

## DRILL STEM TEST REPORT

Prepared For: **Castle Resources Inc**

PO Box 583  
Russell, KS 67665

ATTN: Jerry Green

### **Eagle 1 Moore #1**

#### **15-1s-29w Decatur,KS**

Start Date: 2017.09.10 @ 07:08:00

End Date: 2017.09.10 @ 11:58:15

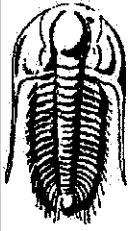
Job Ticket #: 63303                      DST #: 1

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

Printed: 2017.09.13 @ 10:32:07

Castle Resources Inc  
15-1s-29w Decatur,KS  
Eagle 1 Moore #1  
DST # 1  
2017.09.10





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Castle Resources Inc

**15-1s-29w Decatur,KS**

PO Box 583  
Russell, KS 67665

**Eagle 1 Moore #1**

Job Ticket: 63303

**DST#: 1**

ATTN: Jerry Green

Test Start: 2017.09.10 @ 07:08:00

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
260.00	Mud w /light trace oil 100%m	3.647
125.00	Mud w /trace oil & water 100%m	1.753
225.00	Mud w /light trace oil 100%m	3.156

Total Length: 610.00 ft

Total Volume: 8.556 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

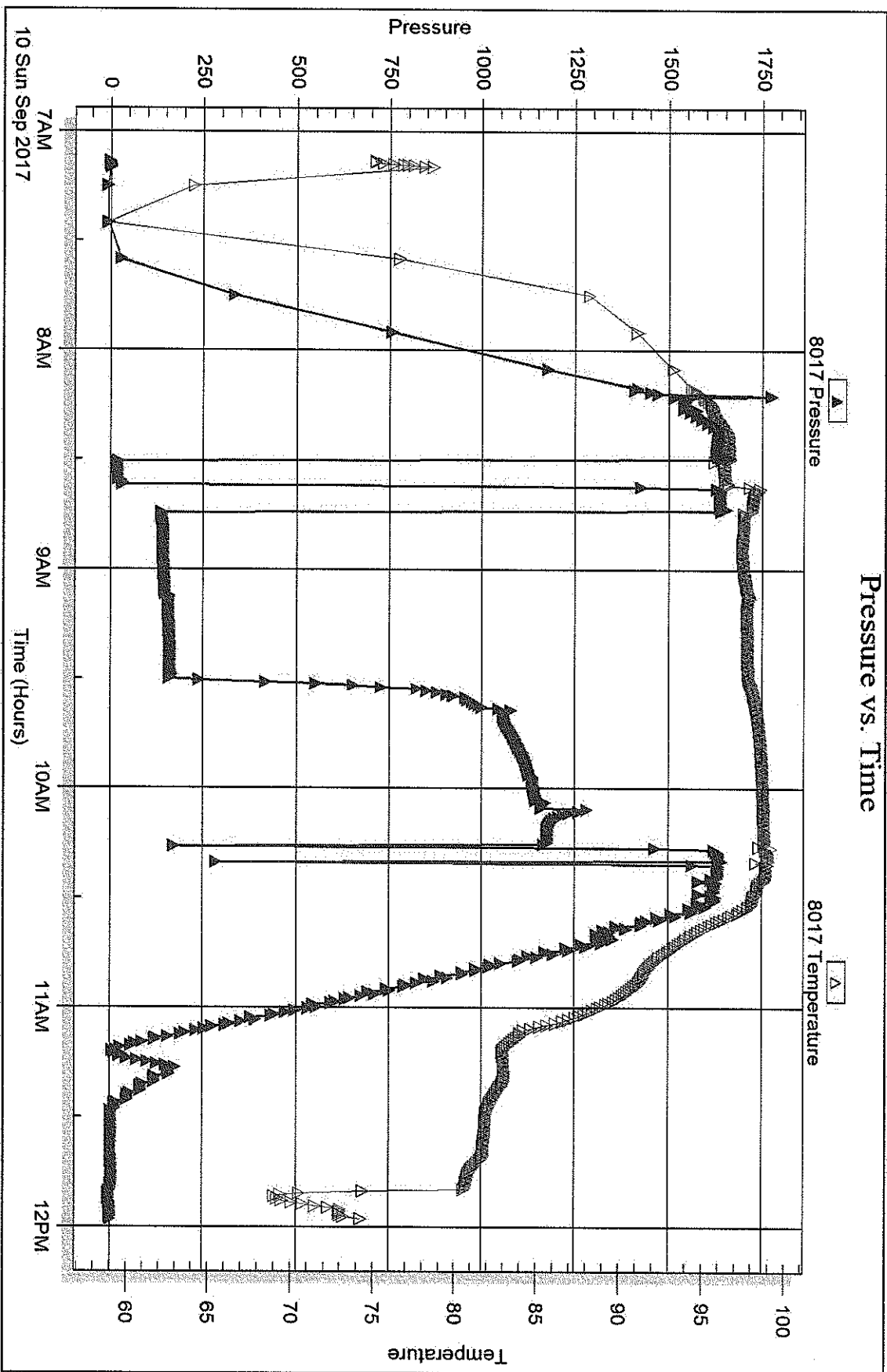
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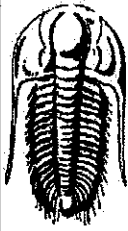
Serial #: 8017

Outside: Castle Resources Inc

Eagle 1 Moore #1

DST Test Number: 1





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Castle Resources Inc

15-1s-29w Decatur,KS

PO Box 583  
Russell, KS 67665

**Eagle 1 Moore #1**

Job Ticket: 63304

**DST#: 2**

ATTN: Jerry Green

Test Start: 2017.09.12 @ 11:31:00

### GENERAL INFORMATION:

Formation: **DST#2**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:10:30

Time Test Ended: 16:38:15

Test Type: Conventional Straddle (Reset)

Tester: James Winder

Unit No: 83

Interval: **3947.00 ft (KB) To 3956.00 ft (KB) (TVD)**

Total Depth: 4175.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2856.00 ft (KB)

2851.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6625**

Inside

Press@RunDepth: 59.62 psig @ 3948.00 ft (KB)

Start Date: 2017.09.12

End Date:

2017.09.12

Capacity: 8000.00 psig

Last Calib.: 2017.09.12

Start Time: 11:31:05

End Time:

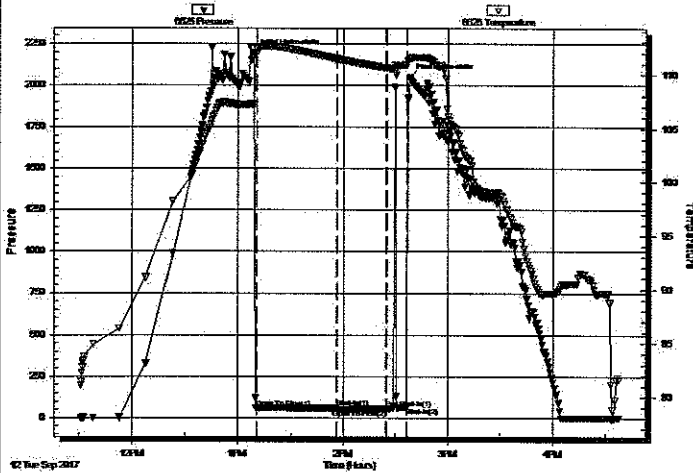
16:38:14

Time On Btm: 2017.09.12 @ 13:09:15

Time Off Btm: 2017.09.12 @ 14:37:45

**TEST COMMENT:** 45 - IF: 5 1/2" Blow at open, bled off, No blow  
30 - IS: No blow  
10 - FF: No blow, Flushed tool, No blow  
Pulled tool

Pressure vs. Time



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2189.46	107.23	Initial Hydro-static
2	56.61	112.37	Open To Flow (1)
47	59.62	111.45	Shut-In(1)
76	53.95	110.62	End Shut-In(1)
76	51.19	110.62	Open To Flow (2)
88	62.31	110.94	Shut-In(2)
89	2045.29	111.47	Final Hydro-static

### Recovery

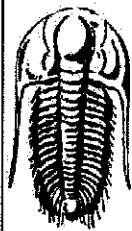
Length (ft)	Description	Volume (bbl)
83.00	Mud 100%	1.16

\* Recovery from multiple tests

### Gas Rates

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





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TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Castle Resources Inc

**15-1s-29w Decatur,KS**

PO Box 583  
Russell, KS 67665

**Eagle 1 Moore #1**

Job Ticket: 63304

**DST#: 2**

ATTN: Jerry Green

Test Start: 2017.09.12 @ 11:31:00

## 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:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
83.00	Mud 100%	1.164

Total Length: 83.00 ft      Total Volume: 1.164 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

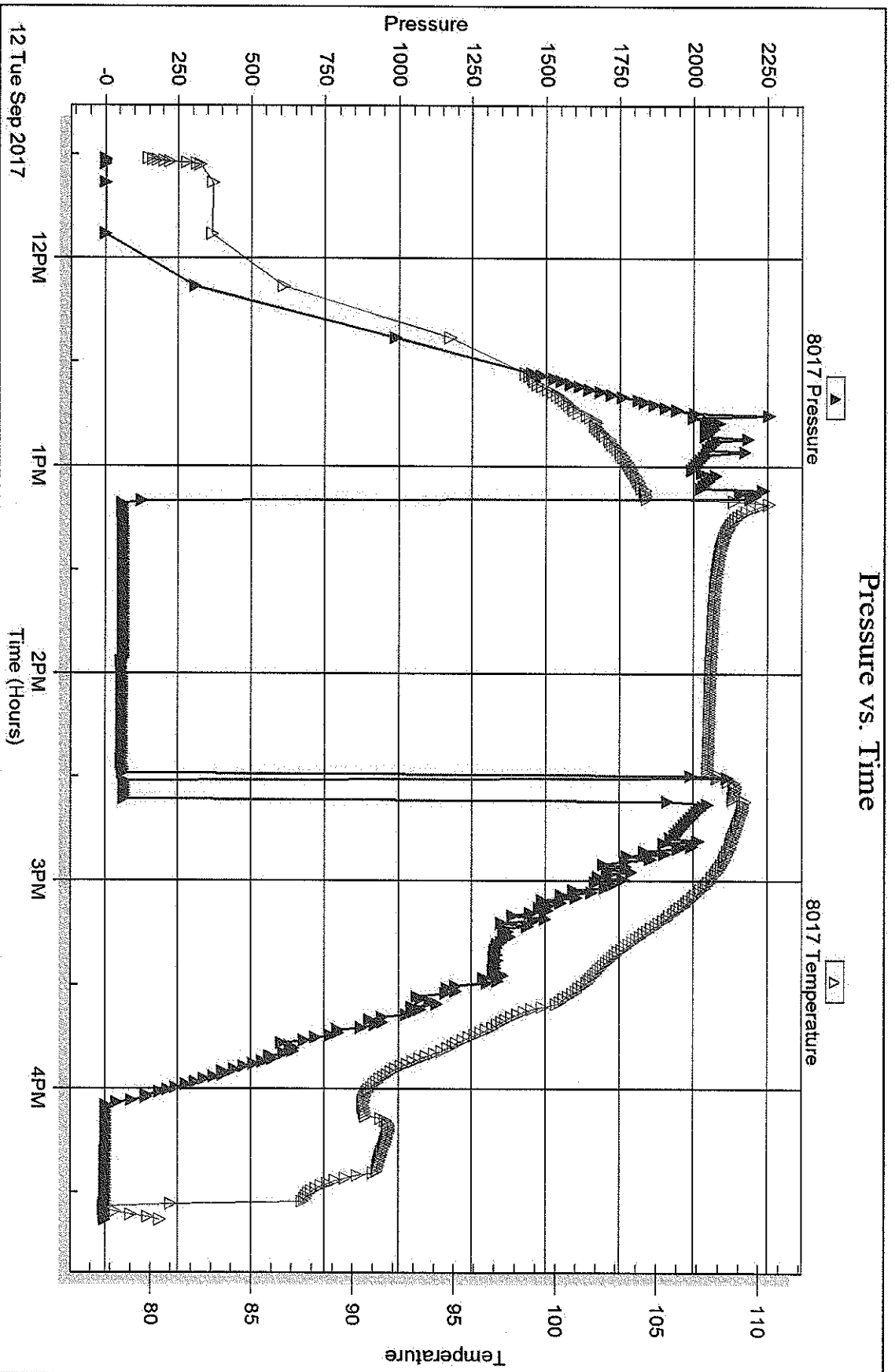
Recovery Comments:

Serial #: 8017

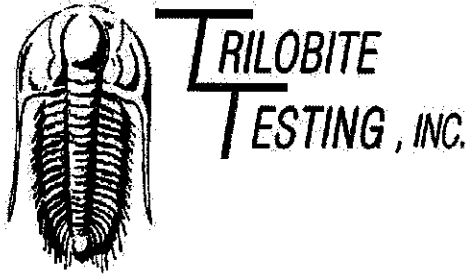
Outside Castle Resources Inc

Eagle 1 Moore #1

DST Test Number: 2







## DRILL STEM TEST REPORT

Prepared For: **Castle Resources Inc**

PO Box 583  
Russell, KS 67665

ATTN: Jerry Green

### **Eagle 1 Moore #1**

### **15-1s-29w Decatur,KS**

Start Date: 2017.09.12 @ 17:48:00

End Date: 2017.09.12 @ 23:44:00

Job Ticket #: 63305                      DST #: 3

Trilobite Testing, Inc

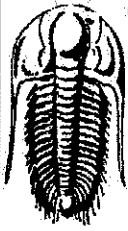
PO Box 362 Hays, KS 67601

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

Printed: 2017.09.13 @ 10:31:21

Castle Resources Inc  
15-1s-29w Decatur,KS  
Eagle 1 Moore #1  
DST # 3  
DST#3  
2017.09.12





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Castle Resources Inc

**15-1s-29w Decatur, KS**

PO Box 583  
Russell, KS 67665

**Eagle 1 Moore #1**

Job Ticket: 63305

**DST#: 3**

ATTN: Jerry Green

Test Start: 2017.09.12 @ 17:48:00

### Tool Information

Drill Pipe:	Length: 3835.00 ft	Diameter: 3.80 inches	Volume: 53.79 bbl	Tool Weight: 3500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 44000.00 lb
			<u>Total Volume: 53.79 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3833.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	3954.00 ft			
Interval between Packers:	121.00 ft			
Tool Length:	363.00 ft			
Number of Packers:	3	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			3813.00	
Shut In Tool	5.00			3818.00	
Hydraulic tool	5.00			3823.00	
Packer	5.00			3828.00	21.00 Bottom Of Top Packer
Packer	5.00			3833.00	
Packer - Shale	0.00			3833.00	
Stubb	1.00			3834.00	
Recorder	0.00	6625	Inside	3834.00	
Recorder	0.00	8017	Outside	3834.00	
Perforations	16.00			3850.00	
Blank Spacing	96.00			3946.00	
Perforations	3.00			3949.00	
Blank Off Sub	1.00			3950.00	
Blank spacing	4.00			3954.00	121.00 Tool Interval
Packer	0.00			3954.00	
Packer - Shale	0.00			3954.00	
Stubb	1.00			3955.00	
Recorder	0.00	8167	Below	3955.00	
Perforations	24.00			3979.00	
Drill Pipe	193.00			4172.00	
Bullnose	3.00			4175.00	221.00 Bottom Packers & Anchor

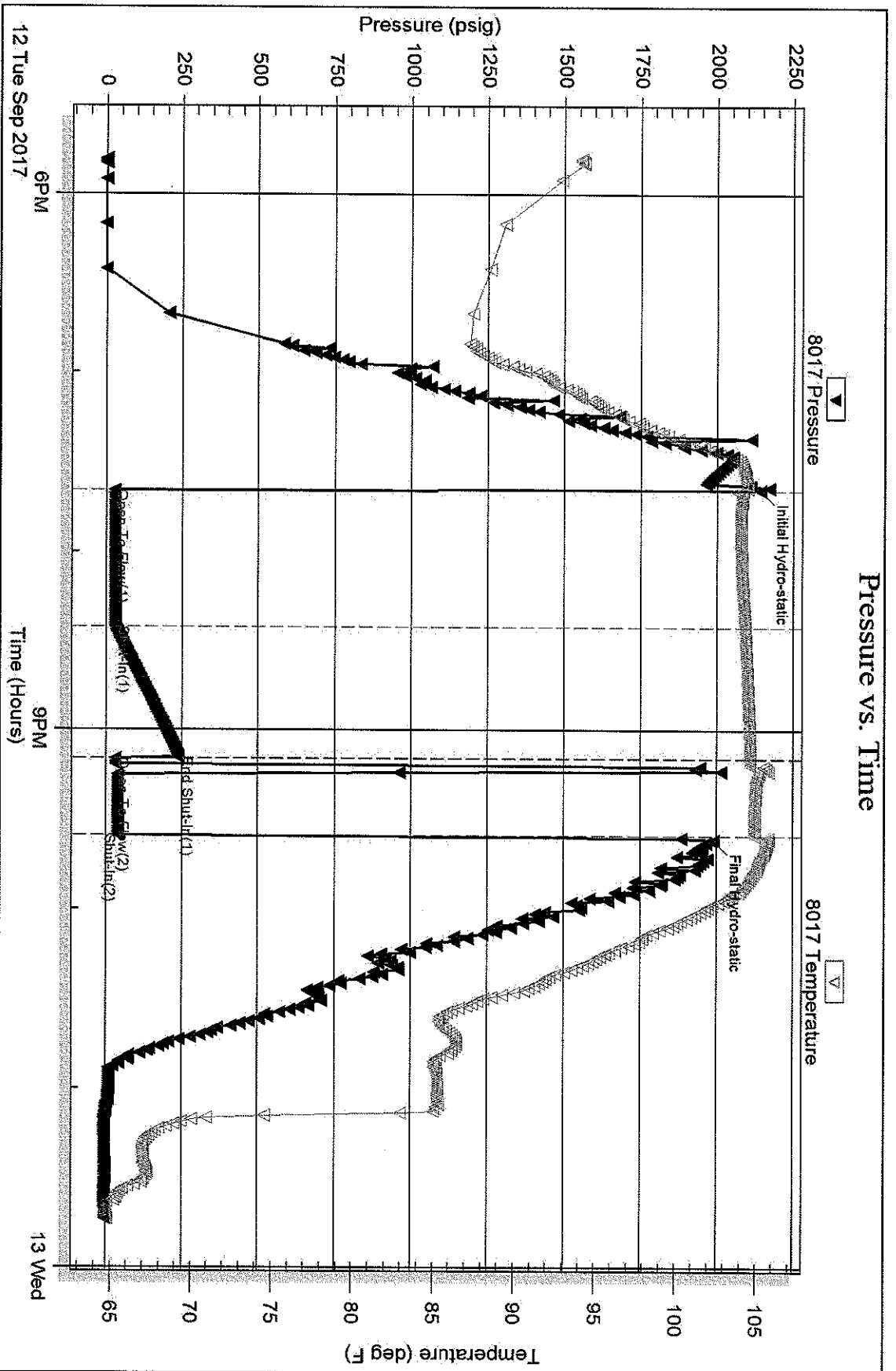
**Total Tool Length: 363.00**

Serial #: 8017

Outside: Castle Resources Inc

Eagle 1 Moore #1

DST Test Number: 3

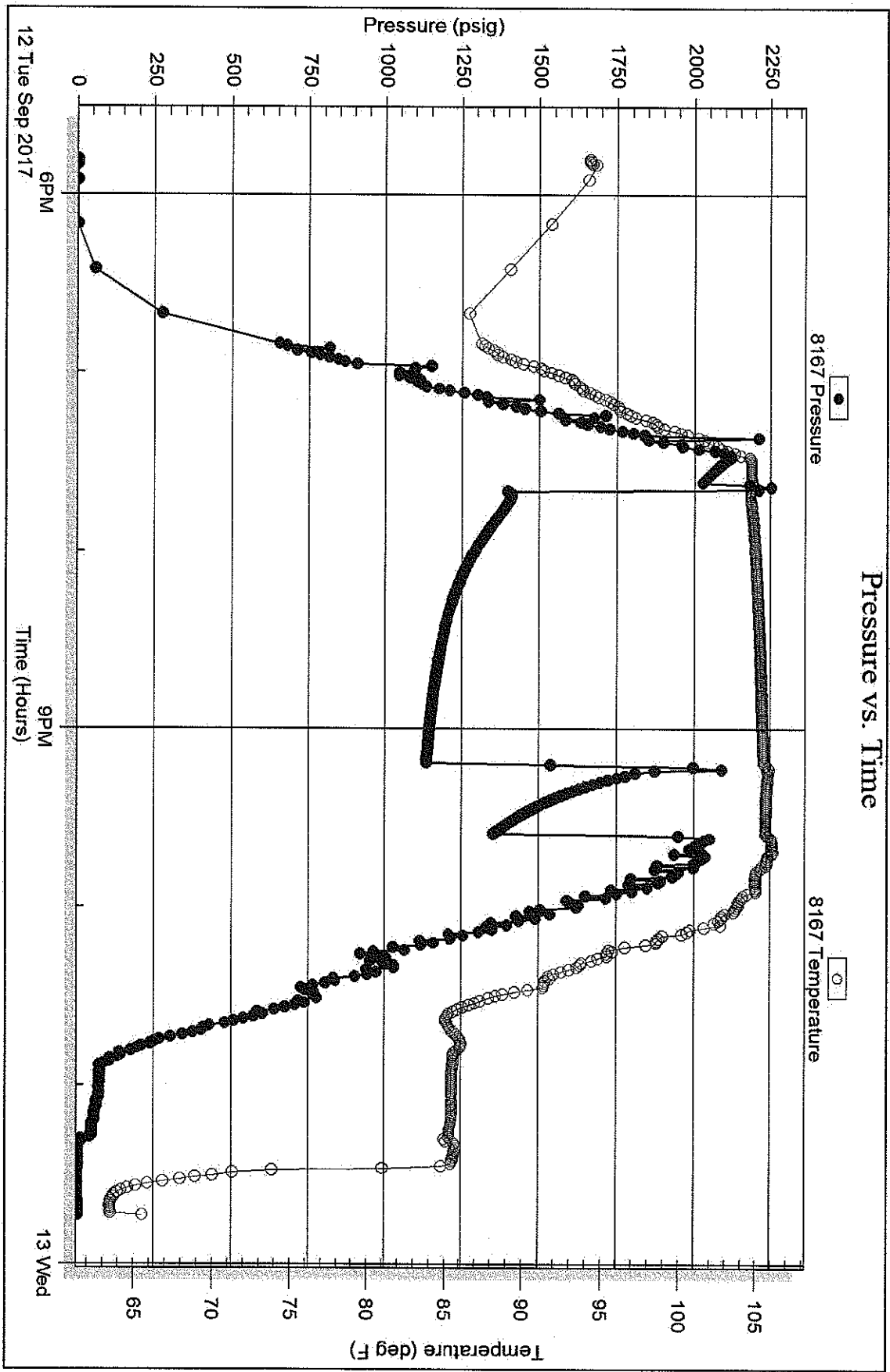


Serial #: 8167

Below (Straddling) Resources Inc

Eagle 1 Moore #1

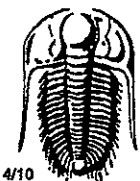
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63305

Printed: 2017.09.13 @ 10:31:23



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63304

Well Name & No. Eagle 1 Moore #1 Test No. 2 Date 9-12-17  
 Company Castle Resources Inc Elevation 2856 KB 2851 GL  
 Address PO Box 583 Russell KS 67665  
 Co. Rep / Geo. Jerry Green Rig White Knight  
 Location: Sec. 15 Twp. 1s Rge. 29w Co. Decatur State KS

Interval Tested 3947 - 3956 Zone Tested DST #2  
 Anchor Length 9 Anchor 219 Tail Drill Pipe Run 3924 Mud Wt. 9.5  
 Top Packer Depth 3947 - 3947 Drill Collars Run - Vis 60  
 Bottom Packer Depth 3956 (shale) Wt. Pipe Run - WL 8.4  
 Total Depth 4175 Chlorides 2000 ppm System LCM 2 1/2

Blow Description IF: 5 1/2" surge blow at open, bled off, No blow  
ISI: No blow  
FF: No blow, Flushed tool, No blow  
Pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>83</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 83 BHT 111 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2189  Test 1050 T-On Location 9:20<sup>OL</sup> / 11:00<sup>old</sup> testing  
 (B) First Initial Flow 57  Jars \_\_\_\_\_ T-Started 11:31  
 (C) First Final Flow 60  Safety Joint \_\_\_\_\_ T-Open 13:10  
 (D) Initial Shut-In 54  Circ Sub \_\_\_\_\_ T-Pulled 14:36  
 (E) Second Initial Flow 51  Hourly Standby \_\_\_\_\_ T-Out 16:35  
 (F) Second Final Flow 62  Mileage 26 RT 19.50 Comments lost around 20' of  
 (G) Final Shut-In -  Sampler \_\_\_\_\_ mud at open - 5 1/2" surge blow  
 (H) Final Hydrostatic 2045  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250  Ruined Packer \_\_\_\_\_

Initial Open 45  Extra Packer \_\_\_\_\_  
 Initial Shut-In 30  Extra Recorder \_\_\_\_\_  
 Final Flow 10  Day Standby 1.5d 11h  
 Final Shut-In \_\_\_\_\_  Accessibility \_\_\_\_\_  
 Sub Total 2019.50

Sub Total 366.67  
 Total 2386.67  
 MP/DST Disc't \_\_\_\_\_

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

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