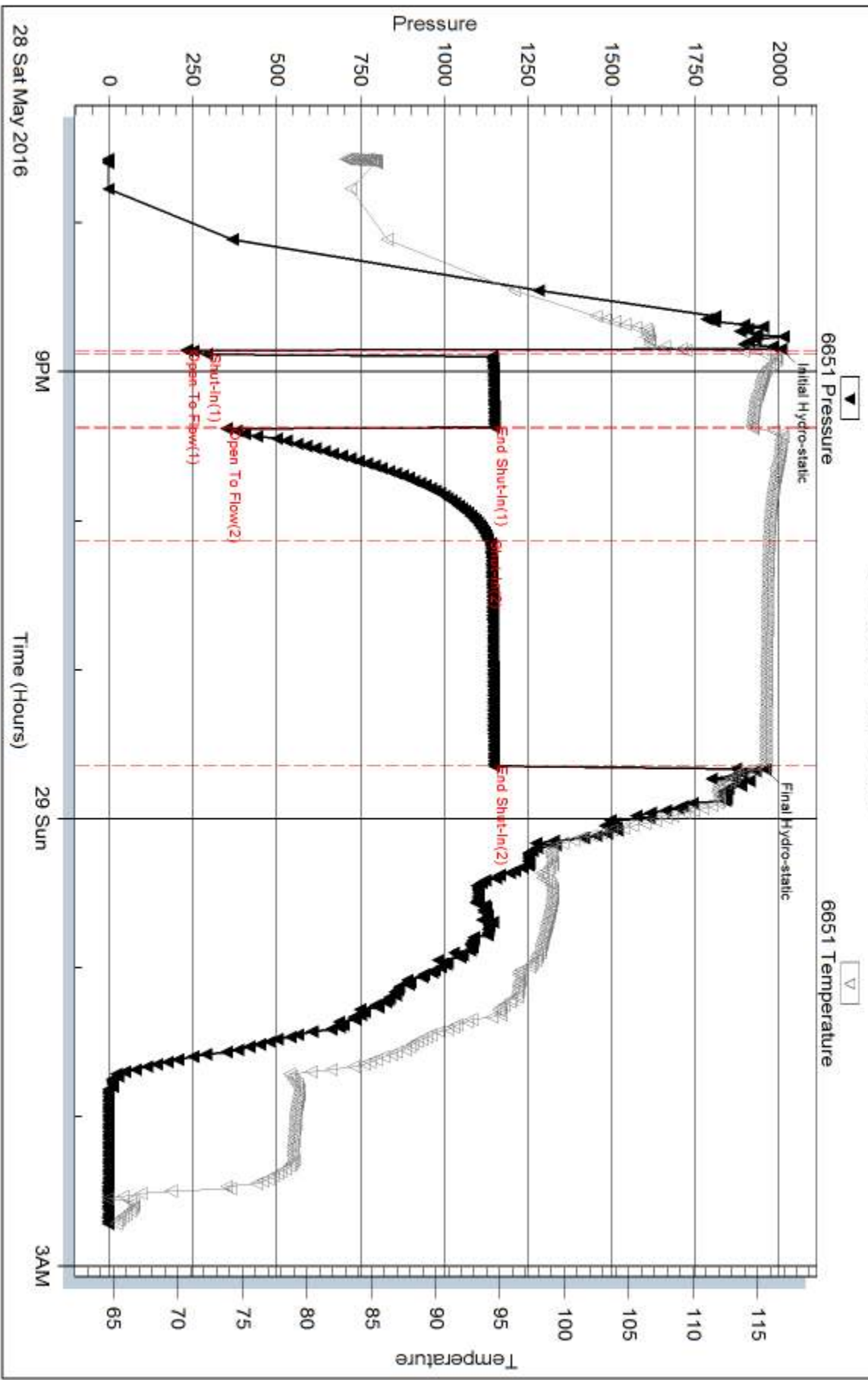
Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler: 2000mL W @ 210PSI

rW: .23 @ 62 degrees

### Pressure vs. Time

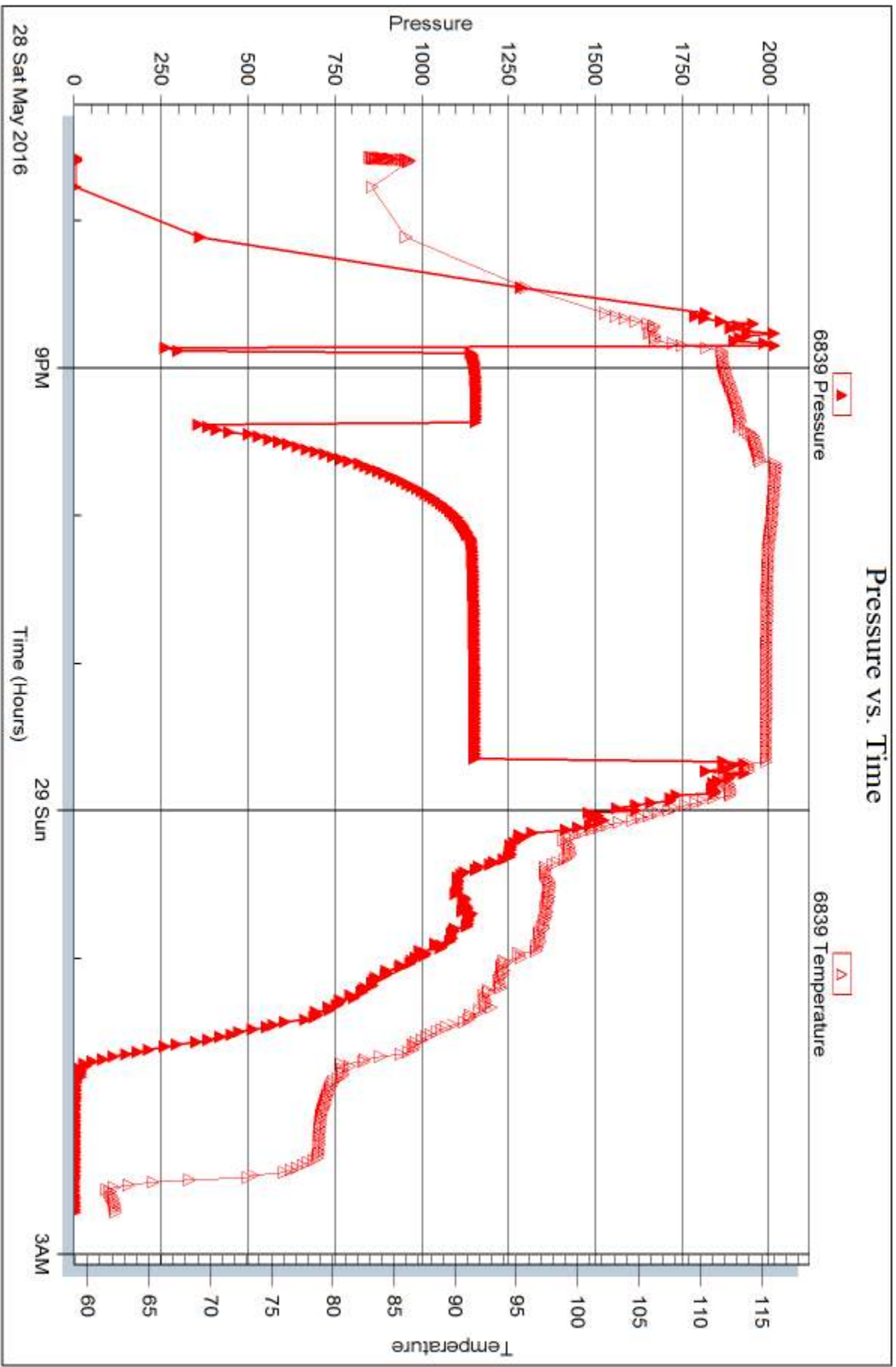


Serial #: 6839

Outside Meridian Energy, Inc.

Hunt Unit #1

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Meridian Energy, Inc.**

1475 Ward Dr.  
Franktown, CO 80116

ATTN: Neal LaFon

### **Hunt Unit #1**

#### **23-9s-21w Graham,KS**

Start Date: 2016.05.29 @ 16:11:11

End Date: 2016.05.30 @ 00:21:41

Job Ticket #: 58086                      DST #: 5

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

Printed: 2016.06.02 @ 14:58:13



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Meridian Energy, Inc.  
 1475 Ward Dr.  
 Franktown, CO 80116  
 ATTN: Neal LaFon

**23-9s-21w Graham, KS**  
**Hunt Unit #1**  
 Job Ticket: 58086 **DST#: 5**  
 Test Start: 2016.05.29 @ 16:11:11

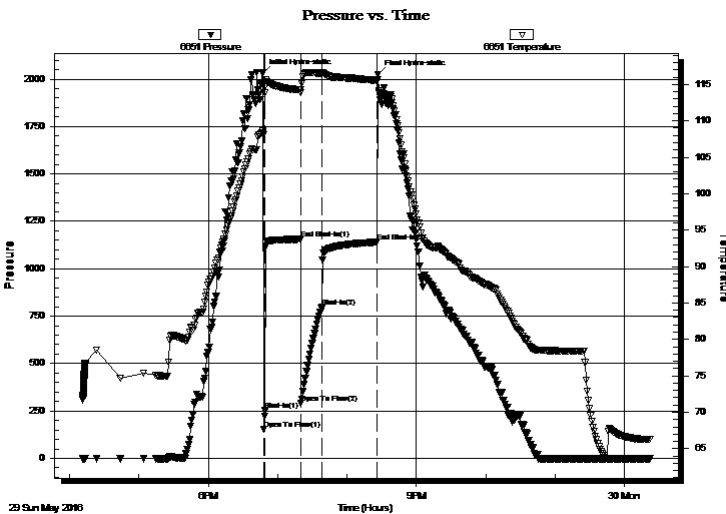
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:47:41  
 Time Test Ended: 00:21:41  
**Interval: 3810.00 ft (KB) To 3820.00 ft (KB) (TVD)**  
 Total Depth: 3852.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Reset)  
 Tester: Brannan Lonsdale  
 Unit No: 73  
 Reference Elevations: 2275.00 ft (KB)  
 2270.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6651 Inside**  
 Press@RunDepth: 799.56 psig @ 3811.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.05.29 End Date: 2016.05.30 Last Calib.: 2016.05.30  
 Start Time: 16:11:12 End Time: 00:21:41 Time On Btm: 2016.05.29 @ 18:47:11  
 Time Off Btm: 2016.05.29 @ 20:26:41

TEST COMMENT: 02- IF- BOB 1 min  
 30- IS- No blow  
 20- FF- BOB 45 sec  
 45- FSI- 1/2" blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2028.09	108.59	Initial Hydro-static
1	153.78	108.14	Open To Flow (1)
2	253.08	114.77	Shut-In(1)
33	1155.80	114.25	End Shut-In(1)
33	292.25	113.91	Open To Flow (2)
51	799.56	116.45	Shut-In(2)
99	1140.20	115.58	End Shut-In(2)
100	2025.35	115.69	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1138.00	OCMW, 7%O 6%M 87%W	16.13
648.00	SGWMCO, 2%G 19%W 6%M 73%O	9.19
0.00	174' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



# DRILL STEM TEST REPORT

Meridian Energy, Inc.  
 1475 Ward Dr.  
 Franktown, CO 80116  
 ATTN: Neal LaFon

**23-9s-21w Graham, KS**  
**Hunt Unit #1**  
 Job Ticket: 58086 **DST#: 5**  
 Test Start: 2016.05.29 @ 16:11:11

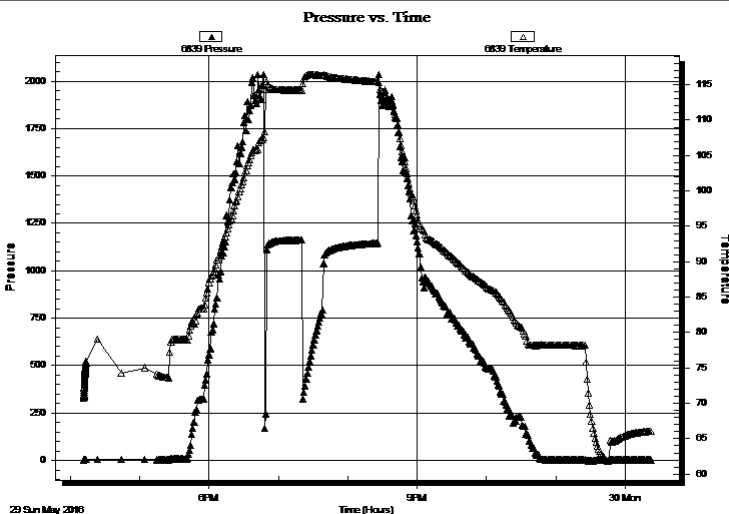
## GENERAL INFORMATION:

Formation: <b>Arbuckle</b>	Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Straddle (Reset)
Time Tool Opened: 18:47:41	Time Test Ended: 00:21:41		Tester: Brannan Lonsdale
			Unit No: 73
<b>Interval: 3810.00 ft (KB) To 3820.00 ft (KB) (TVD)</b>			Reference Elevations: 2275.00 ft (KB)
Total Depth: 3852.00 ft (KB) (TVD)			2270.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair		KB to GR/CF: 5.00 ft

## Serial #: 6839 Outside

Press@RunDepth: psig @ 3811.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2016.05.29	End Date: 2016.05.30
Start Time: 16:11:28	End Time: 00:21:57
	Last Calib.: 2016.05.30
	Time On Btm:
	Time Off Btm:

TEST COMMENT: 02- IF- BOB 1 min  
 30- IS- No blow  
 20- FF- BOB 45 sec  
 45- FS- 1/2" blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
1138.00	OCMW, 7%O 6%M 87%W	16.13
648.00	SGWMCO, 2%G 19%W 6%M 73%O	9.19
0.00	174' GIP	0.00

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Meridian Energy, Inc.  
1475 Ward Dr.  
Franktown, CO 80116  
ATTN: Neal LaFon

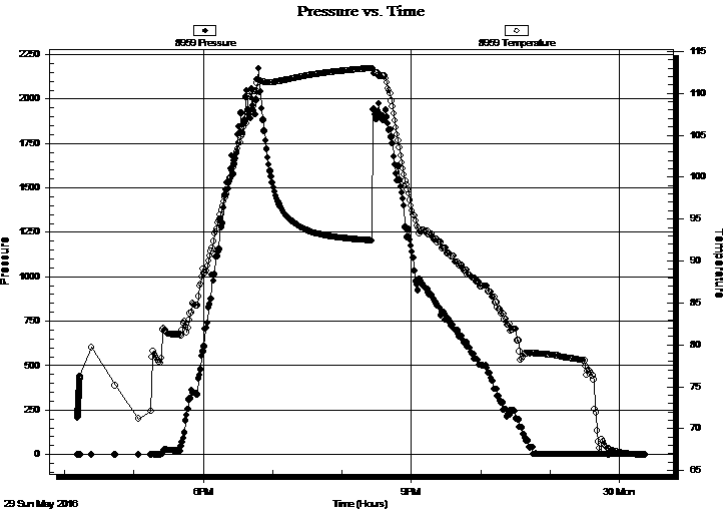
**23-9s-21w Graham, KS**  
**Hunt Unit #1**  
Job Ticket: 58086      **DST#: 5**  
Test Start: 2016.05.29 @ 16:11:11

## GENERAL INFORMATION:

Formation: <b>Arbuckle</b>		
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Straddle (Reset)
Time Tool Opened: 18:47:41		Tester: Brannan Lonsdale
Time Test Ended: 00:21:41		Unit No: 73
<b>Interval: 3810.00 ft (KB) To 3820.00 ft (KB) (TVD)</b>		Reference Elevations: 2275.00 ft (KB)
Total Depth: 3852.00 ft (KB) (TVD)		2270.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 5.00 ft

<b>Serial #: 8959</b>	<b>Below (Straddle)</b>				
Press@RunDepth:	psig @	3822.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2016.05.29	End Date:	2016.05.30	Last Calib.:	2016.05.30
Start Time:	16:11:19	End Time:	00:21:48	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: 02- IF- BOB 1 min  
30- ISL- No blow  
20- FF- BOB 45 sec  
45- FSI- 1/2" blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
1138.00	OCMW, 7%O 6%M 87%W	16.13
648.00	SGWMCO, 2%G 19%W 6%M 73%O	9.19
0.00	174' GIP	0.00

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58086

**DST#: 5**

ATTN: Neal LaFon

Test Start: 2016.05.29 @ 16:11:11

## Tool Information

Drill Pipe:	Length: 3804.00 ft	Diameter: 3.82 inches	Volume: 53.92 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3810.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	3820.00 ft			
Interval between Packers:	10.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

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

Change Over Sub	1.00			3786.00	
Shut In Tool	5.00			3791.00	
Sampler	3.00			3794.00	
Hydraulic tool	5.00			3799.00	
Safety Joint	2.00			3801.00	
Packer	5.00			3806.00	25.00 Bottom Of Top Packer
Packer	4.00			3810.00	
Stubb	1.00			3811.00	
Recorder	0.00	6651	Inside	3811.00	
Recorder	0.00	6839	Outside	3811.00	
Perforations	5.00			3816.00	
Blank Off Sub	1.00			3817.00	
Blank Spacing	3.00			3820.00	10.00 Tool Interval
Packer	1.00			3821.00	
Stubb	1.00			3822.00	
Recorder	0.00	8959	Below	3822.00	
Perforations	27.00			3849.00	
Bullnose	3.00			3852.00	32.00 Bottom Packers & Anchor

**Total Tool Length: 67.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Meridian Energy, Inc.

**23-9s-21w Graham,KS**

1475 Ward Dr.  
Franktown, CO 80116

**Hunt Unit #1**

Job Ticket: 58086

**DST#: 5**

ATTN: Neal LaFon

Test Start: 2016.05.29 @ 16:11:11

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

29000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
1138.00	OCMW, 7%O 6%M 87%W	16.132
648.00	SGWMCO, 2%G 19%W 6%M 73%O	9.186
0.00	174' GIP	0.000

Total Length: 1786.00 ft      Total Volume: 25.318 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

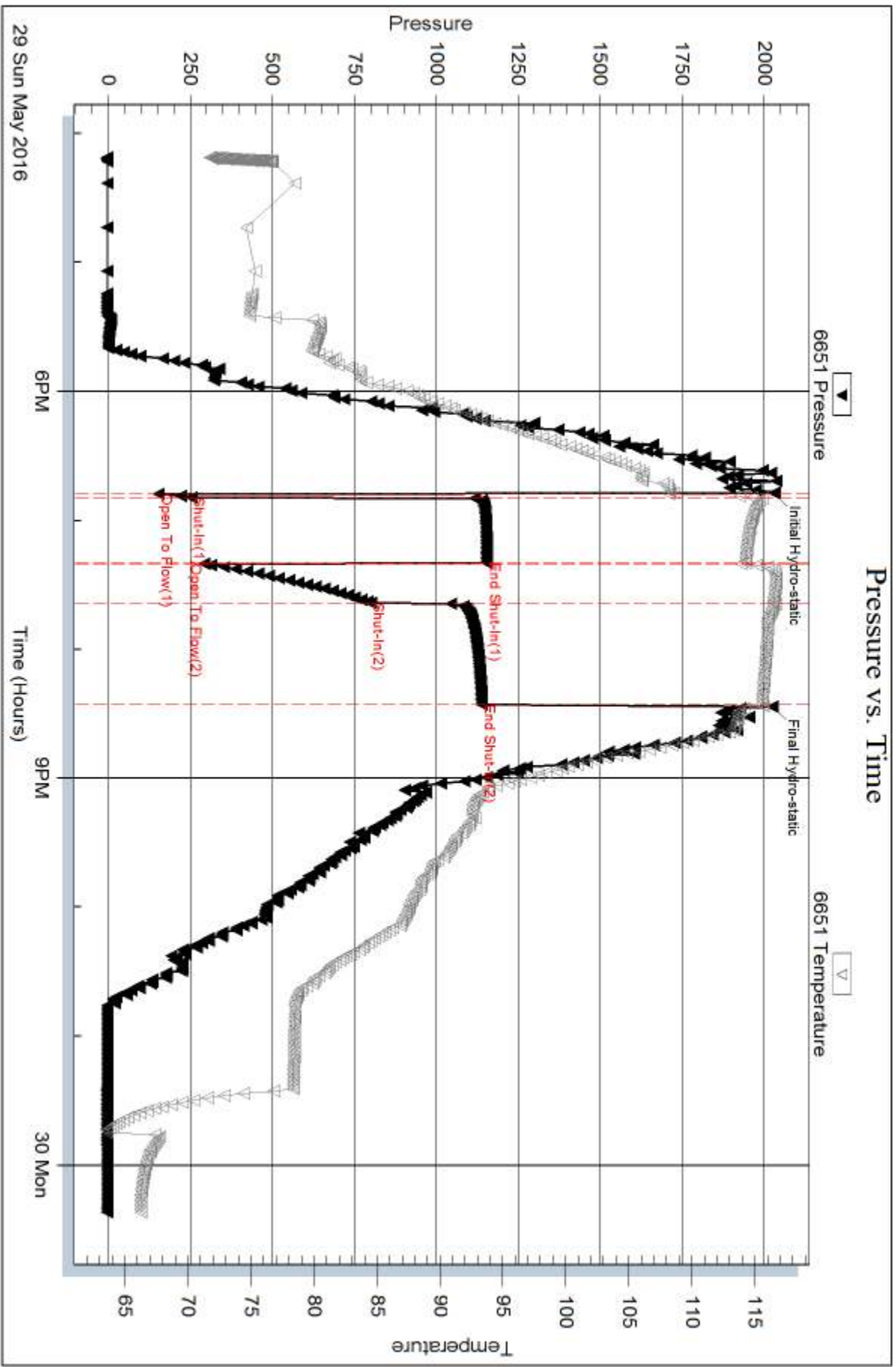
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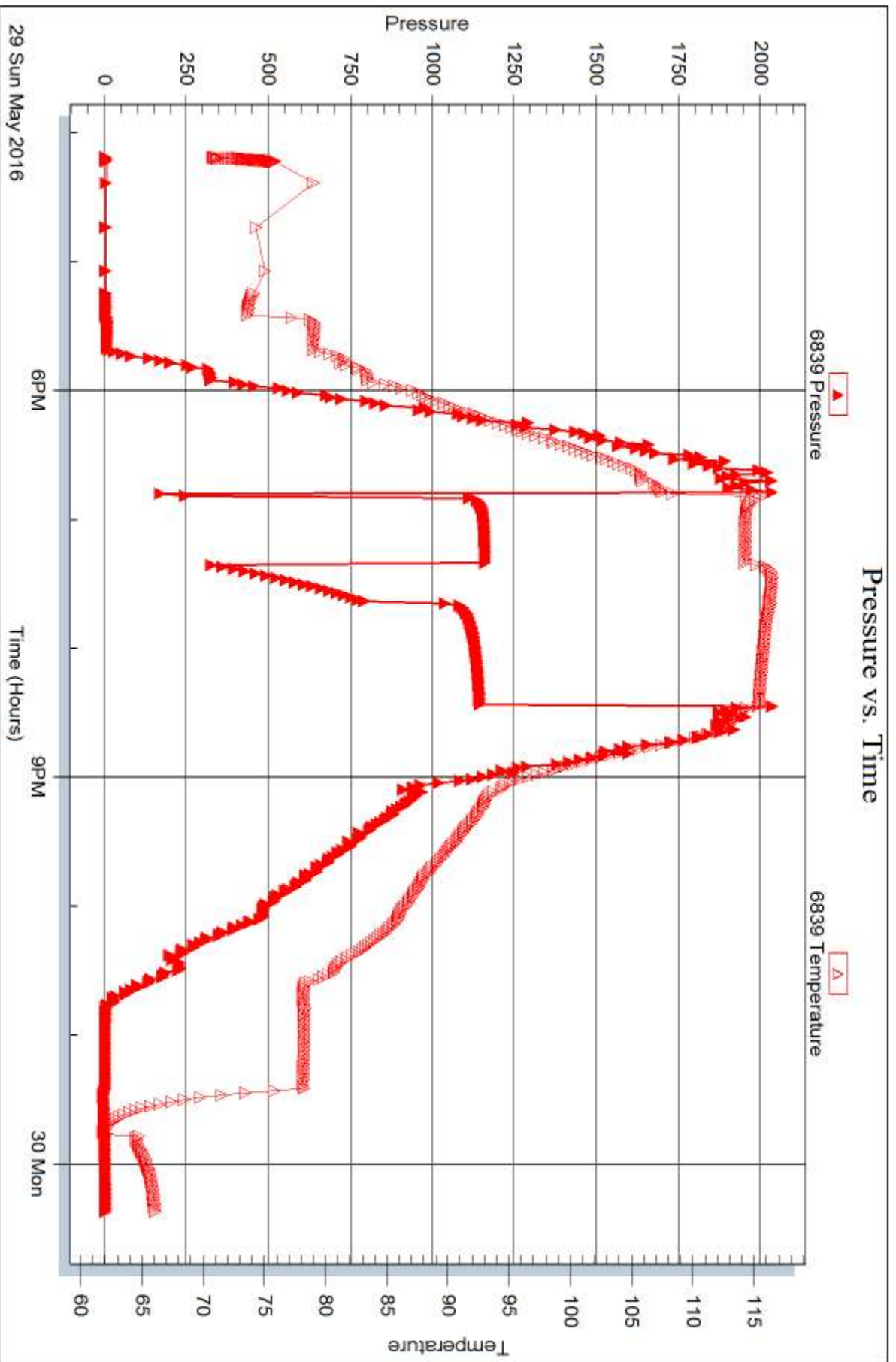
Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler: 1200mL O & 800mL W @ 95PSI

rW: .28 @ 65 degrees



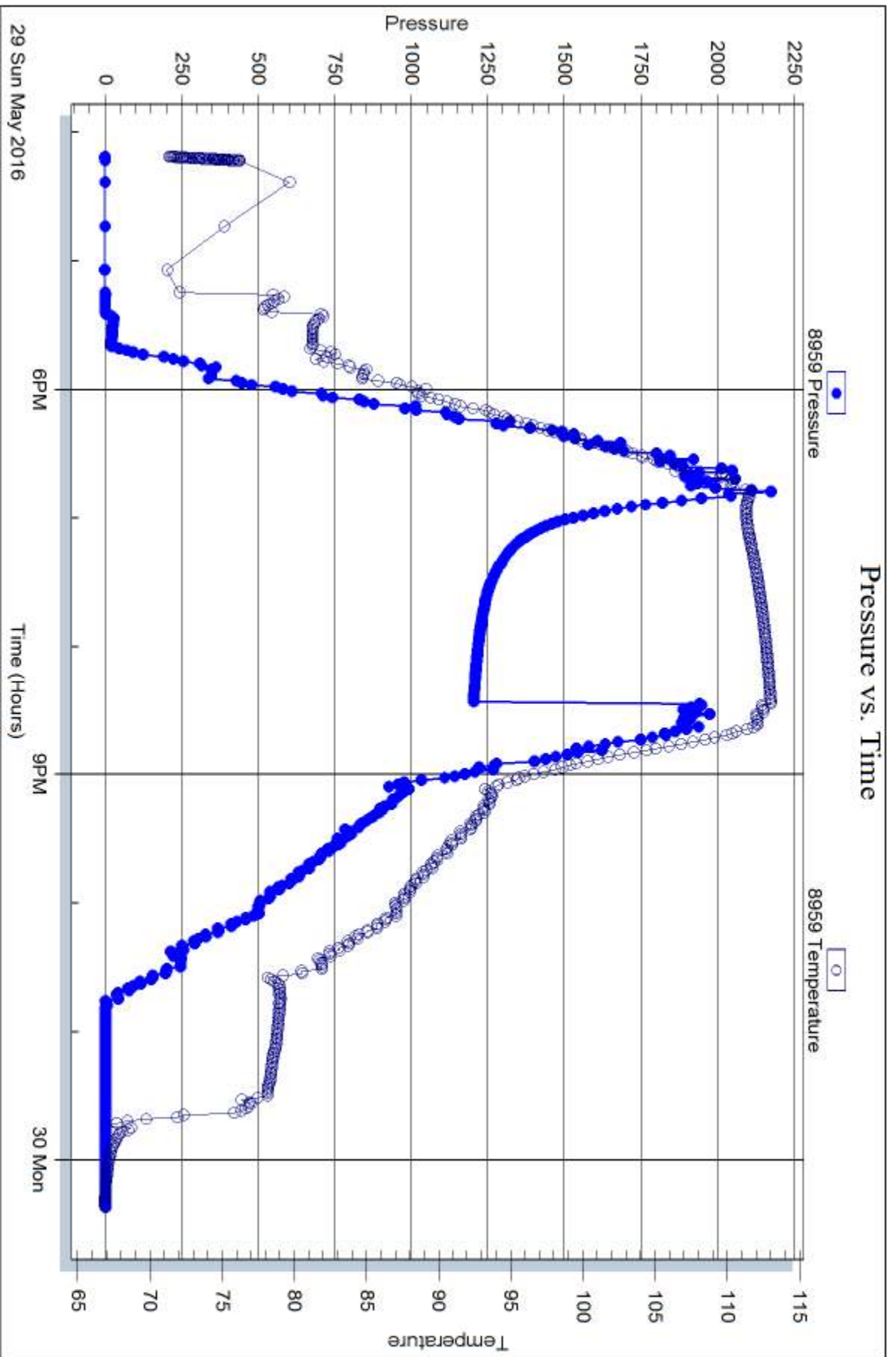


Serial #: 8959

Below (Str Addit) Energy, Inc.

Hunt Unit #1

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 58086

Printed: 2016.06.02 @ 14:58:15