



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water  
Suite 300  
Wichita, KS 67202

ATTN: Tom Funk

**Kruto #2-29**

**S29-10s-24w Thomas,KS**

Start Date: 2012.11.10 @ 14:06:00

End Date: 2012.11.10 @ 23:38:54

Job Ticket #: 48486                      DST #: 1

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

Printed: 2012.11.20 @ 15:26:42



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48486

**DST#: 1**

Test Start: 2012.11.10 @ 14:06:00

## GENERAL INFORMATION:

Formation: **LKC 'F'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:23:24

Time Test Ended: 23:38:54

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 62

**Interval: 4237.00 ft (KB) To 4255.00 ft (KB) (TVD)**

Reference Elevations: 3250.00 ft (KB)

Total Depth: 4255.00 ft (KB) (TVD)

3239.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 8018**

**Inside**

Press@RunDepth: 734.81 psig @ 4242.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.10

End Date: 2012.11.10

Last Calib.: 2012.11.10

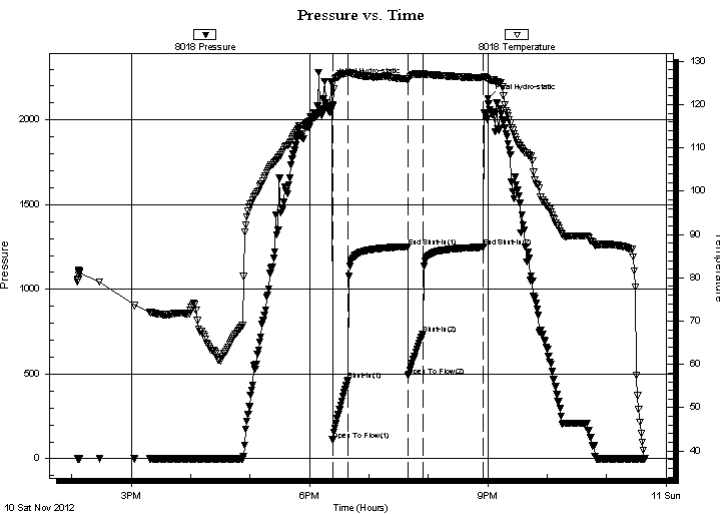
Start Time: 14:06:02

End Time: 23:38:53

Time On Btm: 2012.11.10 @ 18:22:14

Time Off Btm: 2012.11.10 @ 21:00:04

**TEST COMMENT:** B.O.B. @ 1 1/2 min.  
No return.  
B.O.B. @ 2 1/2 min.  
No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2222.82	119.83	Initial Hydro-static
2	108.38	119.90	Open To Flow (1)
17	463.44	127.23	Shut-In(1)
77	1252.47	125.97	End Shut-In(1)
78	490.77	125.59	Open To Flow (2)
92	734.81	127.00	Shut-In(2)
154	1249.18	126.21	End Shut-In(2)
158	2127.50	125.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
493.00	MW 5m 95w	5.29
504.00	MW 20m 80w	7.07
472.00	MW 40m 60w	6.62

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48486

**DST#: 1**

Test Start: 2012.11.10 @ 14:06:00

## Tool Information

Drill Pipe:	Length: 4049.00 ft	Diameter: 3.80 inches	Volume: 56.80 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose:	85000.00 lb
			<u>Total Volume: 57.68 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	4237.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	18.00 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
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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4218.00	
Shut In Tool	5.00			4223.00	
Hydraulic tool	5.00			4228.00	
Packer	5.00			4233.00	20.00 Bottom Of Top Packer
Packer	4.00			4237.00	
Stubb	1.00			4238.00	
Perforations	4.00			4242.00	
Recorder	0.00	8018	Inside	4242.00	
Recorder	0.00	6751	Outside	4242.00	
Perforations	10.00			4252.00	
Bullnose	3.00			4255.00	18.00 Bottom Packers & Anchor

**Total Tool Length: 38.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48486

**DST#: 1**

Test Start: 2012.11.10 @ 14:06:00

## 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: 100000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
493.00	MW 5m 95w	5.294
504.00	MW 20m 80w	7.070
472.00	MW 40m 60w	6.621

Total Length: 1469.00 ft      Total Volume: 18.985 bbl

Num Fluid Samples: 0

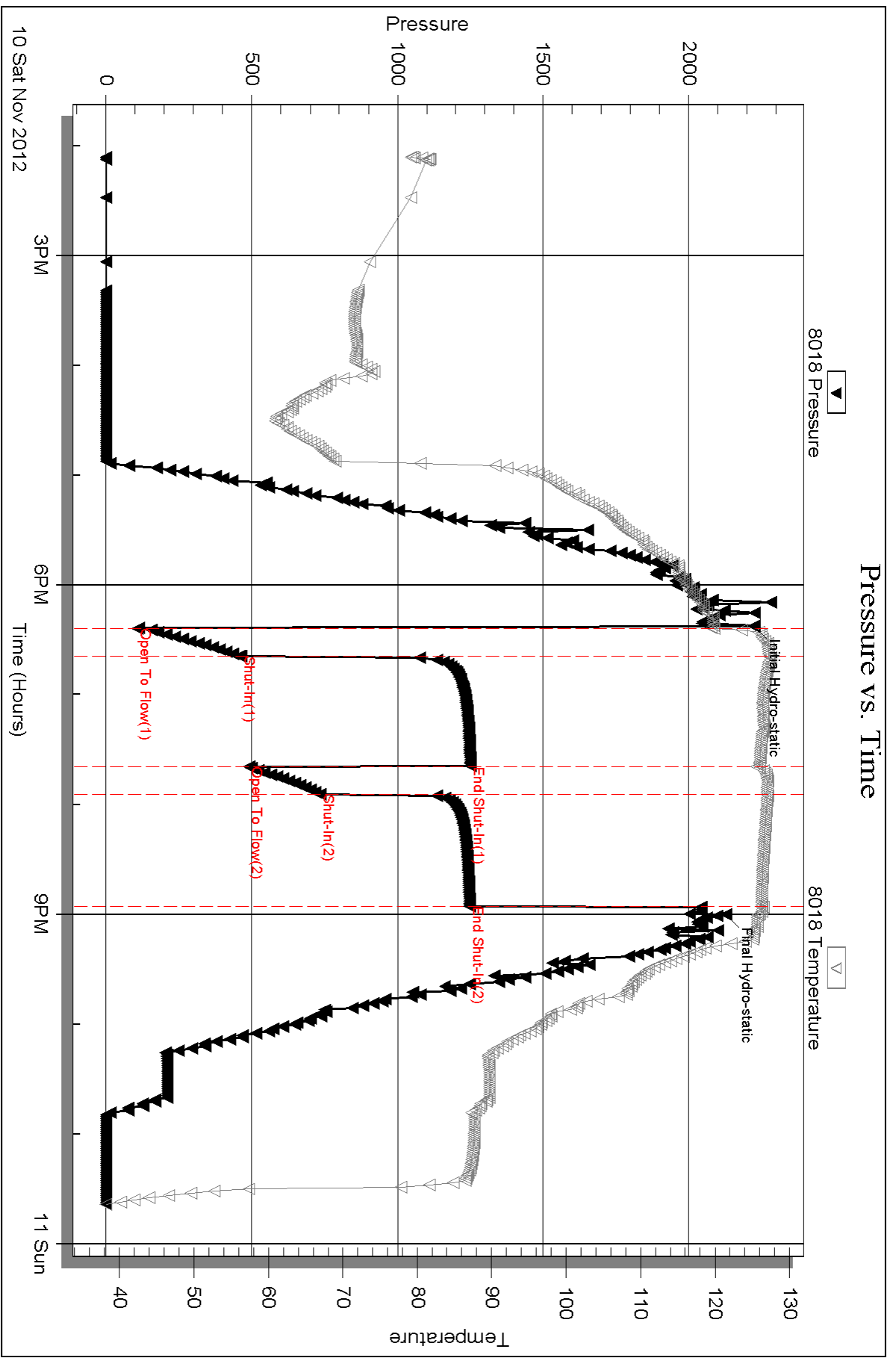
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .148 @ 37 Degrees F = 100000 PPM

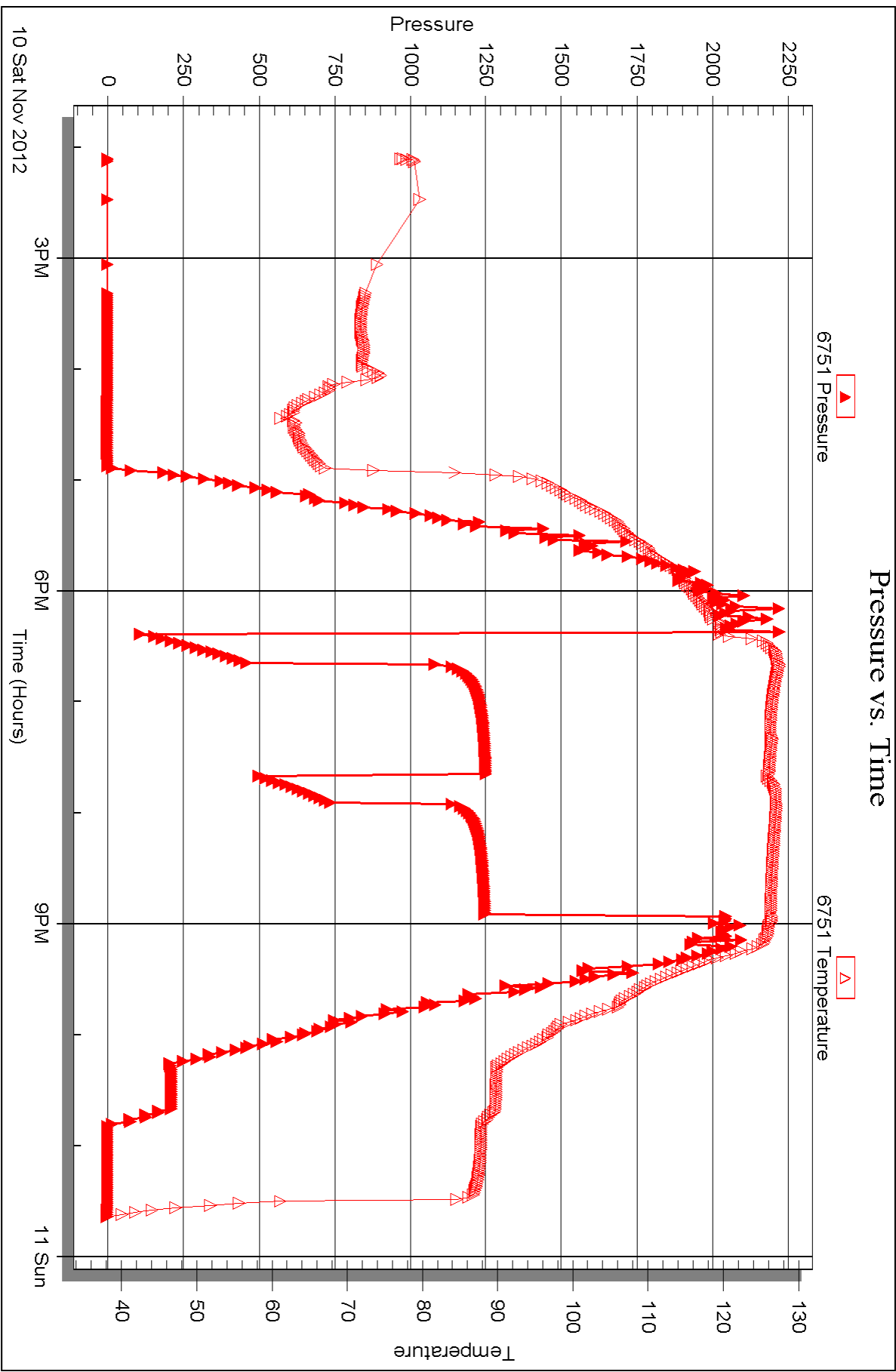


Serial #: 6751

Outside Murfin Drilling Co.

Krulo #2-29

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water  
Suite 300  
Wichita, KS 67202

ATTN: Tom Funk

### **Kruto #2-29**

#### **S29-10s-24w Thomas,KS**

Start Date: 2012.11.11 @ 18:21:00

End Date: 2012.11.12 @ 02:59:32

Job Ticket #: 48487                      DST #: 2

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

Printed: 2012.11.20 @ 15:25:58





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**S29-10s-24w Thomas,KS**

**Kruto #2-29**

Job Ticket: 48487

**DST#: 2**

Test Start: 2012.11.11 @ 18:21:00

## GENERAL INFORMATION:

Formation: **LKC 'H,I,J'**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 20:29:03  
 Tester: Chuck Smith  
 Time Test Ended: 02:59:32  
 Unit No: 62  
 Interval: **4294.00 ft (KB) To 4380.00 ft (KB) (TVD)**  
 Reference Elevations: 3250.00 ft (KB)  
 Total Depth: 4380.00 ft (KB) (TVD)  
 3239.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 11.00 ft

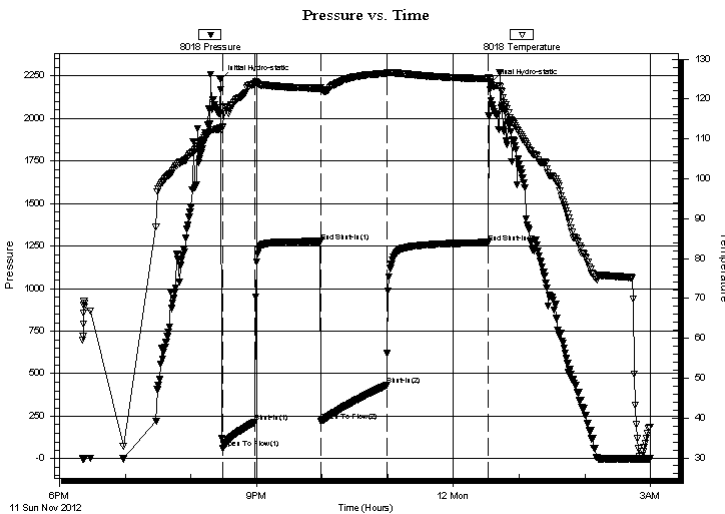
## Serial #: 8018

Inside

Press @ RunDepth: 433.36 psig @ 4298.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.11 End Date: 2012.11.12 Last Calib.: 2012.11.12  
 Start Time: 18:21:02 End Time: 02:59:33 Time On Btm: 2012.11.11 @ 20:26:53  
 Time Off Btm: 2012.11.12 @ 00:33:03

TEST COMMENT: B.O.B. @ 11 min.  
 No return.  
 B.O.B. @ 14 min.  
 No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2228.96	112.78	Initial Hydro-static
3	59.55	112.83	Open To Flow (1)
32	217.17	123.97	Shut-In(1)
92	1277.30	122.71	End Shut-In(1)
93	219.82	122.19	Open To Flow (2)
153	433.36	126.44	Shut-In(2)
245	1271.15	125.06	End Shut-In(2)
247	2206.47	124.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
245.00	MW 5m 95w	1.82
437.00	MW 40m 60w	6.13
218.00	WM 25w 75m	3.06

\* 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.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48487

**DST#: 2**

Test Start: 2012.11.11 @ 18:21:00

## Tool Information

Drill Pipe:	Length: 4110.00 ft	Diameter: 3.80 inches	Volume: 57.65 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 58.53 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4294.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	86.00 ft			
Tool Length:	106.00 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			4275.00	
Shut In Tool	5.00			4280.00	
Hydraulic tool	5.00			4285.00	
Packer	5.00			4290.00	20.00 Bottom Of Top Packer
Packer	4.00			4294.00	
Stubb	1.00			4295.00	
Perforations	3.00			4298.00	
Recorder	0.00	8018	Inside	4298.00	
Recorder	0.00	6751	Outside	4298.00	
Perforations	15.00			4313.00	
Change Over Sub	1.00			4314.00	
Drill Pipe	63.00			4377.00	
Bullnose	3.00			4380.00	86.00 Bottom Packers & Anchor

**Total Tool Length: 106.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48487

**DST#: 2**

Test Start: 2012.11.11 @ 18:21:00

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 60.00 sec/qt

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

Resistivity: ohm.m

Salinity: 6900.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: 90000 ppm

deg API

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
245.00	MW 5m 95w	1.815
437.00	MW 40m 60w	6.130
218.00	WM 25w 75m	3.058

Total Length: 900.00 ft      Total Volume: 11.003 bbl

Num Fluid Samples: 0

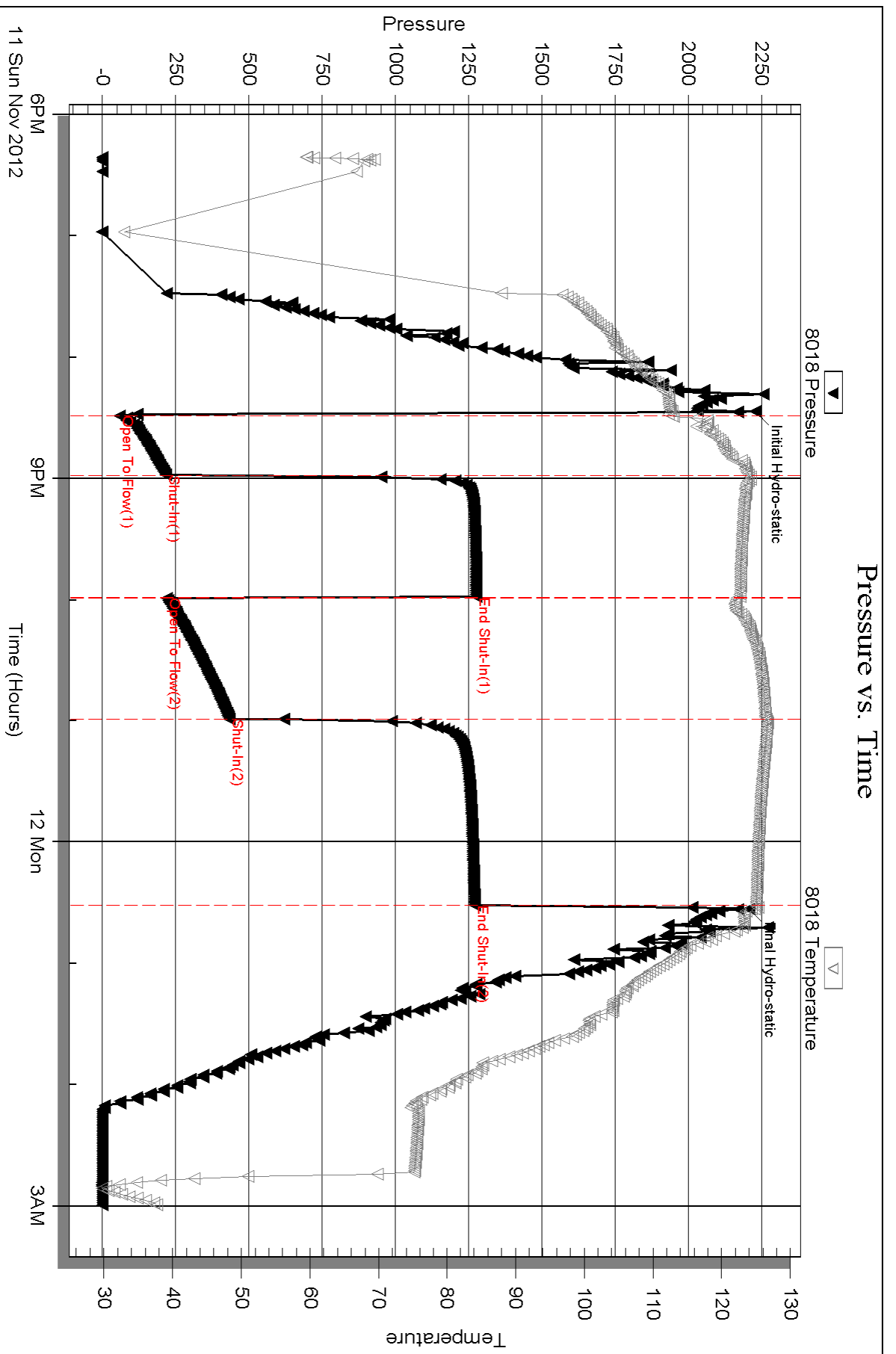
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .190 @ 33 Degrees F = 90000 PPM

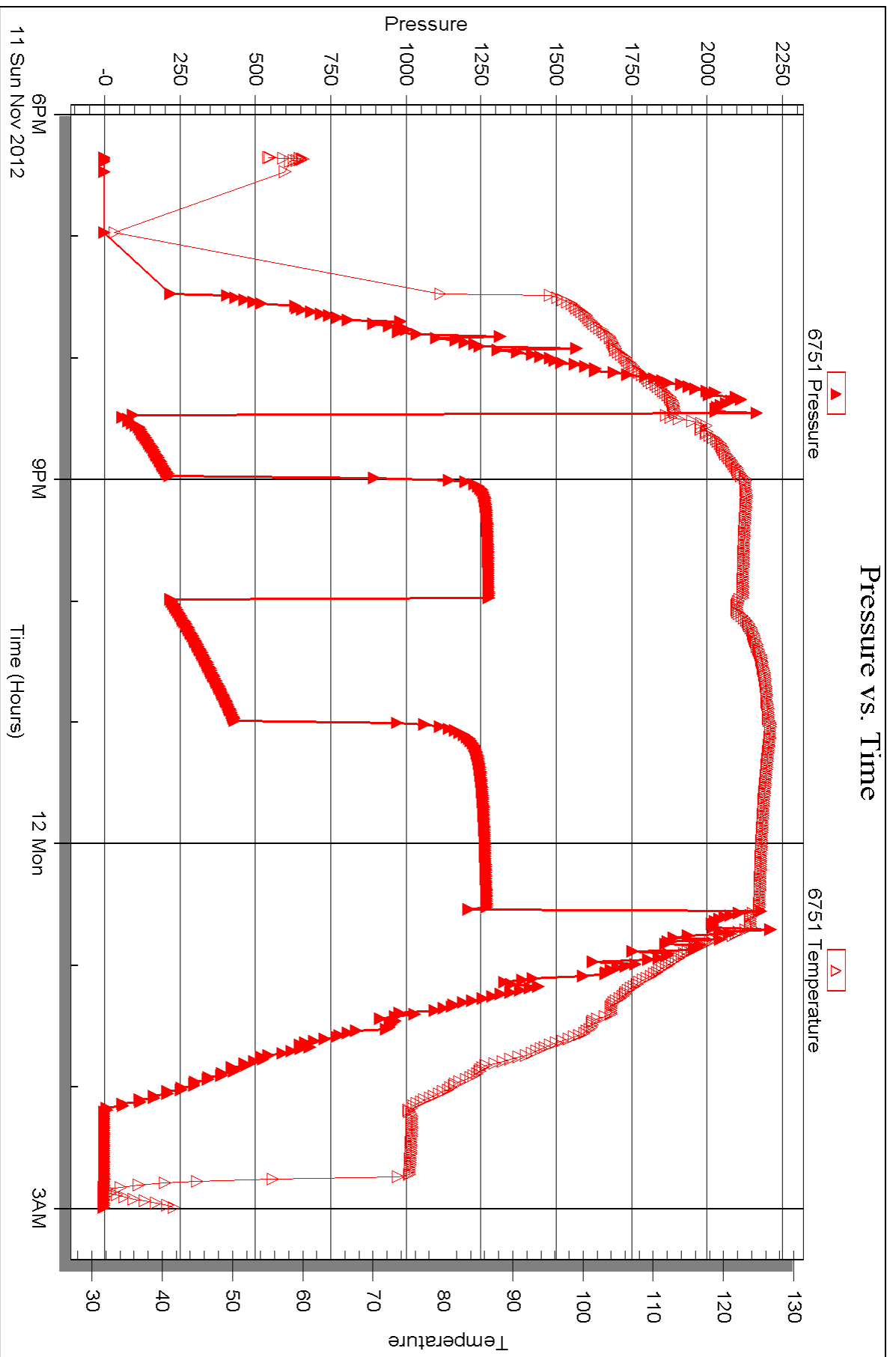


Serial #: 6751

Outside Murfin Drilling Co.

Krulo #2-29

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water  
Suite 300  
Wichita, KS 67202

ATTN: Tom Funk

**Kruto #2-29**

**S29-10s-24w Thomas,KS**

Start Date: 2012.11.12 @ 11:04:00

End Date: 2012.11.12 @ 19:31:22

Job Ticket #: 48488                      DST #: 3

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

Printed: 2012.11.20 @ 15:25:15



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48488

**DST#: 3**

Test Start: 2012.11.12 @ 11:04:00

## GENERAL INFORMATION:

Formation: **LKC 'K'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:34:02

Time Test Ended: 19:31:22

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

**Interval: 4388.00 ft (KB) To 4410.00 ft (KB) (TVD)**

Reference Elevations: 3250.00 ft (KB)

Total Depth: 4410.00 ft (KB) (TVD)

3239.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 8018**

**Inside**

Press @ Run Depth: 83.70 psig @ 4392.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.12

End Date:

2012.11.12

Last Calib.:

2012.11.12

Start Time: 11:04:02

End Time:

19:31:22

Time On Btm:

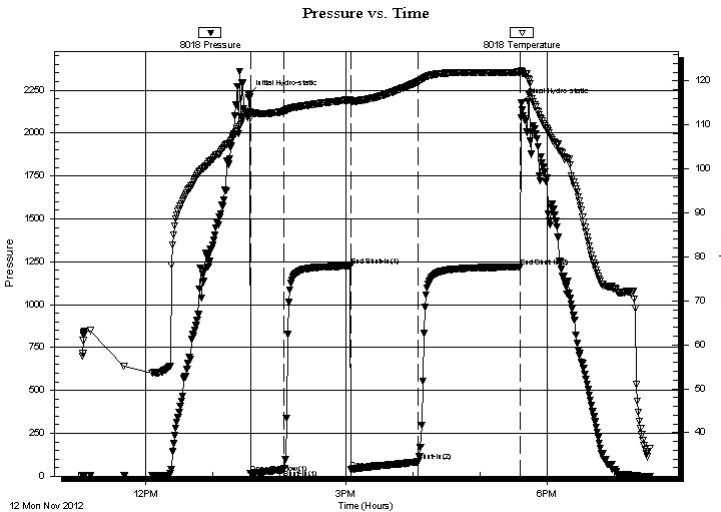
2012.11.12 @ 13:32:52

Time Off Btm:

2012.11.12 @ 17:36:42

**TEST COMMENT:** 2" Blow.  
No return.  
2 1/2" Blow.  
No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2226.32	112.92	Initial Hydro-static
2	14.97	111.79	Open To Flow (1)
31	37.90	113.10	Shut-In(1)
91	1224.08	115.76	End Shut-In(1)
92	41.46	115.28	Open To Flow (2)
152	83.70	119.87	Shut-In(2)
243	1219.72	122.01	End Shut-In(2)
244	2174.51	122.18	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	MW 50m 50w	0.59
15.00	OSM 100m	0.07
1.00	GO 15g 85o	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.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48488

**DST#: 3**

Test Start: 2012.11.12 @ 11:04:00

## Tool Information

Drill Pipe:	Length: 4205.00 ft	Diameter: 3.80 inches	Volume: 58.99 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 59.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4388.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	42.00 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			4369.00	
Shut In Tool	5.00			4374.00	
Hydraulic tool	5.00			4379.00	
Packer	5.00			4384.00	20.00 Bottom Of Top Packer
Packer	4.00			4388.00	
Stubb	1.00			4389.00	
Perforations	3.00			4392.00	
Recorder	0.00	8018	Inside	4392.00	
Recorder	0.00	6751	Outside	4392.00	
Perforations	15.00			4407.00	
Bullnose	3.00			4410.00	22.00 Bottom Packers & Anchor

**Total Tool Length: 42.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48488

**DST#: 3**

Test Start: 2012.11.12 @ 11:04:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 50.00 sec/qt  
Water Loss: 6.78 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 6900.00 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: 57000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	MW 50m 50w	0.590
15.00	OSM 100m	0.074
1.00	GO 15g 85o	0.005

Total Length: 136.00 ft      Total Volume: 0.669 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .270 @ 35 Degrees F = 57000 PPM

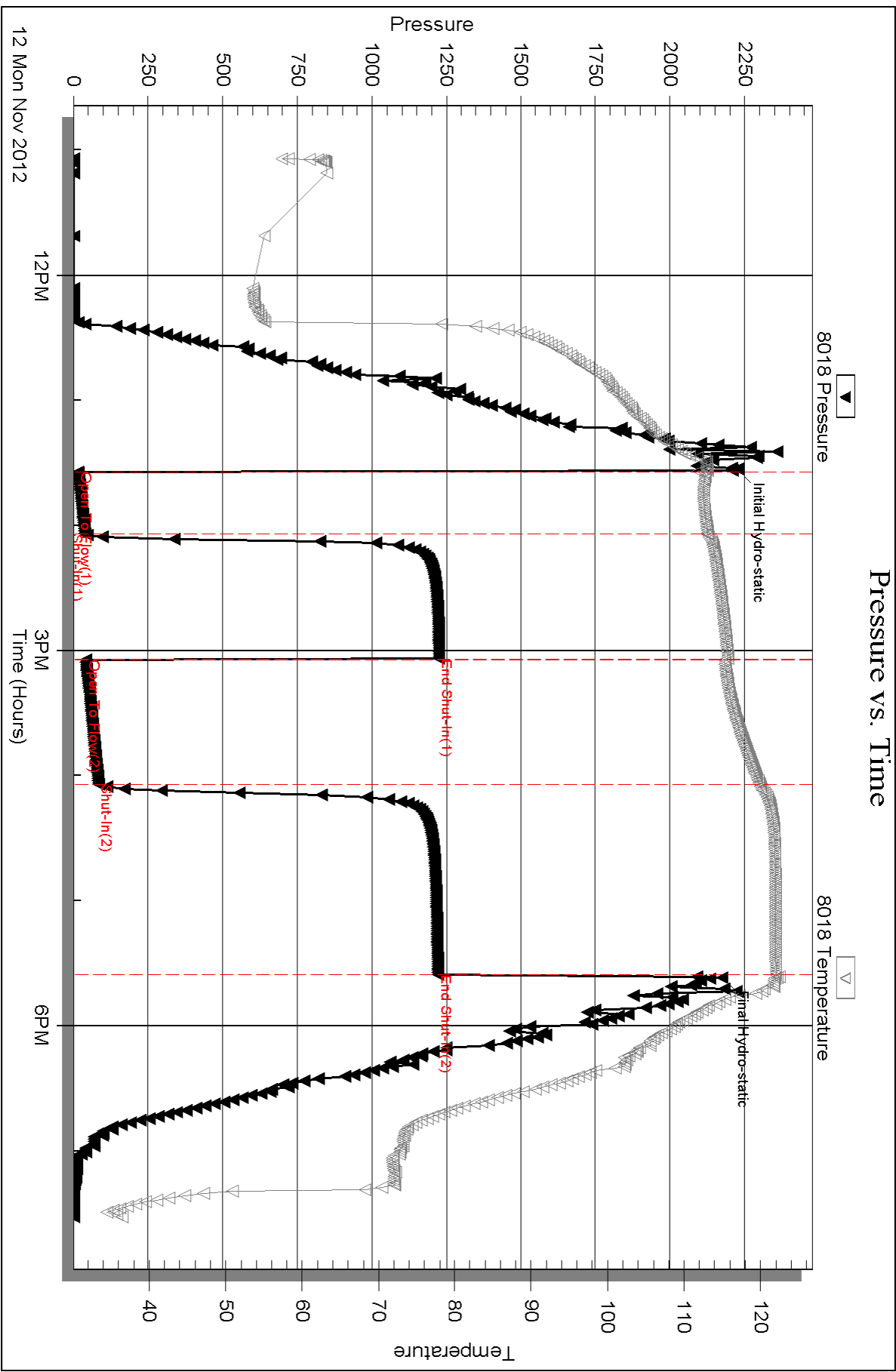
Serial #: 8018

Inside

Murfin Drilling Co.

Krulo #2-29

DST Test Number: 3

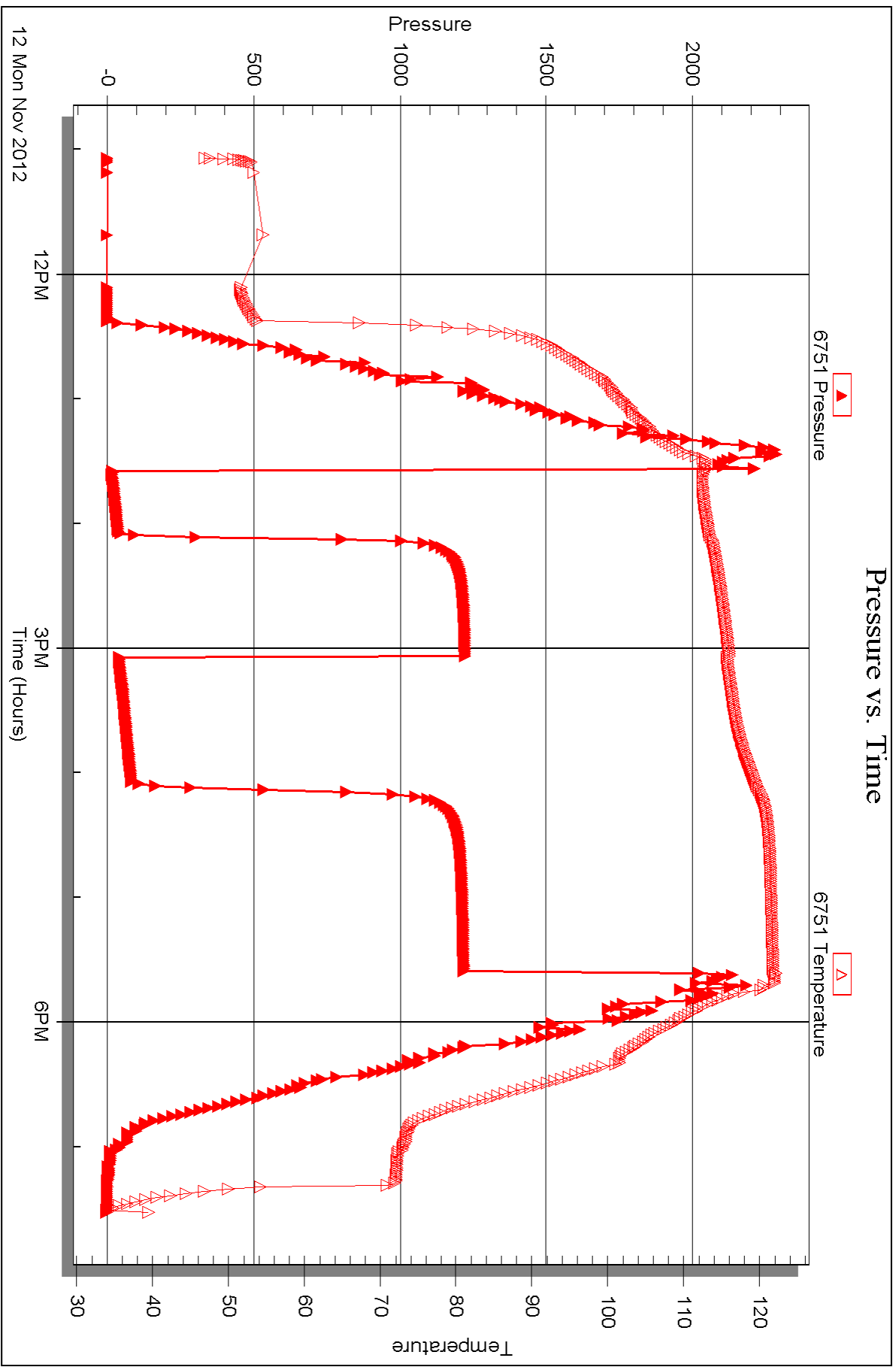


Serial #: 6751

Outside Murfin Drilling Co.

Krulo #2-29

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water  
Suite 300  
Wichita, KS 67202

ATTN: Tom Funk

### **Kruto #2-29**

#### **S29-10s-24w Thomas,KS**

Start Date: 2012.11.13 @ 20:40:00

End Date: 2012.11.14 @ 05:46:50

Job Ticket #: 48489                      DST #: 4

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

Printed: 2012.11.20 @ 15:24:30



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48489

**DST#: 4**

Test Start: 2012.11.13 @ 20:40:00

## GENERAL INFORMATION:

Formation: **Myric Station**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:43:21

Time Test Ended: 05:46:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

**Interval: 4607.00 ft (KB) To 4643.00 ft (KB) (TVD)**

Reference Elevations: 3250.00 ft (KB)

Total Depth: 4643.00 ft (KB) (TVD)

3239.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 8018**

**Inside**

Press @ Run Depth: 335.21 psig @ 4611.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.13

End Date:

2012.11.14

Last Calib.: 2012.11.14

Start Time: 20:40:02

End Time:

05:46:50

Time On Btm: 2012.11.13 @ 22:41:41

Time Off Btm: 2012.11.14 @ 02:46:40

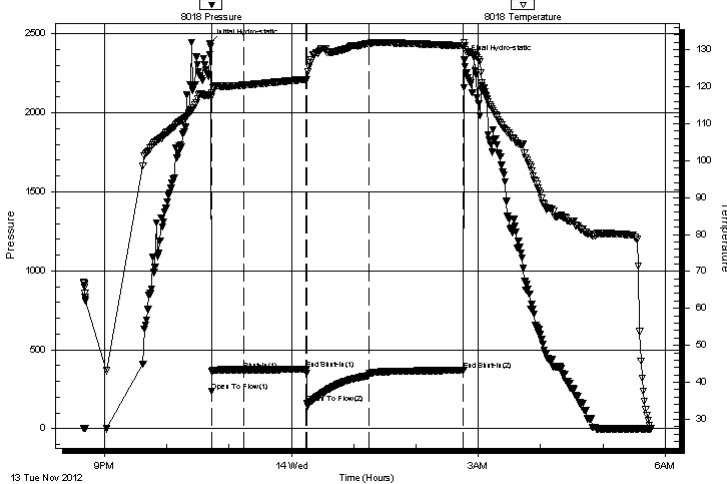
**TEST COMMENT:** Weak surface blow . Tool plugged.

No return.

B.O.B. @ 1 min.

B.O.B. @ 12 min.

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2439.42	117.78	Initial Hydro-static
2	236.49	117.31	Open To Flow (1)
33	373.45	120.38	Shut-In(1)
93	376.49	121.98	End Shut-In(1)
94	158.47	121.87	Open To Flow (2)
153	335.21	131.69	Shut-In(2)
245	368.90	131.03	End Shut-In(2)
245	2334.63	131.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
426.00	GMCO 25g 35m 40o	4.35
124.00	GO 30g 70o	1.74
372.00	GO 50g 50o	5.22
0.00	2108' Weak GIP 1178' 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.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48489

**DST#: 4**

Test Start: 2012.11.13 @ 20:40:00

## Tool Information

Drill Pipe:	Length: 4426.00 ft	Diameter: 3.80 inches	Volume: 62.09 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 62.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4607.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	56.00 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			4588.00	
Shut In Tool	5.00			4593.00	
Hydraulic tool	5.00			4598.00	
Packer	5.00			4603.00	20.00 Bottom Of Top Packer
Packer	4.00			4607.00	
Stubb	1.00			4608.00	
Perforations	3.00			4611.00	
Recorder	0.00	8018	Inside	4611.00	
Recorder	0.00	6751	Outside	4611.00	
Perforations	29.00			4640.00	
Bullnose	3.00			4643.00	36.00 Bottom Packers & Anchor

**Total Tool Length: 56.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48489

**DST#: 4**

Test Start: 2012.11.13 @ 20:40:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 7.96 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 6800.00 ppm  
Filter Cake: 2.00 inches

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

Oil API: 34 deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
426.00	GMCO 25g 35m 40o	4.354
124.00	GO 30g 70o	1.739
372.00	GO 50g 50o	5.218
0.00	2108' Weak GIP 1178' GIP	0.000

Total Length: 922.00 ft      Total Volume: 11.311 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: API: 32 @ 40 Degrees F = 34.

Serial #: 8018

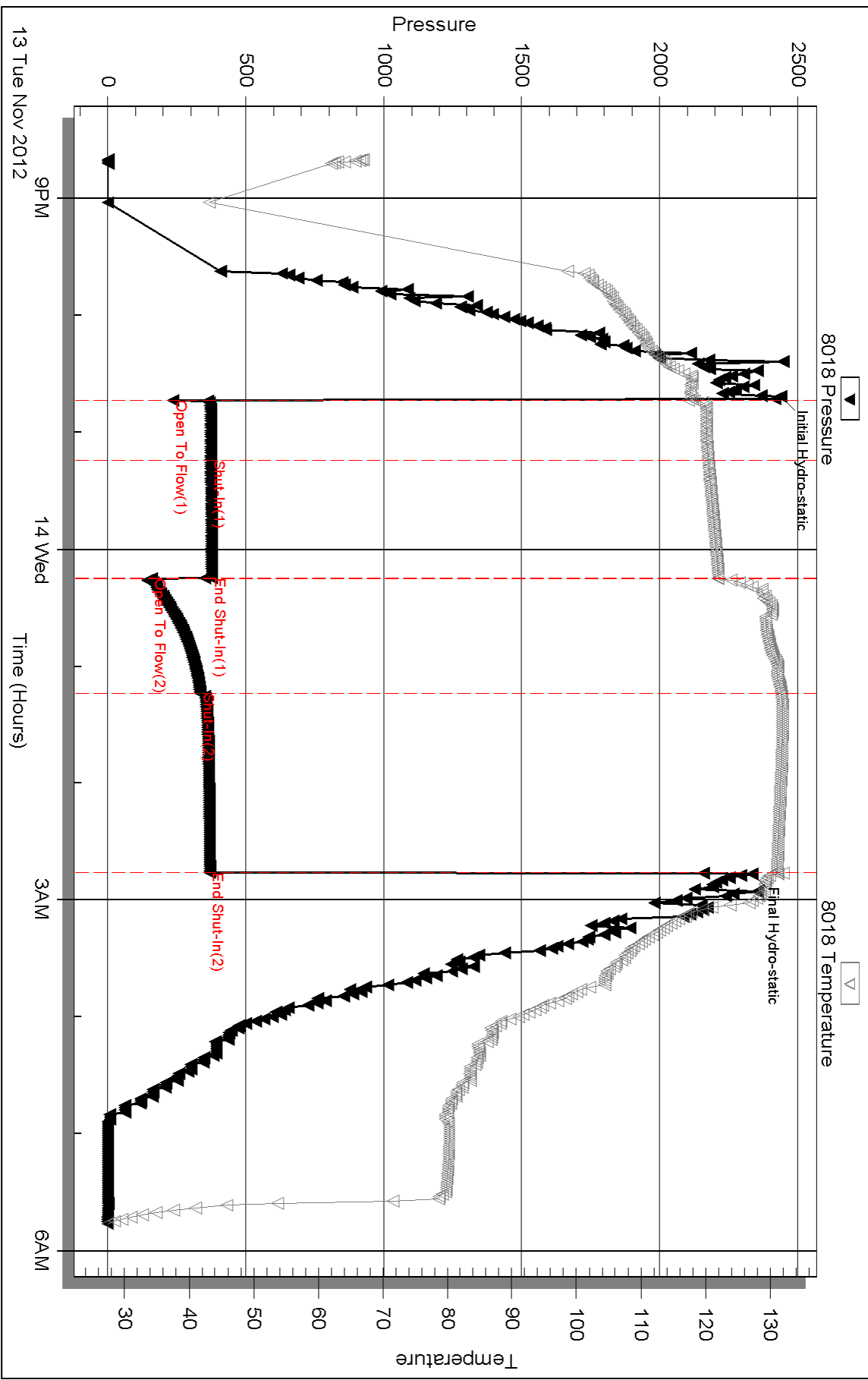
Inside

Murfin Drilling Co.

Krulo #2-29

DST Test Number: 4

### Pressure vs. Time

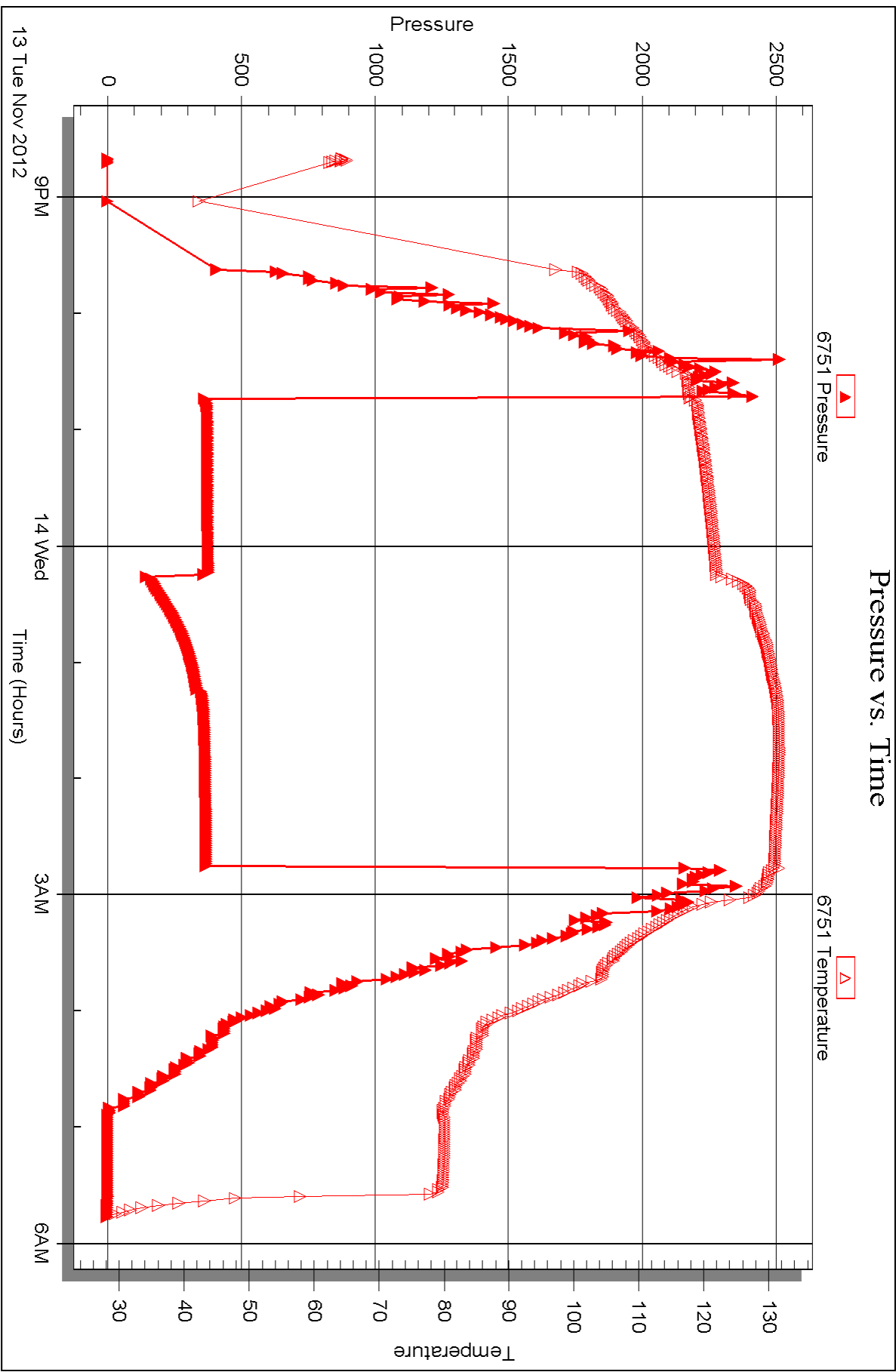


Serial #: 6751

Outside Murfin Drilling Co.

Krulo #2-29

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water  
Suite 300  
Wichita, KS 67202

ATTN: Tom Funk

### **Kruto #2-29**

### **S29-10s-24w Thomas,KS**

Start Date: 2012.11.14 @ 21:46:00

End Date: 2012.11.15 @ 06:41:33

Job Ticket #: 48491                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.20 @ 15:23:39

Murfin Drilling Co. S29-10s-24w Thomas,KS Kruto #2-29 DST # 5 Johnson 2012.11.14



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**S29-10s-24w Thomas,KS**

**Kruto #2-29**

Job Ticket: 48491

**DST#: 5**

Test Start: 2012.11.14 @ 21:46:00

## GENERAL INFORMATION:

Formation: **Johnson**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:14:24  
 Time Test Ended: 06:41:33  
 Interval: **4694.00 ft (KB) To 4740.00 ft (KB) (TVD)**  
 Total Depth: 4740.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Smith  
 Unit No: 62  
 Reference Elevations: 3250.00 ft (KB)  
 3239.00 ft (CF)  
 KB to GR/CF: 11.00 ft

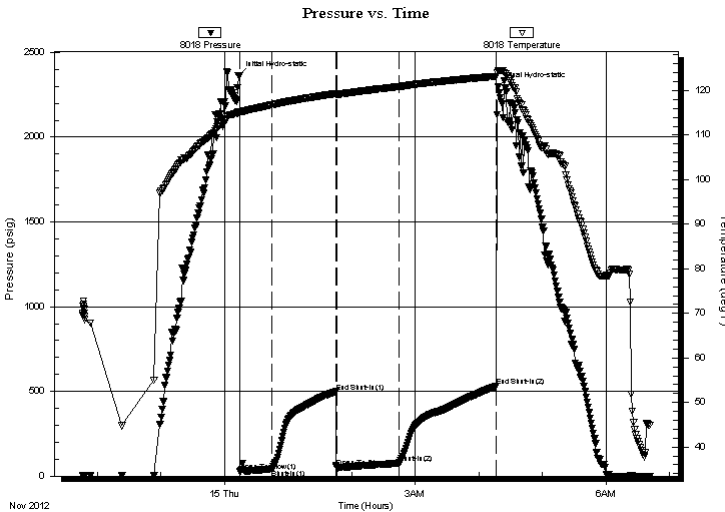
## Serial #: 8018

Inside

Press @ Run Depth: 75.80 psig @ 4698.00 ft (KB)  
 Start Date: 2012.11.14 End Date: 2012.11.15  
 Start Time: 21:46:02 End Time: 06:41:34  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.11.15  
 Time On Btm: 2012.11.15 @ 00:13:04  
 Time Off Btm: 2012.11.15 @ 04:17:54

TEST COMMENT: 6" Blow .  
 Weak surface return died @ 15 min.  
 10" Blow .  
 Surface return died @ 20 min.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2364.05	115.15	Initial Hydro-static
2	25.41	114.92	Open To Flow (1)
32	42.32	116.77	Shut-In(1)
92	498.50	119.31	End Shut-In(1)
93	50.06	119.11	Open To Flow (2)
152	75.80	120.89	Shut-In(2)
244	530.43	123.21	End Shut-In(2)
245	2296.91	124.41	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 10g 30o 60m	0.30
110.00	GO 5g 95o	0.54
0.00	10' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
 250 N. Water  
 Suite 300  
 Wichita, KS 67202  
 ATTN: Tom Funk

**S29-10s-24w Thomas,KS**

**Kruto #2-29**

Job Ticket: 48491

**DST#: 5**

Test Start: 2012.11.14 @ 21:46:00

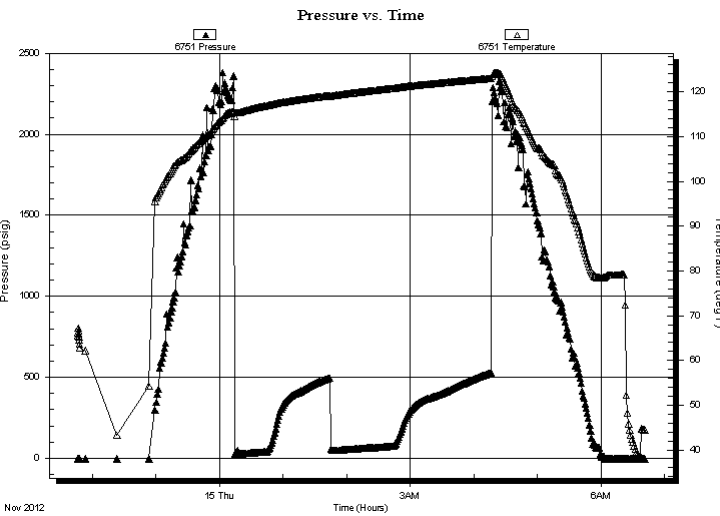
## GENERAL INFORMATION:

Formation: **Johnson**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 00:14:24  
 Tester: Chuck Smith  
 Time Test Ended: 06:41:33  
 Unit No: 62  
 Interval: **4694.00 ft (KB) To 4740.00 ft (KB) (TVD)**  
 Reference Elevations: 3250.00 ft (KB)  
 Total Depth: 4740.00 ft (KB) (TVD)  
 3239.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 11.00 ft

**Serial #: 6751 Outside**

Press @ Run Depth: psig @ 4698.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.14 End Date: 2012.11.15 Last Calib.: 2012.11.15  
 Start Time: 21:46:02 End Time: 06:41:34 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 6" Blow .  
 Weak surface return died @ 15 min.  
 10" Blow .  
 Surface return died @ 20 min.



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 10g 30o 60m	0.30
110.00	GO 5g 95o	0.54
0.00	10' 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.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48491

**DST#: 5**

Test Start: 2012.11.14 @ 21:46:00

## Tool Information

Drill Pipe:	Length: 4525.00 ft	Diameter: 3.80 inches	Volume: 63.47 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 64.35 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4694.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	66.00 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			4675.00	
Shut In Tool	5.00			4680.00	
Hydraulic tool	5.00			4685.00	
Packer	4.00			4689.00	20.00 Bottom Of Top Packer
Packer	5.00			4694.00	
Stubb	1.00			4695.00	
Perforations	3.00			4698.00	
Recorder	0.00	8018	Inside	4698.00	
Recorder	0.00	6751	Outside	4698.00	
Perforations	6.00			4704.00	
Change Over Sub	1.00			4705.00	
Drill Pipe	31.00			4736.00	
Change Over Sub	1.00			4737.00	
Bullnose	3.00			4740.00	46.00 Bottom Packers & Anchor

**Total Tool Length: 66.00**





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co.

**S29-10s-24w Thomas,KS**

250 N. Water  
Suite 300  
Wichita, KS 67202  
ATTN: Tom Funk

**Kruto #2-29**

Job Ticket: 48491

**DST#: 5**

Test Start: 2012.11.14 @ 21:46:00

**Mud and Cushion Information**

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 7.97 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 9100.00 ppm  
Filter Cake: 2.00 inches

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

Oil API: 19 deg API  
Water Salinity: ppm

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
60.00	GOCM 10g 30o 60m	0.295
110.00	GO 5g 95o	0.541
0.00	10' GIP	0.000

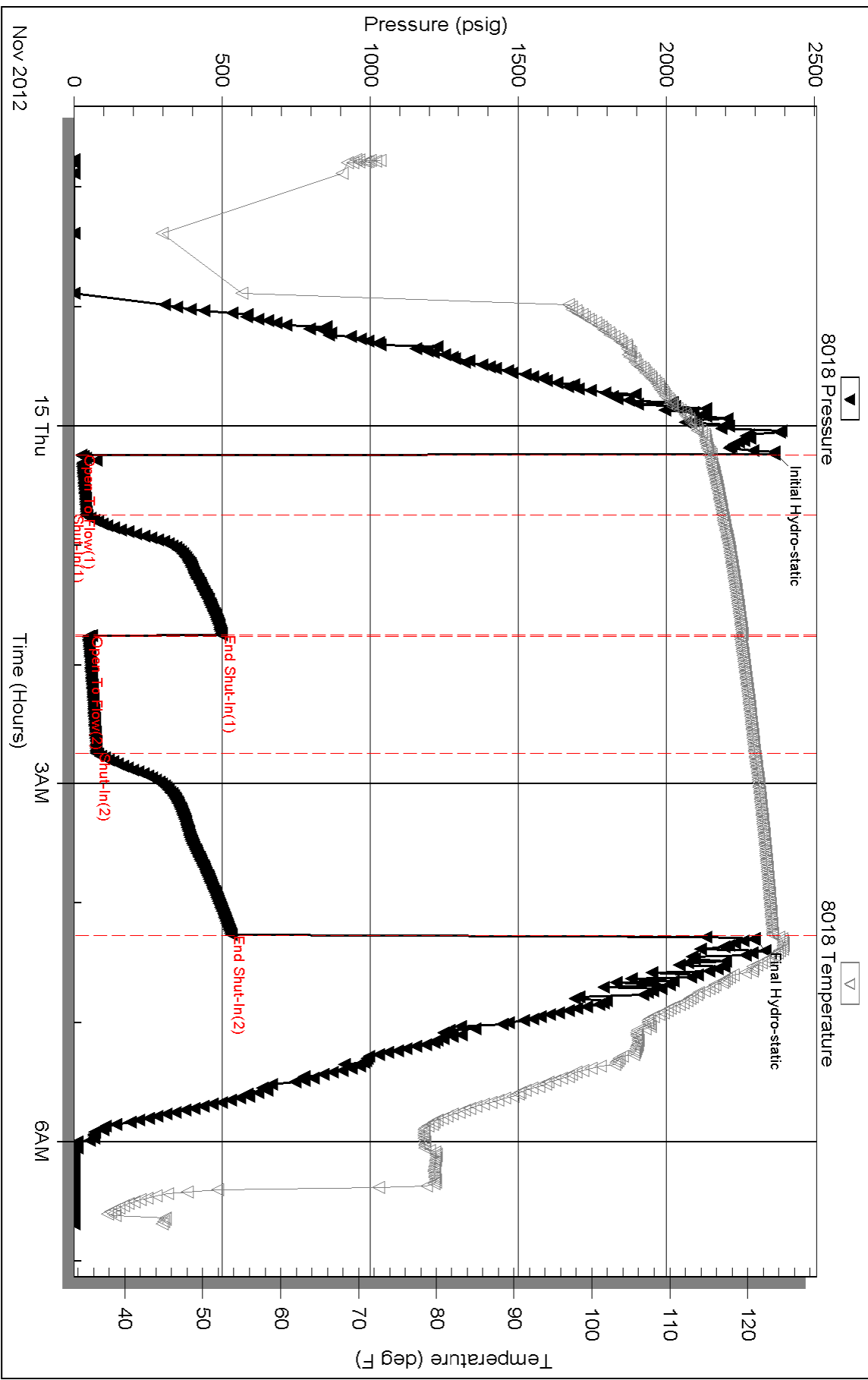
Total Length: 170.00 ft      Total Volume: 0.836 bbl

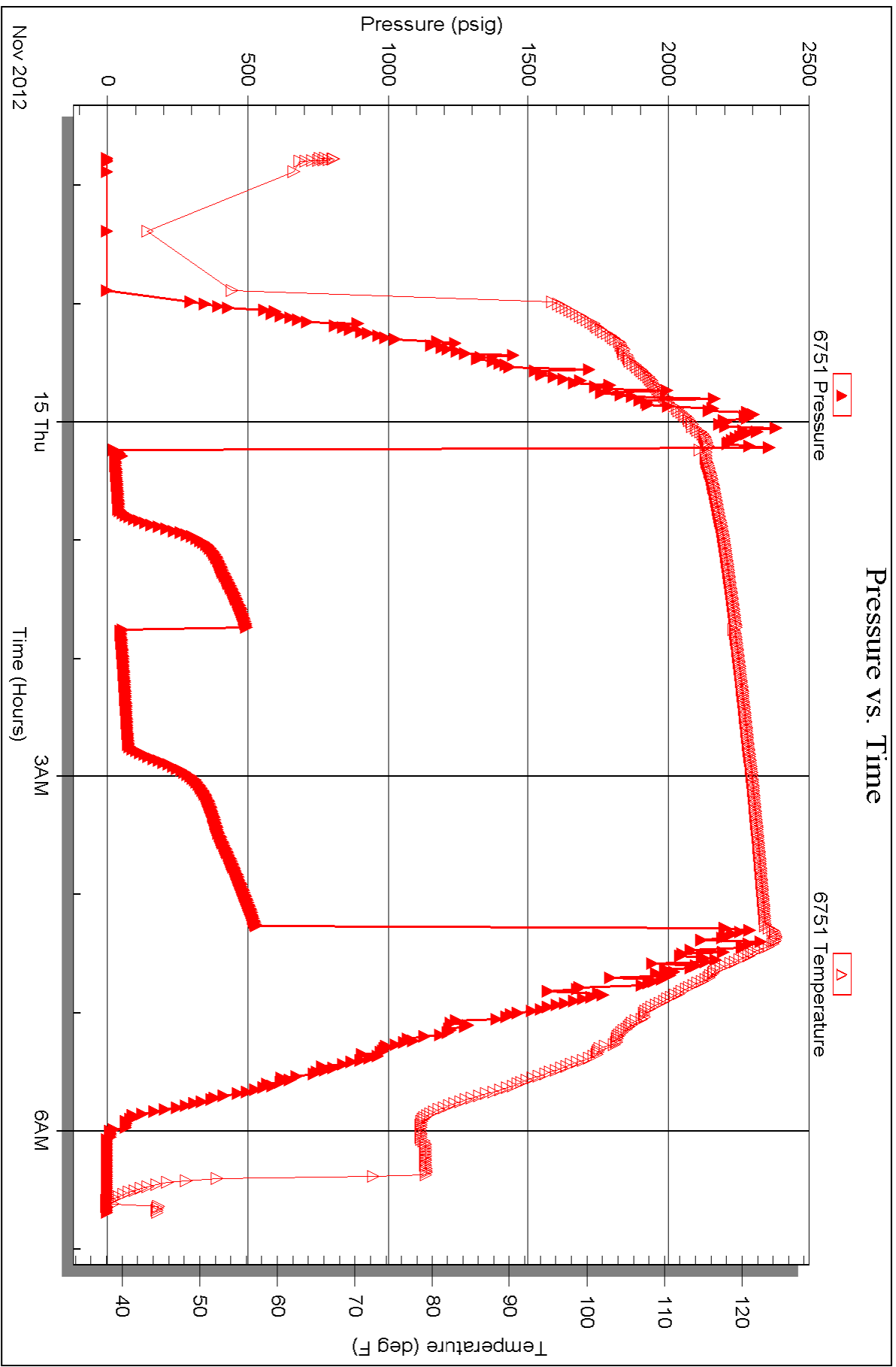
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

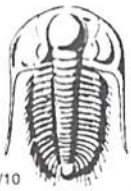
Laboratory Name:      Laboratory Location:

Recovery Comments: API: 19 @ 60 Degrees F = 19

### Pressure vs. Time







# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48486

Well Name & No. Kuto #2-29 Test No. 1 Date 11-10-12  
 Company Murfin Drilling Co. Elevation 3250 KB 3239 GL  
 Address 250 N. Water St. 300 Wichita, KS 67202  
 Co. Rep / Geo. Tom Funk Rig MDC #20  
 Location: Sec. 29 Twp. 10s Rge. 24w Co. Thomas State Ks

Interval Tested 4237-4255 Zone Tested LKC 'F'  
 Anchor Length 18 Drill Pipe Run 4049 Mud Wt. 9.1  
 Top Packer Depth 4233 Drill Collars Run 178 Vis 50  
 Bottom Packer Depth 4237 Wt. Pipe Run 0 WL 7.2  
 Total Depth 4255 Chlorides 6000 ppm System LCM 8"  
 Blow Description B.O.B. @ 1 1/2 min.  
No return.  
B.O.B. @ 2 1/2 min.  
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>472</u>	Feet of <u>MW</u>	%gas	%oil <u>60</u>	%water <u>40</u>	%mud
Rec <u>504</u>	Feet of <u>MW</u>	%gas	%oil <u>80</u>	%water <u>20</u>	%mud
Rec <u>493</u>	Feet of <u>MW</u>	%gas	%oil <u>95</u>	%water <u>5</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud

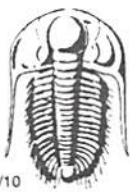
Rec Total 1469 BHT 126 Gravity - API RW 148 @ 37 °F Chlorides 100,000 ppm

(A) Initial Hydrostatic 2223  Test 1250 T-On Location 13:30  
 (B) First Initial Flow 108  Jars T-Started 14:06  
 (C) First Final Flow 463  Safety Joint T-Open 18:23  
 (D) Initial Shut-In 1252  Circ Sub N/C T-Pulled 20:56  
 (E) Second Initial Flow 491  Hourly Standby T-Out 23:39  
 (F) Second Final Flow 735  Mileage 1.32RT 204.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 1249  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2128  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1454.60 MP/DST Disc't \_\_\_\_\_

Initial Open 30 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60

Approved By [Signature] Our Representative Chuck Smith

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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48487

Well Name & No. Kruto #229 Test No. 2 Date 11-11-12  
 Company Murfin Drilling Co. Elevation 3250 KB 3239 GL  
 Address 250 N. Water St. 300 Wichita, KS 67202  
 Co. Rep / Geo. Tom Funk Rig MDC 20  
 Location: Sec. 29 Twp. 10s Rge. 24w Co. Thomas State KS

Interval Tested 4294-4380 Zone Tested LKC 'H, I, J'  
 Anchor Length 86 Drill Pipe Run 4110 Mud Wt. 9.2  
 Top Packer Depth 4290 Drill Collars Run 178 Vis 60  
 Bottom Packer Depth 4294 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4380 Chlorides 6900 ppm System LCM 7<sup>#</sup>  
 Blow Description B.O.B. @ 11 min  
No return.  
B.O.B. @ 14 min.  
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>218</u>	Feet of <u>WM</u>	%gas	%oil	<u>25%</u> water	<u>75%</u> mud
Rec <u>4.37</u>	Feet of <u>MW</u>	%gas	%oil	<u>60%</u> water	<u>40%</u> mud
Rec <u>245</u>	Feet of <u>MW</u>	%gas	%oil	<u>95%</u> water	<u>5%</u> mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 900 BHT 125 Gravity — API RW .190 @ 33 ° F Chlorides 90,000 ppm

(A) Initial Hydrostatic 2229  Test 1250 T-On Location 17:45  
 (B) First Initial Flow 60  Jars T-Started 18:21  
 (C) First Final Flow 217  Safety Joint T-Open 20:29  
 (D) Initial Shut-In 1277  Circ Sub NIC T-Pulled 00:31  
 (E) Second Initial Flow 220  Hourly Standby T-Out 3:00  
 (F) Second Final Flow 433  Mileage 204.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 1271  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2206  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_  
 Final Flow 60  Day Standby \_\_\_\_\_  
 Final Shut-In 90  Accessibility \_\_\_\_\_  
 Sub Total 1454.60 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative Chuck Smith

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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48488

Well Name & No. Kruto # 2-29 Test No. 3 Date 11-12-12  
 Company Murfin Drilling Co. Elevation 3250 KB 3239 GL  
 Address 250 N. Water Ste. 300 Wichita, KS 67202  
 Co. Rep / Geo. Tom Funk Rig MDC 20  
 Location: Sec. 29 Twp. 10s Rge. 24w Co. Thomas State KS

Interval Tested 4388-4410 Zone Tested LKC 'K'  
 Anchor Length 22 Drill Pipe Run 4205 Mud Wt. 9.3  
 Top Packer Depth 4384 Drill Collars Run 178 Vis 50  
 Bottom Packer Depth 4388 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4410 Chlorides 6900 ppm System LCM 6#  
 Blow Description 2" Blow  
No return.  
2 1/2" Blow.  
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>1</u>	Feet of <u>60</u>	<u>15</u> %gas	<u>85</u> %oil	%water	%mud
Rec <u>15</u>	Feet of <u>05M</u>	%gas	%oil	%water <u>100</u>	%mud
Rec <u>120</u>	Feet of <u>MW</u>	%gas	%oil <u>50</u>	%water <u>50</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud

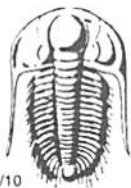
Rec Total 136 BHT 122 Gravity - API RW .270 @ 35 ° F Chlorides 57000 ppm

(A) Initial Hydrostatic 2226  Test 1250 T-On Location 11:00  
 (B) First Initial Flow 15  Jars \_\_\_\_\_ T-Started 11:04  
 (C) First Final Flow 38  Safety Joint \_\_\_\_\_ T-Open 13:34  
 (D) Initial Shut-In 1224  Circ Sub NIC T-Pulled 17:36  
 (E) Second Initial Flow 41  Hourly Standby \_\_\_\_\_ T-Out 19:31  
 (F) Second Final Flow 84  Mileage 204.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 1220  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2175  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1454.60

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

Sub Total 1454.60 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative Chuck Smith  
 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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48489

Well Name & No. Kruto #2-29 Test No. 4 Date 11-13-12  
 Company Murfin Drilling Co. Elevation 3250 KB 3239 GL  
 Address 250 N. Water St. 300 Wichita, KS 67202  
 Co. Rep / Geo. Tom Funk Rig MDC 20  
 Location: Sec. 29 Twp. 10s Rge. 24w Co. Thomas State KS

Interval Tested 4607-4643 Zone Tested Myric Station  
 Anchor Length 36 Drill Pipe Run 4426 Mud Wt. 9.3  
 Top Packer Depth 4603 Drill Collars Run 178 Vis 60  
 Bottom Packer Depth 4607 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4643 Chlorides 6800 ppm System LCM 8#

Blow Description Weak surface flow. Tool plugged.  
No return.  
B.O.B. @ 1 min.  
B.O.B. @ 12 min.

Rec	Feet of	%gas	%oil	%water	%mud
	<u>2108' weak GIP 1178 GIP</u>				
Rec <u>372</u>	Feet of <u>60</u>	<u>50</u> %gas	<u>50</u> %oil	%water	%mud
Rec <u>124</u>	Feet of <u>60</u>	<u>30</u> %gas	<u>70</u> %oil	%water	%mud
Rec <u>426</u>	Feet of <u>GMCO</u>	<u>25</u> %gas	<u>40</u> %oil	%water	<u>.35</u> %mud
Rec	Feet of	%gas	%oil	%water	%mud

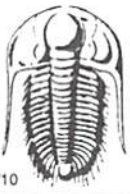
Rec Total 922 BHT 131 Gravity 34 API RW @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 24.39  Test 1250 T-On Location 20:30  
 (B) First Initial Flow 236  Jars T-Started 20:40  
 (C) First Final Flow 373  Safety Joint T-Open 22:43  
 (D) Initial Shut-In 376  Circ Sub NC T-Pulled 02:46  
 (E) Second Initial Flow 158  Hourly Standby T-Out 05:47  
 (F) Second Final Flow 335  Mileage 204.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 369  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2335  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_  
 Final Shut-In 90  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1454.60  
 Sub Total 1454.60

Approved By [Signature] Our Representative Chuck Smith

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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48491

Well Name & No. KRUTO #2-29 Test No. 5 Date 11-14-12  
 Company Murfin Drilling Co. Elevation 3250 KB 32.39 GL  
 Address 2.50 N. Water Ste. 300 Wichita, KS 67202  
 Co. Rep / Geo. Tom Funk Rig MDC 20  
 Location: Sec. 29 Twp. 10s Rge. 24w Co. Thomas State KS

Interval Tested 4694-4740 Zone Tested Johnson  
 Anchor Length 46 Drill Pipe Run 4525 Mud Wt. 9.2  
 Top Packer Depth 4690 Drill Collars Run 178 Vis 60  
 Bottom Packer Depth 4694 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4740 Chlorides 9100 ppm System LCM 6"  
 Blow Description 6" Blow.  
Weak surface return died @ 15 min.  
10" Blow.  
Surface return died @ 20 min.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>110</u>	Feet of <u>60</u>	<u>5</u> %gas	<u>95</u> %oil	%water	%mud
Rec <u>60</u>	Feet of <u>60CM</u>	<u>10</u> %gas	<u>30</u> %oil	%water	<u>60</u> %mud
Rec	Feet of <u>10' GIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 170 BHT 123 Gravity 19 API RW @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2364  Test 1250 T-On Location 21:00  
 (B) First Initial Flow 25  Jars T-Started 21:46  
 (C) First Final Flow 42  Safety Joint N/K T-Open 00:14  
 (D) Initial Shut-In 499  Circ Sub T-Pulled 4:16  
 (E) Second Initial Flow 50  Hourly Standby T-Out 6:42  
 (F) Second Final Flow 76  Mileage 132RT 204.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 530  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2297  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Ruined Packer 320  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1454.60

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

Sub Total 320  
 Total 1774.60  
 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative Chuck Smith

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