

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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Form	ACO1 - Well Completion
Operator	Edison Operating Company LLC
Well Name	KUHN 1-17
Doc ID	1481660

All Electric Logs Run

DUCP
MICRO
DUAL INDUCTION
SONIC



DRILL STEM TEST REPORT

Prepared For: **Edison Operating Company LLC**

8100 East 22nd Street North
Building 1900
Wichita, Kansas 667226

ATTN: Adam Kennedy

Kuhn #1-17

17-19s-12w Barton

Start Date: 2019.11.03 @ 02:02:00

End Date: 2019.11.03 @ 08:01:00

Job Ticket #: 01385 DST #: 1

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2019.11.03 @ 08:23:37



DRILL STEM TEST REPORT

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01385

DST#: 1

Test Start: 2019.11.03 @ 02:02:00

GENERAL INFORMATION:

Formation: **LANSING A-B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:05:00

Time Test Ended: 08:01:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: 3178.00 ft (KB) To 3225.00 ft (KB) (TVD)

Reference Elevations: 1882.00 ft (KB)

Total Depth: 3225.00 ft (KB) (TVD)

1874.00 ft (CF)

Hole Diameter: 7.78 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 938.26 psig @ 3219.84 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.11.03

End Date: 2019.11.03

Last Calib.: 2019.11.03

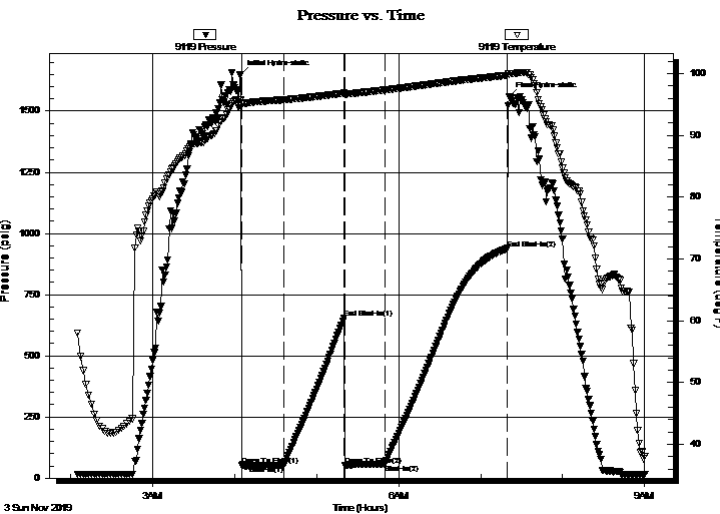
Start Time: 02:02:00

End Time: 09:00:30

Time On Btm: 2019.11.03 @ 04:04:30

Time Off Btm: 2019.11.03 @ 07:21:00

TEST COMMENT: 1st Opening 30 Minutes weak building blow built to the bottom of a 5 gallon bucket in 14 minutes
 1st Shut-In 45 Minutes no blow back
 2nd Opening 30 Minutes strong blow bob immediately bled off bob in 9 minutes
 2nd Shut-In 90 Minutes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1649.64	95.75	Initial Hydro-static
1	53.16	95.25	Open To Flow (1)
32	52.88	95.77	Shut-In(1)
76	654.29	96.86	End Shut-In(1)
76	53.88	96.72	Open To Flow (2)
106	58.42	97.35	Shut-In(2)
195	938.26	99.73	End Shut-In(2)
197	1557.31	99.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	1050 feet of gas in the pipe	0.00
30.00	oil cut mud 80%Mud 20% Oil	0.42

Gas Rates

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



DRILL STEM TEST REPORT

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01385

DST#: 1

Test Start: 2019.11.03 @ 02:02:00

GENERAL INFORMATION:

Formation: LANSING A-B

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:05:00

Time Test Ended: 08:01:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: 3178.00 ft (KB) To 3225.00 ft (KB) (TVD)

Reference Elevations: 1882.00 ft (KB)

Total Depth: 3225.00 ft (KB) (TVD)

1874.00 ft (CF)

Hole Diameter: 7.78 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9139 Outside

Press@RunDepth: 941.44 psig @ 3219.84 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.11.03

End Date: 2019.11.03

Last Calib.: 2019.11.03

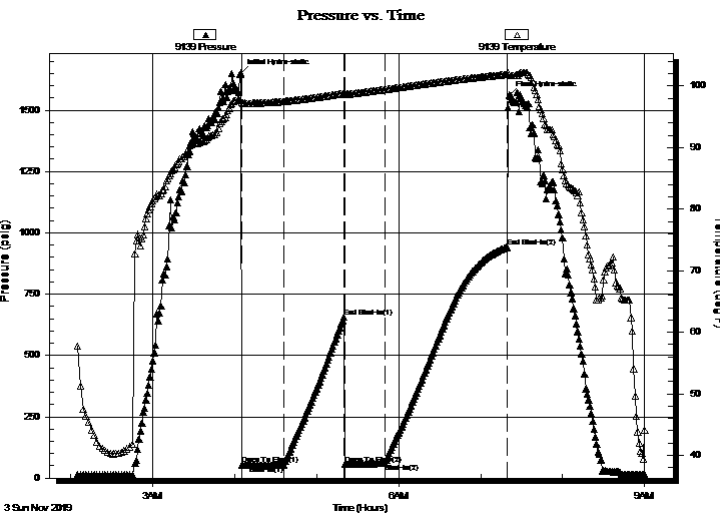
Start Time: 02:02:00

End Time: 09:00:30

Time On Btm: 2019.11.03 @ 04:04:30

Time Off Btm: 2019.11.03 @ 07:21:00

TEST COMMENT: 1st Opening 30 Minutes weak building blow built to the bottom of a 5 gallon bucket in 14 minutes
 1st Shut-In 45 Minutes no blow back
 2nd Opening 30 Minutes strong blow bob immediately bled off bob in 9 minutes
 2nd Shut-In 90 Minutes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1650.69	97.68	Initial Hydro-static
1	54.95	97.32	Open To Flow (1)
32	53.85	97.50	Shut-In(1)
76	655.74	98.80	End Shut-In(1)
76	56.50	98.65	Open To Flow (2)
106	60.14	99.43	Shut-In(2)
195	941.44	101.89	End Shut-In(2)
197	1560.86	101.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	1050 feet of gas in the pipe	0.00
30.00	oil cut mud 80%Mud 20% Oil	0.42

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01385

DST#: 1

Test Start: 2019.11.03 @ 02:02:00

Tool Information

Drill Pipe:	Length: 3168.00 ft	Diameter: 3.80 inches	Volume: 44.44 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: 54000.00 lb
			<u>Total Volume: 44.44 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3178.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.84 ft			
Tool Length:	76.84 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3153.00	
Hydraulic tool	5.00			3158.00	
Jars	5.00			3163.00	
Safety Joint	5.00			3168.00	
Packer	5.00			3173.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3178.00	
Anchor	4.00			3182.00	
Change Over Sub	0.75			3182.75	
Drill Pipe	31.34			3214.09	
Change Over Sub	0.75		Inside	3214.84	
Anchor	5.00			3219.84	
Recorder	0.00	9119	Inside	3219.84	
Recorder	0.00	9139	Outside	3219.84	
Bullnose	5.00			3224.84	46.84 Bottom Packers & Anchor

Total Tool Length: 76.84



DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 66726
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01385

DST#: 1

Test Start: 2019.11.03 @ 02:02:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 54.00 sec/qt
 Water Loss: 8.00 in³
 Resistivity: ohm.m
 Salinity: 5000.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psig

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	1050 feet of gas in the pipe	0.000
30.00	oil cut mud 80%Mud 20% Oil	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

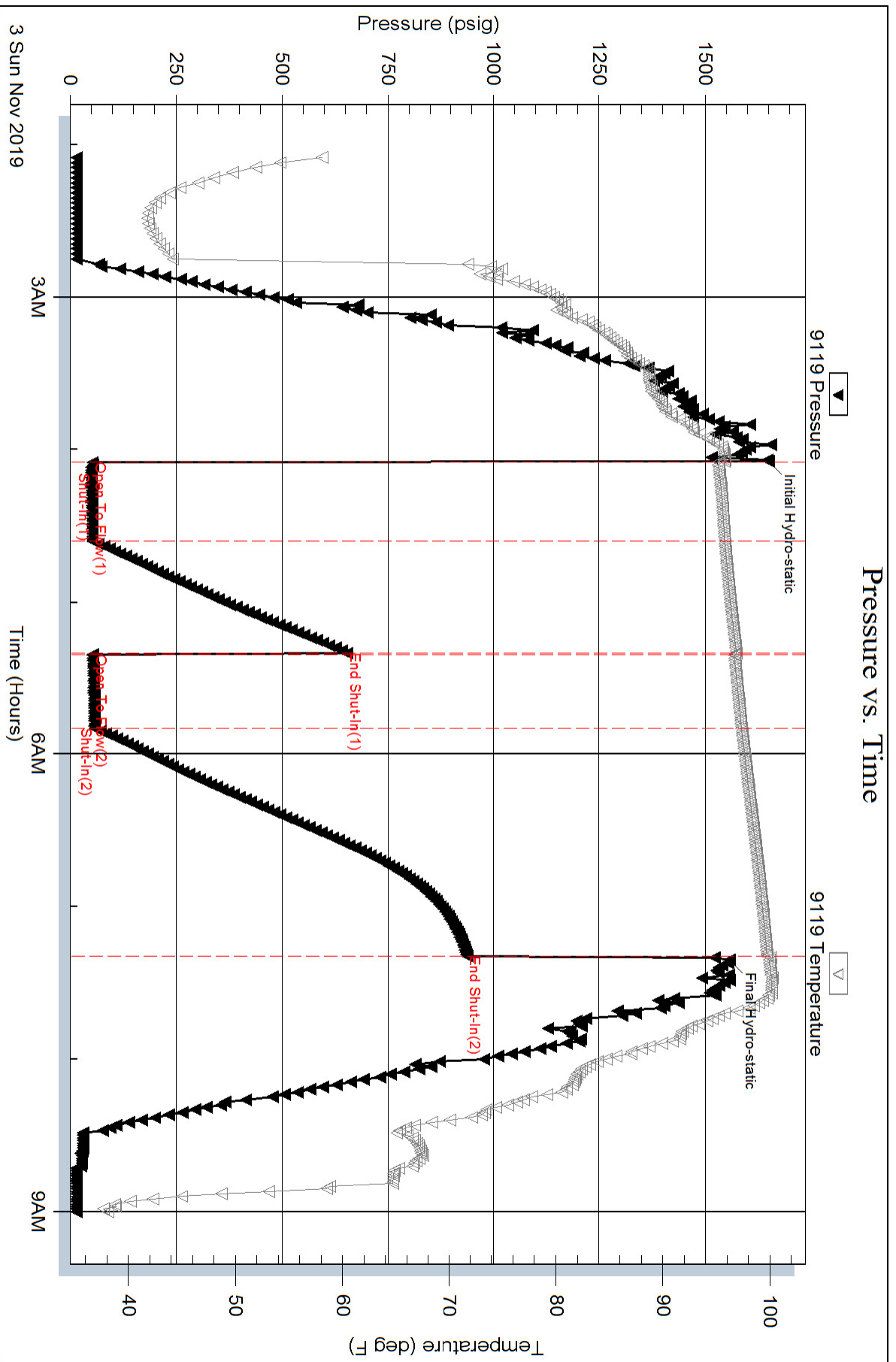
Serial #:

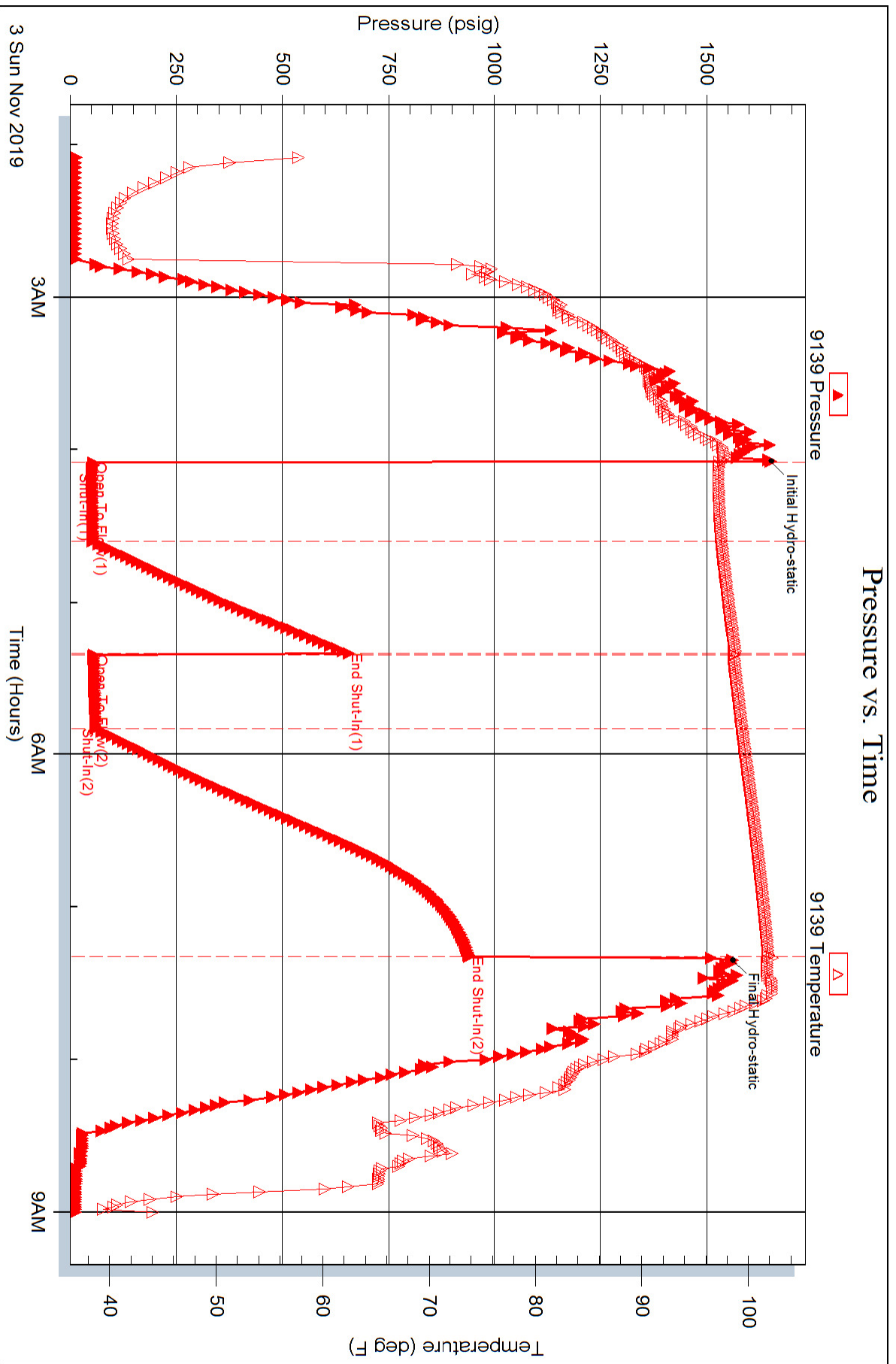
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Edison Operating Company LLC**

8100 East 22nd Street North
Building 1900
Wichita, Kansas 667226

ATTN: Adam Kennedy

Kuhn #1-17

17-19s-12w Barton

Start Date: 2019.11.03 @ 17:55:00

End Date:

Job Ticket #: 01386

DST #: 2

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2019.11.04 @ 00:37:51



DRILL STEM TEST REPORT

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01386

DST#: 2

Test Start: 2019.11.03 @ 17:55:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:28:00

Time Test Ended:

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3314.00 ft (KB) To 3331.00 ft (KB) (TVD)**

Reference Elevations: 1882.00 ft (KB)

Total Depth: 3331.00 ft (KB) (TVD)

1874.00 ft (CF)

Hole Diameter: 7.78 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 550.24 psig @ 3326.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.11.03

End Date: 2019.11.04

Last Calib.: 2019.11.04

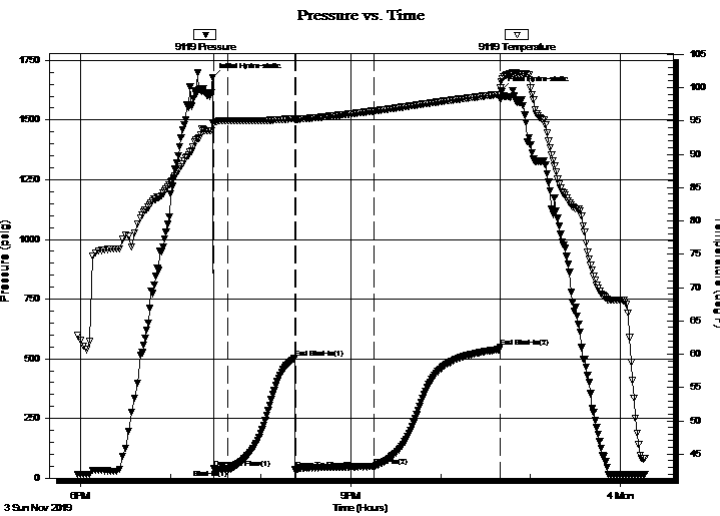
Start Time: 17:55:00

End Time: 00:16:30

Time On Btm: 2019.11.03 @ 19:28:00

Time Off Btm: 2019.11.03 @ 22:40:30

TEST COMMENT: 1st Opening 10 Minutes w eak blow built to 4 inches into the water
 1st Shut-In 45 Minutes no blow back
 2nd Opening 45 Minutes w eak steady 1 1/2 inch blow
 2nd Shut-In 90 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1677.08	94.76	Initial Hydro-static
1	39.25	94.59	Open To Flow (1)
11	37.71	95.07	Shut-In(1)
55	501.93	95.37	End Shut-In(1)
56	38.40	95.27	Open To Flow (2)
108	48.77	96.50	Shut-In(2)
192	550.24	98.98	End Shut-In(2)
193	1622.52	100.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	oil cut mud 10% Oil 90%Mud	

Gas Rates

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



DRILL STEM TEST REPORT

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01386

DST#: 2

Test Start: 2019.11.03 @ 17:55:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:28:00

Time Test Ended:

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: 3314.00 ft (KB) To 3331.00 ft (KB) (TVD)

Reference Elevations: 1882.00 ft (KB)

Total Depth: 3331.00 ft (KB) (TVD)

1874.00 ft (CF)

Hole Diameter: 7.78 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9139 Outside

Press@RunDepth: 541.63 psig @ 3326.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.11.03

End Date: 2019.11.04

Last Calib.: 2019.11.04

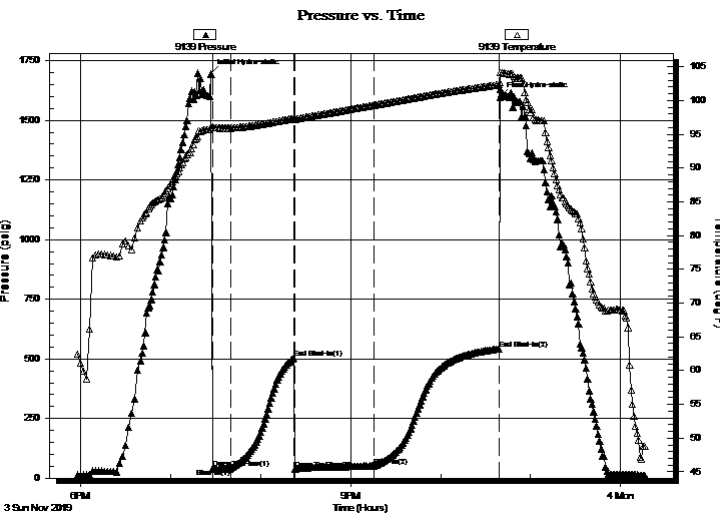
Start Time: 17:55:00

End Time: 00:16:00

Time On Btm: 2019.11.03 @ 19:27:00

Time Off Btm: 2019.11.03 @ 22:39:30

TEST COMMENT: 1st Opening 10 Minutes weak blow built to 4 inches into the water
 1st Shut-In 45 Minutes no blow back
 2nd Opening 45 Minutes weak steady 1 1/2 inch blow
 2nd Shut-In 90 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1694.06	96.07	Initial Hydro-static
1	41.51	96.07	Open To Flow (1)
13	40.92	95.93	Shut-In(1)
55	502.68	97.34	End Shut-In(1)
56	38.41	97.27	Open To Flow (2)
109	51.60	99.31	Shut-In(2)
192	541.63	102.35	End Shut-In(2)
193	1597.23	102.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	oil cut mud 10% Oil 90%Mud	

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01386

DST#: 2

Test Start: 2019.11.03 @ 17:55:00

Tool Information

Drill Pipe:	Length: 3292.00 ft	Diameter:	inches	Volume: 3197923 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter:	inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter:	inches	Volume: 0.00 bbl	Weight to Pull Loose:	48000.00 lb
				<u>Total Volume: 3197923 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	8.00 ft				String Weight: Initial	40000.00 lb
Depth to Top Packer:	3314.00 ft				Final	4000.00 lb
Depth to Bottom Packer:	ft					
Interval between Packers:	17.00 ft					
Tool Length:	47.00 ft					
Number of Packers:	2	Diameter:	6.75 inches			
Tool Comments:						

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3289.00	
Hydraulic tool	5.00			3294.00	
Jars	5.00			3299.00	
Safety Joint	5.00			3304.00	
Packer	5.00			3309.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3314.00	
Anchor	12.00			3326.00	
Recorder	0.00	9119	Inside	3326.00	
Recorder	0.00	9139	Outside	3326.00	
Bullnose	5.00			3331.00	17.00 Bottom Packers & Anchor
Total Tool Length:	47.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01386

DST#:2

Test Start: 2019.11.03 @ 17:55:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 52.00 sec/qt
 Water Loss: 9.20 in³
 Resistivity: ohm.m
 Salinity: 8500.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psig

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	oil cut mud 10% Oil 90%Mud	

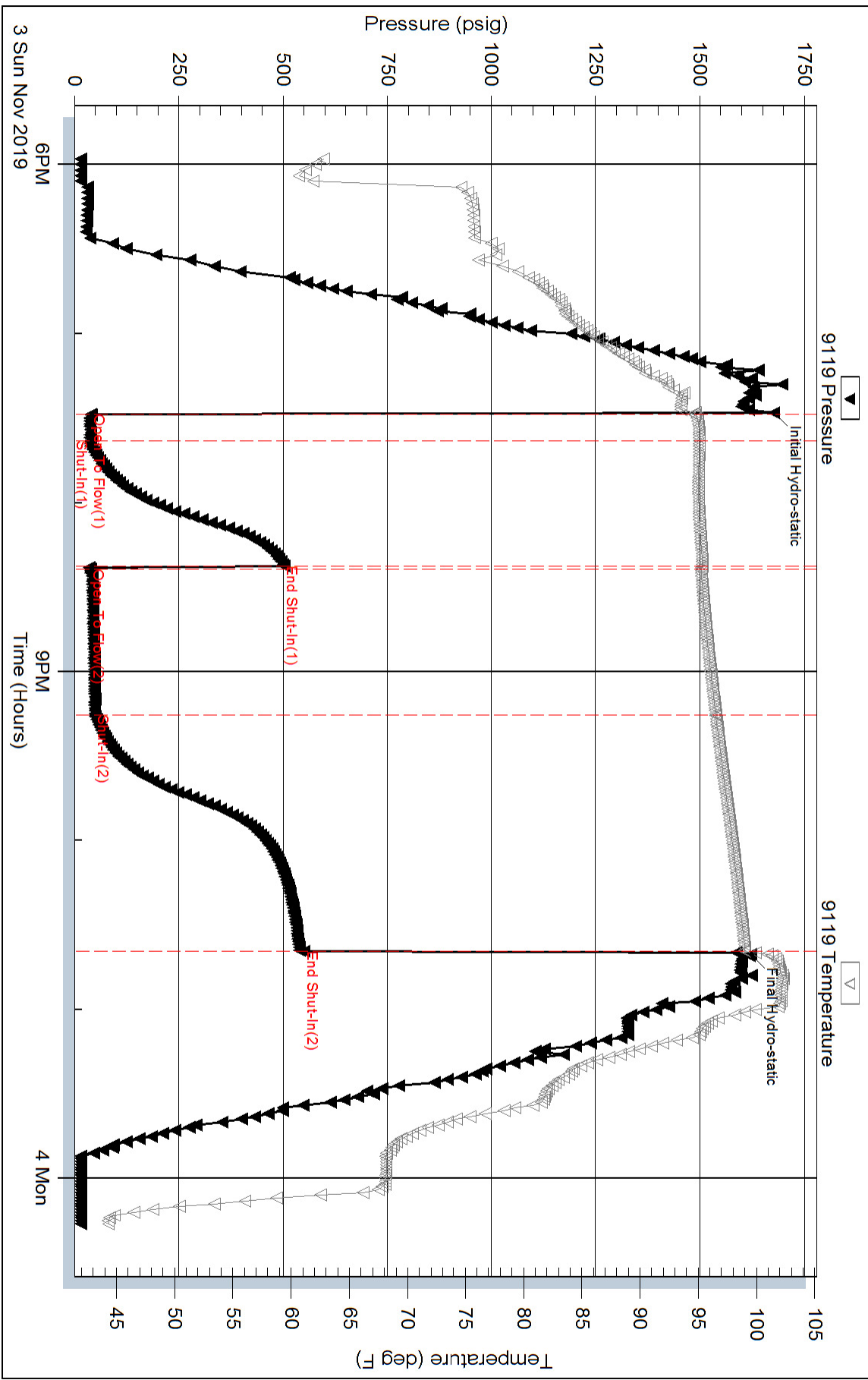
Total Length: 30.00 ft Total Volume: bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

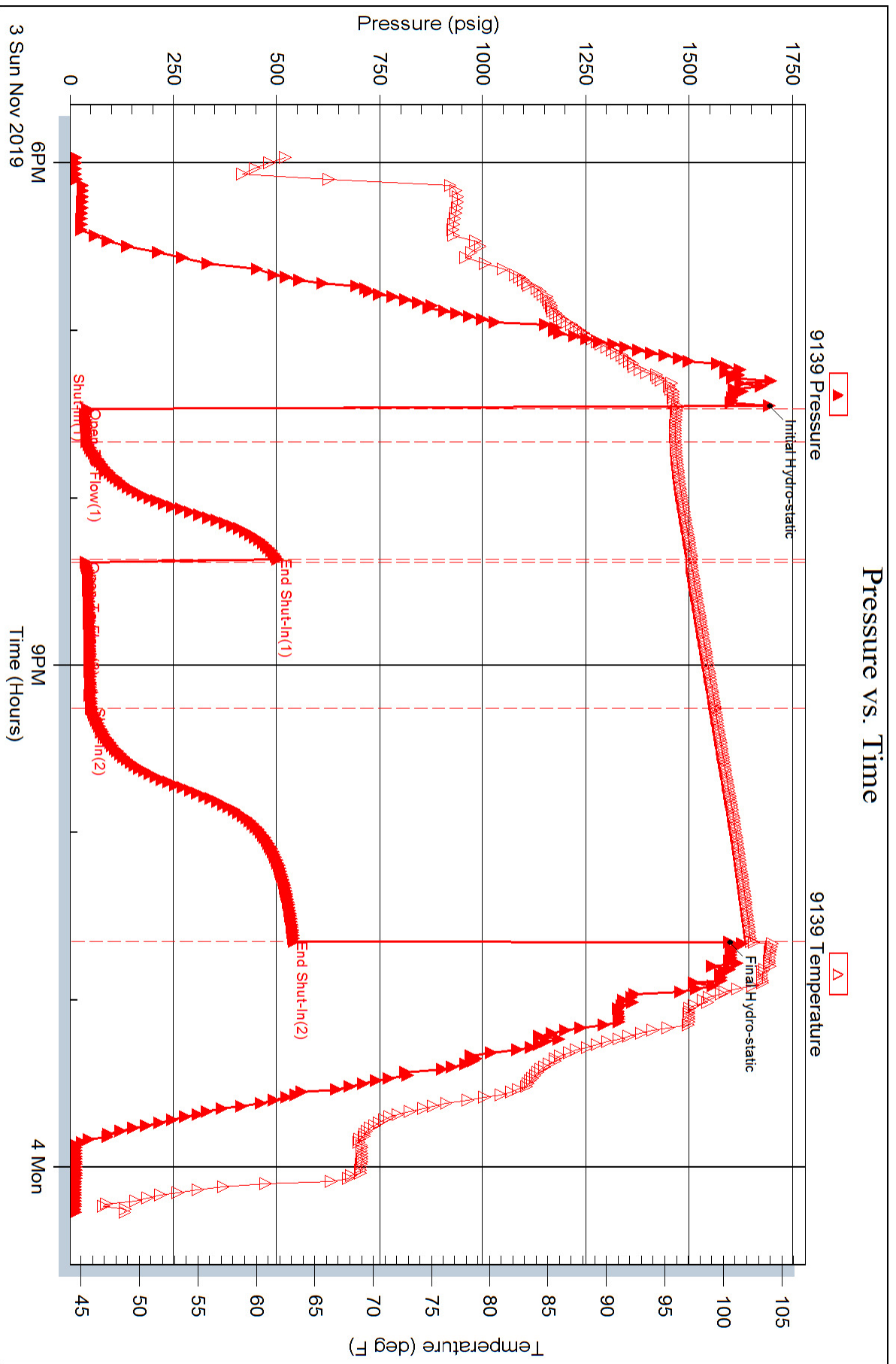
Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Edison Operating Company LLC**

8100 East 22nd Street North
Building 1900
Wichita, Kansas 667226

ATTN: Adam Kennedy

Kuhn #1-17

17-19s-12w Barton

Start Date: 2019.11.04 @ 19:09:00

End Date: 2019.11.04 @ 00:13:00

Job Ticket #: 01387 DST #: 3

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2019.11.05 @ 00:32:34



DRILL STEM TEST REPORT

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01387

DST#: 3

Test Start: 2019.11.04 @ 19:09:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 20:49:00
 Tester: Gene Budig
 Time Test Ended: 00:13:00
 Unit No: 1
 Interval: **3410.00 ft (KB) To 3494.00 ft (KB) (TVD)**
 Reference Elevations: 1882.00 ft (KB)
 Total Depth: 3494.00 ft (KB) (TVD)
 1874.00 ft (CF)
 Hole Diameter: 7.78 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

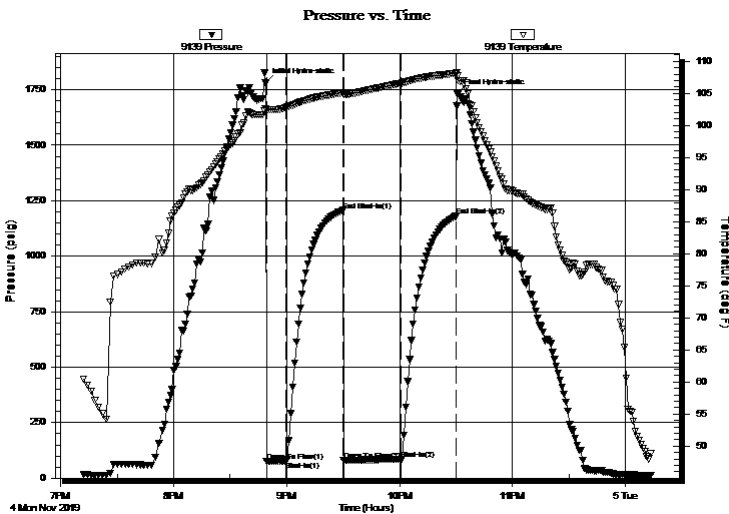
Serial #: 9139

Outside

Press@RunDepth: 1180.13 psig @ 3489.06 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.11.04 End Date: 2019.11.05 Last Calib.: 2019.11.05
 Start Time: 19:09:14 End Time: 00:13:14 Time On Btm: 2019.11.04 @ 20:48:44
 Time Off Btm: 2019.11.04 @ 22:30:44

TEST COMMENT: 1st Opening 10 minutes weak blow for 8 minutes and died
 1st Shuyt-in 30 Minurw a
 2nd Opening 30 Minutes no blow
 2nd Shut-In 30 Minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1779.74	102.61	Initial Hydro-static
1	75.79	102.41	Open To Flow (1)
11	78.12	102.77	Shut-In(1)
41	1206.41	105.09	End Shut-In(1)
42	80.07	104.85	Open To Flow (2)
72	84.96	106.56	Shut-In(2)
101	1180.13	108.09	End Shut-In(2)
102	1731.08	107.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Drilling Mud	0.42

Gas Rates

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



DRILL STEM TEST REPORT

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01387

DST#: 3

Test Start: 2019.11.04 @ 19:09:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:49:00

Time Test Ended: 00:13:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: 3410.00 ft (KB) To 3494.00 ft (KB) (TVD)

Reference Elevations: 1882.00 ft (KB)

Total Depth: 3494.00 ft (KB) (TVD)

1874.00 ft (CF)

Hole Diameter: 7.78 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119 Inside

Press@RunDepth: 1170.58 psig @ 3489.06 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.11.04

End Date: 2019.11.05

Last Calib.: 2019.11.05

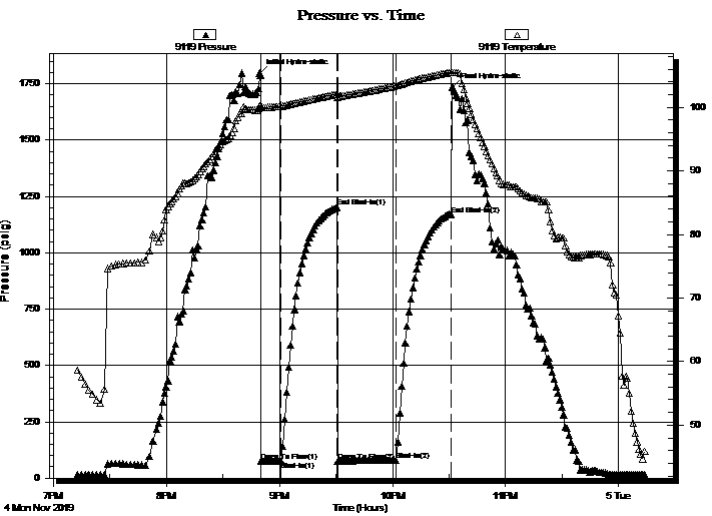
Start Time: 19:09:52

End Time: 00:14:22

Time On Btm: 2019.11.04 @ 20:49:22

Time Off Btm: 2019.11.04 @ 22:31:52

TEST COMMENT: 1st Opening 10 minutes weak blow for 8 minutes and died
 1st Shuyt-in 30 Minurw a
 2nd Opening 30 Minutes no blow
 2nd Shut-In 30 Minutes



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1796.86	100.17	Initial Hydro-static
1	73.56	99.96	Open To Flow (1)
12	75.72	100.14	Shut-In(1)
41	1201.81	102.03	End Shut-In(1)
42	76.12	101.49	Open To Flow (2)
73	80.66	103.36	Shut-In(2)
102	1170.58	105.46	End Shut-In(2)
103	1734.65	105.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Drilling Mud	0.42

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01387

DST#: 3

Test Start: 2019.11.04 @ 19:09:00

Tool Information

Drill Pipe:	Length: 3387.00 ft	Diameter: 3.80 inches	Volume: 47.51 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: 49000.00 lb
			<u>Total Volume: 47.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3410.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.06 ft			
Tool Length:	114.06 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			3385.00	
Hydraulic tool	5.00			3390.00	
Jars	5.00			3395.00	
Safety Joint	5.00			3400.00	
Packer	5.00			3405.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3410.00	
Anchor	5.00			3415.00	
Change Over Sub	0.75			3415.75	
Drill Pipe	63.56			3479.31	
Change Over Sub	0.75		Inside	3480.06	
Anchor	9.00			3489.06	
Recorder	0.00	9119	Inside	3489.06	
Recorder	0.00	9139	Outside	3489.06	
Bullnose	5.00			3494.06	84.06 Bottom Packers & Anchor

Total Tool Length: 114.06



DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company LLC

17-19s-12w Barton

8100 East 22nd Street North
 Building 1900
 Wichita, Kansas 667226
 ATTN: Adam Kennedy

Kuhn #1-17

Job Ticket: 01387

DST#: 3

Test Start: 2019.11.04 @ 19:09:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 45.00 sec/qt
 Water Loss: 12.40 in³
 Resistivity: ohm.m
 Salinity: 10000.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psig

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

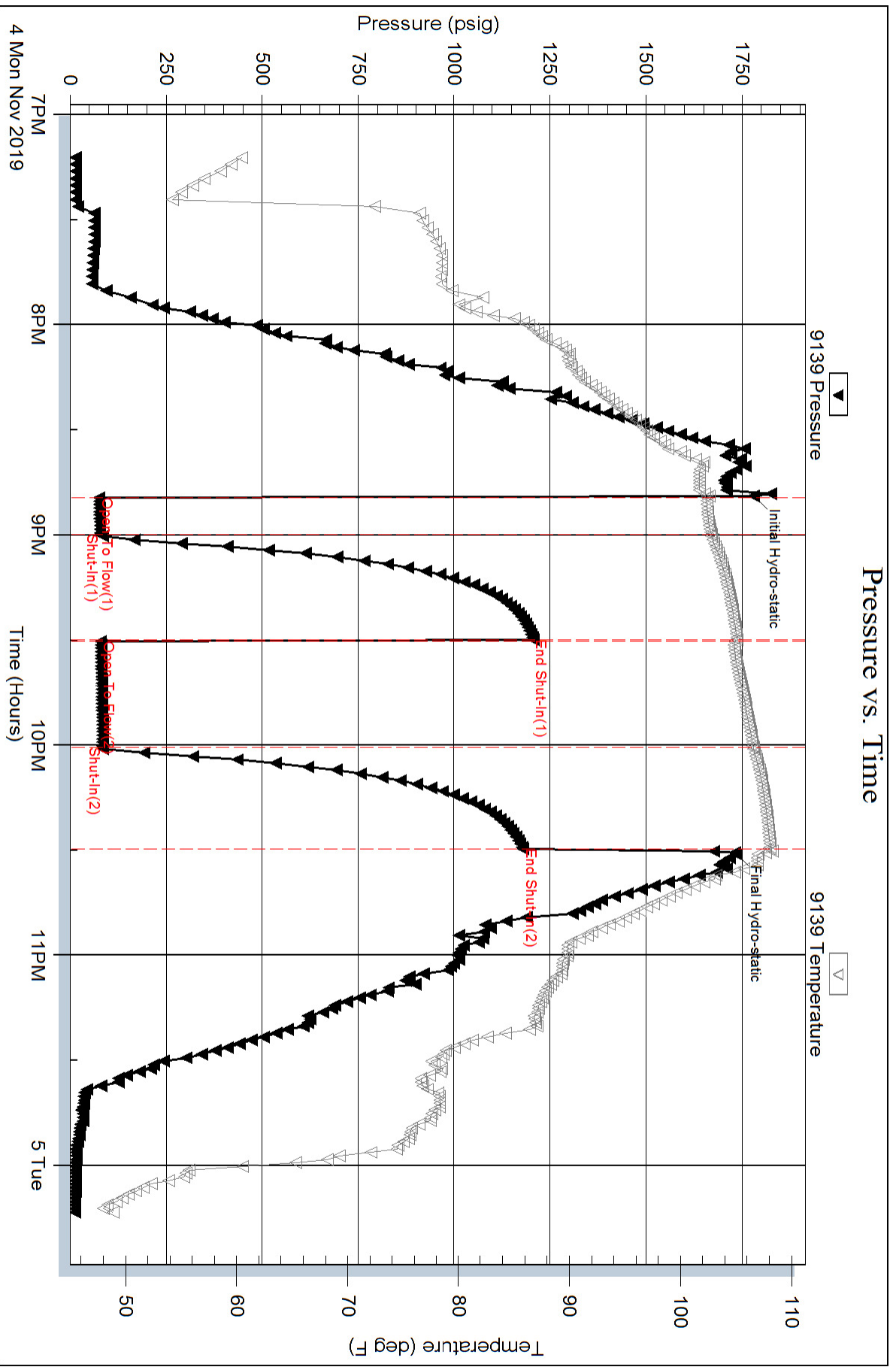
Length ft	Description	Volume bbl
30.00	Drilling Mud	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl

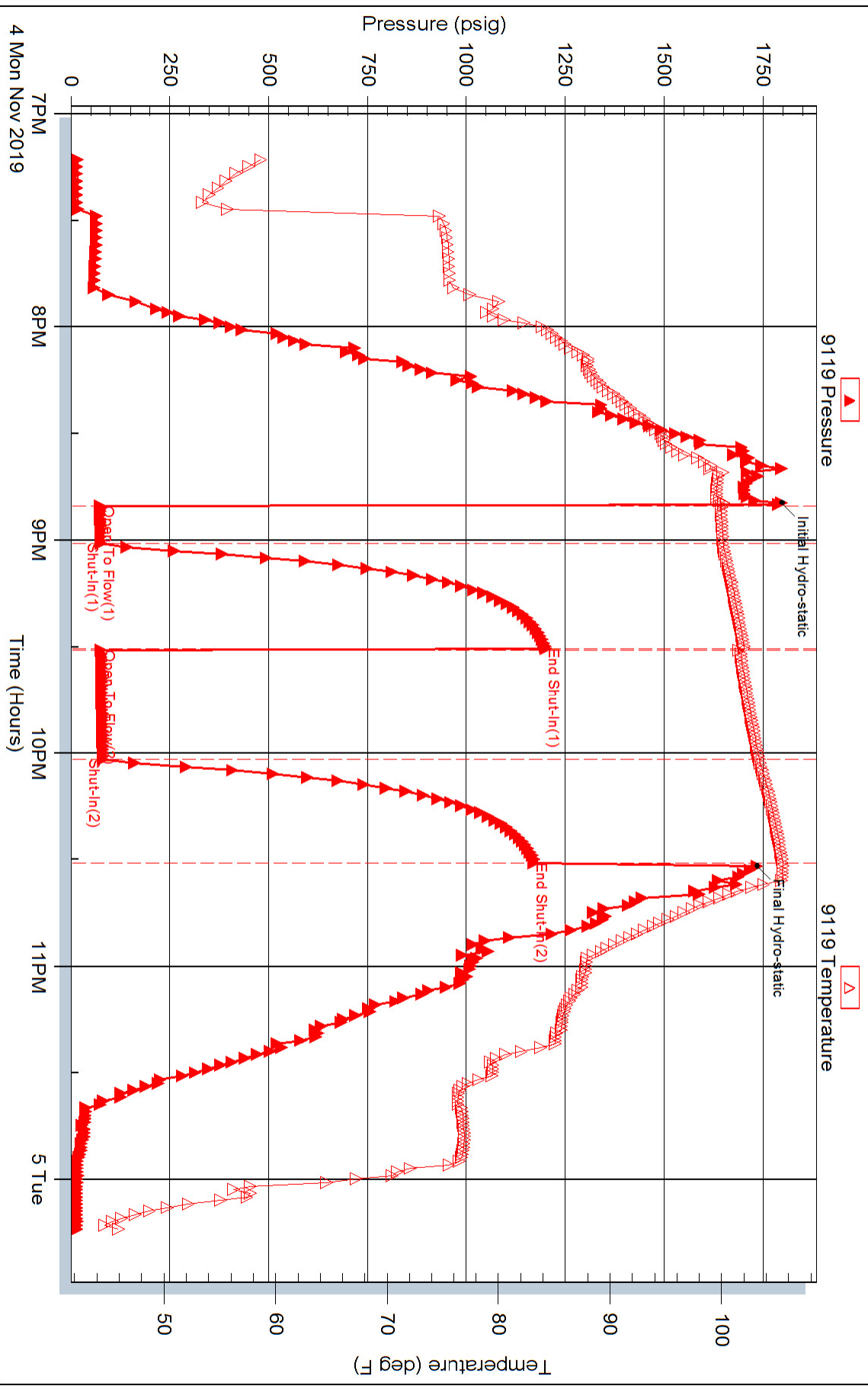
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:



Pressure vs. Time



EDISON OPERATING COMPANY, LLC

Kuhn #1-17

1829' FSL & 1451' FEL Sec 17-19S-12W

Barton Co., Kansas

1874' GL

1884' KB

Report – Set 8-5/8” surface

10-30-19 7:00 am, MIRU Southwind Drilling Rig #1, start spudding @ 2:30 pm 10-29-19. Cut 392' of 12 1/4" hole w/ survey @ 392' – 3/4 °. Run 9 jts of new 8-5/8" 24# csg, tallied 379.02', set @ 392'. RU Basic Energy, LLC, cement w/ 250 sx 60/40 poz 3% cc, 2% gel & 1/4 #/sx floccell. Cement did circulate w/ 25 sx to pit, plug down @ 6:30 am 10-30-19. WOC 8 hrs, Will drill plug @ 2:30 pm 10-30-19 then drill ahead.



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007020	1718	10/31/2019
INVOICE NUMBER			
93080020			

Pratt (620) 672-1201
 B EDISON OPERATING COMPANY LLC
 I 8100 E 22ND ST N
 L WICHITA
 L KS US 67226
 T
 O ATTN: DAVID WITHROW

J LEASE NAME Kuhn 1-17
 O LOCATION
 B COUNTY Barton
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41194303	20920		Net - 30 days	11/30/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 10/30/2019 to 10/30/2019				
0041194303				
171818389A Cement-New Well Casing/Pi 10/30/2019 Cement Surface				
60/40 Poz	250.00	SK	12.69	3,172.50
Celloflake	63.00	LB	1.88	118.44
Calcium Chloride	645.00	LB	0.47	303.15
Wooden Cement Plug, 8 5/8"	1.00	EA	75.20	75.20
Light Vehicle Mileage	65.00	MI	2.35	152.75
Heavy Equipment Mileage	130.00	MI	3.76	488.80
Plug Container Utilization Charge	1.00	EA	117.50	117.50
Depth Charge, 0'-1000'	1.00	HR	564.00	564.00
Blending & Mixing Service Charge	250.00	SK	0.66	164.50

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	5,156.84
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	0.00
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	5,156.84
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

TIMH
45

FIELD SERVICE TICKET
1718 18389 A

DATE _____ TICKET NO. _____

DATE OF JOB: 10-30-99		DISTRICT: Pratt		NEW WELL <input type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/>		CUSTOMER ORDER NO.:				
CUSTOMER: Edison				LEASE: Kuhn		WELL NO. 117				
ADDRESS:				COUNTY: Barton		STATE: MO				
CITY:				SERVICE CREW: Martin, Malone, Clark						
AUTHORIZED BY:				JOB TYPE: 2-42 8 1/2 3200						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
20980	1.5									
						ARRIVED AT JOB	10-30-99			1:00
						START OPERATION				6:30
						FINISH OPERATION				7:15
						RELEASED				
						MILES FROM STATION TO WELL				60

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: _____
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
B-13	60/40 P22	50	250		6,750.00
C-102	collar bar	15	6		252.00
C-109	collar bar	16	645		645.00
M-101	Light work	100	65		325.00
M-102	heavy work	100	1300		1,040.00
C-500	plug	100	1		290.00
C-1	2 1/2" chisel	100	1		1,700.00
C-200	6 1/2" P-100	50	250		350.00
C-105	6 1/2" P-100	100	1		160.00
B-101	Subtotal	100	1		75.00
C-101	Subtotal	100	1		125.00

SUB TOTAL 10,972.00

CHEMICAL / ACID DATA:

SERVICE & EQUIPMENT %TAX ON \$
MATERIALS %TAX ON \$

TOTAL 5,156.89

SERVICE REPRESENTATIVE: Mike Martin

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: _____

FIELD SERVICE ORDER NO.

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)



Scale 1:240 Imperial

Well Name: Kuhn #1-17
 Surface Location: Sec. 17 - T19S - R12W
 Bottom Location:
 API: 15-009-26277-0000
 License Number: 34434
 Spud Date: 10/29/2019 Time: 7:30 AM
 Region: Barton County
 Drilling Completed: 11/5/2019 Time: 8:30 AM
 Surface Coordinates: 1829' FSL & 1451' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 1874.00ft
 K.B. Elevation: 1884.00ft
 Logged Interval: 2600.00ft To: 3575.00ft
 Total Depth: 3575.00ft
 Formation: Arbuckle
 Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: Edison Operating Company LLC
 Address: 8100 E. 22nd St. North
 Building 1900
 Wichita, KS 67226
 Contact Geologist: David Withrow
 Contact Phone Nbr: 316.613.1544
 Well Name: Kuhn #1-17
 Location: Sec. 17 - T19S - R12W
 API: 15-009-26277-0000
 Pool:
 State: Kansas Field: Ft. Zarah North
 Country: USA

LOGGED BY



Company: Edison Operating Company LLC
 Address: 8100 E. 22nd St. North
 Building 1900
 Wichita, KS 67226
 Phone Nbr: 316.650.9677
 Logged By: Geologist Name: Adam T. Kennedy

REMARKS

After review of the geologic log, DST results, and open hole logs, it was determined by the operator that the Kuhn #1-17 was incapable of producing commercial quantities of oil and gas. Said well was plugged and abandoned.

The well samples were saved, submitted, and will be available for review at the Kansas Geologic Survey's Well Sample Library located in Wichita, KS.

Respectfully Submitted,

Adam T. Kennedy

GENERAL INFORMATION

Service Companies

Drilling Contractor: Southwind Drilling - Rig #1
 Tool Pusher: Cecil Farmer
 Daylight Driller: Ryan Colby
 Evening Driller: Angel Martinez

Drilling Fluid: Mud-Co/Service Mud Inc.
 Engineer: Jason Whiting

Morning Driller: Shawn Jensen
 Gas Detector: Bluestem Environmental
 Engineer: Keith Reavis
 Unit: 5279
 Operational By: 1900'

Logging Company: ELI
 Engineer: Jason Cappellucci
 Logs Ran: CDNL DIL MEL SONIC
 Testing Company: Eagle Testers
 Tester: Gene Budig

Deviation Survey	
Depth	Survey
392'	1 deg
3225'	1/2 deg
3575'	1/2 deg

Pipe Strap	
Depth	Pipe Strap
3225'	1.01 LTB

Bit Record								
Bit #	Size	Make	Type	Serial Number	Depth In	Depth Out	Feet	Hours
1	12 1/4	JZ	RR		0	392	392	3.25
2	7 7/8	JZ	RR		392	3225	2833	53.25
3	7 7/8	JZ	RR		3225	3575	350	12.5

Surface Casing
 Ran 9 joints of new 24# 8 5/8 casing, tally @ 379, set @ 392. Used 250 sacks of 60/40 poz, 3%cc, 2% gel, cement did circulate, by Basic (ticket 18390), plug down @ 645 am on 10.30.19.

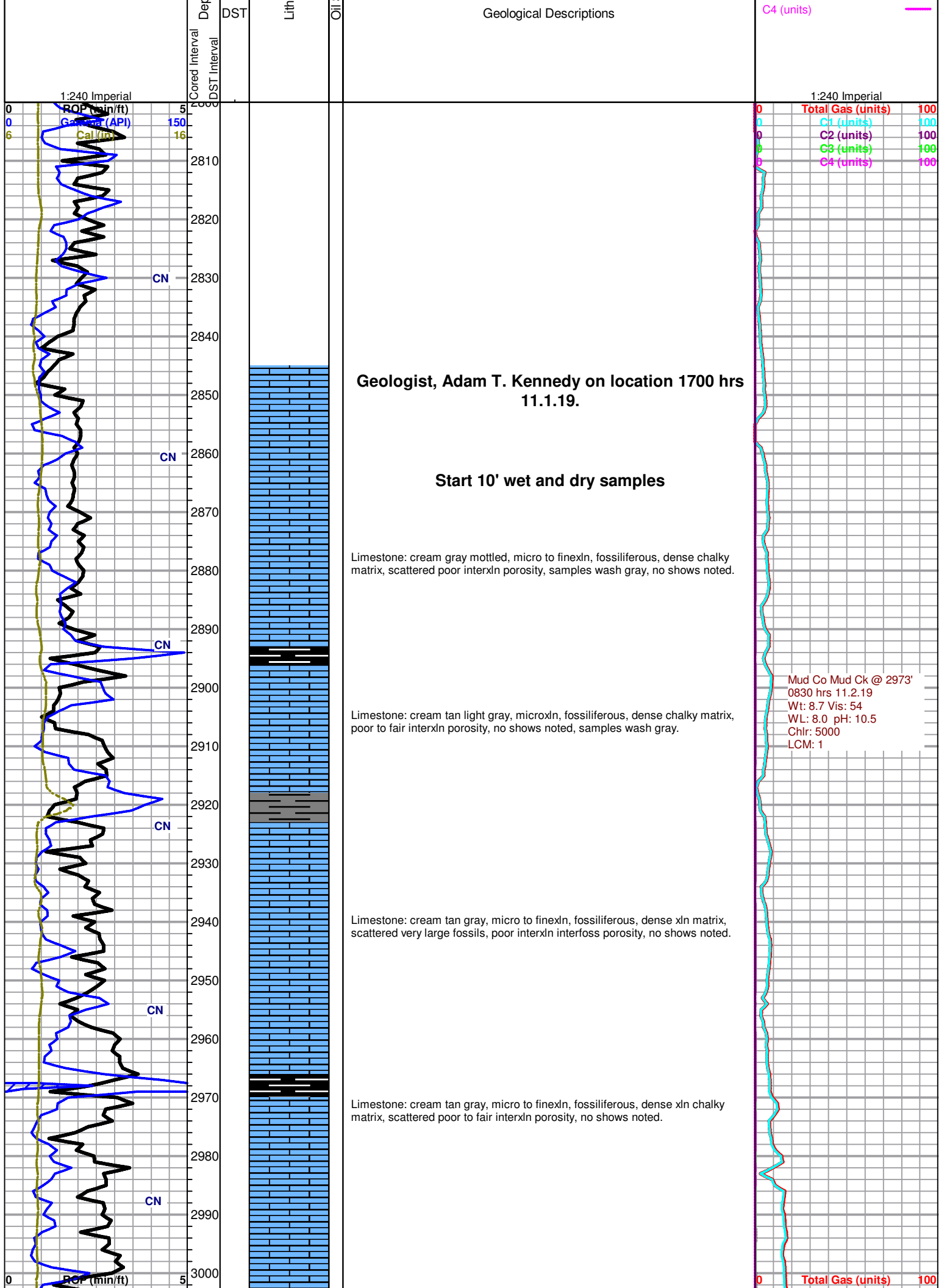
Plugging Info
 Plugged well with 235 sacks of 60/40 poz 4% gel, 1/4 flo seal, 1st plug @ 3457', with 50 sacks, 2nd plug @ 750 w/ 50 sacks 3rd plug @ 450' w/ 80 sacks, 4th plug @ 40' w/ 10 sacks. 30 sacks for rathole, 15 sacks for mousehole, cemented by Quality ticket # 1821, job complete @ 1230 am 11.6.19.

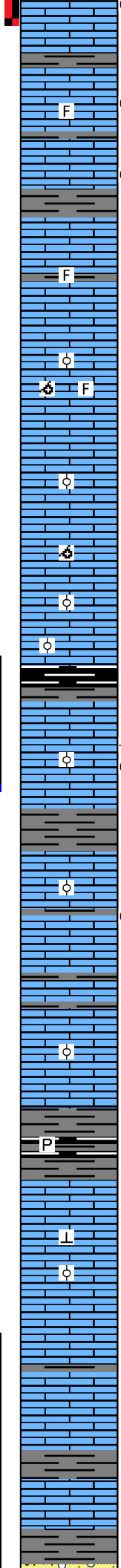
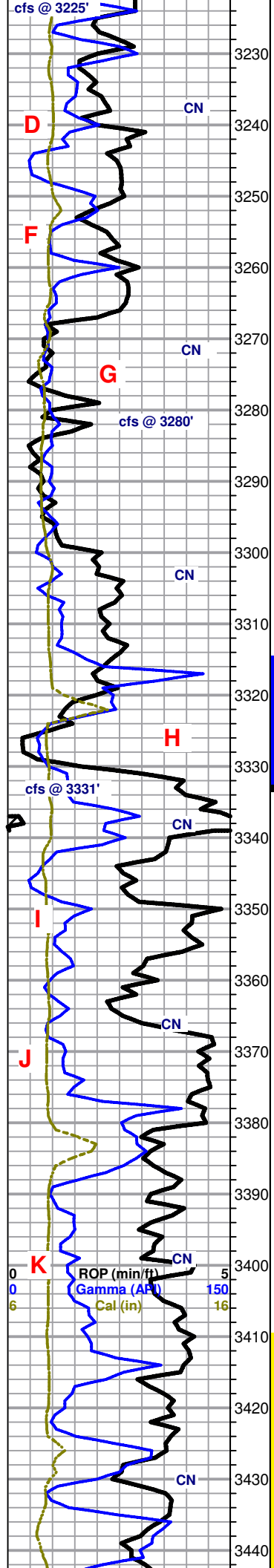
DAILY DRILLING REPORT

Date	0700 Hrs Depth	Previous 24 Hours of Operations
11.2.19	2941'	Displace mud system @ 2500'. Geologist Adam T. Kennedy on location 11.1.19 @ 1700 hrs. Drilling ahead through Topeka. WOB: 32k RPM: 75 PP: 720 SPM: 60 DMC: \$561.01 CMC: \$4,112.34
11.3.19	3225'	Drilling and connections Topeka, Heebner, Lansing. Short trip 20 stands @ 3178'. CTCH resume drilling Lansing A and B. CFS @ 3225'. Shows warrant test, TOH for DST #1. Short trip 15 stands. TOH for test, conduct test. Currently TOH to resume drilling. WOB: 32k RPM: 75 PP: 720 SPM: 60 DMC: \$0.00 CMC: 4,112.34
11.4.19	3390'	Drilling and connections LKC, CFS @ 3331'. Shows warrant test, TOH for DST #2. Conduct test. TIH to resume drilling, drilling and connections lower Lansing. WOB: 32k RPM: 75 PP: 720 SPM: 60 DMC: \$845.70 CMC: 4,958.04
11.5.19	3575'	Drilling and connections Lansing through Arbuckle. CFS @ 3470', 3478', 3486', 3494'. Shows warrant test, TOH for DST #3. Conduct test, TIH resume drilling Arbuckle. CFS @ 3504', 3514'. Rathole ahead to RTD of 3575'. RTD Reached 0900 hrs 11.6.19. Rig up loggers, logging complete 1700 hrs, orders received to plug well @ 1730 hours 11.6.19. Geologist off location. WOB: 32k RPM: 75 PP: 720 SPM: 60 DMC: \$369.81 CMC: \$6,178.67

WELL COMPARISON SHEET

Drilling Well				Comparison Well				
Edison Operating - Kuhn #1-17 Sec. 17 - T19S - R12W 1829' FSL & 1380' FEL 1874 GL 1884 KB				Murfin Drilling Company - Traux #1 Sec. 17 - T19S - R12W SW NW SE Dry 1874 KB				
				Structural Relationship				
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log





Limestone: cream tan gray, micro to finexln, fossiliferous, dense xln matrix, scattered poor pinpoint porosity, mottled, scattered light brown oil stain in porosity, faint odor, no free oil in tray, pale yellow fl.

Limestone: cream tan gray, micro to finexln, trace fossils, dense xln matrix, scattered poor to fair interxln vuggy porosity, scattered secondary crystals, scattered dark brown/black oil stain, slight free oil under lamp, faint odor.

Limestone: cream tan light brown mottled, micro to finexln, fossiliferous, dense chalky matrix, poor visible porosity, scattered trace dark brown stain in porosity, samples wash gray, no odor or fl.

Limestone: white cream tan, micro to finexln, fossiliferous oolitic, dense xln matrix, scattered poor to fair interxln porosity, no shows noted.

cfs Limestone: cream tan light brown, micro to finexln, fossiliferous oolitic, dense xln matrix, scattered good interxln vuggy porosity, scattered sucrosic texture, scattered trace light brown oil, faint odor.

Limestone: cream tan, micro to finexln fossiliferous oolitic, friable xln matrix, oomoldic, abundant good to vgood vuggy oomoldic porosity, abundant secondary rexln, no odor or shows noted.

Limestone: cream tan, micro to finexln, fossiliferous oolitic, dense xln oomoldic matrix, scattered good interxln oomoldic porosity, abundant rexln, no shows noted.

Muncie Creek 3316' (-1432)

cfs Limestone: cream tan, micro to finexln, fossiliferous oolitic, friable xln matrix, excellent vuggy interxln porosity, abundant golden brown stain and free oil / gas, abundant rexln, strong odor, even yellowish fl.

Limestone: white cream tan, micro to finexln, fossiliferous oolitic, dense xln matrix, scattered poor to fair interxln porosity, scattered light brown stain in porosity, no free oil shows, faint odor.

Limestone: white cream light brown, micro to finexln, fossiliferous oolitic, dense sub chalky matrix, poor visible porosity, scattered dead black wormy stain, no shows noted.

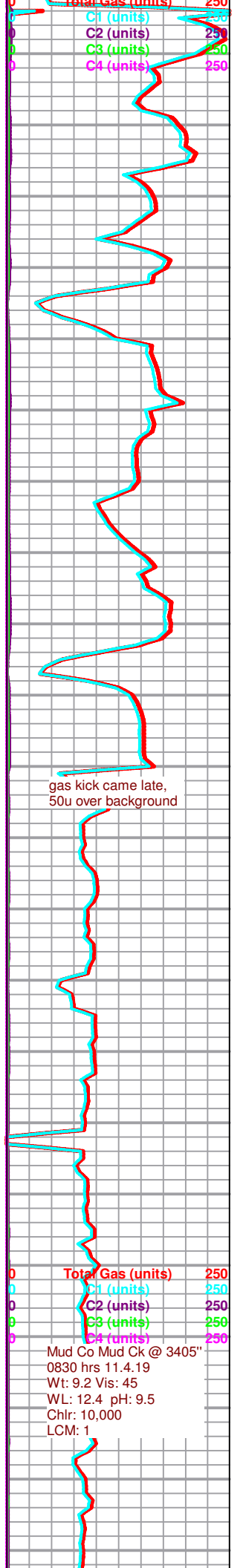
Stark 3380' (-1496)

Shale: gray dark gray black, dense fissile waxy, pyritic, trace carbonaceous.

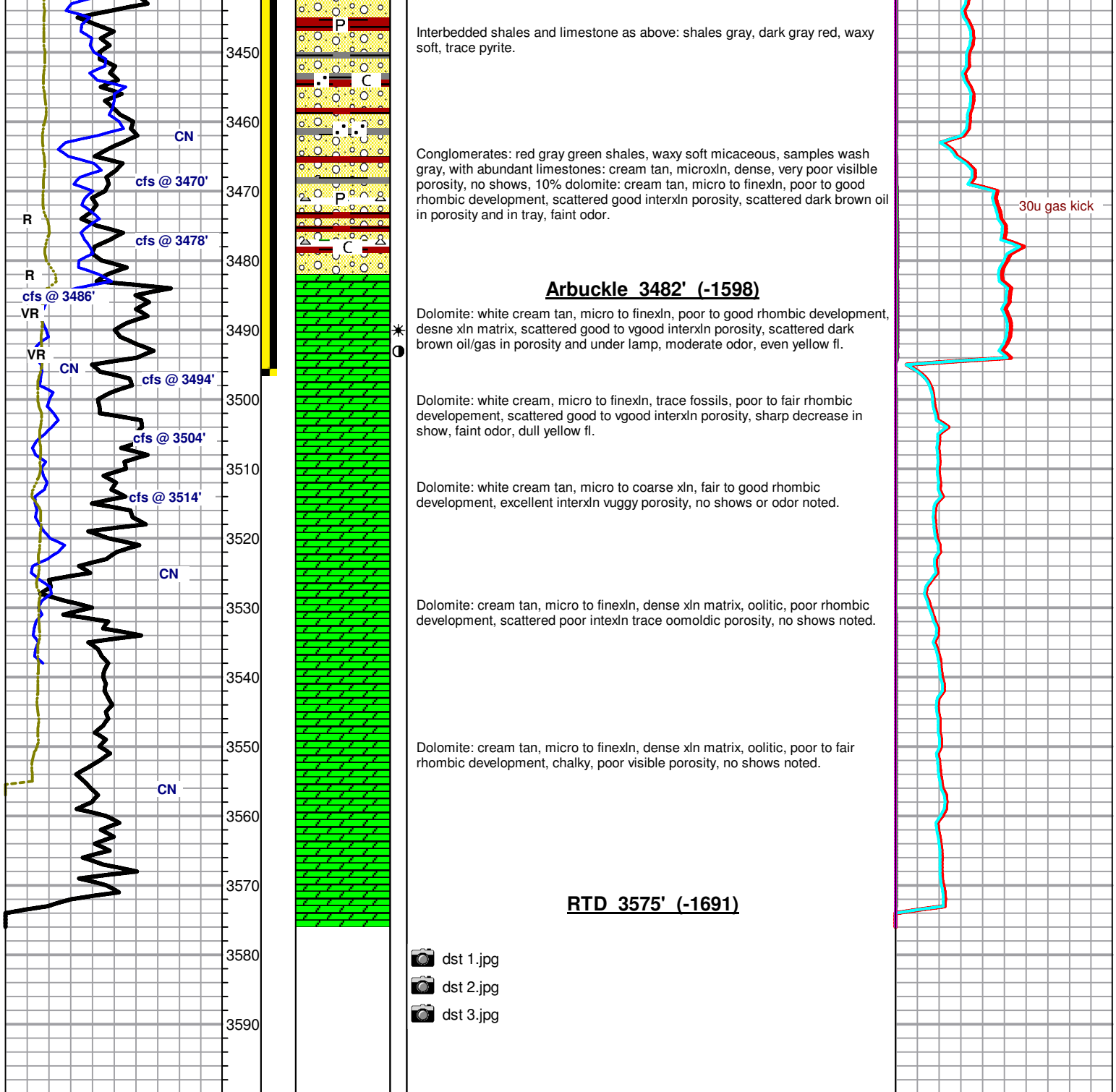
Limestone: cream tan light brown, micro to finexln, fossiliferous trace oolitic, dense xln calcareous matrix, poor visible porosity, no shows noted.

Base Kansas City 3414' (-1530)

Limestone: cream tan, micro to finexln, dense chalky matrix, scattered poor interxln porosity, no shows noted.



Mud Co Mud Ck @ 3405'
 0830 hrs 11.4.19
 Wt: 9.2 Vis: 45
 WL: 12.4 pH: 9.5
 Chr: 10,000
 LCM: 1



Interbedded shales and limestone as above: shales gray, dark gray red, waxy soft, trace pyrite.

Conglomerates: red gray green shales, waxy soft micaceous, samples wash gray, with abundant limestones: cream tan, microxn, dense, very poor visible porosity, no shows, 10% dolomite: cream tan, micro to finexln, poor to good rhombic development, scattered good interxn porosity, scattered dark brown oil in porosity and in tray, faint odor.

Arbuckle 3482' (-1598)

Dolomite: white cream tan, micro to finexln, poor to good rhombic development, dense xln matrix, scattered good to vgood interxn porosity, scattered dark brown oil/gas in porosity and under lamp, moderate odor, even yellow fl.

Dolomite: white cream, micro to finexln, trace fossils, poor to fair rhombic development, scattered good to vgood interxn porosity, sharp decrease in show, faint odor, dull yellow fl.

Dolomite: white cream tan, micro to coarse xln, fair to good rhombic development, excellent interxn vuggy porosity, no shows or odor noted.

Dolomite: cream tan, micro to finexln, dense xln matrix, oolitic, poor rhombic development, scattered poor intexln trace oomoldic porosity, no shows noted.

Dolomite: cream tan, micro to finexln, dense xln matrix, oolitic, poor to fair rhombic development, chalky, poor visible porosity, no shows noted.

RTD 3575' (-1691)

-  dst 1.jpg
-  dst 2.jpg
-  dst 3.jpg

30u gas kick

 <p>Eagle Testers Great Bend, Kansas</p>	DRILL STEM TEST REPORT			
	<table style="width:100%;"> <tr> <td style="width:50%;">Edison Operating Company LLC</td> <td style="width:50%; text-align: right;">17-19s-12w Barton</td> </tr> <tr> <td>8100 East 22nd Street North Building 1900 Wichita, Kansas 667226 ATTN: Adam Kennedy</td> <td style="text-align: right;">Kuhn #1-17 Job Ticket: 01385 DST#: 1 Test Start: 2019.11.03 @ 02:02:00</td> </tr> </table>	Edison Operating Company LLC	17-19s-12w Barton	8100 East 22nd Street North Building 1900 Wichita, Kansas 667226 ATTN: Adam Kennedy
Edison Operating Company LLC	17-19s-12w Barton			
8100 East 22nd Street North Building 1900 Wichita, Kansas 667226 ATTN: Adam Kennedy	Kuhn #1-17 Job Ticket: 01385 DST#: 1 Test Start: 2019.11.03 @ 02:02:00			

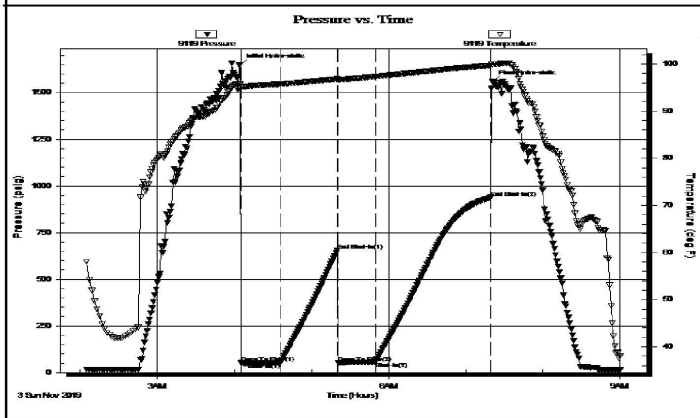
GENERAL INFORMATION:

Formation: Arbuckle	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Gene Budig
Time Tool Opened: 03:05:00	Unit No: 1
Time Test Ended: 08:01:00	Reference Elevations: 1882.00 ft (KB)
Interval: 3178.00 ft (KB) To 3225.00 ft (KB) (TVD)	1874.00 ft (CF)
Total Depth: 3225.00 ft (KB) (TVD)	KB to GR/CF: 8.00 ft
Hole Diameter: 7.78 inches Hole Condition: Fair	

Serial #: 9119 Inside

Press@RunDepth: 938.26 psig @ 3219.84 ft (KB)	Capacity: 5000.00 psig
Start Date: 2019.11.03	End Date: 2019.11.03
Start Time: 02:02:00	End Time: 09:00:30
	Last Calib.: 2019.11.03
	Time On Btm: 2019.11.03 @ 04:04:30
	Time Off Btm: 2019.11.03 @ 07:21:00

TEST COMMENT: 1st Opening 30 Minutes weak building blow built to the bottom of a 5 gallon bucket in 14 minutes
 1st Shut-In 45 Minutes no blow back
 2nd Opening 30 Minutes strong blow bob imediately bled off bob in 9 minutes
 2nd Shut-In 90 Minutes blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1649.64	95.75	Initial Hydro-static
1	53.16	95.25	Open To Flow (1)
32	52.88	95.77	Shut-In(1)
76	654.29	96.86	End Shut-In(1)
76	53.88	96.72	Open To Flow (2)
106	58.42	97.35	Shut-In(2)
195	938.26	99.73	End Shut-In(2)
197	1557.31	99.94	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
0.00	1050 feet of gas in the pipe	0.00
30.00	oil cut mud 80%Mud 20% Oil	0.42

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

 <p>Eagle Testers Great Bend, Kansas</p>	DRILL STEM TEST REPORT	
	Edison Operating Company LLC 8100 East 22nd Street North Building 1900 Wichita, Kansas 667226 ATTN: Adam Kennedy	17-19s-12w Barton Kuhn #1-17 Job Ticket: 01386 DST#:2 Test Start: 2019.11.03 @ 17:55:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:28:00
 Time Test Ended:

Interval: 3314.00 ft (KB) To 3331.00 ft (KB) (TVD)
 Total Depth: 3331.00 ft (KB) (TVD)
 Hole Diameter: 7.78 inches Hole Condition: Fair

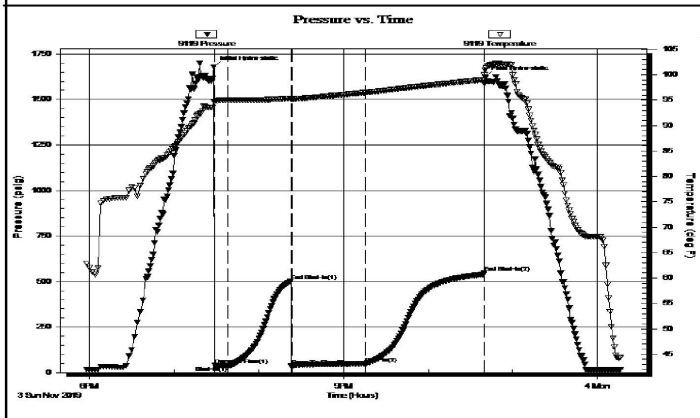
Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 1

Reference Elevations: 1882.00 ft (KB)
 1874.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 9119 Inside

Press@RunDepth: 550.24 psig @ 3326.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.11.03 End Date: 2019.11.04 Last Calib.: 2019.11.04
 Start Time: 17:55:00 End Time: 00:16:30 Time On Btm: 2019.11.03 @ 19:28:00
 Time Off Btm: 2019.11.03 @ 22:40:30

TEST COMMENT: 1st Opening 10 Minutes weak blow built to 4 inches into the water
 1st Shut-In 45 Minutes no blow back
 2nd Opening 45 Minutes weak steady 1 1/2 inch blow
 2nd Shut-In 90 Minutes no blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1677.08	94.76	Initial Hydro-static
1	39.25	94.59	Open To Flow (1)
11	37.71	95.07	Shut-In(1)
55	501.93	95.37	End Shut-In(1)
56	38.40	95.27	Open To Flow (2)
108	48.77	96.50	Shut-In(2)
192	550.24	98.98	End Shut-In(2)
193	1622.52	100.94	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
30.00	oil cut mud 10% Oil 90%Mud	

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

 <p>Eagle Testers Great Bend, Kansas</p>	DRILL STEM TEST REPORT	
	Edison Operating Company LLC 8100 East 22nd Street North Building 1900 Wichita, Kansas 667226 ATTN: Adam Kennedy	17-19s-12w Barton Kuhn #1-17 Job Ticket: 01387 DST#: 3 Test Start: 2019.11.04 @ 19:09:00

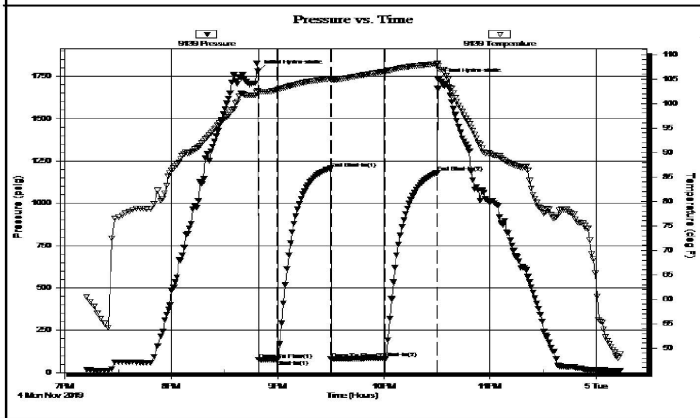
GENERAL INFORMATION:

Formation: Arbuckle	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Gene Budig
Time Tool Opened: 20:49:00	Unit No: 1
Time Test Ended: 00:13:00	Reference Elevations: 1882.00 ft (KB)
Interval: 3410.00 ft (KB) To 3494.00 ft (KB) (TVD)	1874.00 ft (CF)
Total Depth: 3494.00 ft (KB) (TVD)	KB to GR/CF: 8.00 ft
Hole Diameter: 7.78 inches Hole Condition: Fair	

Serial #: 9139 Outside

Press@RunDepth: 1180.13 psig @ 3489.06 ft (KB)	Capacity: 5000.00 psig
Start Date: 2019.11.04 End Date: 2019.11.05	Last Calib.: 2019.11.05
Start Time: 19:09:14 End Time: 00:13:14	Time On Btm: 2019.11.04 @ 20:48:44
	Time Off Btm: 2019.11.04 @ 22:30:44

TEST COMMENT: 1st Opening 10 minutes weak blow for 8 minutes and died
 1st Shuyt-in 30 Minurwa
 2nd Opening 30 Minutes no blow
 2nd Shut-In 30 Minutes



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1779.74	102.61	Initial Hydro-static
1	75.79	102.41	Open To Flow (1)
11	78.12	102.77	Shut-In(1)
41	1206.41	105.09	End Shut-In(1)
42	80.07	104.85	Open To Flow (2)
72	84.96	106.56	Shut-In(2)
101	1180.13	108.09	End Shut-In(2)
102	1731.08	107.70	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
30.00	Drilling Mud	0.42

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



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 WEST WICHITA AVE, RUSSELL KS 67665
 PHONE:785-324-1041 FAX:785-483-1087
 EMAIL: cementing@ruraltel.net

Date: 11/6/2019
 Invoice # 1821

P.O.#:
 Due Date: 12/6/2019
 Division: *Russell*

Invoice

Contact:

Address/Job Location:

Edison Operating

Reference:
 KUHN 1-17 SEC 17-19-12

Description of Work:
 PLUG JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 684.02	Yes				
Common-Class A	141	\$ 2,226.86	Yes				
POZ Mix-Standard	94	\$ 504.47	Yes				
Bulk Truck Matl-Material Service Charge	243	\$ 186.30	Yes				
Premium Gel (Bentonite)	8	\$ 177.87	Yes				
Flo Seal	60	\$ 92.00	Yes				
Dry Hole Plug	1	\$ 64.40	Yes				
Pump Truck Mileage-Job to Nearest Camp	15	\$ 51.75	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	15	\$ 40.25	Yes				

Invoice Terms:

Net 30

	<i>SubTotal:</i>	\$ 4,027.91
	<i>Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice:</i>	\$ (100.70)
<hr/>		
	SubTotal for Taxable Items:	\$ 3,927.22
	SubTotal for Non-Taxable Items:	\$ -
<hr/>		
	Total:	\$ 3,927.21
	Tax:	\$ 294.54
		<i>7.50% Barton County Sales Tax</i>

Thank You For Your Business!

Amount Due: \$ 4,221.75
Applied Payments:
Balance Due: \$ 4,221.75

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1821

Date	11-6-19	Sec.	17	Twp.	19	Range	12	County	Barton	State	Ks	On Location		Finish	12:30 AM
Lease								Well No.		Owner					
Kuhn								1-17		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Contractor								Type Job		Charge To					
Southwest #1								Rotary Plug		Edison Operating					
Hole Size				T.D.				Cement Left in Csg.				Shoe Joint			
7 7/8				3575											
Csg.				Depth				Street				City			
Tbg. Size				Depth				State				The above was done to satisfaction and supervision of owner agent or contractor.			
Tool				Depth				Cement Amount Ordered				235 1/4 40 4 1/2 1/4 #F10			
Meas Line				Displace				Common				141			
EQUIPMENT				Pumptrk				No. Cementer				Helper			
20				3				Cris				Tan/F.			
Bulktrk				No. Driver				Gel.				8 @ 8			
3				M. Dept				Calcium							
JOB SERVICES & REMARKS								Hulls							
Remarks:								Salt							
Rat Hole								Flowseal							
30SK								60#							
Mouse Hole								Kol-Seal							
15SK															
Centralizers								Mud CLR 48							
Baskets								CFL-117 or CD110 CAF 38							
D/V or Port Collar								Sand							
1st 3457 50SK								Handling							
2nd 750 50SK								243							
3rd 450 80SK								Mileage							
4th 40 10SK								FLOAT EQUIPMENT							
								8 5/8 Dry Hal-Plug							
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge							
								plug							
								Mileage							
								15 (min)							
Signature								Tax							
Carl E. Janner								Discount							
								Total Charge							