

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)</i> <i>(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	F. G. Holl Company L.L.C.
Well Name	CALCARA 4-19
Doc ID	1470442

All Electric Logs Run

Sonic Cement Bond log
CPI
Fracfinder
BHCS
DIL
CDL/CNL
Microresistivity

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	CALCARA 4-19
Doc ID	1470442

Tops

Name	Top	Datum
Herrington	1738	173
Winfield	1791	120
Towanda	1853	58
Ft Riley	1887	24
Florence	1949	-38
B/Florence	2000	-89
Wrefold	2043	-132
Council Grove	2063	-152
Neva	2237	-326
Red Eagle	2300	-389
Stotler	2587	-676
Tarkio	2649	-738
Howard	2786	-875
Topeka	2862	-951
Heebner	3116	-1205
Toronto	3132	-1221
Douglas Shale	3148	-1237
Brown Lime	3200	-1289
Lansing	3213	-1302
BKC	3449	-1538
Arbuckle	3536	-1625
Reagan Sand	3593	-1682
Quartzite	3603	-1692
RTD	3750	-1839

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	CALCARA 4-19
Doc ID	1470442

Tops

Name	Top	Datum
LTD	3674	-1763



DRILL STEM TEST REPORT

Prepared For: **F G Holl Company LLC**

9431 East Central suite 100
Wichita, Kansas 67206-2563

ATTN: Renee Hustain

Calcara #4-19

19-19s-14w Barton

Start Date: 2019.07.11 @ 04:57:00

End Date: 2019.07.11 @ 09:40:00

Job Ticket #: 01364 DST #: 1

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

Printed: 2019.07.11 @ 09:56:28



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01364

DST#: 1

ATTN: Renee Hustean

Test Start: 2019.07.11 @ 04:57:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:48:00

Time Test Ended: 09:40:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3340.00 ft (KB) To 3365.00 ft (KB) (TVD)**

Reference Elevations: 1911.00 ft (KB)

Total Depth: 3365.00 ft (KB) (TVD)

1903.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **9139** Outside

Press@RunDepth: 41.41 psig @ 3360.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.07.11

End Date:

2019.07.11

Last Calib.:

2019.07.11

Start Time: 04:57:00

End Time:

09:37:59

Time On Btm:

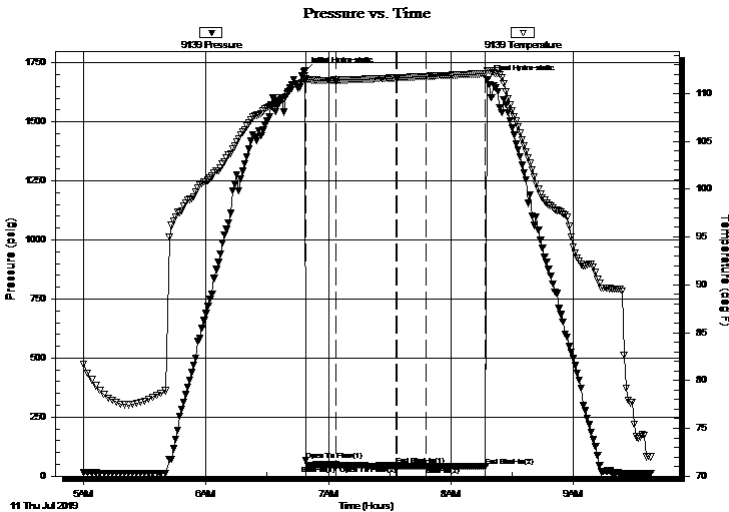
2019.07.11 @ 06:48:30

Time Off Btm:

2019.07.11 @ 08:18:00

TEST COMMENT: 1st Opening 15 minutes weak surface blow for 15 minutes and died
1st Shut-in 30 Minutes
2nd opening 15 Minutes no blow
2nd Shut-In 30 Minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1714.08	111.83	Initial Hydro-static
1	67.44	111.50	Open To Flow (1)
15	47.49	111.39	Shut-In(1)
45	43.70	111.62	End Shut-In(1)
45	43.71	111.63	Open To Flow (2)
60	41.69	111.78	Shut-In(2)
89	41.41	112.07	End Shut-In(2)
90	1679.48	112.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Drilling mud	0.01

Gas Rates

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



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01364

DST#: 1

ATTN: Renee Hustean

Test Start: 2019.07.11 @ 04:57:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:48:00

Time Test Ended: 09:40:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: 3340.00 ft (KB) To 3365.00 ft (KB) (TVD)

Reference Elevations: 1911.00 ft (KB)

Total Depth: 3365.00 ft (KB) (TVD)

1903.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119 Inside

Press@RunDepth: 45.95 psig @ 3360.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.07.11 End Date: 2019.07.11

Last Calib.: 2019.07.11

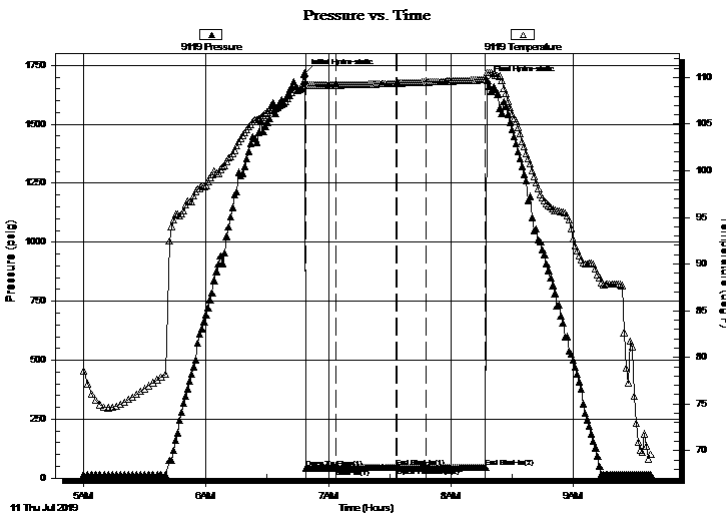
Start Time: 04:57:00 End Time: 09:37:59

Time On Btm: 2019.07.11 @ 06:48:30

Time Off Btm: 2019.07.11 @ 08:18:00

TEST COMMENT: 1st Opening 15 minutes weak surface blow for 15 minutes and died
1st Shut-in 30 Minutes
2nd opening 15 Minutes no blow
2nd Shut-In 30 Minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1716.86	109.68	Initial Hydro-static
1	41.43	109.19	Open To Flow (1)
15	43.02	109.19	Shut-In(1)
45	47.30	109.39	End Shut-In(1)
45	47.34	109.39	Open To Flow (2)
60	44.47	109.52	Shut-In(2)
89	45.95	109.77	End Shut-In(2)
90	1685.65	110.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Drilling mud	0.01

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01364

DST#: 1

ATTN: Renee Hustean

Test Start: 2019.07.11 @ 04:57:00

Tool Information

Drill Pipe:	Length: 3315.00 ft	Diameter: 3.80 inches	Volume: 46.50 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: 9.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 46.50 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3340.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	55.00 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			3315.00	
Hydraulic tool	5.00			3320.00	
Jars	5.00			3325.00	
Safety Joint	5.00			3330.00	
Packer	5.00			3335.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3340.00	
Anchor	20.00			3360.00	
Recorder	0.00	9119	Inside	3360.00	
Recorder	0.00	9139	Outside	3360.00	
Bullnose	5.00			3365.00	25.00 Bottom Packers & Anchor
Total Tool Length:	55.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01364

DST#: 1

ATTN: Renee Hustean

Test Start: 2019.07.11 @ 04:57:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 67.00 sec/qt
Water Loss: 8.00 in³
Resistivity: ohm.m
Salinity: 5300.00 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
1.00	Drilling mud	0.014

Total Length: 1.00 ft Total Volume: 0.014 bbl

Num Fluid Samples: 0

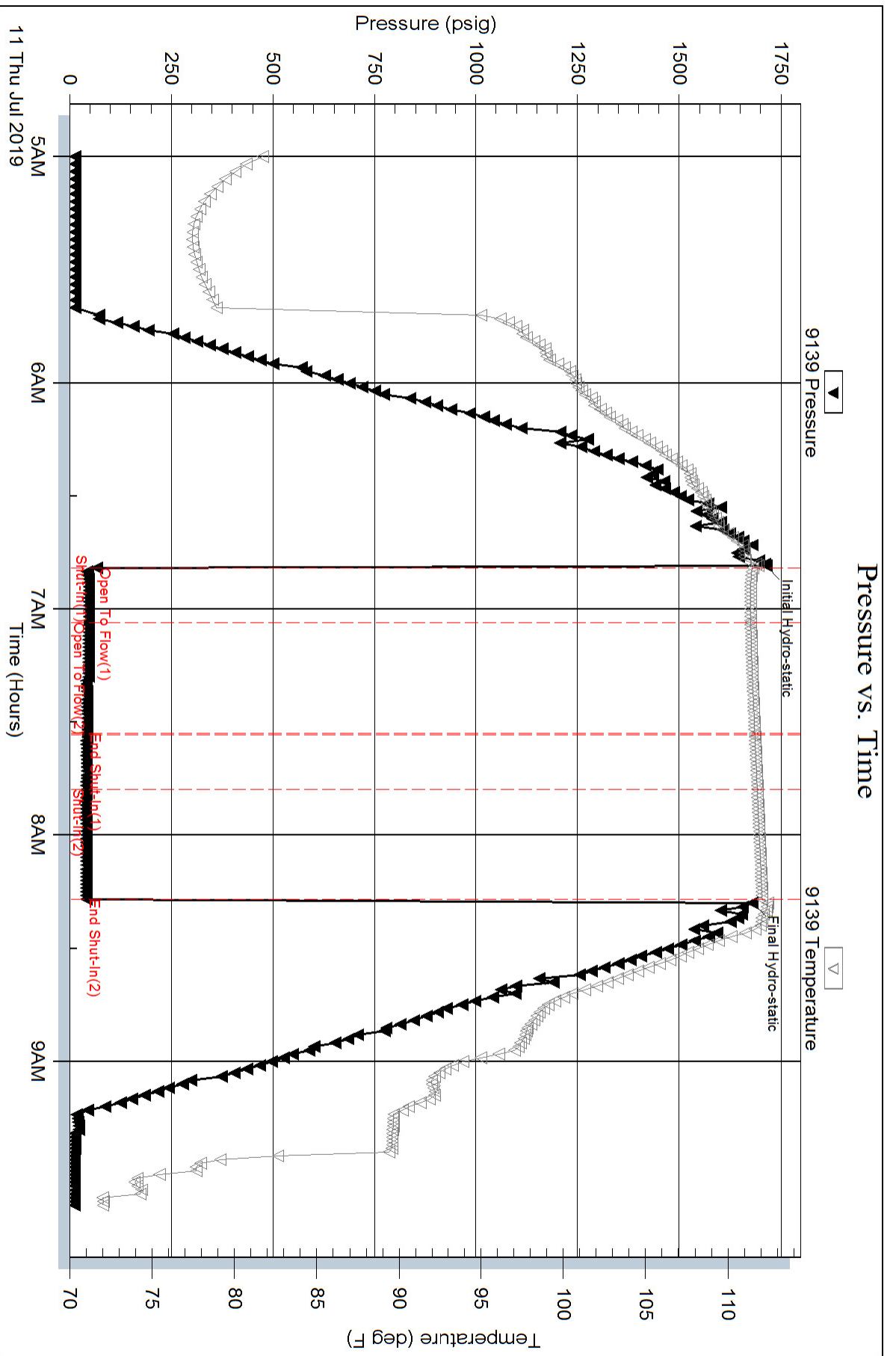
Num Gas Bombs: 0

Serial #:

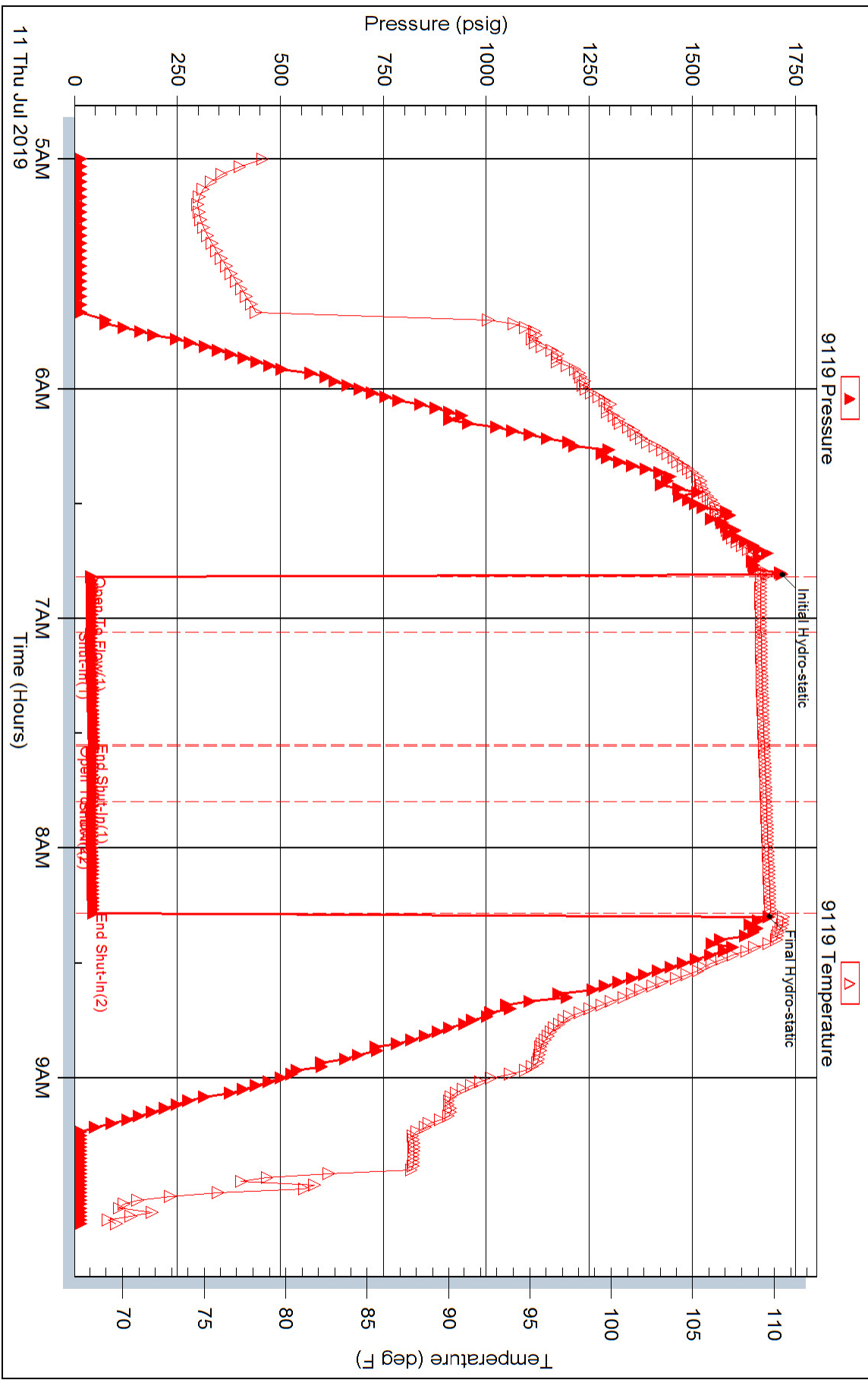
Laboratory Name:

Laboratory Location:

Recovery Comments:



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **F G Holl Company LLC**

9431 East Central suite 100
Wichita, Kansas 67206-2563

ATTN: Renee Hustain

Calcara #4-19

19-19s-14w Barton

Start Date: 2019.07.11 @ 17:10:00

End Date: 2019.07.11 @ 23:56:00

Job Ticket #: 01365 DST #: 2

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

Printed: 2019.07.12 @ 00:17:28



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01365

DST#: 2

ATTN: Renee Hustean

Test Start: 2019.07.11 @ 17:10:00

GENERAL INFORMATION:

Formation: **Kansas City "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:28:00

Time Test Ended: 23:56:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: 3365.00 ft (KB) To 3380.00 ft (KB) (TVD)

Reference Elevations: 1911.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1903.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9139 Outside

Press@RunDepth: 539.85 psig @ 3375.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.07.11

End Date:

2019.07.11

Last Calib.:

2019.07.12

Start Time: 17:10:00

End Time:

23:54:00

Time On Btm:

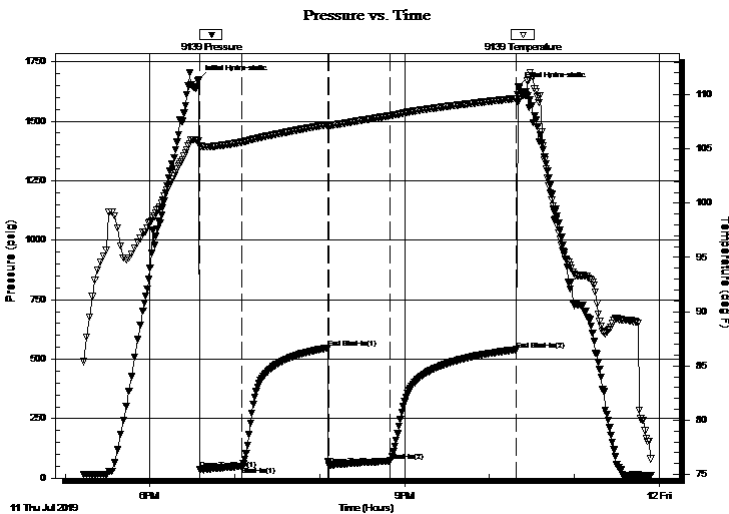
2019.07.11 @ 18:34:30

Time Off Btm:

2019.07.11 @ 22:20:30

TEST COMMENT: 1st Opening 30 Minutes weak building blow built to 9 inches into the water
1st Shut-In 60 Minutes no blow back
2nd Opening 45 Minutes weak building blow built to 5 inches into the water
2nd Shut-In 90 Minutes no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1674.68	105.74	Initial Hydro-static
1	35.68	105.31	Open To Flow (1)
31	49.97	105.63	Shut-In(1)
91	547.24	107.26	End Shut-In(1)
92	52.40	107.15	Open To Flow (2)
135	71.59	108.05	Shut-In(2)
225	539.85	109.65	End Shut-In(2)
226	1645.31	109.91	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	100 FEET OF GAS IN THE PIPE	0.00
1.00	Clean Oil	0.01
20.00	Mud with a trace of oil	0.28
60.00	Muddy water with a trace of oil	0.84
0.00	1% Oil 38% Mud 61% water	0.00
0.00	Chlorides 72000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01365

DST#: 2

ATTN: Renee Hustean

Test Start: 2019.07.11 @ 17:10:00

GENERAL INFORMATION:

Formation: **Kansas City "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:28:00

Time Test Ended: 23:56:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3365.00 ft (KB) To 3380.00 ft (KB) (TVD)**

Reference Elevations: 1911.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1903.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 542.95 psig @ 3375.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.07.11

End Date:

2019.07.11

Last Calib.:

2019.07.12

Start Time: 17:10:00

End Time:

23:55:00

Time On Btm:

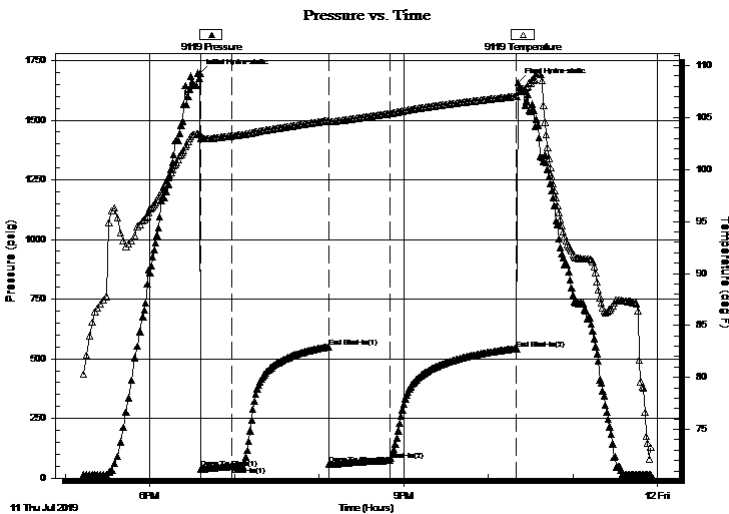
2019.07.11 @ 18:35:30

Time Off Btm:

2019.07.11 @ 22:21:00

TEST COMMENT: 1st Opening 30 Minutes weak building blow built to 9 inches into the water
1st Shut-In 60 Minutes no blow back
2nd Opening 45 Minutes weak building blow built to 5 inches into the water
2nd Shut-In 90 Minutes no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1695.14	103.47	Initial Hydro-static
1	39.66	102.99	Open To Flow (1)
23	49.59	103.23	Shut-In(1)
91	550.35	104.71	End Shut-In(1)
92	56.67	104.60	Open To Flow (2)
135	74.64	105.39	Shut-In(2)
225	542.95	107.05	End Shut-In(2)
226	1657.11	107.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	100 FEET OF GAS IN THE PIPE	0.00
1.00	Clean Oil	0.01
20.00	Mud with a trace of oil	0.28
60.00	Muddy water with a trace of oil	0.84
0.00	1% Oil 38% Mud 61% water	0.00
0.00	Chlorides 72000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01365

DST#: 2

ATTN: Renee Hustean

Test Start: 2019.07.11 @ 17:10:00

Tool Information

Drill Pipe:	Length: 3348.00 ft	Diameter: 3.80 inches	Volume: 46.96 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:	62000.00 lb
			<u>Total Volume: 46.96 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3365.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	15.00 ft				
Tool Length:	45.00 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			3340.00	
Hydraulic tool	5.00			3345.00	
Jars	5.00			3350.00	
Safety Joint	5.00			3355.00	
Packer	5.00			3360.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3365.00	
Anchor	10.00			3375.00	
Recorder	0.00	9119	Inside	3375.00	
Recorder	0.00	9139	Outside	3375.00	
Bullnose	5.00			3380.00	15.00 Bottom Packers & Anchor
Total Tool Length:	45.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01365

DST#:2

ATTN: Renee Hustean

Test Start: 2019.07.11 @ 17:10:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 10.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 9.59 in³
Resistivity: ohm.m
Salinity: 8000.00 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	100 FEET OF GAS IN THE PIPE	0.000
1.00	Clean Oil	0.014
20.00	Mud with a trace of oil	0.281
60.00	Muddy water with a trace of oil	0.842
0.00	1% Oil 38% Mud 61% water	0.000
0.00	Chlorides 72000	0.000

Total Length: 81.00 ft Total Volume: 1.137 bbl

Num Fluid Samples: 0

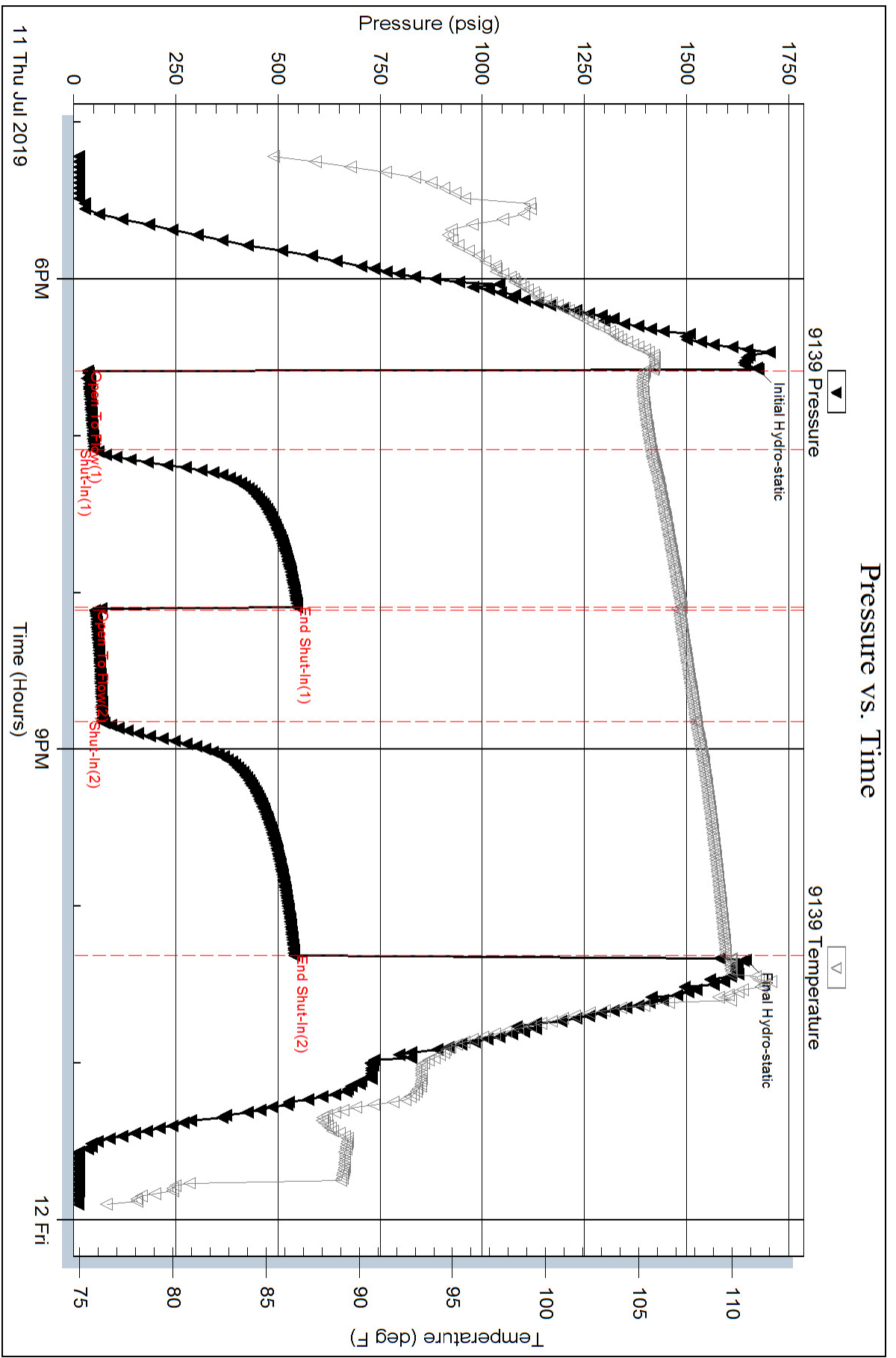
Num Gas Bombs: 0

Serial #:

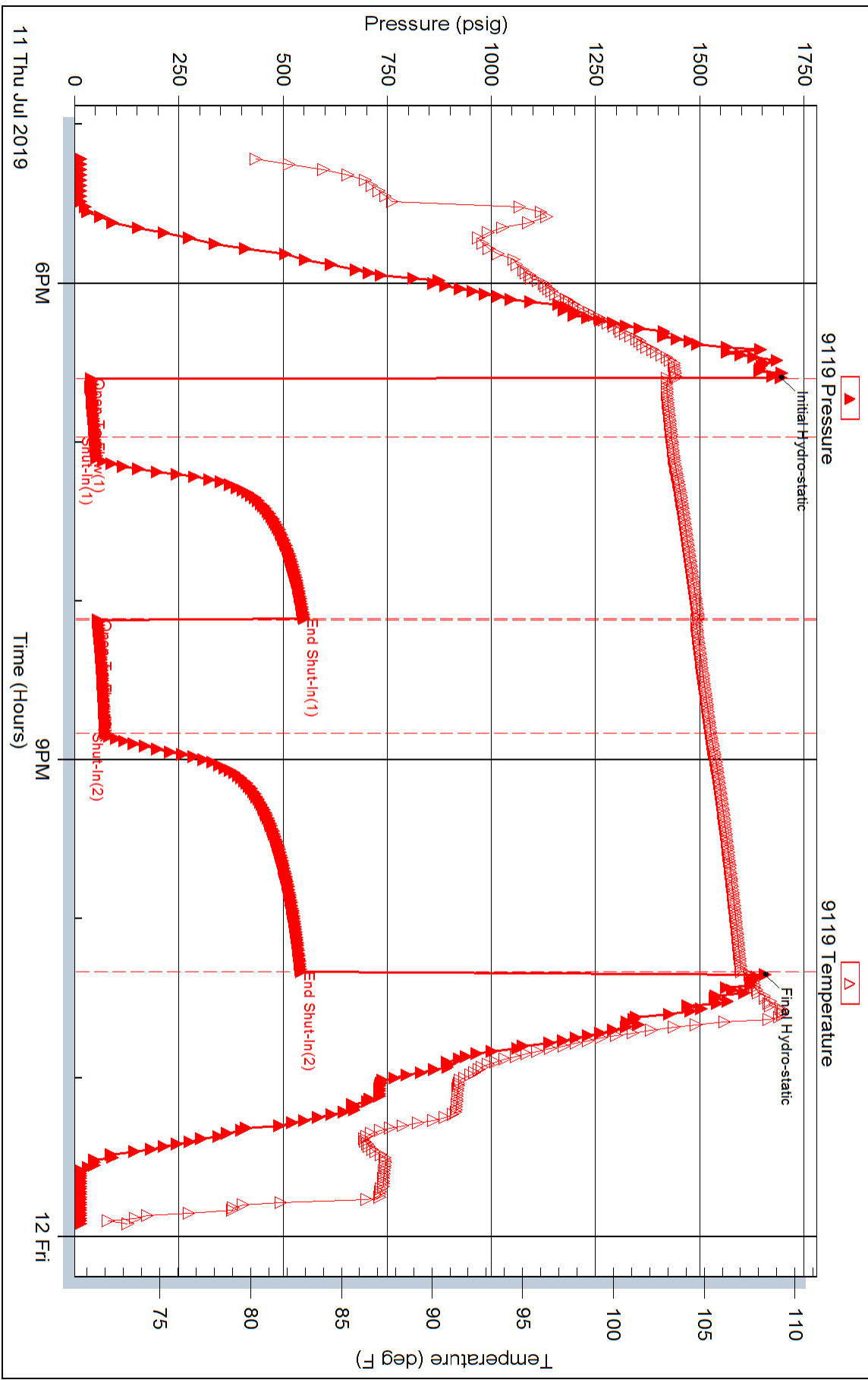
Laboratory Name:

Laboratory Location:

Recovery Comments:



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **F G Holl Company LLC**

9431 East Central suite 100
Wichita, Kansas 67206-2563

ATTN: Renee Hustain

Calcara #4-19

19-19s-14w Barton

Start Date: 2019.07.12 @ 06:05:00

End Date: 2019.07.12 @ 01:15:00

Job Ticket #: 01366 DST #: 3

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

Printed: 2019.07.12 @ 13:34:35



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01366

DST#: 3

ATTN: Renee Hustean

Test Start: 2019.07.12 @ 06:05:00

GENERAL INFORMATION:

Formation: **Kansas City "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:52:00

Time Test Ended: 01:15:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3380.00 ft (KB) To 3398.00 ft (KB) (TVD)**

Reference Elevations: 1911.00 ft (KB)

Total Depth: 3398.00 ft (KB) (TVD)

1903.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 9119 Inside

Press@RunDepth: 1089.66 psig @ 3393.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.07.12

End Date: 2019.07.12

Last Calib.: 2019.07.12

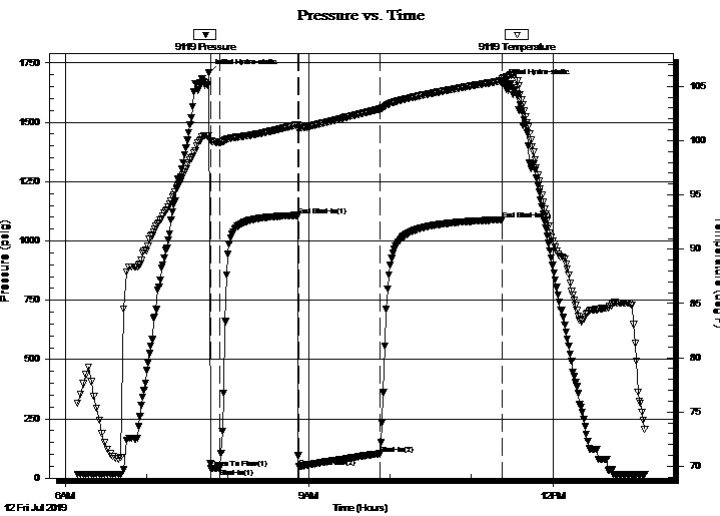
Start Time: 06:05:55

End Time: 13:08:25

Time On Btm: 2019.07.12 @ 07:45:55

Time Off Btm: 2019.07.12 @ 11:22:55

TEST COMMENT: 1st Opening 5 Minutes built to the bottom of a 5 gallon bucket in 1 minute
1st Shut-In 60 Minutes no blow back
2NDOpening 60 Minutes strong Blow gas to surface in 33 Minutes
2nd Shut-In 90 Minutes weak blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1707.39	100.47	Initial Hydro-static
2	42.22	99.98	Open To Flow (1)
8	43.30	99.85	Shut-In(1)
66	1108.08	101.47	End Shut-In(1)
67	47.43	101.18	Open To Flow (2)
126	102.39	102.91	Shut-In(2)
217	1089.66	105.52	End Shut-In(2)
217	1663.37	105.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
220.00	Clean Gassy Oil 20%Gas 80% Oil	3.09
0.00	gravity 44 corrected	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	0.01	5.39
Last Gas Rate	0.13	1.30	5.88
Max. Gas Rate	0.13	1.30	5.88



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01366

DST#: 3

ATTN: Renee Hustean

Test Start: 2019.07.12 @ 06:05:00

GENERAL INFORMATION:

Formation: **Kansas City "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:52:00

Time Test Ended: 01:15:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3380.00 ft (KB) To 3398.00 ft (KB) (TVD)**

Reference Elevations: 1911.00 ft (KB)

Total Depth: 3398.00 ft (KB) (TVD)

1903.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: **9139** Outside

Press@RunDepth: 1086.24 psig @ 3393.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.07.12

End Date: 2019.07.12

Last Calib.: 2019.07.12

Start Time: 06:05:00

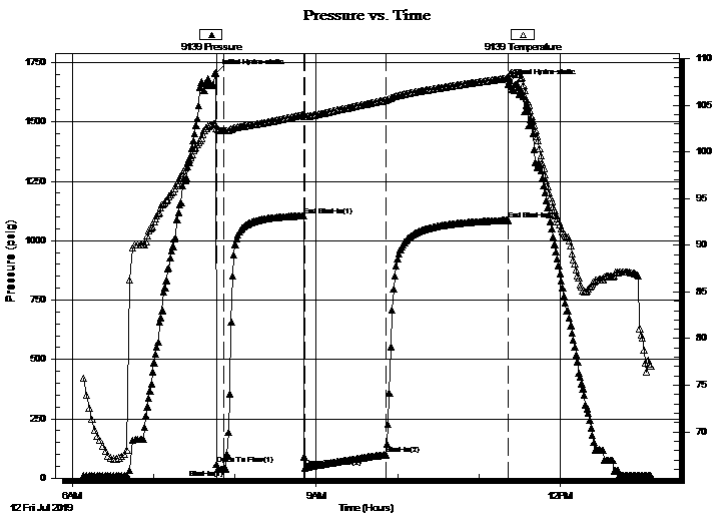
End Time: 13:07:30

Time On Btm: 2019.07.12 @ 07:45:30

Time Off Btm: 2019.07.12 @ 11:22:00

TEST COMMENT: 1st Opening 5 Minutes built to the bottom of a 5 gallon bucket in 1 minute
1st Shut-In 60 Minutes no blow back
2NDOpening 60 Minutes strong Blow gas to surface in 33 Minutes
2nd Shut-In 90 Minutes weak blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1705.43	102.92	Initial Hydro-static
1	57.28	102.50	Open To Flow (1)
6	38.43	102.25	Shut-In(1)
65	1104.81	103.99	End Shut-In(1)
66	43.78	103.77	Open To Flow (2)
126	98.83	105.53	Shut-In(2)
216	1086.24	107.90	End Shut-In(2)
217	1660.10	107.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
220.00	Clean Gassy Oil 20%Gas 80% Oil	3.09
0.00	gravity 44 corrected	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	0.01	5.39
Last Gas Rate	0.13	1.30	5.88
Max. Gas Rate	0.13	1.30	5.88



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01366

DST#: 3

ATTN: Renee Hustean

Test Start: 2019.07.12 @ 06:05:00

Tool Information

Drill Pipe:	Length: 3377.00 ft	Diameter: 3.80 inches	Volume: 47.37 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:	64000.00 lb
			<u>Total Volume: 47.37 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3380.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	18.00 ft				
Tool Length:	48.00 ft				
Number of Packers:	2	Diameter:	inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3355.00	
Hydraulic tool	5.00			3360.00	
Jars	5.00			3365.00	
Safety Joint	5.00			3370.00	
Packer	5.00			3375.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3380.00	
Anchor	13.00			3393.00	
Recorder	0.00	9119	Inside	3393.00	
Recorder	0.00	9139	Outside	3393.00	
Bullnose	5.00			3398.00	18.00 Bottom Packers & Anchor
Total Tool Length:	48.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01366

DST#: 3

ATTN: Renee Hustean

Test Start: 2019.07.12 @ 06:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 95.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 9.60 in³

Resistivity: ohm.m

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
220.00	Clean Gassy Oil 20%Gas 80% Oil	3.086
0.00	gravity 44 corrected	0.000

Total Length: 220.00 ft Total Volume: 3.086 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

GAS RATES

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01366

DST#: 3

ATTN: Renee Hustean

Test Start: 2019.07.12 @ 06:05:00

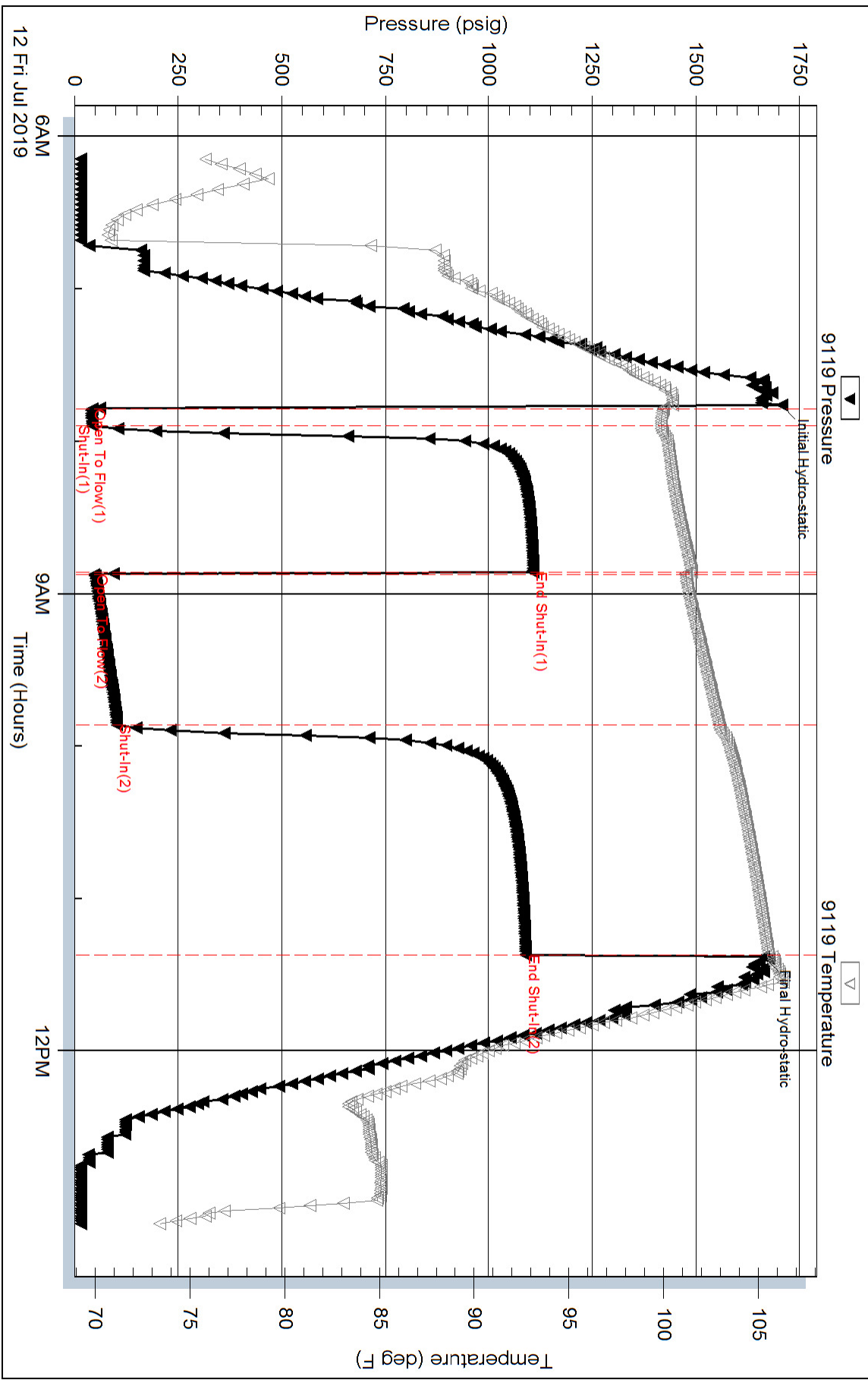
Gas Rates Information

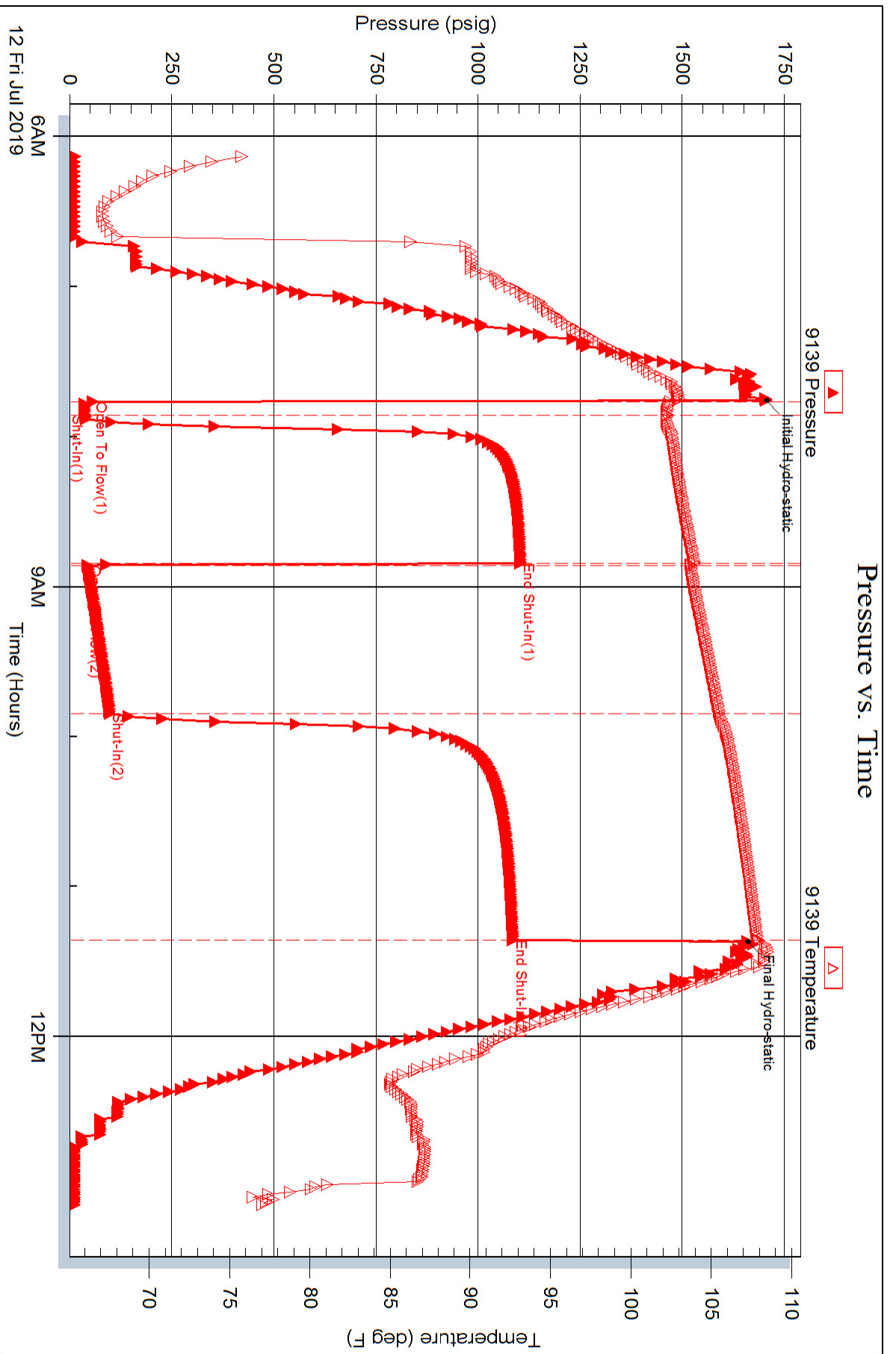
Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	445	0.13	0.01	5.39
2	50	0.13	1.30	5.88
2	55	0.13	1.30	5.88
2	60	0.13	1.30	5.88

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **F G Holl Company LLC**

9431 East Central suite 100
Wichita, Kansas 67206-2563

ATTN: Renee Hustain

Calcara #4-19

19-19s-14w Barton

Start Date: 2019.07.13 @ 08:52:00

End Date: 2019.07.13 @ 03:22:00

Job Ticket #: 01367 DST #: 4

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

Printed: 2019.07.13 @ 15:48:40



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01367

DST#: 4

ATTN: Renee Hustean

Test Start: 2019.07.13 @ 08:52:00

GENERAL INFORMATION:

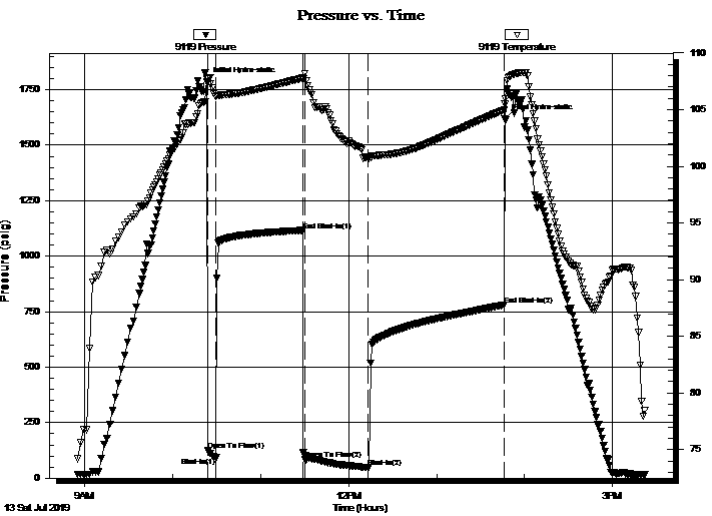
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 10:24:00
 Tester: Gene Budig
 Time Test Ended: 03:22:00
 Unit No: 1
 Interval: **3537.00 ft (KB) To 3545.00 ft (KB) (TVD)**
 Reference Elevations: 1911.00 ft (KB)
 Total Depth: 3545.00 ft (KB) (TVD)
 1903.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 780.00 psig @ 3540.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.07.13 End Date: 2019.07.13 Last Calib.: 2019.07.13
 Start Time: 08:52:00 End Time: 15:22:00 Time On Btm: 2019.07.13 @ 10:23:00
 Time Off Btm: 2019.07.13 @ 13:46:30

TEST COMMENT: 1st Opening 5 Minutes strong blow gas to surface
 1st Shut-In 60 Minutes no blow back
 2nd Opening 45 Minutes Strong blow see gas flow report
 2nd Shuy-In 90 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1784.26	107.70	Initial Hydro-static
1	126.79	107.69	Open To Flow (1)
7	91.82	106.16	Shut-In(1)
66	1116.09	107.79	End Shut-In(1)
67	84.89	108.19	Open To Flow (2)
111	48.24	100.72	Shut-In(2)
203	780.00	104.97	End Shut-In(2)
204	1620.10	105.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Heavy Oil Cut Mud	0.49
0.00	80%Oil 20%Mud	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	65.00	290.86
Last Gas Rate	0.38	21.75	132.43
Max. Gas Rate	0.38	65.00	290.86



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01367

DST#: 4

ATTN: Renee Hustean

Test Start: 2019.07.13 @ 08:52:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:24:00

Time Test Ended: 03:22:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: 3537.00 ft (KB) To 3545.00 ft (KB) (TVD)

Reference Elevations: 1911.00 ft (KB)

Total Depth: 3545.00 ft (KB) (TVD)

1903.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 1939 Outside

Press@RunDepth: 778.00 psig @ 3540.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2019.07.13

End Date: 2019.07.13

Last Calib.: 2019.07.13

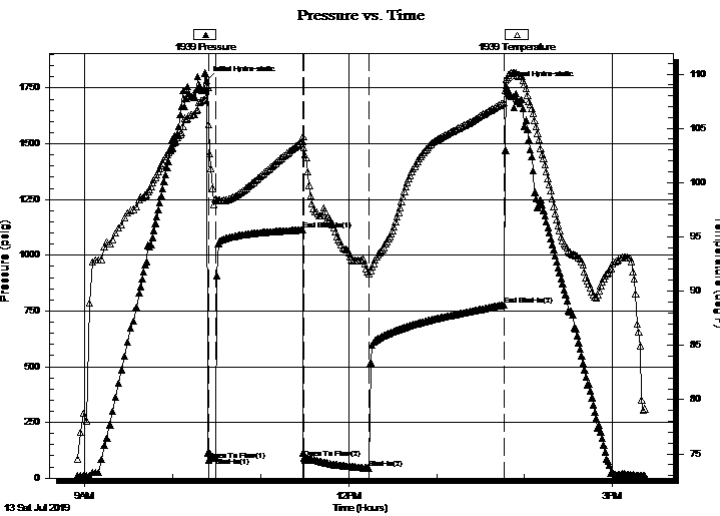
Start Time: 08:52:00

End Time: 15:22:00

Time On Btm: 2019.07.13 @ 10:23:00

Time Off Btm: 2019.07.13 @ 13:47:30

TEST COMMENT: 1st Opening 5 Minutes strong blow gas to surface
1st Shut-In 60 Minutes no blow back
2nd Opening 45 Minutes Strong blow see gas flow report
2nd Shuy-In 90 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1782.60	108.91	Initial Hydro-static
2	81.90	105.34	Open To Flow (1)
6	91.51	98.48	Shut-In(1)
66	1113.77	103.80	End Shut-In(1)
67	88.38	103.20	Open To Flow (2)
111	45.19	91.63	Shut-In(2)
203	778.00	107.34	End Shut-In(2)
205	1762.38	109.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Heavy Oil Cut Mud	0.49
0.00	80%Oil 20%Mud	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	65.00	290.86
Last Gas Rate	0.38	21.75	132.43
Max. Gas Rate	0.38	65.00	290.86



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01367

DST#: 4

ATTN: Renee Hustean

Test Start: 2019.07.13 @ 08:52:00

Tool Information

Drill Pipe:	Length: 3532.00 ft	Diameter: 3.80 inches	Volume: 49.54 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 49.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3537.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3512.00	
Hydraulic tool	5.00			3517.00	
Jars	5.00			3522.00	
Safety Joint	5.00			3527.00	
Packer	5.00			3532.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3537.00	
Anchor	3.00			3540.00	
Recorder	0.00	9119	Inside	3540.00	
Recorder	0.00	1939	Outside	3540.00	
Bullnose	5.00			3545.00	8.00 Bottom Packers & Anchor
Total Tool Length:	38.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01367

DST#: 4

ATTN: Renee Hustean

Test Start: 2019.07.13 @ 08:52:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 9.20 in³
Resistivity: 6000.00 ohm.m
Salinity: 0.00 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
35.00	Heavy Oil Cut Mud	0.491
0.00	80%Oil 20%Mud	0.000

Total Length: 35.00 ft Total Volume: 0.491 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

GAS RATES

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01367

DST#: 4

ATTN: Renee Hustean

Test Start: 2019.07.13 @ 08:52:00

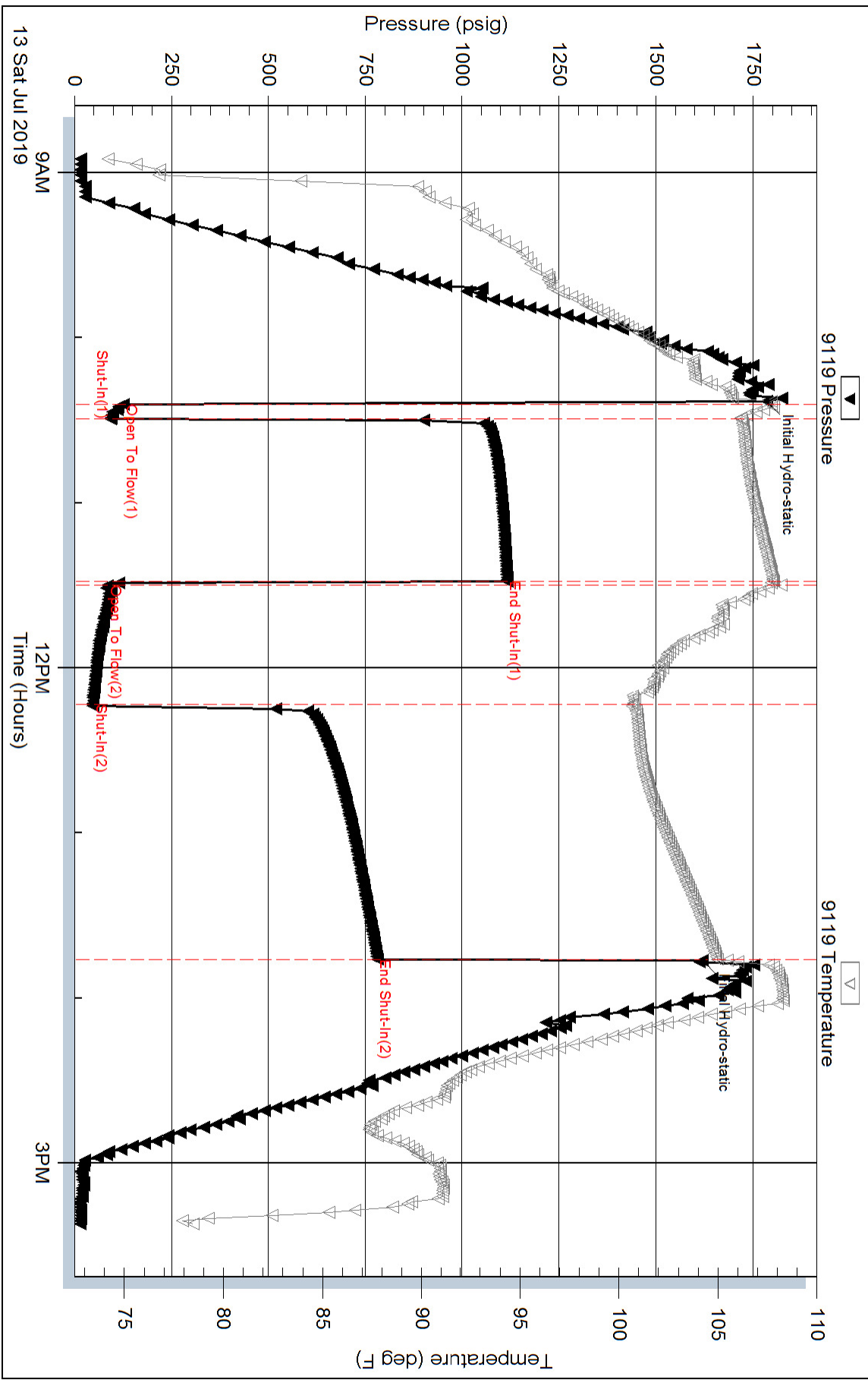
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

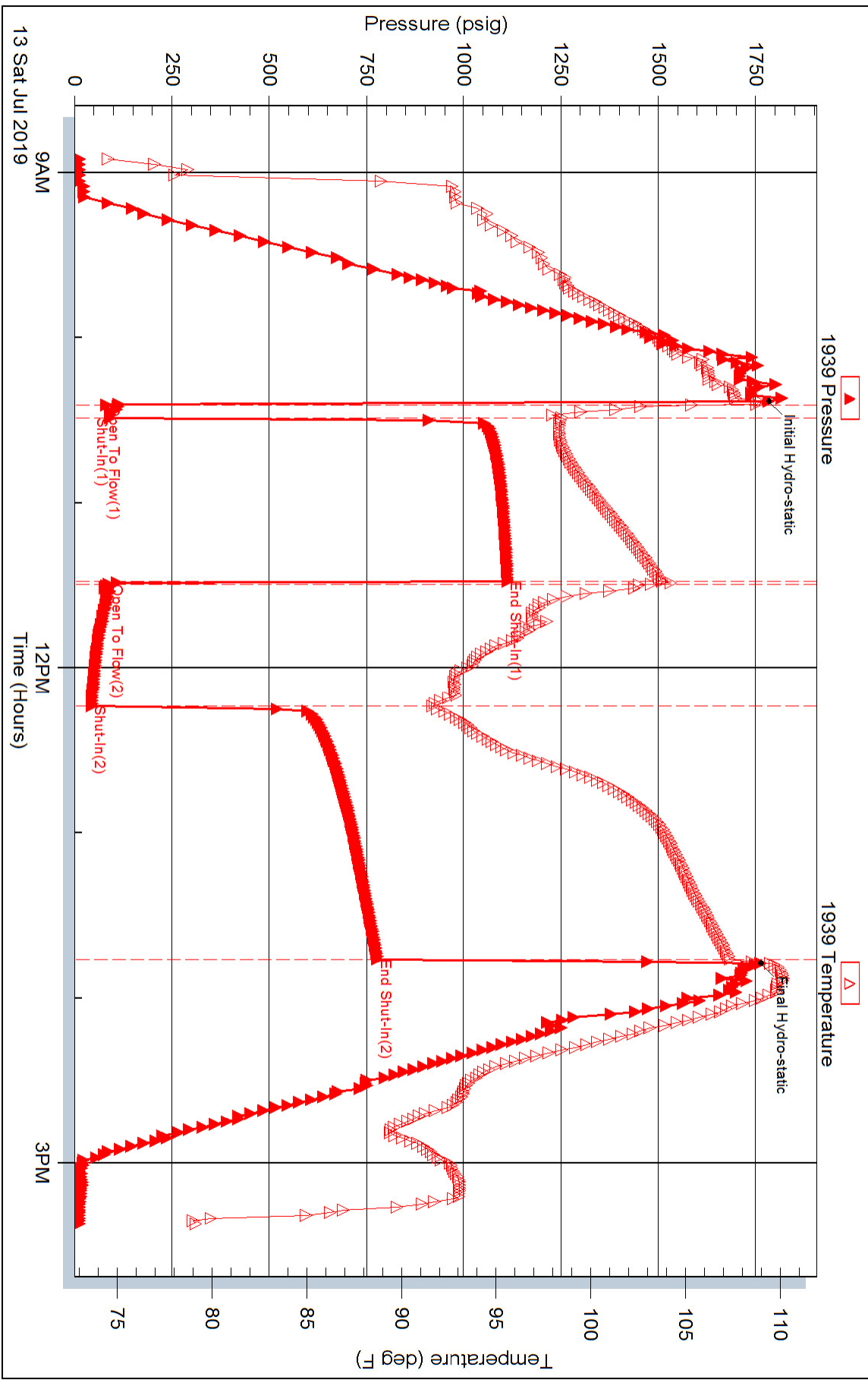
Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	5	0.38	65.00	290.86
2	15	0.38	55.50	256.06
2	25	0.38	38.00	191.95
2	35	0.38	28.40	156.79
2	45	0.38	21.75	132.43

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **F G Holl Company LLC**

9431 East Central suite 100
Wichita, Kansas 67206-2563

ATTN: Renee Hustain

Calcara #4-19

19-19s-14w Barton

Start Date: 2019.07.13 @ 20:02:00

End Date: 2019.07.14 @ 04:34:00

Job Ticket #: 01368 DST #: 5

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

Printed: 2019.07.14 @ 05:17:19



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01368

DST#: 5

ATTN: Renee Hustean

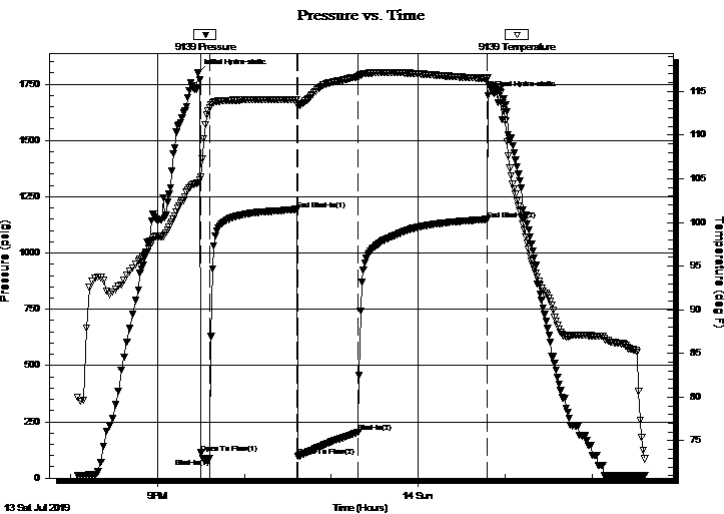
Test Start: 2019.07.13 @ 20:02:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 23:24:00
 Tester: Gene Budig
 Time Test Ended: 04:34:00
 Unit No:
 Interval: **3445.00 ft (KB) To 3555.00 ft (KB) (TVD)**
 Reference Elevations: 1911.00 ft (KB)
 Total Depth: 3555.00 ft (KB) (TVD)
 1903.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 1149.02 psig @ 3550.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.07.13 End Date: 2019.07.14 Last Calib.: 2019.07.14
 Start Time: 20:05:00 End Time: 02:36:30 Time On Btm: 2019.07.13 @ 21:28:00
 Time Off Btm: 2019.07.14 @ 00:48:00

TEST COMMENT: 1st Opening 5 Minutes strong blow gas to surface in 5 minutes
 1st Shut-In 60 Minutes no blow back
 2nd Opening 45 Minutes strong blow see gas flow report
 2nd Shut-In 90 Minutes weak blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1798.36	104.58	Initial Hydro-static
2	112.25	105.18	Open To Flow (1)
8	87.29	113.14	Shut-In(1)
68	1193.68	114.05	End Shut-In(1)
69	98.17	113.39	Open To Flow (2)
111	203.74	116.64	Shut-In(2)
200	1149.02	116.48	End Shut-In(2)
200	1698.97	116.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	Clean Bassy Oil 20% Gas 80% Oil	1.40
60.00	Oil and gas cut w ater	0.84
0.00	30%Gas 30%Oil 10%Mud 30%Water	0.00
60.00	slightly oil land mud cut w ater	0.84
0.00	4%Oil 8%Mud 88%Water	0.00
180.00	Water Chlorides 28000	2.52

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	25.50	63.30
Last Gas Rate	0.25	10.50	39.50
Max. Gas Rate	0.25	25.50	63.30



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01368

DST#: 5

ATTN: Renee Hustean

Test Start: 2019.07.13 @ 20:02:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 23:24:00
 Tester: Gene Budig
 Time Test Ended: 04:34:00
 Unit No:
 Interval: **3445.00 ft (KB) To 3555.00 ft (KB) (TVD)**
 Reference Elevations: 1911.00 ft (KB)
 Total Depth: 3555.00 ft (KB) (TVD)
 1903.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 9119

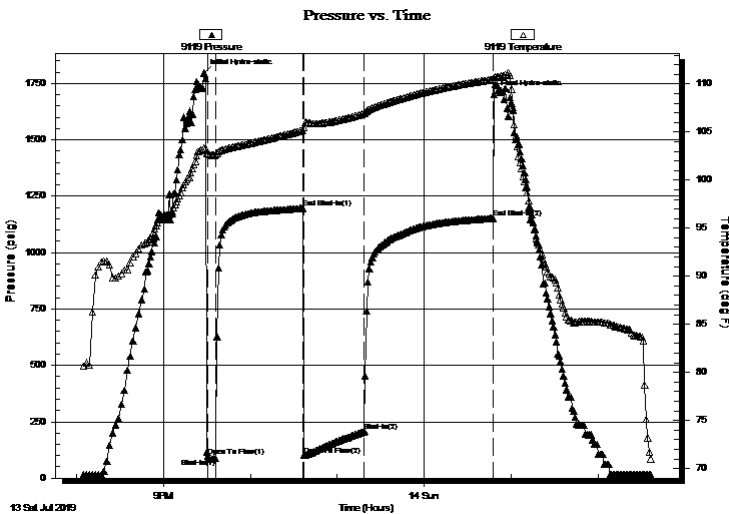
Inside

Press@RunDepth: 1152.06 psig @ 3550.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.07.13 End Date: 2019.07.14 Last Calib.: 2019.07.14
 Start Time: 20:05:00 End Time: 02:36:30 Time On Btm: 2019.07.13 @ 21:28:00
 Time Off Btm: 2019.07.14 @ 00:48:00

TEST COMMENT: 1st Opening 5 Minutes strong blow gas to surface in 5 minutes
 1st Shut-In 60 Minutes no blow back
 2nd Opening 45 Minutes strong blow see gas flow report
 2nd Shut-In 90 Minutes weak blow back

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1795.55	103.32	Initial Hydro-static
3	98.47	102.81	Open To Flow (1)
8	89.04	102.62	Shut-In(1)
69	1196.58	105.16	End Shut-In(1)
69	100.22	105.50	Open To Flow (2)
111	206.49	106.92	Shut-In(2)
200	1152.06	110.48	End Shut-In(2)
200	1700.86	110.70	Final Hydro-static



Recovery

Length (ft)	Description	Volume (bbl)
100.00	Clean Bassy Oil 20% Gas 80% Oil	1.40
60.00	Oil and gas cut w ater	0.84
0.00	30%Gas 30%Oil 10%Mud 30%Water	0.00
60.00	slightly oil land mud cut w ater	0.84
0.00	4%Oil 8%Mud 88%Water	0.00
180.00	Water Chlorides 28000	2.52

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	25.50	63.30
Last Gas Rate	0.25	10.50	39.50
Max. Gas Rate	0.25	25.50	63.30



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01368

DST#: 5

ATTN: Renee Hustean

Test Start: 2019.07.13 @ 20:02:00

Tool Information

Drill Pipe:	Length: 3528.00 ft	Diameter: 3.80 inches	Volume: 49.49 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: 68000.00 lb
			<u>Total Volume: 49.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3545.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	1	Diameter: inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3520.00	
Hydraulic tool	5.00			3525.00	
Jars	5.00			3530.00	
Safety Joint	5.00			3535.00	
Packer	5.00			3540.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3545.00	
Anchor	5.00			3550.00	
Recorder	0.00	9119	Inside	3550.00	
Recorder	0.00	9139	Outside	3550.00	
Bullnose	5.00			3555.00	10.00 Bottom Packers & Anchor
Total Tool Length:	40.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01368

DST#: 5

ATTN: Renee Hustean

Test Start: 2019.07.13 @ 20:02:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 9.18 in³
Resistivity: ohm.m
Salinity: 6000.00 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
100.00	Clean Bassy Oil 20% Gas 80% Oil	1.403
60.00	Oil and gas cut w ater	0.842
0.00	30%Gas 30%Oil 10%Mud 30%Water	0.000
60.00	slightly oil land mud cut w ater	0.842
0.00	4%Oil 8%Mud 88%Water	0.000
180.00	Water Chlorides 28000	2.525

Total Length: 400.00 ft Total Volume: 5.612 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

GAS RATES

F G Holl Company LLC

19-19s-14w Barton

9431 East Central suite 100
Wichita, Kansas 67206-2563

Calcara #4-19

Job Ticket: 01368

DST#: 5

ATTN: Renee Hustean

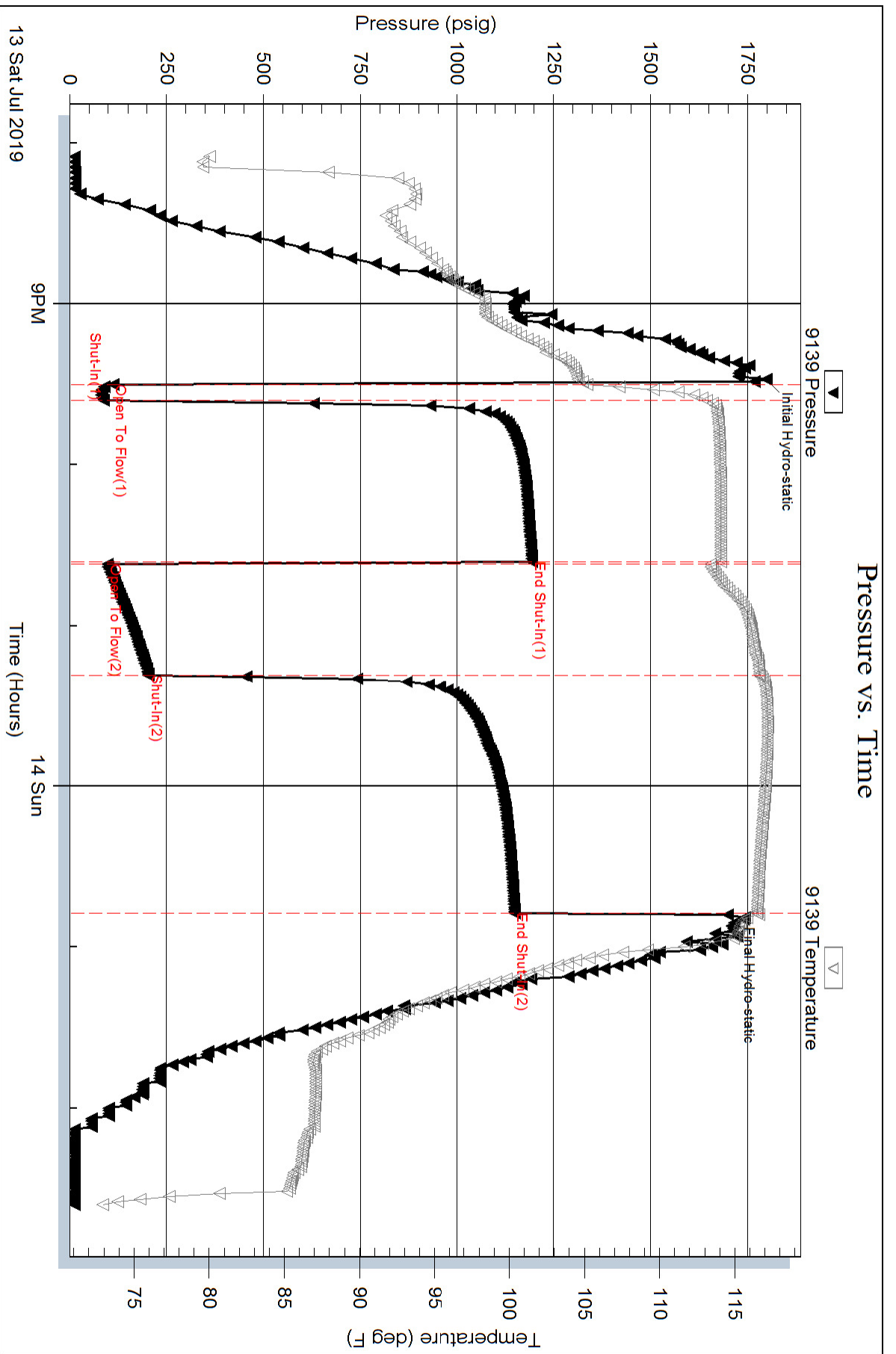
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Gas Rates Information

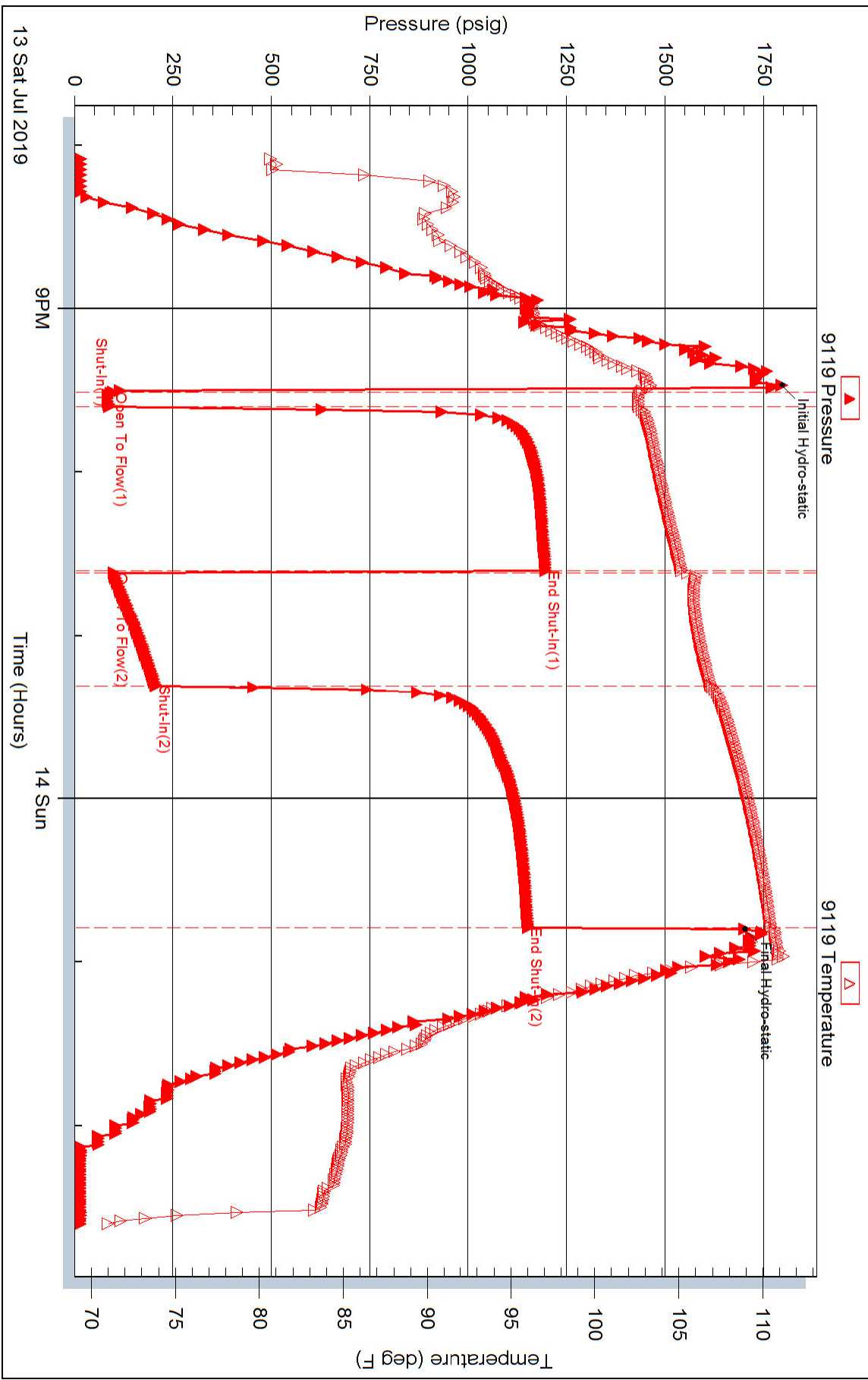
Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

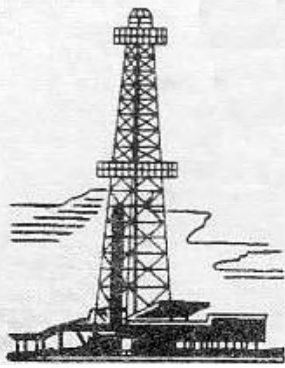
Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	5	0.25	25.50	63.30
2	15	0.25	21.00	56.16
2	25	0.25	17.00	49.81
2	35	0.25	15.00	46.64
2	45	0.25	10.50	39.50



Pressure vs. Time





WELLSITE GEOLOGIST'S REPORT

RENE HUSTEAD
CONSULTANT GEOLOGIST



Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: **CALCARA NO. 4-19**
Well Id:
Location: **SEC 19-T19S-14W**
License Number: **15-009-26,263-0000**
Spud Date: **July 5-2019**
Surface Coordinates: **1650' FEL, 660' FSL
C E/2 SW SE**
Bottom Hole **VERTICAL**
Coordinates:
Ground Elevation (ft): **1898'** K.B. Elevation (ft): **1911'**
Logged Interval (ft): **1700'** To: **3750'** Total Depth (ft): **3750'**
Formation: **LANSING/KC AND ARBUCKLE**
Type of Drilling Fluid: **STARCH/CHEMICAL**

Region: **Barton Co**
Drilling Completed: **July 15 -2019**

Printed by WellSight LogViewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: **F.G. Holl Company LLC**
Address: **9431 E. Central, Suite 100
Wichita, Kansas 67206**

DRILLING CONTRACTOR:

DUKE RIG #2

Double derrick; drill pipe 4.5' X H (16.25#); collars 6.25 x2.25 x 478'; Bit 1; 12.25,J2HA1PG #17135RR, BIT #2 7 7/8,J2 TYPE 23C,J1021, BIT 3,7 7/8, J2-MD30MH,#F17618RR, 3-15's; Reference datum 8 ft above ground level. Poor Boy's (Martin- Decker) mechanical geograph. Toolpusher -Dion Vasquez

SURFACE CASING:

SURFACE CASING SET 8 5/8 INCHES 23 LBS AT 830' WITH 350 SAXS OF CEMENT
PRODUCTION CASING SET 5 1/2 INCHES 14 LBS AT 3672 FT WITH 175 SAXS OF CEMENT

CIRCULATION SYSTEM:

Pump Make:IDECO,Pump model: MM 550, liner size 6 ,stroke 14. Starch mud @ 1582' to 2582', Chemical mud @ 2582' to TD
Mud/Co/Service Mud, Inc.-Gerald Adams-Great Bend, Ks-620-770-2022

GAS DETECTION SYSTEM:

MBC Well Logging and Leasing -Analog Gas Detection.

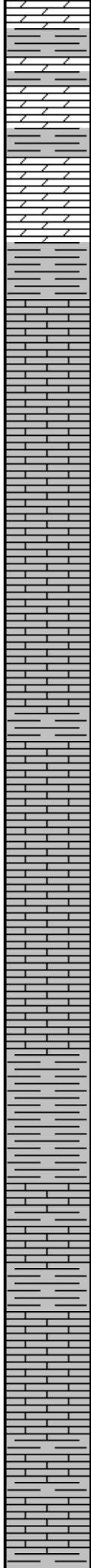
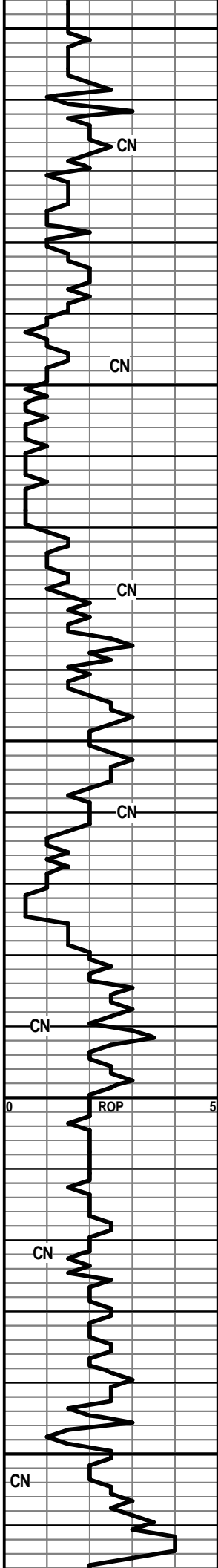
OPEN HOLE LOGS:

DN (PE), DI (SP), ML:Sonic, Fracfinder 5" detail RTD-3675; 2" DI to surface casing; ; Pioneer Energy Services, Hays, KS, Recorded by IAN MABB; Log total depth (3674') was to rotary total depth (3675').

WELLSITE GEOLOGIST:

RENE HUSTEAD
 4714 N. PORTWEST CIRCLE
 WICHITA, KANSAS 67204
 PHONE (913) 208-3390

ROP ROP (min/ft) ———	DST	Lithology	Porosity and Show	MID	Geological Descriptions	TG, C1-C4 / REMARKS
				17	ANHY-FRSTY GRY-SUB-ANG-TR SH-GRY-IMBD DOLO-GRY-TN-FN-GRN-BRIT DOLO AND ANHY HERINGTON 1744' (167') LOG-1738'- (173')	MUD DATA DEPTH-1,163' WT.-8.6 VIS 27 SURVEYS DEPTH DEGREES 489' 3/4 830' 1 3365' 3/4 3675' 3/4
				1750	DOLO-GRY-FN-GRN-SM PYR XLS-FR PP POR-GAS SHOW DOLO-GRY-FN-GRN-SH-GRY-IMBD-TR PP POR SH-DK GRY-BLKY DOLO-OFF WHT/GRY-FN GRN-BRIT-FN PP POR IP TO NO VIS POR SH-RED-SILTY WINFIELD 1798' (113') LOG 1790' (121')	HOT WIRE-70 UNIT
				1800	DOLO-LT GRY-SUCRO-BRIT-GD PP POR-TR FRAC IN ROCK-GAS INCRS DOLO-LT TN-F-GRN-HD-DNS DOLO-LT GRY-F-GRN-GD PP POR-GAS SHOW DOLO-GRY-F-GRN-HD-DNS W/ TR PP POR SH-GRY-BLKY-DOLO DOLO-LT GRY/BLK SPOTS-FN GRN-SUCRO IP-SH DK GRY IMBD-GD PP AND SHALLOW VUG POR-GAS SHOW	

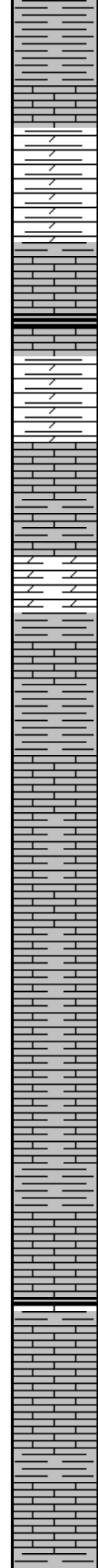
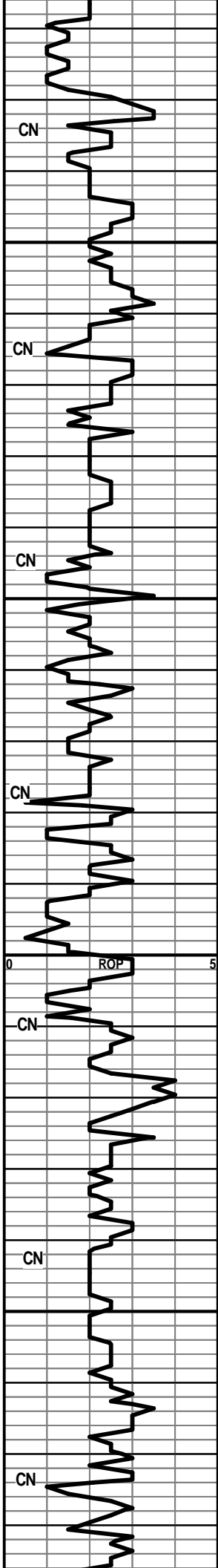


1850
1900
1950
2000
2050

SH-RED-V-SFT-GUMMY
TOWANDA 1854' (57')
 DOLO-GRY-V-F-GRN-HD-DNS
 DOLO -LT BRN/GRY-CRS-GRN-FOSS-FR INTER-GRN POR
 SH-DK GRY-FRM-BLKY
 LS-GRY-F-XLN-OOL-TR VUG POR
 LS-OFF WHT-M-GRN-BRIT-SM FOSS/OOL-TR INTER-PRT POR
 POOR SAMPLES
 LS-OFF WHT-F-XLN-FOSS-BRY-BRIT-SM VUG POR- W/ CHRT-OFF WHT-FOSS-FRSH
 LS-OFF WHT-F-XLN-BRIT-DNS
 LS-OFF WHT/TN-F-GRN-BRIT TO HD-MSTLY DNS W/ FOSS-TR OOL
 LS A.A.
 MISSING SAMPLE
 LS-TN-F-XLN-FOSS-HD-DNS-TR SH GRY IMBD
B/FLORENCE 2004' (-93')
 SH-GRY-LMY-BLKY-FOSS
 KENNY LS 2012'
 LS-TN-F-GRN-FOSS-OOL-BRIT-SHLY
 SH-GRY/RD-SFT-GUMMY
 SH-GRY-GUMMY
WREFORD 2042' (-131')
 LS-TN-M-GRN-FOSS-OOL-FR TO GD VUG/INTER-GRN POR-GAS SHOW
 LS-GRY-F-XLN-HD-DNS
COUNCIL GROVE 2064' (-153')

HOT WIRE 74 UNIT

MUD DATA
 DEPTH-2,060'
 WT. 9.3



SH-GRY/GRN-RD-SFT-GUMMY

LS-REDDISH BRN-F-XLN-HD-DNS

SH-GRY-SFT-GUMMY

2100 CROUSE 2102'

LS-DK BRN-F-XLN-HD-DNS

SH-BLK-CARB

SH-RED/GRY-SFT-GUMMY

SHALES-GRY-GRN-BLK-RED-SFT-GUMMY TR OF
LS-OFF WHT-F-GRN-BRIT-CHLKY

2150 LS-OFF WHT-F-GRN-FOSS-OOL-BRIT-CHLKY IP-TR
INTER-PRT POR

SH-RED-GRN-BLK-GRY-SFT-GUMMY TR LS-LT BRN
-F-XLN-HD-DNS

SHALES A.A. W/ TR LS-OFF
WHT-M-GRN-FOSS-OOL-CHLKY-NO VIS POR

LS-OFF WHT-F-GRN-FOSS-OOL-TR CHLKY-BRIT TO HD

LS-OFF WHT-F-XLN-TR FOSS-TR OOL-HD-DNS

LS A.A. CHLKY

SH-LT-GRY-SFT-SILTY

2200 LS/SH A.A.

SH-GRY-FRM-BLKY/LS-TN-F-XLN-FOSS-HD-DNS

LS-LT TN-V-FXLN/GRN-BLOCKY-HD-DNS

SH-RED-SFT-SILTY

NEVA 2236' (-325')

2250 LS-TN-F-XLN-HD-DNS

SH-GRY-SPLNTY

LS-TN/GRY-F-XLN-FOSS-OOL-HD-DNS

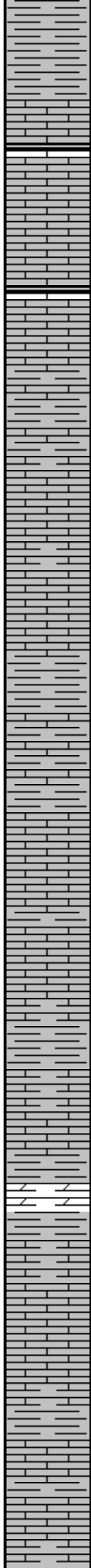
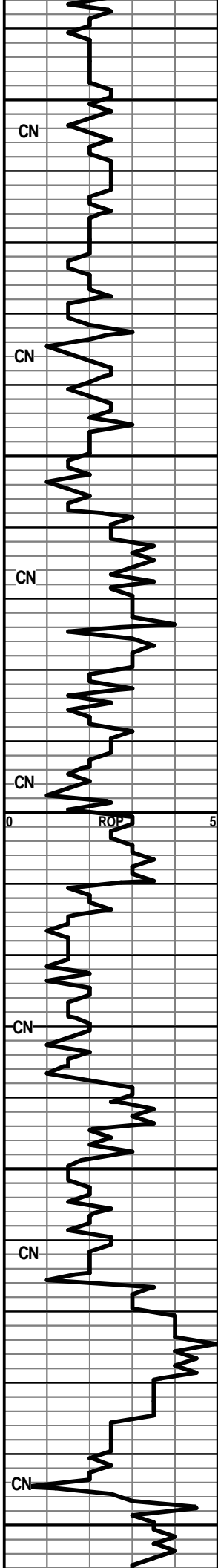
LS-GRY-TN-F-XLN-HD-DNS W/ GLAU IMBD

SH-BLK-CARB

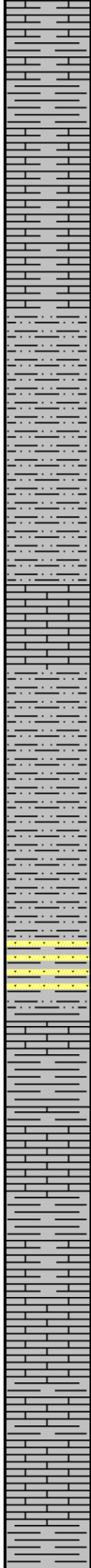
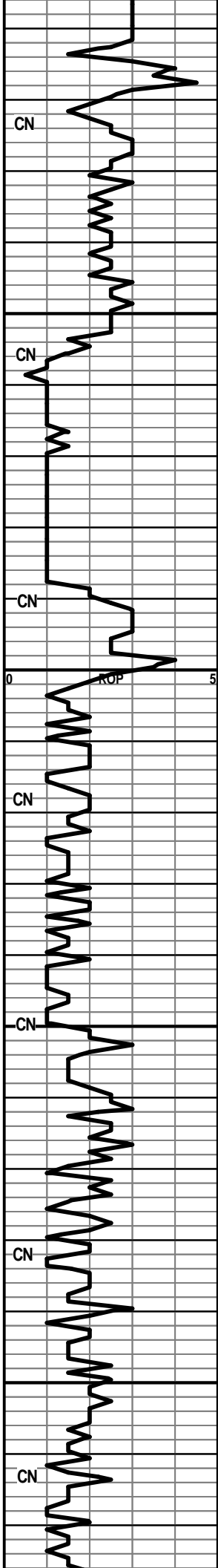
LS-OFF WHT/BLK SPOTS-F-XLN-OOL-SH-GRY
IMBD-NO VIS POR

HOT WIRE -66 UNIT

HOT WIRE-75 UNIT GAS INCREASE



2300
 LS-GRY-F-XLN-HD-DNS/SH-GRY-FRM-BLKY
 SH-RED-GRY-SILTY
RED EAGLE 2300' (-389')
 LS-GRY-F-XLN-SHLY-HD-DNS
 SH-GRY-FRM-LMY
 LS-BRN/GRY-F-XLN-FOSS FRAGS-SHLY-HD-DNS
 LS-LT GRY-F-XLN-FOSS-HD-DNS
 SH-BLK-CARB
 LS-GRY-F-XLN-SHLY-HD-DNS
 SH-GRY-LMY
 2350
 LS-GRY-TN-F-GRN-FOSS-CHLKY IP-PR TO FR
 INTER-GRN POR-GAS SHOW
 LS-GRY-TN-OFF WHT-V-F-GRN-FOSS-HD-DNS
 LS A.A. TR CHLK
 SH-GRY-SPLNTY
 LS-TN-OFF WHT-F-XLN-FOSS-HD-DNS
 SH-BLK-CARB
 2400
 LS-GRY-F-XLN-SHLY/SH-GRY-LMY
 LS-OFF WHT-W/BLK SPOTS-F-GRN-BLK
 OOL/FOSS-BRIT-CHLKY-PR INTER-GRN POR
 SH-GRY-FRM-FOSS
 SH-GRY-FRM-FOSS/LS-GRY-F-XLN-FOSS-HD-DNS
 SH/LS A.A.
 2450
 POOR SAMPLE
 SH-GRY-FRM-FOSS
 LS-OFF WHT-M-GRN-FOSS-V-BRIT-FR INTER-GRN
 POR-NO VIS GAS INCRS
 LS-TN-F-XLN-FOSS-BRIT-DNS
 LS-TN/GRY-F-XLN-SM FOSS FRAGS-TR CHLK-HD-DNS
 SH-GRY-SFT-FOSS
 2500
 LS-TN-F-XLN-V-OOL-HD-DNS



2550

SH-GRY-GUMMY
 LS-LT GRY-F-XLN/GRN-HD-DNS TR FOSS FRAGS
 SH-GRY-FRM-WAXEY
 SH-GRY/RED/GRN-SFT-GUMMY IP TO FRM-SPLNTY
 LS-GRY-F-XLN-SHLY-HD-DNS
 LS/SH A.A.

2600

SH-GRY-SILTY
 SH-GRY-SFT-SILTY
 SLTSS-FRSTY-GRY-V-FN GRN-SHLY-MICA-HEM
 SH-GRY-SFT-SILTY

STOTLER 2537' (-626')

LS-TN-F-XLN-FOSS FRAGS-HD-DNS
 SH-GRY-FOSS-SNDY
 SH-GRY-SPLNTY-W/ LS-OFF WHT-F-XLN-FOSS-BRIT
 -DNS
 SLTSS-FRSTY GRY-F-GRN-SHLY-MICA-HEM

2650

SH-GRY-SPLNTY
 SH-GRY-BLK-SPLNTY
 SS-FRSTY WHT-M-GRN-ANG-WELL SRTEG-TT-TR
 MICA-TR GLAU
 SH-RED-GRY-FRM-BLKY

**TARKIO 2650' (-739')
 LOG-2648' (-737')**

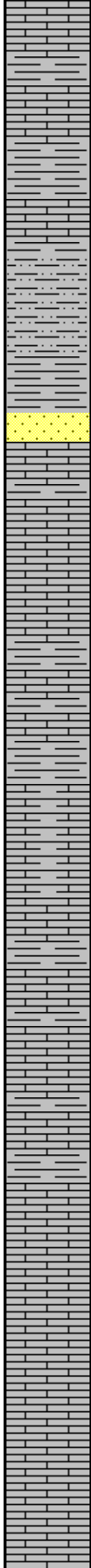
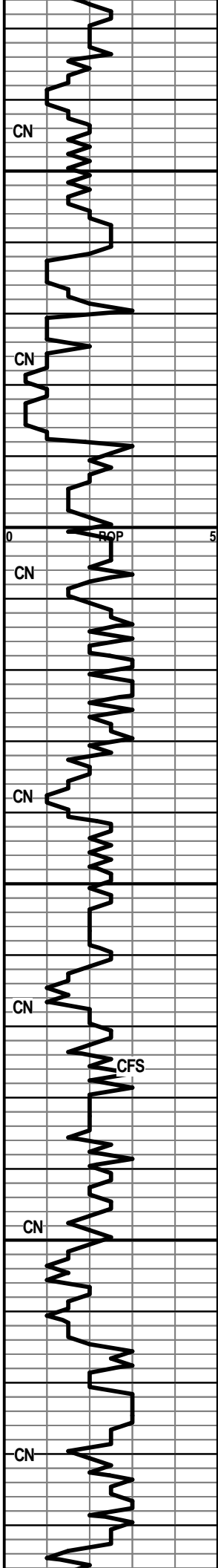
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 LS-TN-F-XLN-BRIT-CHLKY-FOSS FRAGS-TR GLAU IMBD
 LS-TN-F-XLN-OOL-FOSS-HD-DNS
 SH-GRY-LMY
 LS-TN-F-XLN-FOSS-HD-DNS
 LS-TN-F-XLN-TR FOSS-HD-DNS

2700

SH-GRY-LMY
 LS-TN/GRY-F-XLN-HD-DNS
 SH-GRY-SPLNTY

HOT WIRE-30 UNIT GAS INCRS

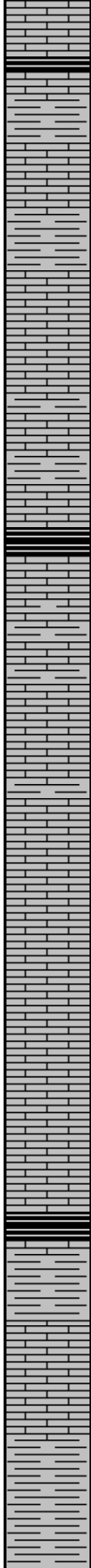
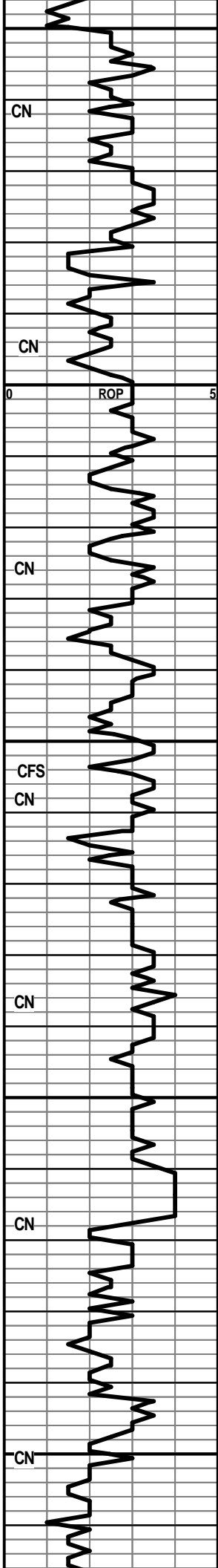
MUD DATA
 DEPTH-2,679'
 WT. 8.9
 VIS 40
 FIL-9.6



LS-TN-F-XLN-TR FOSS-HD-DNS
 SH-GRY-SPLNTY
 LS-TN-F-XLN-V-FOSS-THIN-BEDDED-BRIT-NO VIS POR
 2750 SH-GRY-SPLNTY
 LS-TN-F-XLN-HD-DNS
 SLTSS-FRSTY GRY-F-GRN-SILTY-MICA-HEM
 SLTSS A.A.
 SH-GRY-SFT-SILTY-W/ LG SND GRNS
 SS-FRSTY
 WHT-M-GRN-RND-WELL-SRTED-FRI-MICA-HEM
HOWARD 2786' (-875')
 LS-REDDISH BRN-F-XLN-FOSS-HD-DNS
 2800 LS-TN-F-XLN-FOSS FRAGS-HD-DNS
 LS-CRM-FGRN-FOSS-CHLKY-BRIT-NO VIS POR OR SHOW
 SH-GRY-SFT-BLKY
 LS-GRY/CRM-F-XLN-FOSS FRAGS-BRIT TO HD-SLI CHLKY IP
 SH-GRY-BLKY-FOSS
 LS-GRY/CRM-F-XLN-FOSS-SHLY-HD-DNS
 2850 LS-TN-F-XLN-OOL-HD-DNS W/ PYR XLS
TOPEKA 2862' (-951')
 LS-TN-F-GRN-SUCRO-FOSS-OOL-BRIT-TR PP POR-NO VIS CUT
 LS-CRM-M-GRN-PYR XLS DISS THRU-HD-DNS
 LS-GRY-BLOCKY-HD-DNS
 LS-OFF WHT/BLK SPKS-F-XLN-SM BLK OOL-HD-DNS
 SH-GRY-FRM-BLKY-FOSS
 2900 LS-GRY-F-XLN-SH DISS THRU-HD-DNS W/ FOSS FRAGS
 LS A.A. W/CHLK IN TRAY
 LS-TN-F-XLN-FOSS-HD-DNS
 LS-TN-F-XLN-HD-DNS-FOSS W/ CHRT-BLK-OPQ-FRSH-PYR IMBD
 LS-TN-F-XLN-CHLKY-BRIT-FOSS FRAGS-NO VIS POR-DNS

45 UNIT GAS INCRS

HOTWIRE 10 UNITS



2950 **QUEEN 2954' (-643')**
 SH-BLK-CARB
 SH-GRY-SFT-WAXEY
 LS-TN-F-SLN-FOSS-CHLKY IP W/
 CHRT-GRY-OPQ-FOSS-FUS-FRSH
 LS-OFF WHT-F-XLN-BLOCKY-HD-DNS
 SH-GRY-FRM-LMY
 LS-CRM-F-XLN-CHLKY-BRIT-DNS-FOSS-W/ CHRT A.A.

3000 SH-GRY-SPLINTY
 LS-GRY-F-XLN-SHLY-FOSS-HD-DNS
 SH-GRY-BLKY
 KING SH- 3021' (-1,110')
 SH-BLK-CARB
 LS-OFF WHT-FN-GRN-OOL-PR INTER-GRN POR TR
 CHLK
 LS-TN-F-GRN-FOSS-TR OOL-CHLKY-PR PP POR-NO
 VIS SHOW

3050 LS-TN-F-XLN-FOSS-HD-DNS
 SH-GRY-BLKY-LMY-FOSS-CRINOID STEM-PYR IN TRAY
 SH-GRY-SPLINTY
 LS-TN-F-XLN-SHLY-FOSS-HD-DNS
 LS-TN/GRY-F-XLN-FOSS-HD-DNS

3100 LS A.A.

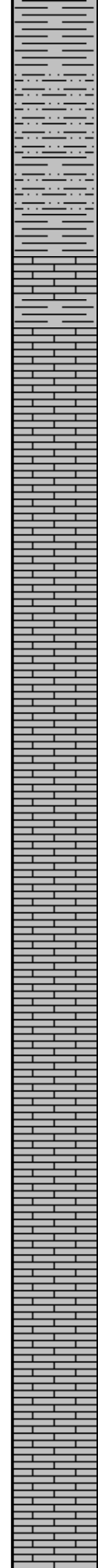
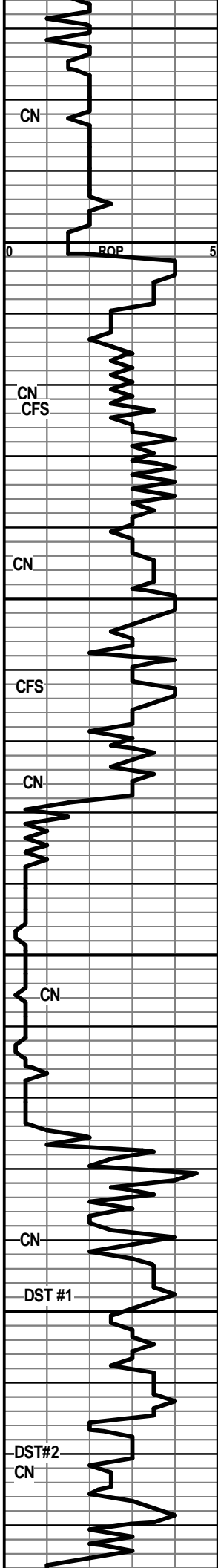
HEEBNER 3116' (-1205')
 SH-BLK-CARB

TORONTO 3132' (-1221')
 LS-CRM-F-XLN-CHLKY IP-FOSS-TR PP AND SM VUG
 POR-NO VIS SHOW

DOUGLAS SH 3148' (-1237')
 SH-LT GRY-GUMMY W/ SND GRN
 SH-GRY-SFT-GUMMY
 SH-GRY-GRN-RED-SFT-SILTY W/ LS-TN-F-XLN-HD-DNS

MUD DATA
 DEPTH-3,104'
 WT. 9.3
 VIS 67
 FIL 8.0

20 UNIT GAS INCRS



SH-GRY-SFT-SILTY

SLTSS-FRST GRY-FN-GRN-FRM-SHLY-MICA-HEM

SLTSS A.A.

BROWN LS 3202' (-1291')

LS-BRN-F-XLN-TR FOSS-HD-DNS

LANSING/KC 3212' (-1301')

LS-OFF WHT-F-XLN-TR FOSS-SM PP AND INTER-GRN
POR-BRIGHT WHT FLOR-GD STRM CUT-FNT
ODOR-GAS INCRS

POOR SAMPLE

LS-LT GRY-F-XLN-SURCO-HD-DNS W/ TR CHRT-LT BRN
STN

LS-CRM-F-GRN-FOSS FRAGS-PP POR-DK BRN
STN-GLD FLOR-GD STRM CUT-GOOD ODOR

LS-BRN-F-XLN-V-OOL/FOSS-FR INTER-PRT POR-DK
BRN STN-GLD FLOR-STRM CUT-GD ODOR

LS-TN-F-XLN-OOL-BRIT-GD-OOL-MOLDIC POR-MSTLY
BARREN W/TR OF DK BRN STN-GD ODOR

LS-TN-F-XLN-OOL-BRIT-GD OOL-MOLDIC POR-LT BRN
STN-GLD FLOR-GD CUT-V-STRNG ODOR

LS-TN-F-XLN-OOL-GD-OOL-MOLDIC POR-LT BRN STN
IP-GLD FLOR-GD CUT-STRNG ODOR-GAS BUB

POOR SAMPLE

LS-TN-F-XLN-OOL-GD-FR-OOL-MOLDIC POR-LT BRN
STN-GLD FLOR-STRM CUT-FREE OIL-STRNG ODOR

LS-TN-F-XLN-OOL-GD-FR-OOL-MOLDIC POR-TR DK
BRN STN-GLD FLOR-GD STRM CUT-GD-ODOR

LS-TN-F-XLN-FR-GD OOL-MOLDIC POR-TR DK BRN STN
-GLD FLOR-GD STRM CUT-STRNG ODOR

LS-TN-F-XLN/GRN-SUCRO-HD-DNS W/ TR STNING-YEL
MIN FLOR-NO VIS CUT-NO ODOR

LS-CRM-F-XLN/GRN-PR TO FR INTER-GRN/PP POR W/
LRG VUG POR-DK BRNSTN-GLD FLOR-FR STRM
CUT-FNT ODOR

LS-TN-F-XLN-HD-DNS W/ SOME
LS-TN-F-XLN-V-FOSS-GD INTER-PRT POR-DK BRN
STN-GLD FLOR-STRM CUT-FNT ODOR

LS-OFF WHT-F-XLN-V-CHLKY-DK BLK STN-YEL/GLD FLOR TO NO
VIS FLOR-FR FLSH CUT-GD ODOR-FREE OIL

LS-TN-F-XLN-FOSS-OOL-SM VUG POR-LT BRN STN-NO VIS
FLOR-GD STRM CUT-CHLK IN TRAY-FREE OIL

LS-TN/BRN-F-XLN-OOL-GD OOL-MOLDIC AND
INTER-XLN POR-DK BRN STN-WHT FLOR-GD STRM

18 UNIT GAS INCRS

25 UNIT GAS INCRS

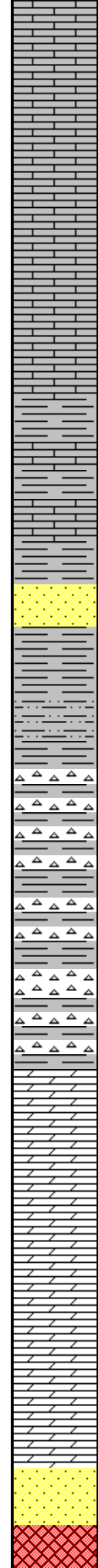
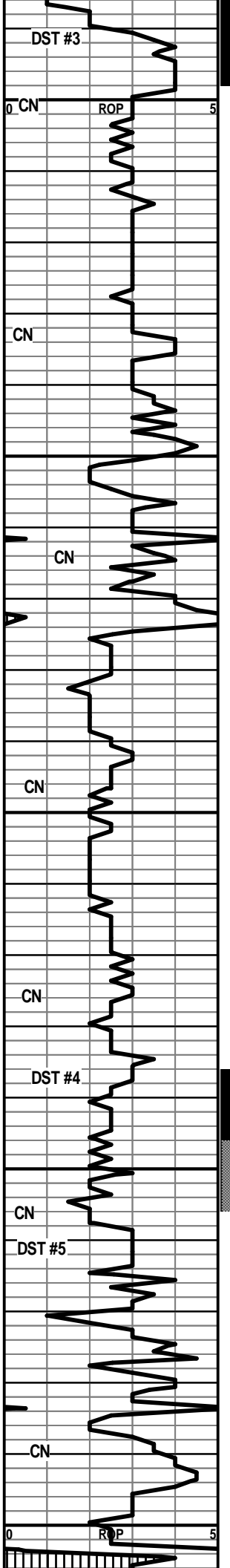
MUD DATA
DEPTH-3,365'
WT. 9.5
VIS 48
FIL 9.6

DST #1
3340'-3365'
REC-1 FT DRILLING MUD
IBLW-WK SURF BLW FOR 15 MIN AND DIED
FBLW-NO BLW
15/30/15/30
SIP-47.3-45.95
IFP-41.43-43.02
FFP-47.34-44.47
HP-1716.86-1685.65

35 UNIT GAS INCRS

80 UNIT GAS INCRS

DST #2
3365-3380
IBLW-WK BLDING BLW TO 9 INCHES
FBLW-WK BLDING BLW BLT TO 5 INCHES
REC-20 FT 1% OIL 99% MUD, 60 FT MUDDY
420 1% OIL 28% MUD 61% 420



3400

CUT-FNT ODOR -GAS BUB

LS-OFF WHT-F-XLN-HD-DNS

LS-TN-F-XLN-V-OOL-TR PP POR-NO VIS STN-NO CUT-FNT ODOR

LS-TN-F-XLN-FOSS-TR OOL-TR PP POR-1 PC CHLK W/ BLK STN IN TRAY

LS-TN-F-XLN-OOL-HD-DNS

LS-OFF WHT-TN-F-XLN-HD-DNS W/ CHLK IN TRAY

LS-TN-F-XLN-HD-DNS W/ FOSS-FUS

LS-TN-F-XLN-HD-DNS W/ TR GLAU SH-GRY-SPLNTY

BASE OF THE B/KC 3450' (-1,539')

SH-GRY/GRN-SPLNTY-BLKY

LS-OFF WHT-F-XLN-HD-DNS

SS-FRSTY WHT-F-GRN-S-M-GRN-PR SRTEG-CALC CMT-TT-NO VIS SHOW

SH-GRY/GRN-FRM-BLKY

SH-GRY-RED-SILTY

SHALES-RED-GRN-BRN-SPLNTY W/ CHRT-TN-OPQ-FRSH

SH-RED-SFT-SILTY W/ CHRT-CRM-OPQ-FRSH

SH-RED-GRY-SPLNTY-W/ CHRT-TN-OPQ-OOL-FRSH

CHERT-OFF WHT-OPQ TO TRANS-OOL IP-FRSH TO TRIP

ARBUCKLE 3536' (-1625')

DOLO-OFF WHT-M-CRS-GRN-BRIT-LT BRN STN-GLD FLOR-GD STRM CUT-STRNG ODOR

DOLO-M-CRS GRN-BRIT-TR GLAU-LT BRN STN-GLD FLOR-STRM CUT-GD ODOR-FREE OIL

DOLO-TN-F-XLN-OOL-PR-OOL-MOLDIC POR-LTBRN STN-BRIGHT YEL FLOR-GD STRM CUT-FNT ODOR-NO SHOW FREE OIL

DOLO-OFF WHT-F-XLN-V-SNDY-BRIT-FR INTER-GRN POR-LT BRN STN IP-NO VIS FLOR-NO VIS CUT-NO SHOW

REGAN SAND 3594' (-1683')

3550

3500

3450

H₂O, 1% OIL 36% MUD, 61% H₂O

100 FT-GIP

30/60/45/90

SIP-550.35-542.95

IFP-39.66-49.59

FFP-56.67-74.64

HP-1695.14-1657.11

DST #3

3380'-3398'

IBLW-BOB IN 1 MIN

FBLW-BOB IN 1 MIN

REC-220 FT CLEAN OIL 20% GAS AND 80% OIL

5/60/60/90

SIP-1108.08-1089.66

IFP-42.22-43.3

FFP-47.43-102.39

HP-1707.39-1663.37

GAS TO SURF

GAS RATES

CHOK (IN)	PSIG	MCF/D
1ST 0.13	.01	5.39
LAST 0.13	1.30	5.88
MAX 0.13	1.30	5.88

MUD DATA

DEPTH-3400

WT. 9.4

VIS-46

FIL-9.6

DST #4

3537-3545

IBLW-STRNG BLW -GAS TO SURF IN 5 MIN

FBLW-STRNG BLW- SEE GAS FLW CHART

REC 35 FT 80% OIL AND 20% MUD

5/60/45/90

SIP-1116.09-780

IFLW-126.79-91.82

FFLW-84.89-48.24

HP-1784.26-1620.10

GAS RATES

CHOK (IN)	PSIG	MCF/D
1ST 0.38	65	290.86
0.38	21.75	132.43
0.38	65	290.86

DST #5

3545-3555'

IBLW-STRNG BLW -GAS TO SURF

FBLW-STRNG BLW (SEE GAS CHART)

REC -100 FT CLEAN OIL 20% GAS, 80% OIL, 60 FT OIL/GAS CUT WATER 30% GAS, 30% OIL, 10% MUD 30% WATER, 60 FT SLI OIL/MUD CUT WATER, 4% OIL/8% MUD/88% WATER, 180 FT WATER

5/60/45/90

SIP-1196.58-1152.06

IFLW-98.47-89.04

FFLW-100.22-206.49

HP-1795.55-1700.86

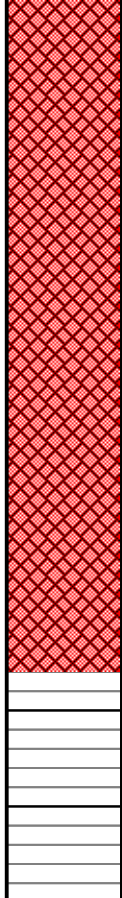
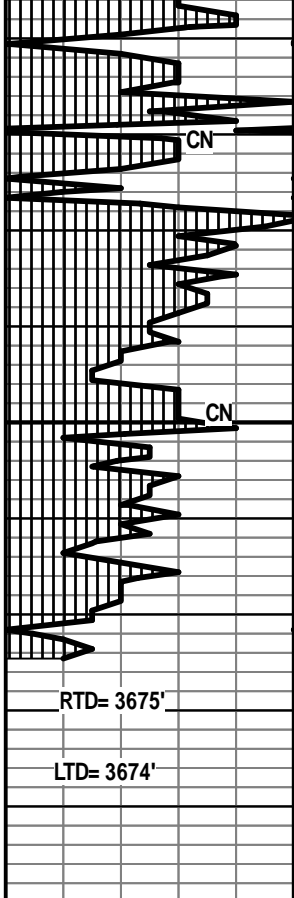
GAS RATE

CHOK (IN)	PSIG	MCF/D
1ST 0.25	25.50	63.3
0.25	10.5	39.5

3600

QUARTZITE 3603' (-1692')

QUARTZITE OLD QRTZ AND TR REDDISH QUARTZ



3650
00

QUARTZITE-CLR QRTZ AND TR REDDISH QUARTZ WITH BLK MIN (AMPHIBOLES) -NO VIS FLOR-NO VIS CUT

QUARTZITE A.A.

QUARTZITE-CLR QRTZ TO REDDISH QUARTZ W/ BLK MIN-NO VIS FLOR-NO VIS CUT

QUARTZITE A.A. W/ SHALES -GRY-RED-SPLNTY

QUARTZITE-CLR QRTZ WITH BLK MIN-SHALES-GRN-RED-GRY-BLKY

QUARTZITE AND SHALE A.A.

QUARTZITE -CLR QRTZ TO REDDISH QUARTZ W/ BLK MIN (AMPHIBOLES)-NO VIS FLOR-NO VIS CUT

MUD DATA
DEPTH-3545'
WT.9.4
VIS 48
FIL 9.2
LCM 0

MUD DATA
DEPTH-3581'
WT. 9.2
VIS 46
FIL 8.8
LCM-0



244919

PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1001376	1718	07/16/2019
INVOICE NUMBER			
93010649			

Pratt (620) 672-1201
 B F.G. HOLL COMPANY LLC
 L PO Box: 308
 L ELLINWOOD
 T KS US 67526
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Calcara #4-19
 O LOCATION
 B COUNTY Barton
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

PAID
 SEP 30 2019
 BY: 80992

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41183375			Net - 30 days	08/15/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 07/15/2019 to 07/15/2019</i>				
0041183375				
171817986A Cement-New Well Casing/Pi 07/15/2019				
<u>5 1/2" LONGSTRING</u>				
AA2 Premium Cement	150.00	SK		
60/40 Poz	75.00	SK		
Celloflake	38.00	LB		
C-41P	71.00	LB		
Salt	654.00	LB		
C-17	85.00	LB		
BES: C-MagChem 10 CR	423.00	LB		
Gilsonite	1,862.00	LB		
Super Flush	500.00	GAL		
Light Vehicle Mileage	65.00	MI		
Heavy Equipment Mileage	130.00	MI		
Plug Container Utilization Charge	1.00	EA		
Depth Charge, 3001-4000'	1.00	HR		
Blending & Mixing Service Charge	225.00	SK		
Casing Swivel Rental	1.00	EA		
Auto Fill Float Shoe 5 1/2" (Blue)	1.00	EA		
Latch Down Plug & Baffle, 5 1/2" (Blue)	1.00	EA		
5 1/2" Basket (Blue)	2.00	EA		
Turbolizer, 5 1/2" (Blue)	8.00	EA		
Cement Scratchers Rotating Type	60.00	EA		
Service Supervisor Charge	1.00	EA		
Driver Charge	3.00	EA		

RECEIVED
 JUL 27 2019
 BY: ROB LONG

405-1050

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



BASIC
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

TMM: 45

FIELD SERVICE TICKET
1718 17986 A

19-195-14

DATE _____ TICKET NO. _____

DATE OF JOB: 7/15/2019	DISTRICT: P944, KS	NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.:			
CUSTOMER: FG Holl	LEASE: C910910	WELL NO. 4-11								
ADDRESS:	COUNTY: Barton	STATE: KS								
CITY:	STATE:	SERVICE CREW: Devin, Brock, D192								
AUTHORIZED BY:	JOB TYPE: 242/5 1/2 Long string									
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
17843	1						7/15			10:30
17862	1/2						7/15	AM	PM	2:30
							7/15	AM	PM	8:00
							7/15	AM	PM	9:00
							7/15	AM	PM	9:30
						MILES FROM STATION TO WELL	15			

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: *[Signature]*
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
BC 145	AA2 Premium Cement	SK	150		
BC 132	10/40 Poz	SK	75		
CC 102	Celloflex	Lb	38		
CC 105	C-418	Lb	71		
CC 111	5614	Lb	654		
CC 187	C-17	Lb	85		
CC 189	BES: C-MegChem 1002	Lb	423		
CC 201	Gilmanite	Lb	1,862		
CC 154	Super Floss	Gal	500		
ME 101	Light Vehicle Mileage	MI	65		
ME 102	Heavy Equipment Mileage	MI	130		
ES 04	Plus Contractor Utilization Charge	ED	1		
CC 4	Depron Charge, 3001-4000	HR	1		
CE 240	Blowout & mixing Service Charge	SLC	225		
WIC 457	Cyprus Service Permit	EA	1		

CHEMICAL / ACID DATA:			

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

SERVICE REPRESENTATIVE: *[Signature]* THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: *[Signature]*
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO. _____



BASIC
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

TMM 45

FIELD SERVICE TICKET
1718 17986 A

DATE _____ TICKET NO. _____

DATE OF JOB: 7/15/2019	DISTRICT: PISA, KS	NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.:		
CUSTOMER: FG Hall	LEASE: Calcare	WELL NO. 41							
ADDRESS:	COUNTY: Berno	STATE: KS							
CITY:	STATE:	SERVICE CREW: Dean, Brian, D132							
AUTHORIZED BY:	JOB TYPE: 242154, Longstr...								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM/PM	TIME
19843	1						7/15	AM	10:30
19862	7/2						7/15	AM	2:30
							7/15	AM	8:00
							7/15	AM	9:00
							7/15	AM	9:30
						MILES FROM STATION TO WELL			65

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
BC145	AA2 Premium Cement	SK	150		
BC132	10/40 Pol	SK	75		
CC102	Cellolite	Lb	38		
CC105	C-41P	Lb	71		
CC111	SG11	Lb	654		
CC187	C-17	Lb	85		
CC189	BFS-C Mechchem 10CR	Lb	423		
CC201	G. 1000	Lb	1,862		
CC154	Super Flow	Gal	500		
ME101	L-shaft vehicle mileage	MJ	65		
ME102	Hes. Fe. 1000	MJ	130		
CF504	Phys. Chem. Util. for Chem	EA	1		
LC4	Drain Cheese, 3001 4000	LR	1		
CF240	B... ..	SK	275		
CC157	CS... ..	EA	1		

SUB TOTAL

CHEMICAL / ACID DATA			

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

SERVICE REPRESENTATIVE: Dean Laska THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Paul...
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.



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

FIELD SERVICE TICKET

1718 ~~17987~~ A

Continuation 17986

PRESSURE PUMPING & WIRELINE

19-190-140

DATE _____ TICKET NO. _____

DATE OF JOB: <u>7/15/2015</u>	DISTRICT: <u>District</u>	NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.:			
CUSTOMER: <u>EG Well</u>		LEASE: <u>CGC 111</u>					WELL NO. <u>4-15</u>			
ADDRESS:		COUNTY: <u>Brown</u>	STATE: <u>Ks</u>							
CITY:		SERVICE CREW: <u>Denny Brown, Dora</u>								
STATE:		JOB TYPE: <u>242/5/4 Laminating</u>								
AUTHORIZED BY:										
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
<u>1912</u>	<u>1</u>					ARRIVED AT JOB			AM	PM
<u>1912</u>	<u>1/2</u>					START OPERATION			AM	PM
						FINISH OPERATION			AM	PM
						RELEASED			AM	PM
						MILES FROM STATION TO WELL				

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: Rolland S. King
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CF 1251	Blue Fin First Stage 5 1/2" (Blue)	EA	1		
CF 127	Lock Down Pins & Reel Me, 5 1/2" (Blue)	EA	1		
CF 1901	5 1/2" Riser (Blue)	EA	2		
CF 1651	Intubator, 5 1/2" (Blue)	EA	3		
CF 2002	Cement Scraper Bits	EA	10		
BE 113	Service Supervisor Charge	EA	1		
BE 114	Driver Charge	EA	3		

SUB TOTAL

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$
<u>Discovered</u> TOTAL	

SERVICE REPRESENTATIVE: Dora Franks

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Rolland S. King

FIELD SERVICE ORDER NO.

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET

1718 ~~17907~~ A

Continuation 17986

DATE _____ TICKET NO. _____

DATE OF JOB: <u>1/15/2005</u>		DISTRICT: <u>Pratt</u>		NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD. <input type="checkbox"/>	INJ. <input type="checkbox"/>	WDW. <input type="checkbox"/>	CUSTOMER ORDER NO.:
CUSTOMER: <u>FG 1011</u>				LEASE: <u>C91015</u>			WELL NO. <u>4-12</u>		
ADDRESS:					COUNTY: <u>Pratt</u>		STATE: <u>KS</u>		
CITY:		STATE:			SERVICE CREW: <u>Devin, Brian, D 52</u>				
AUTHORIZED BY:					JOB TYPE: <u>2 1/2" 5/8" Logging</u>				
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM/PM	TIME
<u>111243</u>	<u>1</u>					ARRIVED AT JOB		AM/PM	
<u>111262</u>	<u>1/2</u>					START OPERATION		AM/PM	
						FINISH OPERATION		AM/PM	
						RELEASED		AM/PM	
						MILES FROM STATION TO WELL			

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
CF1231	Drive Pin Flow Shop 5/8" (Blue)	EA	1		
CF1401	Latch Down Lug & Bolt (Blue)	EA	1		
CF1901	5/8" Bolt (Blue)	EA	2		
CF1651	Turbine, 5/8" (Blue)	EA	2		
CF2002	Common Scissors Bolts (Blue)	EA	10		
BF143	Service Supervisor Chrome	EA	1		
BF144	Drive Chain	EA	3		

SUB-TOTAL

CHEMICAL / ACID DATA:	

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

SERVICE REPRESENTATIVE: [Signature]

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]

(WELL OWNER OPERATOR CONTRACTOR OR)

FIELD SERVICE ORDER NO. _____

BASIC

energy services, L.P.

TREATMENT REPORT

Customer FG Hall	Lease No.	Date 7/15/2019
Lease 601009	Well # 4-19	
Field Order # 17186	Station Pratt, KS	Casing 5 1/2
		Depth 3672
		County Barton
		State KS
Type Job 24 1/2" 5 1/2" Long Slug	Formation TD-3674	Legal Description 19-195-140

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
5 1/2				Pre Pad		Max		5 Min.
Depth 3672	Depth	From	To	Pad		Min		10 Min.
Volume 89 1/2	Volume	From	To	Frac		Avg		15 Min.
Max Press 1500	Max Press	From	To			HHP Used		Annulus Pressure
Well Connection	Annulus Vol.	From	To	Flush Water		Gas Volume		Total Load
Plug Depth 3657	Packer Depth	From	To					

Customer Representative Rob Long	Station Manager Justin Westerman	Treater
Service Units 72911 75982 19843 19959 19862		
Driver Names Darin Brian Brian Dize Dize		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
7:30pm					On location / safety meeting
					255K LCI/40 Pbz, 2% Gel + 5pps gel/solvent
					14.4 pps, 1.27 void, 5.23 water
					150SK AD2 Cement, 0.6% fluid loss, 0.5%
					2.4 pps, 0.25 pps Cellulose, 3% methchem lock
					10pps gel/solvent, 5% gypsum, 10% SS1
					15.0 pps, 1.43 void, 5.23 water
8:05pm	200		5	5	Pump 5 bbls water
	200		12	5	Pump 12 bbls flush
	200		5	5	Pump 5 bbls water
	200		6	5	Mix 25SK sequester, cement
	200		38	5	mix 150SK AD2 cement
					Shut down
					Release plug
	100		0	5	Start displacement
	300		65	5	hit pressure
	400		80	3	slow rate
9:00pm	1500		88	3	Bump plug
					Flow - hold
	0		7	3	plug R9+ hole
	0		5	3	plug mouse hole



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1001376	1718	07/08/2019
INVOICE NUMBER			
93004693			

Pratt (620) 672-1201
 B F.G. HOLL COMPANY LLC
 I PO Box: 308
 L ELLINWOOD
 L KS US 67526
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME CALCARA 4-19
 O LOCATION
 B COUNTY BARTON
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

PAID
 SEP 30 2019
 BY 80992

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41182361	19572		Net - 30 days	08/07/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 07/06/2019 to 07/06/2019</i>				
0041182361				
171819527L Cement-New Well Casing/Pi 07/06/2019				
CEMENT SURFACE CASING				
A-Con Blend	175.00	EA	244878	
Class C Cement	175.00	SK		
Celloflake	88.00	LB		
Calcium Chloride	825.00	LB		
Light Vehicle Mileage	65.00	MI		
Heavy Equipment Mileage	130.00	MI		
Plug Container Utilization Charge	1.00	EA		
Depth Charge, 0'-1000'	1.00	HR		
Blending & Mixing Service Charge	350.00	SK		
Top Rubber Cement Plug, 8 5/8"	1.00	EA		
Centralizer 8 5/8 x 12 1/4	3.00	EA		
Baffle Plate Aluminum, 8 5/8" (Blue)	1.00	EA		
Service Supervisor Charge	1.00	EA		
Driver Charge	3.00	EA		

RECEIVED
 ROB LONG

105-1050

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



Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

Job Log

Customer:	FG Holl	Cement Pump No.:	37223 19572 28HRS	Operator TRK No.:	78868
Address:		Ticket #:	1718 19527 L	Bulk TRK No.:	37725 19827 Oscar
City, State, Zip:		Job Type:	Z42 - Cement Surface Casing		
Service District:	1718-Liberal KS	Well Type:	OIL		
Well Name and No.:	Calcara #4-19	Well Location:	19,19,14	County:	Barton
				State:	Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
A-Con Blend Common	175	3% Calcium Chloride, .25pps Celloflake	37725 19827 Oscar	Front	Back
Premium Plus Cement	175	2% Calcium Chloride, .25pps Celloflake	37725 19827	Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	12	2.47	14.49	432.25	TT Man Hours:	88
Tail:	14.8	1.34	6.33	234.5	# of Men on Job:	4

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps		Pressure(PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
20:00pm							Arrived at location
10:00am							Spot trucks/ Rig up
14:30pm							Safety meeting
14:48pm						1500	Pressure test lines to 1500psi
14:49pm	3	10				50	Pump 10bbbls of fresh water spacer
14:52pm	5	76				100	Pump 76bbbls of lead from 175sks at 12lbs
15:08pm	5	41				50	Pump 41bbbls of tail from 175sks at 14.8lbs
15:21pm							Shut down/Drop plug/Wash pump and lines
15:23pm							Start Displacement of bbbls with fresh water
15:31pm	5	20				20	20bbbls gone
15:35pm	5	40				180	40bbbls gone /Slow down rate
15:38pm	3	52				700	Bump plug/Hold for 5 minutes
							Release pressure to check if float holds
							Float did not hold close valves left head
							Got 40bbbls of cement to Surface
							Rig Down
							Job Completed
							Thanked company man and rig crew

Size Hole	12 1/4	Depth	865.08		TYPE	
Size & Wt. Csg.	8 5/8 24#	Depth	865.08	New / Used	Baffle Plate	822.48
Landing Psi	500+	Depth			Retainer	Depth
Shoe Joint	42.6	Type			Perfs	CIBP

Customer Signature: <i>Adrian Vazquez</i>	Basic Representative:	Victor A. Corona
	Basic Signature:	<i>Victor A. Corona</i>
	Date of Service:	7/6/2019