



DRILL STEM TEST REPORT

Prepared For: **Castle Resources, Inc**

PO Box 583
Russell, KS 67665

ATTN: Jerry Green

Lamer #1

3-17S-21W Ness, KS

Start Date: 2016.07.30 @ 07:33:44

End Date: 2016.07.30 @ 13:34:44

Job Ticket #: 58054 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2016.08.01 @ 08:27:03

Castle Resources, Inc 3-17S-21W Ness, KS Lamer #1 DST # 1 Cherokee 2016.07.30



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Castle Resources, Inc

3-17S-21W Ness, KS

PO Box 583
Russell, KS 67665

Lamer #1

Job Ticket: 58054

DST#: 1

ATTN: Jerry Green

Test Start: 2016.07.30 @ 07:33:44

GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:51:44

Time Test Ended: 13:34:44

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **4066.00 ft (KB) To 4106.00 ft (KB) (TVD)**

Total Depth: 4106.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2217.00 ft (KB)

2212.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **8959**

Outside

Press@RunDepth: psig @ 4071.00 ft (KB)

Start Date: 2016.07.30

End Date:

2016.07.30

Start Time: 07:33:28

End Time:

13:32:27

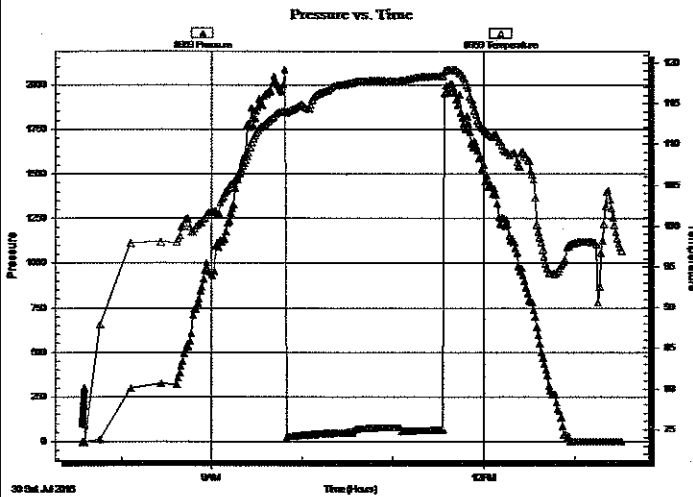
Capacity: 8000.00 psig

Last Calib.: 2016.07.30

Time On Btm:

Time Off Btm:

TEST COMMENT: 45- IF- Slow ly built to 4"
30- IS- No blow
30- FF- Slow ly built to .5" Pulled tool



PRESSURE SUMMARY

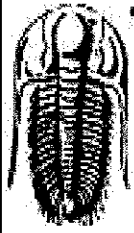
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
111.00	WM, 15%W 85%M	1.57

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Castle Resources, Inc

3-17S-21W Ness, KS

PO Box 583
Russell, KS 67665

Lamer #1

Job Ticket: 58054

DST#: 1

ATTN: Jerry Green

Test Start: 2016.07.30 @ 07:33:44

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:

14000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
111.00	WM, 15%W 85%M	1.573

Total Length: 111.00 ft Total Volume: 1.573 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

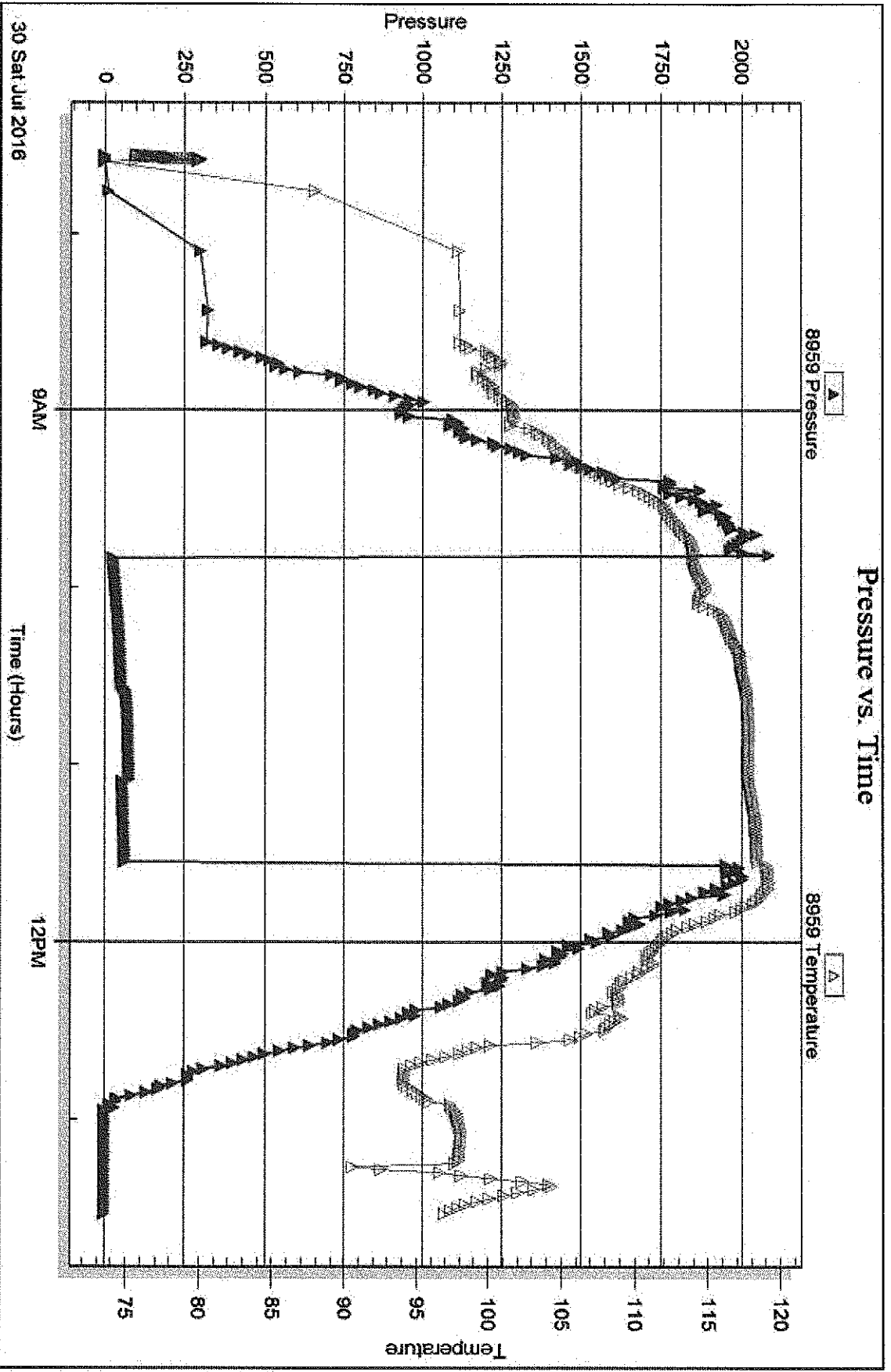
Recovery Comments:

Serial #: 8959

Outside Castle Resources, Inc

Lamer #1

DST Test Number: 1



Trachite Testing, Inc

Ref. No: 58054

Printed: 2016.06.01 @ 08:27:04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Castle Resources, Inc
 PO Box 583
 Russell, KS 67665
 ATTN: Jerry Green

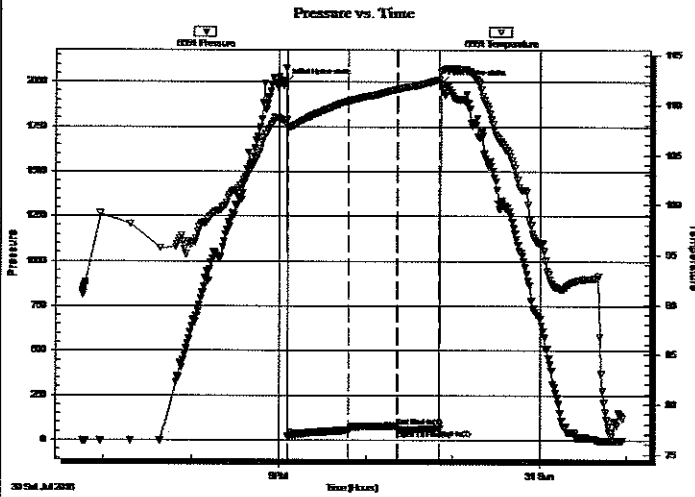
3-17S-21W Ness, KS
Lamer #1
 Job Ticket: 58055 **DST#: 2**
 Test Start: 2016.07.30 @ 18:45:26

GENERAL INFORMATION:

Formation: **Cherokee**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 21:05:56 Tester: Brannan Lonsdale
 Time Test Ended: 00:57:26 Unit No: 73
 Interval: **4067.00 ft (KB) To 4111.00 ft (KB) (TVD)** Reference Elevations: 2217.00 ft (KB)
 Total Depth: 4111.00 ft (KB) (TVD) 2212.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 6651 Inside
 Press@RunDepth: 53.26 psig @ 4077.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.07.30 End Date: 2016.07.31 Last Calib.: 2016.07.31
 Start Time: 18:45:27 End Time: 00:57:26 Time On Btm: 2016.07.30 @ 21:04:26
 Time Off Btm: 2016.07.30 @ 22:51:56

TEST COMMENT: 45- IF- Slowly built to 4"
 30- IS- No blow
 30- FF- Slowly built to 1" Pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1995.00	108.51	Initial Hydro-static
2	23.27	107.78	Open To Flow (1)
44	53.26	110.38	Shut-In(1)
77	78.03	111.53	End Shut-In(1)
78	55.89	111.54	Open To Flow (2)
107	61.23	112.52	Shut-In(2)
108	1988.50	113.24	Final Hydro-static

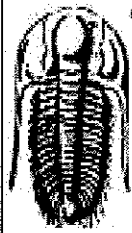
Recovery

Length (ft)	Description	Volume (bbl)
95.00	WM, 10%W 90%M	1.35

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Castle Resources, Inc

3-17S-21W Ness, KS

PO Box 583
Russell, KS 67665

Lamer #1

Job Ticket: 58055

DST#: 2

ATTN: Jerry Green

Test Start: 2016.07.30 @ 18:45:26

Tool Information

Drill Pipe:	Length: 4061.00 ft	Diameter: 3.82 inches	Volume: 57.57 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 58000.00 lb
			Total Volume: - bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4067.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	72.00 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			4041.00	
Shut In Tool	5.00			4046.00	
Hydraulic tool	5.00			4051.00	
Jars	5.00			4056.00	
Safety Joint	2.00			4058.00	
Packer	5.00			4063.00	27.00 Bottom Of Top Packer
Packer	4.00			4067.00	
Stubb	1.00			4068.00	
Perforations	8.00			4076.00	
Change Over Sub	1.00			4077.00	
Recorder	0.00	6651	Inside	4077.00	
Recorder	0.00	8959	Outside	4077.00	
Drill Pipe	31.00			4108.00	
Change Over Sub	1.00			4109.00	
Bullnose	3.00			4112.00	45.00 Bottom Packers & Anchor

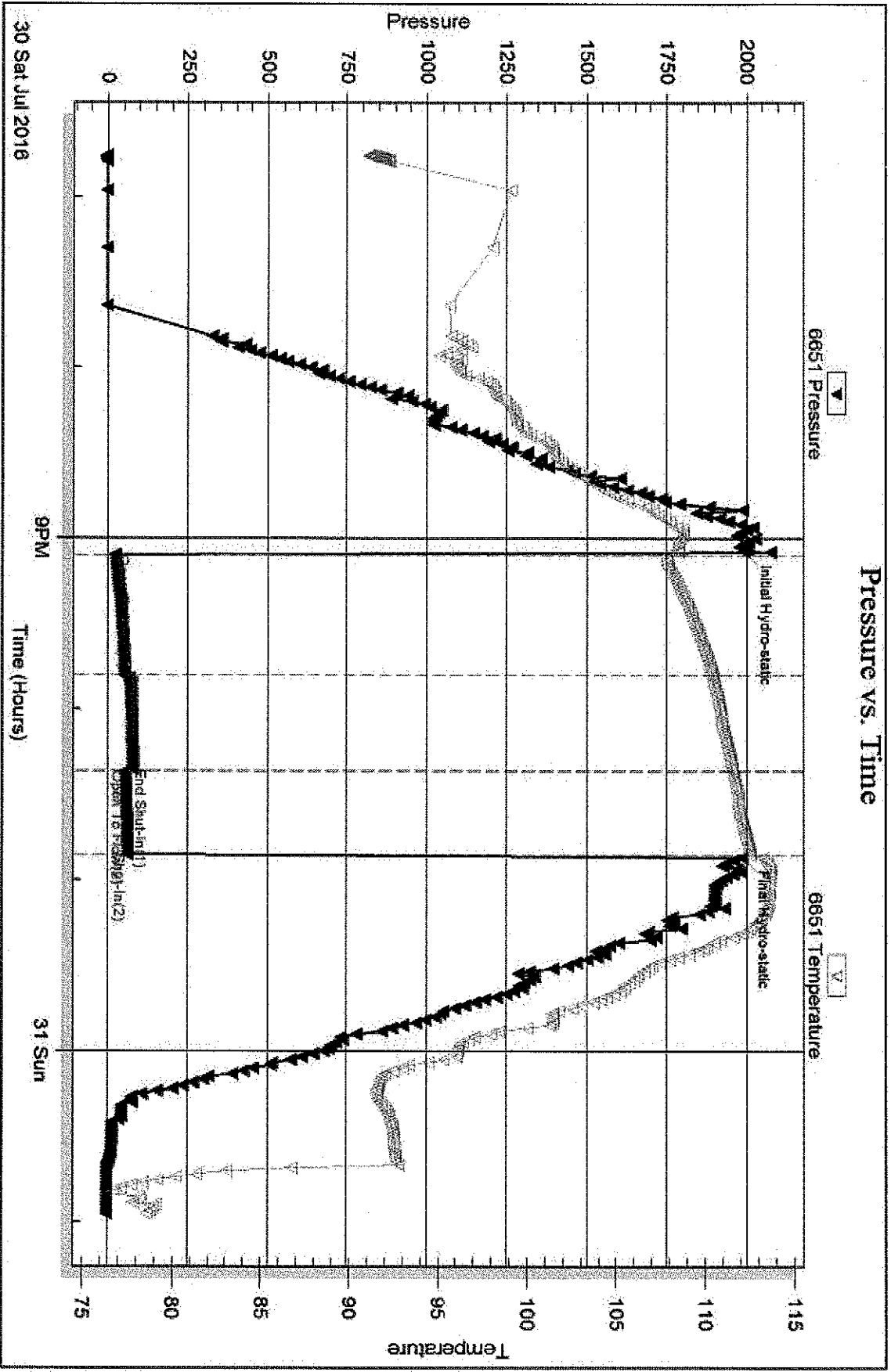
Total Tool Length: 72.00

Serial #: 6651

Inside Castle Resources, Inc

Larner #1

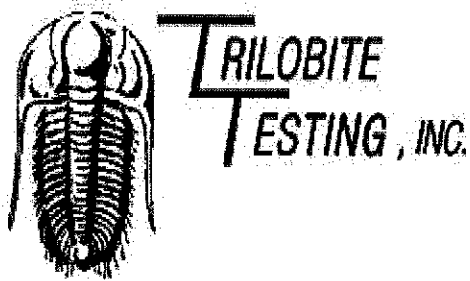
DST Test Number: 2



Trichble Testing, Inc

Ref. No: 58055

Printed: 2016.08.01 @ 08:23:45



DRILL STEM TEST REPORT

Prepared For: **Castle Resources, Inc**

PO Box 583
Russell, KS 67665

ATTN: Jerry Green

Lamer #1

3-17S-21W Ness, KS

Start Date: 2016.07.31 @ 14:58:17

End Date: 2016.07.31 @ 20:56:17

Job Ticket #: 58056 DST #: 3

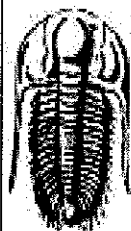
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2016.08.01 @ 08:23:14

Castle Resources, Inc 3-17S-21W Ness, KS Lamer #1 DST # 3 Cherokee 2016.07.31



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Castle Resources, Inc

3-17S-21W Ness, KS

PO Box 583
Russell, KS 67665

Lamer #1

Job Ticket: 58056

DST#: 3

ATTN: Jerry Green

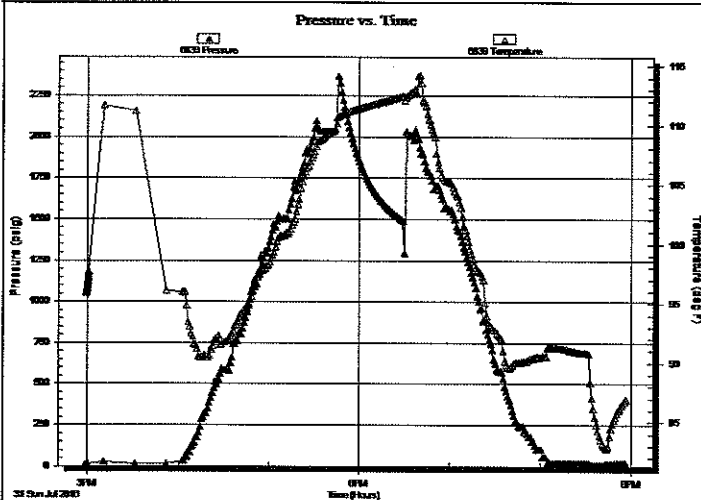
Test Start: 2016.07.31 @ 14:58:17

GENERAL INFORMATION:

Formation: **Cherokee**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Straddle (Reset)
 Time Tool Opened: 17:46:17 Tester: Brannan Lonsdale
 Time Test Ended: 20:56:17 Unit No: 73
 Interval: **4104.00 ft (KB) To 4125.00 ft (KB) (TVD)** Reference Elevations: 2217.00 ft (KB)
 Total Depth: 4215.00 ft (KB) (TVD) 2212.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 6839 Below (Straddle)
 Press@RunDepth: psig @ 4127.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.07.31 End Date: 2016.07.31 Last Calib.: 2016.07.31
 Start Time: 14:58:51 End Time: 20:56:50 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45- IF- BOB 7 mins Pulled tool at end of IFP



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
254.00	MW, 10%M 90%W w / show of oil	3.60
185.00	WM, 25%W 75%M w / show of oil	2.62

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Castle Resources, Inc

3-17S-21W Ness, KS

PO Box 583
Russell, KS 67665

Lamer #1

Job Ticket: 58056

DST#: 3

ATTN: Jerry Green

Test Start: 2016.07.31 @ 14:58:17

Tool Information

Drill Pipe:	Length: 4092.00 ft	Diameter: 3.82 inches	Volume: 58.01 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 120000.0 lb
			Total Volume: - bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4104.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	4125.00 ft			
Interval between Packers:	21.00 ft			
Tool Length:	138.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

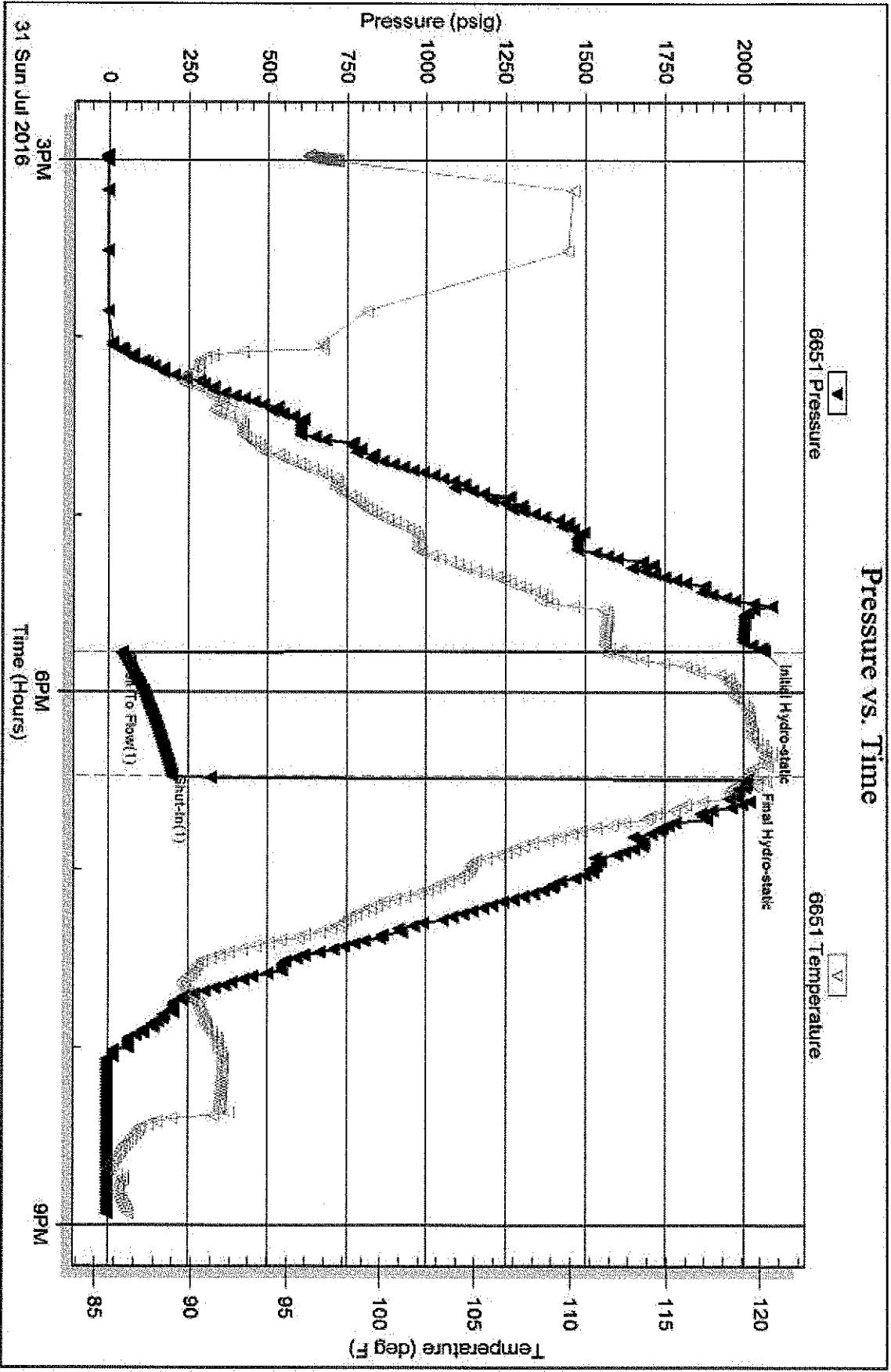
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4078.00	
Shut In Tool	5.00			4083.00	
Hydraulic tool	5.00			4088.00	
Jars	5.00			4093.00	
Safety Joint	2.00			4095.00	
Packer	5.00			4100.00	27.00 Bottom Of Top Packer
Packer	4.00			4104.00	
Stubb	1.00			4105.00	
Recorder	0.00	6651	Inside	4105.00	
Recorder	0.00	8959	Outside	4105.00	
Perforations	16.00			4121.00	
Blank Off Sub	1.00			4122.00	
Blank Spacing	3.00			4125.00	21.00 Tool Interval
Packer	1.00			4126.00	
Stubb	1.00			4127.00	
Recorder	0.00	6839	Below	4127.00	
Perforations	20.00			4147.00	
Change Over Sub	1.00			4148.00	
Drill Pipe	63.00			4211.00	
Change Over Sub	1.00			4212.00	
Bulthose	3.00			4215.00	90.00 Bottom Packers & Anchor
Total Tool Length:	138.00				

Serial #: 6651

Inside Castle Resources, Inc

Lamer #1

DST Test Number: 3



Triachite Testing, Inc

Ref. No: 58056

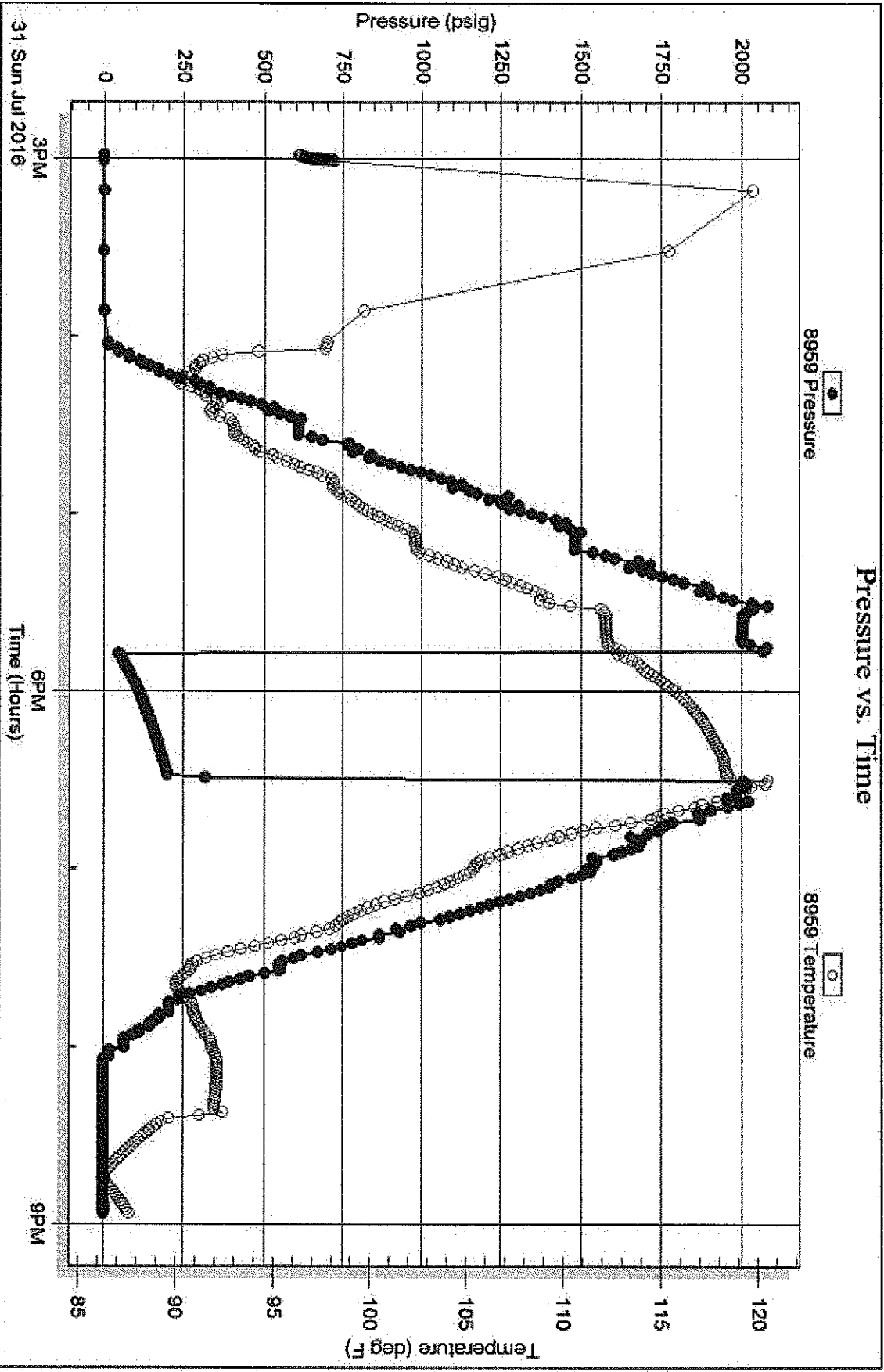
Printed: 2016.06.01 @ 08:23:15

Serial #: 8959

Outside Castle Resources, Inc

Lamer #1

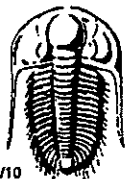
DST Test Number: 3



TriChble Testing, Inc

Ref. No: 58056

Printed: 2016.06.01 @ 08:23:16



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

No. 58055

Well Name & No. Lamer #1 Test No. 2 Date 7/30/16
 Company Castle Resources, Inc Elevation 2217 KB 2212 GL
 Address PO Box 583 Russell, KS 67665
 Co. Rep / Geo. Jerry Green Rig White Knight
 Location: Sec. 3 Twp. 17 S Rge. 21 W Co. Ness State KS

Interval Tested 4067-4111 Zone Tested Cherokee
 Anchor Length 44' Drill Pipe Run 4061 Mud Wt. 9.4
 Top Packer Depth 4062 Drill Collars Run — Vis 54
 Bottom Packer Depth 4067 Wt. Pipe Run — WL 16.2
 Total Depth 4111 Chlorides 6,500 ppm System LCM 1#
 Blow Description IF - Slowly built to 4"
IS - No flow
FF - Slowly built to 1" Pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>95</u>	<u>WM</u>			<u>10</u>	<u>90</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 95 BHT 113° Gravity — API RW .38 @ 75 ° F Chlorides 16,000 ppm

(A) Initial Hydrostatic <u>1995</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1834</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1845</u>
(C) First Final Flow <u>53</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2105</u>
(D) Initial Shut-In <u>70</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2250</u>
(E) Second Initial Flow <u>56</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>7/31 0057</u>
(F) Second Final Flow <u>61</u>	<input checked="" type="checkbox"/> Mileage <u>104 RT</u> 78	Comments
(G) Final Shut-In	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1989</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>45</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>↑ 30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In	<input type="checkbox"/> Day Standby	Total <u>1553</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1553</u>	

Approved By _____ Our Representative Brannan Lonsdale

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.