



# Eagle Testers L.L.C.

1309 Patton  
Great Bend, Kansas 67530  
(620)791-7394

Company Castle Resources L.L.C.

Address Box 87 Schoenched Kansas 67667-0087

Lease & # WESSLER #1 Sec. 19 Twp 17<sup>s</sup> Rng 9<sup>w</sup>

Date 6-28-2015 County Ellsworth Elevation 1773 G.L. 1778 K.B.

Drilling Contractor White Knight Drilling

Drill Pipe Length \_\_\_\_\_ I.D. of Drill Pipe 3.80 Tool Joint Size 4 1/2" X 11

Drill Collar Length NONE I.D. of Drill Collars NONE Tool Joint Size NONE

Mud Weight 9.31 Viscosity 48 Filtrate 92.8<sup>8</sup> Chlorides-Pits 9000 DST \_\_\_\_\_

Top Packer Depth 3160 Bottom Packer Depth 3165 Number of Packers 2

Tested From 3165 to 3222 Total Depth 3222 Anchor Length 57

Test # 2 Formation Tested Arbuckle Hole Size 7.718

Initial Blow Strong blow built to the bottom of a 5 Gallon bucket in 1 minute

Blow back on the 1st Shut-in YES

Final Blow Strong blow built to the bottom of a 5 Gallon bucket in 1 minute

Blow back on the 2nd Shut-in \_\_\_\_\_

Initial Hydrostatic 1701 P.S.I. Final Hydrostatic 1640 P.S.I. Maximum Temp. 114 F

Initial Opening	<u>175</u> P.S.I. to <u>396</u> P.S.I.	from	<u>8:33 p</u> m to <u>8:53 p</u> m	<u>20</u> minutes
Initial Shut-in	<u>1064</u> P.S.I.	from	<u>8:53 p</u> m to <u>9:23 p</u> m	<u>30</u> minutes
Final Opening	<u>461</u> P.S.I. to <u>579</u> P.S.I.	from	<u>9:23 p</u> m to <u>9:43 p</u> m	<u>20</u> minutes
Final Shut-in	<u>1096</u> P.S.I.	from	<u>9:43 p</u> m to <u>10:53 p</u> m	<u>70</u> minutes

Feet	Recovery Description	% Gas	% Oil	% Mud	% Water
10	CLEAN GASSY				
80	HEAVY OIL cut muddy water	15	45	10	30
60	HEAVY OIL cut muddy water	5	45	10	40
180	OIL & Gas cut muddy water	20	40	20	20
180	SLIGHTLY muddy water cut Gassy oil	30	50	6	14
180	Frothy oil	53	37	4	6
180	Frothy oil	60	32	2	5
180	Frothy oil	64	30	2	4
180	Frothy oil	<del>73</del>	22	3	2
60	OIL & Gas cut water	10	10	5	75
240	Gas in the pipe				

Total Feet Recovered ~~1200~~ 1290

Gravity of oil \_\_\_\_\_ Corrected \_\_\_\_\_ Recovery Chlorides 16,000 Rw. \_\_\_\_\_ ohms @ \_\_\_\_\_ Degrees

Gas to Surface in \_\_\_\_\_ minutes Max. Gas Gauged \_\_\_\_\_ MCF/day Was a gas sample taken \_\_\_\_\_

Comments \_\_\_\_\_

Time on Location \_\_\_\_\_ Tool Opened \_\_\_\_\_ Tool Pulled \_\_\_\_\_ Time Out \_\_\_\_\_

Extra Equipment-Jars NONE Safety Joint NONE Circulating Sub NONE Straddle NONE

Inside Recorder No. NONE Depth 9119 Extra Packer (3rd) NONE Hook Wall NONE

Outside Recorder No. \_\_\_\_\_ Depth 9139 Extra Packer (4th) NONE Sampler NONE

Tool Operator Steve Burdy Approved By \_\_\_\_\_

Ticket No 01042



## DRILL STEM TEST REPORT

Prepared For: **CASTLE RRESOURCES INC.**

BOX 87  
SCHOENCHEN ,KANSAS 676567-0087

ATTN: JERRY GREEN

**WESSELER 1**

**19-17S-17W ELLSWORTH**

Start Date: 2015.06.28 @ 00:00:00

End Date: 2015.06.28 @ 00:00:00

Job Ticket #: 01042                      DST #: 2

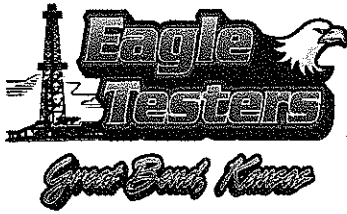
Eagle Testers

1309 Patton Road    Great Bend, Kansas 67530

620-791-7394

Printed: 2015.06.29 @ 02:16:01

CASTLE RRESOURCES INC.    19-17S-17W ELLSWORTH    WESSELER 1    DST # 2    ARBUCKLE    2015.06.28



# DRILL STEM TEST REPORT

CASTLE RESOURCES INC.  
 BOX 87  
 SCHOENCHEN, KANSAS 676567-0087  
 ATTN: JERRY GREEN

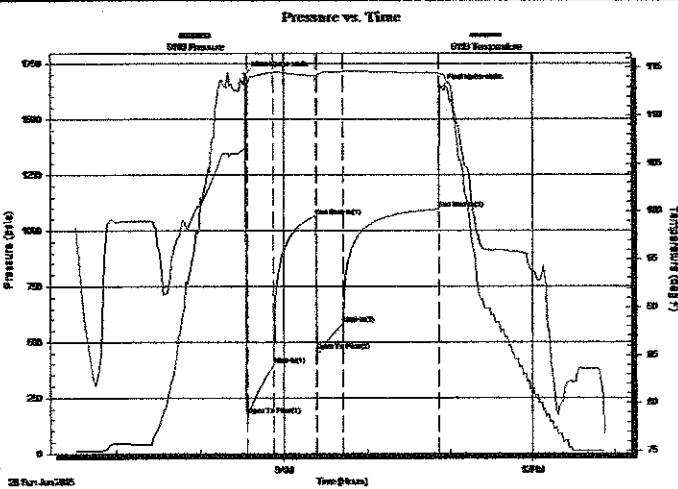
**19-17S-17W ELLSWORTH**  
**WESSELER 1**  
 Job Ticket: 01042 **DST#: 2**  
 Test Start: 2015.06.28 @ 00:00:00

### GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:00:00  
 Time Test Ended: 00:00:00  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: GENE BUDIG  
 Unit No:  
 Interval: **3165.00 ft (KB) To 3222.00 ft (KB) (TVD)**  
 Total Depth: 3222.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Reference Elevations: 1778.00 ft (KB)  
 1773.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 9119** Inside  
 Press@RunDepth: 1096.16 psia @ 3216.78 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2015.06.28 End Date: 2015.06.28 Last Calib.: 2015.06.29  
 Start Time: 06:30:00 End Time: 12:53:00 Time On Btm: 2015.06.28 @ 08:32:00  
 Time Off Btm: 2015.06.28 @ 10:54:00

**TEST COMMENT:** 1ST OPENING 20 MINUTES STRONG BLOW BUILT TO BOTTOM OF A 5 GALLON BUCKET IN 1 MINUTE  
 1ST SHUT-IN 30 MINUTES WEAK BLOW BACK  
 2ND OPENING 20 MINUTES- STRONG BLOW BUILT TO BOTTOM OF A 5 GALLON BUCKET I N 1 MINUTE  
 2ND SHUT-IN 70 MINUTES-WEAK BLOW BACK



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1701.03	106.53	Initial Hydro-static
2	175.04	113.22	Open To Flow (1)
21	396.15	114.44	Shut-In(1)
52	1064.57	114.10	End Shut-In(1)
52	461.93	113.92	Open To Flow (2)
71	579.62	114.55	Shut-In(2)
140	1096.16	114.39	End Shut-In(2)
142	1640.28	114.24	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
60.00	oil and gas cut w ater	0.84
0.00	10gas 10oil 5mud75w ater chlorides 160	0.00
180.00	frothy oil 73gas 22oil 3mud 2w ater	2.52
180.00	frothy oil 64gas 30oil 2mud 4w ater	2.52
180.00	frothy oil 60gas 32oil 3mud 5w ater	2.52
180.00	frothy oil 53gas 37oil 4mud 6w ater	2.52

Gas Rates			
	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

CASTLE RESOURCES INC.

19-17S-17W ELLSWORTH

BOX 87  
SCHOENCHEN, KANSAS 676567-0087

WESSELER 1

Job Ticket: 01042 DST#: 2

ATTN: JERRY GREEN

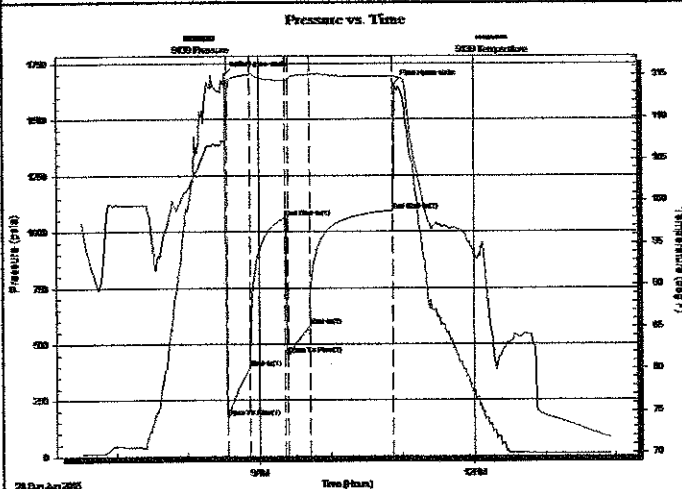
Test Start: 2015.06.28 @ 00:00:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No Whipstock: (KB) Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 00:00:00 Tester: GENE BUDIG  
 Time Test Ended: 00:00:00 Unit No:  
 Interval: **3165.00 ft (KB) To 3222.00 ft (KB) (TVD)** Reference Elevations: 1778.00 ft (KB)  
 Total Depth: 3222.00 ft (KB) (TVD) 1773.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: **9139** Outside  
 Press@RunDepth: 1095.23 psia @ 3216.78 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2015.06.28 End Date: 2015.06.28 Last Calib.: 2015.06.29  
 Start Time: 06:30:00 End Time: 13:56:30 Time On Btm: 2015.06.28 @ 08:32:00  
 Time Off Btm: 2015.06.28 @ 10:53:00

TEST COMMENT: 1ST OPENING 20 MINUTES STRONG BLOW BUILT TO BOTTOM OF A 5 GALLON BUCKET IN 1 MINUTE  
 1ST SHUT-IN 30 MINUTES WEAK BLOW BACK  
 2ND OPENING 20 MINUTES- STRONG BLOW BUILT TO BOTTOM OF A 5 GALLON BUCKET IN 1 MINUTE  
 2ND SHUT-IN 70 MINUTES-WEAK BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1701.47	107.10	Initial Hydro-static
2	175.66	113.11	Open To Flow (1)
21	396.21	115.05	Shut-in(1)
51	1062.66	114.29	End Shut-in(1)
53	453.37	114.21	Open To Flow (2)
71	579.55	115.03	Shut-in(2)
140	1095.23	114.75	End Shut-in(2)
141	1656.01	114.82	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	oil and gas cut w ater	0.84
0.00	10gas 10oil 5mud75w ater chlorides 16	0.00
180.00	frothy oil 73gas 22oil 3mud 2w ater	2.52
180.00	frothy oil 64gas 30oil 2mud 4w ater	2.52
180.00	frothy oil 60gas 32oil 3mud 5w ater	2.52
180.00	frothy oil 53gas 37oil 4mud 6w ater	2.52

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

CASTLE RRESOURCES INC.

19-17S-17W ELLSWORTH

BOX 87  
SCHOENCHEN, KANSAS 676567-0087

WESSELER 1

Job Ticket: 01042

DST#: 2

ATTN: JERRY GREEN

Test Start: 2015.06.28 @ 00:00:00

## Tool Information

Drill Pipe:	Length: 3175.00 ft	Diameter: 3.80 inches	Volume: 44.54 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 44000.00 lb
			Total Volume: 44.54 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3165.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.78 ft			
Tool Length:	76.78 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3150.00	
Hydraulic tool	5.00			3155.00	
Top Packer	5.00			3160.00	
Packer	5.00			3165.00	20.00 Bottom Of Top Packer
Anchor	5.00			3170.00	
Change Over Sub	0.75			3170.75	
Drill Pipe	30.28			3201.03	
Change Over Sub	0.75			3201.78	
Anchor	15.00			3216.78	
Recorder	0.00	9119	Inside	3216.78	
Recorder	0.00	9139	Outside	3216.78	
Bullnose	5.00			3221.78	56.78 Anchor Tool

**Total Tool Length: 76.78**



# DRILL STEM TEST REPORT

FLUID SUMMARY

CASTLE RRESOURCES INC.  
 BOX 87  
 SCHOENCHEN ,KANSAS 676567-0087  
 ATTN: JERRY GREEN

19-17S-17W ELLSWORTH  
 WESSELER 1  
 Job Ticket: 01042      DST#: 2  
 Test Start: 2015.06.28 @ 00:00:00

## 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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.80 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 9000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	oil and gas cut water	0.842
0.00	10gas 10oil 5mud75w ater chlorides 16000	0.000
180.00	frothy oil 73gas 22oil 3mud 2w ater	2.525
180.00	frothy oil 64gas 30oil 2mud 4w ater	2.525
180.00	frothy oil 60gas 32oil 3mud 5w ater	2.525
180.00	frothy oil 53gas 37oil 4mud 6w ater	2.525
180.00	sloightly muddy w ater cut gassy oil	2.525
0.00	30gas 50oil 6mud 14w ater	0.000
180.00	oil and gas cut muddy w ater	2.525
0.00	20gas 40oil 20mud 20w ater	0.000
60.00	heavy oil cut muddy w ater	0.842
0.00	15gas 45oil 10mud 30w ater	0.000
80.00	heavy oil cut muddy w ater	1.122
0.00	5gas 45oil 10 mud 40w ater	0.000
10.00	clean gassy oil	0.140
240.00	gas in the pipe	3.367

Total Length: 1530.00 ft      Total Volume: 21.463 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

Serial #: 9119

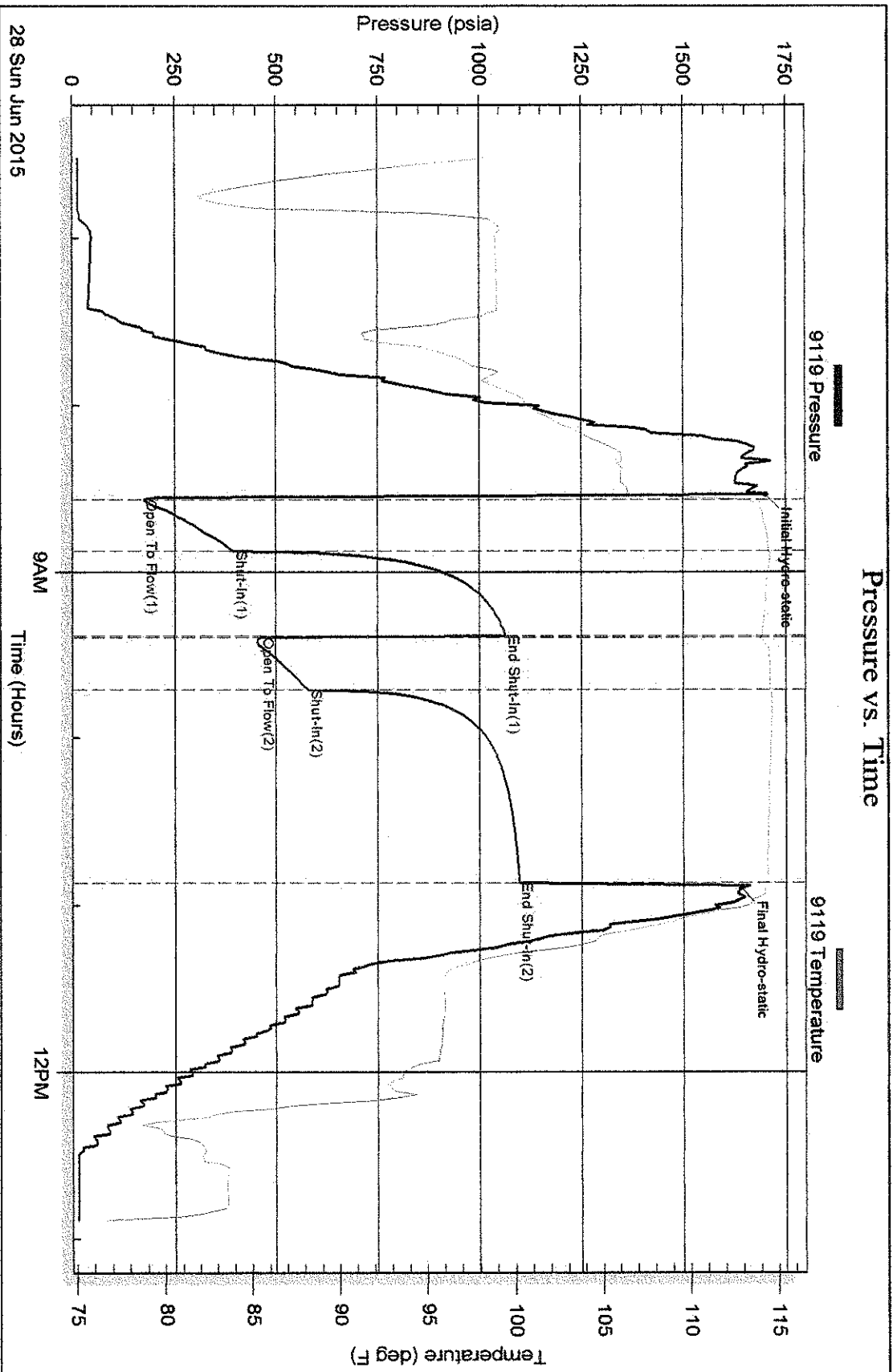
Inside

CASTLERESOURCES INC.

WESSELER 1

DST Test Number: 2

### Pressure vs. Time



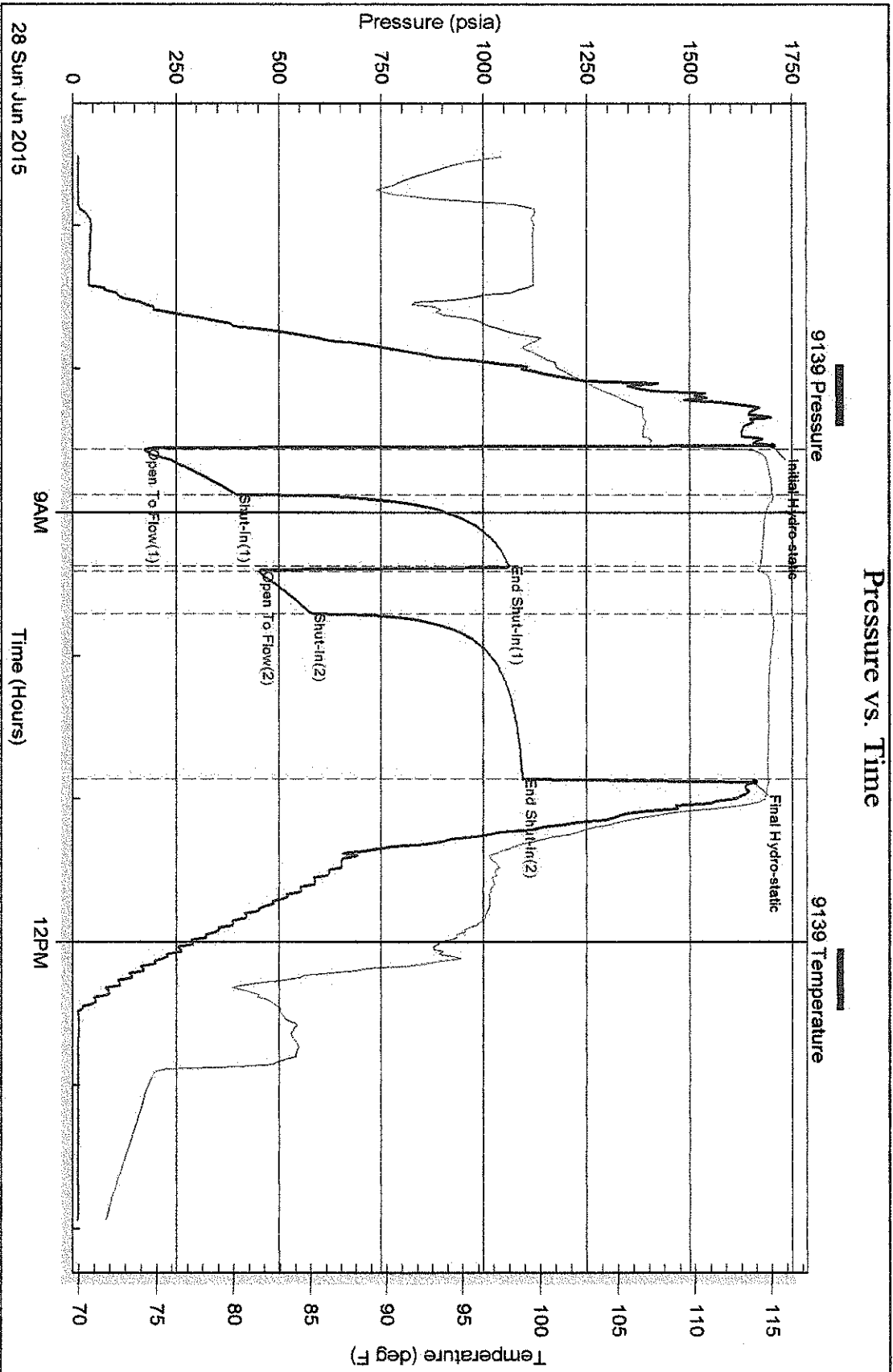
Serial #: 9139

Outside CASTLE RESOURCES INC.

WESSLER 1

DST Test Number: 2

### Pressure vs. Time



28 Sun Jun 2015

Eagle Testers

Ref. No: 01042

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