

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 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	Shelby Resources LLC
Well Name	Francis 1-36
Doc ID	1303726

All Electric Logs Run

Dual Induction
Compensated Neutron
Micro
Sonic

Form	ACO1 - Well Completion
Operator	Shelby Resources LLC
Well Name	Francis 1-36
Doc ID	1303726

Tops

Name	Top	Datum
HEEBNER SHALE	3364	-1382
BROWN LIME	3469	-1487
LKC	3478	-1496
STARK SHALE	3673	-1691
BKC	3722	-1740
VIOLA	3790	-1808
SIMPSON SHALE	3839	-1857
ARBUCKLE	3903	-1921
RTD	4000	-2018



DRILL STEM TEST REPORT

Prepared For: **Shelby Resources LLC**

621 17th Street SUITE 1155
Denver Colorado 80293

ATTN: Keith Revis

FRANCIS 1-36

36-321s-17w PAWNEE

Start Date: 2016.03.20 @ 10:07:00

End Date: 2016.03.20 @ 17:13:00

Job Ticket #: 01217 DST #: 1

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

Printed: 2016.03.20 @ 17:54:42



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

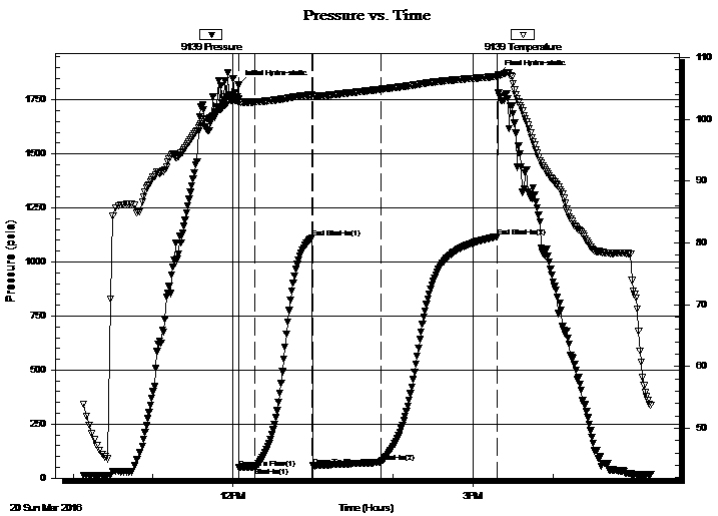
36-321s-17w PAWNEE
FRANCIS 1-36
 Job Ticket: 01217 **DST#: 1**
 Test Start: 2016.03.20 @ 10:07:00

GENERAL INFORMATION:

Formation: **KANSAS CITY H**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:12:00
 Time Test Ended: 17:13:00
 Interval: **3598.00 ft (KB) To 3620.00 ft (KB) (TVD)**
 Total Depth: 3620.00 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: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 1116.75 psia @ 3615.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2016.03.20 End Date: 2016.03.20 Last Calib.: 2016.03.20
 Start Time: 10:07:00 End Time: 17:13:30 Time On Btm: 2016.03.20 @ 12:04:00
 Time Off Btm: 2016.03.20 @ 15:18:30

TEST COMMENT: 1ST OPENING 10 MINUTES WEAK BLOW BUILT TO 3 INCHES INTO THE WATER
 1ST SDHUT-IN 45 MINUTES NO BLOW BACK
 2ND OPENING 45 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF THE BUCKETR IN 10 MINUTES
 2ND SHUT-IN 90 MINUTES- WEAK BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1818.32	103.24	Initial Hydro-static
1	46.82	102.74	Open To Flow (1)
12	51.23	102.81	Shut-In(1)
56	1111.01	103.97	End Shut-In(1)
56	56.55	103.72	Open To Flow (2)
107	73.78	104.85	Shut-In(2)
194	1116.75	106.93	End Shut-In(2)
195	1866.15	107.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	oil and and gas cut mud	0.15
0.00	5 gas 30 oil 65 mud	0.00
30.00	muddy frothy oil	0.15
0.00	5 gas 15oil 80 mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01217

DST#: 1

ATTN: Keith Revis

Test Start: 2016.03.20 @ 10:07:00

GENERAL INFORMATION:

Formation: **KANSAS CITY H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:12:00

Time Test Ended: 17:13:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3598.00 ft (KB) To 3620.00 ft (KB) (TVD)**

Reference Elevations: 1982.00 ft (KB)

Total Depth: 3620.00 ft (KB) (TVD)

1971.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 9119

Inside

Press@RunDepth: 1118.82 psia @ 3615.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2016.03.20

End Date: 2016.03.20

Last Calib.: 2016.03.20

Start Time: 10:07:00

End Time: 10:07:30

Time On Btm: 2016.03.20 @ 12:03:30

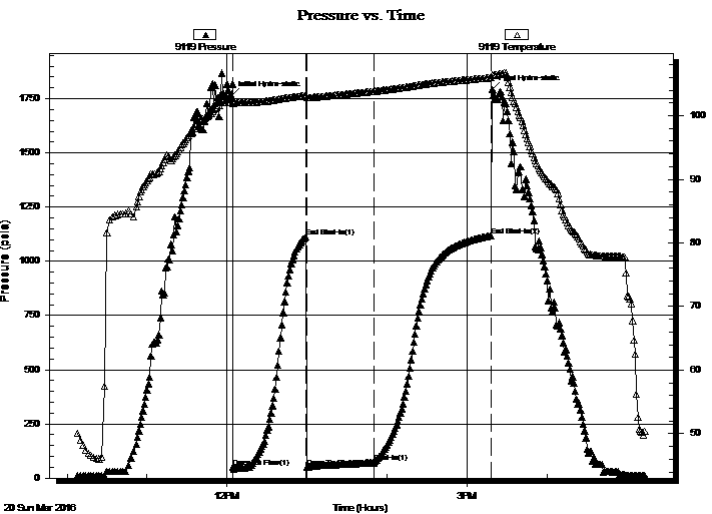
Time Off Btm: 2016.03.20 @ 15:19:00

TEST COMMENT: 1ST OPENING 10 MINUTES WEAK BLOW BUILT TO 3 INCHES INTO THE WATER

1ST SDHUT-IN 45 MINUTES NO BLOW BACK

2ND OPENING 45 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF THE BUCKETR IN 10 MINUTES

2ND SHUT-IN 90 MINUTES- WEAK BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1762.04	102.80	Initial Hydro-static
1	49.71	101.98	Open To Flow (1)
56	1114.10	103.17	End Shut-In(1)
57	50.56	102.91	Open To Flow (2)
107	71.23	103.85	Shut-In(1)
195	1118.82	105.99	End Shut-In(2)
196	1790.55	106.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	oil and and gas cut mud	0.15
0.00	5 gas 30 oil 65 mud	0.00
30.00	muddy frothy oil	0.15
0.00	5 gas 15oil 80 mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

36-321s-17w PAWNEE
FRANCIS 1-36
 Job Ticket: 01217 **DST#: 1**
 Test Start: 2016.03.20 @ 10:07:00

Tool Information

Drill Pipe:	Length: 3374.00 ft	Diameter: 3.80 inches	Volume: 47.33 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: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 48.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3598.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	51.00 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			3574.00	
Hydraulic tool	5.00			3579.00	
Jars	7.00			3586.00	
Safety Joint	2.00		Fluid	3588.00	
Top Packer	5.00			3593.00	
Packer	5.00			3598.00	29.00 Bottom Of Top Packer
Anchor	17.00			3615.00	
Recorder	0.00	9119	Inside	3615.00	
Recorder	0.00	9139	Outside	3615.00	
Bullnose	5.00			3620.00	22.00 Anchor Tool
Total Tool Length:	51.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01217

DST#: 1

ATTN: Keith Revis

Test Start: 2016.03.20 @ 10:07:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 68.00 sec/qt
Water Loss: 6.80 in³
Resistivity: ohm.m
Salinity: 4200.00 ppm
Filter Cake: 0.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	oil and and gas cut mud	0.148
0.00	5 gas 30 oil 65 mud	0.000
30.00	muddy frothy oil	0.148
0.00	5 gas 15oil 80 mud	0.000

Total Length: 60.00 ft Total Volume: 0.296 bbl

Num Fluid Samples: 0

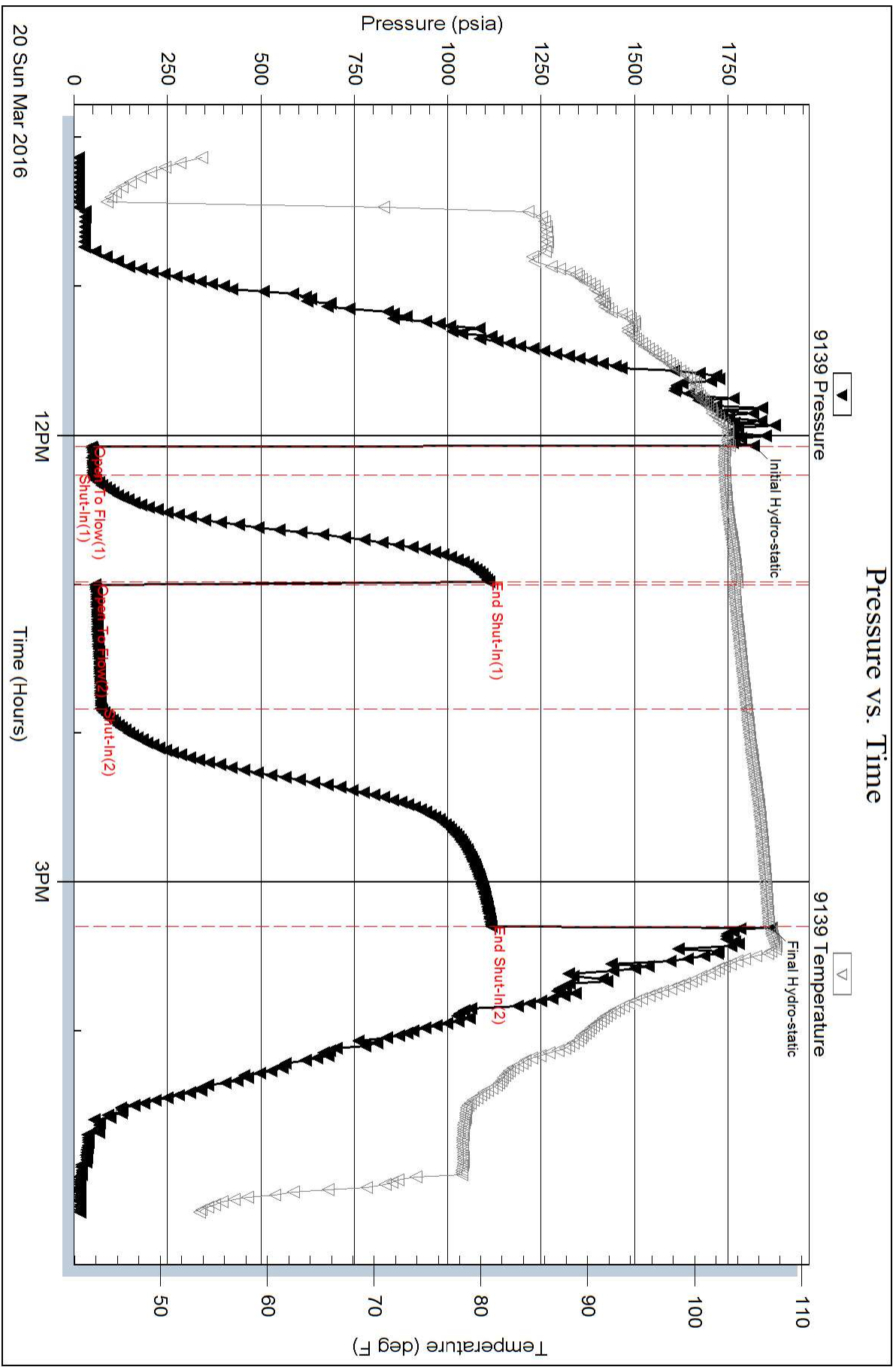
Num Gas Bombs: 0

Serial #:

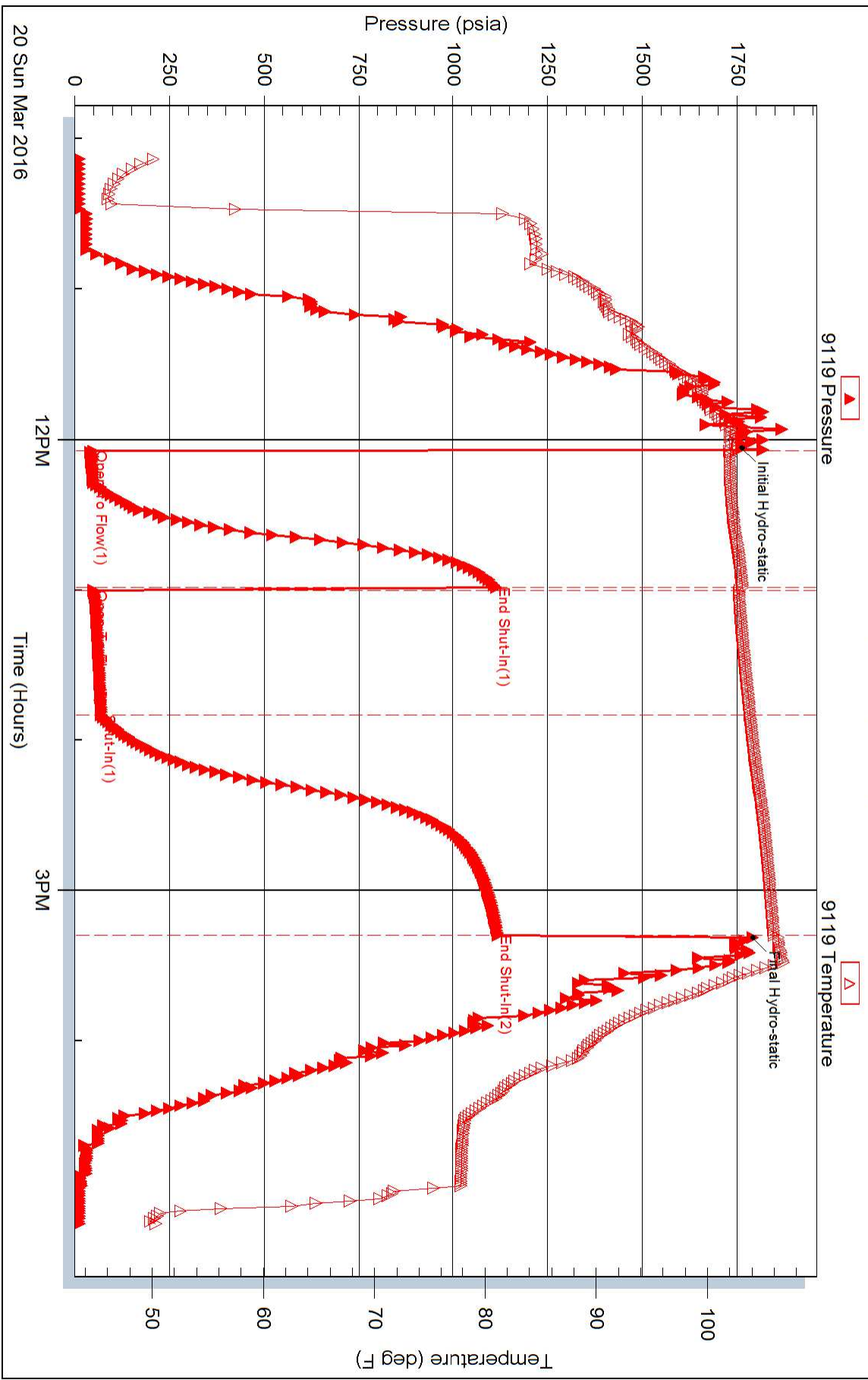
Laboratory Name:

Laboratory Location:

Recovery Comments:



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Shelby Resources LLC**

621 17th Street SUITE 1155
Denver Colorado 80293

ATTN: Keith Revis

FRANCIS 1-36

36-321s-17w PAWNEE

Start Date: 2016.03.21 @ 11:00:00

End Date: 2016.03.21 @ 17:13:00

Job Ticket #: 01218 DST #: 2

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

Printed: 2016.03.21 @ 17:27:00

Shelby Resources LLC

36-321s-17w PAWNEE

FRANCIS 1-36

DST # 2

CONGLOMERATE CHERT

2016.03.21



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

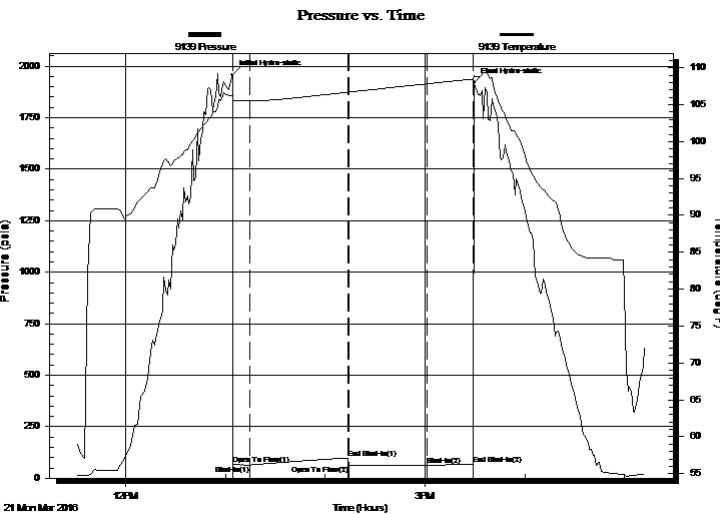
36-321s-17w PAWNEE
FRANCIS 1-36
 Job Ticket: 01218 **DST#: 2**
 Test Start: 2016.03.21 @ 11:00:00

GENERAL INFORMATION:

Formation: **CONGLOMERATE CHERT**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 13:13:00 Tester: GENE BUDIG
 Time Test Ended: 17:13:00 Unit No: 1
 Interval: **3754.00 ft (KB) To 3800.00 ft (KB) (TVD)** Reference Elevations: 1982.00 ft (KB)
 Total Depth: 3800.00 ft (KB) (TVD) 1971.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 68.25 psia @ 3795.34 ft (KB) Capacity: 5000.00 psia
 Start Date: 2016.03.21 End Date: 2016.03.21 Last Calib.: 2016.03.21
 Start Time: 11:30:00 End Time: 17:12:30 Time On Btm: 2016.03.21 @ 13:04:00
 Time Off Btm: 2016.03.21 @ 15:29:30

TEST COMMENT: 1st OPEANING 10 MINUTES WEAK BLOW BUILT TO 2 INCHES INTO THE WATER
 1st SHUT-IN 60 MINUTES- NO BLOWQ BACK
 2n OPENING 45 MINUTES WEAK BLOW BUILT TO 1 1/2 INCH DECREASED AND DIED IN 33 MINUTES
 2nd SHUT IN 30 MINIUTES- NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1958.66	106.14	Initial Hydro-static
1	66.52	105.59	Open To Flow (1)
11	63.83	105.50	Shut-In(1)
70	98.25	106.70	End Shut-In(1)
70	61.16	106.70	Open To Flow (2)
117	61.95	107.84	Shut-In(2)
145	68.25	108.47	End Shut-In(2)
146	1920.82	108.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	OIL, SPECKED MUD	0.10

Gas Rates

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



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

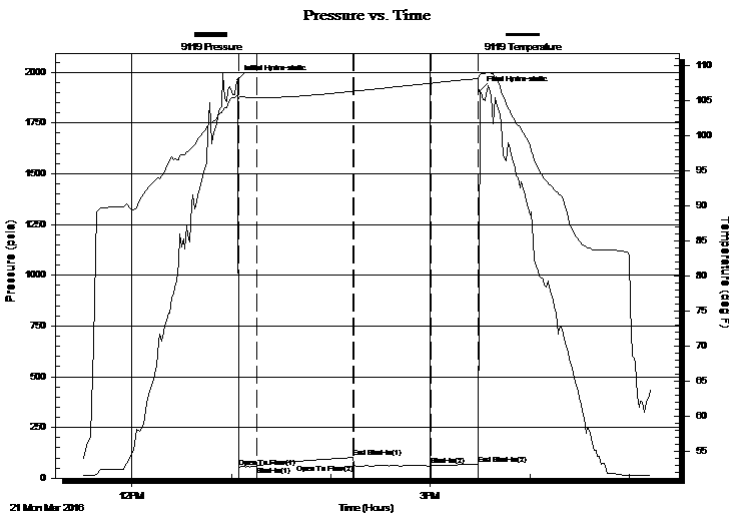
36-321s-17w PAWNEE
FRANCIS 1-36
 Job Ticket: 01218 **DST#: 2**
 Test Start: 2016.03.21 @ 11:00:00

GENERAL INFORMATION:

Formation: **CONGLOMERATE CHERT**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 13:13:00 Tester: GENE BUDIG
 Time Test Ended: 17:13:00 Unit No: 1
 Interval: **3754.00 ft (KB) To 3800.00 ft (KB) (TVD)** Reference Elevations: 1982.00 ft (KB)
 Total Depth: 3800.00 ft (KB) (TVD) 1971.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 68.65 psia @ 3795.34 ft (KB) Capacity: 5000.00 psia
 Start Date: 2016.03.21 End Date: 2016.03.21 Last Calib.: 2016.03.21
 Start Time: 11:30:00 End Time: 17:13:00 Time On Btm: 2016.03.21 @ 13:04:00
 Time Off Btm: 2016.03.21 @ 15:30:00

TEST COMMENT: 1st OPEANING 10 MINUTES WEAK BLOW BUILT TO 2 INCHES INTO THE WATER
 1st SHUT-IN 60 MINUTES- NO BLOWQ BACK
 2n OPENING 45 MINUTES WEAK BLOW BUILT TO 1 1/2 INCH DECREASED AND DIED IN 33 MINUTES
 2nd SHUT IN 30 MINIUTES- NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1962.52	105.75	Initial Hydro-static
1	54.96	105.30	Open To Flow (1)
12	60.65	105.37	Shut-In(1)
70	102.05	106.28	End Shut-In(1)
70	65.99	106.27	Open To Flow (2)
117	60.98	107.43	Shut-In(2)
145	68.65	108.10	End Shut-In(2)
146	1907.19	108.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	OIL, SPECKED MUD	0.10

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01218

DST#: 2

ATTN: Keith Revis

Test Start: 2016.03.21 @ 11:00:00

Tool Information

Drill Pipe:	Length: 3533.00 ft	Diameter: 3.80 inches	Volume: 49.56 bbl	Tool Weight:	9.40 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	59.00 lb
Drill Collar:	Length: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose:	66000.00 lb
			Total Volume: 50.63 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3754.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	46.34 ft				
Tool Length:	75.34 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			3730.00	
Hydraulic tool	5.00			3735.00	
Jars	7.00			3742.00	
Safety Joint	2.00		Fluid	3744.00	
Top Packer	5.00			3749.00	
Packer	5.00			3754.00	29.00 Bottom Of Top Packer
Anchor	3.00			3757.00	
Change Over Sub	0.75			3757.75	
Drill Pipe	31.84			3789.59	
Change Over Sub	0.75			3790.34	
Anchor	5.00			3795.34	
Recorder	0.00	9119	Inside	3795.34	
Recorder	0.00	9139	Outside	3795.34	
Bullnose	5.00			3800.34	46.34 Anchor Tool

Total Tool Length: 75.34



DRILL STEM TEST REPORT

FLUID SUMMARY

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01218

DST#: 2

ATTN: Keith Revis

Test Start: 2016.03.21 @ 11:00:00

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: 5100.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	OIL, SPECKED MUD	0.098

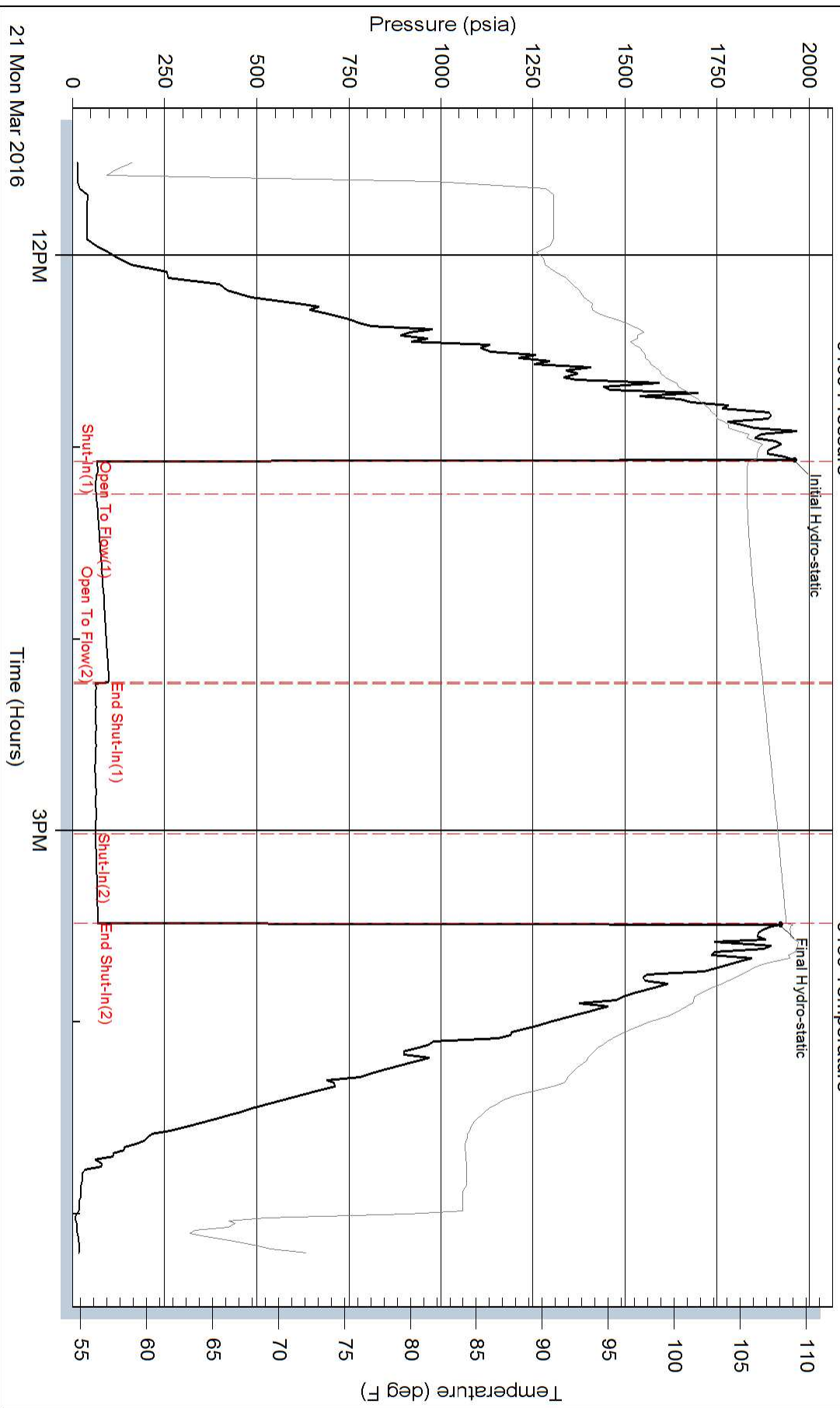
Total Length: 20.00 ft Total Volume: 0.098 bbl

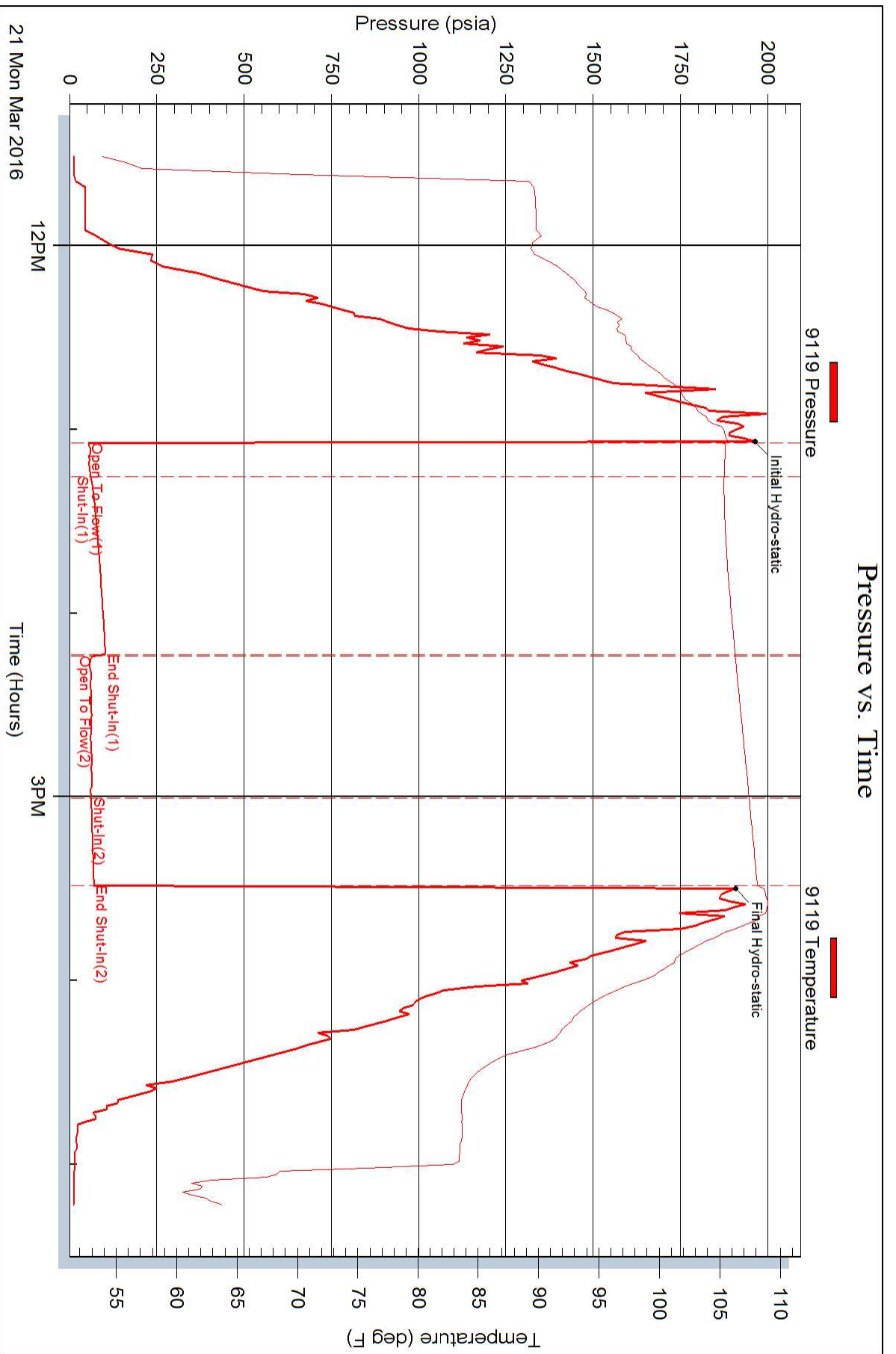
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Shelby Resources LLC**

621 17th Street SUITE 1155
Denver Colorado 80293

ATTN: Keith Revis

FRANCIS 1-36

36-321s-17w PAWNEE

Start Date: 2016.03.22 @ 04:41:00

End Date: 2016.03.22 @ 09:02:00

Job Ticket #: 01219 DST #: 3

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

Printed: 2016.03.22 @ 09:18:26



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

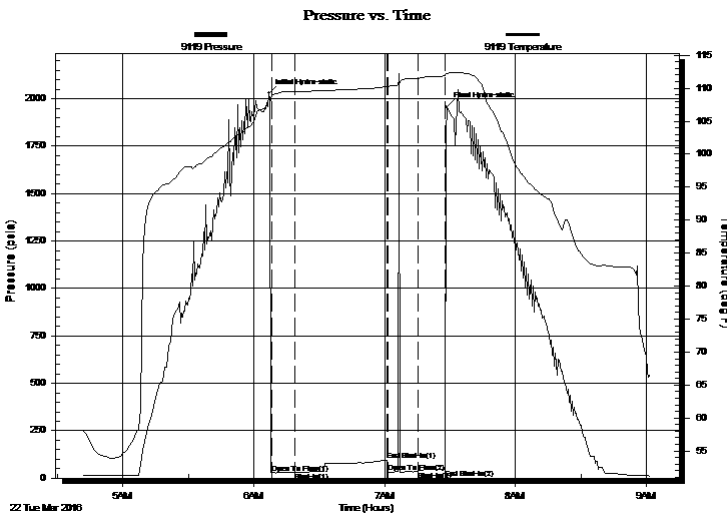
36-321s-17w PAWNEE
FRANCIS 1-36
 Job Ticket: 01219 **DST#: 3**
 Test Start: 2016.03.22 @ 04:41:00

GENERAL INFORMATION:

Formation: **SIMPSON SAND**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:08:00
 Time Test Ended: 09:02:00
 Interval: **3890.00 ft (KB) To 3895.00 ft (KB) (TVD)**
 Total Depth: 3895.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No:
 Reference Elevations: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 47.00 psia @ 3890.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2016.03.22 End Date: 2016.03.22 Last Calib.: 2016.03.22
 Start Time: 04:41:00 End Time: 09:02:00 Time On Btm: 2016.03.22 @ 06:07:00
 Time Off Btm: 2016.03.22 @ 07:28:30

TEST COMMENT: 1st OPENING 10 MINUTES VERY WEAK BLOW FOR 10 MINUTWESMAND DIED
 1st SHUT-IN 45 MINUTES NOI BLOW BACK
 2nd OPENING 10 MINUTES-3-4 BUBBLES DEAD FLUSHED TOOL GOOD SURGEW NO HELP
 2nd SHUT-IN 15 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2028.69	108.31	Initial Hydro-static
2	27.41	108.96	Open To Flow (1)
12	31.20	109.50	Shut-In(1)
54	92.32	110.21	End Shut-In(1)
55	30.22	110.21	Open To Flow (2)
69	37.86	111.48	Shut-In(2)
81	47.00	111.86	End Shut-In(2)
82	1955.59	112.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	DRILLING MUD WITH A SLIGHT	0.02
0.00	SHOW OF OIL BETWEEN THE TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

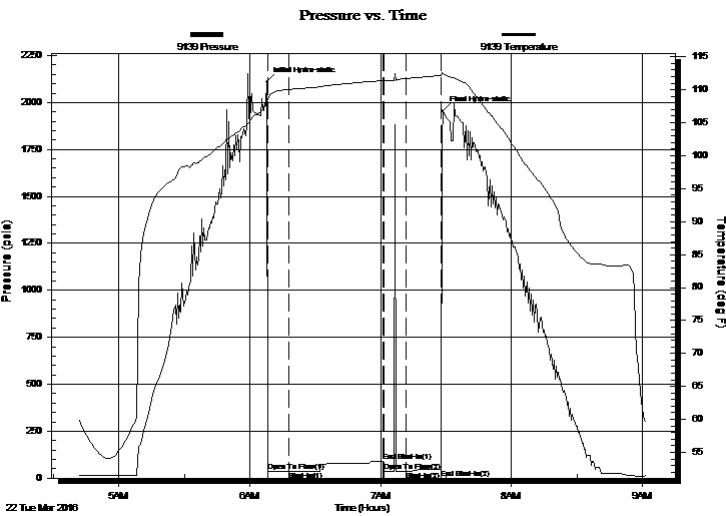
36-321s-17w PAWNEE
FRANCIS 1-36
 Job Ticket: 01219 **DST#: 3**
 Test Start: 2016.03.22 @ 04:41:00

GENERAL INFORMATION:

Formation: **SIMPSON SAND**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:08:00
 Time Test Ended: 09:02:00
 Interval: **3890.00 ft (KB) To 3895.00 ft (KB) (TVD)**
 Total Depth: 3895.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No:
 Reference Elevations: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 48.71 psia @ 3890.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2016.03.22 End Date: 2016.03.22 Last Calib.: 2016.03.22
 Start Time: 04:41:00 End Time: 09:02:00 Time On Btm: 2016.03.22 @ 06:08:00
 Time Off Btm: 2016.03.22 @ 07:28:30

TEST COMMENT: 1st OPENING 10 MINUTES VERY WEAK BLOW FOR 10 MINUTWESMAND DIED
 1st SHUT-IN 45 MINUTES NOI BLOW BACK
 2nd OPENING 10 MINUTES-3-4 BUBBLES DEAD FLUSHED TOOL GOOD SURGEW NO HELP
 2nd SHUT-IN 15 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2109.49	108.05	Initial Hydro-static
1	36.92	108.69	Open To Flow (1)
10	35.61	110.08	Shut-In(1)
53	90.42	111.40	End Shut-In(1)
54	36.62	111.38	Open To Flow (2)
64	36.55	111.72	Shut-In(2)
80	48.71	112.17	End Shut-In(2)
81	1954.05	112.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	DRILLING MUD WITH A SLIGHT	0.02
0.00	SHOW OF OIL BETWEEN THE TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

36-321s-17w PAWNEE
FRANCIS 1-36
 Job Ticket: 01219 **DST#: 3**
 Test Start: 2016.03.22 @ 04:41:00

Tool Information

Drill Pipe:	Length: 3662.00 ft	Diameter: 3.80 inches	Volume: 51.37 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: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose: 20000.00 lb
			<u>Total Volume: 52.44 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3890.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	5.00 ft			
Tool Length:	34.00 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			3866.00	
Hydraulic tool	5.00			3871.00	
Jars	7.00			3878.00	
Safety Joint	2.00		Fluid	3880.00	
Top Packer	5.00			3885.00	
Packer	5.00			3890.00	29.00 Bottom Of Top Packer
Anchor	0.00			3890.00	
Recorder	0.00	9119	Inside	3890.00	
Recorder	0.00	9139	Outside	3890.00	
Bullnose	5.00			3895.00	5.00 Anchor Tool
Total Tool Length:	34.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01219

DST#: 3

ATTN: Keith Revis

Test Start: 2016.03.22 @ 04:41:00

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: 5100.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	DRILLING MUD WITH A SLIGHT	0.025
0.00	SHOW OF OIL BETWEEN THE TOOLS	0.000

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

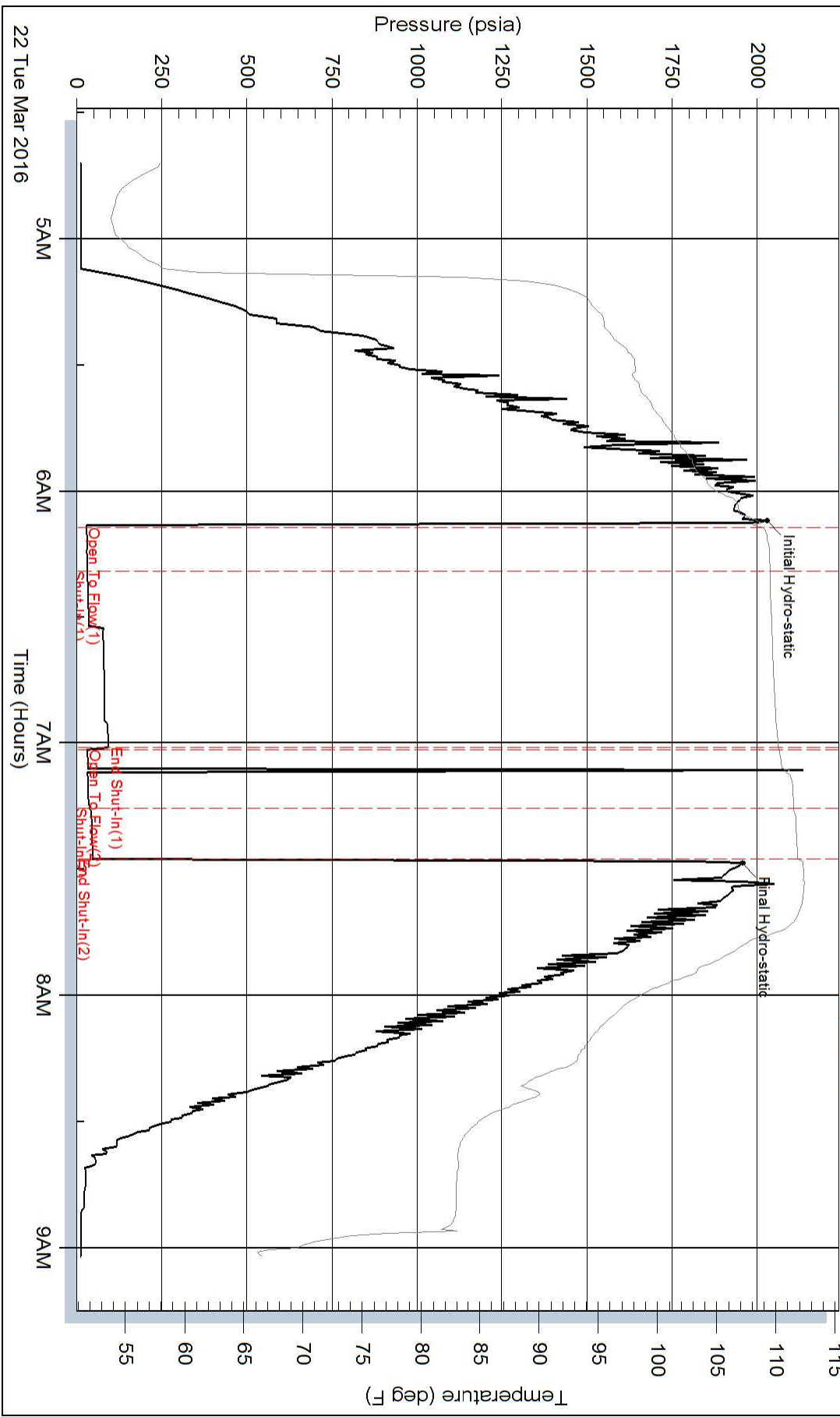
Serial #:

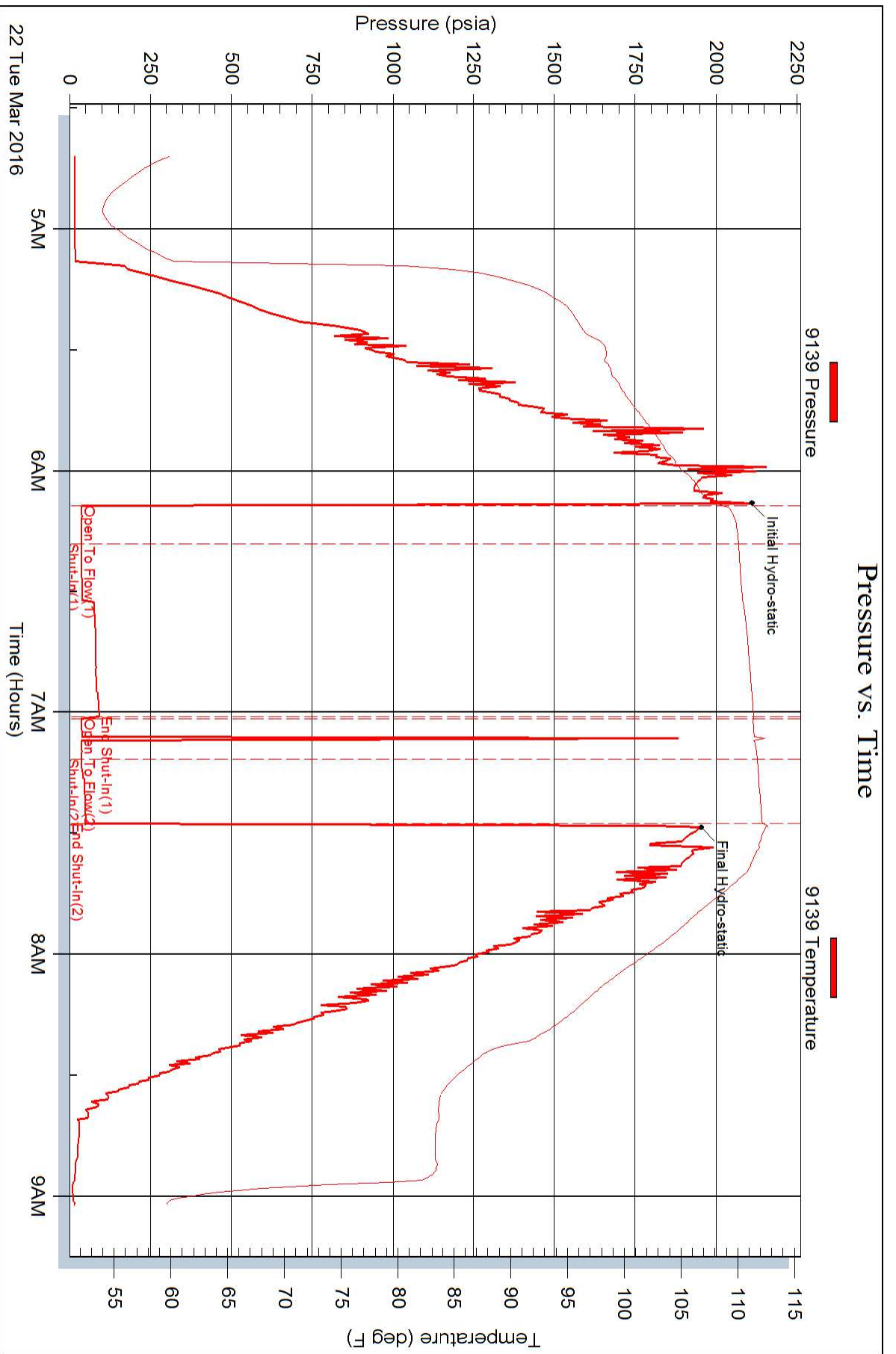
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Shelby Resources LLC**

621 17th Street SUITE 1155
Denver Colorado 80293

ATTN: Keith Revis

FRANCIS 1-36

36-321s-17w PAWNEE

Start Date: 2016.03.22 @ 03:39:00

End Date: 2016.03.22 @ 22:31:00

Job Ticket #: 01220 DST #: 4

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

Printed: 2016.03.22 @ 23:08:28



DRILL STEM TEST REPORT

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01220

DST#: 4

ATTN: Keith Revis

Test Start: 2016.03.22 @ 03:39:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:13:00

Time Test Ended: 22:31:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3902.00 ft (KB) To 3908.00 ft (KB) (TVD)**

Reference Elevations: 1982.00 ft (KB)

Total Depth: 3908.00 ft (KB) (TVD)

1971.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 9139

Outside

Press@RunDepth: 1340.83 psia @ 3903.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2016.03.22

End Date: 2016.03.22

Last Calib.: 2016.03.22

Start Time: 15:39:00

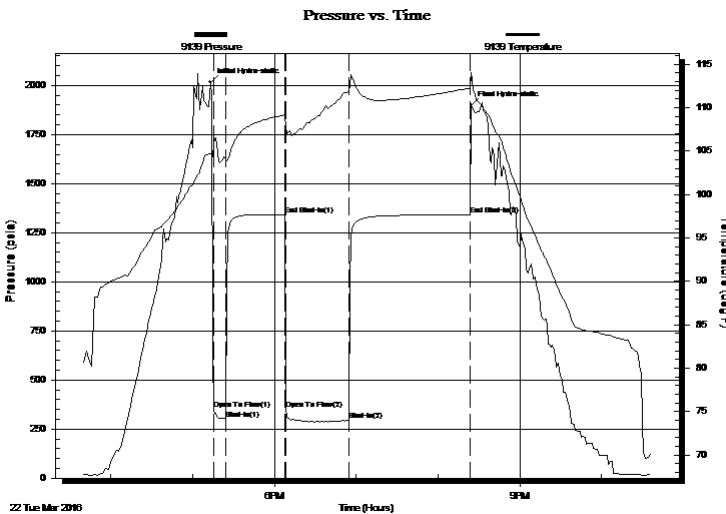
End Time: 22:36:00

Time On Btm: 2016.03.22 @ 17:13:00

Time Off Btm: 2016.03.22 @ 20:24:30

TEST COMMENT: 1st OPENING 10 MINUTES STRONG BLOW GAS TO SURFACE IN 3 MINUTES
1st SHUT-IN 45 MINUTES GOOD BLOW BACK
2nd OPENING 45 MINUTES STRONG BLOW -SEE GAS FLOW REPORT
2nd SHUT-IN 90 MINUTES-GOOD BLOW BACK

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2016.26	104.76	Initial Hydro-static
3	353.13	105.82	Open To Flow (1)
12	299.42	103.74	Shut-In(1)
55	1342.76	109.17	End Shut-In(1)
55	353.96	107.84	Open To Flow (2)
102	296.79	111.98	Shut-In(2)
191	1340.83	112.23	End Shut-In(2)
192	1898.24	114.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	slightly oil cut gassy w water	0.30
0.00	12 gas 3 oil 80 w ater 5 mud	0.00
30.00	oil cut muddy w ater chlor ides 32000	0.15
0.00	10 gas 10 oil 50 w ater 30 mud	0.00
330.00	clean gassy oil	3.47
0.00	20 gas 80 oil gravity 36 corrected	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	37.60	1080.95
Last Gas Rate	1.00	31.60	908.46
Max. Gas Rate	1.00	37.60	1080.95



DRILL STEM TEST REPORT

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01220

DST#: 4

ATTN: Keith Revis

Test Start: 2016.03.22 @ 03:39:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:13:00

Time Test Ended: 22:31:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3902.00 ft (KB) To 3908.00 ft (KB) (TVD)**

Reference Elevations: 1982.00 ft (KB)

Total Depth: 3908.00 ft (KB) (TVD)

1971.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 9119

Inside

Press@RunDepth: 1339.33 psia @ 3903.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2016.03.22

End Date: 2016.03.22

Last Calib.: 2016.03.22

Start Time: 15:39:00

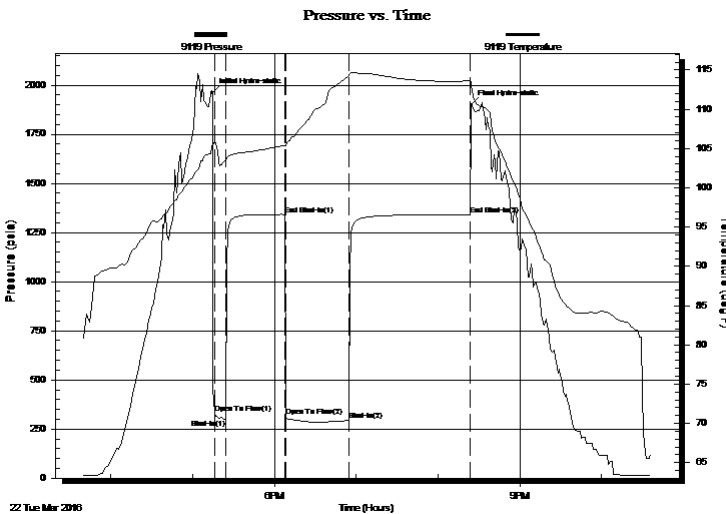
End Time: 22:36:00

Time On Btm: 2016.03.22 @ 17:14:30

Time Off Btm: 2016.03.22 @ 20:24:30

TEST COMMENT: 1st OPENING 10 MINUTES STRONG BLOW GAS TO SURFACE IN 3 MINUTES
1st SHUT-IN 45 MINUTES GOOD BLOW BACK
2nd OPENING 45 MINUTES STRONG BLOW -SEE GAS FLOW REPORT
2nd SHUT-IN 90 MINUTES-GOOD BLOW BACK

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1961.72	105.56	Initial Hydro-static
2	331.14	105.98	Open To Flow (1)
10	300.64	103.43	Shut-In(1)
53	1342.10	105.41	End Shut-In(1)
54	312.60	105.48	Open To Flow (2)
100	294.57	114.23	Shut-In(2)
189	1339.33	113.61	End Shut-In(2)
190	1899.61	112.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	slightly oil cut gassy w ater	0.30
0.00	12 gas 3 oil 80 w ater 5 mud	0.00
30.00	oil cut muddy w ater chlor ides 32000	0.15
0.00	10 gas 10 oil 50 w ater 30 mud	0.00
330.00	clean gassy oil	3.47
0.00	20 gas 80 oil gravity 36 corrected	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	37.60	1080.95
Last Gas Rate	1.00	31.60	908.46
Max. Gas Rate	1.00	37.60	1080.95



DRILL STEM TEST REPORT

TOOL DIAGRAM

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

36-321s-17w PAWNEE
FRANCIS 1-36
 Job Ticket: 01220 **DST#: 4**
 Test Start: 2016.03.22 @ 03:39:00

Tool Information

Drill Pipe:	Length: 3666.00 ft	Diameter: 3.80 inches	Volume: 51.42 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: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose:	68000.00 lb
			<u>Total Volume: 52.49 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	640000.0 lb
Depth to Top Packer:	3902.00 ft			Final	66000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	6.00 ft				
Tool Length:	35.00 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			3878.00	
Hydraulic tool	5.00			3883.00	
Jars	7.00			3890.00	
Safety Joint	2.00		Fluid	3892.00	
Top Packer	5.00			3897.00	
Packer	5.00			3902.00	29.00 Bottom Of Top Packer
Anchor	1.00			3903.00	
Recorder	0.00	9119	Inside	3903.00	
Recorder	0.00	9139	Outside	3903.00	
Bullnose	5.00			3908.00	6.00 Anchor Tool
Total Tool Length:	35.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01220

DST#: 4

ATTN: Keith Revis

Test Start: 2016.03.22 @ 03:39:00

Mud and Cushion Information

Mud Type: KCl	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 32000 ppm
Viscosity: 63.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.50 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psia	
Salinity: 5700.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	slightly oil cut gassy w ater	0.295
0.00	12 gas 3 oil 80 w ater 5 mud	0.000
30.00	oil cut muddy w ater chlor ides 32000	0.148
0.00	10 gas 10 oil 50 w ater 30 mud	0.000
330.00	clean gassy oil	3.472
0.00	20 gas 80 oil gravity 36 corrected	0.000

Total Length: 420.00 ft Total Volume: 3.915 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: gas sample w as caught



DRILL STEM TEST REPORT

GAS RATES

Shelby Resources LLC

36-321s-17w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01220

DST#: 4

ATTN: Keith Revis

Test Start: 2016.03.22 @ 03:39:00

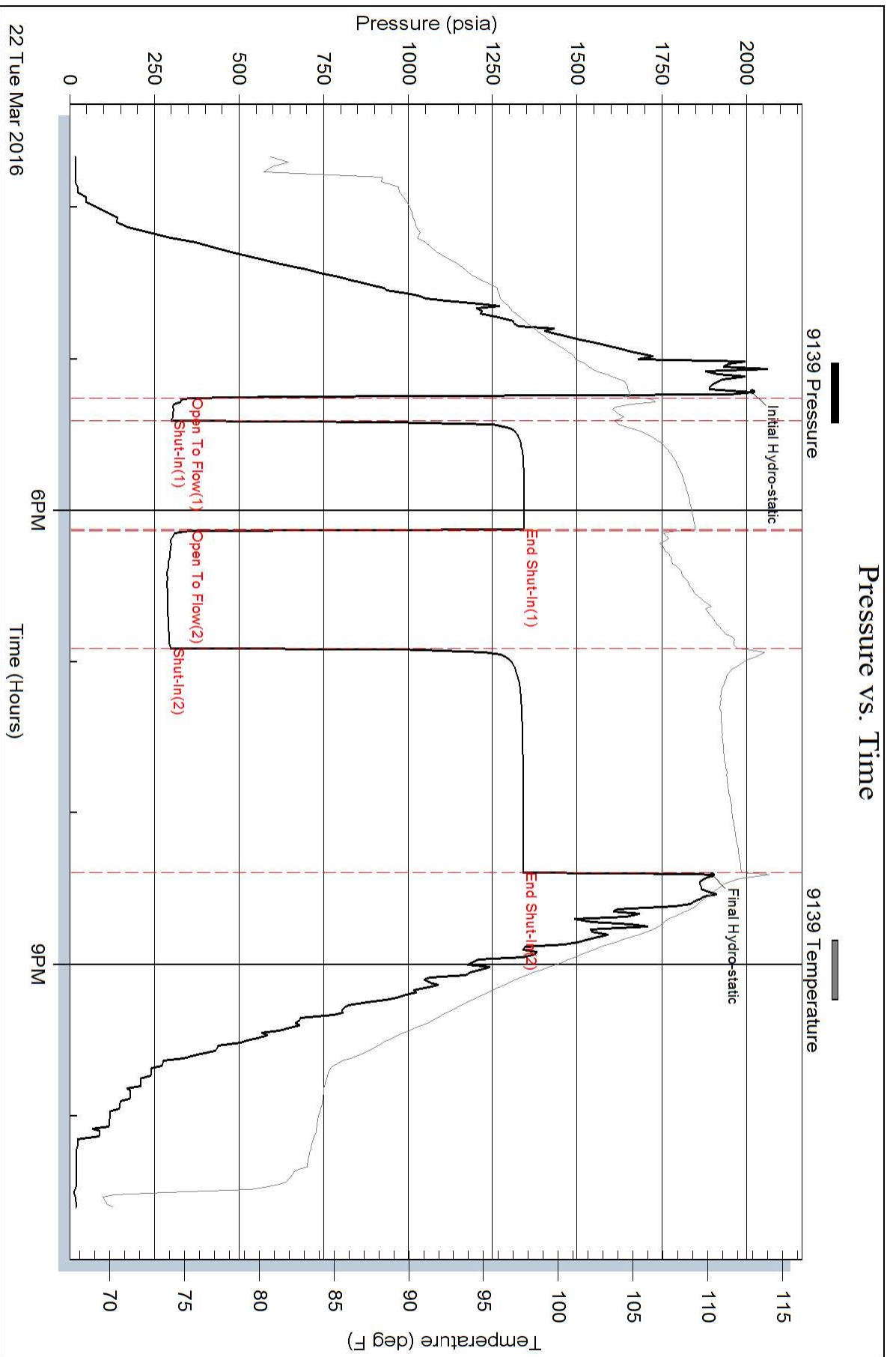
Gas Rates Information

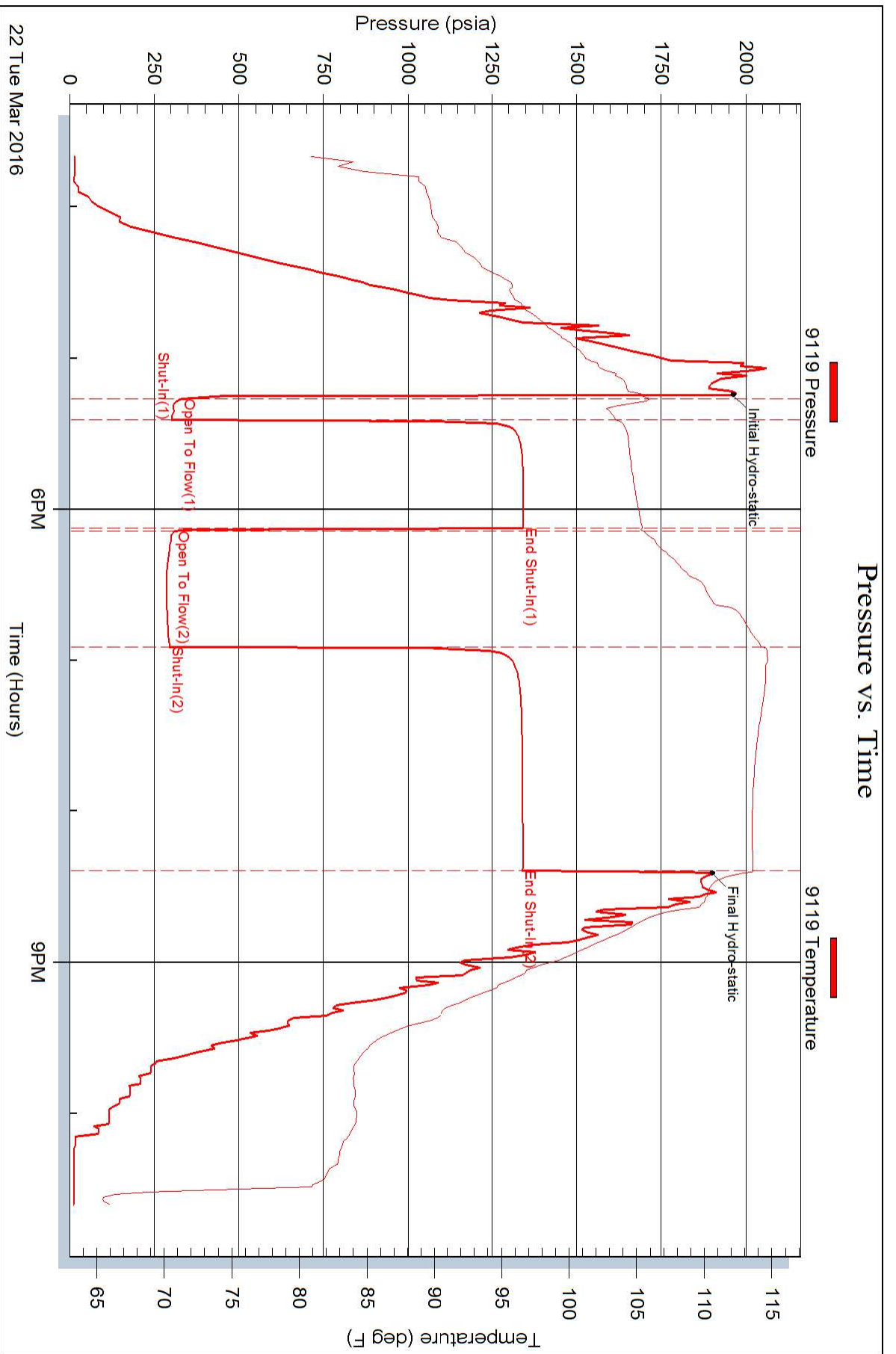
Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
2	10	1.00	37.60	1080.95
2	20	1.00	36.05	1036.39
2	30	1.00	33.15	953.02
2	40	1.00	31.60	908.46

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Shelby Resources LLC**

621 17th Street SUITE 1155
Denver Colorado 80293

ATTN: Keith Revis

FRANCIS 1-36

36-21s-16w PAWNEE

Start Date: 2016.03.23 @ 14:16:00

End Date: 2016.03.24 @ 13:00:00

Job Ticket #: 01221 DST #: 5

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

Printed: 2016.03.24 @ 05:51:44



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

36-21s-16w PAWNEE
FRANCIS 1-36
 Job Ticket: 01221 **DST#: 5**
 Test Start: 2016.03.23 @ 14:16:00

GENERAL INFORMATION:

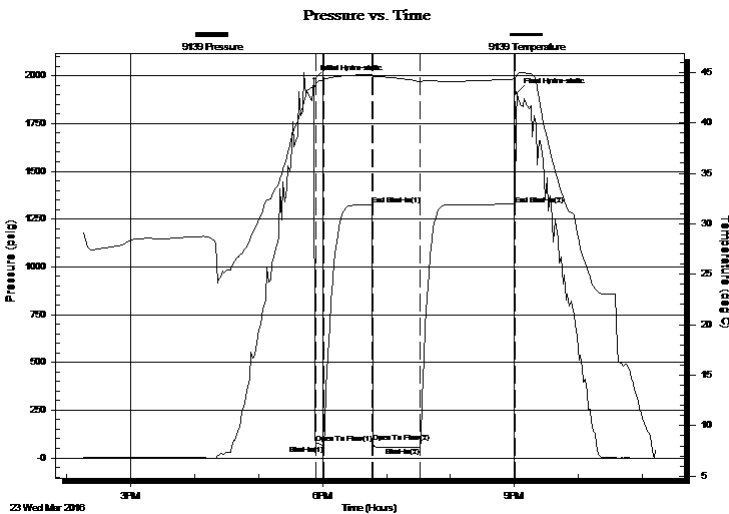
Formation: **SDIMPSON SAND**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:52:00
 Time Test Ended: 13:00:00
 Interval: **3836.00 ft (KB) To 3902.00 ft (KB) (TVD)**
 Total Depth: 4000.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9139

Inside

Press@RunDepth: 1327.06 psig @ 3900.39 ft (KB) Capacity: 5000.00 psig
 Start Date: 2016.03.23 End Date: 2016.03.23 Last Calib.: 2016.03.24
 Start Time: 14:15:00 End Time: 23:13:00 Time On Btm: 2016.03.23 @ 17:52:00
 Time Off Btm: 2016.03.23 @ 21:02:30

TEST COMMENT: 1st OPENING 10 MINUTES STRONG BLOW BUILT TO THE BOTTOM OF THE BUCKET IN 30 SECONDS
 1st SHUT-IN 45 MINUTES NO BLOW BACK
 2nd OPENING 45 MINUTES STRONG BLOW GAS TO SURFACE IN 2 MINUTES SEE GAS FLOW REPOR 2nd SHUT-IN
 90 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation
0	1981.66	43.83	Initial Hydro-static
2	78.87	43.91	Open To Flow (1)
9	66.28	44.27	Shut-In(1)
54	1324.09	44.82	End Shut-In(1)
56	81.44	44.61	Open To Flow (2)
100	57.28	44.08	Shut-In(2)
189	1327.06	44.35	End Shut-In(2)
191	1911.43	44.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	drilling mud	0.44

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	-8.36	40.74
Last Gas Rate	0.50	-6.63	52.41
Max. Gas Rate	0.50	-6.63	52.41



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

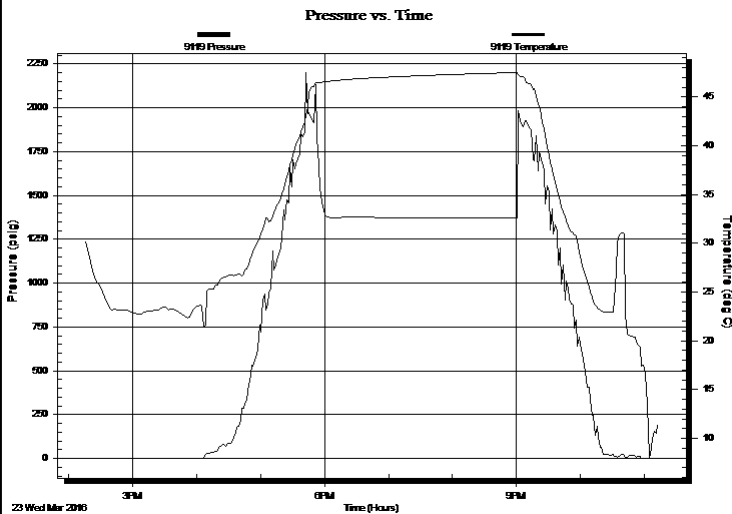
36-21s-16w PAWNEE
FRANCIS 1-36
 Job Ticket: 01221 **DST#: 5**
 Test Start: 2016.03.23 @ 14:16:00

GENERAL INFORMATION:

Formation: **SDIMPSON SAND**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:52:00
 Time Test Ended: 13:00:00
Interval: 3836.00 ft (KB) To 3902.00 ft (KB) (TVD)
 Total Depth: 4000.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9119 Outside
 Press@RunDepth: psig @ 3999.54 ft (KB) Capacity: 5000.00 psig
 Start Date: 2016.03.23 End Date: 2016.03.23 Last Calib.: 2016.03.24
 Start Time: 14:15:00 End Time: 23:13:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: 1st OPENING 10 MINUTES STRONG BLOW BUILT TO THE BOTTOM OF THE BUCKET IN 30 SECONDS
 1st SHUT-IN 45 MINUTES NO BLOW BACK
 2nd OPENING 45 MINUTES STRONG BLOW GAS TO SURFACE IN 2 MINUTES SEE GAS FLOW REPOR 2nd SHUT-IN
 90 MINUTES NO BLOW BACK



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
90.00	drilling mud	0.44

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	-8.36	40.74
Last Gas Rate	0.50	-6.63	52.41
Max. Gas Rate	0.50	-6.63	52.41



DRILL STEM TEST REPORT

TOOL DIAGRAM

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

36-21s-16w PAWNEE
FRANCIS 1-36
 Job Ticket: 01221 **DST#: 5**
 Test Start: 2016.03.23 @ 14:16:00

Tool Information

Drill Pipe:	Length: 3600.00 ft	Diameter: 3.80 inches	Volume: 50.50 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: 2000.00 lb
Drill Collar:	Length: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 51.57 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3836.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	3901.39 ft			
Interval between Packers:	65.39 ft			
Tool Length:	197.54 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			3812.00	
Hydraulic tool	5.00			3817.00	
Jars	7.00			3824.00	
Safety Joint	2.00		Fluid	3826.00	
Top Packer	5.00			3831.00	
Packer	5.00			3836.00	29.00 Bottom Of Top Packer
Anchor	5.00			3841.00	
Drill Pipe	30.64			3871.64	
Change Over Sub	0.75			3872.39	
Anchor	28.00			3900.39	
Recorder	0.00	9139	Inside	3900.39	
Recorder	0.00	91375	Outside	3900.39	
Blank Off Sub	1.00			3901.39	65.39 Tool Interval
Packer	5.00			3906.39	
Anchor	5.00			3911.39	
Change Over Sub	0.75			3912.14	
Drill Pipe	63.65			3975.79	
Change Over Sub	0.75			3976.54	
Anchor	23.00			3999.54	
Recorder	0.00	9119	Outside	3999.54	
Bullnose	5.00			4004.54	103.15 Bottom Packers & Anchor
Total Tool Length:	197.54				



DRILL STEM TEST REPORT

FLUID SUMMARY

Shelby Resources LLC

36-21s-16w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01221

DST#: 5

ATTN: Keith Revis

Test Start: 2016.03.23 @ 14:16:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 74.00 sec/qt
Water Loss: 7.60 in³
Resistivity: ohm.m
Salinity: 4500.00 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
90.00	drilling mud	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

GAS RATES

Shelby Resources LLC
621 17th Street SUITE 1155
Denver Colorado 80293
ATTN: Keith Revis

36-21s-16w PAWNEE
FRANCIS 1-36
Job Ticket: 01221 **DST#: 5**
Test Start: 2016.03.23 @ 14:16:00

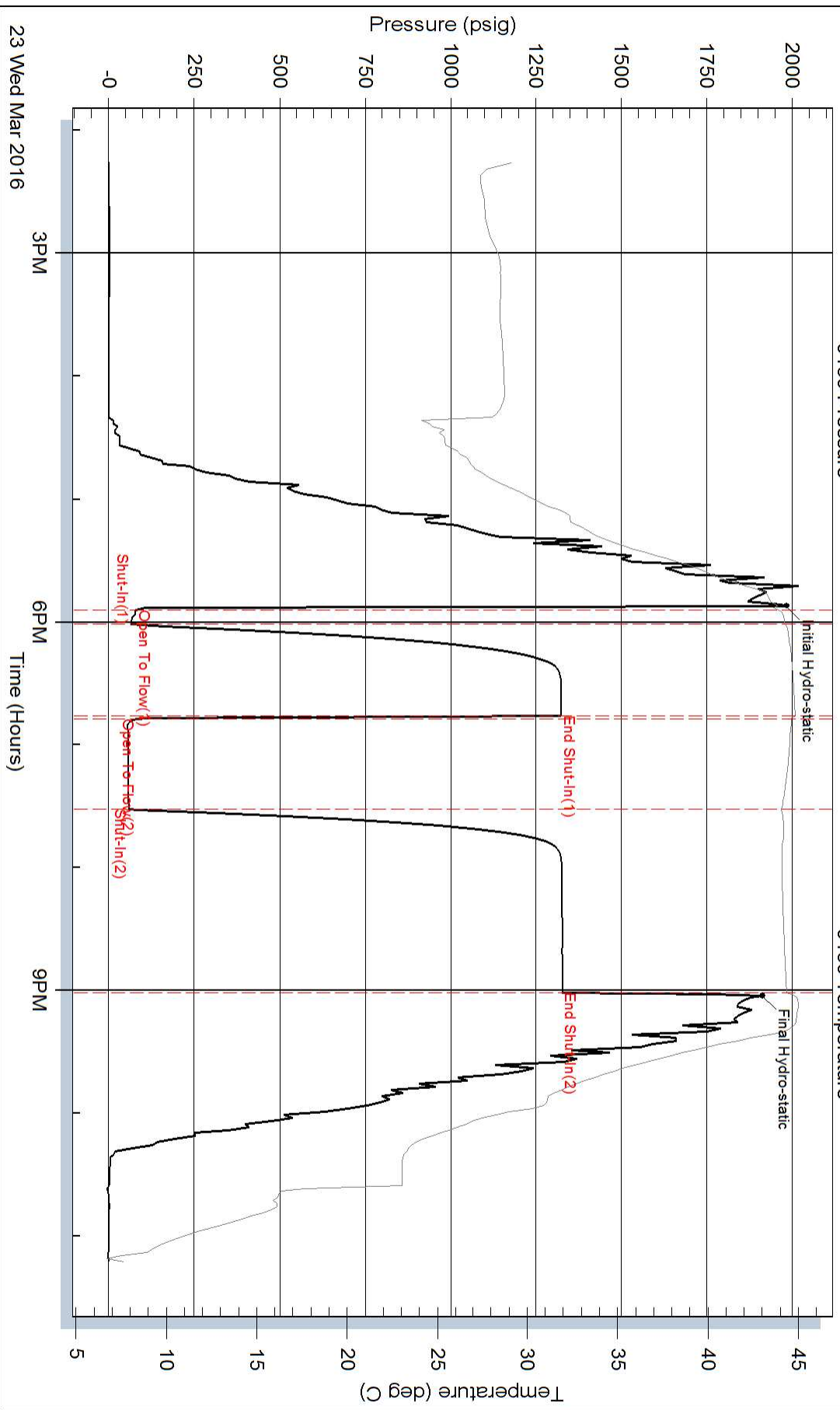
Gas Rates Information

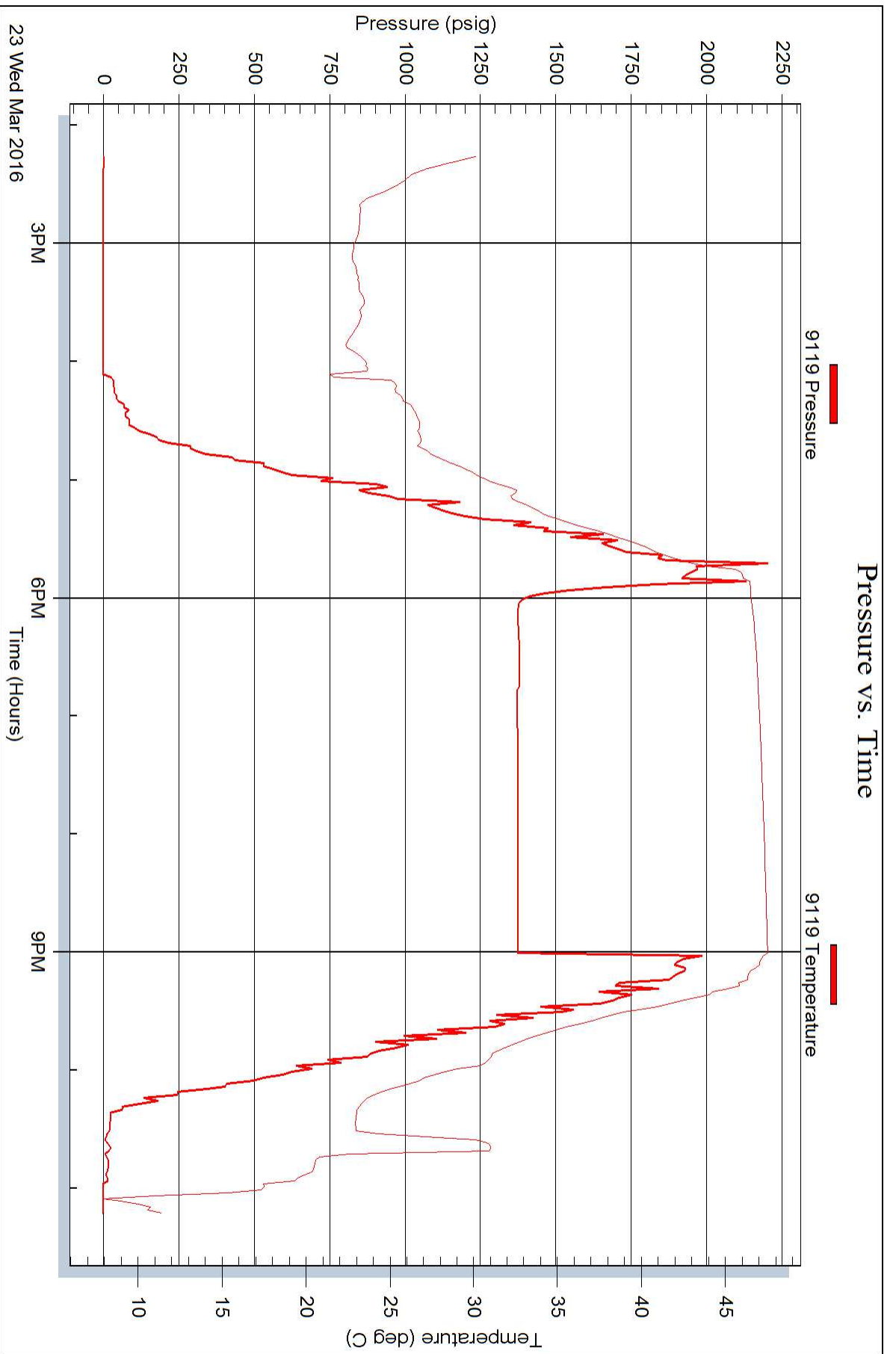
Temperature: 15 (deg C)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.50	-8.36	40.74
2	20	0.50	-7.20	48.57
2	30	0.50	-6.73	51.74
2	40	0.50	-6.63	52.41

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Shelby Resources LLC**

621 17th Street SUITE 1155
Denver Colorado 80293

ATTN: Keith Revis

FRANCIS 1-36

36-21s-16w PAWNEE

Start Date: 2016.03.24 @ 11:43:00

End Date: 2016.03.24 @ 21:28:00

Job Ticket #: 01222 DST #: 6

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

Printed: 2016.03.24 @ 09:48:35



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

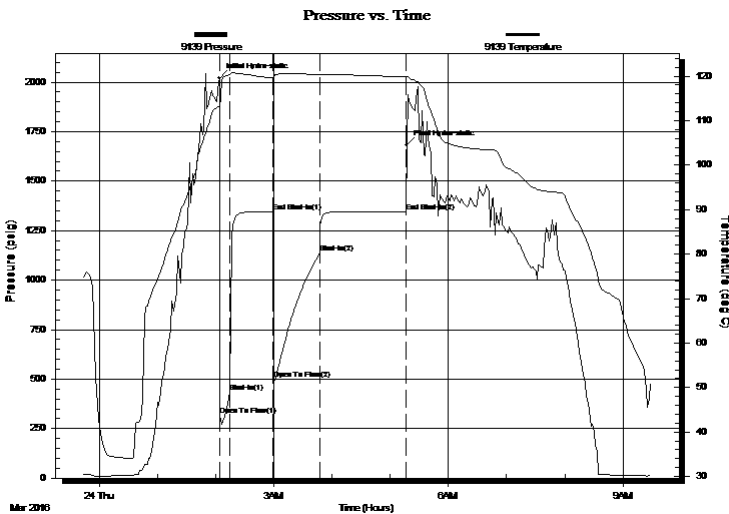
36-21s-16w PAWNEE
FRANCIS 1-36
 Job Ticket: 01222 **DST#: 6**
 Test Start: 2016.03.24 @ 11:43:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:07:00
 Time Test Ended: 21:28:00
 Interval: **3914.00 ft (KB) To 3922.00 ft (KB) (TVD)**
 Total Depth: 4000.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9139 Inside
 Press@RunDepth: 1346.89 psig @ 3921.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2016.03.23 End Date: 2016.03.24 Last Calib.: 2016.03.24
 Start Time: 23:43:00 End Time: 09:28:30 Time On Btm: 2016.03.24 @ 02:04:00
 Time Off Btm: 2016.03.24 @ 05:17:00

TEST COMMENT: 1st OPENING 10 MINUTES STRONG BLOW BUILT TO THE BOTTOM OF THE BUCKET IN 1 MINUTES
 1st SHUT-IN 45 MINUTES=GOOD BLOW BACK
 2nd OPENING 45 MINUTES-STRONG BLOW GAS TO SURFACE
 2nd SHUT-IN 90 MINUTES GOOD BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation
0	2020.51	113.43	Initial Hydro-static
1	317.18	112.55	Open To Flow (1)
11	434.16	120.40	Shut-In(1)
56	1346.74	119.58	End Shut-In(1)
56	498.92	119.35	Open To Flow (2)
104	1135.99	120.40	Shut-In(2)
193	1346.89	119.89	End Shut-In(2)
193	1682.20	119.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2150.00	water chlorides 23,000	28.18
250.00	slightly mud and water cut gassy oil	3.51
0.00	60 gas 25 oil 7 mud 8 water	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13		



DRILL STEM TEST REPORT

Shelby Resources LLC
 621 17th Street SUITE 1155
 Denver Colorado 80293
 ATTN: Keith Revis

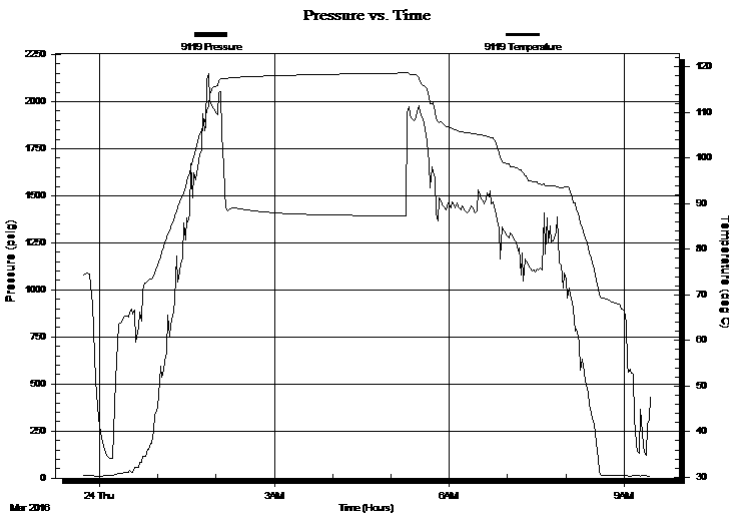
36-21s-16w PAWNEE
FRANCIS 1-36
 Job Ticket: 01222 **DST#: 6**
 Test Start: 2016.03.24 @ 11:43:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:07:00
 Time Test Ended: 21:28:00
 Interval: **3914.00 ft (KB) To 3922.00 ft (KB) (TVD)**
 Total Depth: 4000.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1982.00 ft (KB)
 1971.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 9119 Outside
 Press@RunDepth: psig @ 3999.30 ft (KB) Capacity: 5000.00 psig
 Start Date: 2016.03.23 End Date: 2016.03.24 Last Calib.: 2016.03.24
 Start Time: 23:43:00 End Time: 09:28:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: 1st OPENING 10 MINUTES STRONG BLOW BUILT TO THE BOTTOM OF THE BUCKET IN 1 MINUTES
 1st SHUT-IN 45 MINUTES=GOOD BLOW BACK
 2nd OPENING 45 MINUTES-STRONG BLOW GAS TO SURFACE
 2nd SHUT-IN 90 MINUTES GOOD BLOW BACK



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2150.00	water chlorides 23,000	28.18
250.00	slightly mud and water cut gassy oil	3.51
0.00	60 gas 25 oil 7 mud 8 water	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13		



DRILL STEM TEST REPORT

TOOL DIAGRAM

Shelby Resources LLC

36-21s-16w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01222

DST#: 6

ATTN: Keith Revis

Test Start: 2016.03.24 @ 11:43:00

Tool Information

Drill Pipe:	Length: 3690.00 ft	Diameter: 3.80 inches	Volume: 51.76 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: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 52.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3914.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	3922.00 ft			
Interval between Packers:	8.00 ft			
Tool Length:	114.30 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: GAS Gauged 2nd opening
 10 minutes 4.120 mcf
 20 minutes 5.32 mcf
 30 minutes 4.76 mcf

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3895.00	
Hydraulic tool	5.00			3900.00	
Jars	7.00			3907.00	
Safety Joint	2.00		Fluid	3909.00	
Packer	5.00			3914.00	24.00 Bottom Of Top Packer
Anchor	6.00			3920.00	
Recorder	1.00	9139	Inside	3921.00	
Recorder	1.00	91716	Outside	3922.00	8.00 Tool Interval
Packer	5.00			3927.00	
Anchor	7.00			3934.00	
Change Over Sub	0.75			3934.75	
Drill Pipe	63.80			3998.55	
Change Over Sub	0.75			3999.30	
Recorder	0.00	9119	Outside	3999.30	
Bullnose	5.00			4004.30	82.30 Bottom Packers & Anchor

Total Tool Length: 114.30



DRILL STEM TEST REPORT

FLUID SUMMARY

Shelby Resources LLC

36-21s-16w PAWNEE

621 17th Street SUITE 1155
Denver Colorado 80293

FRANCIS 1-36

Job Ticket: 01222

DST#: 6

ATTN: Keith Revis

Test Start: 2016.03.24 @ 11:43:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 74.00 sec/qt
Water Loss: 7.60 in³
Resistivity: 4000.00 ohm.m
Salinity: 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
2150.00	w ater chlorides 23,000	28.182
250.00	slightly mud and w ater cut gassy oil	3.507
0.00	60 gas 25 oil 7 mud 8 w ater	0.000

Total Length: 2400.00 ft Total Volume: 31.689 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

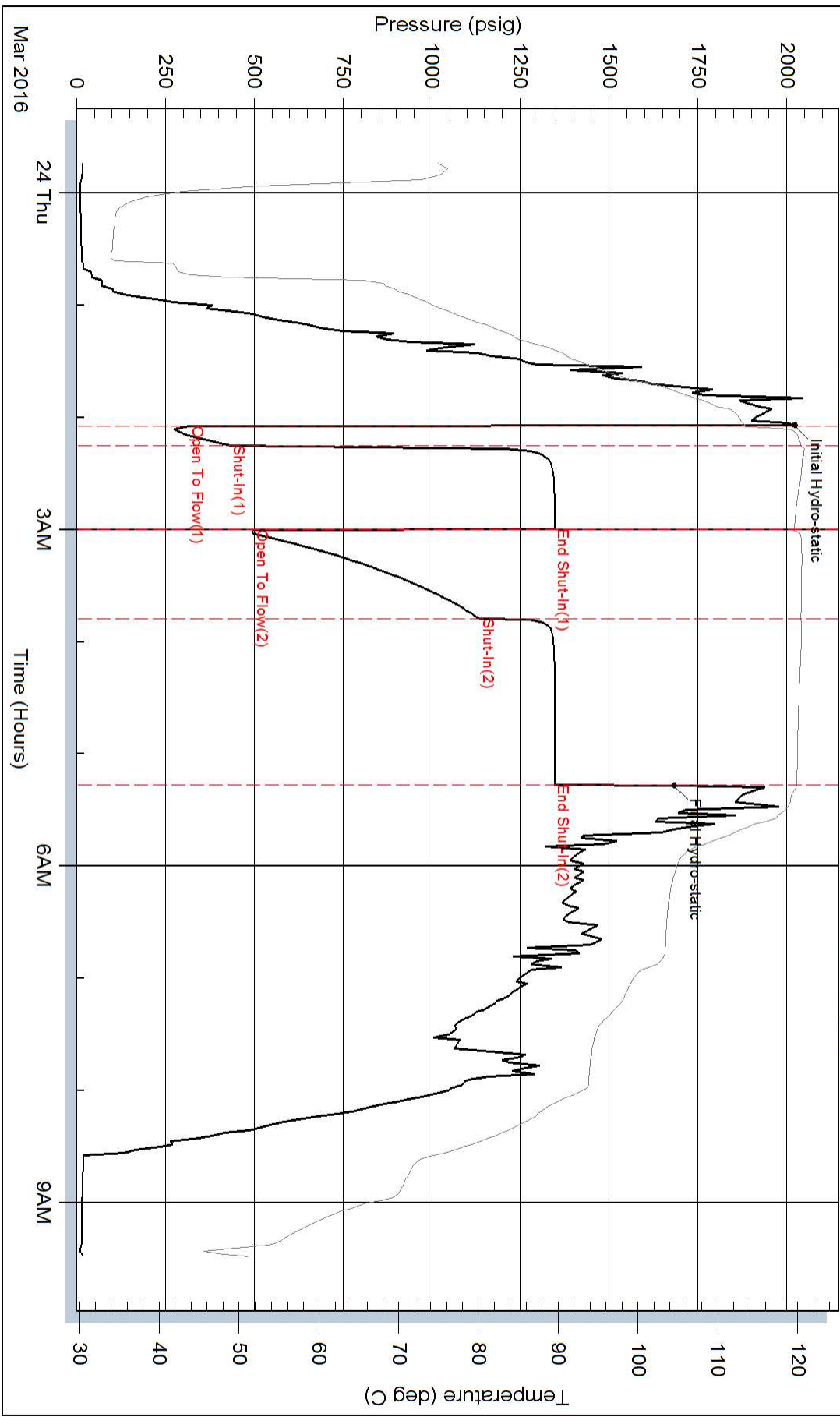
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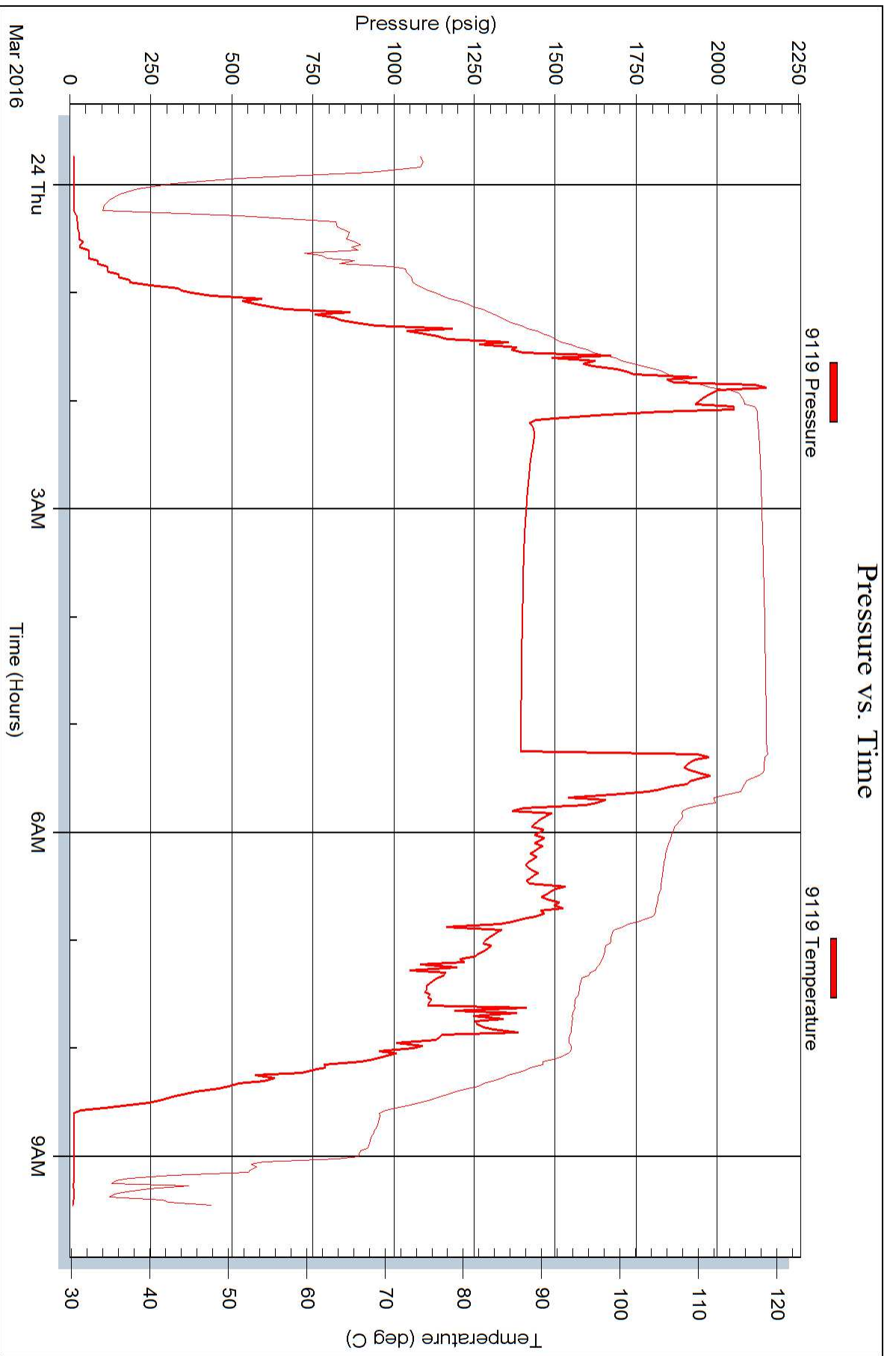
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

1332

Phone 785-483-2025
Cell 785-324-1041

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

No.

Date	3-17-16	Sec.	36	Twp.	21	Range	16	County	Pawnee	State	Ks	On Location		Finish	7:30pm
------	---------	------	----	------	----	-------	----	--------	--------	-------	----	-------------	--	--------	--------

Lease **Francis** Location **Larned, Ks - S to K-19 3E to 80rd**

Well No.	1-36	Owner	IN, Follow trail to Rig
----------	------	-------	-------------------------

Contractor	Sterling	4	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
------------	-----------------	---	--

Type Job	Surface		
----------	----------------	--	--

Hole Size	12 1/4"	T.D.	974'	Charge To	Shelby Resources
-----------	----------------	------	-------------	-----------	-------------------------

Csg.	8 5/8"	Depth	970'	Street	
------	---------------	-------	-------------	--------	--

Tbg. Size		Depth		City		State	
-----------	--	-------	--	------	--	-------	--

Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.		
------	--	-------	--	--	--	--

Cement Left in Csg.	35.90'	Shoe Joint	35.90'	Cement Amount Ordered	450 60/40 3% CC 2% Gel
---------------------	---------------	------------	---------------	-----------------------	-------------------------------

Meas Line		Displace	59 1/2 BLS	1/2# Flo-seal
-----------	--	----------	-------------------	----------------------

EQUIPMENT

Pumptrk	5	No.	Cement Helper Brett	Common	270
Bulktrk	19	No.	Driver Doug	Poz. Mix	180
Bulktrk	pu	No.	Driver Rick	Gel.	9
				Calcium	19

JOB SERVICES & REMARKS

Remarks:	Cement did Circulate	Hulls	
----------	-----------------------------	-------	--

Rat Hole		Salt	
----------	--	------	--

Mouse Hole		Flowseal	225
------------	--	----------	------------

Centralizers		Kol-Seal	
--------------	--	----------	--

Baskets		Mud CLR 48	
---------	--	------------	--

D/V or Port Collar		CFL-117 or CD110 CAF 38	
--------------------	--	-------------------------	--

		Sand	
--	--	------	--

		Handling	477
--	--	----------	------------

		Mileage	
--	--	---------	--

FLOAT EQUIPMENT

Guide Shoe	1 weld-on
------------	------------------

Centralizer	Baffle plate
-------------	---------------------

Baskets	Rubber plug
---------	--------------------

AFU Inserts	
-------------	--

Float Shoe	
------------	--

Latch Down	
------------	--

--	--

--	--

Pumptrk Charge	Long Surface
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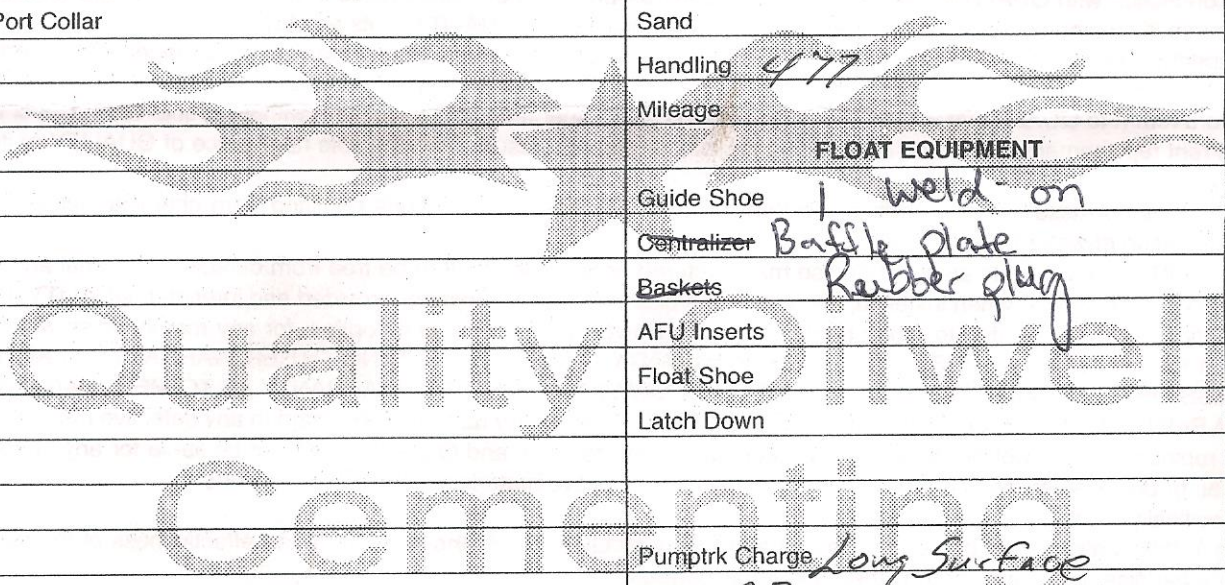
Mileage	23
---------	-----------

		Tax	
--	--	-----	--

		Discount	
--	--	----------	--

		Total Charge	
--	--	--------------	--

X Signature	Tommy S. Salgado
-------------	-------------------------



GLOBAL CEMENTING, L.L.C.

2612

REMIT TO 18048 170RD
RUSSELL, KS 67665

SERVICE POINT:

Russell, KS

DATE <i>3-24-16</i>	SEC <i>36</i>	TWP. <i>21</i>	RANGE <i>21</i>	CALLED OUT <i>9:06 AM</i>	ON LOCATION <i>1:45 PM</i>	JOB START	JOB FINISH <i>6:15 PM</i>
LEASE <i>Francis</i>	WELL #. <i>1-36</i>	LOCATION <i>3SE</i>			COUNTY <i>Pawnee</i>	STATE <i>Ks</i>	
OLD OR NEW (CIRCLE ONE)							

CONTRACTOR *Geelins Digs*

TYPE OF JOB *plug*

HOLE SIZE _____ T.D. _____

CASING SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE *1 1/2* DEPTH *3903*

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS _____

DISPLACEMENT _____

OWNER _____

CEMENT AMOUNT ORDERED

2000 lb 60/100 4% Gel

5 lb cell/flare

COMMON *132* @ _____

POZMIX *80* @ _____

GEL *8* @ _____

CHLORIDE @ _____

ASC @ _____

Flt seal 55 lbs @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING _____ @ _____

MILEAGE _____ @ _____

EQUIPMENT

PUMP TRUCK CEMENTER *Bill*

HELPER _____

BULK TRUCK _____

DRIVER _____

BULK TRUCK _____

DRIVER _____

REMARKS:

1st plug c 3903 w/ 500lb

2nd plug c 3990 w/ 500lb

3rd plug c 4720 w/ 500lb

4th plug c 60' w/ 200lb

300lb MH

200lb MH

TOTAL _____

SERVICE

DEPTH OF JOB *3903*

PUMP TRUCK CHARGE _____

EXTRA FOOTAGE @ _____

MILEAGE @ _____

MANIFOLD @ _____

1-25 plug @ _____

_____ @ _____

TOTAL _____

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

CHARGE TO: *Shelby Rec*

STREET *2717 Canal Blvd. Suite C*

CITY *HAYS* STATE *Ks* ZIP *67601*

Global Cementing, L.L.C.,
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

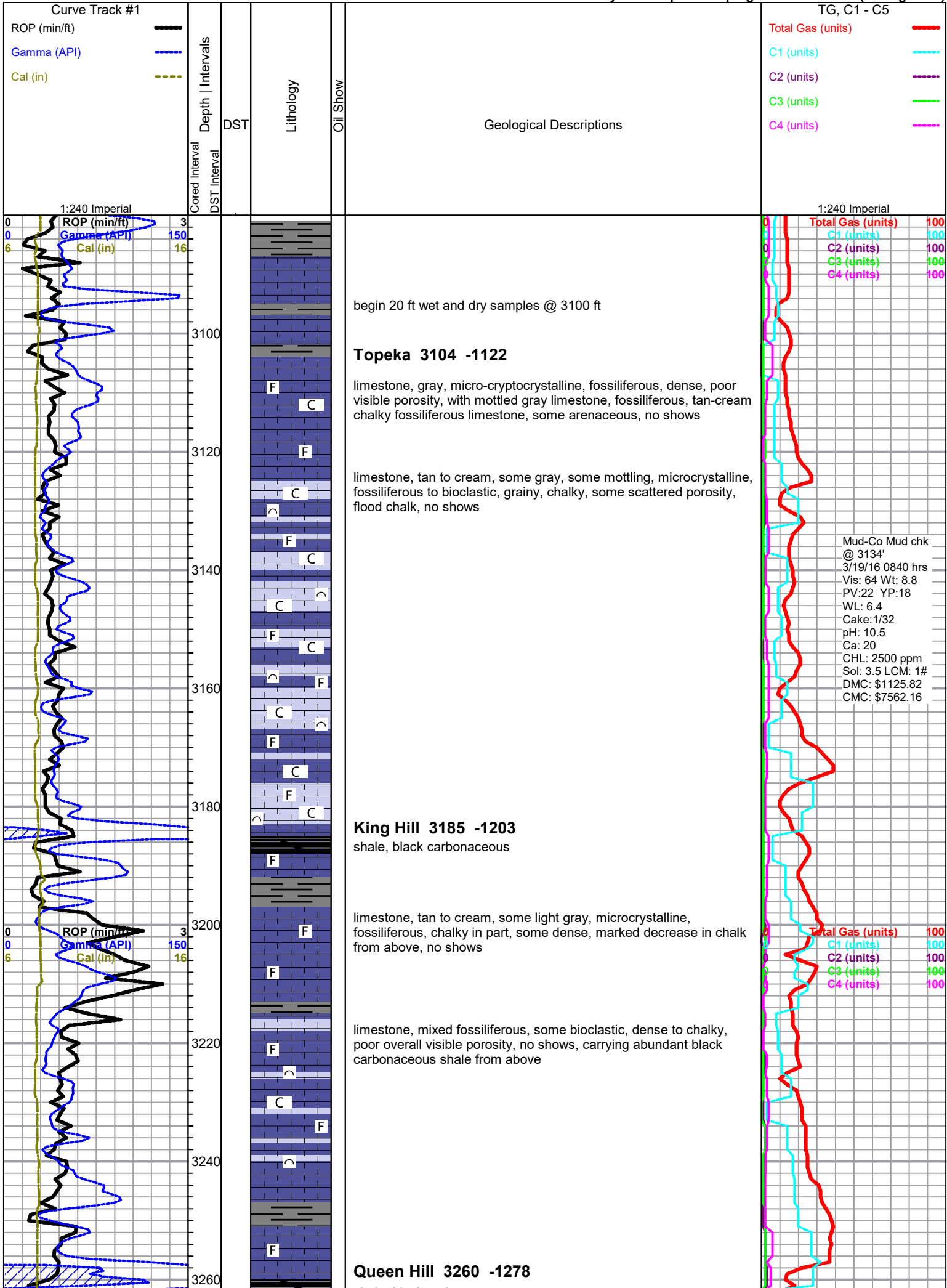
PRINTED NAME *Larry C. Selago*

SIGNATURE *[Signature]*

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS



1:240 Imperial

ROP (min/ft) 3
 Gamma (API) 150
 Cal (in) 16

Depth | Intervals
 Cored Interval
 DST Interval

DST

Lithology

Oil Show

Geological Descriptions

TG, C1 - C5

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

1:240 Imperial

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

begin 20 ft wet and dry samples @ 3100 ft

Topeka 3104 -1122

limestone, gray, micro-cryptocrystalline, fossiliferous, dense, poor visible porosity, with mottled gray limestone, fossiliferous, tan-cream chalky fossiliferous limestone, some arenaceous, no shows

limestone, tan to cream, some gray, some mottling, microcrystalline, fossiliferous to bioclastic, grainy, chalky, some scattered porosity, flood chalk, no shows

Mud-Co Mud chk
 @ 3134'
 3/19/16 0840 hrs
 Vis: 64 Wt: 8.8
 PV:22 YP:18
 WL: 6.4
 Cake:1/32
 pH: 10.5
 Ca: 20
 CHL: 2500 ppm
 Sol: 3.5 LCM: 1#
 DMC: \$1125.82
 CMC: \$7562.16

King Hill 3185 -1203

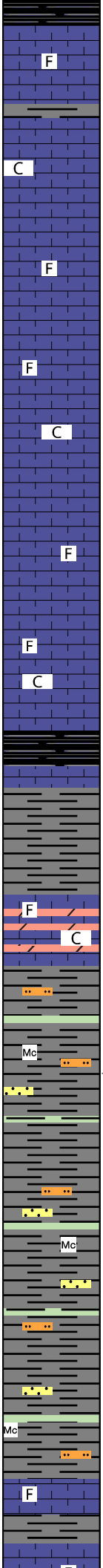
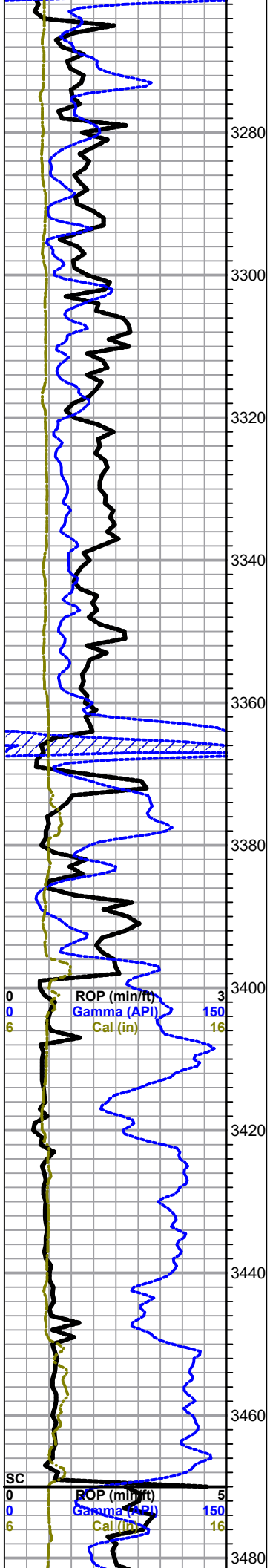
shale, black carbonaceous

limestone, tan to cream, some light gray, microcrystalline, fossiliferous, chalky in part, some dense, marked decrease in chalk from above, no shows

limestone, mixed fossiliferous, some bioclastic, dense to chalky, poor overall visible porosity, no shows, carrying abundant black carbonaceous shale from above

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

Queen Hill 3260 -1278



shale, black carbonaceous

limestone, cream to light gray, some gray, micro-cryptocrystalline, fossiliferous, dense to chalky, some white grainy chalky limestone, poor overall visible porosity, some chalk in samples, no shows

a.a

limestone, a.a. grading to more white to light gray, no shows

Heebner 3364 -1382
shale, black carbonaceous

Toronto 3387 -1405
limestone, white to light gray, chalky fossiliferous to fine crystalline dolomitic, with, dolomite, light gray, micro to fine crystalline, poor visible porosity, some chalk in samples, no shows

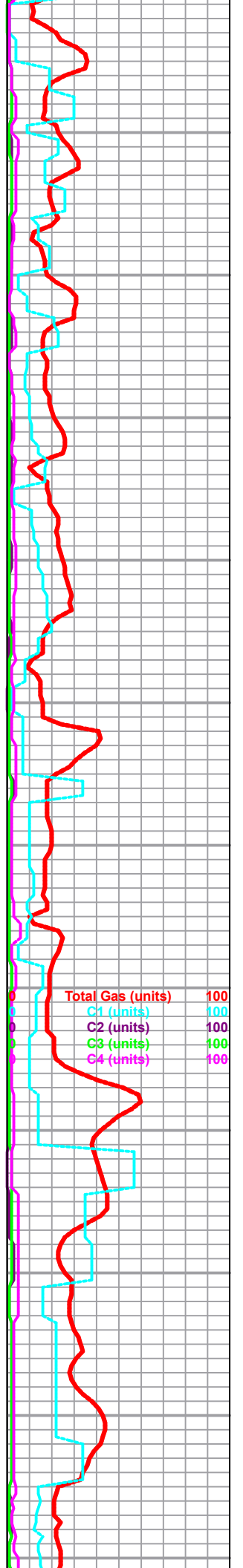
Douglas 3398 -1416
shale, gray, some pale green, silty and micaceous, with siltstone, light gray, micaceous, sandstone, light gray to pale green, silty, poorly sorted, rounded to sub-angular, dense, micaceous, poor visible porosity, few pieces gas bubbles on break, no other shows or fluorescence

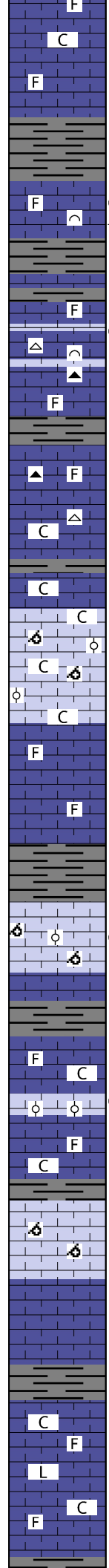
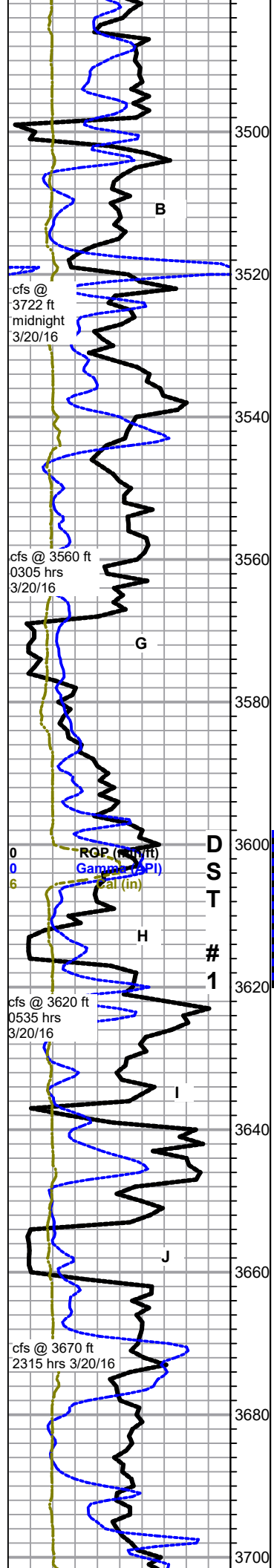
a.a

bit trip @ 3469 ft. out with PDC, in with button bit

Brown Lime 3469 -1487
limestone, light brown, cryptocrystalline, fossiliferous, some large clast, dense, no shows

Lansing 3478 -1496
limestone, white to cream, micro-cryptocrystalline, fossiliferous to





limestone, white to cream, mostly cryptocrystalline, fossiliferous to sub-lithographic, dense to chalky, poor visible porosity, no shows

limestone, light gray to cream, cryptocrystalline, fossiliferous, dense, some pinpoint porosity, slow bleeding gas, trace oil, with some light gray bioclastic, fairly dense, pinpoint porosity, bleeding some gas, trace oil, light spotty stain, fair odor, fair fluorescence, poor slow cut

3540 sample, mixed limestones, tan to cream, micro-cryptocrystalline, grainy porous bioclastic to dense cherty fossiliferous, 1 piece bioclastic, light stain, sheen on break, gas bubbles, 1 piece very cherty fossiliferous, some pinpoint porosity, light stain, slight bleeding oil droplets, dull yellow cut, fleeting odor in wet cup, abundant light gray to gray chert in sample

limestone, white to light gray, micro-cryptocrystalline, fossiliferous, chalky in part, no visible porosity or shows, abundant mixed cherts

a.a., increasing chalk

limestone, light gray, oomoldic to sub-oolitic, good mold porosity, barren, flood chalk in samples

limestone, light gray to brown, micro-cryptocrystalline, fossiliferous, chalky to very dense, no shows

limestone, light gray, oomoldic to oolitic, good oomold porosity, appx 5% with black tarry inter-mold staining, slight show free oil, heavy sheen in tray, questionable odor, poor dull fluorescence, quick flashing excellent bright white cut with halo

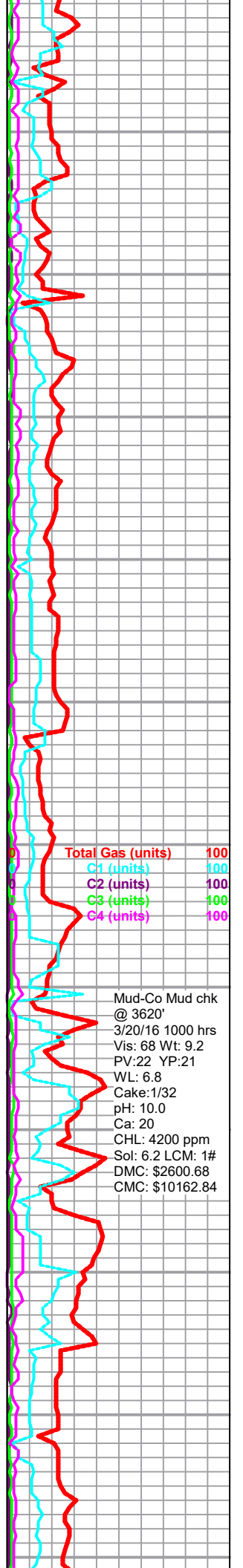
limestone, white to light gray, mostly cryptocrystalline, fossiliferous, dense, some chalky, moderate chalk in samples, with limestone, cream, recrystallized oolitic, some interoolite porosity, trace black flakey stain, 1 piece slight show oil on break, poor fluorescence, no odor

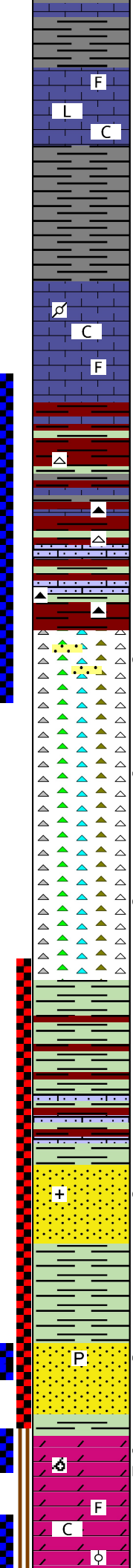
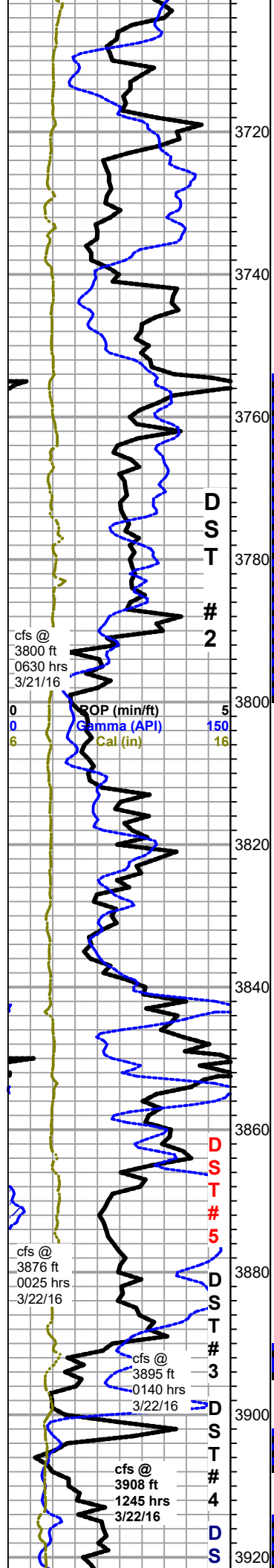
limestone, white to light gray, oomoldic, excellent porosity, barren, no odor, some poor light yellow fluorescence

limestone, gray to cream and tan, micro to cryptocrystalline, fossiliferous, dense to chalky, no shows

Stark Shale 3673 -1691

limestone, light gray to white, mostly cryptocrystalline, fossiliferous to lithographic, chalky in part, poor porosity, no shows, moderate chalk in samples





a.a. with influx limestone, gray to gray green, cryptocrystalline, lithographic to arenaceous to fossiliferous, dense, no shows

Base KC 3722 -1740

gray shales

Marmaton 3741 -1759

limestone, gray to gray/green, microcrystalline, arenaceous, dense, limestone, light brown, pelletal, dense, white to cream chalky limestones, slightly fossiliferous, no shows

Conglomerate 3758 -1776

3770 sample, influx maroon and green mottled shale, some soft red clayey shale - 3780 sample, red to pink mushy shale, heavy red wash, mixed limestone, trace orange chert

3790 sample, soft red clayey shale, red/maroon mottled shale, gray shale, trace chert, 1 piece white sandy limestone with dead black spotty stain, no other shows noted

3800 sample, a.a., increase chert and white sandy limestone with dead stain, no show oil, no odor, no fluorescence

Viola 3790 -1808

chert, white, gray, tan, some yellow and orange, fresh to tripolitic to rotton/weathered, 60%+ staining, slight show free oil and bleeding oil, fleeting odor, light fluorescence with slow cut, trace black and brown stained very fine grain sandstone, poorly sorted, round to sub angular, well cemented

3840 sample, a.a.flood solid black stained chert, pinpoint porosity, bleeding some gas, no show oil, no odor, no fluorescence, also abundant black carbonaceous shale

Simpson 3839 -1857

light green and maroon shale, some very dense

3870 samp - shale a.a. some olive, soft, with influx limestone, white to olive/yellow, fossiliferous, sandy, mostly soft and chalky, no show

Simpson Sand 3865 -1883

sandstone, quartz, very fine to fine grain, fair to poor sorting, rounded to sub-angular, fair to poor intergranular porosity, some shaly infill and feldspar grains, fair to well cemented, saturated light brown staining, slight show free oil, good odor, dull yellow fluorescence, poor cut

soft mushy green clay and green shales

Lower Simpson Sand 3890

sandstone, quartz, very fine grain, well to fair sorting, rounded, very friable, very light brown stain, slight show free oil, good odor, good white fluorescence, light cut with halo, some white well cemented sand, some pyrite (pock marked), abundant loose sand grains in bottom of tray

Arbuckle 3903 -1921

dolomite, mixed, light gray to white and cream, microcrystalline rhombic, poor porosity, light staining to barren, re-crystallized oolitic to sub-oomoldic, some good solution vugs, some secondary crystals, light staining, show gassy oil on break, some scattered sucrosic, poor visible porosity, light stain, mostly barren, good odor in wet cup, not much free oil, good white/green fluorescence, excellent cut - NOTE, most of the show is in the oomoldic facies 60 min same, sucrosic facies more staining with slight show gassy oil on break

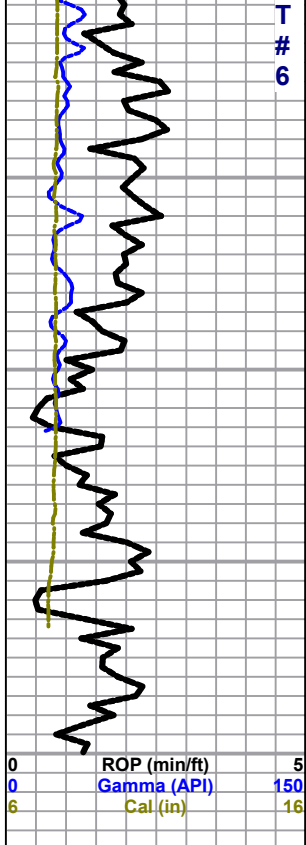
Mud-Co Mud chk @ 3800' 3/21/16 0905 hrs Vis: 59 Wt: 9.4 PV:22 YP:16 WL: 6.8 Cake:1/32 pH: 10.5 Ca: 20 CHL: 5100 ppm Sol: 7.5 LCM: 1# DMC: \$9.57 CMC: \$10172.41

75 units total
 Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

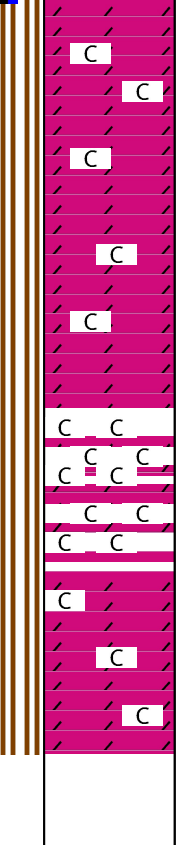
121 unit total kick
 110 unit recycle

Mud-Co Mud chk @ 3895' 3/22/16 0840 hrs Vis: 63 Wt: 9.4 PV:23 YP:20 WL: 7.2 Cake:2/32 pH: 10.5 Ca: 20 CHL: 5700 ppm Sol: 7.5 LCM: 2#

DMC: \$955.72
 CMC: \$11128.13



T # 6



beginning 3920 sample, dolomite, gray, micro-medium crystalline, sub-rhombic-
 recrystallized, some recrystallized fossiliferous, mostly barren with some
 scattered solution vugs, black dead stain in vugs, no show free oil, faint sour
 odor, fair to good yellow to green fluorescence - some caliche

3930 sample, a.a., marked decrease in stain

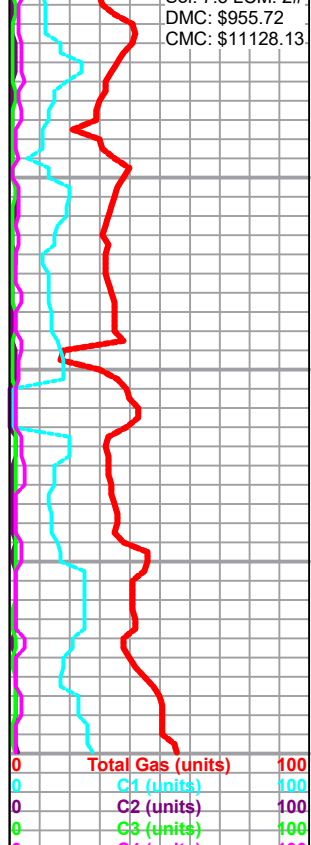
3940 - 80 samples, dolomite, gray to light gray, some orange/pink
 cast, micro to fine crystalline, sub-rhombic, recrystallized, trace
 sandy dolomite, dense with poor porosity overall with few scattered
 vugs, no shows, flood caliche/chalk

a.a.

3990 sample, flood caliche/chalk, appx 70-80% of sample, with
 dolomite, white to light gray and tan, microcrystalline, sub-rhombic
 with some rhombic, few vugs, mostly recrystallized, few small vugs,
 no shows

dolomite and caliche a.a., decrease caliche, appx 50/50

Rotary TD @ 4000 ft, 0450 hrs 3/23/16
 C&J Cased Hole Solutions TD 3998 ft
 Complete Logging Operations 1220 hrs 3/23/16



0 Total Gas (units) 100
 0 C1 (units) 100
 0 C2 (units) 100
 0 C3 (units) 100