

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1373319
OIL & GAS CONSERVATION DIVISION

Form ACO-1
November 2016

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

1373319

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
TCores aken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Geologist Report / Mud Logs	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

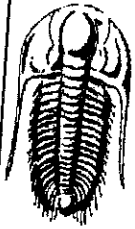
- Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
- Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
- Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____							
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Water	Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i>			PRODUCTION INTERVAL: Top _____ Bottom _____	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:
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TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Castle Resources, Inc.

P.O. Box 583
Russell KS
67665
ATTN: Jerry Green

15-13-17 Ellis Co KS

LJ Drilling 2

Job Ticket: 64241

DST#: 1

Test Start: 2017.11.12 @ 18:01:00

GENERAL INFORMATION:

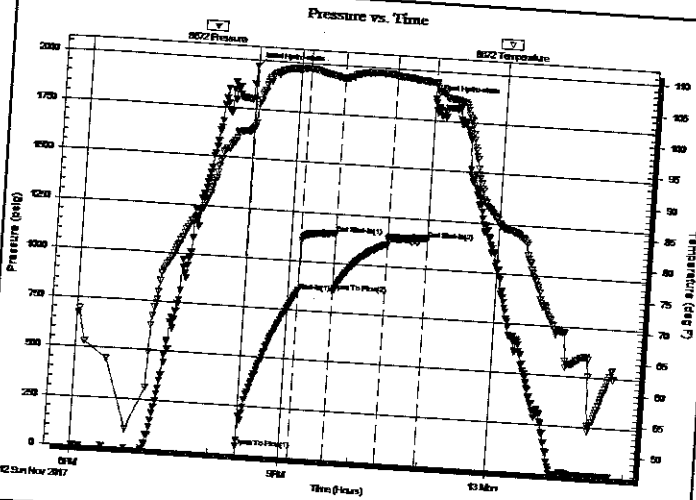
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:23:00
 Time Test Ended: 01:46:15
 Interval: **3504.00 ft (KB) To 3548.00 ft (KB) (TVD)**
 Total Depth: 3620.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Initial)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 2001.00 ft (KB)
 1996.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: **8672** Inside
 Press@RunDepth: 1110.62 psig @ 3509.00 ft (KB)
 Start Date: 2017.11.12 End Date:
 Start Time: 18:01:15 End Time:

Capacity: 8000.00 psig
 Last Calib.: 2017.11.13
 Time On Btm: 2017.11.12 @ 20:22:15
 Time Off Btm: 2017.11.12 @ 22:58:00

TEST COMMENT: IF:BOB in 2 min.
 IS:No return blow
 FF:BOB in 2 min.
 FS:No return blow



PRESSURE SUMMARY

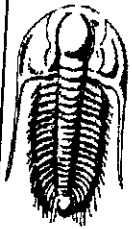
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1970.94	99.22	Initial Hydro-static
1	42.61	99.20	Open To Flow (1)
47	849.95	109.29	Shut-In(1)
76	1149.67	108.02	End Shut-In(1)
76	858.68	107.89	Open To Flow (2)
121	1110.62	108.98	Shut-In(2)
156	1152.50	108.30	End Shut-In(2)
156	1862.39	108.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
448.00	mud 100%m	6.28
512.00	w cm 10%w 90%m	7.18
310.00	w cm 50%w 50%m	4.35
1148.00	sw 100%sw	16.10

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Castle Resources, Inc.

P.O. Box 583
Russell KS
67665
ATTN: Jerry Green

15-13-17 Ellis Co KS

LJ Dreiling 2

Job Ticket: 64241

DST#: 1

Test Start: 2017.11.12 @ 18:01:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:23:00
Time Test Ended: 01:46:15
Interval: **3504.00 ft (KB) To 3548.00 ft (KB) (TVD)**
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

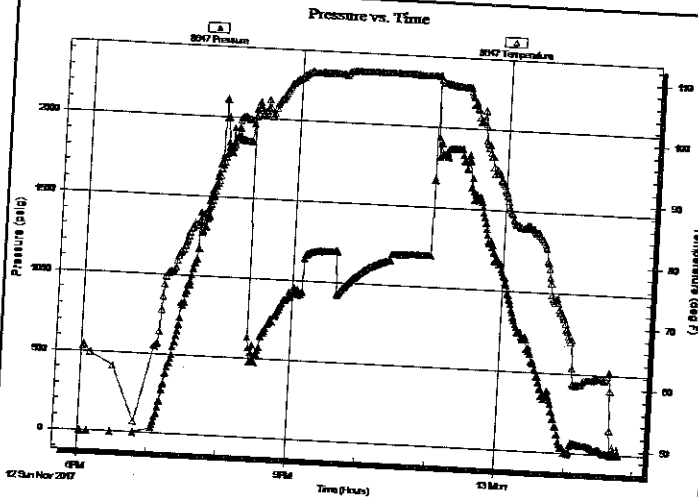
Test Type: Conventional Straddle (Initial)
Tester: Mike Roberts
Unit No: 81
Reference Elevations: 2001.00 ft (KB)
1996.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8647 Below (Straddle)

Press@RunDepth: psig @ 3611.00 ft (KB)
Start Date: 2017.11.12 End Date: 2017.11.13
Start Time: 18:01:15 End Time: 01:46:30

Capacity: 8000.00 psig
Last Calib.: 2017.11.13
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:BOB in 2 min.
IS:No return blow
FF:BOB in 2 min.
FS:No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
448.00	mud 100% m	6.28
512.00	w cm 10% w 90% m	7.18
310.00	w cm 50% w 50% m	4.35
1148.00	sw 100% sw	16.10

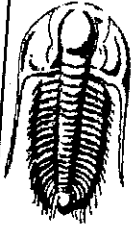
Gas Rates

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

Trilobite Testing, Inc

Ref. No: 64241

Printed: 2017.11.13 @ 08:50:25



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Castle Resources, Inc.

15-13-17 Ellis Co KS

P.O. Box 583
Russell KS
67665
ATTN: Jerry Green

LJ Dreiling 2

Job Ticket: 64241

DST#: 1

Test Start: 2017.11.12 @ 18:01:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 10.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 10.75 in³

Resistivity: 0.00 ohm.m

Salinity: 12400.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 0 deg API

Water Salinity: 30000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
448.00	mud 100%m	
512.00	w cm 10%w 90%m	6.284
310.00	w cm 50%w 50%m	7.182
1148.00	sw 100%sw	4.348
		16.103

Total Length: 2418.00 ft

Total Volume: 33.917 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Laboratory Name:

Laboratory Location:

Serial #:

Recovery Comments: RW= .584@ 32.1= 30,000 ppm

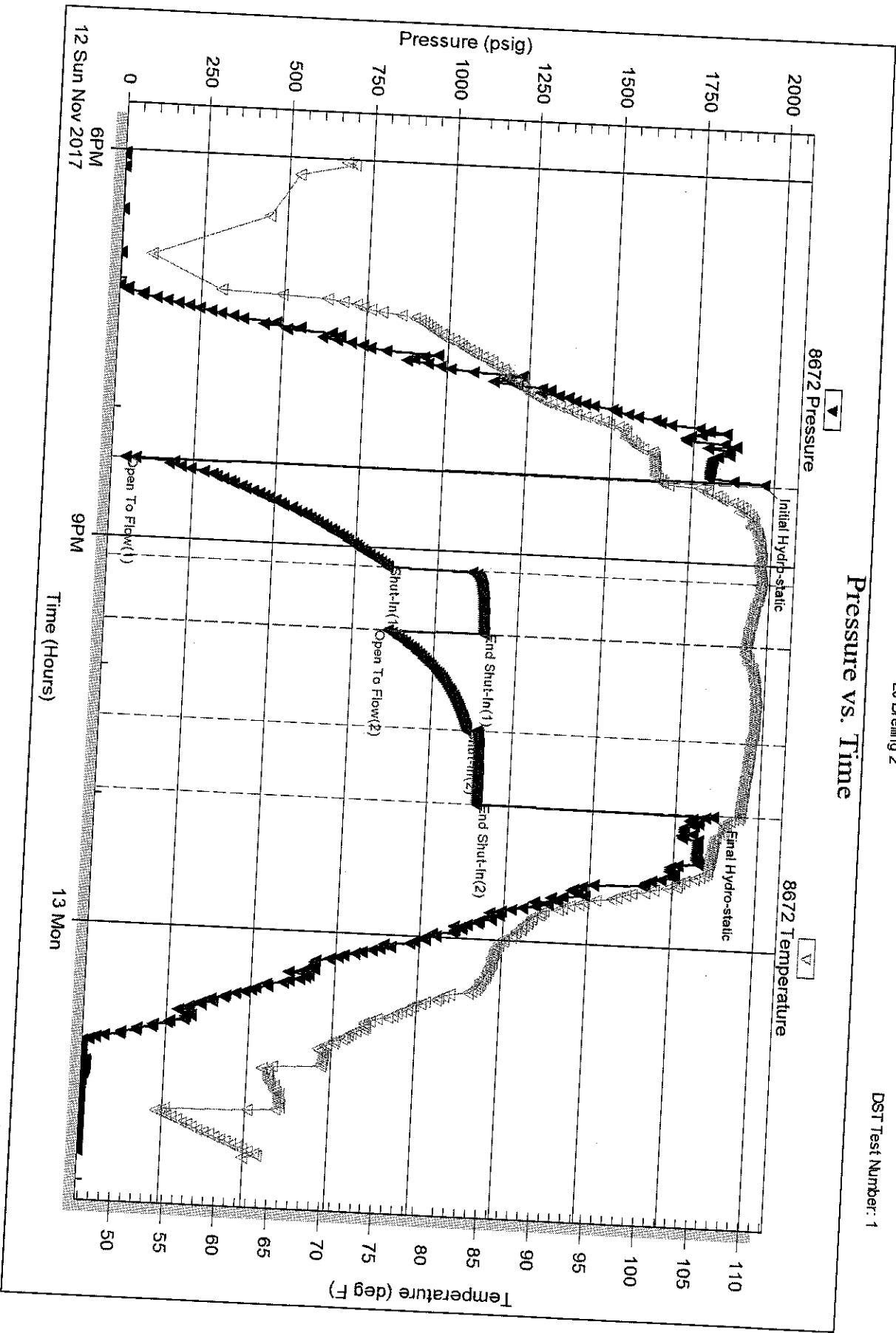
Serial #: 8672

Inside

Castle Resources, Inc.

LJ Drilling 2

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64241

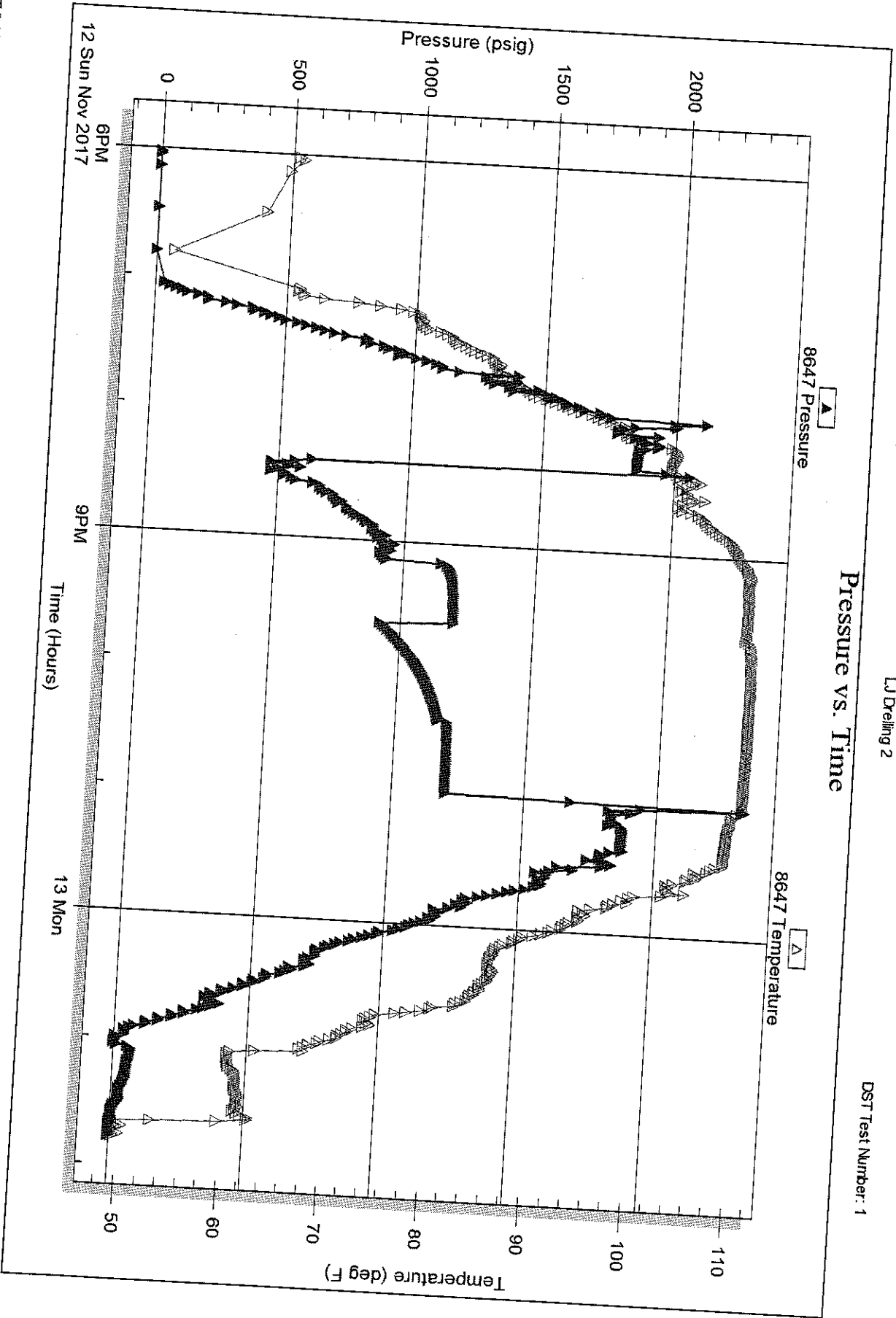
Printed: 2017.11.13 @ 08:50:26

Serial #: 8647

Below (Straddles) Resources, Inc.

LJ Drilling 2

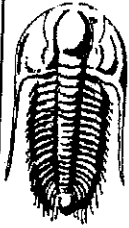
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 64241

Printed: 2017.11.13 @ 08:50:26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Castle Resources, Inc.

15-13-17 Ellis Co KS

P.O. Box 583
Russell KS
67665

LJ Drilling 2

Job Ticket: 64242

DST#: 2

ATTN: Jerry Green

Test Start: 2017.11.13 @ 06:58:15

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:45:30
 Time Test Ended: 12:12:30

Test Type: Conventional Straddle (Reset)
 Tester: Mike Roberts
 Unit No: 81

Interval: **3504.00 ft (KB) To 3535.00 ft (KB) (TVD)**
 Total Depth: 3620.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2001.00 ft (KB)
 1996.00 ft (CF)
 KB to GR/CF: 5.00 ft

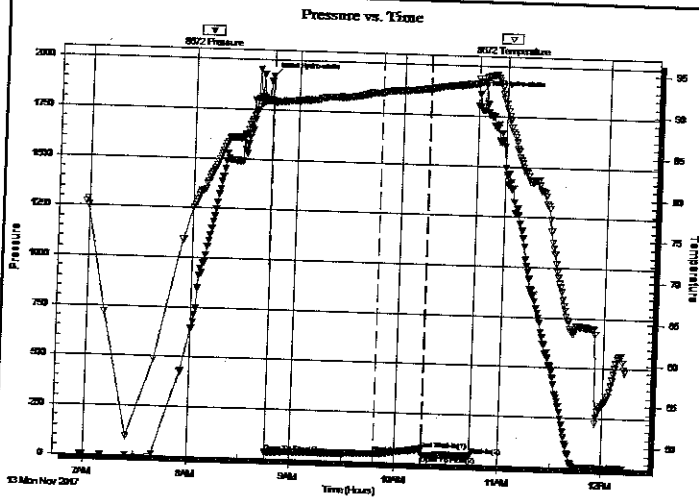
Serial #: **8672**

Inside

Press@RunDepth: 41.73 psig @ 3509.00 ft (KB)
 Start Date: 2017.11.13 End Date: 2017.11.13
 Start Time: 06:58:15 End Time: 12:12:30

Capacity: 8000.00 psig
 Last Calib.: 2017.11.13
 Time On Btm: 2017.11.13 @ 08:44:45
 Time Off Btm: 2017.11.13 @ 10:44:00

TEST COMMENT: IF: Built to 3" blow
 IS: No return blow
 FF: No blow
 FS: Pulled Test



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1918.82	90.92	Initial Hydro-static
1	31.49	90.59	Open To Flow (1)
64	41.73	92.24	Shut-In(1)
91	73.59	92.92	End Shut-In(1)
91	43.86	92.93	Open To Flow (2)
119	45.60	93.74	Shut-In(2)
120	1860.49	93.80	Final Hydro-static

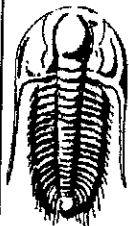
Recovery

Length (ft)	Description	Volume (bbl)
40.00	mud 100%m	0.56

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Castle Resources, Inc.

15-13-17 Ellis Co KS

P.O. Box 583
Russell KS
67665

LJ Dreiling 2

Job Ticket: 64242

DST#: 2

ATTN: Jerry Green

Test Start: 2017.11.13 @ 06:58:15

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 10.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 10.75 in³

Resistivity: 0.00 ohm.m

Salinity: 12400.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

0 deg API

Water Salinity:

0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	mud 100% _m	0.561

Total Length: 40.00 ft Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

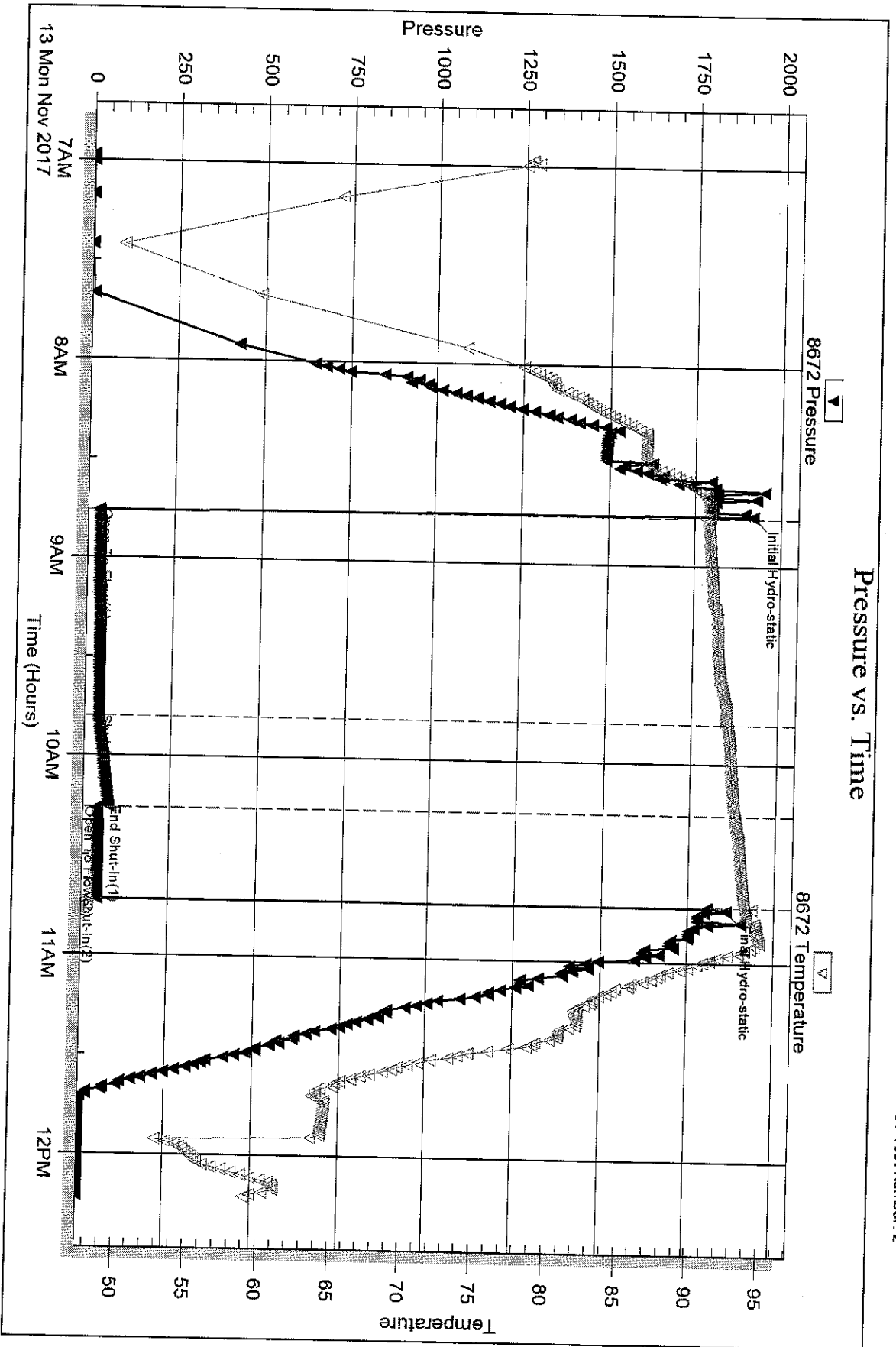
Serial #: 8672

Inside

Castle Resources, Inc.

LJ Drilling 2

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64242

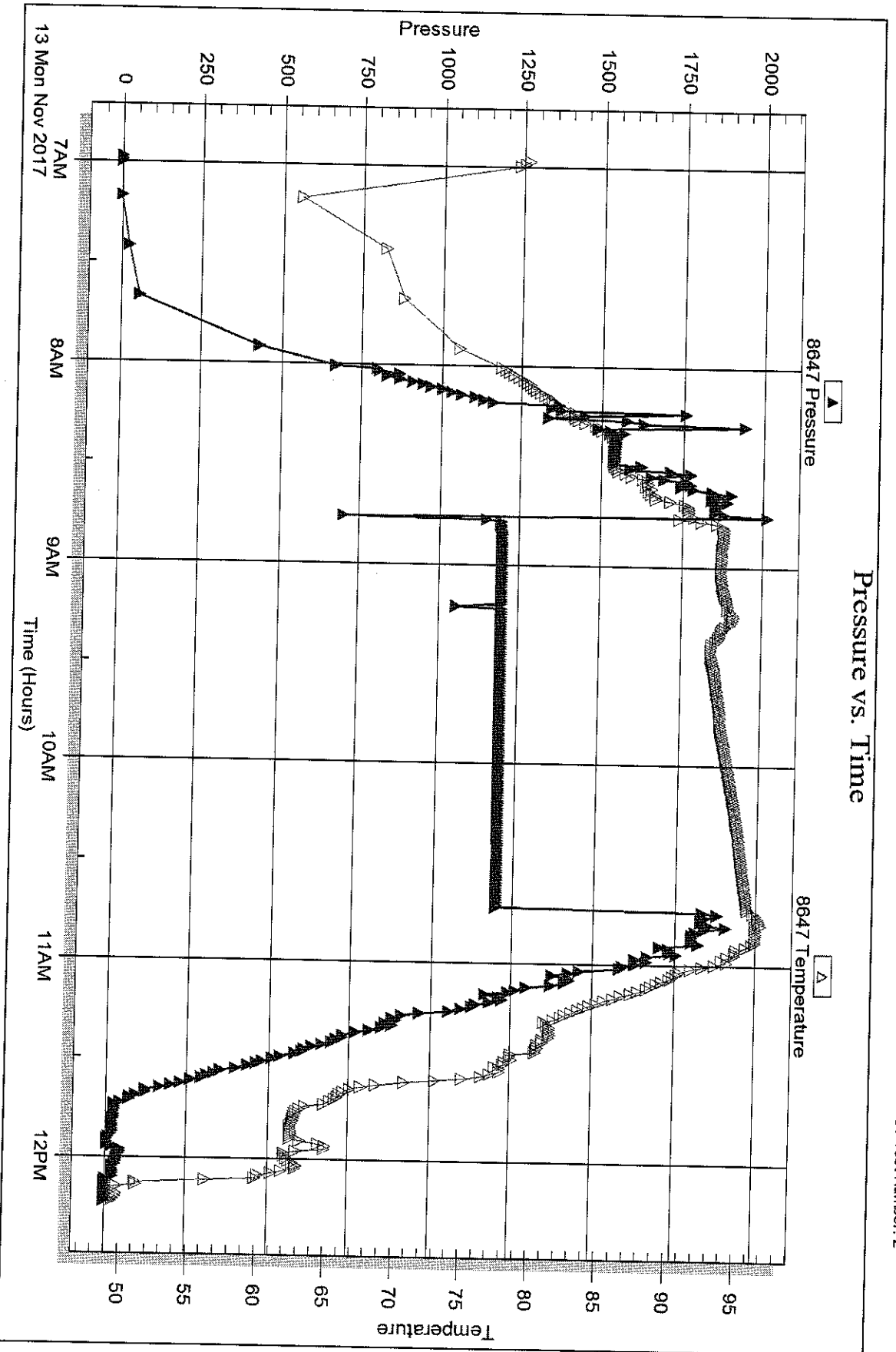
Printed: 2017.11.13 @ 15:15:45

Serial #: 8647

Below (Straddle) Resources, Inc.

LJ Deiling 2

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64242

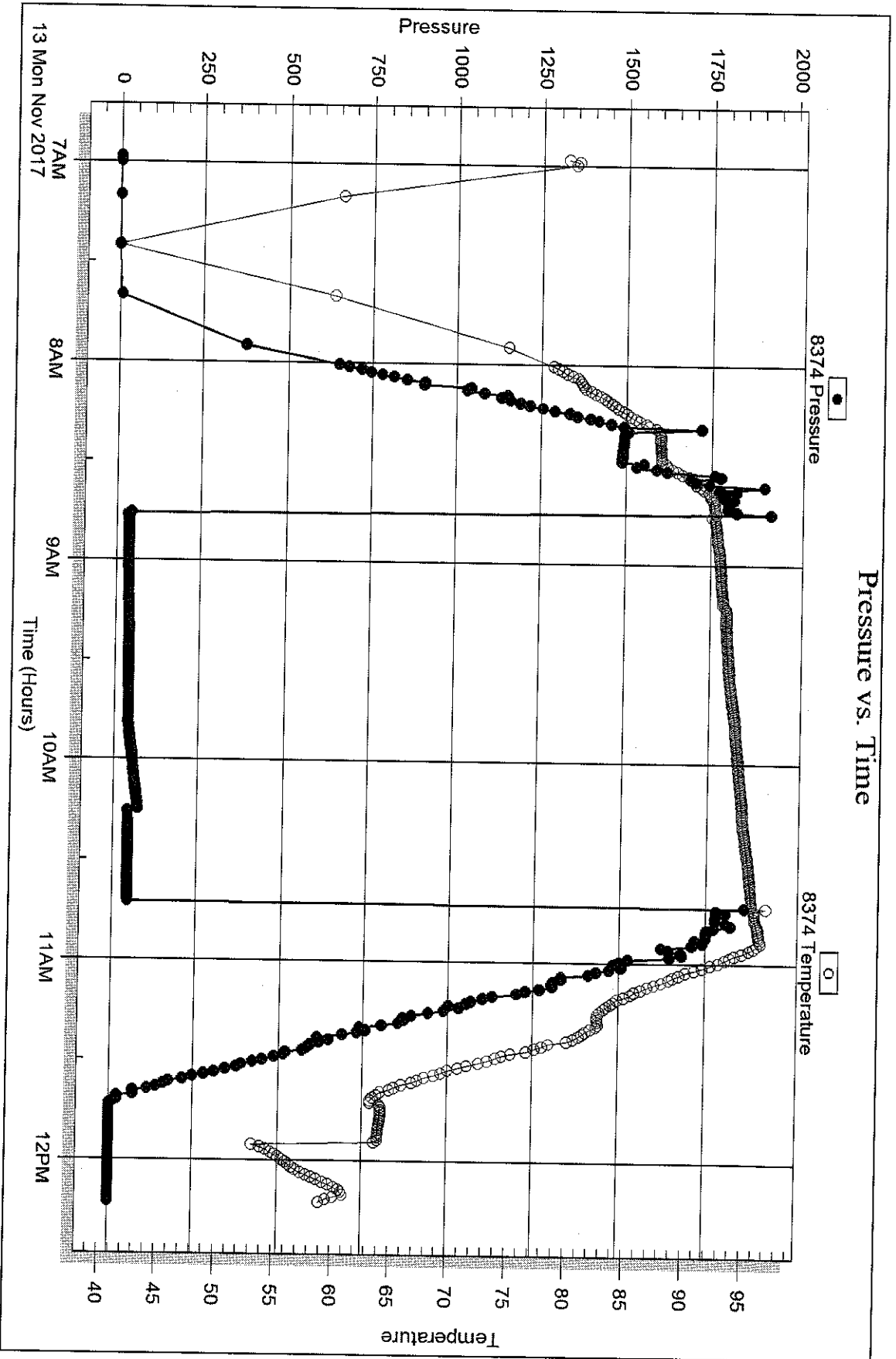
Printed: 2017.11.13 @ 15:15:45

Serial #: 8374

Outside Castle Resources, Inc.

LJ Drilling 2

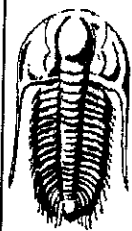
DST Test Number: 2



Triobrite Testing, Inc

Ref. No: 64242

Printed: 2017.11.13 @ 15:15:45



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Castle Resources, Inc.

15-13-17 Ellis Co KS

P.O. Box 583
Russell KS
67665

LJ Dreiling 2

Job Ticket: 64243

DST#: 3

ATTN: Jerry Green

Test Start: 2017.11.13 @ 13:07:42

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:36:50

Time Test Ended: 19:06:05

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: **3504.00 ft (KB) To 3549.00 ft (KB) (TVD)**

Total Depth: 3620.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2001.00 ft (KB)

1996.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8672

Inside

Press@RunDepth: 34.85 psig @ 3509.00 ft (KB)

Start Date: 2017.11.13

End Date: 2017.11.13

Start Time: 13:07:57

End Time: 19:06:05

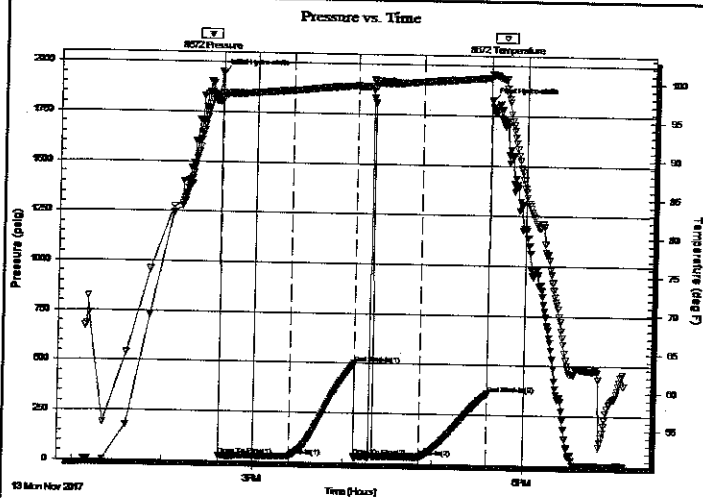
Capacity: 8000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2017.11.13 @ 14:36:35

Time Off Btm: 2017.11.13 @ 17:36:35

TEST COMMENT: IF: Built to 3" blow
IS: No return blow
FF: No blow -- flushed tool -- weak surface blow died in 20 min.
FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1944.64	98.27	Initial Hydro-static
1	25.88	97.41	Open To Flow (1)
47	28.93	98.71	Shut-In(1)
90	499.25	99.46	End Shut-In(1)
91	31.16	99.24	Open To Flow (2)
101	1867.79	100.22	flush
135	34.85	100.05	Shut-In(2)
180	359.12	100.67	End Shut-In(2)
180	1824.38	101.18	Final Hydro-static

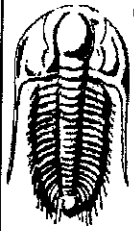
Recovery

Length (ft)	Description	Volume (bbl)
30.00	mud with oil spots	0.42

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Castle Resources, Inc.
P.O. Box 583
Russell KS
67665
ATTN: Jerry Green

15-13-17 Ellis Co KS
LJ Dreiling 2
Job Ticket: 64243 **DST#: 3**
Test Start: 2017.11.13 @ 13:07:42

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: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.77 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 12400.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	mud with oil spots	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

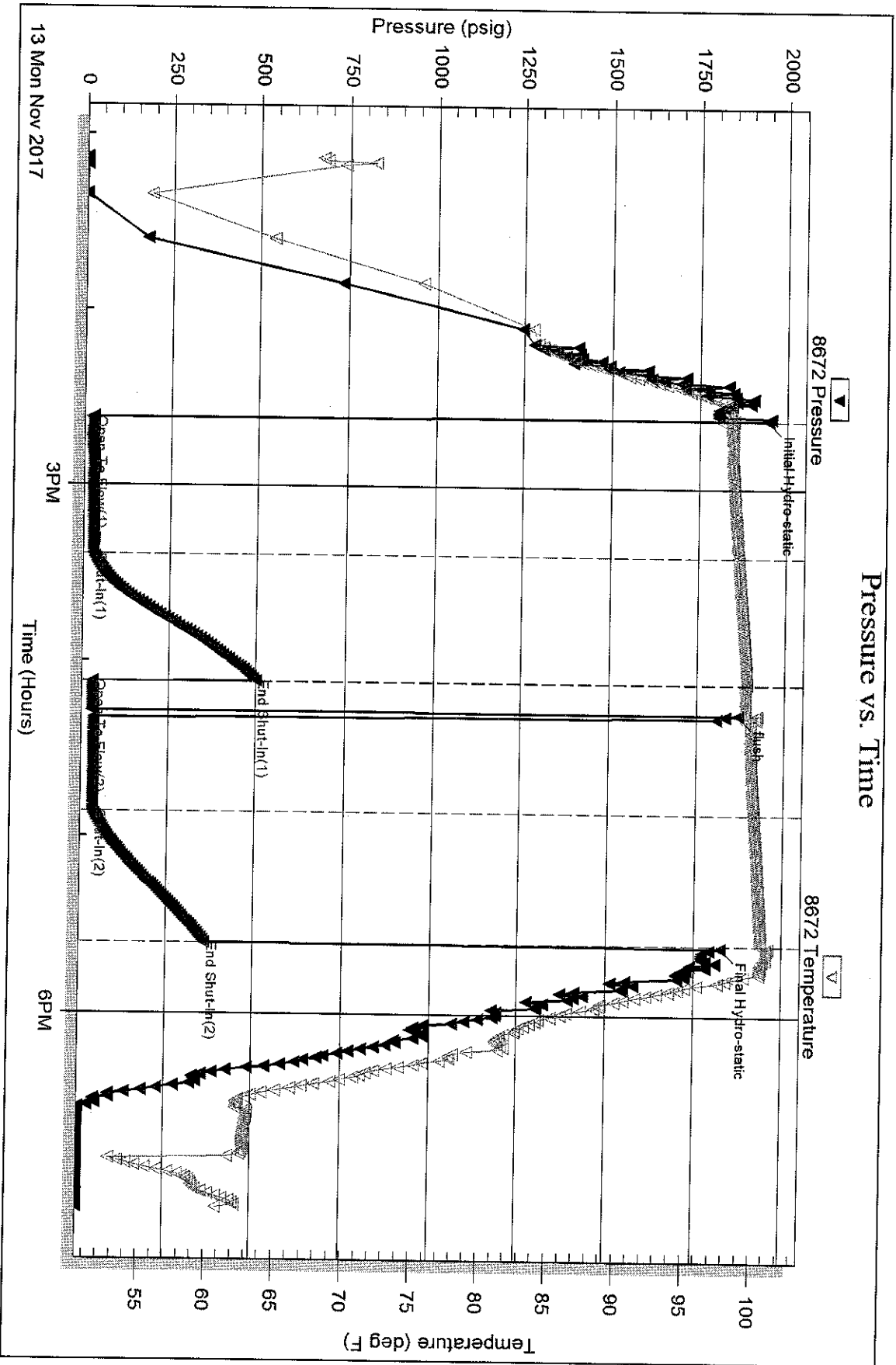
Serial #: 8672

Inside

Castle Resources, Inc.

LJ Drilling 2

DST Test Number: 3

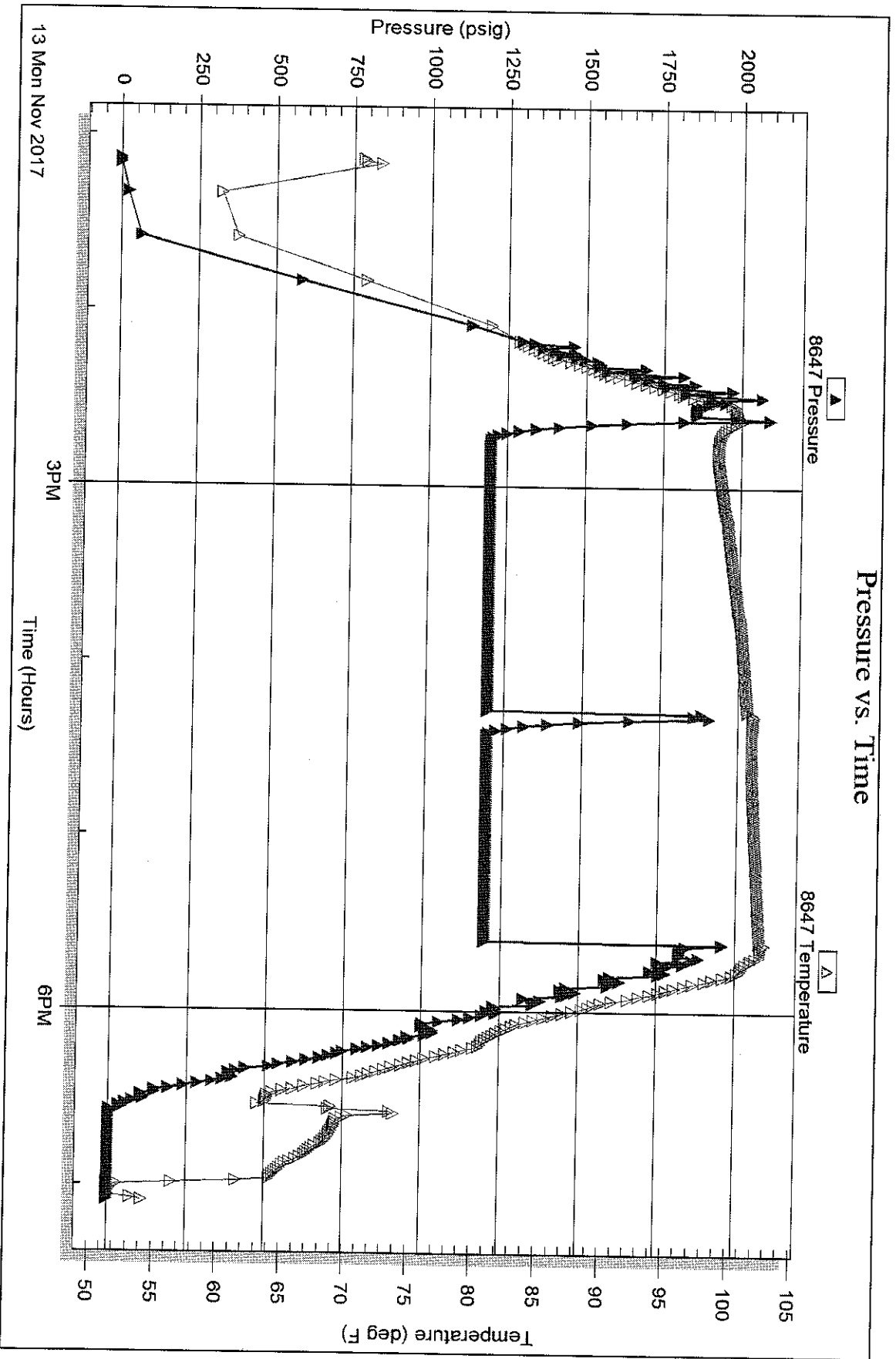


Serial #: 8647

Below (Stratton) Resources, Inc.

LJ Drilling 2

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 64243

Printed: 2017.11.13 @ 19:24:31

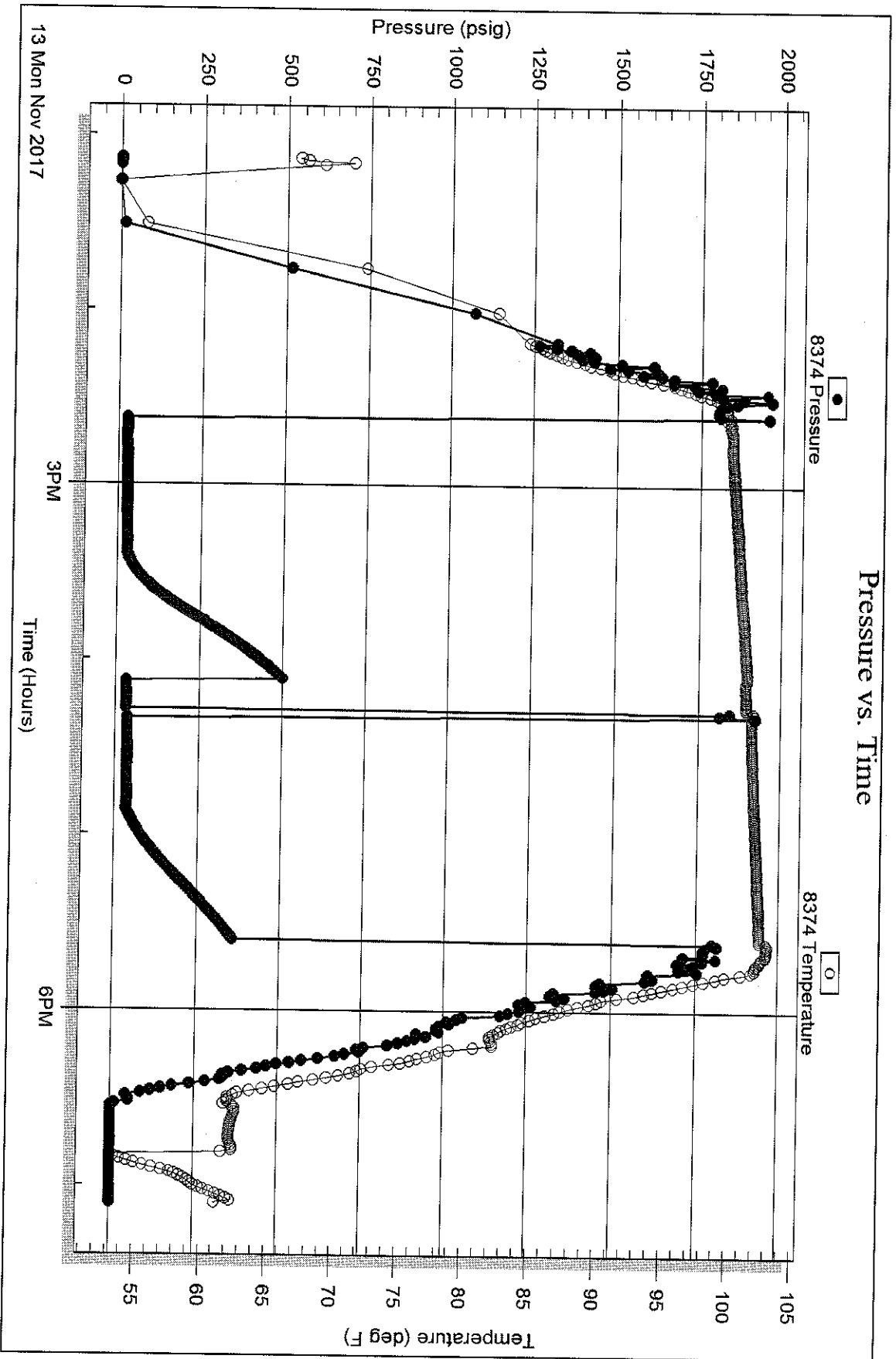
Serial #: 8374

Outside

Castle Resources, Inc.

LJ Drilling 2

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 64243

Printed: 2017.11.13 @ 19:24:31

JERRY GREEN

CONSULTING GEOLOGIST

4350 Keystone Rd
HAYS, KS 67601
PHONE: 785-625-5155

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: CASTLE RESOURCES INC.

LEASE: L J DRILLING #2

FIELD: CATHERINE SOUTH

LOCATION: SW-NW-SE

SEC 15 TWP 13S RGE 17W

COUNTY: ELLIS STATE KS.

CONTRACTOR: WHITE KNIGHT DRLG.

SPUD: 11-8-17 COMP: 11-13-17

RTD: 3620' LTD: 3620'

MUD UP: 2900' TYPE MUD: CHEM

SAMPLES SAVED FROM: 2900'

DRILLING TIME KEPT FROM: 2900'

SAMPLES EXAMINED FROM: 2900'

GEOLOGICAL SUPERVISION FROM: 2900'

GEOLOGIST ON WELL: 2900-3620'

FORMATION TOPS	LOG	SAMPLES
ANHY	1192-1232 8091195-1237 806	
TOPEKA	2988-987	2987-986
HEEBNER	3232-1231	3231-1230
TORONTO	3250-1249	3249-1248
LKC	3275-1274	3274-1273
BKC	3508-1505	3507-1506
ARBuckle	3524-1524	3524-1523
RTD	3620-1619	3620-1619

FORMATION TOPS	LOG	SAMPLES
ANHY	1192-1232 8091195-1237 806	
TOPEKA	2988-987	2987-986
HEEBNER	3232-1231	3231-1230
TORONTO	3250-1249	3249-1248
LKC	3275-1274	3274-1273
BKC	3508-1505	3507-1506
ARBuckle	3524-1524	3524-1523
RTD	3620-1619	3620-1619

REMARKS: All parties involved recommended that this well be plugged. Laterals might have saved this well but was deemed to high risk.

respectfully submitted,
[Signature]

LEGEND

