

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	F. G. Holl Company L.L.C.
Well Name	KUFELD 2-19
Doc ID	1412990

All Electric Logs Run

Microresistivity Log
DNL/CDL Log
DIL
Sonic cement Bond Log
Fracfinder Log
BHCS Log

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	KUFELD 2-19
Doc ID	1412990

Tops

Name	Top	Datum
Herrington	1760	+153
Winfield	1812	+101
Towanda	1880	+33
Fort Riley	1906	+7
B/Florence	2003	-90
Kinney LS	2027	-114
Wrefold	2059	-146
Council Grove	2079	-166
Crouse	2118	-205
Neva	2254	-341
Red Eagle	2313	-400
Onaga Shale	2464	-551
Wabaunsee	2486	-573
Root Shale	2564	-651
Stotler	2602	-689
Tarkio	2670	-757
Howard	2740	-827
Severy Shale	2778	-865
Topeka	2804	-891
Heebner	3136	-1223
Toronto	3154	-1241
Douglas Shale	3168	-1255
Brown Lime	3222	-1309
Lansing	3233	-1320

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	KUFELD 2-19
Doc ID	1412990

Tops

Name	Top	Datum
Drum	3362	-1449
BKC	3465	-1552
Conglomerate	3478	1565
Arbuckle	3537	-1624
Reagan Sand	3654	-1741
Granite	3664	-1751
RTD	3750	1837
LTD	3747	-1834



DRILL STEM TEST REPORT

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

9431 East Central Suite 100
Wichita, Kansas 67206-2563

ATTN: Ryan Greenbaum

Kufeld #2-19

19-19s-14w

Start Date: 2018.06.15 @ 18:56:00

End Date: 2018.06.15 @ 22:17:00

Job Ticket #: 01081 DST #: 1

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

Printed: 2018.06.15 @ 05:15:03



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01081

DST#: 1

Test Start: 2018.06.15 @ 18:56:00

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:38:00

Time Test Ended: 22:17:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Gene Budig

Unit No: 1

Interval: **3135.00 ft (KB) To 3170.00 ft (KB) (TVD)**

Reference Elevations: 1922.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: **9139** Outside

Press@RunDepth: 1071.50 psig @ 3165.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2018.06.13

End Date: 2018.06.13

Last Calib.: 2018.06.15

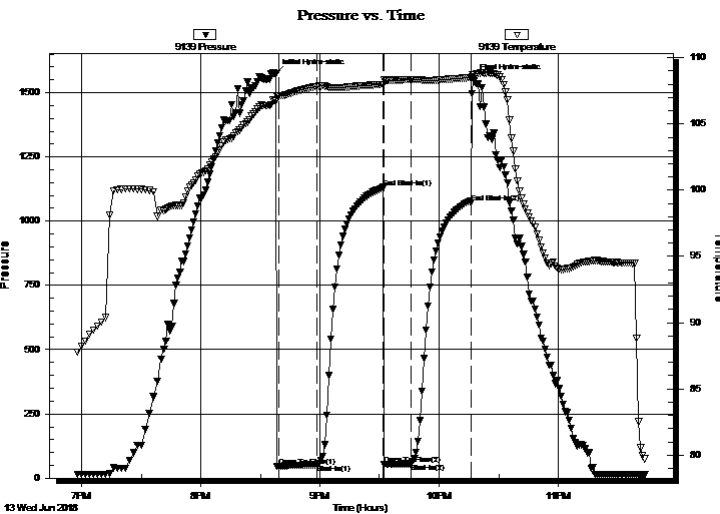
Start Time: 18:56:00

End Time: 23:43:30

Time On Btm: 2018.06.13 @ 20:38:00

Time Off Btm: 2018.06.13 @ 22:17:00

TEST COMMENT: 1ST Opening 15-Minutes weak blow for 11 minutes and died
1st Shut-In 30 Minutes no blow back
2nd Opening 15 Minutes no blow
2nd Shut-In 30 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1574.37	106.75	Initial Hydro-static
1	47.17	107.12	Open To Flow (1)
21	52.55	107.83	Shut-In(1)
54	1131.77	108.00	End Shut-In(1)
55	53.14	108.34	Open To Flow (2)
68	56.56	108.36	Shut-In(2)
98	1071.50	108.50	End Shut-In(2)
99	1555.53	108.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01081

DST#: 1

Test Start: 2018.06.15 @ 18:56:00

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:38:00

Time Test Ended: 22:17:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Gene Budig

Unit No: 1

Interval: **3135.00 ft (KB) To 3170.00 ft (KB) (TVD)**

Reference Elevations: 1922.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 9119

Inside

Press@RunDepth: 1070.50 psig @ 3165.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2018.06.13

End Date: 2018.06.13

Last Calib.: 2018.06.15

Start Time: 18:56:00

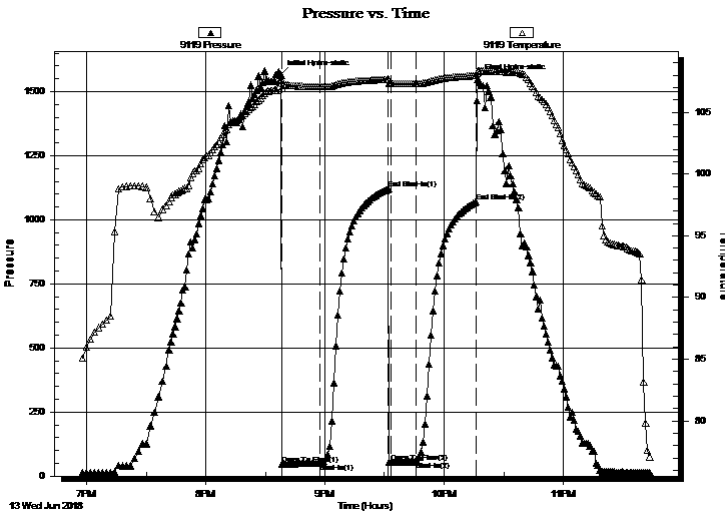
End Time: 23:43:30

Time On Btm: 2018.06.13 @ 20:38:00

Time Off Btm: 2018.06.13 @ 22:17:00

TEST COMMENT: 1ST Opening 15-Minutes weak blow for 11 minutes and died
1st Shut-In 30 Minutes no blow back
2nd Opening 15 Minutes no blow
2nd Shut-In 30 Minutes no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1564.65	107.71	Initial Hydro-static
1	45.83	106.93	Open To Flow (1)
20	51.37	107.08	Shut-In(1)
54	1120.49	107.69	End Shut-In(1)
55	53.71	107.37	Open To Flow (2)
68	56.30	107.33	Shut-In(2)
98	1070.50	107.98	End Shut-In(2)
99	1549.33	108.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

Gas Rates

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

* Recovery from multiple tests



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01081

DST#: 1

Test Start: 2018.06.15 @ 18:56:00

Tool Information

Drill Pipe:	Length: 2952.00 ft	Diameter: 3.80 inches	Volume: 41.41 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 42.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3135.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	65.00 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			3110.00	
Hydraulic tool	5.00			3115.00	
Jars	5.00			3120.00	
Safety Joint	5.00			3125.00	
Packer	5.00			3130.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3135.00	
Anchor	30.00			3165.00	
Recorder	0.00	9119	Inside	3165.00	
Recorder	0.00	9139	Outside	3165.00	
Bullnose	5.00			3170.00	35.00 Bottom Packers & Anchor
Total Tool Length:	65.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01081

DST#: 1

ATTN: Ryan Greenbaum

Test Start: 2018.06.15 @ 18:56:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: 8.80 in³
Resistivity: ohm.m
Salinity: 4000.00 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
10.00	Mud	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

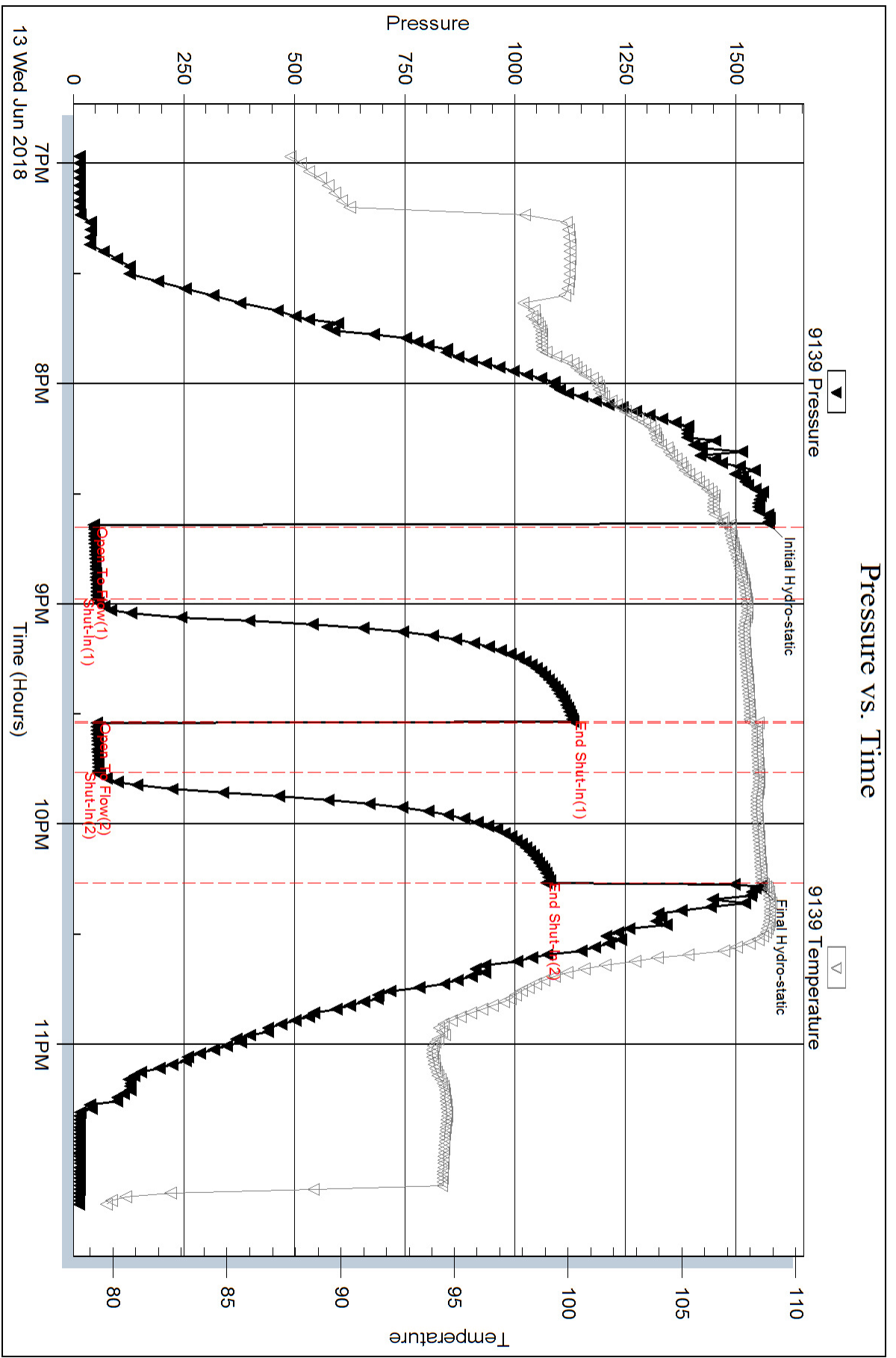
Num Gas Bombs: 0

Serial #:

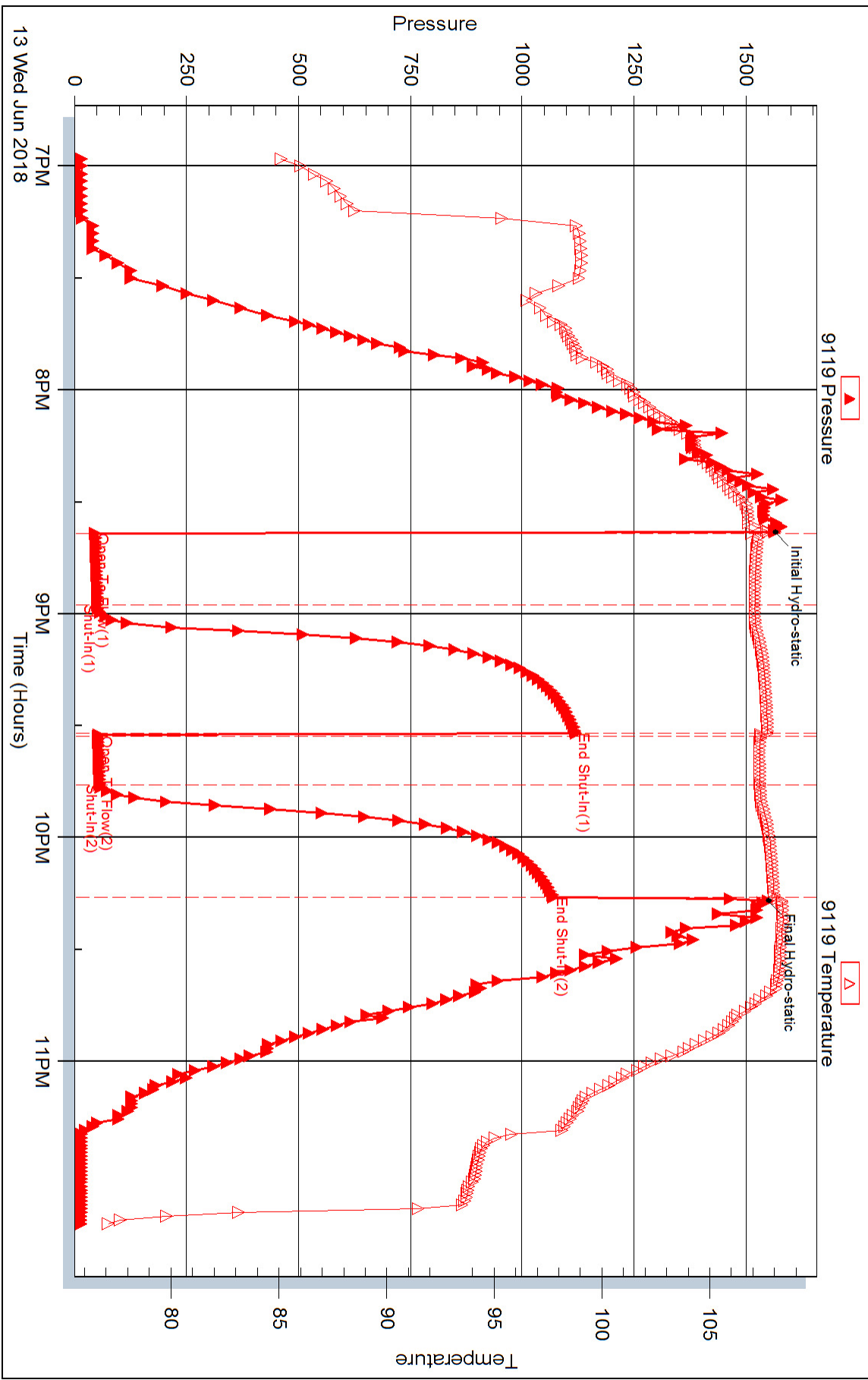
Laboratory Name:

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: Ryan Greenbaum

Kufeld #2-19

19-19s-14w

Start Date: 2018.06.15 @ 01:18:00

End Date: 2018.06.15 @ 06:23:00

Job Ticket #: 01083 DST #: 3

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

Printed: 2018.06.15 @ 06:40:00



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01083

DST#: 3

ATTN: Ryan Greenbaum

Test Start: 2018.06.15 @ 01:18:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:18:00

Time Test Ended: 06:23:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3350.00 ft (KB) To 3380.00 ft (KB) (TVD)**

Reference Elevations: 1922.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 9119 Inside

Press@RunDepth: 932.66 psig @ 3375.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2018.06.15 End Date: 2018.06.15

Last Calib.: 2018.06.15

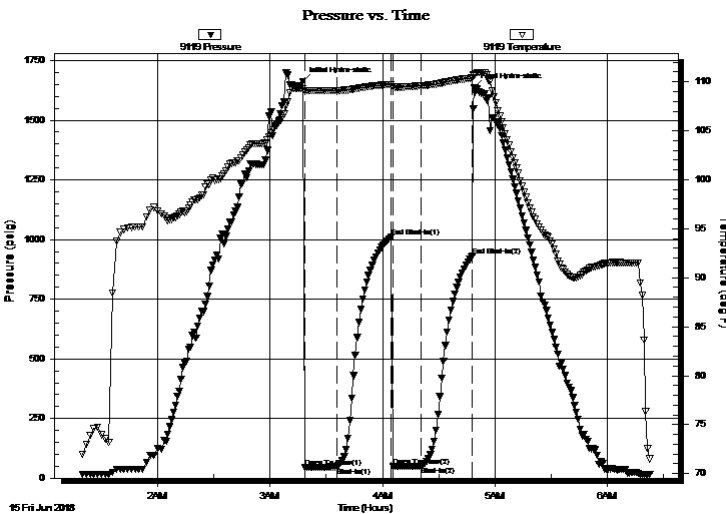
Start Time: 01:18:00 End Time: 06:22:59

Time On Btm: 2018.06.15 @ 03:17:30

Time Off Btm: 2018.06.15 @ 04:49:00

TEST COMMENT: 1st Opening 15 Minutes weak blow for 4 minutes and died
1st Shut-In 30 Minutes no blow back
2nd Opening 15 minutes no blow
2nd Shut-In 30 Minutes no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1662.84	109.31	Initial Hydro-static
1	44.22	109.08	Open To Flow (1)
18	47.01	109.11	Shut-In(1)
47	1009.26	109.74	End Shut-In(1)
48	48.37	109.50	Open To Flow (2)
63	50.25	109.59	Shut-In(2)
91	932.66	110.39	End Shut-In(2)
92	1637.35	110.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

Gas Rates

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



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01083

DST#: 3

ATTN: Ryan Greenbaum

Test Start: 2018.06.15 @ 01:18:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:18:00

Time Test Ended: 06:23:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3350.00 ft (KB) To 3380.00 ft (KB) (TVD)**

Reference Elevations: 1922.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 9139 Outside

Press@RunDepth: 944.54 psig @ 3375.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2018.06.15 End Date: 2018.06.15

Last Calib.: 2018.06.15

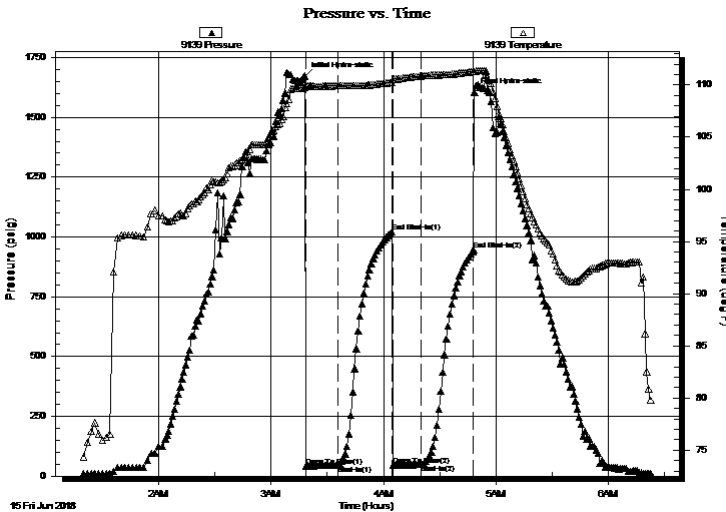
Start Time: 01:18:00 End Time: 06:22:59

Time On Btm: 2018.06.15 @ 03:18:00

Time Off Btm: 2018.06.15 @ 04:48:30

TEST COMMENT: 1st Opening 15 Minutes weak blow for 4 minutes and died
1st Shut-In 30 Minutes no blow back
2nd Opening 15 minutes no blow
2nd Shut-In 30 Minutes no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1672.23	109.75	Initial Hydro-static
1	42.56	110.05	Open To Flow (1)
18	46.05	109.94	Shut-In(1)
47	1020.85	110.26	End Shut-In(1)
47	46.19	110.50	Open To Flow (2)
62	48.63	110.87	Shut-In(2)
90	944.54	111.31	End Shut-In(2)
91	1604.00	111.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01083

DST#: 3

ATTN: Ryan Greenbaum

Test Start: 2018.06.15 @ 01:18:00

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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 67000.00 lb
			<u>Total Volume: 45.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3350.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	60.00 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			3325.00	
Hydraulic tool	5.00			3330.00	
Jars	5.00			3335.00	
Safety Joint	5.00			3340.00	
Packer	5.00			3345.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3350.00	
Anchor	25.00			3375.00	
Recorder	0.00	9119	Inside	3375.00	
Recorder	0.00	9139	Outside	3375.00	
Bullnose	5.00			3380.00	30.00 Bottom Packers & Anchor
Total Tool Length:	60.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01083

DST#: 3

ATTN: Ryan Greenbaum

Test Start: 2018.06.15 @ 01:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
10.00	MUD	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

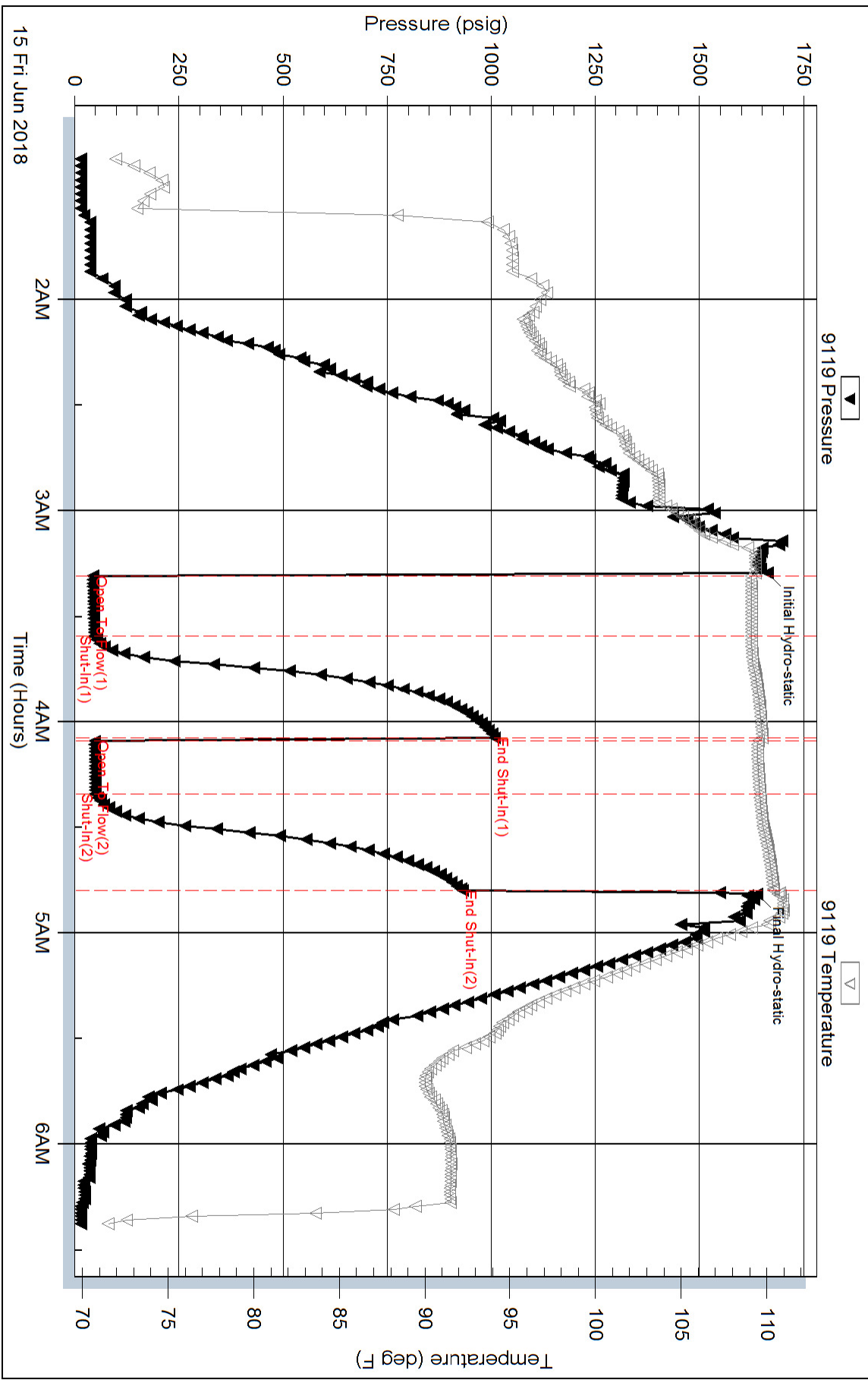
Serial #:

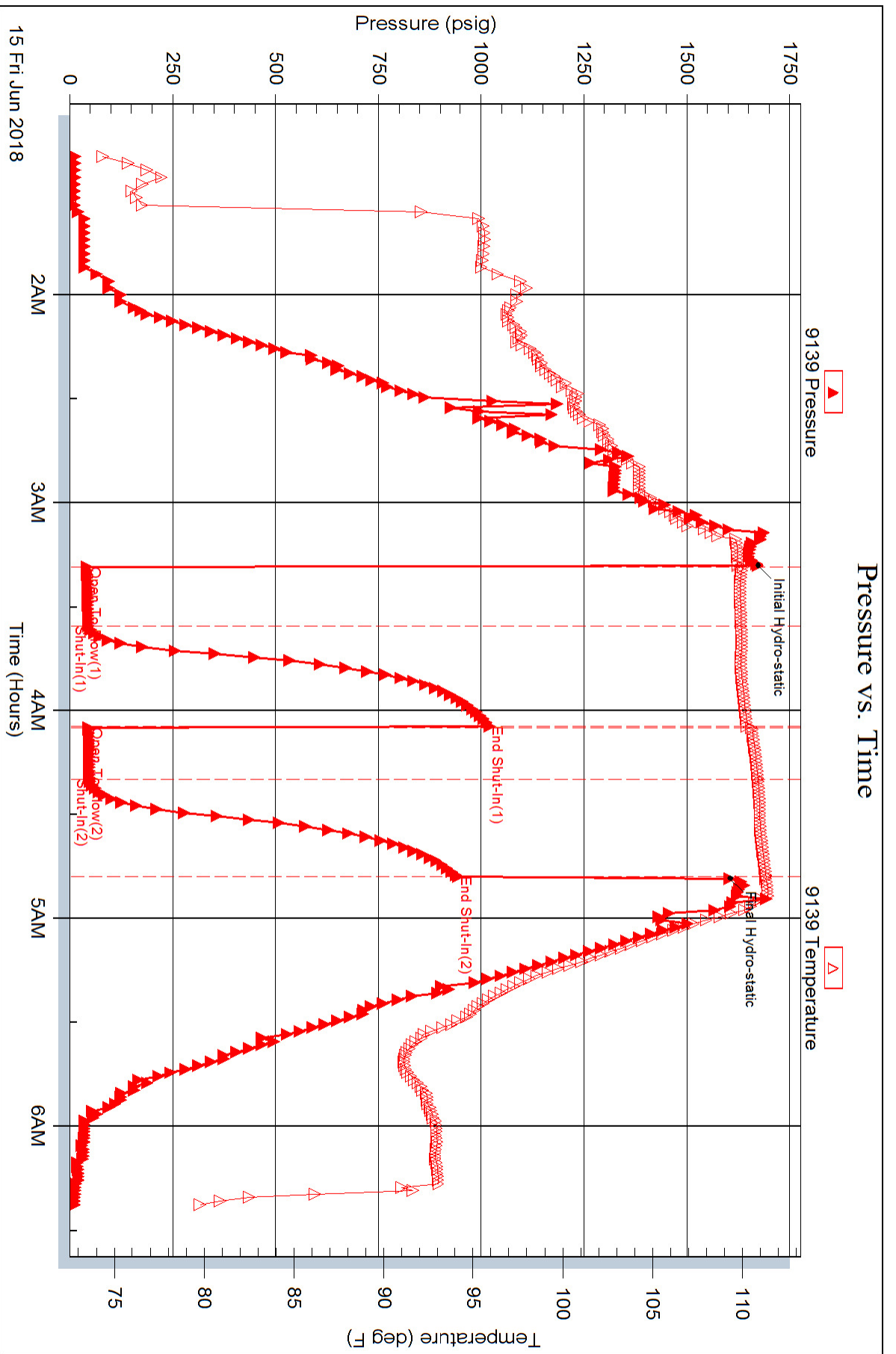
Laboratory Name:

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: Ryan Greenbaum

Kufeld #2-19

19-19s-14w

Start Date: 2018.06.15 @ 10:00:00

End Date: 2018.06.15 @ 02:35:00

Job Ticket #: 01082 DST #: 2

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

Printed: 2018.06.15 @ 05:14:13



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01082

DST#: 2

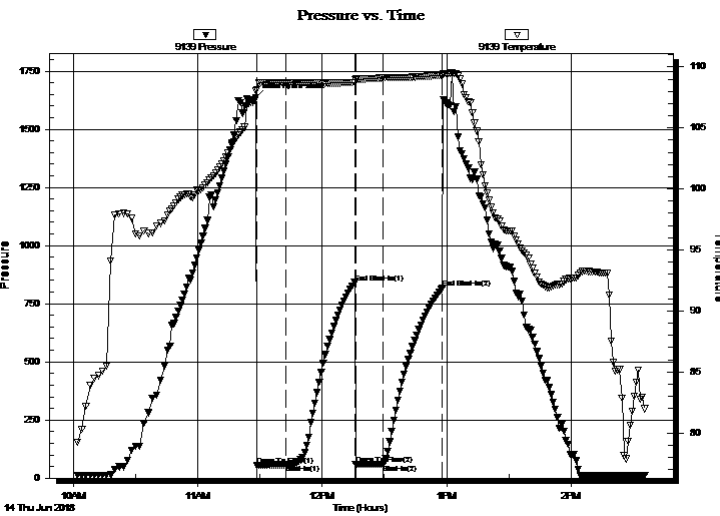
Test Start: 2018.06.15 @ 10:00:00

GENERAL INFORMATION:

Formation: **Kansas City "A-E"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:28:00
 Time Test Ended: 02:35:00
 Interval: **3228.00 ft (KB) To 3280.00 ft (KB) (TVD)**
 Total Depth: 3380.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1922.00 ft (KB)
 1909.00 ft (CF)
 KB to GR/CF: 13.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 816.45 psig @ 3274.77 ft (KB) Capacity: 5000.00 psig
 Start Date: 2018.06.14 End Date: 2018.06.14 Last Calib.: 2018.06.15
 Start Time: 10:00:00 End Time: 14:36:00 Time On Btm: 2018.06.14 @ 11:28:00
 Time Off Btm:

TEST COMMENT: 1st Opening 15 Minutes Weak Blow for 6 minutes and died
 1st Shut-In 30 Minutes No blow back
 2nd Opening 15 Minutes no blow
 2nd shut-In 30 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1636.77	108.01	Initial Hydro-static
1	54.61	108.13	Open To Flow (1)
15	57.41	108.71	Shut-In(1)
48	841.26	108.74	End Shut-In(1)
48	58.77	108.96	Open To Flow (2)
62	59.91	109.11	Shut-In(2)
90	816.45	109.33	End Shut-In(2)

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01082

DST#: 2

Test Start: 2018.06.15 @ 10:00:00

GENERAL INFORMATION:

Formation: **Kansas City "A-E"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:28:00
 Time Test Ended: 02:35:00
 Interval: **3228.00 ft (KB) To 3280.00 ft (KB) (TVD)**
 Total Depth: 3380.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1922.00 ft (KB)
 1909.00 ft (CF)
 KB to GR/CF: 13.00 ft

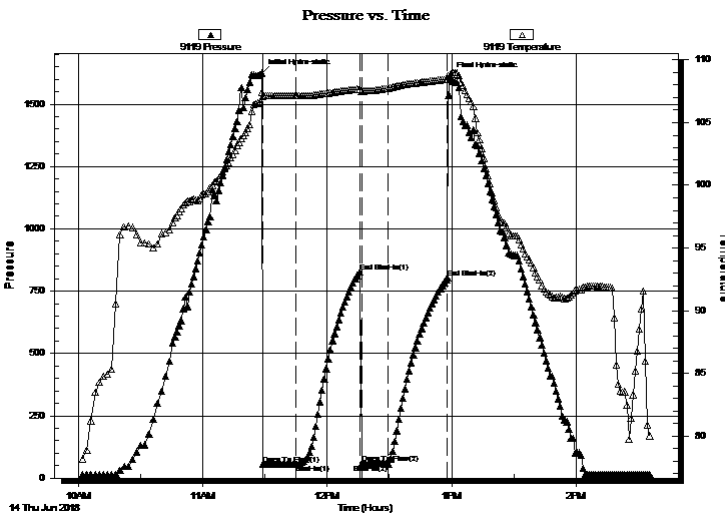
Serial #: 9119

Inside

Press@RunDepth: 802.55 psig @ 3274.77 ft (KB) Capacity: 5000.00 psig
 Start Date: 2018.06.14 End Date: 2018.06.14 Last Calib.: 2018.06.15
 Start Time: 10:00:00 End Time: 14:36:00 Time On Btm: 2018.06.14 @ 11:28:30
 Time Off Btm: 2018.06.14 @ 12:59:00

TEST COMMENT: 1st Opening 15 Minutes Weak Blow for 6 minutes and died
 1st Shut-In 30 Minutes No blow back
 2nd Opening 15 Minutes no blow
 2nd shut-In 30 Minutes no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1624.56	107.40	Initial Hydro-static
1	54.92	107.09	Open To Flow (1)
17	56.80	107.13	Shut-In(1)
47	827.05	107.68	End Shut-In(1)
48	57.50	107.52	Open To Flow (2)
61	57.25	107.76	Shut-In(2)
90	802.55	108.46	End Shut-In(2)
91	1612.60	108.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01082

DST#: 2

Test Start: 2018.06.15 @ 10:00:00

Tool Information

Drill Pipe:	Length: 3044.00 ft	Diameter: 3.80 inches	Volume: 42.70 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 43.59 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3228.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.77 ft			
Tool Length:	81.77 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			3203.00	
Hydraulic tool	5.00			3208.00	
Jars	5.00			3213.00	
Safety Joint	5.00			3218.00	
Packer	5.00			3223.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3228.00	
Anchor	5.00			3233.00	
Change Over Sub	0.75			3233.75	
Drill Pipe	31.27			3265.02	
Change Over Sub	0.75		Inside	3265.77	
Anchor	9.00			3274.77	
Recorder	0.00	9119	Inside	3274.77	
Recorder	0.00	9139	Outside	3274.77	
Bullnose	5.00			3279.77	51.77 Bottom Packers & Anchor

Total Tool Length: 81.77



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01082

DST#: 2

ATTN: Ryan Greenbaum

Test Start: 2018.06.15 @ 10:00:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: 8.80 in³
Resistivity: ohm.m
Salinity: 4200.00 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
10.00	Mud	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

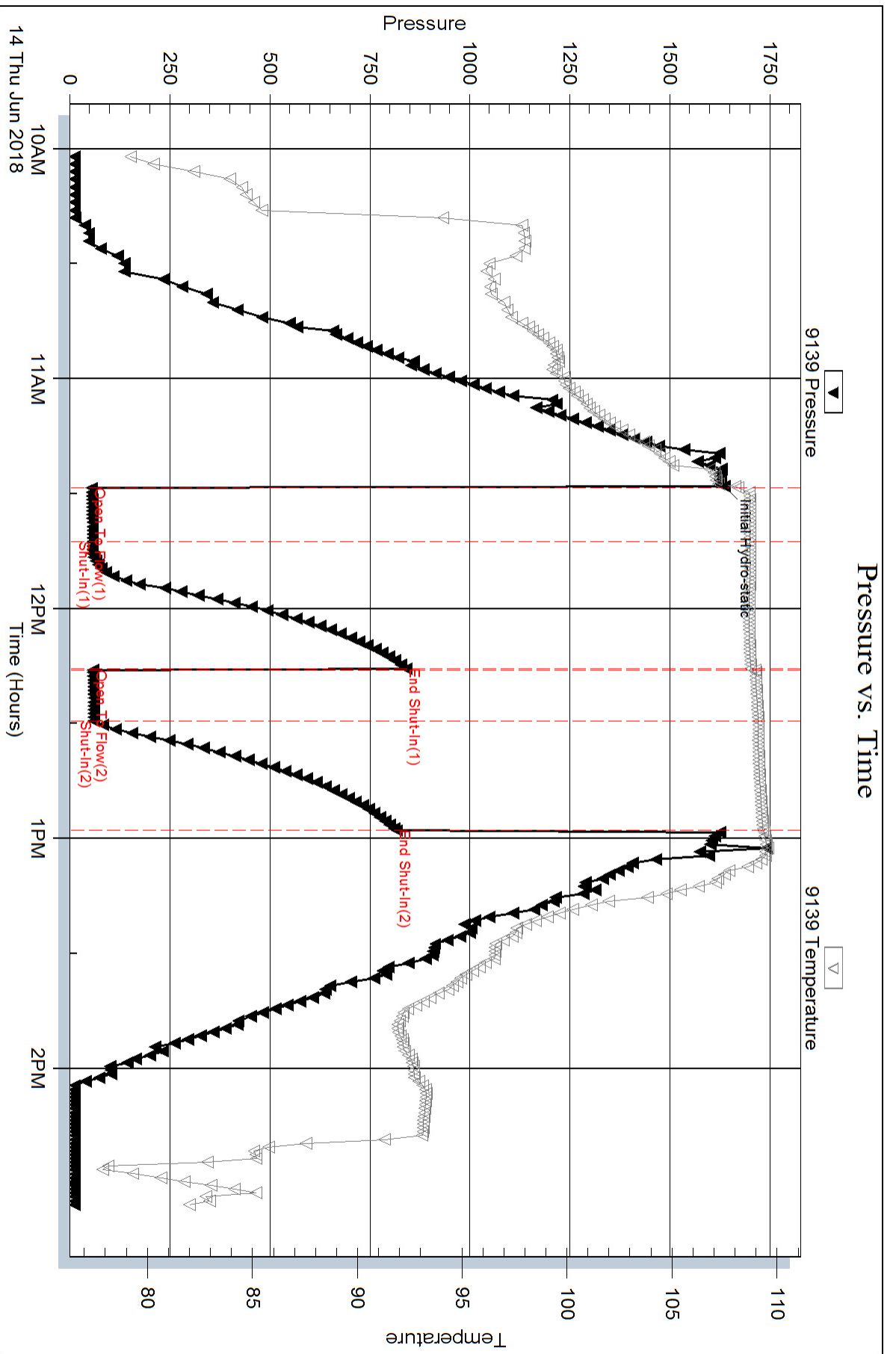
Num Gas Bombs: 0

Serial #:

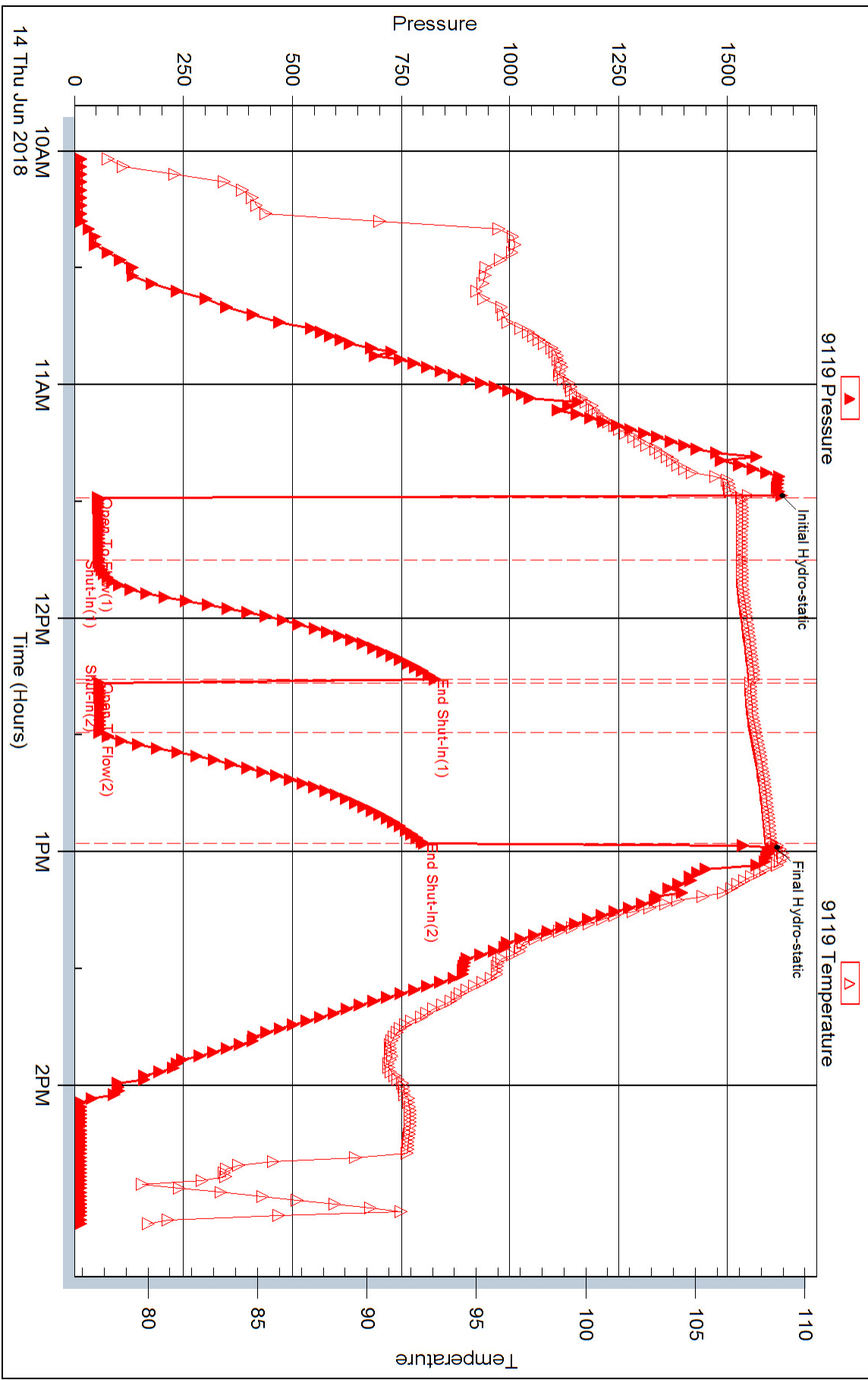
Laboratory Name:

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: Ryan Greenbaum

Kufeld #2-19

19-19s-14w

Start Date: 2018.06.15 @ 17:10:00

End Date: 2018.06.15 @ 21:45:00

Job Ticket #: 01084 DST #: 4

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

Printed: 2018.06.15 @ 22:04:54

F G Holl Company LLC
19-19s-14w
Kufeld #2-19
DST # 4
Kansas City "I-K"
2018.06.15



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01084

DST#: 4

ATTN: Ryan Greenbaum

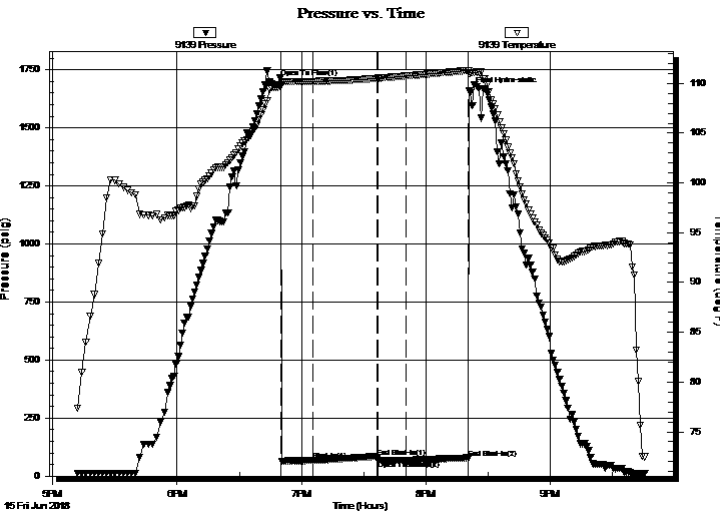
Test Start: 2018.06.15 @ 17:10:00

GENERAL INFORMATION:

Formation: **Kansas City "I-K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:50:00
 Time Test Ended: 21:45:00
 Interval: **3380.00 ft (KB) To 3440.00 ft (KB) (TVD)**
 Total Depth: 3380.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1913.00 ft (KB)
 1900.00 ft (CF)
 KB to GR/CF: 13.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 79.05 psig @ 3434.77 ft (KB) Capacity: 5000.00 psig
 Start Date: 2018.06.15 End Date: 2018.06.15 Last Calib.: 2018.06.15
 Start Time: 17:10:00 End Time: 21:45:30 Time On Btm:
 Time Off Btm: 2018.06.15 @ 20:21:00

TEST COMMENT: 1st Opening 15 minutes w eak blow for 12 minutes and died
 1st Shut-In 30 Minutes no blow back
 2nd Opening 15 Minutes no blow
 2nd Shut-In 30 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1717.84	109.72	Open To Flow (1)
16	67.06	110.21	Shut-In(1)
47	82.12	110.50	End Shut-In(1)
47	68.77	110.51	Open To Flow (2)
61	68.70	110.74	Shut-In(2)
91	79.05	111.30	End Shut-In(2)
91	1658.08	110.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01084

DST#: 4

Test Start: 2018.06.15 @ 17:10:00

GENERAL INFORMATION:

Formation: **Kansas City "I-K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:50:00
 Time Test Ended: 21:45:00
 Interval: **3380.00 ft (KB) To 3440.00 ft (KB) (TVD)**
 Total Depth: 3380.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1913.00 ft (KB)
 1900.00 ft (CF)
 KB to GR/CF: 13.00 ft

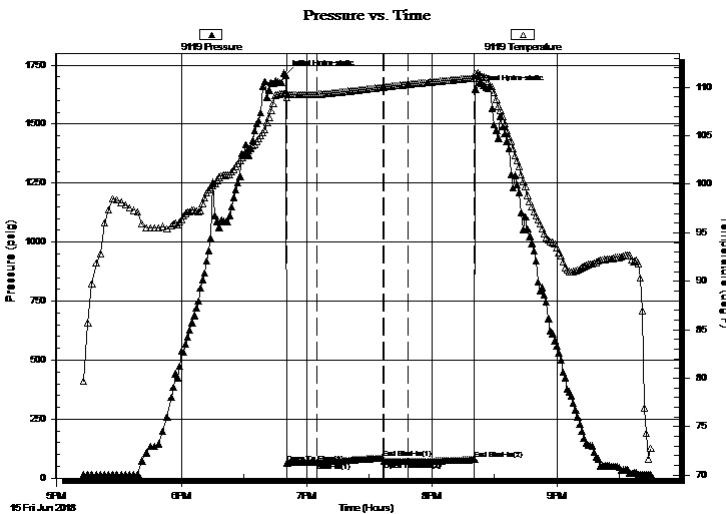
Serial #: 9119

Inside

Press@RunDepth: 79.22 psig @ 3434.77 ft (KB) Capacity: 5000.00 psig
 Start Date: 2018.06.15 End Date: 2018.06.15 Last Calib.: 2018.06.15
 Start Time: 17:10:00 End Time: 21:45:30 Time On Btm: 2018.06.15 @ 18:50:00
 Time Off Btm: 2018.06.15 @ 20:21:00

TEST COMMENT: 1st Opening 15 minutes w eak blow for 12 minutes and died
 1st Shut-In 30 Minutes no blow back
 2nd Opening 15 Minutes no blow
 2nd Shut-In 30 Minutes no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1708.87	109.52	Initial Hydro-static
1	64.89	108.95	Open To Flow (1)
15	68.34	109.28	Shut-In(1)
47	85.21	110.02	End Shut-In(1)
47	69.99	110.03	Open To Flow (2)
59	69.99	110.30	Shut-In(2)
91	79.22	110.95	End Shut-In(2)
91	1648.33	111.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01084

DST#: 4

ATTN: Ryan Greenbaum

Test Start: 2018.06.15 @ 17:10:00

Tool Information

Drill Pipe:	Length: 3200.00 ft	Diameter: 3.80 inches	Volume: 44.89 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose:	68000.00 lb
			<u>Total Volume: 45.78 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3380.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	59.77 ft				
Tool Length:	89.77 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			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	2.00			3382.00	
Change Over Sub	0.75			3382.75	
Drill Pipe	31.27			3414.02	
Change Over Sub	0.75		Inside	3414.77	
Anchor	20.00			3434.77	
Recorder	0.00	9119	Inside	3434.77	
Recorder	0.00	9139	Outside	3434.77	
Bullnose	5.00			3439.77	59.77 Bottom Packers & Anchor

Total Tool Length: 89.77



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01084

DST#: 4

ATTN: Ryan Greenbaum

Test Start: 2018.06.15 @ 17:10:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 59.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 4300.00 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
10.00	MUD	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

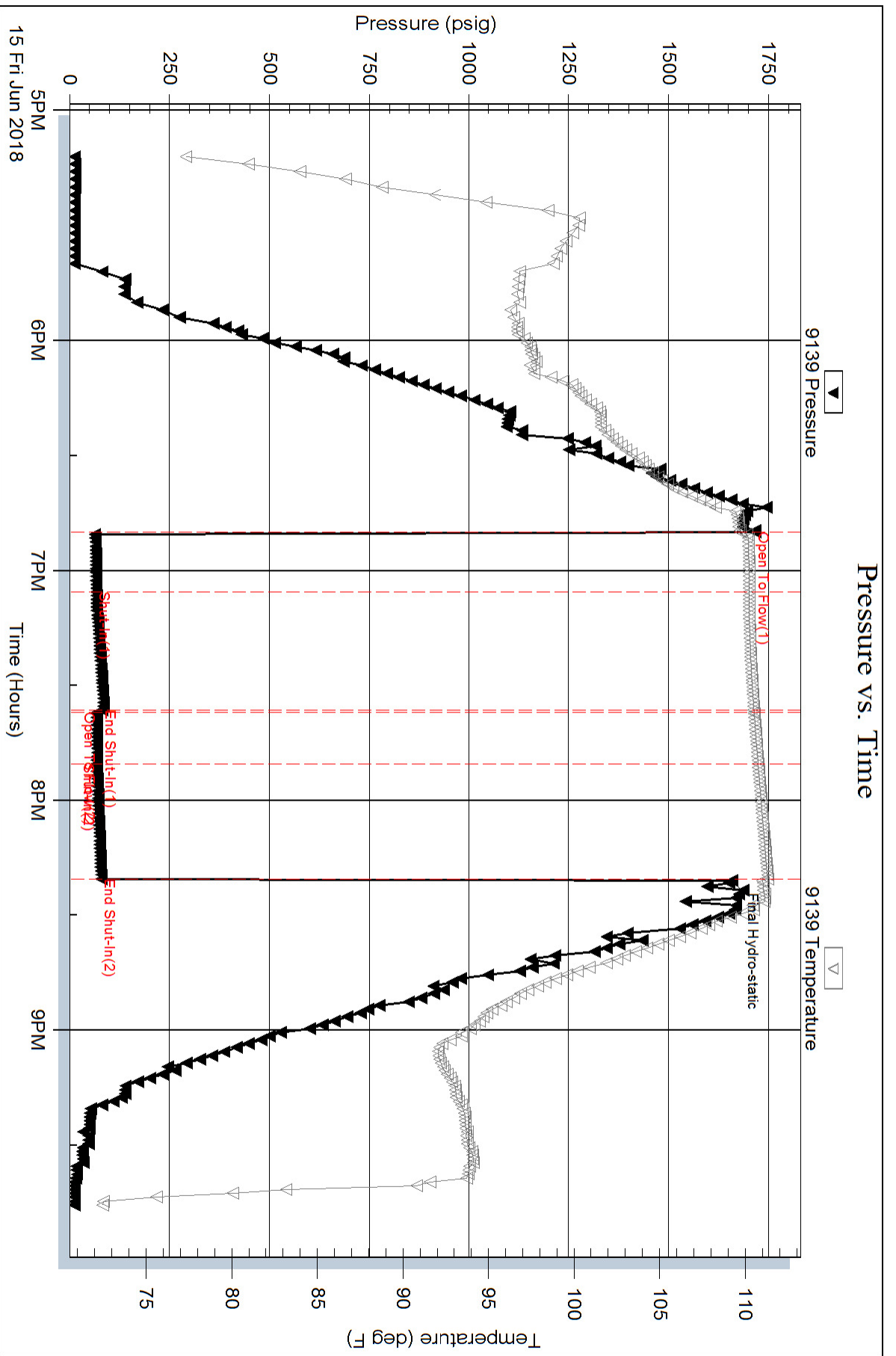
Num Gas Bombs: 0

Serial #:

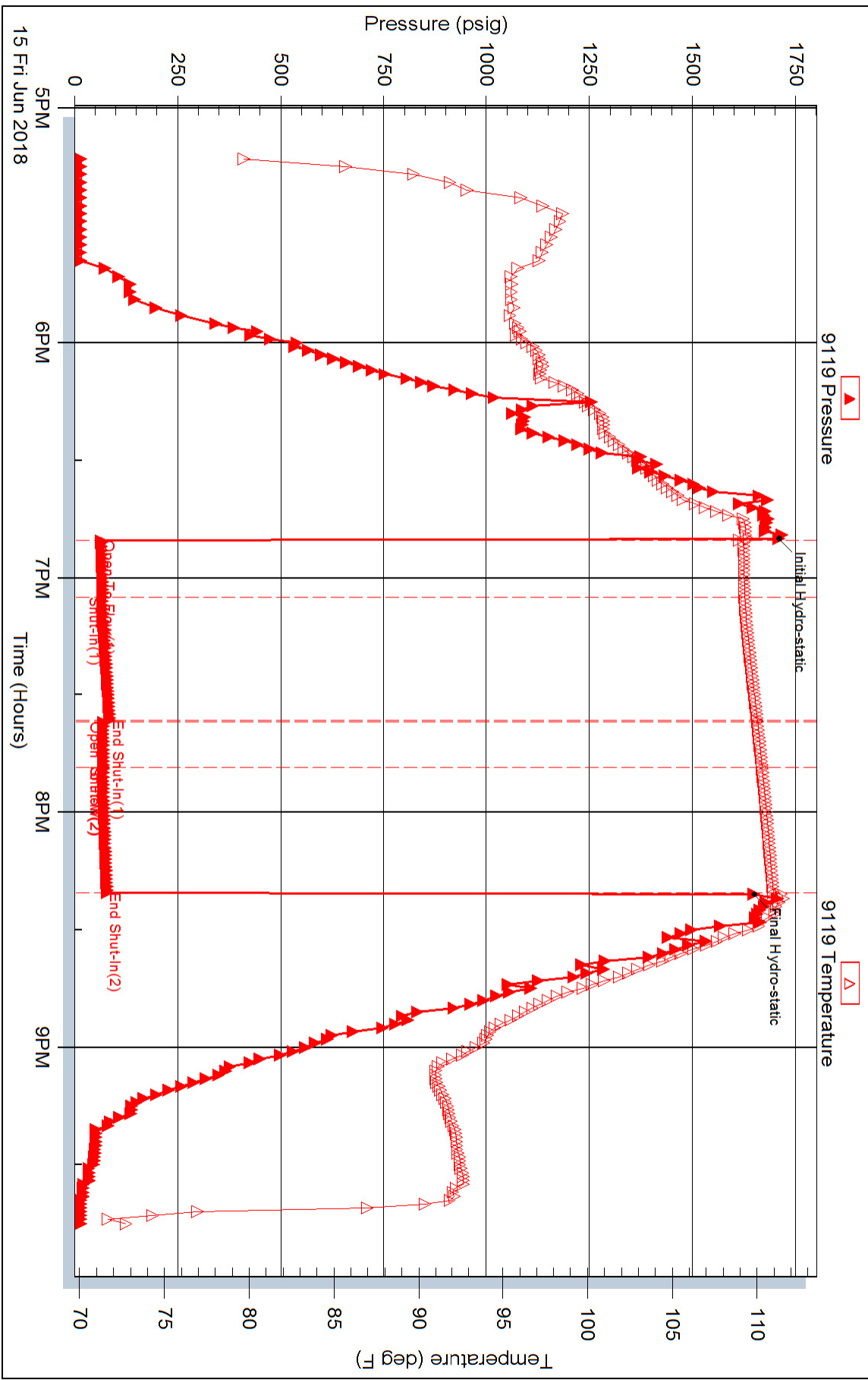
Laboratory Name:

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: Ryan Greenbaum

Kufeld #2-19

19-19s-14w

Start Date: 2018.06.16 @ 11:52:00

End Date: 2018.06.16 @ 16:29:00

Job Ticket #: 01085 DST #: 5

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

Printed: 2018.06.16 @ 16:47:37



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01085

DST#: 5

Test Start: 2018.06.16 @ 11:52:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:21:00

Time Test Ended: 16:29:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3544.00 ft (KB) To 3550.00 ft (KB) (TVD)**

Reference Elevations: 1913.00 ft (KB)

Total Depth: 3550.00 ft (KB) (TVD)

1900.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 9139 Outside

Press@RunDepth: 408.94 psig @ 3545.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2018.06.16

End Date: 2018.06.16

Last Calib.: 2018.06.16

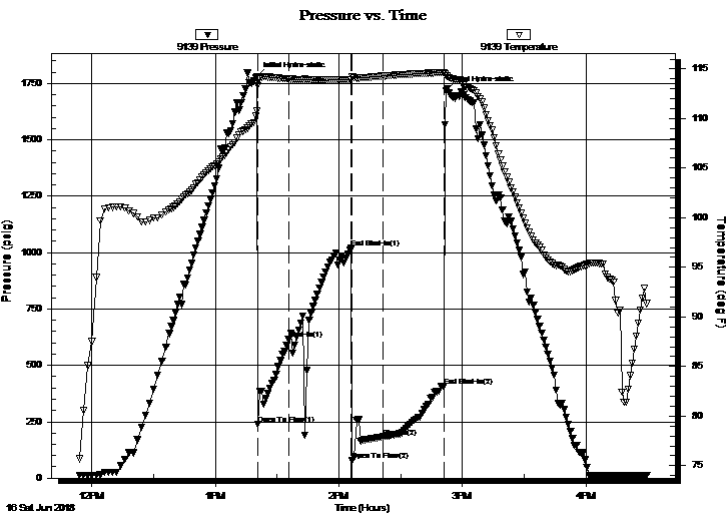
Start Time: 11:52:00

End Time: 16:29:30

Time On Btm: 2018.06.16 @ 13:20:00

Time Off Btm: 2018.06.16 @ 14:52:00

TEST COMMENT: 1st Opening 15 Minutes weak surface blow for 6 minutes and died
1st Shut-In 30 Minutes no blow back
2nd Opening 15 Minutes no blow
2nd Shut-In 30 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1779.82	110.75	Initial Hydro-static
1	237.75	113.35	Open To Flow (1)
16	614.49	113.98	Shut-In(1)
46	1019.40	113.92	End Shut-In(1)
47	77.68	114.21	Open To Flow (2)
62	182.90	114.28	Shut-In(2)
91	408.94	114.65	End Shut-In(2)
92	1716.01	114.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

Gas Rates

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



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01085

DST#: 5

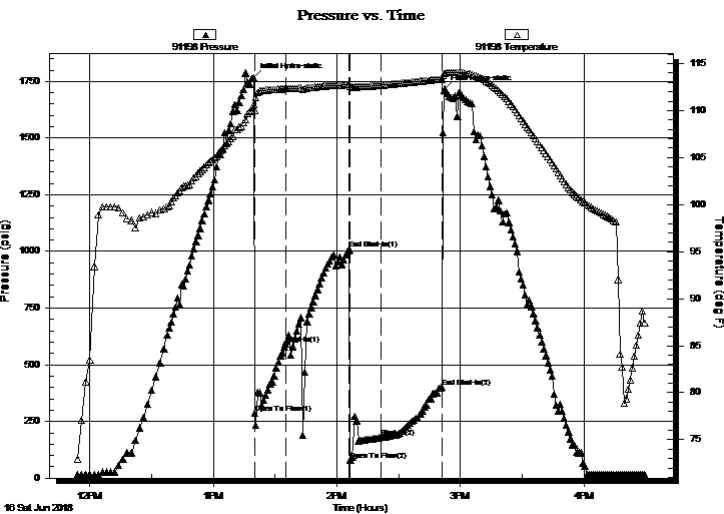
Test Start: 2018.06.16 @ 11:52:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:21:00
 Time Test Ended: 16:29:00
 Interval: **3544.00 ft (KB) To 3550.00 ft (KB) (TVD)**
 Total Depth: 3550.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1913.00 ft (KB)
 1900.00 ft (CF)
 KB to GR/CF: 13.00 ft

Serial #: 91198 Inside
 Press@RunDepth: 400.42 psig @ 3545.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2018.06.16 End Date: 2018.06.16 Last Calib.: 2018.06.16
 Start Time: 11:52:00 End Time: 16:29:30 Time On Btm: 2018.06.16 @ 13:19:30
 Time Off Btm: 2018.06.16 @ 14:52:00

TEST COMMENT: 1st Opening 15 Minutes weak surface blow for 6 minutes and died
 1st Shut-In 30 Minutes no blow back
 2nd Opening 15 Minutes no blow
 2nd Shut-In 30 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1765.87	110.69	Initial Hydro-static
1	287.50	110.05	Open To Flow (1)
16	591.73	112.32	Shut-In(1)
47	1009.46	112.78	End Shut-In(1)
47	79.49	112.53	Open To Flow (2)
62	179.64	112.70	Shut-In(2)
92	400.42	113.37	End Shut-In(2)
93	1711.77	113.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01085

DST#: 5

Test Start: 2018.06.16 @ 11:52:00

Tool Information

Drill Pipe:	Length: 3356.00 ft	Diameter: 3.80 inches	Volume: 47.08 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 47.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3544.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	6.00 ft			
Tool Length:	36.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3519.00	
Hydraulic tool	5.00			3524.00	
Jars	5.00			3529.00	
Safety Joint	5.00			3534.00	
Packer	5.00			3539.00	30.00 Bottom Of Top Packer
Packer	5.00		Fluid	3544.00	
Anchor	1.00			3545.00	
Recorder	0.00	91198	Inside	3545.00	
Recorder	0.00	9139	Outside	3545.00	
Bullnose	5.00			3550.00	6.00 Bottom Packers & Anchor
Total Tool Length:	36.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01085

DST#: 5

ATTN: Ryan Greenbaum

Test Start: 2018.06.16 @ 11:52:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 66.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 3600.00 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
5.00	Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

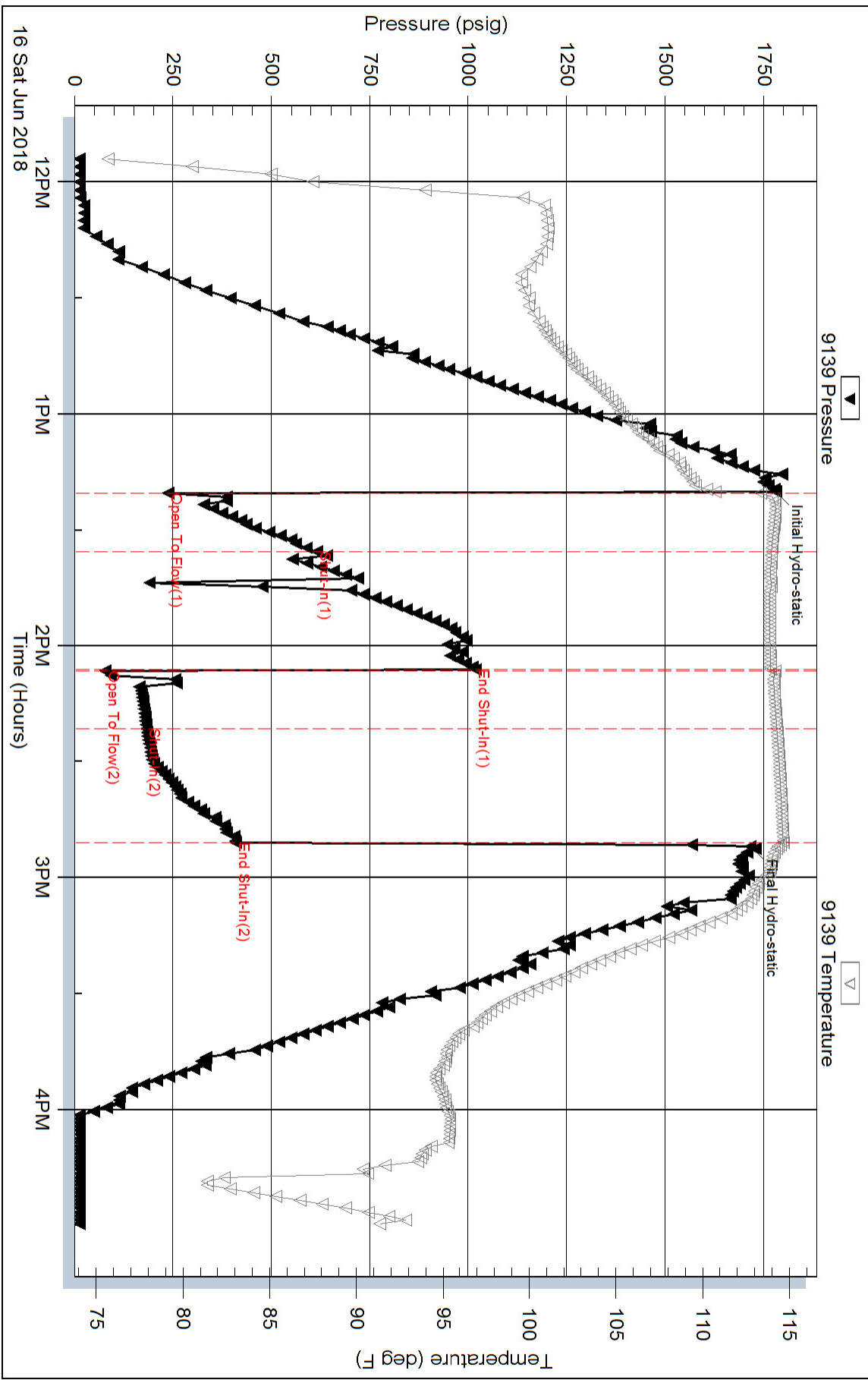
Serial #:

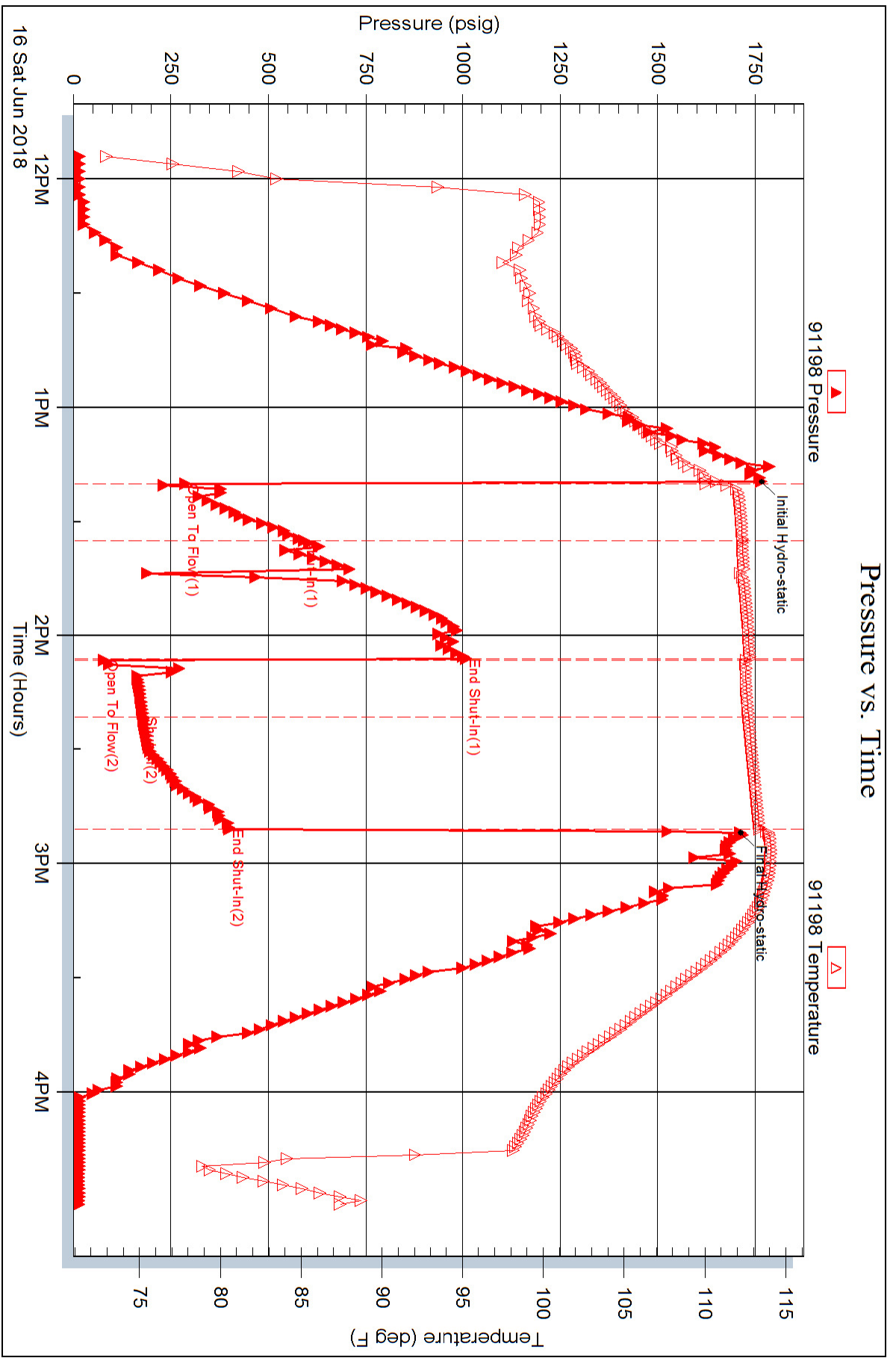
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

9431 East Central Suite 100
Wichita, Kansas 67206-2563

ATTN: Ryan Greenbaum

Kufeld #2-19

19-19s-14w

Start Date: 2018.06.17 @ 22:56:00

End Date: 2018.06.17 @ 07:05:00

Job Ticket #: 01086 DST #: 6

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

Printed: 2018.06.17 @ 07:22:31



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01086

DST#: 6

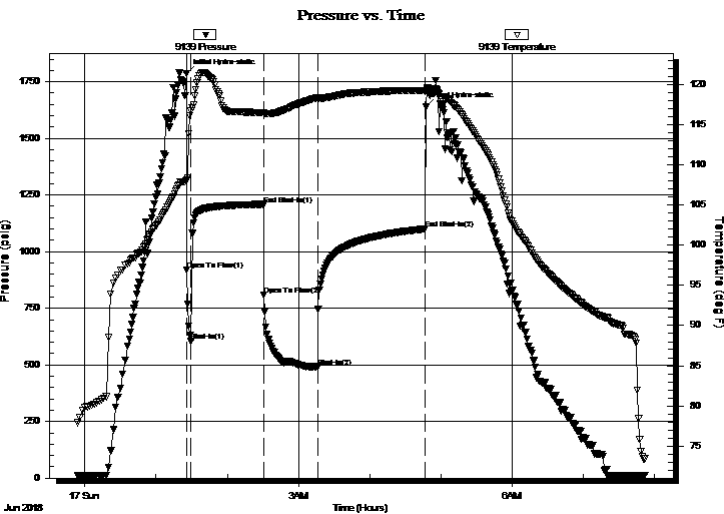
Test Start: 2018.06.17 @ 22:56:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:21:00
 Time Test Ended: 07:05:00
 Interval: **3545.00 ft (KB) To 3559.00 ft (KB) (TVD)**
 Total Depth: 3559.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1913.00 ft (KB)
 1900.00 ft (CF)
 KB to GR/CF: 13.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 1100.84 psig @ 3554.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2018.06.16 End Date: 2018.06.17 Last Calib.: 2018.06.17
 Start Time: 23:52:00 End Time: 07:51:30 Time On Btm: 2018.06.17 @ 01:25:30
 Time Off Btm: 2018.06.17 @ 04:47:30

TEST COMMENT: 1st Opening 5 Minutes Strong blow gas to surface in 2 minutes
 1st Shut-In 60 Minutes good blow back
 2nd Opening 45 Minutes Strong blow max gas gauged
 2nd Shut-in 90 Minutes good blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1785.25	108.01	Initial Hydro-static
1	918.23	108.07	Open To Flow (1)
4	605.76	116.72	Shut-In(1)
65	1209.00	116.47	End Shut-In(1)
66	807.73	116.43	Open To Flow (2)
111	489.68	118.39	Shut-In(2)
201	1100.84	119.23	End Shut-In(2)
202	1638.71	119.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	gas 986 mcf to 451 mcf	0.00
360.00	Clean Gassy Oil 20%Gas 80%Oil	3.41
0.00	Gravity 36 corrected	0.00
60.00	slightly oil cut w ater 5%Oil 95%Water	0.84
60.00	slightly Oil cut w ater 3%Oil 97%Water	0.84
360.00	Water Chlorides 18000	5.05

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.50	1.73	986.16
Last Gas Rate	1.00	1.30	451.36
Max. Gas Rate	1.00	13.64	806.12



DRILL STEM TEST REPORT

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01086

DST#: 6

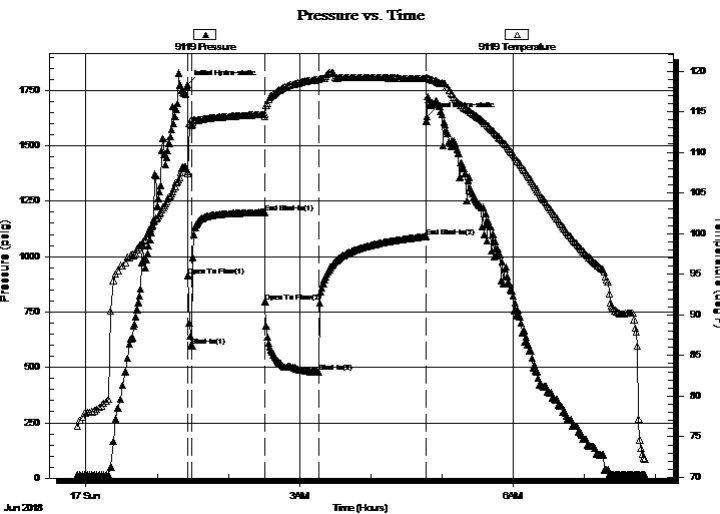
Test Start: 2018.06.17 @ 22:56:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:21:00
 Time Test Ended: 07:05:00
 Interval: **3545.00 ft (KB) To 3559.00 ft (KB) (TVD)**
 Total Depth: 3559.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1913.00 ft (KB)
 1900.00 ft (CF)
 KB to GR/CF: 13.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 1090.59 psig @ 3554.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2018.06.16 End Date: 2018.06.17 Last Calib.: 2018.06.17
 Start Time: 23:52:00 End Time: 07:51:30 Time On Btm: 2018.06.17 @ 01:25:30
 Time Off Btm: 2018.06.17 @ 04:47:30

TEST COMMENT: 1st Opening 5 Minutes Strong blow gas to surface in 2 minutes
 1st Shut-In 60 Minutes good blow back
 2nd Opening 45 Minutes Strong blow max gas gauged
 2nd Shut-in 90 Minutes good blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1775.59	107.66	Initial Hydro-static
1	911.10	107.36	Open To Flow (1)
4	596.83	113.45	Shut-In(1)
65	1199.09	114.68	End Shut-In(1)
66	796.96	114.42	Open To Flow (2)
111	479.52	118.95	Shut-In(2)
201	1090.59	119.04	End Shut-In(2)
202	1630.65	119.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	gas 986 mcf to 451 mcf	0.00
360.00	Clean Gassy Oil 20%Gas 80%Oil	3.41
0.00	Gravity 36 corrected	0.00
60.00	slightly oil cut w ater 5%Oil 95%Water	0.84
60.00	slightly Oil cut w ater 3%Oil 97%Water	0.84
360.00	Water Chlorides 18000	5.05

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.50	1.73	986.16
Last Gas Rate	1.00	1.30	451.36
Max. Gas Rate	1.00	13.64	806.12



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

ATTN: Ryan Greenbaum

Job Ticket: 01086

DST#: 6

Test Start: 2018.06.17 @ 22:56:00

Tool Information

Drill Pipe:	Length: 3355.00 ft	Diameter: 3.80 inches	Volume: 47.06 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 47.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3545.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	39.00 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			3525.00		
Hydraulic tool	5.00			3530.00		
Jars	5.00			3535.00		
Safety Joint	5.00			3540.00		
Packer	5.00		Fluid	3545.00	25.00	Bottom Of Top Packer
Anchor	9.00			3554.00		
Recorder	0.00	9119	Inside	3554.00		
Recorder	0.00	9139	Outside	3554.00		
Bullnose	5.00			3559.00	14.00	Anchor Tool
Total Tool Length:	39.00					



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company LLC

19-19s-14w

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01086

DST#: 6

ATTN: Ryan Greenbaum

Test Start: 2018.06.17 @ 22:56:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 66.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 3600.00 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	gas 986 mcf to 451 mcf	0.000
360.00	Clean Gassy Oil 20%Gas 80%Oil	3.410
0.00	Gravity 36 corrected	0.000
60.00	slightly oil cut w ater 5%Oil 95%Water	0.842
60.00	slightly Oil cut w ater 3%Oil 97%Water	0.842
360.00	Water Chlorides 18000	5.050

Total Length: 840.00 ft Total Volume: 10.144 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

9431 East Central Suite 100
Wichita, Kansas 67206-2563

Kufeld #2-19

Job Ticket: 01086

DST#: 6

ATTN: Ryan Greenbaum

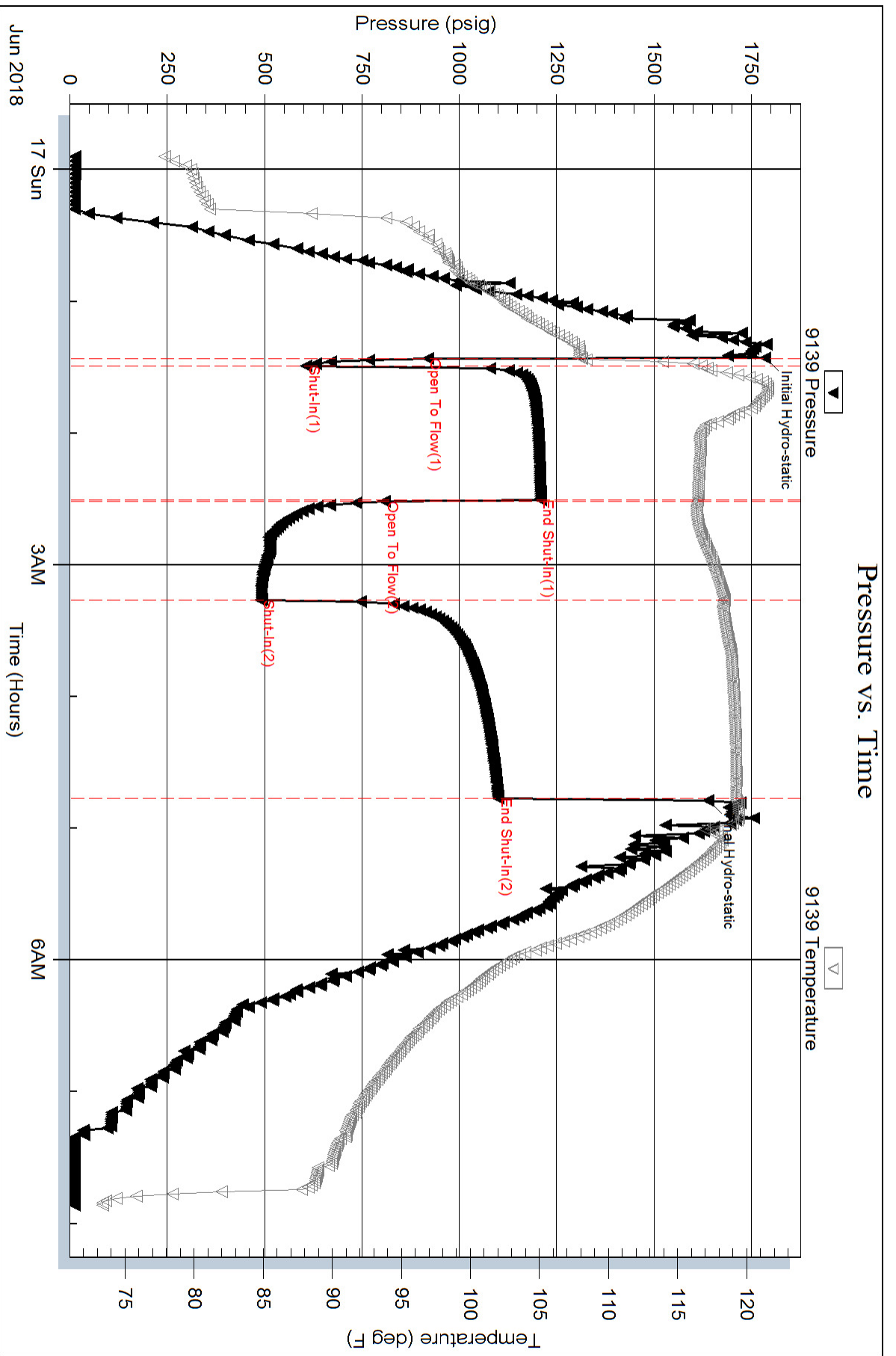
Test Start: 2018.06.17 @ 22:56:00

Gas Rates Information

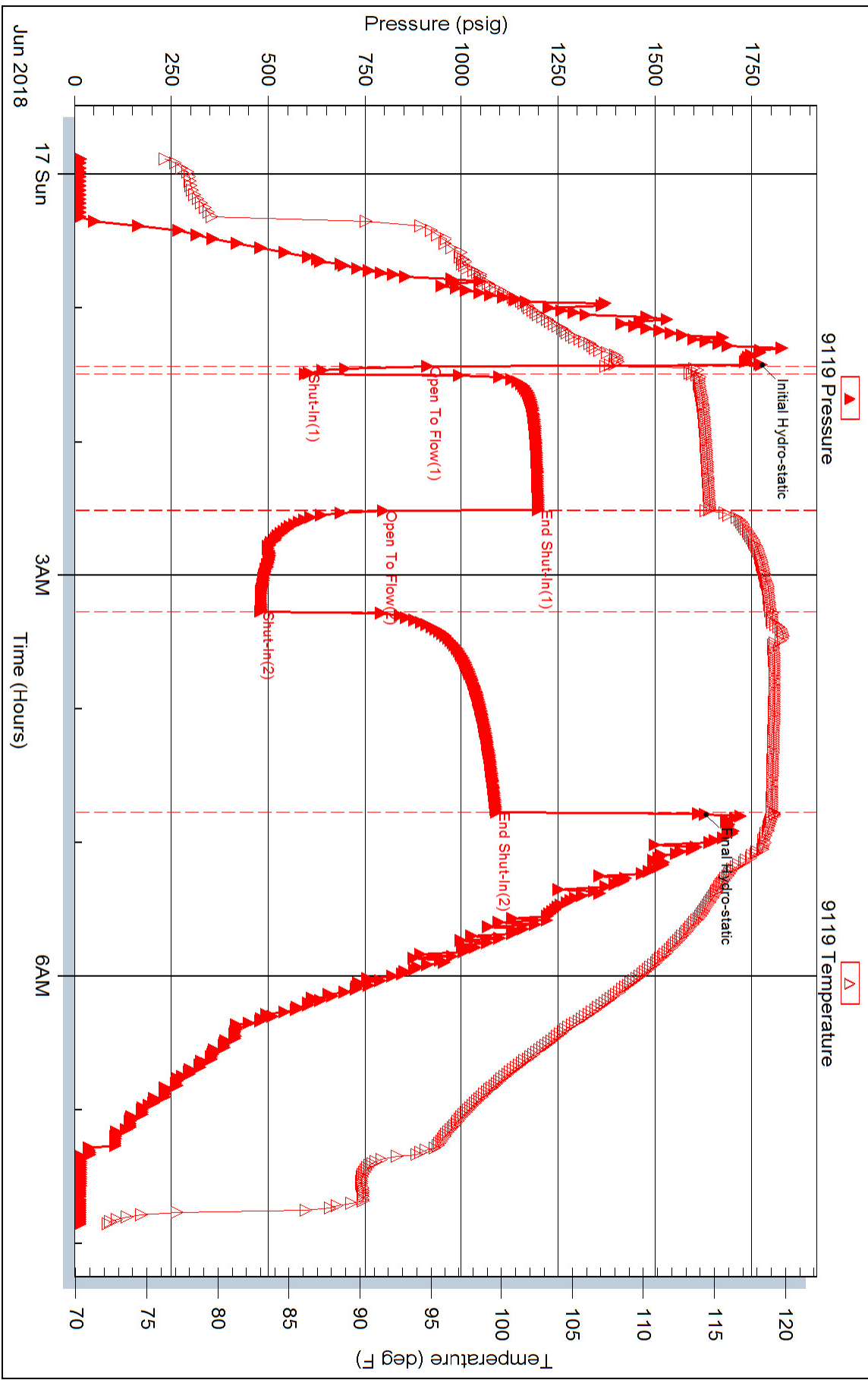
Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	5	1.50	1.73	986.16
2	15	1.00	13.64	806.12
2	25	1.00	8.15	648.29
2	35	1.00	6.10	589.35
2	45	1.00	1.30	451.36



Pressure vs. Time



Mud-Co / Service Mud Inc.

Operator **FG Holl** County **Barton** State **Kansas** Pump **6** X **15** X **60** SPM Casing Program **8 5/8** " @ **824** ft.
 Well **Kufeld #2-19** Location **1903 EGL** GPM **8.28** BPM " @ _____ ft.
 Contractor **Duke #7** Sec **19** TWP **19S** R^{NG} **14W** D.P. **4.5** in. **204** FT/MIN R.A. " @ _____ ft.
 Stockpoint **Pratt, Ks.** Date **6/8/2018** Engineer **Rick Hughes** Collar **6.25** in. **450** ft. **372** FT/MIN R.A. Total Depth **3750'** ft.

DATE	DEPTH feet	WEIGHT lb/gal	VISCOSITY			GELS 10 sec / 10 min.	pH Strip_ Meter_	FILTRATION/FILTRATION ANALYSIS					SAND %	RETORT			L.C.M.	Pump Press. PSI	CUMULATIVE COST	REMARKS AND TREATMENT
			Sec API @_F	PV @_F	Yp			ml API	Cake 32nds	Pres. #/BBL	Cl ppm	Ca ppm		Solids %	Oil %	Water %				
6/8	0																		RURT	
6/9	637	10.5	42															2	Drig.	
6/10	825		W	A	T	E	R												WOC Starch displacement 1647	
6/11	1741	8.6	54	10	25	21/43	7.0	6.4	2		9,000	Hvy	2.4		97.6				Drig. Chem displacement ~2600	
6/12	2448	9.3	42	7	28	28/42	7.0	10.4	2		15m	Hvy	6.2		93.8				Drig. DST #1 @ 3170'	
6/13	3085	9.2	53	19	19	10/28	10.5	7.6	2		3,000	20	6.3		93.7				Drig. DST #2 @ 3280'	
6/14	3280	9.3	51	17	19	11/40	10.5	8.8	2		4,200	20	6.9		93.1				CFS DST #3 @ 3380'	
6/15	3380	9.2	59	17	16	9/36	10.5	7.2	1		4,300	20	6.2		93.8				TIH w/ bit DST #4 @ 3440'	
6/16	3540	9.2	66	22	18	10/46	10.5	7.2	1		3,600	20	6.3		93.7				CFS DST #5 @ 3550'	
6/17	3559	9.2	74	25	21	12/49	10.5	8.0	1		4,300	20	6.2		93.8				Lay down tool DST #6 @ 3559'	
6/18	3737	9.3	62	18	17	10/40	10.5	7.2	1		4,000	20	6.9		93.1			1	Drig.	
6/19	3750																		circ 5 1/2 csg	
																			FINAL: Ran 6 DST's, Logs OK, Ran 5 1/2 csg	
																				Reserve Pit, Chl content ppm: 17000
																				Estimated Volume: 900 bbls

MUD-CO / SERVICE MUD INC.

100 S. Main Suite #310
Wichita, Ks. 67202
316/264-2814 Fax: 316/264-5024

DRILLING MUD RECAP

Materials	Sacks	Amount	Materials	Sacks	Amount	Amount
C/S HULLS	74		X-CIDE 102W	1	335.00	
CAUSTIC SODA	22					
DESCO	1					
DRILL PAK	7					
LIME	2					
PREMIUM GEL	445					
SAPP	1					
SODA ASH	22					
STARCH	60					
SUPER LIG	14					
						Total Mud Cost
						Trucking Cost
						Trucking Surcharge
						Taxes
						TOTAL COST



BASIC SM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET

1718 16500 A

DATE _____ TICKET NO. _____

DATE OF JOB		DISTRICT		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				LEASE				WELL NO.		
ADDRESS				COUNTY				STATE		
CITY		STATE		SERVICE CREW						
AUTHORIZED BY				JOB TYPE: <i>5 1/2" prod casing</i>						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
						ARRIVED AT JOB		AM	PM	
						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
C-165	HAZ CONCRETE	YD	150		
C-403	60/40 P&T	SK	75		
C-102	TLL PLANK	160	35		
C-405	C-41P	160	76		
C-111	SALT	160	20		
C-124	MAG-CHEM 10CR	160	403		
C-140	C-17	160	17		
C-701	GILSONITE	160	857		
F-1251	40 TO FILL FLAT SHOE 300		1		
F-147	LATCH (2) 1/2" x 3/4" x 1/2"		1		
F-1154	TRUCK RIG		1		
F-2082	CRANK SCRATCHER (2) 1/2" x 1/2"		30		
F-1161	BASKET 5' x 6"		3		
C-134	OVER FILL SH		300		
E-100	PICKUP MILEAGE	M3	65		
E-101	HEAVY EQUIPMENT MILEAGE	M3	130		
E-113	TRUCK DELIVERY CHARGE		603		
E-204	DEPTH CHARGE (300) - (160)	HR	14		
E-504	PLUG CONTAINER CHARGE	303	14		
E-501	CASING JAWEL RENTAL	CA	1		
				SUB TOTAL	

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

TOTAL

SERVICE REPRESENTATIVE _____

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: _____
(WELL OWNER OPERATOR CONTRACTOR)

FIELD SERVICE ORDER NO. _____

Customer FG HOLL	Lease No.	Date 6-19-2018
Lease KUFELD	Well # 2-19	
Field Order # 16500	Station PRATT, KS.	Casing 5 1/2" ID
Type Job 5 1/2" L.S.	Formation 3750'	County BARTON
		State KS
		Legal Description 19-195-14

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size # 5 1/2 x 17#	Tubing Size 2 3/8	Shots/Ft CMT -		Fluid 150 SK AA2		RATE	PRESS	ISIP
Depth 3738'	Depth	From	To	Pre Pad @ 1.43 CU FT		Max		5 Min.
Volume	Volume	From	To	Pad		Min		10 Min.
Max Press 2000	Max Press	From	To	Frac		Avg		15 Min.
Well Connection P.C.	Annulus Vol.	From	To			HHP Used		Annulus Pressure
Plug Depth 3722'	Packer Depth	From	To	Flush 86.5 BBL		Gas Volume		Total Load

Customer Representative **Rob Long** Station Manager **JW** Treater **K. LESLEY**

Service Units	86531	27463	19889	21010					
Driver Names	LESLEY	HANSON	MATTAL	---					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1:00 AM					ON LOCATION! - SAFETY MEETING
4:15 AM					RUN CSG - 5 1/2" x 17"
					TURBID - 2, 3, 4, 5, 6, 7, 8, 9
					BASKETS - 2, 4, 7
6:30 AM					CSG ON BOTTOM
6:30 AM					HOOK UP TO CSA / BREAK CIRC. W/ RIG
8:30 AM	250		5	6	H2O AHEAD
8:35 AM	250		12	6	SUPER FLUSH
8:36 AM	250		5	5	H2O SPACER
8:37 AM	250		6	5	MIX 25 SKS. SCAVENGER @ 13 PPG
8:39 AM	200		39	5	MIX 150 SKS. AA2 @ 15 PPG
8:45 AM					CLEAR PUMP & LINES / DROPL.D. PLUG
8:50 AM	0		0	6	START DISPLACEMENT
9:00 AM	200		62	5	LIFT PRESSURE
9:12 AM	500		102	4	SLOW RATE - KICK OUT ROTATION!
9:15 AM	1500		86.5	3	PLUG DOWN - HELD
					CIRC. THRU JOB
9:30 AM	0		7.5		PLUG R.H. & M.H.
					JOB COMPLETE,
					THANKS -
					KEVEN LESLEY



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 16495 A

DATE _____ TICKET NO. _____

DATE OF JOB	DISTRICT	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	LEASE	Kufel					WELL NO.	219		
ADDRESS	COUNTY	STATE					KS			
CITY	STATE	SERVICE CREW								
AUTHORIZED BY	JOB TYPE: 242 8-5/8 SP									
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
						ARRIVED AT JOB				
						START OPERATION				
						FINISH OPERATION				
						RELEASED				
						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
E 101	CEMENT	SK	175		
E 102	CEMENT	SK	175		
E 103	CEMENT	SK	175		
E 104	CEMENT	SK	175		
E 105	CEMENT	SK	175		
E 106	CEMENT	SK	175		
E 107	CEMENT	SK	175		
E 108	CEMENT	SK	175		
E 109	CEMENT	SK	175		
E 110	CEMENT	SK	175		
E 111	CEMENT	SK	175		
E 112	CEMENT	SK	175		
E 113	CEMENT	SK	175		
E 114	CEMENT	SK	175		
E 115	CEMENT	SK	175		
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E 191	CEMENT	SK	175		
E 192	CEMENT	SK	175		
E 193	CEMENT	SK	175		
E 194	CEMENT	SK	175		
E 195	CEMENT	SK	175		
E 196	CEMENT	SK	175		
E 197	CEMENT	SK	175		
E 198	CEMENT	SK	175		
E 199	CEMENT	SK	175		
E 200	CEMENT	SK	175		

SUB TOTAL

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		5,385

SERVICE REPRESENTATIVE	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY:
FIELD SERVICE ORDER NO.	(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

Customer FG HOLL	Lease No.	Date 6-9-2018
Lease KUFELD	Well # 2-19 TD	
Field Order # 16495	Station PRATT, Ks.	Casing 8 5/8" 325'
Type Job 8 5/8" S.P.	Formation	County BARTON
		State Ks
		Legal Description 19-195-14

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 8 5/8"	Tubing Size 2 3/8"	Shots/Ft CMT-		175SK A-CON		RATE	PRESS	ISIP
Depth 824'	Depth	From	To	Pre Pad @ 2.47 CUFT	Max		5 Min.	
Volume	Volume	From	To	Pad 175SK COMMON	Min		10 Min.	
Max Press 1000	Max Press	From	To	Frac @ 1.20 CUFT	Avg		15 Min.	
Well Connection P.C.	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth 781'	Packer Depth	From	To	Flush 50 BBL	Gas Volume		Total Load	

Customer Representative ROBLONG	Station Manager J.W.	Treater K. LESLEY
Service Units 816531 84980 20920		
Driver Names LESLEY MARQUEZ FRANKLIN		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
4:45 PM					ON LOCATION - SAFETY MEETING
6:00 PM					RUN 19 JTS. - 8 5/8" x 24" CSG
					CENTRALIZERS - 3, 10, 18
					BAFFLE PLATE @ 781'
1:00 PM					HOOK UP TO CSG. / BREAK CIRC. W/ RIG
7:20 PM	150		10	5	H2O AHEAD
7:23 PM	150		77	5	MIX 175SKS A-CON @ 12 PPG
7:38 PM	100		36	5	MIX 175SKS COMMON @ 15.6 PPG
7:45 PM					SHUT DOWN - DROP T.R. PLUG
7:49 PM	0		0	6	START DISPLACEMENT
7:56 PM	250		40	5	SLOW RATE
8:00 PM	500		50	3	PLUG DOWN - CLOSE IN @ HEAD
					CIRC. THRU JOBS
					CIRC. 15 BBL TO PIT
					JOB COMPLETE,
					THANKS -
					KEVEN LESLEY

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: KUFELD #2-19
Well Id:
Location: SEC. 19-19S-14W
License Number:
Spud Date: 6/2018
Surface Coordinates: 2970' FEL, 1320' FSL
C E/2 E/2 SW

Region: Barton Co.
Drilling Completed: 04//11

Bottom Hole Coordinates:
Ground Elevation (ft): 1900' K.B. Elevation (ft): 1913'
Logged Interval (ft): To: Total Depth (ft):
Formation:
Type of Drilling Fluid: Starch/Chemical

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

OPERATOR

Company: F. G. Holl Company L.L.C.
Address: 9431 E. Central ST #100
Wichita, KS 67206

GEOLOGIST


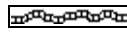
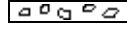
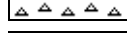
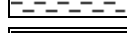

Name: Ryan Greenbaum
Company: F. G. Holl Company L.L.C.
Address:







Cores

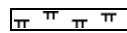
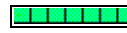

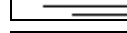


DSTs

Comments

ROCK TYPES

 Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal

 Congl
 Dol
 Gyp
 Igne
 Lmst
 Meta

 Mrlst
 Salt
 Shale
 Shcol
 Shgy
 Slst

 Ss
 Till
 Blk shale

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl

- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral

- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol

- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang

- Angular

OIL SHOW

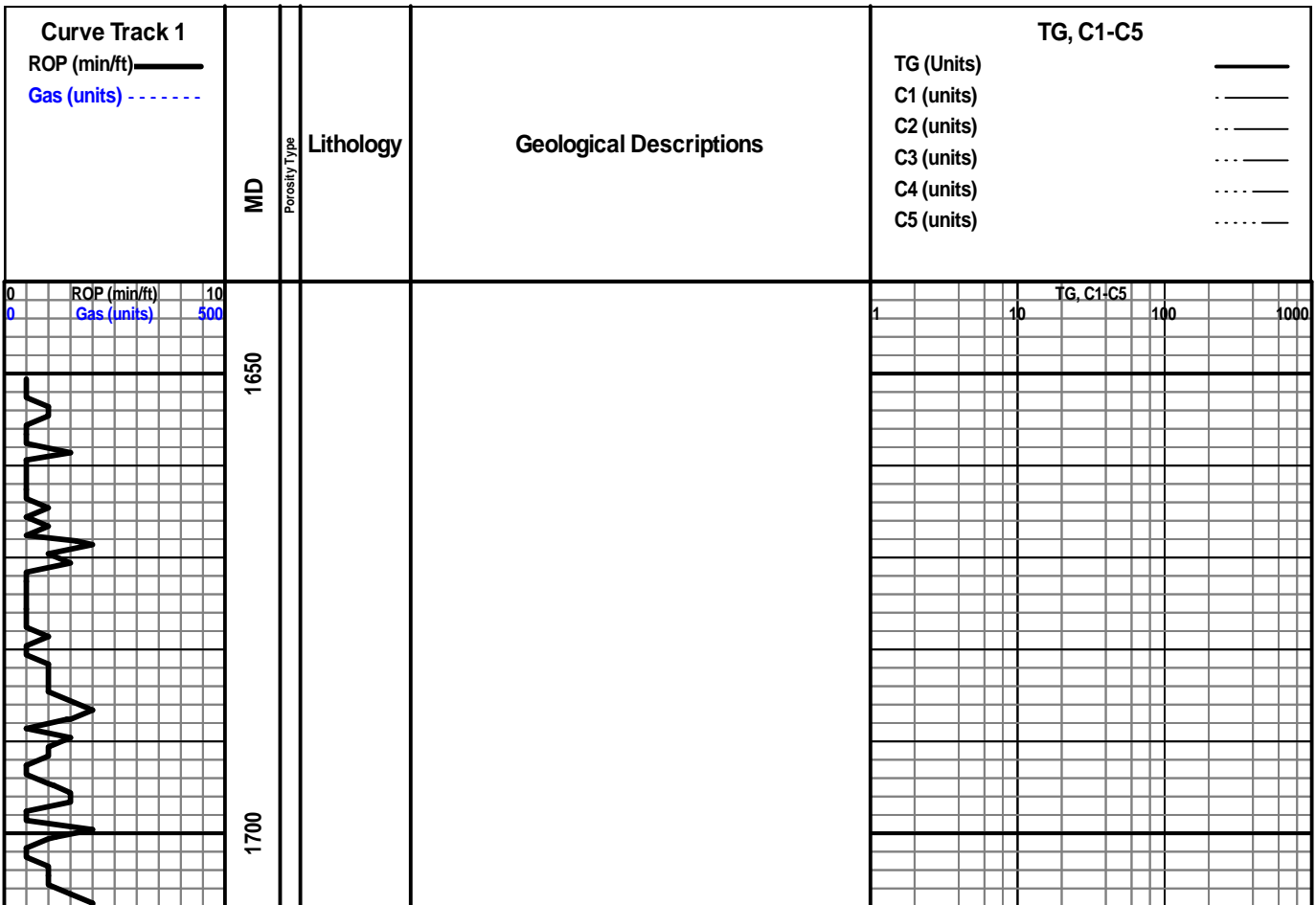
- Even
- Spotted
- Ques
- Dead

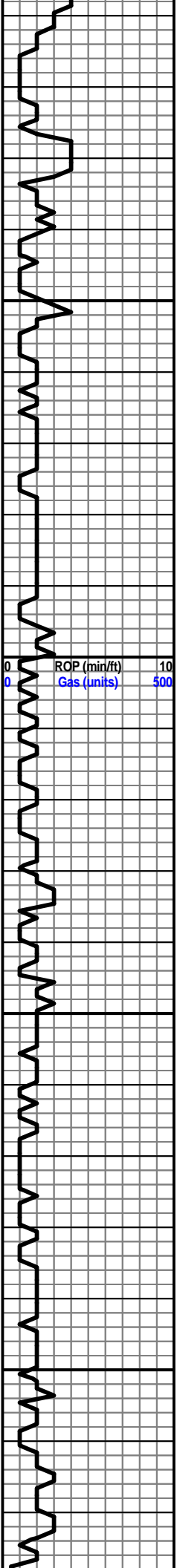
INTERVAL

- Core
- Dst

EVENT

- Rft
- Sidewall





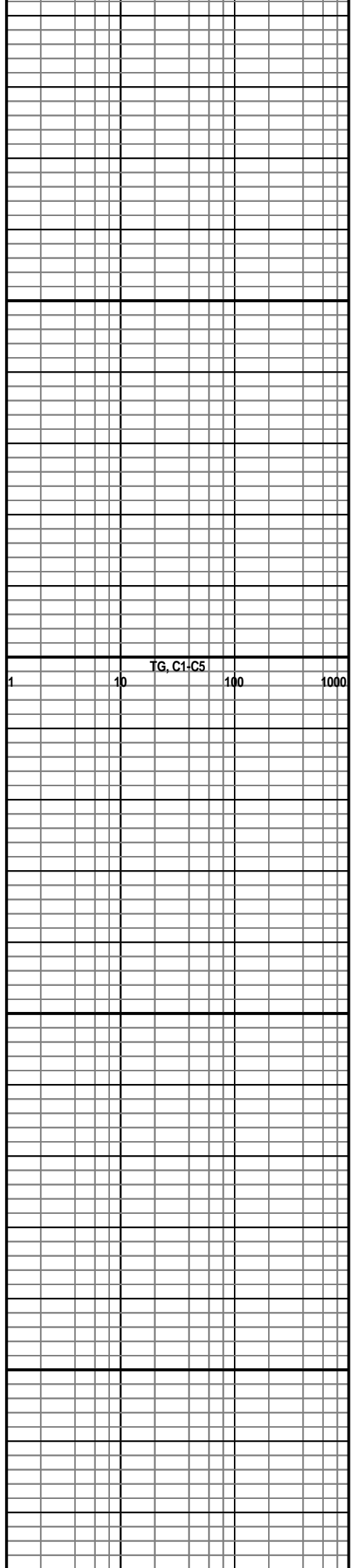
1750

1800

1850

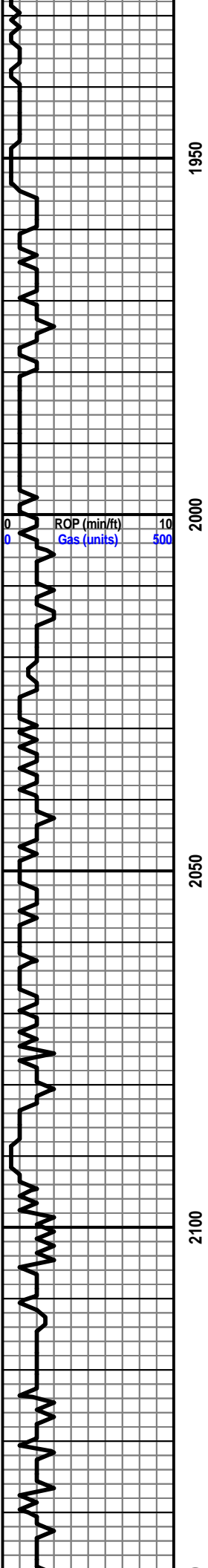
1900

ROP (min/ft)
Gas (units)



TG, C1-C5

1 10 100 1000



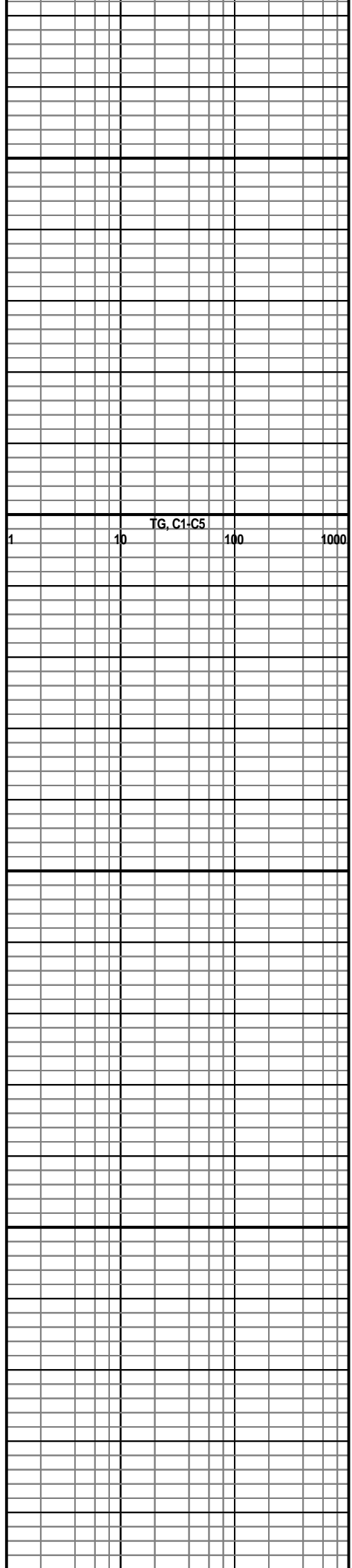
1950

2000

2050

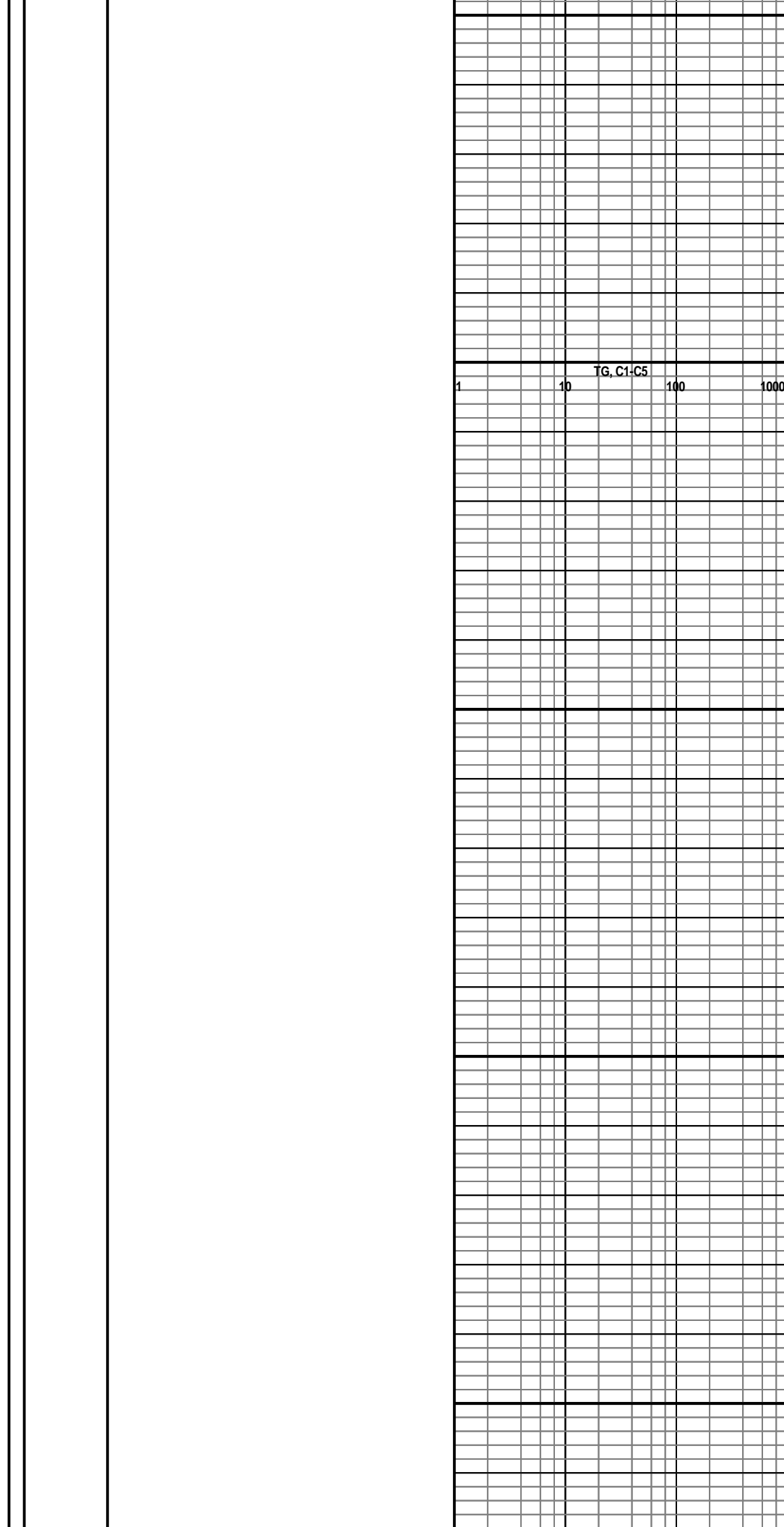
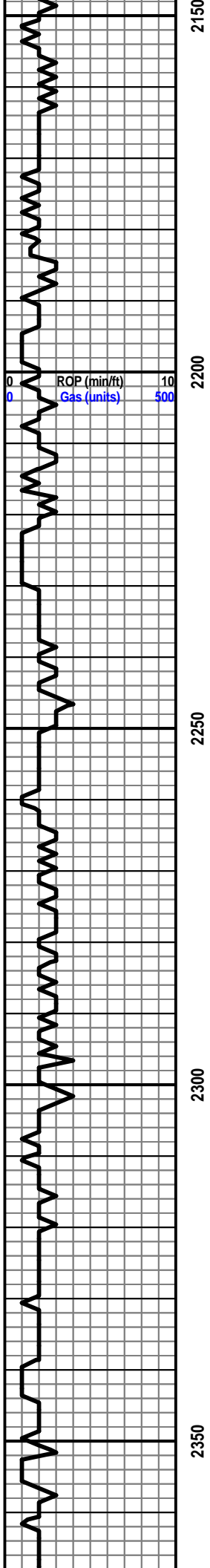
2100

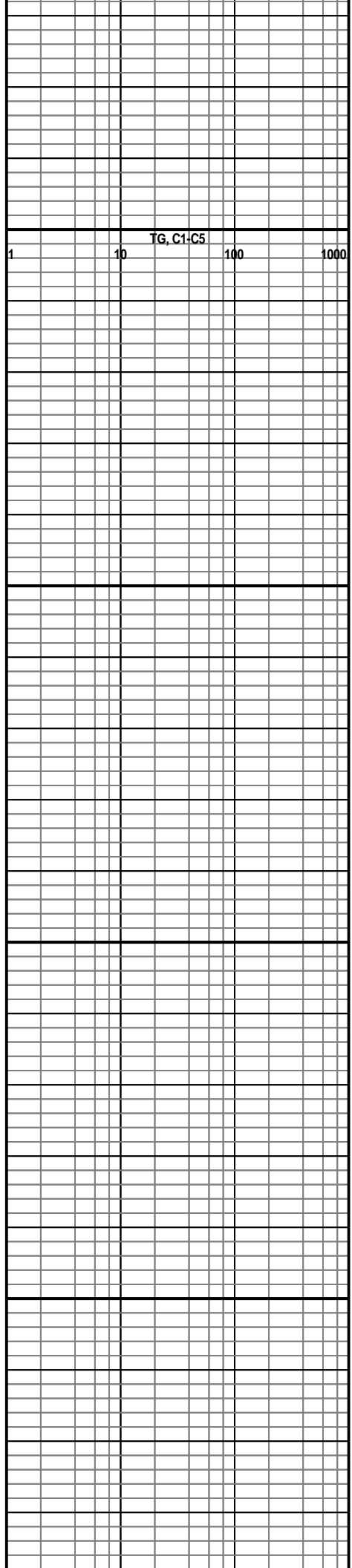
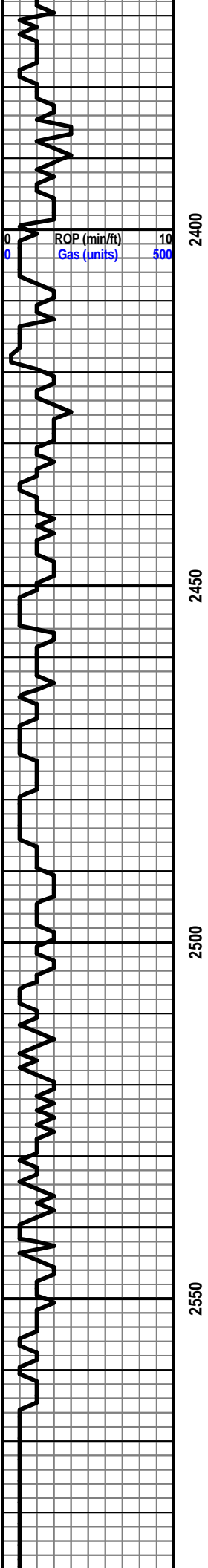
ROP (min/ft) 10
Gas (units) 500

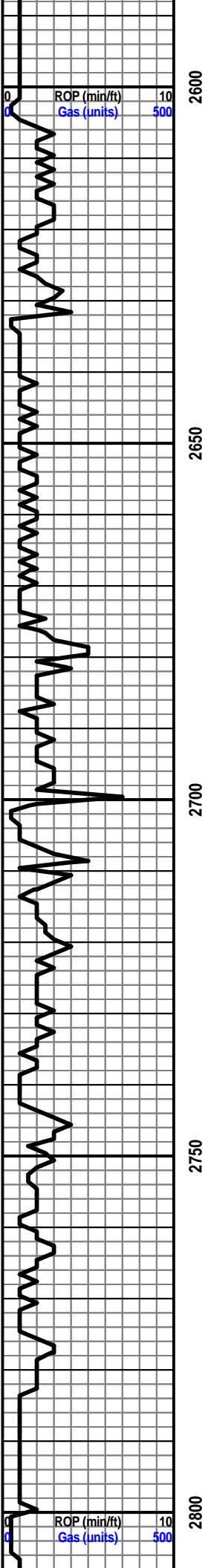


TG, C1-C5

1 10 100 1000



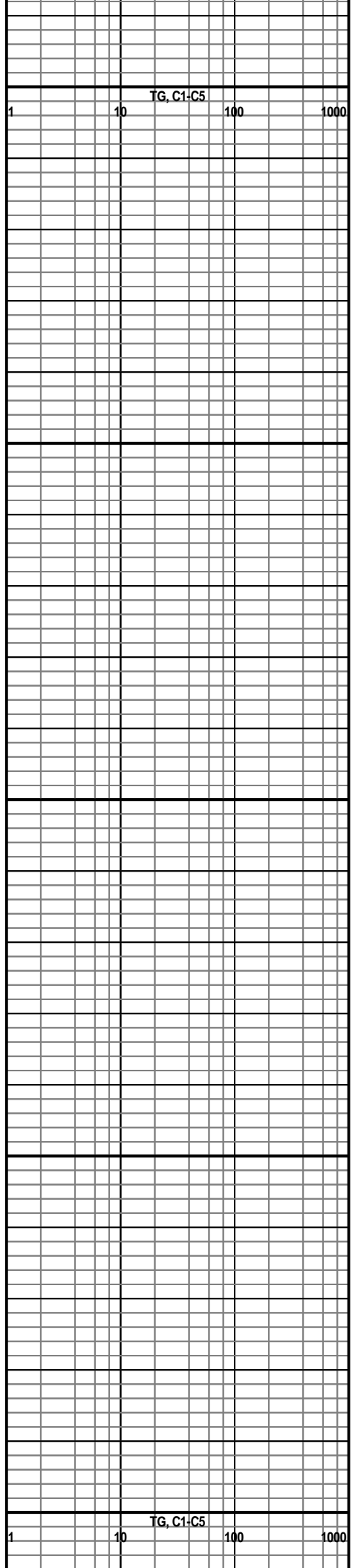




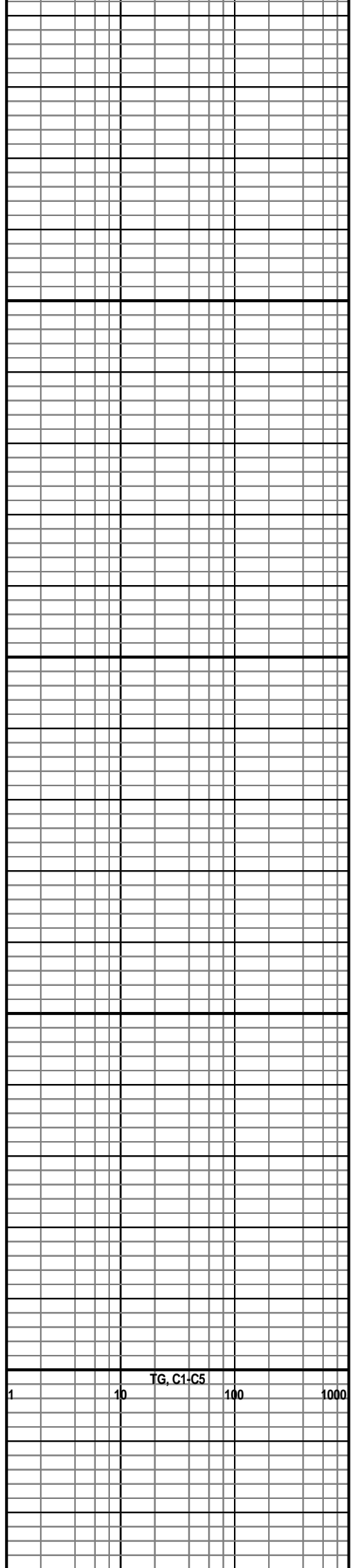
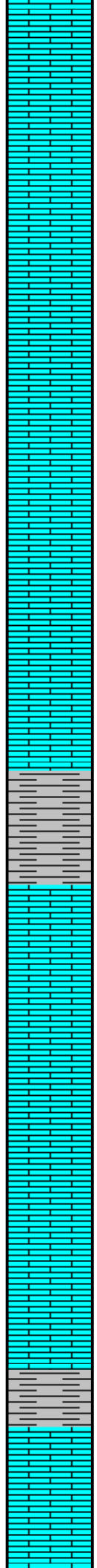
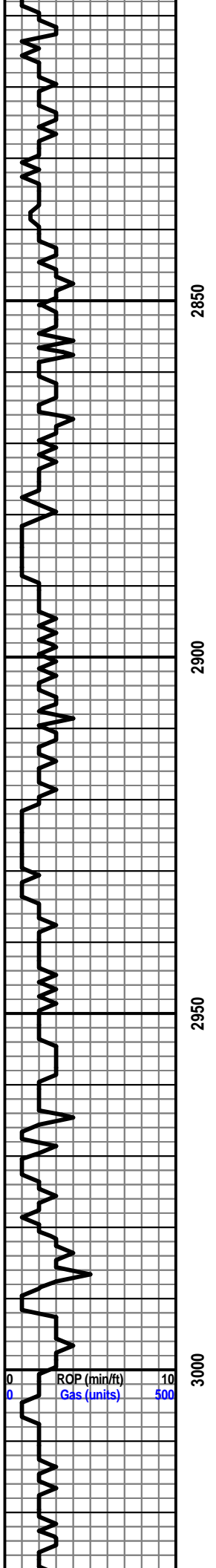
2600
2650
2700
2750
2800

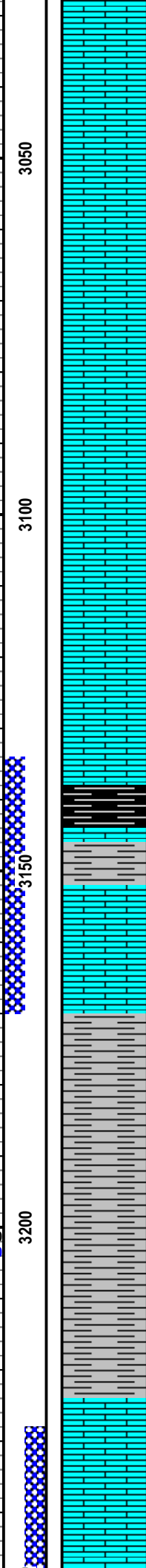
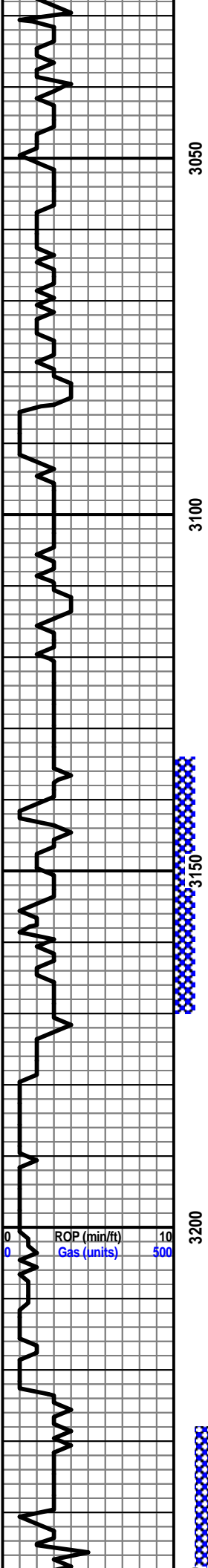
STOTLER 2606' (-693')

TARKIO 2677' (-764')



HOWARD 2810' (-897')





HEEBNER 3338' (-1225')

SH-BLK, CARB
LS-V LT TAN, F GRN, XLN, HD, FOSS-FRAG

65 unit gas kick

TORONTO 3155' (-1242)

LS-V LT TAN, F GRN, XLN-CHLKY, HD-BRTL, SHW OIL, GAS

50 unit gas kick

DST #1
3135'-3170'
10' mud

SH-GRY-LT GRY, SFT

SH-GRY-DK GRY, WXY-SLTY

BROWN LS 3224' (-1311')

LS-BRN, F GRN, XLN, HD, DNS

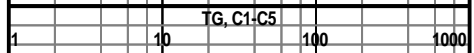
LKC 3234' (-1321')

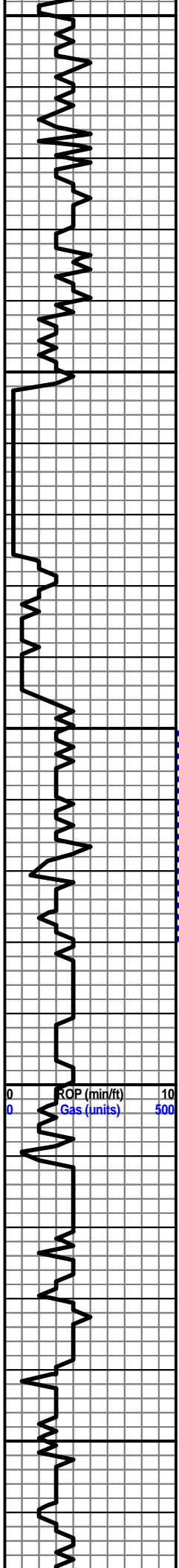
LS-TAN-GRY, F GRN, XLN, HD, FOSS

LS-V LT TAN, F GRN, XLN, HD-BRTL, PR-FR OOLM & INTRXLN POR, SHW OIL, GAS, FNT ODR

80 unit gas kick

DST #2





3250
3300
3350
3400
3450

LS-GRY, F GRN, XLN, HD, FOSS-FRAG, FUS
 LS-TAN-LT TAN, F GRN, XLN, HD-BRTL, PR-FR INTRXLN POR, W/CHRT-BLK STND, SHW OIL, FNT ODR, PYR
 LS-TAN, F GRN, XLN, MSTLY HD, OOL, FOSS-FRAG
 LS-LT TAN-GRY TAN, F GRN, XLN, HD, MSTLY DNS
 LS-LT TAN, F GRN, XLN, HD-BRTL, OOL, PR-FR INTRPRTCL POR, SHW OIL, GAS, FR ODR
 LS-V LT TAN, F GRN, XLN-SLTLY CHLKY, HD-BRTL
 LS-TAN, F GRN, XLN, OOL, BRTL, FR OOLM POR, SHW LT OIL CUP SURFACE
 LS-TAN, F GRN, XLN, OOL, BRTL, FR OOLM POR
 LS-TAN-LT TAN, F GRN, XLN, HD-BRTL, OOL, PR OOLM POR
 LS-TAN-GRY/BRN, F GRN, XLN, HD, DNS
 SH-BLK
 LS-TAN, F GRN, XLN, MSTLY HD, SMWT DNS, SHW LT OIL CUP SURFACE
 LS-V LT TAN-OFF WHT, F GRN, XLN-SLTLY CHLKY, HD-BRTL PRTLY OOL, PR-FR INTRXLN POR, SHW OIL, FR ODR, BLK STN
 LS-V LT TAN, F GRN, XLN-SLTLY CHLKY, HD-BRTL, PRTLY OOL, PR-FR INTRPRTCL POR, FNT ODR
 LS-LT TAN, F GRN, XLN, HD-BRTL, PRTLY DNS, PRTLY OOL, FOSS-FRAG, PR-FR INTRXLN POR, SHW OIL, SHW GAS, FNT ODR
 LS-LT TAN, F GRN, XLN-SLTLY CHLKY, HD-BRTL, TR DK BRN STN
 LS-LT TAN, F GRN, XLN, MSTLY HD, DNS
 LS-V LT TAN, F GRN, XLN-SLTLY CHLKY, HD-BRTL
 LS-LT TAN, F GRN, XLN, MSTLY HD, MSTLY DNS
 LS-TAN, F GRN, XLN, HD-BRTL, DNS
 LS-LT TAN, F GRN, XLN, MSTLY HD, DNS
 LS-LT TAN, F GRN, XLN, MSTLY HD, MSTLY DNS, PYR

DST #2
3228'-3280'
10' mud
 33 unit gas kick
 DST #3 3350'-3380'
10' mud
 50 unit gas kick
 60 unit gas kick
 DST #4 3380'-3440'
10' mud
 60 unit gas kick TG, C1-C5 100 1000
 35 unit gas kick

