

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

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

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: _____

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <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:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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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

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

31-8s-33w Thomas Co KS

Epard 1-31

Job Ticket: 64244

DST#: 1

Test Start: 2017.11.15 @ 14:51:15

GENERAL INFORMATION:

Formation: **H-J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:29:00
 Time Test Ended: 21:56:00
 Interval: **4300.00 ft (KB) To 4378.00 ft (KB) (TVD)**
 Total Depth: 4378.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3220.00 ft (KB)
 3215.00 ft (CF)
 KB to GR/CF: 5.00 ft

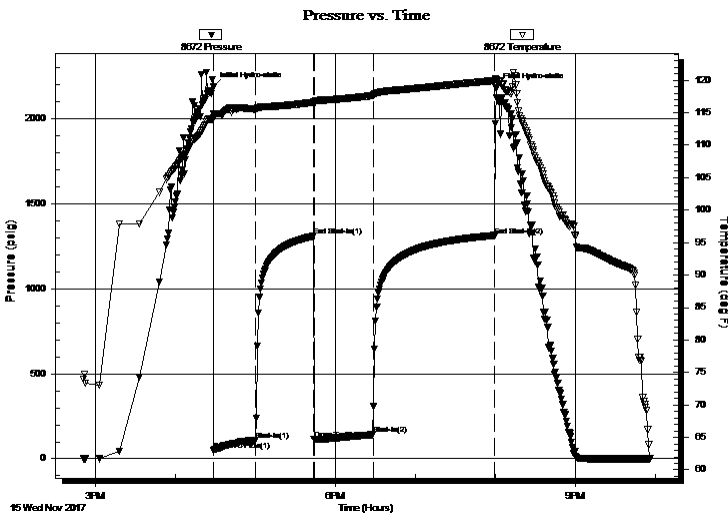
Serial #: 8672

Inside

Press@RunDepth: 142.26 psig @ 4373.00 ft (KB)
 Start Date: 2017.11.15 End Date: 2017.11.15
 Start Time: 14:51:15 End Time: 21:56:00
 Capacity: 8000.00 psig
 Last Calib.: 2017.11.15
 Time On Btm: 2017.11.15 @ 16:28:45
 Time Off Btm: 2017.11.15 @ 20:00:30

TEST COMMENT: IF: Built to 4 1/2" blow
 IS: No return blow
 FF: Built to 4 1/2" blow
 FS: No return blow

PRESSURE SUMMARY



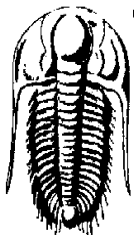
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2186.89	114.81	Initial Hydro-static
1	52.17	114.20	Open To Flow (1)
32	109.60	115.52	Shut-In(1)
75	1309.54	116.60	End Shut-In(1)
76	115.42	116.22	Open To Flow (2)
120	142.26	117.63	Shut-In(2)
211	1314.06	119.94	End Shut-In(2)
212	2181.39	120.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
119.00	mcw 10% m 90% w (collars)	0.59
82.00	mcw 50% m 50% w	1.15

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Slawson Exploration Comp, Inc

31-8s-33w Thomas Co KS

204 North Robinson Ave.
Ste. 2300
Oklahoma OK
ATTN: Jeremy Schwartz

Epard 1-31

Job Ticket: 64244

DST#: 1

Test Start: 2017.11.15 @ 14:51:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

25000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
119.00	mcw 10%m 90% w (collars)	0.585
82.00	mcw 50%m 50%w	1.150

Total Length: 201.00 ft Total Volume: 1.735 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

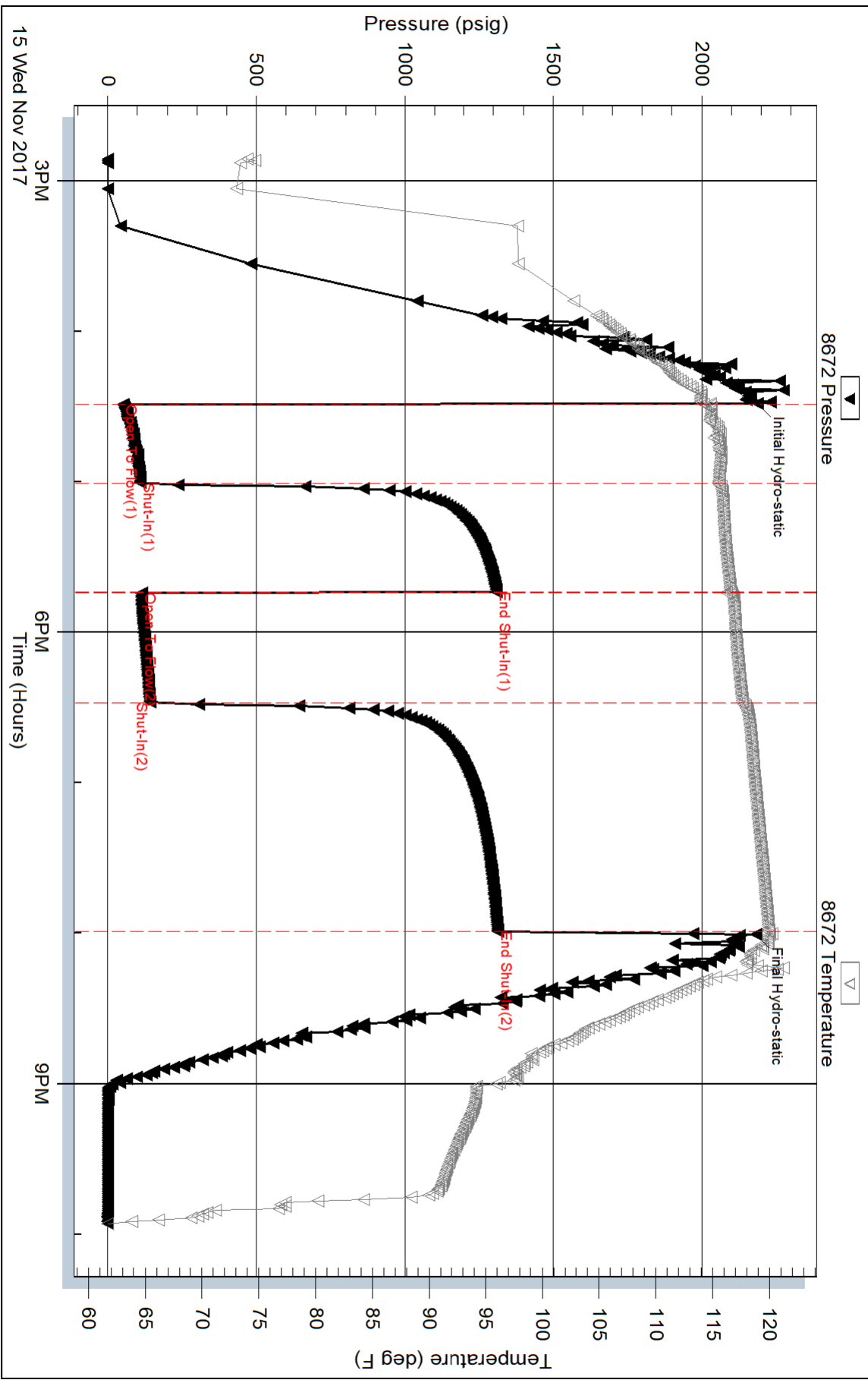
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .539@40.7*= 25,000 ppm

Pressure vs. Time



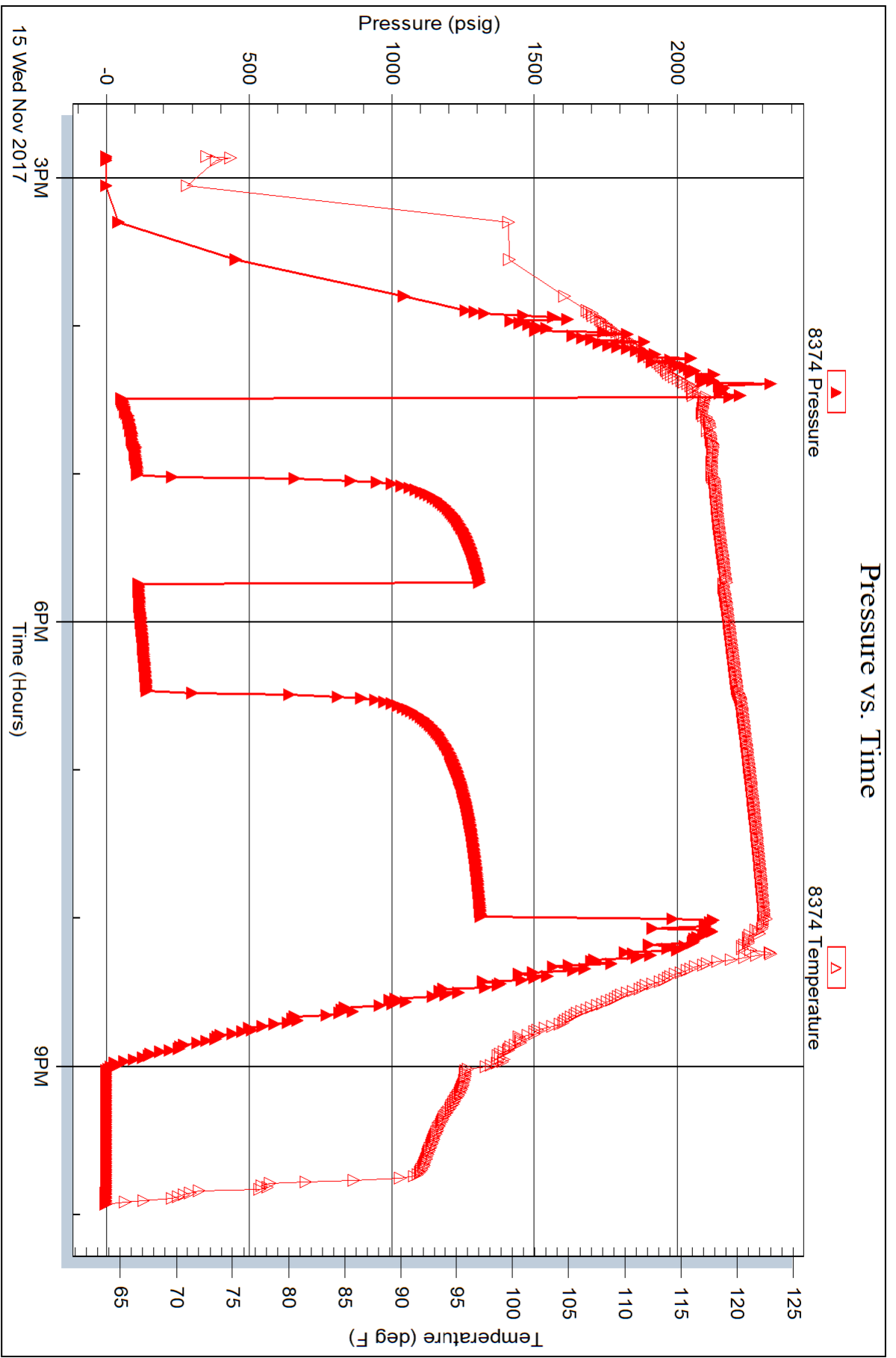
Serial #: 8374

Outside

Slaw son Exploration Comp, Inc

Epard 1-31

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64244

Printed: 2017.11.16 @ 03:34:07



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

31-8s-33w Thomas Co KS

Epard 1-31

Job Ticket: 64245

DST#: 2

Test Start: 2017.11.16 @ 21:36:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:52:15

Time Test Ended: 03:21:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4486.00 ft (KB) To 4528.00 ft (KB) (TVD)

Reference Elevations: 3220.00 ft (KB)

Total Depth: 4528.00 ft (KB) (TVD)

3215.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8672 Inside

Press@RunDepth: 20.83 psig @ 4523.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.11.16

End Date:

2017.11.17

Last Calib.: 2017.11.17

Start Time: 21:36:15

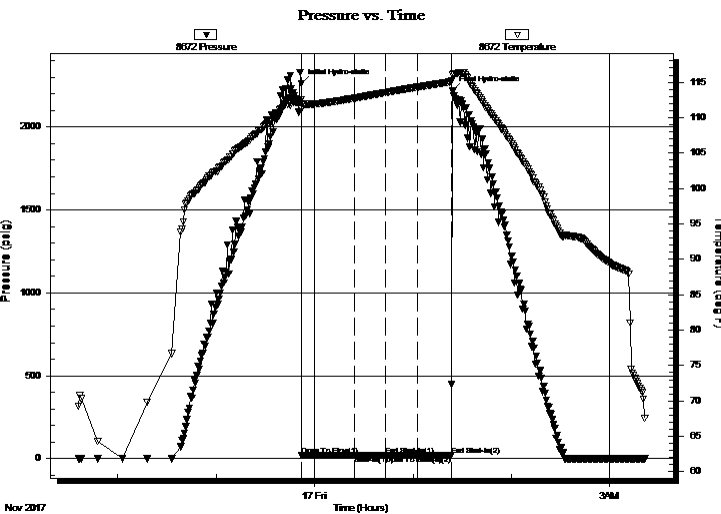
End Time:

03:21:30

Time On Btm: 2017.11.16 @ 23:52:00

Time Off Btm: 2017.11.17 @ 01:24:15

TEST COMMENT: IF:30 Built to weak surface blow
 FF:20 No return blow
 FS:20 No blow
 FS:20 No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2259.59	112.51	Initial Hydro-static
1	19.76	111.29	Open To Flow (1)
33	20.95	112.74	Shut-In(1)
52	22.88	113.53	End Shut-In(1)
52	21.38	113.54	Open To Flow (2)
71	20.83	114.30	Shut-In(2)
92	22.22	115.05	End Shut-In(2)
93	2216.57	116.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100% m	0.01

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Slawson Exploration Comp, Inc

31-8s-33w Thomas Co KS

204 North Robinson Ave.
Ste. 2300
Oklahoma OK
ATTN: Jeremy Schwartz

Epard 1-31

Job Ticket: 64245

DST#: 2

Test Start: 2017.11.16 @ 21:36:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	mud 100% m	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

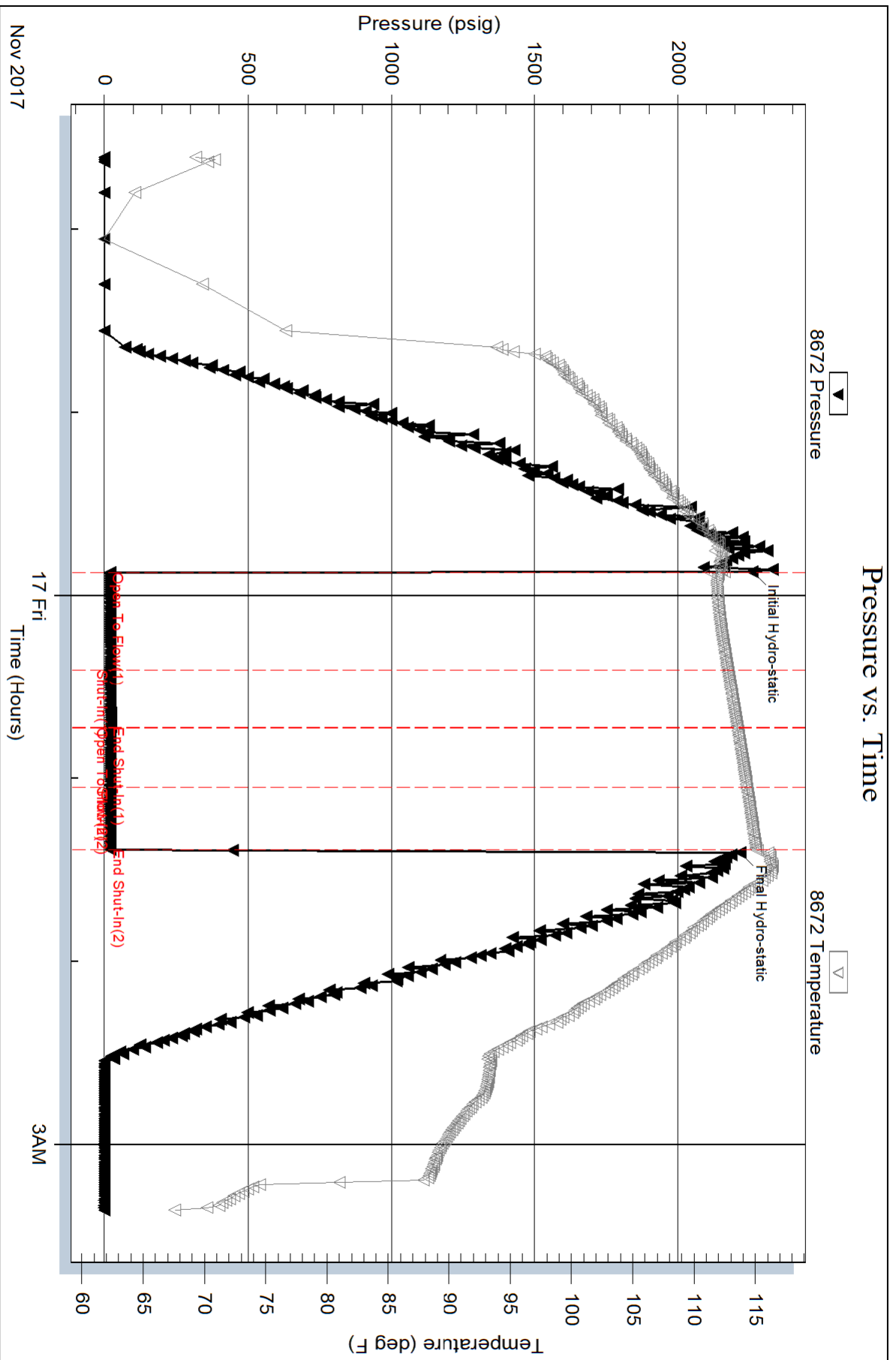
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



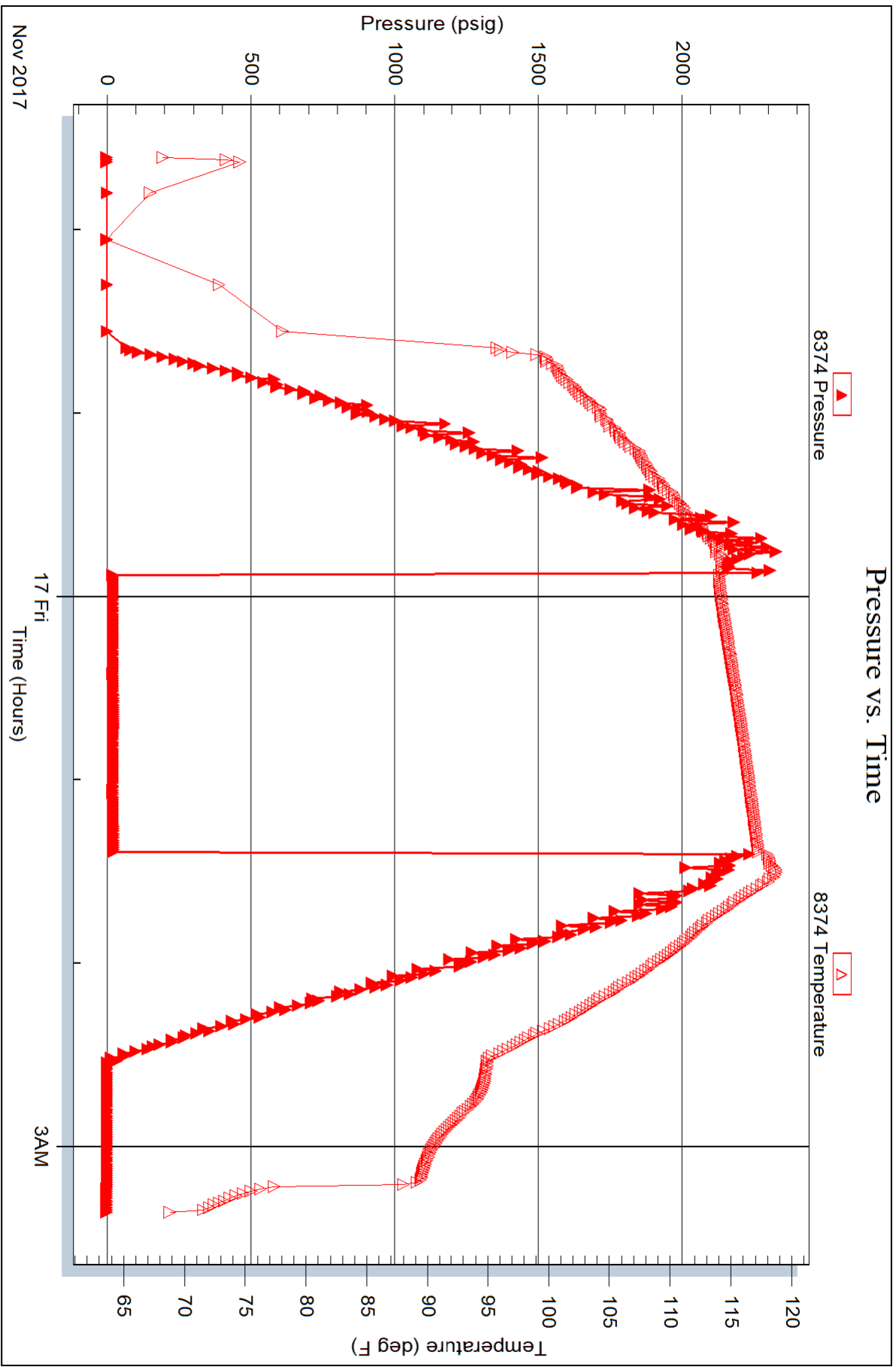
Serial #: 8374

Outside

Slaw son Exploration Comp, Inc

Epard 1-31

DST Test Number: 2





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc

31-8s-33w Thomas Co KS

204 North Robinson Ave.
Ste. 2300
Oklahoma OK
ATTN: Jeremy Schwartz

Epard 1-31

Job Ticket: 64246

DST#: 3

Test Start: 2017.11.17 @ 13:06:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:45:30

Time Test Ended: 18:13:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4527.00 ft (KB) To 4560.00 ft (KB) (TVD)

Total Depth: 4560.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3220.00 ft (KB)

3215.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8672 Inside

Press@RunDepth: 22.21 psig @ 4528.00 ft (KB)

Start Date: 2017.11.17

End Date:

2017.11.17

Start Time: 13:06:15

End Time:

18:13:00

Capacity: 8000.00 psig

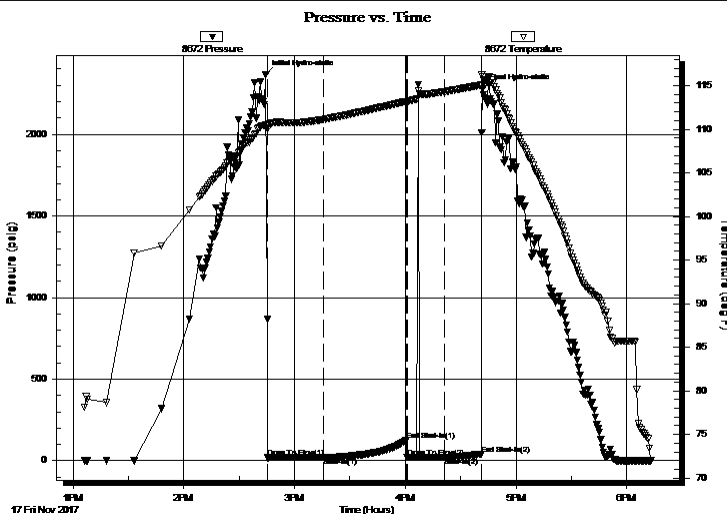
Last Calib.: 2017.11.17

Time On Btm: 2017.11.17 @ 14:44:30

Time Off Btm: 2017.11.17 @ 16:42:00

TEST COMMENT: IF:30- Built to 1/8" blow
IS:45- No return blow
FF:20- No blow --- flushed tool-- no blow
FS:20- No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2367.08	110.45	Initial Hydro-static
1	18.88	110.07	Open To Flow (1)
32	20.34	111.12	Shut-In(1)
77	127.52	113.20	End Shut-In(1)
77	19.58	113.13	Open To Flow (2)
97	22.21	114.31	Shut-In(2)
117	41.58	115.07	End Shut-In(2)
118	2280.03	116.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100% m	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Slawson Exploration Comp, Inc

31-8s-33w Thomas Co KS

204 North Robinson Ave.
Ste. 2300
Oklahoma OK
ATTN: Jeremy Schwartz

Epard 1-31

Job Ticket: 64246

DST#: 3

Test Start: 2017.11.17 @ 13:06:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

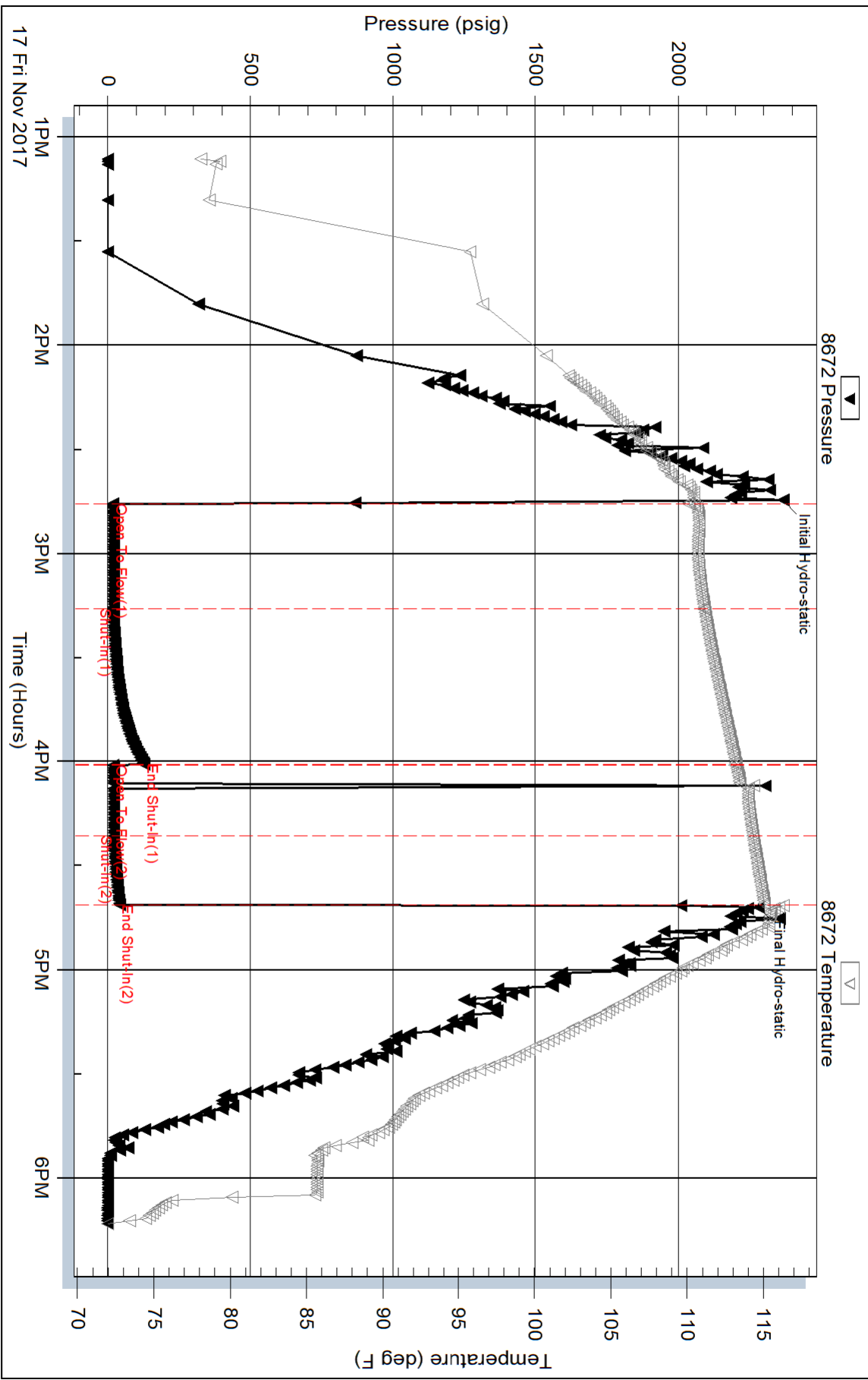
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Serial #: 8374

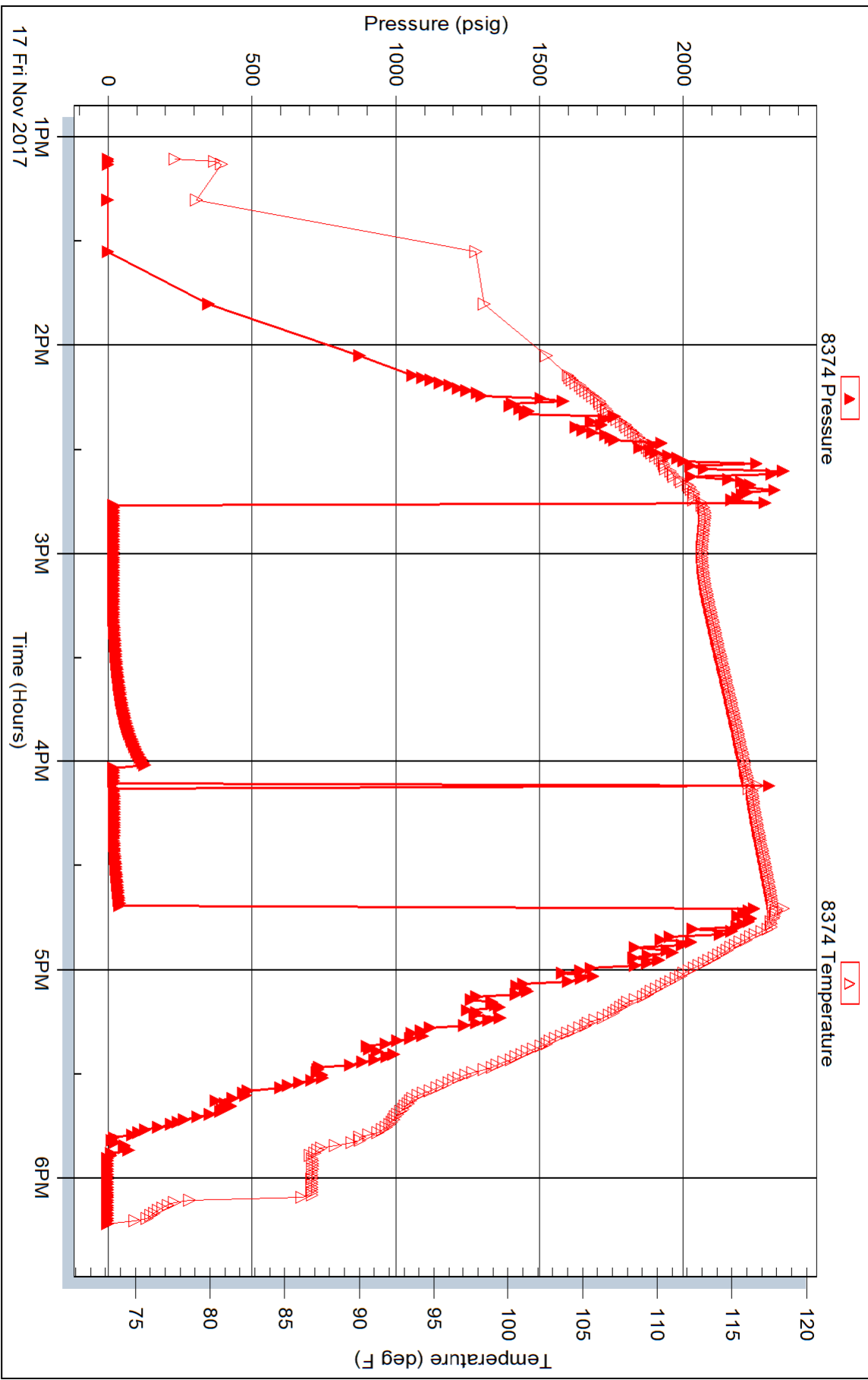
Outside

Slaw son Exploration Comp, Inc

Epard 1-31

DST Test Number: 3

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 64246

Printed: 2017.11.17 @ 18:37:59



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc

31-8s-33w Thomas Co KS

204 North Robinson Ave.
Ste. 2300
Oklahoma OK
ATTN: Jeremy Schwartz

Epard 1-31

Job Ticket: 64247

DST#: 4

Test Start: 2017.11.18 @ 08:23:15

GENERAL INFORMATION:

Formation: **Pawnee-Myric Station**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:15:15

Time Test Ended: 13:43:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4534.00 ft (KB) To 4619.00 ft (KB) (TVD)

Reference Elevations: 3220.00 ft (KB)

Total Depth: 4619.00 ft (KB) (TVD)

3215.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8672 Inside

Press@RunDepth: 64.91 psig @ 4614.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.11.18 End Date: 2017.11.18

Last Calib.: 2017.11.18

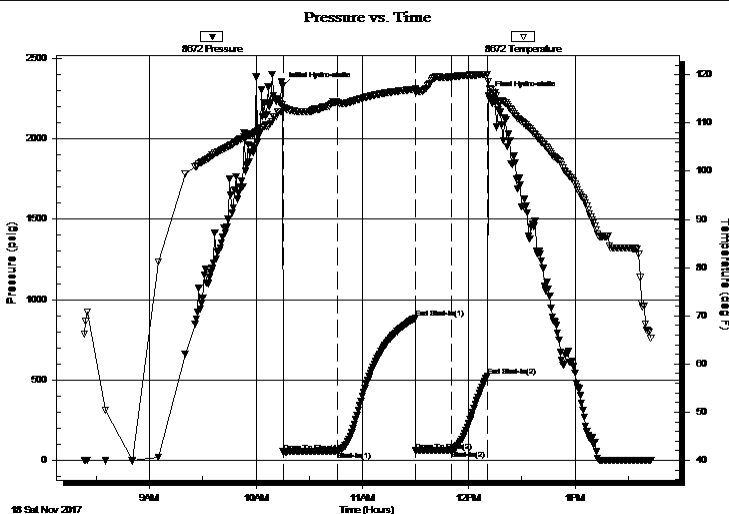
Start Time: 08:23:15 End Time: 13:43:15

Time On Btm: 2017.11.18 @ 10:15:00

Time Off Btm: 2017.11.18 @ 12:11:15

TEST COMMENT: IF:30-Built to 1" blow
IS:45- No return blow
FF:20- No blow
FS:20-No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2325.95	113.73	Initial Hydro-static
1	53.98	113.09	Open To Flow (1)
32	59.97	114.17	Shut-In(1)
75	886.71	117.00	End Shut-In(1)
76	60.46	116.46	Open To Flow (2)
96	64.91	119.52	Shut-In(2)
116	527.95	120.06	End Shut-In(2)
117	2267.79	118.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud with oil spots 100% m	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Slawson Exploration Comp, Inc

31-8s-33w Thomas Co KS

204 North Robinson Ave.
Ste. 2300
Oklahoma OK
ATTN: Jeremy Schwartz

Epard 1-31

Job Ticket: 64247

DST#: 4

Test Start: 2017.11.18 @ 08:23:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 72.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud with oil spots 100% _m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

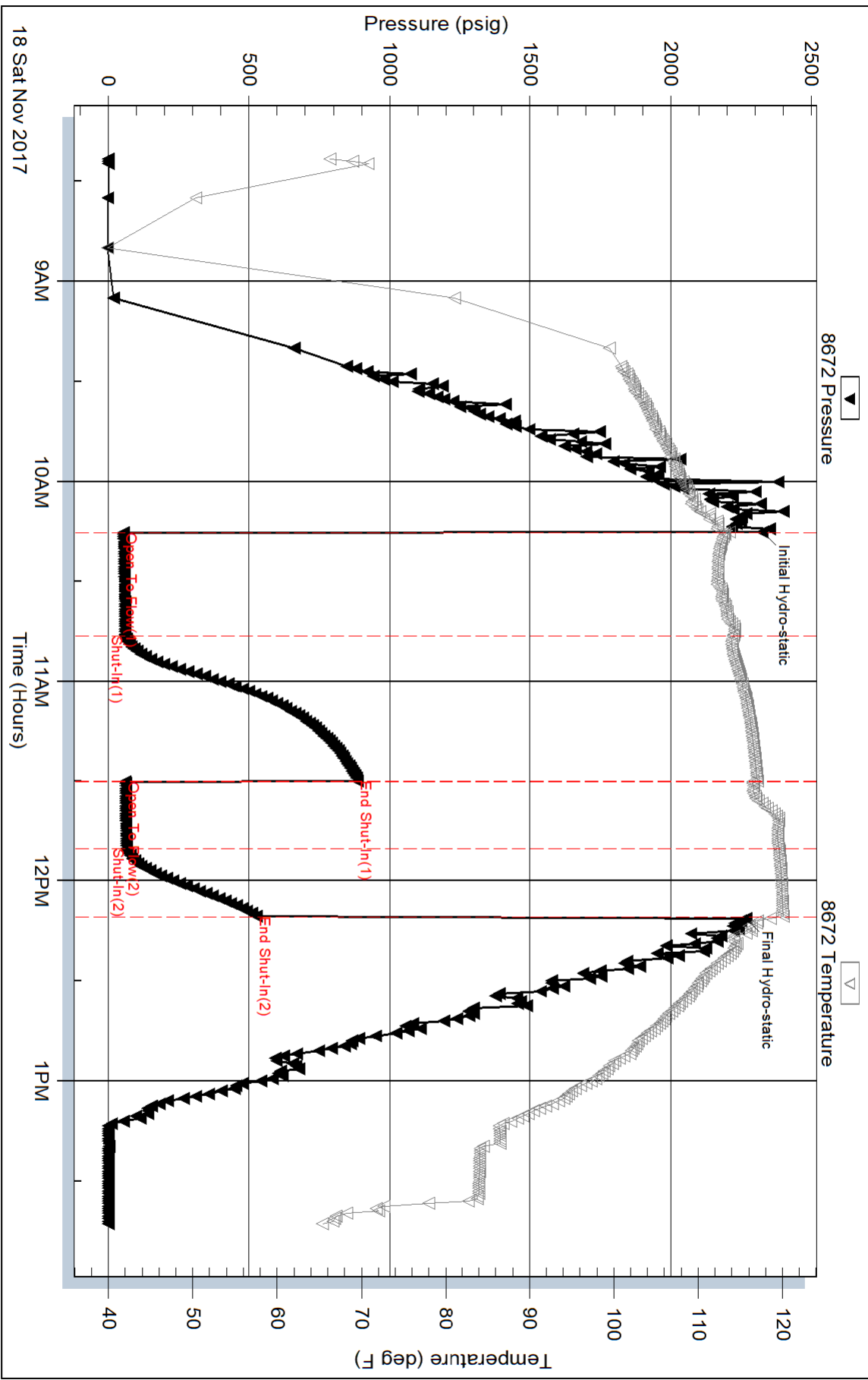
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Serial #: 8374

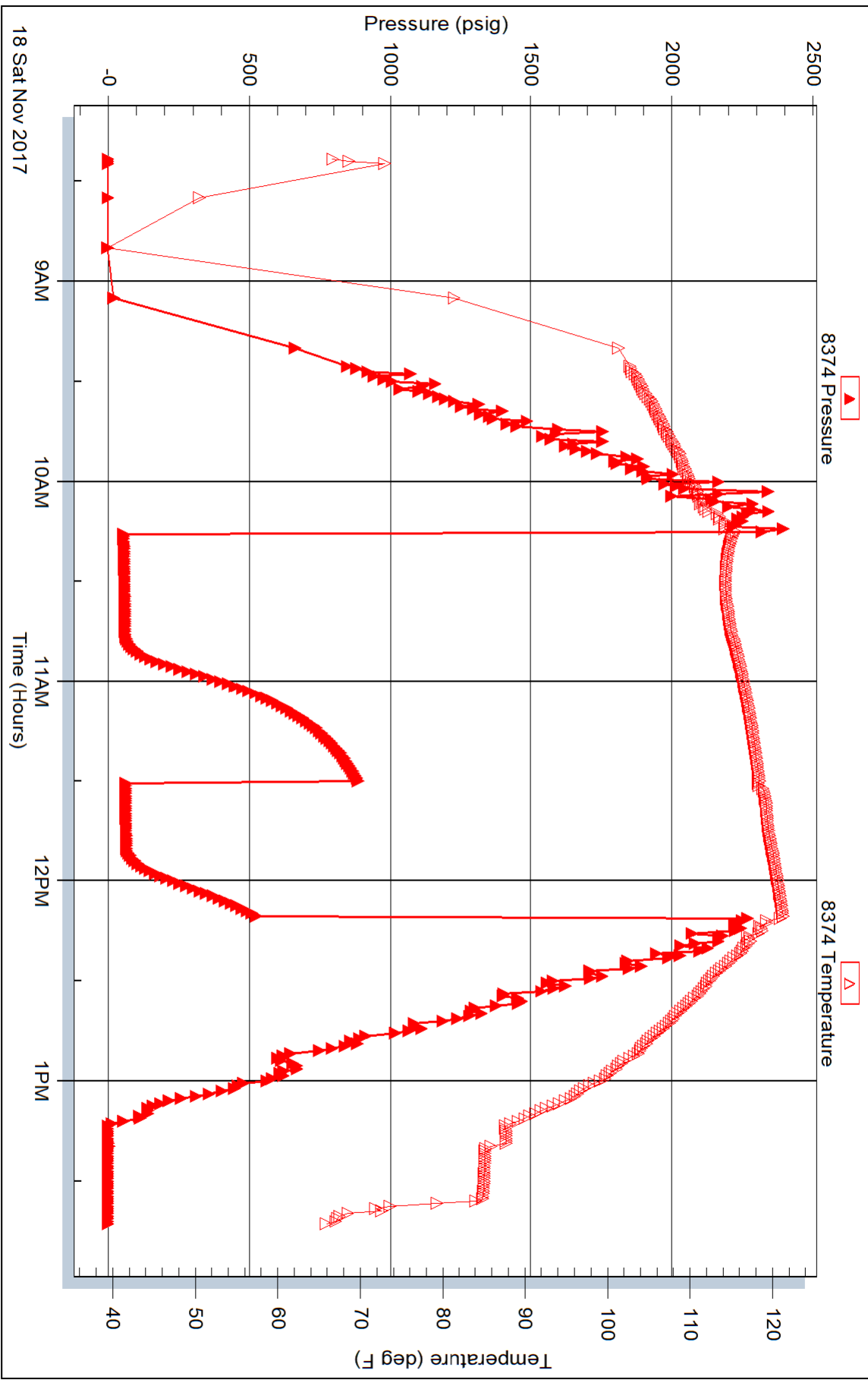
Outside

Slaw son Exploration Comp, Inc

Epard 1-31

DST Test Number: 4

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 64247

Printed: 2017.11.18 @ 14:36:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

31-8s-33w Thomas Co KS

Epard 1-31

Job Ticket: 64248

DST#: 5

Test Start: 2017.11.19 @ 06:33:15

GENERAL INFORMATION:

Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened:
 Time Test Ended: 09:03:00
 Interval: **4643.00 ft (KB) To 4714.00 ft (KB) (TVD)**
 Total Depth: 4714.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3220.00 ft (KB)
 3215.00 ft (CF)
 KB to GR/CF: 5.00 ft

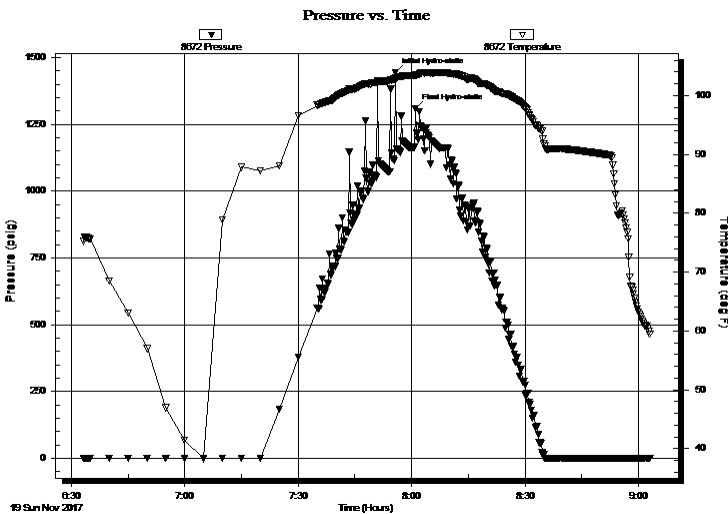
Serial #: 8672

Inside

Press@RunDepth: psig @ 4709.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.11.19 End Date: 2017.11.19 Last Calib.: 2017.11.19
 Start Time: 06:33:15 End Time: 09:03:00 Time On Btm: 2017.11.19 @ 07:55:45
 Time Off Btm: 2017.11.19 @ 08:01:00

TEST COMMENT: IF: Hit a bridge at 4100 ft
 IS:
 FF:
 FS:

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1444.49	102.98	Initial Hydro-static
6	1307.92	103.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
	Hit bridge	

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Slawson Exploration Comp, Inc

31-8s-33w Thomas Co KS

204 North Robinson Ave.
Ste. 2300
Oklahoma OK
ATTN: Jeremy Schwartz

Epard 1-31

Job Ticket: 64248

DST#: 5

Test Start: 2017.11.19 @ 06:33:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
	Hit bridge	

Total Length:

ft

Total Volume:

bbl

Num Fluid Samples: 0

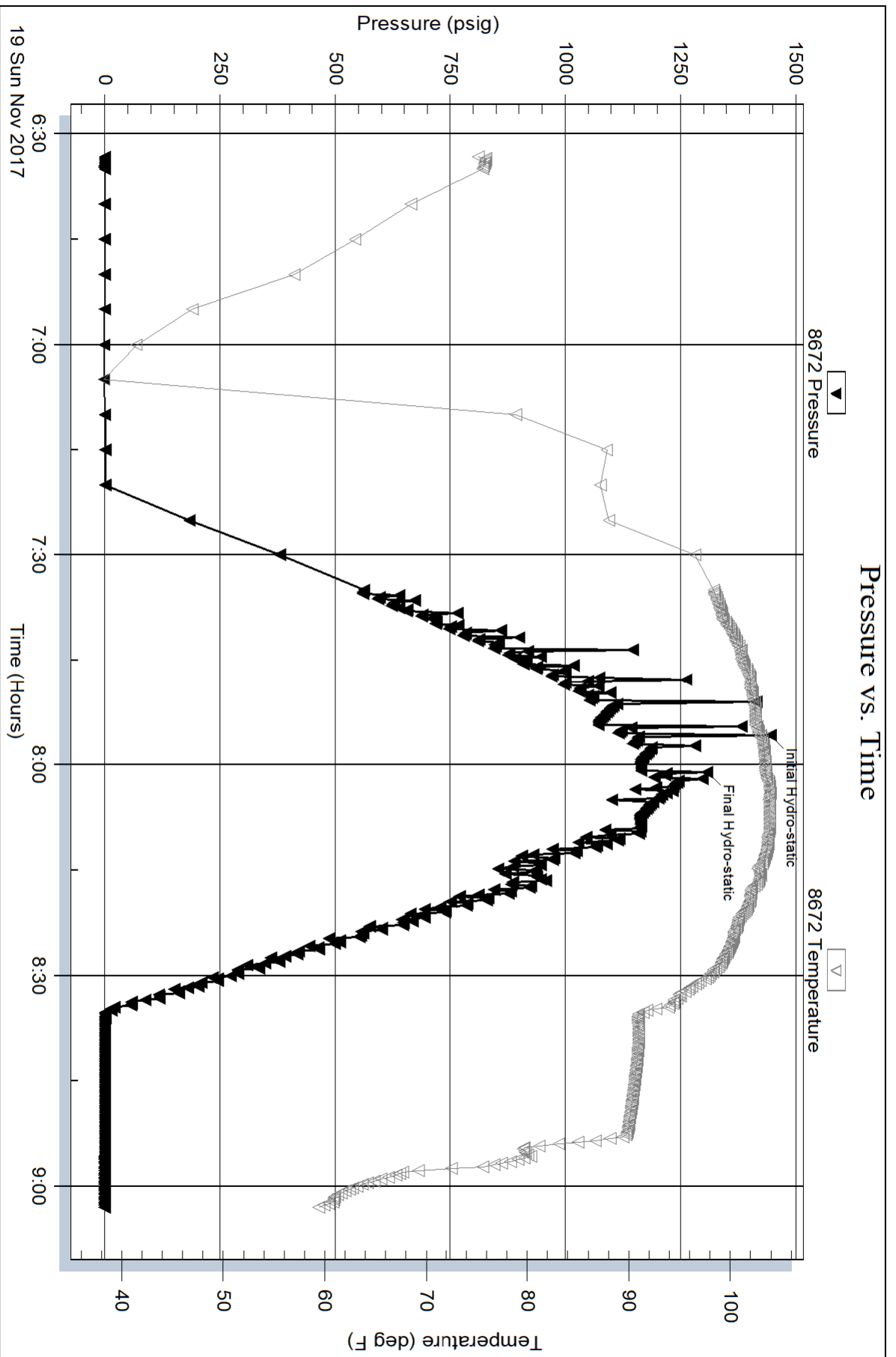
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

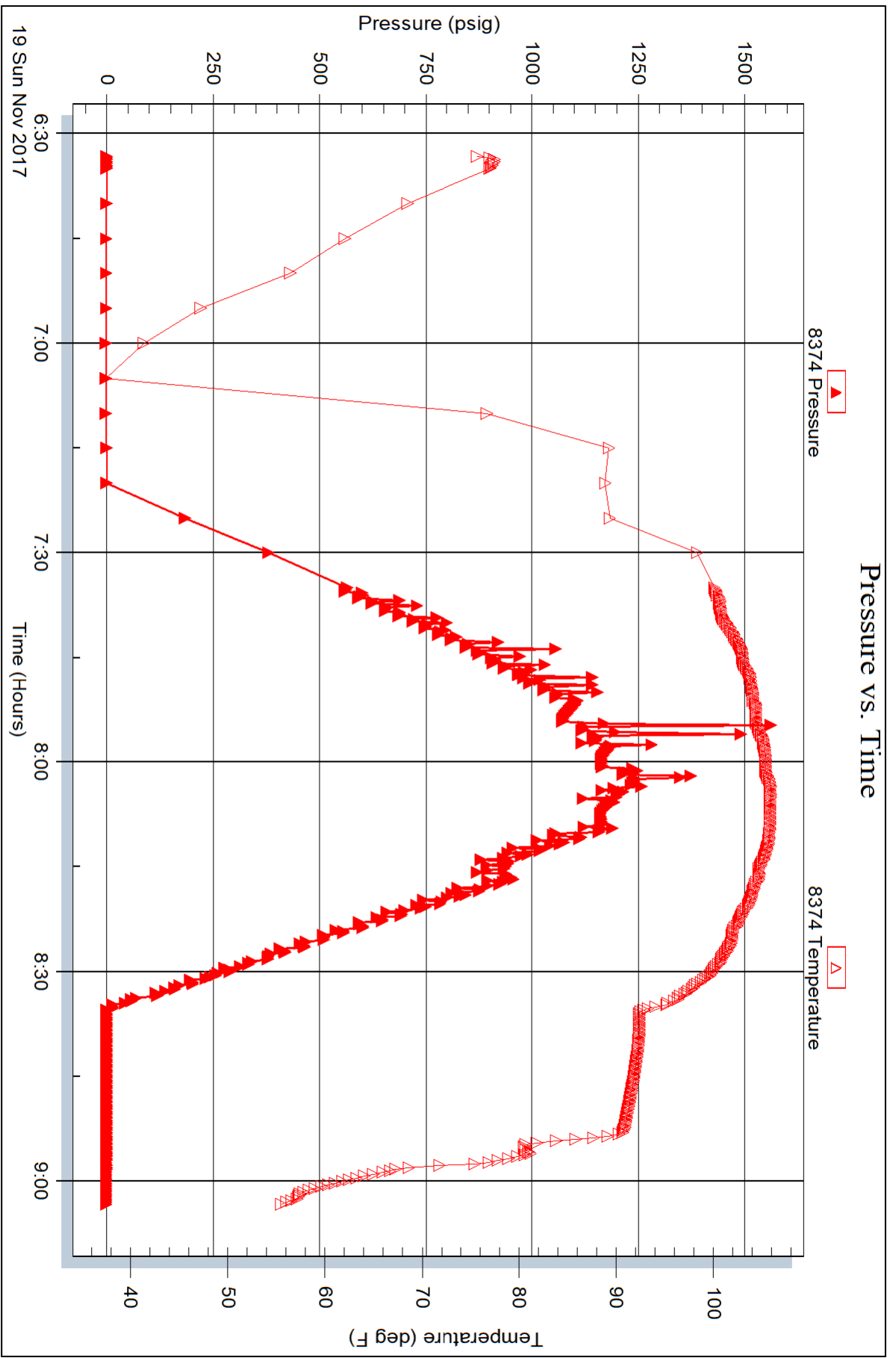


Serial #: 8374

Outside Slaw son Exploration Comp, Inc

Epard 1-31

DST Test Number: 5





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

31-8s-33w Thomas Co KS

Epard 1-31

Job Ticket: 64249

DST#: 6

Test Start: 2017.11.19 @ 14:02:15

GENERAL INFORMATION:

Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:55:00
 Time Test Ended: 19:37:15
 Interval: **4643.00 ft (KB) To 4714.00 ft (KB) (TVD)**
 Total Depth: 4714.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3220.00 ft (KB)
 3215.00 ft (CF)
 KB to GR/CF: 5.00 ft

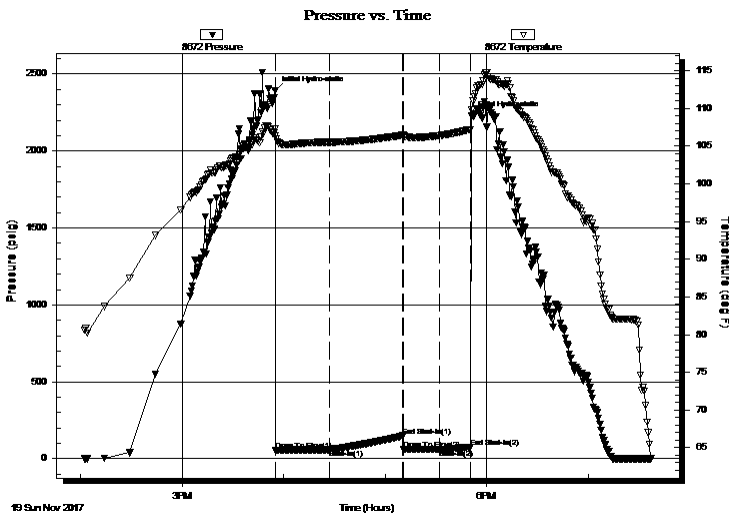
Serial #: 8672

Inside

Press@RunDepth: 61.63 psig @ 4709.00 ft (KB)
 Start Date: 2017.11.19 End Date: 2017.11.19
 Start Time: 14:02:15 End Time: 19:37:15
 Capacity: 8000.00 psig
 Last Calib.: 2017.11.19
 Time On Btm: 2017.11.19 @ 15:54:45
 Time Off Btm: 2017.11.19 @ 17:51:00

TEST COMMENT: IF:30-Built to 1/2" blow
 IS:45-No return blow
 FF:20-No blow
 FS:20- No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2390.34	107.34	Initial Hydro-static
1	55.35	106.38	Open To Flow (1)
33	59.53	105.52	Shut-In(1)
76	148.62	106.46	End Shut-In(1)
76	59.63	106.41	Open To Flow (2)
98	61.63	106.41	Shut-In(2)
116	76.30	107.20	End Shut-In(2)
117	2226.94	109.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100% _m	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Slaw son Exploration Comp, Inc

31-8s-33w Thomas Co KS

204 North Robinson Ave.
Ste. 2300
Oklahoma OK
ATTN: Jeremy Schw artz

Epard 1-31

Job Ticket: 64249

DST#: 6

Test Start: 2017.11.19 @ 14:02:15

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 61.00 sec/qt

Water Loss: 7.98 in³

Resistivity: 0.00 ohm.m

Salinity: 2000.00 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
5.00	mud 100%m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

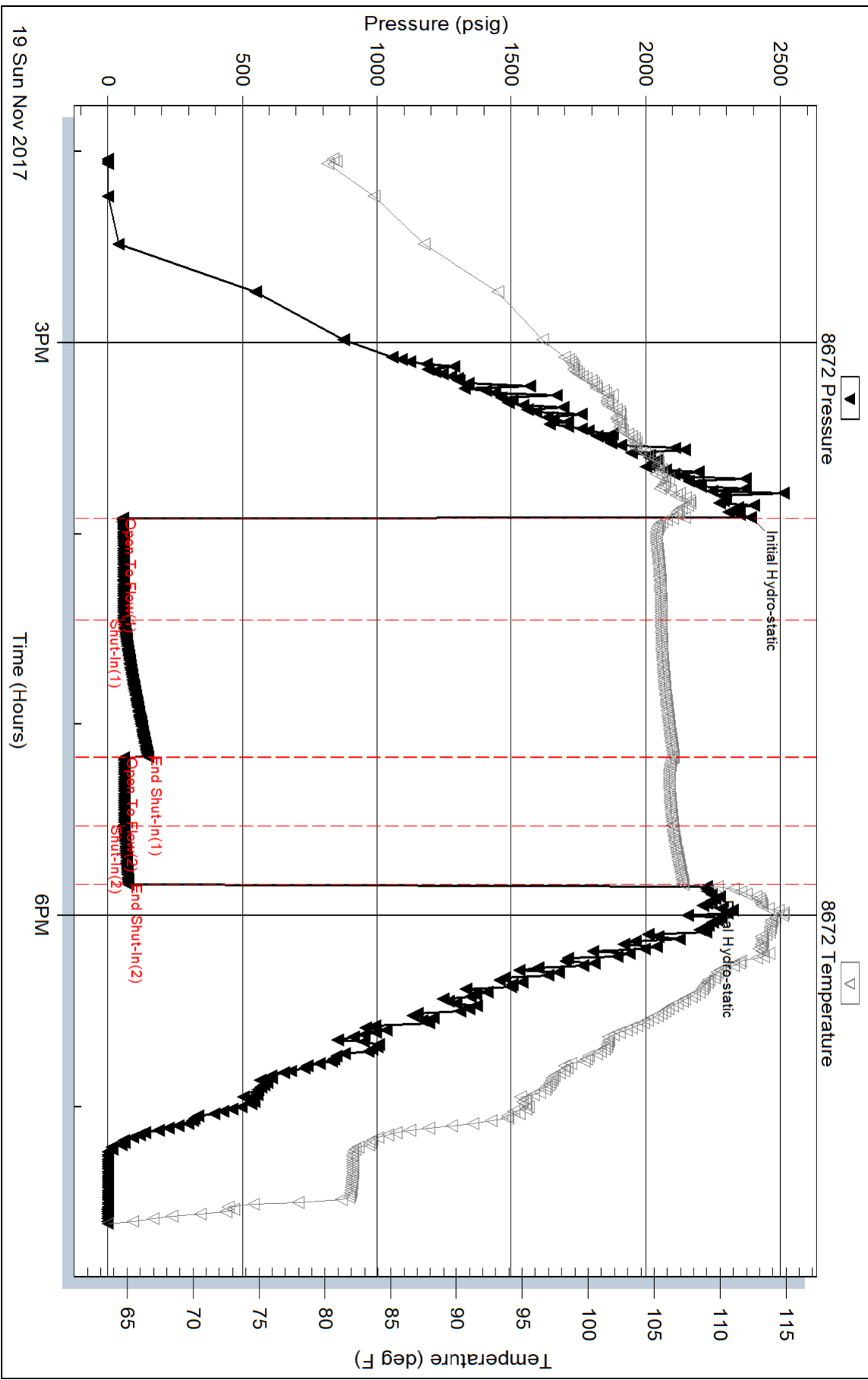
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Serial #: 8374

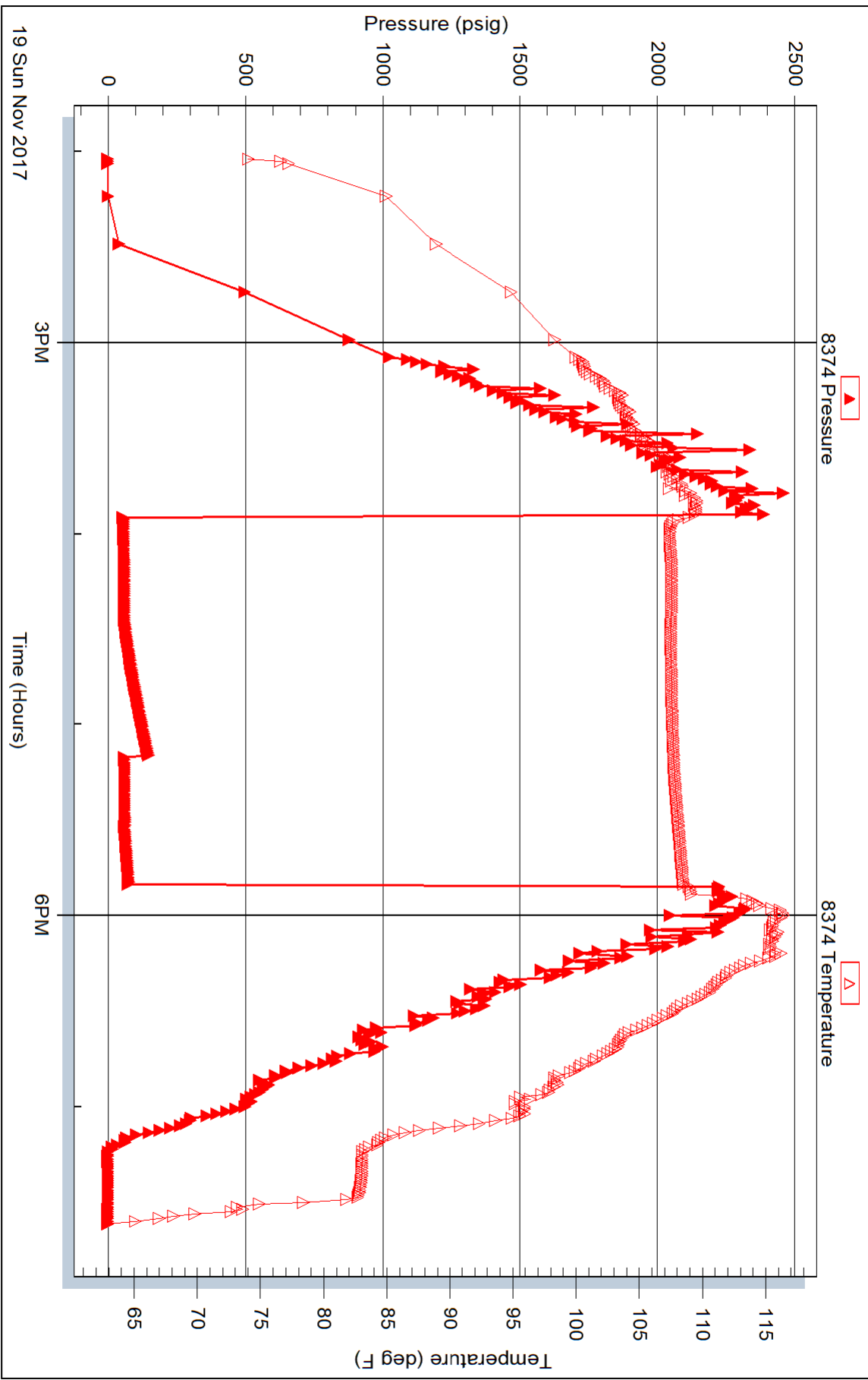
Outside

Slaw son Exploration Comp, Inc

Epard 1-31

DST Test Number: 6

Pressure vs. Time



Scale 1:240 Imperial

Well Name: Epard #1-31
 Surface Location: 2227' FNL_1901' FWL Sec. 31-8S-33W
 Bottom Location:
 API: 15-193-21007-00-00
 License Number:
 Spud Date: 11/10/2017 Time: 8:45 AM
 Region: Thomas County
 Drilling Completed: 11/20/2017 Time: 7:20 AM
 Surface Coordinates:
 Bottom Hole Coordinates:
 Ground Elevation: 3210.00ft
 K.B. Elevation: 3215.00ft
 Logged Interval: 3730.00ft To: 4835.00ft
 Total Depth: 4835.00ft
 Formation: Lansing, Marmaton, Pawnee
 Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: Slawson Exploration Co., Inc
 Address: 204 N. Robinson Ave., Ste 2300
 Oklahoma City, OK 73102
 Contact Geologist: Dillon Dolezal
 Contact Phone Nbr: 701-260-2016
 Well Name: Epard #1-31
 Location: 2227' FNL_1901' FWL Sec. 31-8S-33W
 API: 15-193-21007-00-00
 Pool:
 State: KS Field: USA
 Country: USA

LOGGED BY

Company: Mile High Exploration, LLC
 Address: 675 Loveland St
 Golden, CO 80401
 Phone Nbr: 203-671-6034
 Logged By: Geologist Name: Jeremy Schwartz

NOTES

The Slawson Exploration Company, Inc Epard #1-31 was drilled to a total depth of 4835', bottoming in the Mississippi. Five DST's were conducted throughout the Lansing, Marmaton, Pawnee, Myric Station and Johnson zones. The DST reports can be found at the bottom of this log.

Due to negative DST results, sample shows, gas kicks, and log analysis it was determined to plug and abandon the well. The dry samples were saved and will be available for further review at the Kansas Geological Society Well Sample Library, located in Wichita, KS.

NOTE: The drill time and sample tops were approximately 6-8' low to the Elog tops so the drill time and all pertinent info such as tops, DST's, etc have been shifted up 6' to match the Elog tops on this log

Respectfully Submitted,
 Jeremy Schwartz
 Geologist

CONTRACTOR

Contractor: WW Drilling, LLC
 Rig #: 10
 Rig Type: mud rotary
 Spud Date: 11/10/2017 Time: 8:45 AM
 TD Date: 11/20/2017 Time: 7:20 AM
 Rig Release: Time:

ELEVATIONS

K.B. Elevation: 3215.00ft
K.B. to Ground: 5.00ft

Ground Elevation: 3210.00ft

DATE	DEPTH	ACTIVITY
Monday, November 13, 2017	3700'	Geologist Jeremy Schwartz on location @ 1530hrs, ~3700', drlg ahead through
Tuesday, November 14, 2017	4096'	Wabaunsee, Topeka, Oread, CFS @ 4096', conduct wiper trip, succesfull wiper trip,
	4258'	resume drlg ahead through Heebner, Toronto, Lansing, CFS @ 4258', resume drlg
Wednesday, November 15, 2017	4340'	CFS @ 4340', resume Drlg, CFS @ 4378', conduct short trip, CTCH 1hr, drop survey,
	4378'	strap out of hole in order to conduct DST #1 in the Lansing "H-J"
Thursday, November 16, 2017	4410'	successful test, resume drlg ahead through Lansing "K", CFS @ 4410', resume drlg,
	4440'	CFS @ 4440', resume Drlg, CFS @ 4504, resume Drlg, CFS @ 4515' resume Drlg,
	4528'	CFS @ 4528', trip out of hole to conduct DST #2 in the Marmaton,
Friday, November 17, 2017	4528'	successful test, resume drlg through Marmaton, CFS @ 4560',
	4560'	trip out of hole to Conduct DST #3 in the Marmaton, successful test, resume drlg,
	4619'	CFS @ 4590', resume Drlg, CFS @ 4619', trip out of hole in order to Conduct DST #4
		in the Pawnee/Myric Station
Saturday, November 18, 2017	4693'	successful test, resume drlg, CFS @ 4693', resume drlg,
Sunday, November 19, 2017	4714'	CFS @ 4714', trip out of hole to conduct DST #5 in the Johnson Zone, hit a bridge
		while running in with test tool, tried to work through it, trip out and go back to
		bottom with bit, CTCH 1.5hrs, trip out, run back in with test tool and got to bottom ok
Monday, November 20, 2017	4755'	conduct DST #6, successful test, resume drlg, CFS @ 4755', resume drlg ahead to TD
	4835'	TD of 4835' reached @ 0720hrs, CTCH 1hr, drop survey, trip out of hole to conduct
		logging operations, logging operations complete @ 1500hrs
		Geologist Jeremy Schwartz off location @ 1630hrs

	OIL - P&A										OIL - P&A										SLAWSON EXPLORATION CO.									
	CASTLE RESOURCES, INC										CASTLE RESOURCES, INC										KISTLER #2-14									
	EEPARD #1-31					STEELE #1					ELLER CHASE UNIT #1					KISTLER #2-14														
	2227' FNL & 1901' FWL 31-8S-33W					1600' FSL & 2280' FEL 36-8S-34W					2560' FNL & 2230' FEL 30-8S-33W					80' FNL & 1730' FEL 14-9S-34W														
KB		3215			KB		3217			KB		3168			KB		3176													
LOG TOPS		SAMPLE TOPS			COMP. CARD		LOG		SMPL.		COMP. CARD		LOG		SMPL.		COMP. CARD		LOG		SMPL.									
FORMATION	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.										
ANHYDRITE TOP	2794	421	2798	417	2782	435	- 14	- 18	2750	418	+ 3	- 1	2724	452	- 31	- 35														
BASE	2820	395	2824	391	2808	409	- 14	- 18	2778	390	+ 5	+ 1	2752	424	- 29	- 33														
WABAUNSEE	3788	-573	3788	-573	3789	-572	- 1	- 1	3760	-592	+ 19	+ 19	3732	-556	- 17	- 17														
TOPEKA	3918	-703	3918	-703	3912	-695	- 8	- 8	3880	-712	+ 9	+ 9	3861	-685	- 18	- 18														
OREAD	4074	-859	4074	-859	4069	-852	- 7	- 7	4034	-866	+ 7	+ 7	4025	-849	- 10	- 10														
HEEBNER	4116	-901	4116	-901	4112	-895	- 6	- 6	4076	-908	+ 7	+ 7	4067	-891	- 10	- 10														
TORONTO	4140	-925	4140	-925	4136	-919	- 6	- 6	4105	-937	+ 12	+ 12	4093	-917	- 8	- 8														
LANSING	4154	-939	4154	-939	4153	-936	- 3	- 3	4118	-950	+ 11	+ 11	4104	-928	- 11	- 11														
MUNCIE CREEK	4286	-1071	4288	-1073	4284	-1067	- 4	- 6	4250	-1082	+ 11	+ 9	4242	-1066	- 5	- 7														
LNS H	4305	-1090	4310	-1095	4302	-1085	- 5	- 10	4268	-1100	+ 10	+ 5	4261	-1085	- 5	- 10														
STARK	4368	-1153	4368	-1153	4367	-1150	- 3	- 3	4334	-1166	+ 13	+ 13	4328	-1152	- 1	- 1														
LNS K	4380	-1165	4380	-1165	4380	-1163	- 2	- 2	4347	-1179	+ 14	+ 14	4344	-1168	+ 3	+ 3														
BKC	4429	-1214	4430	-1215	4429	-1212	- 2	- 3	4396	-1228	+ 14	+ 13	4389	-1213	- 1	- 2														
MARMATON	4450	-1235	4451	-1236	4450	-1233	- 2	- 3	4416	-1248	+ 13	+ 12	4410	-1234	- 1	- 2														
PAWNEE	4552	-1337	4554	-1339	4562	-1345	+ 8	+ 6	4518	-1350	+ 13	+ 11	4513	-1337	+ 0	- 2														
MYRICK STATION	4595	-1380	4595	-1380	4605	-1388	+ 8	+ 8	4561	-1393	+ 13	+ 13	4556	-1380	+ 0	+ 0														
FT. SCOTT	4616	-1401	4622	-1407	4625	-1408	+ 7	+ 1	4581	-1413	+ 12	+ 6	4578	-1402	+ 1	- 5														
CHEROKEE	4646	-1431	4646	-1431	4654	-1437	+ 6	+ 6	4613	-1445	+ 14	+ 14	4606	-1430	- 1	- 1														
JOHNSON ZONE	4688	-1473	4686	-1471	4696	-1479	+ 6	+ 8	4655	-1487	+ 14	+ 16	4653	-1477	+ 4	+ 6														
CHEROKEE SAND					4741	-1524			4696	-1528			4706	-1530																
MISSISSIPPI	4756	-1541	4755	-1540	4756	-1539	- 2	- 1	4715	-1547	+ 6	+ 7	4715	-1539	- 2	- 1														
RTD			4835	-1620	4936	-1719		+ 99	5128	-1960		+ 340	4800	-1624		+ 4														
LTD	4830	-1615																												

ROCK TYPES

 Lmst fw<7	 shale, gry	 shale, red
 shale, grn	 Carbon Sh	 Shcol

ACCESSORIES

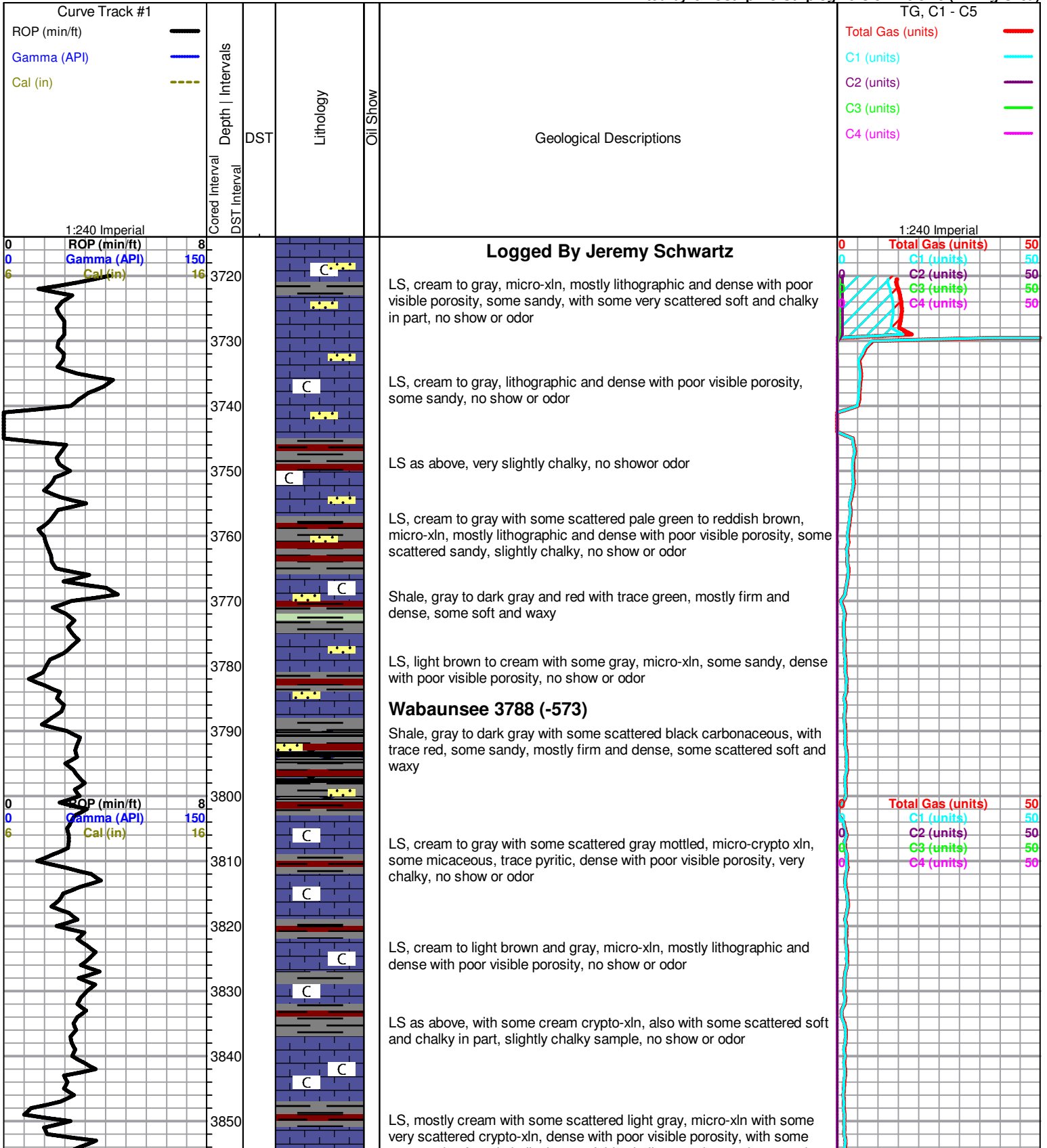
MINERAL △ Chert White ∴ Varicolored chert	FOSSIL F Fossils < 20%	STRINGER ▨ Dolomite ∴ Sandstone ∴ Siltstone ▨ green shale ▨ red shale	TEXTURE C Chalky
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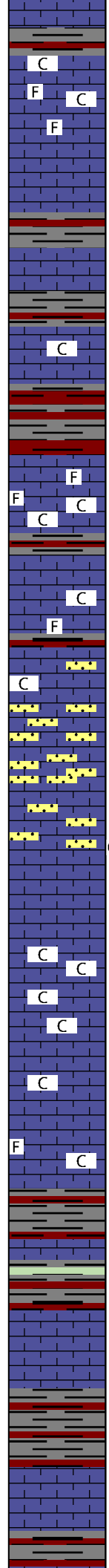
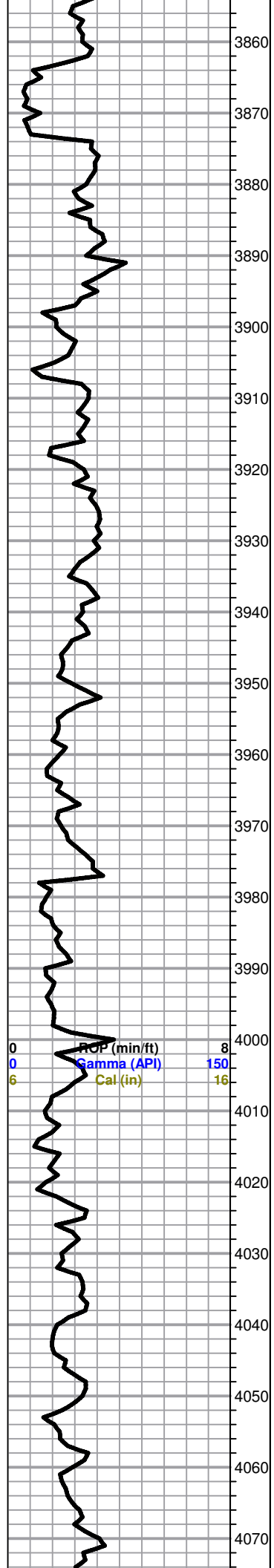
OTHER SYMBOLS

MISC  Daily Report	Oil Show ● Good Show ● Fair Show	DST ■ DST Int ■ DST alt
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- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt

- Poor show
- Spotted or Trace
- Questionable Strn
- Dead Oil Strn
- Fluorescence
- Gas





scattered soft and chalky in part, fairly chalky sample, no show or odor

3860

C

3870 F C

F

3880

LS as above, no show or odor

3890

LS, cream to light gray, micro-xln, mostly lithographic and dense with poor visible porosity, some very scattered slightly fossiliferous, also with some scattered white, crypto-xln and dense with poor visible porosity, no show or odor

3900

LS as above, with some scattered soft and chalky in part, slightly chalky sample, no show or odor

3910

C

3920

F F

F C

3930

C

3940

C

F

3950

C

3960

LS as above, with some scattered SS clusters, clear to light gray, vf-grained, sub-rounded to sub-angluar and fairly well sorted, some fairly well cemented, some fairly friable, calc., no show or odor

3970

LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered sandy, few very scattered chips with some scattered mostly poor pinpoint porosity on edges, one chip with very scattered stain in porosity only, upon break chip shows mostly poor inter-xln porosity and stain, instant cut with milky white fluor., NSFO, no odor

3980

3990

C C

C

4000

LS as above, no show or odor

4010

LS, cream to light gray, micro-xln, mostly lithographic and dense with poor visible porosity, few scattered chips with some scattered poor to fair visible pinpoint porosity on edges, less chalky, no show or odor

4020

F C

4030

LS, mostly same as above, few very scattered chips fossiliferous with some scattered inter-fossil porosity, some chalk-filled, no show or odor

4040

LS, cream to gray with some gray mottled, dense with poor visible porosity, with Shale, dark gray to black carbonaceous with some scattered red and trace maroon, no show or odor

As above, with trace green shale, with slight influx LS, cream, micro-xln, oolitic and dense with poor visible porosity, no show or odor

4050

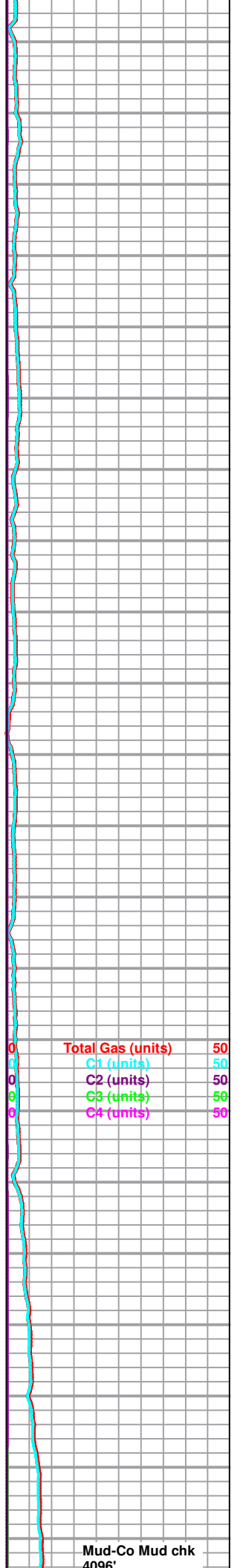
LS, cream to gray with some gray mottled, dense with poor visible porosity, with oolitic as above appaering to be dropping out, no show or odor

4060

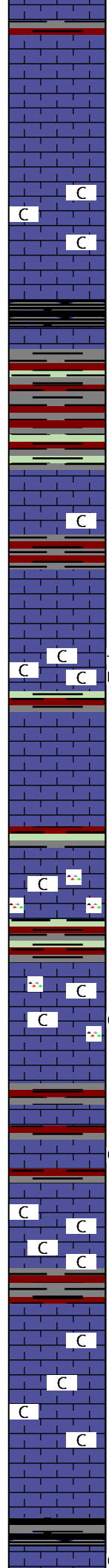
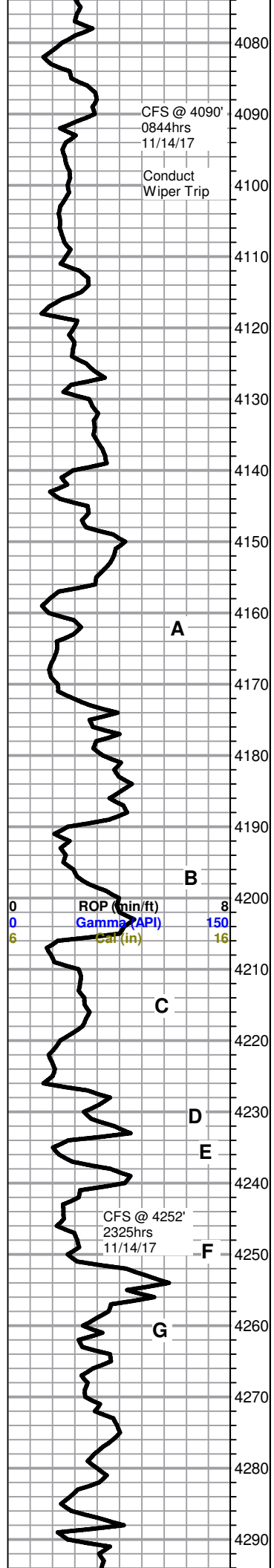
LS, cream to gray, micro-xln, lithographic and dense with poor visible porosity, trace oolitic, with shale, red and green with scattered gray and maroon, mostly soft and waxy, no show or odor

4070

Oread 4074 (-859)



Total Gas (units)	50
C1 (units)	50
C2 (units)	50
C3 (units)	50
C4 (units)	50



LS, cream to light gray, micro-xln, mostly lithographic and dense with poor visible porosity, few scattered chips with scattered mostly poor pinpoint porosity on edges, no show or odor

4090' 30" LS, cream to light gray with some scattered brown, micro-crypto xln, mostly lithographic and dense with poor visible porosity, few very scattered chips oolitic with some very scattered inter-oolite porosity, no show or odor

4090' 60" Same as above, no show or odor

LS, white to cream with some light gray, micro-xln, mostly lithographic and soft and chalky in part, some dense, poor visible porosity, fairly chalky sample, no show or odor

Heebner 4116 (-901)
Shale, black carbonaceous

Shale, red and gray with trace green, mostly soft and waxy, some blocky and dense

Toronto 4140 (-925)
LS, cream to gray with some brown, micro-xln, mostly lithographic and dense with poor visible porosity, some soft and chalky in part, some scattered slightly fossiliferous, trace orange chert, no show or odor

Lansing 4154 (-939)
LS, cream to light gray and gray, micro-xln, mostly lithographic and dense with poor visible porosity, some with some scattered poor to fair pinpoint to slightly vuggy edge porosity, no show, fluor., or odor

LS, cream to light gray, micro-xln, lithographic and dense with poor visible porosity, some scattered soft and chalky in part, scattered show of gas bubbles in tray with scattered dull yellow fluor., fairly chalky sample, no show of oil

LS, cream to gray, micro-xln, lithographic to fossiliferous with some scattered oolitic, mostly dense with poor visible porosity, no show or odor

LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered soft and chalky in part, with influx chert, orange to tan and translucent with some scattered brown, fresh and sharp, glassy, no show or odor

LS, cream to white, micro-xln, mostly soft and chalky in part, with some lithographic and dense, poor visible porosity, also with some tan to light brown and translucent chert, fresh and sharp, glassy, no show or odor

LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, few very scattered chips with some scattered mostly poor pinpoint edge porosity, some scattered soft and chalky in part, no show or odor

LS as above, with some scattered chips (~10%) with some very scattered to scattered poor to fair pinpoint porosity to very slightly vuggy edges with stain mostly confined to porosity, upon break some chips have SSFO and show mostly poor with some very scattered fair visible inter-xln porosity with stain in porosity only, streaming cut with bright white fluor., no odor

~4240' LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, few very scattered chips with very scattered poor pinpoint porosity and stain, NSFO in tray, no odor

4258' 30" LS, cream, micro-xln, lithographic and dense with poor visible porosity, very chalky sample, no show or odor

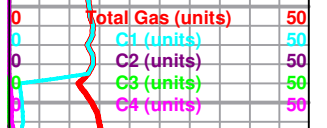
4258' 60" LS as above, no show or odor

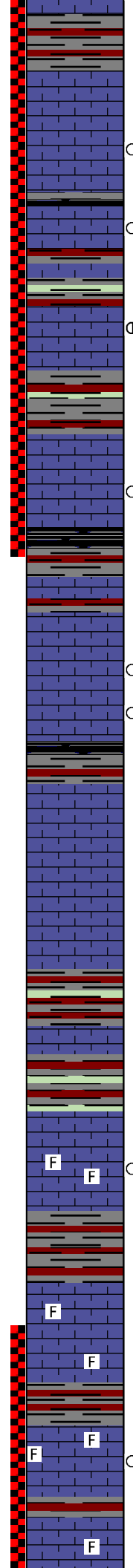
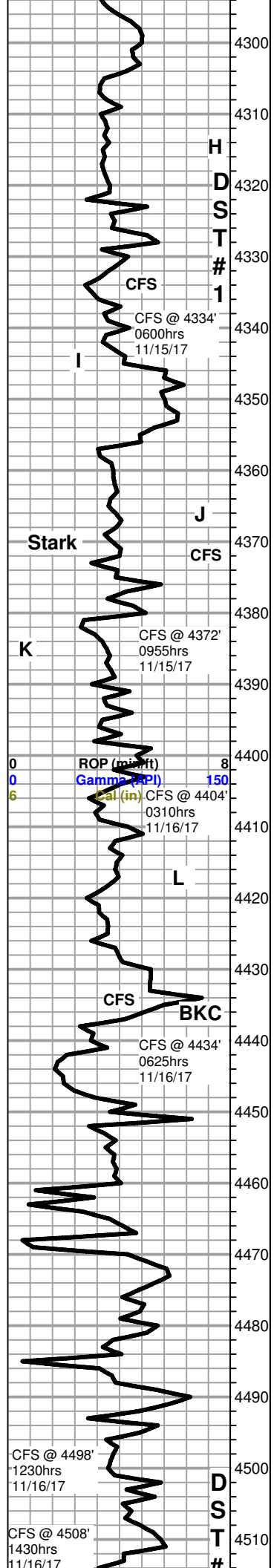
LS, cream to light gray, micro-xln, some lithographic and dense with poor visible porosity, some soft and chalky in part, fairly chalky sample, no show or odor

LS as above, less chalky, no show or odor

Muncie Creek 4286 (-1071)
Shale, black carbonaceous

11/14/17
Vis: 51 Wt: 9.0
PV: 18 YP: 24
WL: 6.8
Cake: 1/32
pH: 11.0
Ca: Tr
CHL: 900ppm
Sol: 4.9 LCM: 2
DMC: \$653.68
CMC: \$9,025.01





LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, few scattered chips (<5%) with some scattered poor to fair pinpoint porosity and stain in porosity only, when agitated chips release S-FSFO, most too dense to break, SSFO in tray, very scattered dull fluor., no odor

LS, cream to light gray, micro-crypto xln, lithographic and dense with poor visible porosity, no show or odor

LS as above, with few very scattered chips (<5%) cream, crypto-xln with few very small vugs with stain in porosity only, when agitated chips release SSFO, too dense to break, no fluor., or odor

43434' 30" LS as above, with few very scattered chips with show as above, chips release S-FSFO (opaque droplets) when agitated, no fluor., or odor

4334' 60" Mostly same as above, with abundant red clay and shale, no fluor., or odor

LS, cream to light gray, micro-xln, lithographic and dense with poor visible porosity, with some scattered chips (~5-10%) with some scattered to very scattered poor to fair pinpoint porosity and stain in and around porosity on some, upon break few chips have FSFO and show fair inter-xln stain and porosity, some too dense to break, instant streaming cut with bright white fluor., no odor

LS, cream, micro-xln, lithographic and dense with poor visible porosity, no show or odor

4372' 30" LS, cream to gray, micro-xln, lithographic and dense with poor visible porosity, no show or odor

4372' 60" LS as above, few very scattered chips with some scattered mostly poor pinpoint porosity and stain in porosity only, upon break chips show mostly poor inter-xln porosity and stain with SSFO, slow streaming cut with dull fluor., no odor

LS, cream to light gray, micro-xln, mostly lithographic and dense with poor visible porosity, few very scattered chips with scattered to very scattered mostly poor pinpoint porosity and slight stain in porosity only, upon break chips have SSFO and show some poor to fair inter-xln porosity with very scattered stain, instant streaming cut, chips with show have dull yellow fluor., fair fleeting odor

4404' 30" LS as above, few chips have several small vugs in addition to scattered pinpoint porosity with mostly very scattered to scattered stain, poor odor

LS, cream to light gray, micro-crypto xln, lithographic and dense with poor visible porosity, no show or odor

4434' 30" LS as above, no show or odor

4434' 60" LS, cream to gray with some scattered brown, micro-xln, lithographic and dense with poor visible porosity, with some shale, gray to maroon and red with trace green, mostly soft and waxy, no show or odor

~4440' LS, cream, micro-xln, mostly lithographic with some scattered oolitic, dense with poor visible porosity, no show or odor

Marmaton 4451 (-1236)

LS, mostly gray with some scattered cream and brown, micro-xln, mostly lithographic with some scattered oolitic and very scattered slightly fossiliferous, dense with poor visible porosity, few very scattered chips oolitic with some very scattered mostly poor pinpoint porosity, upon break chips have SSFO and show mostly poor inter-xln porosity and very scattered stain, slow streaming cut, no odor

LS, gray to cream with some scattered brown, lithographic to oolitic with some very scattered slightly fossiliferous, dense with poor visible porosity, no show or odor

Slawson Epard 1-31 dst2.jpg

4498' 30" LS, gray to cream, micro-crypto xln, mostly lithographic and dense with poor visible porosity, no show or odor

4498' 60" LS as above, no show or odor

4508' 15" LS, gray to cream and brown, micro-xln, lithographic to slightly fossiliferous and mostly dense with poor visible porosity, no show or odor

4508' 30" LS as above, with influx red and gray shale, no odor

4508' 60" LS, mostly same as above, found few very small chips cream, micro-xln, oolitic with very scattered very light golden brown stain, chips fairly friable, upon break chips show

DST #1 (4300-4378)
Lansing "H-J"
 30-45-45-90
 IH: 2187
 IF: 52-110
 FF: 115-142
 FH: 2181
 SIP: 1309-1314
 Recovery: 119' MCW (10%M/90%W)
 82' MCW (50%M/50%W)

Mud-Co Mud chk 4378'
 11/15/17
 Vis: 54 Wt: 9.3
 PV: 18 YP: 24
 WL: 7.2
 Cake: 1/32
 pH: 11.0
 Ca: Tr
 CHL: 1,400ppm
 Sol: 7.1 LCM: 2
 DMC: \$913.30
 CMC: \$9,938.31

Survey @ 4378' = 3/4deg Strap .83STB

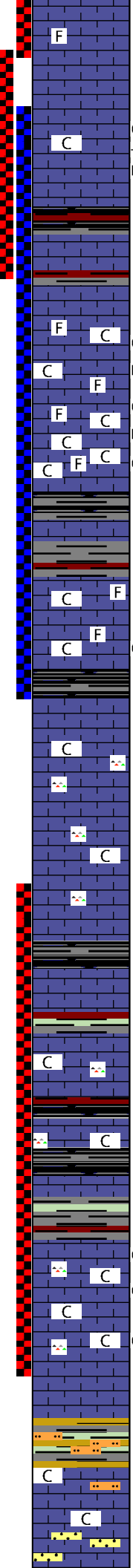
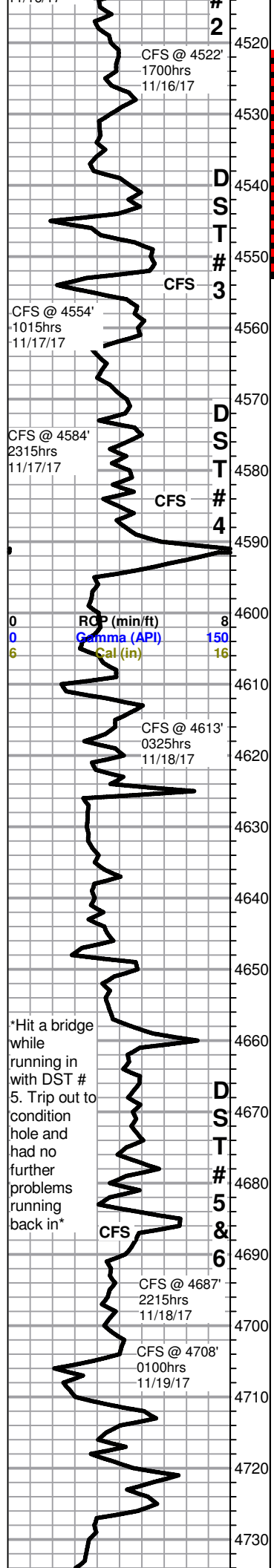
Total Gas (units) 50
 C1 (units) 50
 C2 (units) 50
 C3 (units) 50
 C4 (units) 50

LIGHTER TEST

Mud-Co Mud chk 4481'
 11/16/17
 Vis: 56 Wt: 9.1
 PV: 18 YP: 24
 WL: 7.6
 Cake: 1/32
 pH: 11.0
 Ca: Tr
 CHL: 900ppm
 Sol: 5.7 LCM: 2
 DMC: \$1,040.85
 CMC: \$10,979.16

DST #2 (4486-4528)
Marmaton 30-20-20-20
 IH: 2260
 IF: 20-21
 FF: 21-21
 FH: 2217
 SIP: 23-22
 Recovery: 2' Mud

Mud-Co Mud chk 4528'
 11/17/17
 Vis: 67 Wt: 9.1



fair inter-oolite porosity and scattered golden brown stain that increases to mostly saturated when left under lamp for several minutes with several gas bubbles in porosity, dull fluor., no odor

4522' 30" LS, cream to light gray, micro-crypto xln, mostly lithographic with some slightly fossiliferous, dense with poor visible porosity, no show or odor

4522' 60" LS as above, no show or odor

LS, mostly light gray to gray with some scattered cream, micro-xln with some scattered crypto-xln, mostly lithographic and dense with poor visible porosity, with some scattered soft and chalky in part, slightly chalky samples, no show or odor

Slawson Epard 1-31 dst3.jpg

4554' 30" LS as above, with some scattered (~15-20%) cream, micro-xln, with mostly fair pinpoint to slightly vuggy wormy porosity, most chips slowly bleeding oil and gas bubbles from porosity, matrix very dense, some cherty, too dense to break with tweezers but when agitated chips release fair to good show free oil and slight to fair show gas bubbles, good dull yellow fluor, throughout tray, FSFO in tray, good odor

4554' 60" As above, with slightly less shows and slight increase in gray to black shales, SSFO in tray, good odor

Pawnee 4554 (-1339)

Slawson Epard 1-31 dst4.jpg

~4560' LS, cream, micro-crypto-xln, some slightly fossiliferous, some scattered soft and chalky in part, most chips appear barren, some chips with scattered mostly small vugs and re-crystallized edges with very light golden brown stain in porosity, few chips with areas of very slightly vuggy porosity, stain increases throughout matrix in some chips when left under lamp for several minutes, upon break SSFO with scattered darker stain in matrix and mostly poor with areas of fair visible inter-xln porosity, good bright yellow fluor. throughout tray, good odor

~4570' mostly same as above, few chips very slowly bleeding oil to surface from porosity, upon break FSFO in some chips (very light brown droplets), SSFO in tray, good fluor., good odor

4584' 15" Influx dark gray to brown LS, some fossiliferous, dense with poor visible porosity, shows mostly dropping out, slightly chalkier, NSFO, very scattered fluor., poor fleeting odor

4584' 30" LS as above, very scattered fluor., NSFO, poor fleeting odor

4584' 60" As above, few very scattered chips LS, cream, micro-xln with scattered small vugs with very scattered stain in some, chips with shows have good fluor, NSFO, poor odor

Myrick Station 4595 (-1380)

~4600' LS, cream to dark gray and brown, micro-xln, some fossiliferous, some soft and chalky in part, with some very scattered white, gray, and translucent chert, no show or odor

4613' 15" As above, with some very scattered oolitic with very scattered mostly poor inter-oolite porosity and light golden brown stain in porosity only, very scattered dull yellow fluor, NSFO, poor odor

4613' 60" LS, cream with some scattered gray and brown, micro-xln, mostly soft and chalky in part, some dense with poor visible porosity, with some very scattered gray chert, very scattered dull fluor., NSFO, poor odor

Fort Scott 4622 (-1407)

LS, cream with some scattered brown, micro-xln, some lithographic, some slightly fossiliferous, mostly dense with poor visible porosity, some soft and chalky in part, also with some very scattered white to light gray and translucent chert, no show or odor

LS as above, no show or odor

Cherokee Shale 4646 (-1431)

Shale, dark gray to black with some scattered red and trace green

LS, mostly cream with some scattered gray and brown, mostly lithographic with some scattered slightly fossiliferous, dense with poor visible porosity, with some soft and chalky in part, less shales and trace chert, no show or odor

LS, cream to light gray, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered soft and chalky in part, shales dropped out, trace brown chert, no show or odor

Slawson Epard 1-31 dst5.jpg

Slawson Epard 1-31 dst6.jpg

Johnson Zone 4686 (-1471)

4687' 30" LS as above, with slight influx brown. crypto-xln with few scattered small vugs and wet black stain and free oil in porosity, upon break some chips have fair to good show free oil (heavy dark brown to black droplets), some cream micro-xln chips as above also with few very scattered small vugs and stain, trace white and brown chert, SSFO in tray, slightly chalky wash in tray, poor fluor., poor odor

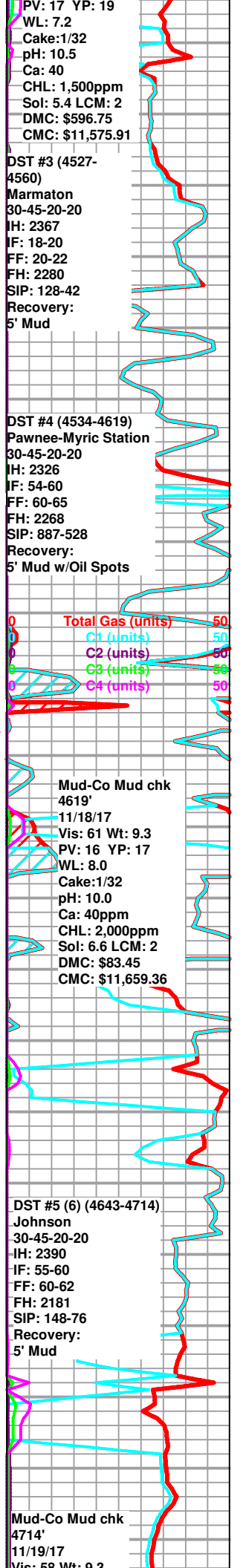
4687' 60" mostly same as above, poor odor

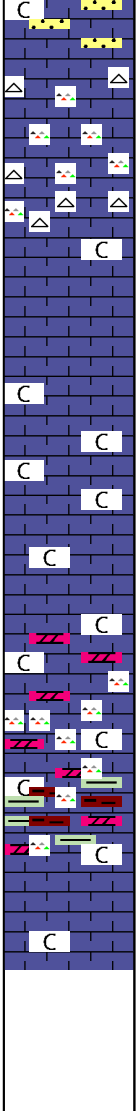
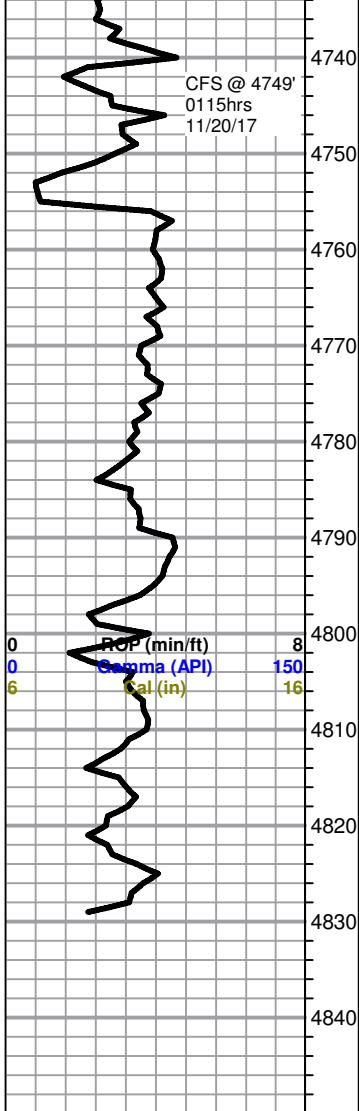
LS as above with slight increase in shows, some scattered chips with scattered areas of fair vuggy porosity and stain with free oil pooling up on surface, upon break some show scattered fair inter-xln porosity with good show free oil, SSFO in tray, scattered dull yellow fluor., fairly chalky wash, good odor

4708' 30" Mostly same as above, slight decrease in shows, fair odor

4708' 60" LS, gray to cream and light brown, mostly lithographic and barren with poor visible porosity, slight increase in soft and chalky in part, some still carrying shows, still carrying few shows as above but mostly dropping out, with some very scattered gray, red, and green shales, fair fleeting odor

~4720-4730' Mostly shale, gray to green and maroon to red with some some scattered pale yellow, most soft and waxy, some scattered silty, with some LS, cream to white with some scattered gray, micro-crypto xln, some dense, some soft and chalky in part, no show or odor





Influx SS, mostly white to light gray, vf-f grained and sub-rounded, fairly well sorted, some very friable, some well cemented and dense, some clean, some chalky, barren, no fluor., cut, or odor

LS, gray to brown, crypto-xln, lithographic and dense with poor visible porosity, with abundant chert, white to milky white and tan to brown with some scattered burnt orange, mostly fresh and sharp, glassy, heavy red wash, no show or odor

4755' 15", 30", 60" LS and chert as above with influx orange to burnt orange chert, no show or odor

Mississippian 4755 (-1540)

LS, gray to brown with some cream, micro-crypto xln, dense with poor visible porosity, with some soft and chalky in part, slightly chalky sample, no show or odor

LS, gray to cream with some brown, micro-crypto xln, some sandy, some soft and chalky in part, fairly chalky sample, no show or odor

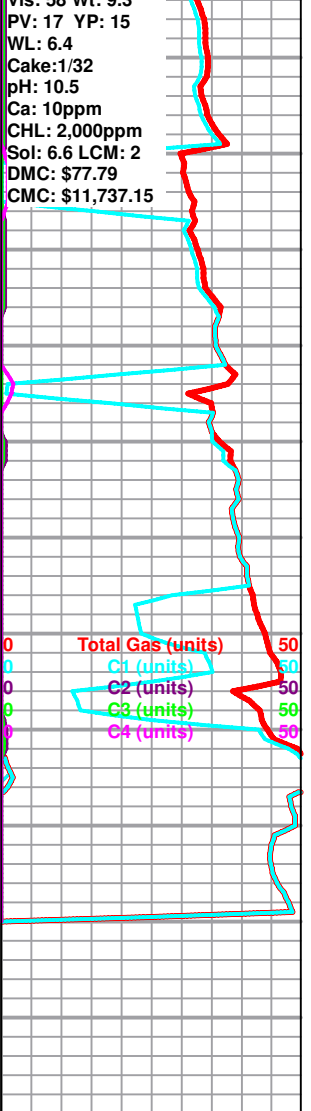
LS as above, no show or odor

LS as above, with influx dolomite, light gray to white, vf-xln, most sucrosic and dense with poor visible porosity, some very scattered slightly chalky and friable, fairly chalky sample, no show or odor

As above, with influx and abundant chert, gray to tan and opaque with some scattered burnt orange, no show or odor

LS, chert, and scattered sucrosic dolomite as above, with slight influx shale, maroon to red and green to pale yellow, no show or odor

4835' 30" & 60" LS, gray to brown with some scattered cream, micro-xln, dense with poor visible porosity, some scattered soft and chalky in part, dolomite, cherts, and shales appear to be dropping out, slightly chalky samples, no show or odor



Rotary TD 4835' @ 0720hrs 11/20/17
Weatherford Logging TD @ 4830'
Complete Logging Operations @ 1500hrs 11/20/17
Geologist Jeremy Schwartz off location @ 1630hrs

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

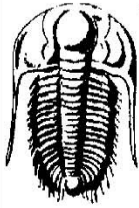
31-8s-33w Thomas Co KS

Epard 1-31

Job Ticket: 64244

DST#: 1

Test Start: 2017.11.15 @ 14:51:15



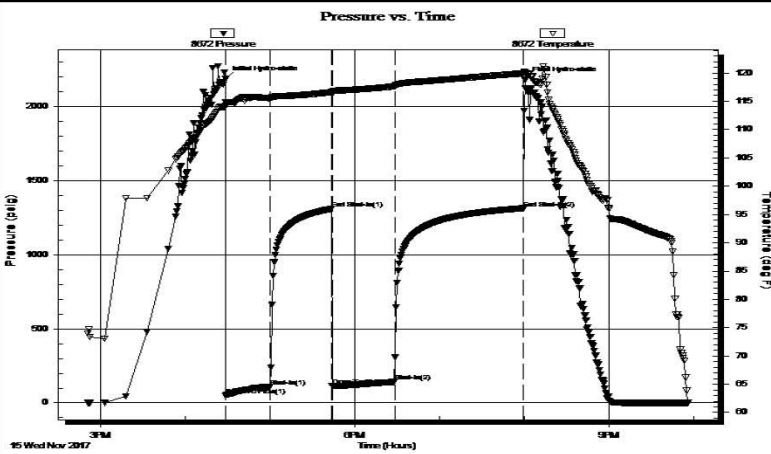
TRILOBITE TESTING, INC

GENERAL INFORMATION:

Formation: **HJ**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:29:00
 Time Test Ended: 21:56:00
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Mike Roberts
 Unit No: 81
 Interval: **4300.00 ft (KB) To 4378.00 ft (KB) (TVD)**
 Total Depth: 4378.00 ft (KB) (TVD)
 Reference Elevations: 3220.00 ft (KB)
 3215.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 8672 Inside
 Press@RunDepth: 142.26 psig @ 4373.00 ft (KB)
 Capacity: 8000.00 psig
 Start Date: 2017.11.15 End Date: 2017.11.15
 Last Calib.: 2017.11.15
 Start Time: 14:51:15 End Time: 21:56:00
 Time On Btm: 2017.11.15 @ 16:28:45
 Time Off Btm: 2017.11.15 @ 20:00:30

TEST COMMENT: IF: Built to 4 1/2" blow
 IS: No return blow
 FF: Built to 4 1/2" blow
 FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2186.89	114.81	Initial Hydro-static
1	52.17	114.20	Open To Flow (1)
32	109.60	115.52	Shut-In(1)
75	1309.54	116.60	End Shut-In(1)
76	115.42	116.22	Open To Flow (2)
120	142.26	117.63	Shut-In(2)
211	1314.06	119.94	End Shut-In(2)
212	2181.39	120.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
119.00	mcw 10% m 90% w (collars)	0.59
82.00	mcw 50% m 50% w	1.15

Gas Rates

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

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

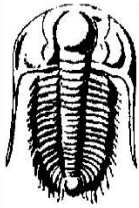
31-8s-33w Thomas Co KS

Epad 1-31

Job Ticket: 64245

DST#: 2

Test Start: 2017.11.16 @ 21:36:15



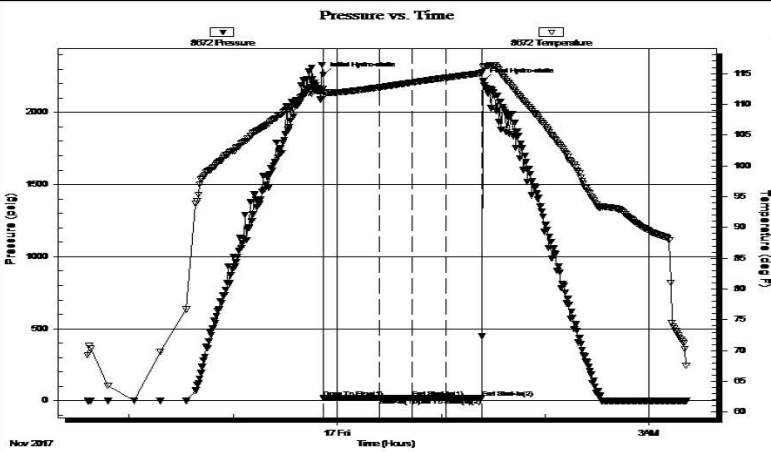
**TRILOBITE
TESTING, INC**

GENERAL INFORMATION:

Formation: **Marmaton**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:52:15
 Time Test Ended: 03:21:30
 Interval: **4486.00 ft (KB) To 4528.00 ft (KB) (TVD)**
 Total Depth: 4528.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3220.00 ft (KB)
 3215.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8672 Inside
 Press@RunDepth: 20.83 psig @ 4523.00 ft (KB)
 Start Date: 2017.11.16 End Date: 2017.11.17
 Start Time: 21:36:15 End Time: 03:21:30
 Capacity: 8000.00 psig
 Last Calib.: 2017.11.17
 Time On Btm: 2017.11.16 @ 23:52:00
 Time Off Btm: 2017.11.17 @ 01:24:15

TEST COMMENT: IF:30 Built to weak surface blow
 FF:20 No return blow
 FS:20 No blow
 FS:20 No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2259.59	112.51	Initial Hydro-static
1	19.76	111.29	Open To Flow (1)
33	20.95	112.74	Shut-In(1)
52	22.88	113.53	End Shut-In(1)
52	21.38	113.54	Open To Flow (2)
71	20.83	114.30	Shut-In(2)
92	22.22	115.05	End Shut-In(2)
93	2216.57	116.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100% m	0.01

* Recovery from multiple tests

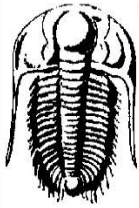
Gas Rates

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

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

31-8s-33w Thomas Co KS
Epad 1-31
 Job Ticket: 64246 **DST#: 3**
 Test Start: 2017.11.17 @ 13:06:15



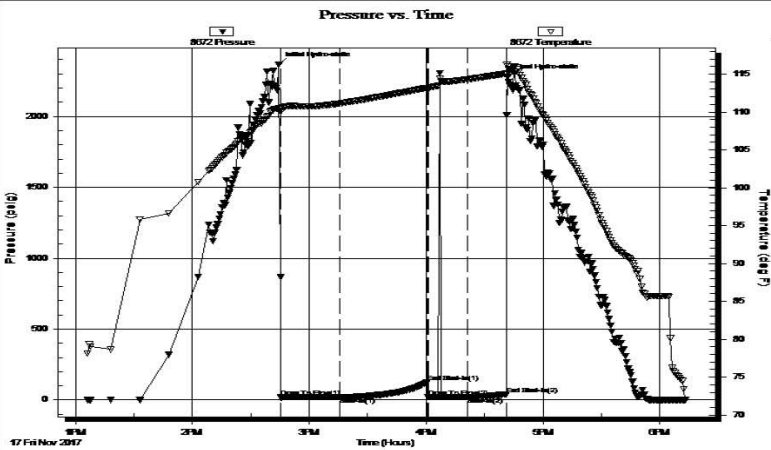
TRILOBITE TESTING, INC

GENERAL INFORMATION:

Formation: **Marmaton**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:45:30
 Time Test Ended: 18:13:00
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
Interval: 4527.00 ft (KB) To 4560.00 ft (KB) (TVD)
 Total Depth: 4560.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Reference Elevations: 3220.00 ft (KB)
 3215.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8672 Inside
 Press@RunDepth: 22.21 psig @ 4528.00 ft (KB)
 Start Date: 2017.11.17 End Date: 2017.11.17
 Start Time: 13:06:15 End Time: 18:13:00
 Capacity: 8000.00 psig
 Last Calib.: 2017.11.17
 Time On Btm: 2017.11.17 @ 14:44:30
 Time Off Btm: 2017.11.17 @ 16:42:00

TEST COMMENT: IF:30- Built to 1/8" blow
 IS:45- No return blow
 FF:20- No blow --- flushed tool-- no blow
 FS:20- No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2367.08	110.45	Initial Hydro-static
1	18.88	110.07	Open To Flow (1)
32	20.34	111.12	Shut-In(1)
77	127.52	113.20	End Shut-In(1)
77	19.58	113.13	Open To Flow (2)
97	22.21	114.31	Shut-In(2)
117	41.58	115.07	End Shut-In(2)
118	2280.03	116.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100% m	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

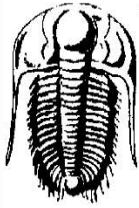
31-8s-33w Thomas Co KS

Epard 1-31

Job Ticket: 64247

DST#: 4

Test Start: 2017.11.18 @ 08:23:15



**TRILOBITE
TESTING, INC**

GENERAL INFORMATION:

Formation: **Pawnee-Myric Station**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:15:15

Time Test Ended: 13:43:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4534.00 ft (KB) To 4619.00 ft (KB) (TVD)

Total Depth: 4619.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3220.00 ft (KB)

3215.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8672

Inside

Press@RunDepth: 64.91 psig @ 4614.00 ft (KB)

Start Date: 2017.11.18

Start Time: 08:23:15

End Date: 2017.11.18

End Time: 13:43:15

Capacity: 8000.00 psig

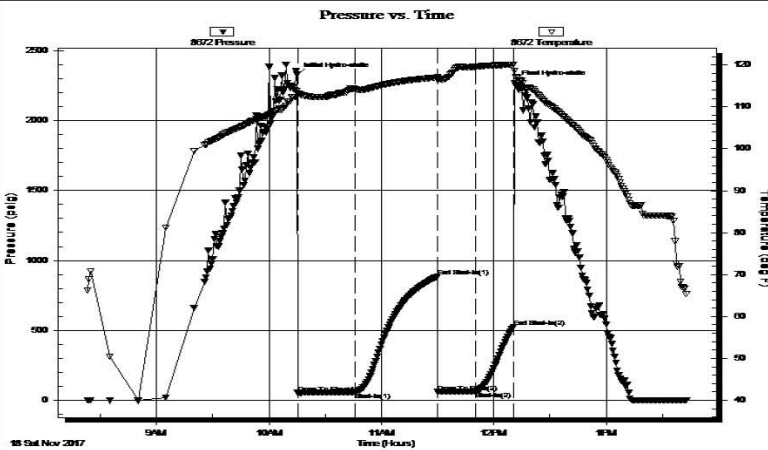
Last Calib.: 2017.11.18

Time On Btm: 2017.11.18 @ 10:15:00

Time Off Btm: 2017.11.18 @ 12:11:15

TEST COMMENT:

IF:30-Built to 1" blow
 IS:45- No return blow
 FF:20- No blow
 FS:20-No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2325.95	113.73	Initial Hydro-static
1	53.98	113.09	Open To Flow (1)
32	59.97	114.17	Shut-In(1)
75	886.71	117.00	End Shut-In(1)
76	60.46	116.46	Open To Flow (2)
96	64.91	119.52	Shut-In(2)
116	527.95	120.06	End Shut-In(2)
117	2267.79	118.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud with oil spots 100% m	0.02

* Recovery from multiple tests

Gas Rates

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

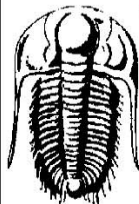
DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

31-8s-33w Thomas Co KS

Epard 1-31

Job Ticket: 64248 **DST#: 5**
 Test Start: 2017.11.19 @ 06:33:15



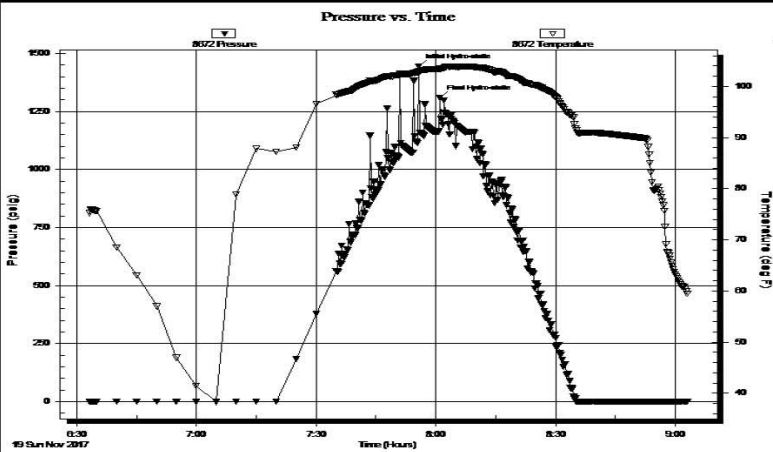
TRILOBITE TESTING, INC

GENERAL INFORMATION:

Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened:
 Time Test Ended: 09:03:00
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Interval: **4643.00 ft (KB) To 4714.00 ft (KB) (TVD)**
 Total Depth: 4714.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Reference Elevations: 3220.00 ft (KB)
 3215.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8672 Inside
 Press@RunDepth: psig @ 4709.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.11.19 End Date: 2017.11.19 Last Calib.: 2017.11.19
 Start Time: 06:33:15 End Time: 09:03:00 Time On Btm: 2017.11.19 @ 07:55:45
 Time Off Btm: 2017.11.19 @ 08:01:00

TEST COMMENT: IF: Hit a bridge at 4100 ft
 IS:
 FF:
 FS:



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1444.49	102.98	Initial Hydro-static
6	1307.92	103.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
	Hit bridge	

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Slawson Exploration Comp, Inc
 204 North Robinson Ave.
 Ste. 2300
 Oklahoma OK
 ATTN: Jeremy Schwartz

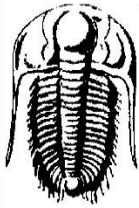
31-8s-33w Thomas Co KS

Epard 1-31

Job Ticket: 64249

DST#: 6

Test Start: 2017.11.19 @ 14:02:15



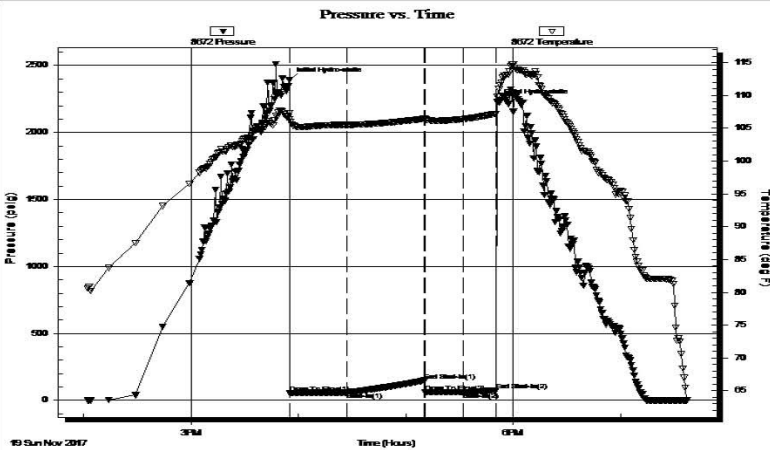
TRILOBITE TESTING, INC

GENERAL INFORMATION:

Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:55:00
 Time Test Ended: 19:37:15
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Interval: **4643.00 ft (KB) To 4714.00 ft (KB) (TVD)**
 Total Depth: 4714.00 ft (KB) (TVD)
 Reference Elevations: 3220.00 ft (KB)
 3215.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 8672 Inside
 Press@RunDepth: 61.63 psig @ 4709.00 ft (KB)
 Capacity: 8000.00 psig
 Start Date: 2017.11.19 End Date: 2017.11.19
 Last Calib.: 2017.11.19
 Start Time: 14:02:15 End Time: 19:37:15
 Time On Btm: 2017.11.19 @ 15:54:45
 Time Off Btm: 2017.11.19 @ 17:51:00

TEST COMMENT: IF:30-Built to 1/2" blow
 IS:45-No return blow
 FF:20-No blow
 FS:20- No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2390.34	107.34	Initial Hydro-static
1	55.35	106.38	Open To Flow (1)
33	59.53	105.52	Shut-In(1)
76	148.62	106.46	End Shut-In(1)
76	59.63	106.41	Open To Flow (2)
98	61.63	106.41	Shut-In(2)
116	76.30	107.20	End Shut-In(2)
117	2226.94	109.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100% m	0.02

* Recovery from multiple tests

Gas Rates

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