

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Younger Energy Company
Well Name	PANNING B-21
Doc ID	1567784

All Electric Logs Run

Dual Induction
Compensated Density/Neutron
Micro
Geologist report
Dual Receiver Cement Bond Log
CPI
LAS

Form	ACO1 - Well Completion
Operator	Younger Energy Company
Well Name	PANNING B-21
Doc ID	1567784

Tops

Name	Top	Datum
King Hill	2705	-934
Queen Hill	2778	-1007
Heebner	2869	-1098
Douglas	2898	-1127
Brown Lime	2992	-1221
L-K/C	3017	-1246
BKC	3269	-1498
Arbuckle	3276	-1505



Scale 1:240 Imperial

Well Name: Panning B-21
Surface Location: Sec. 2 - T20S - R11W
Bottom Location:
API: 15-009-26298-0000
License Number: 30705
Spud Date: 1/4/2021 Time: 9:00 PM
Region: Barton County Time: 12:40 PM
Drilling Completed: 1/10/2021
Surface Coordinates: 1675' FNL & 855' FEL
Bottom Hole Coordinates:
Ground Elevation: 1762.00ft
K.B. Elevation: 1771.00ft
Logged Interval: 2800.00ft To: 3370.00ft
Total Depth: 3370.00ft
Formation: Arbuckle
Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: Younger Energy Company
Address: 9415 E. Harry
Suite 403, Bldg. 400
Wichita, KS 67207
Contact Geologist:
Contact Phone Nbr: 316-681-2542
Well Name: Panning B-21
Location: Sec. 2 - T20S - R11W
API: 15-009-26298-0000
Pool: Kansas Field: Chase - Silica
State: Kansas Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -98.50142
Latitude: 38.34279
N/S Co-ord: 1675' FNL
E/W Co-ord: 855' FEL

LOGGED BY

Keith Reavis
Consulting Geologist

Company: Keith Reavis, Inc.
Address: 3420 22nd Street
Great Bend, KS 67530
Phone Nbr: 620-617-4091
Logged By: KLG #136 Name: Keith Reavis

CONTRACTOR

Contractor: Duke Drilling Company
Rig #: 4
Rig Type: mud rotary
Spud Date: 1/4/2021 Time: 9:00 PM
TD Date: 1/10/2021 Time: 12:40 PM
Rig Release: Time:

ELEVATIONS

K.B. Elevation: 1771.00ft
K.B. to Ground: 9.00ft

Ground Elevation: 1762.00ft

NOTES

Based on the results of DST #3, 5 1/2" production casing was set and cemented to further test the Arbuckle through perforations and stimulation.

A Bloodhound gas detection system operated by Bluestem Labs was employed during the drilling of this well. ROP and gas data from the Bloodhound was imported into this mudlog.

It should be noted that all log tops were consistently 4-5 low to drillers measurements.

Respectfully submitted,
Keith Reavis

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
01/07/2021		Geologist Keith Reavis on location @1400 hrs, 2600 ft, drilling ahead Topeka, King Hill, Queen Hill, Heebner, Toronto, Douglas, displaced @ 2700' Begin 10 ft wet and dry samples @ 2800'
01/08/2021	3115	Drilling Lansing A - G, G zone show and gas kick warrant test, short trip, ctch, TOH w/bit and in w/tools, conduct DST #1, successful test. TIH w/bit, resume drilling LKC
01/09/2021	3212	LKC H-J zones have gas kicks and shows warrant testing, TOH w/bit and in w/tools, conduct DST #2, successfu test, TIH w/bit, resume drilling Arbuckle show warrants test, TOH w/bit and TIH w/tools, conducting DST #3
01/10/2021	3285	complete DST #3, reversed out 30 bbl oil from test, CTCH, TOH w/tools, lay down tools, back in hole w/bit, rathole ahead to TD of 3370', 1340 hrs. ctch, TOH, conduct open hole logging operations. Geologist off loc. 1900 hrs

well comparison sheet

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
Panning B-21					Younger - Panning B-18				Stanolind - Panning B-12			
1675' FNL & 855' FEL					636' FNL & 1661' FEL				1650' FNL & 330' FEL			
Sec 2-T20S-R11W					Sec 2-T20S-R11W				Sec 2-T20S-R11W			
1771 KB					1767 KB		Structural Relationship		1766 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
King Hill	2701	-930	2705	-934	2701	-934	4	0				
Queen Hill	2776	-1005	2778	-1007	2774	-1007	2	0				
Heebner	2864	-1093	2869	-1098	2865	-1098	5	0				
Douglas	2893	-1122	2898	-1127	2894	-1127	5	0				
Brown Lime	2987	-1216	2992	-1221	2986	-1219	3	-2				
Lansing	3011	-1240	3017	-1246	3011	-1244	4	-2				
Lansing G	3092	-1321	3097	-1326	3090	-1323	2	-3				
Arbuckle	3271	-1500	3276	-1505	3272	-1505	5	0	3270	-1504	4	-1
Total Depth	3370	-1599	3366	-1595	3365	-1598	-1	3	3278	-1512	-87	-83
					COMPARISON WELL				COMPARISON WELL			
					Stanolind - Panning B-17				Rosel - Panning B-19			
					1650' FNL & 1320' FEL				990' FNL & 990' FEL			
					Sec 2-T20S-R11W				Sec 2-T20S-R11W			
					1768 KB		Structural Relationship		1767 KB		Structural Relationship	
Formation					Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
King Hill									2700	-933	3	-1
Queen Hill									2774	-1007	2	0
Heebner									2866	-1099	6	1
Douglas									2894	-1127	5	0
Brown Lime									2987	-1220	4	-1
Lansing									3012	-1245	5	-1
Lansing G									3093	-1326	5	0
Arbuckle					3284	-1516	16	11	3282	-1515	15	10
Total Depth					3303	-1537	-62	-58	3361	-1594	-5	-1

Drill Stem Test #1



DRILL STEM TEST REPORT

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 400
Wichita, Kansas 67207

Panning B-21

Job Ticket: 01459

DST#: 1

ATTN: Keith Reeves

Test Start: 2021.01.08 @ 12:27:00

GENERAL INFORMATION:

Formation: **Kansas City "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:29:00

Time Test Ended: 07:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3090.00 ft (KB) To 3120.00 ft (KB) (TVD)**

Reference Elevations: 1771.00 ft (KB)

Total Depth: 3120.00 ft (KB) (TVD)

1763.00 ft (CF)

Hole Diameter: 7.81 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9139

Press@RunDepth: 583.18 psig @ ft (KB)

Capacity: psig

Start Date: 2021.01.08

End Date: 2021.01.08

Last Calib.: 1899.12.30

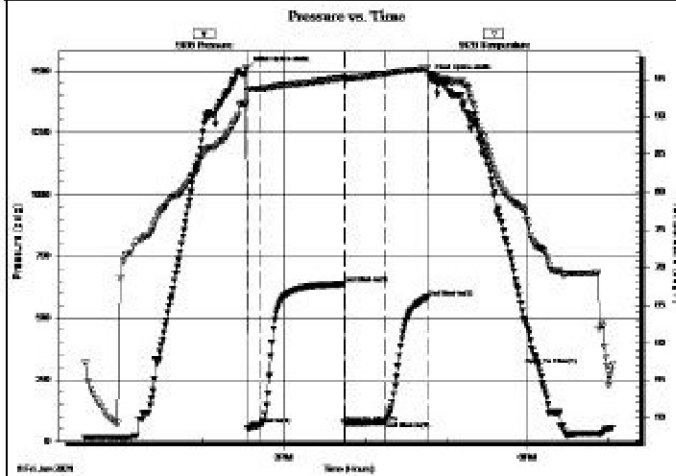
Start Time: 12:30:00

End Time: 19:03:00

Time On Btm: 2021.01.08 @ 14:32:00

Time Off Btm: 2021.01.08 @ 16:48:59

TEST COMMENT: 1st Opening 10 Minutes Weak blow built to 1 1/2 inches
1st Shut-in 60 Minutes
2nd Opening 30 Minutes weak 1/2 inch blow
2nd Shut-in 30 Minutes



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1508.51	91.79	Initial Hydro-static
1	53.46	93.37	Open To Flow (1)
10	65.73	93.73	Shut-In(1)
72	836.30	95.11	End Shut-In(1)
73	75.26	94.98	Open To Flow (2)
103	80.78	95.65	End Shut-In(2)
134	583.18	96.43	End Shut-In(3)
135	147.147	95.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	DRILLING MUD	0.05
60.00	MUDDY WATER 30 % MUD 70% WATER	0.30
0.00	CHLORIDES 32000	0.00

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mc/D)

Drill Stem Test #2



DRILL STEM TEST REPORT

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 400
Wichita, Kansas 67207

Panning B-21

Job Ticket: 01460

DST#: 2

ATTN: Keith Reeves

Test Start: 2021.01.09 @ 04:50:00

GENERAL INFORMATION:

Formation: **Kansas City "H1 & J"**

Deviated: No Whipstock ft (KB)
 Time Tool Opened: 07:19:00
 Time Test Ended: 12:05:00

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

Interval: 3140.00 ft (KB) To 3212.00 ft (KB) (TVD)
 Total Depth: 3212.00 ft (KB) (TVD)
 Hole Diameter: 7.81 inches -hole Condition: Fair

Reference Elevations: 1771.00 ft (KB)
 1763.00 ft (CF)
 KB to GR/CF: 8.00 ft

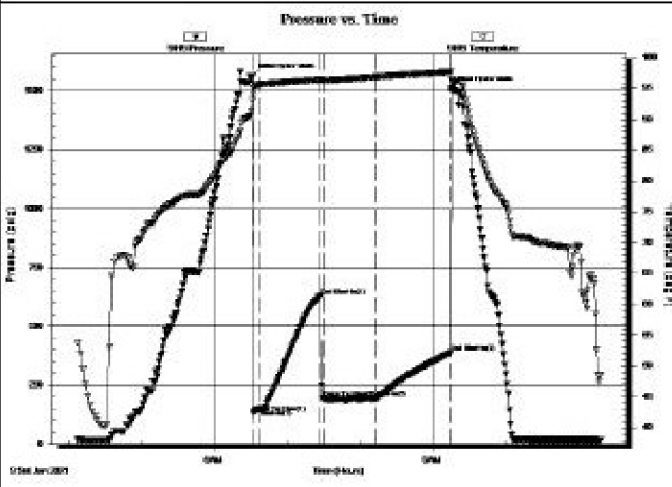
Serial #: 9119

Inside

Press@RunDepth: 388.31 psig @ 3208.32 ft (KB)
 Start Date: 2021.01.09 End Date: 2021.01.09
 Start Time: 04:05:00 End Time: 11:19:30

Capacity: psig
 Last Calib.: 1899.12.30
 Time On Btm: 2021.01.09 @ 06:32:00
 Time Off Btm: 2021.01.09 @ 09:16:30

TEST COMMENT: 1st opening 10 Minutes good blow built to the bottom of a 5 gallon bucket in 9 minutes
 1st shut-in 45 Minutes surface blow back
 2nd Opening 45 Minutes good blow built to the bottom of a 5 gallon bucket in 3 minutes
 2nd Shut-in 60 Minutes surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1562.15	93.11	Initial Hydro-static
1	131.02	94.09	Open To Flow (1)
7	149.21	95.70	Shut-In(1)
57	628.37	96.48	End Shut-In(1)
58	193.04	96.37	Open To Flow (2)
102	194.90	96.89	Shut-In(2)
164	388.31	97.73	End Shut-In(2)
165	1508.67	96.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1800.00	Gas in the pipe	23.62
100.00	Frothy gassy oil cut mud	1.40
0.00	50%Gas 10% oil 40% Mud	0.00
60.00	Frothy gassy oil cut mud	0.84
0.00	45%Gas 20%Oil 35% mud	0.00
60.00	Frothy gassy oil cut mud	0.84

Gas Rates

Choke (Inches)	Pressure (psig)	Gas Rate (Mcfd)



DRILL STEM TEST REPORT

Younger Energy Company
 9431 E Harry Street Suite 40 Building 400
 Wichita, Kansas 67207
 ATTN: Keith Reeves

2-20s-11w Barton
 Panning B-21
 Job Ticket: 01461 DST#: 3
 Test Start: 2021.01.10 @ 21:28:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock ft (KB)
 Time Tool Opened: 23:37:00
 Time Test Ended: 07:36:00

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

Interval: 3265.00 ft (KB) To 3285.00 ft (KB) (TVD)
 Total Depth: 3265.00 ft (KB) (TVD)
 Hole Diameter: 7.81 inches -hole Condition: Fair

Reference Elevations: 1771.00 ft (KB)
 1763.00 ft (CF)
 KB to GR/CF: 8.00 ft

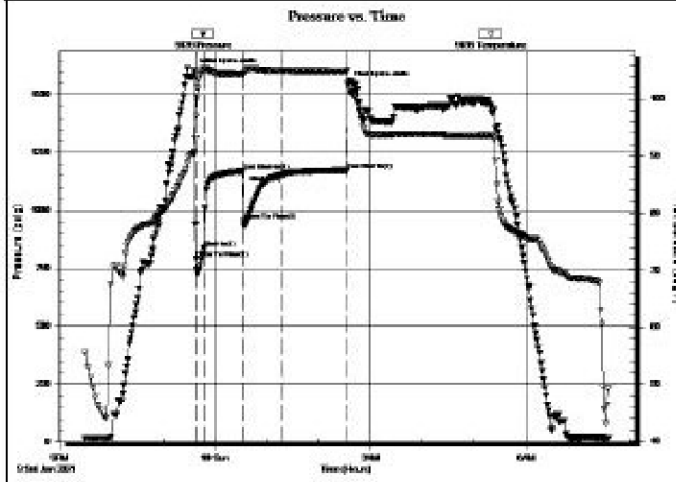
Serial #: 9139

Outside

Press@RunDepth: 1173.43 psig @ 3282.00 ft (KB)
 Start Date: 2021.01.09 End Date: 2021.01.10
 Start Time: 21:28:00 End Time: 07:35:30

Capacity: psig
 Last Calib.: 1899.12.30
 Time On Btm: 2021.01.09 @ 23:35:30
 Time Off Btm: 2021.01.10 @ 02:33:00

TEST COMMENT: 1st Opening 10 Minutes Strong blow bottom of the bucket in less than 1 minute
 1st Shut-In 45 Minutes no blow back
 2nd Opening 45 Minutes strong blow bottom of the bucket in less than 1 minute
 2nd Shut-In 75 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1602.92	90.83	Initial Hydro-static
2	790.74	96.93	Open To Flow (1)
12	834.59	105.17	Shut-In(1)
57	1169.92	104.47	End Shut-In(1)
58	954.93	104.39	Open To Flow (2)
102	1155.89	105.03	Shut-In(2)
177	1173.43	104.91	End Shut-In(2)
178	1544.01	105.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bb)
120.00	Gas in the pipe	0.59
3100.00	Clean Gassy Oil	42.95

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mc/D)

ROCK TYPES

- Dolprim
- Lmst fw>7
- Carbon Sh
- shale, red
- Lmst fw<7
- shale, gry

ACCESSORIES

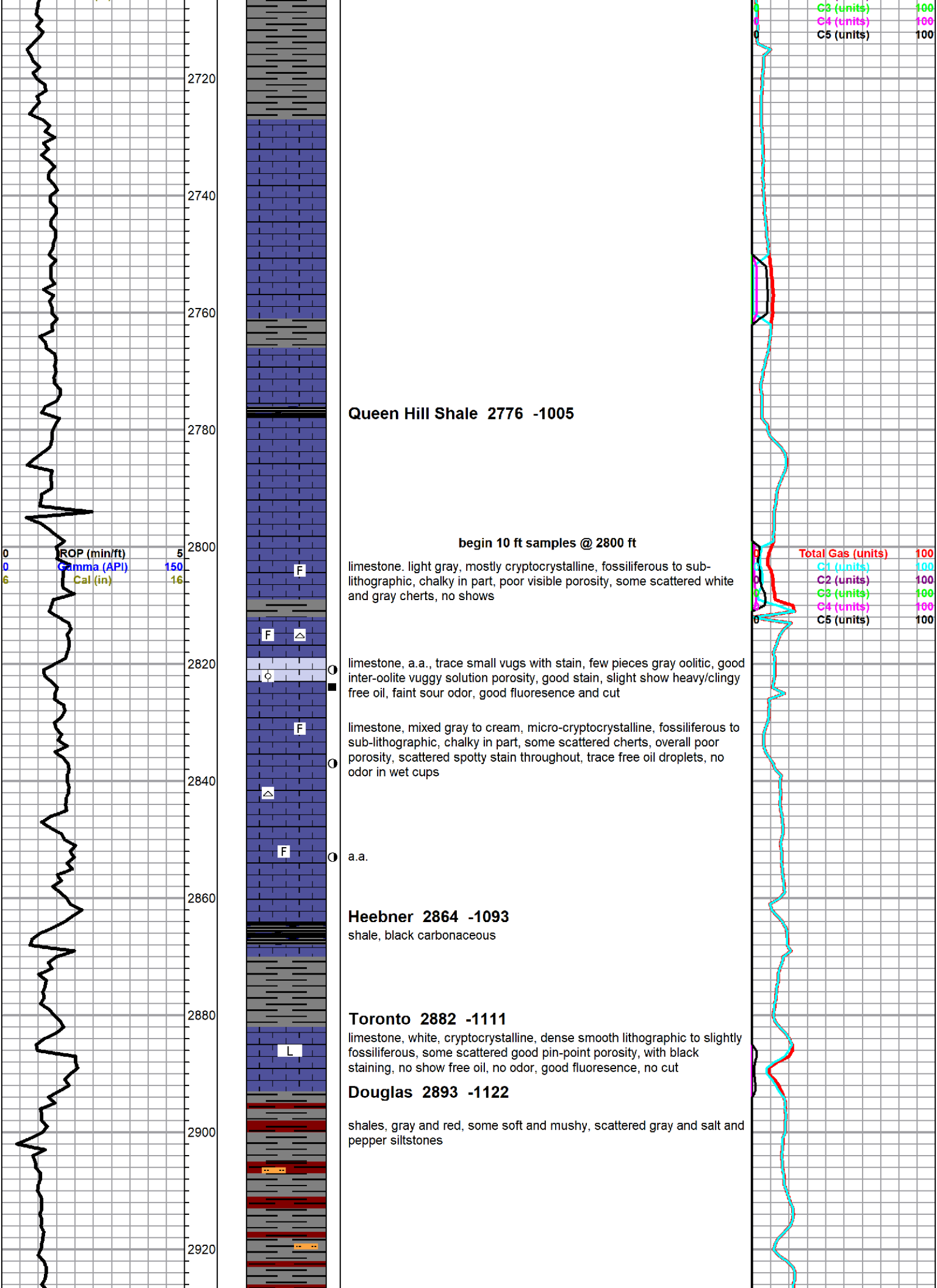
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|---|---|---|---|
| <p>MINERAL</p> <ul style="list-style-type: none"> △ Chert White | <p>FOSSIL</p> <ul style="list-style-type: none"> ∩ Bioclastic or Fragmental F Fossils < 20% ○ Oolite ⊕ Oomoldic | <p>STRINGER</p> <ul style="list-style-type: none"> ••• Sandstone ••• Siltstone | <p>TEXTURE</p> <ul style="list-style-type: none"> C Chalky L Lithogr |
|---|---|---|---|

OTHER SYMBOLS

- | | |
|---|---|
| <p>Oil Show</p> <ul style="list-style-type: none"> ● Good Show ● Fair Show ● Poor Show ● Spotted or Trace ○ Questionable Stn ■ Dead Oil Stn ■ Fluorescence * Gas | <p>DST</p> <ul style="list-style-type: none"> ■ DST Int ■ DST alt ■ Core ■ tail pipe |
|---|---|

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)

				TG, C1 - C5			
<p>Curve Track #1</p> <p>ROP (min/ft) </p> <p>Gamma (API) </p> <p>Cal (in) </p>	<p>Depth Intervals</p> <p>Cored Interval</p> <p>DST Interval</p>	<p>DST</p>	<p>Lithology</p>	<p>Oil Show</p>	<p>Geological Descriptions</p>		<p>Total Gas (units) </p> <p>C1 (units) </p> <p>C2 (units) </p> <p>C3 (units) </p> <p>C4 (units) </p> <p>C5 (units) </p>
1:240 Imperial				1:240 Imperial			
0	5					0	100
0	150					0	100
6	16					0	100



2720

2740

2760

2780

2800

2820

2840

2860

2880

2900

2920

Queen Hill Shale 2776 -1005

begin 10 ft samples @ 2800 ft

limestone. light gray, mostly cryptocrystalline, fossiliferous to sub-lithographic, chalky in part, poor visible porosity, some scattered white and gray cherts, no shows

limestone, a.a., trace small vugs with stain, few pieces gray oolitic, good inter-oolite vuggy solution porosity, good stain, slight show heavy/clingy free oil, faint sour odor, good fluorescence and cut

limestone, mixed gray to cream, micro-cryptocrystalline, fossiliferous to sub-lithographic, chalky in part, some scattered cherts, overall poor porosity, scattered spotty stain throughout, trace free oil droplets, no odor in wet cups

a.a.

Heebner 2864 -1093

shale, black carbonaceous

Toronto 2882 -1111

limestone, white, cryptocrystalline, dense smooth lithographic to slightly fossiliferous, some scattered good pin-point porosity, with black staining, no show free oil, no odor, good fluorescence, no cut

Douglas 2893 -1122

shales, gray and red, some soft and mushy, scattered gray and salt and pepper siltstones

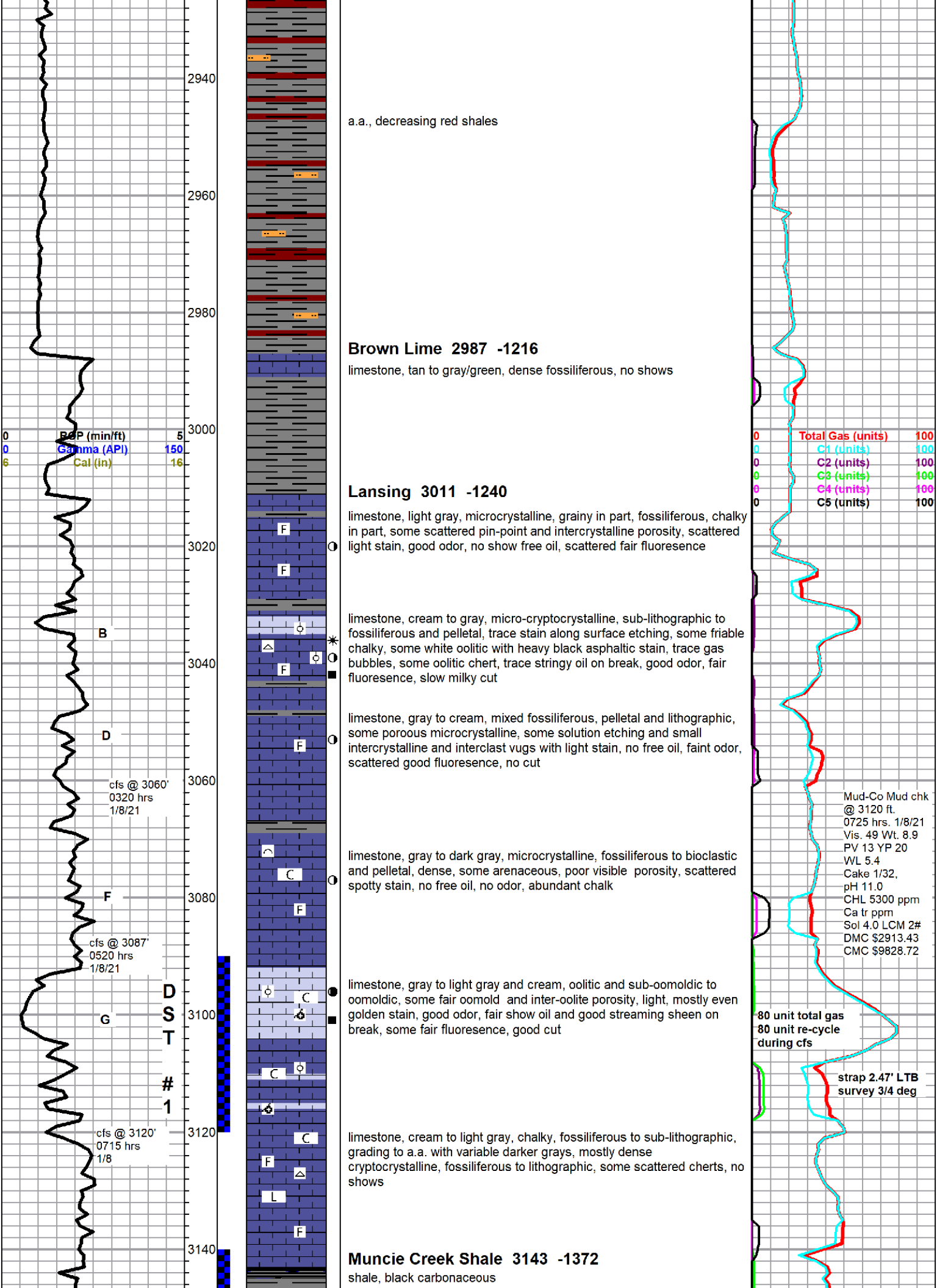
F

F

F

F

L



a.a., decreasing red shales

Brown Lime 2987 -1216

limestone, tan to gray/green, dense fossiliferous, no shows

Lansing 3011 -1240

limestone, light gray, microcrystalline, grainy in part, fossiliferous, chalky in part, some scattered pin-point and intercrystalline porosity, scattered light stain, good odor, no show free oil, scattered fair fluorescence

limestone, cream to gray, micro-cryptocrystalline, sub-lithographic to fossiliferous and pelletal, trace stain along surface etching, some friable chalky, some white oolitic with heavy black asphaltic stain, trace gas bubbles, some oolitic chert, trace stringy oil on break, good odor, fair fluorescence, slow milky cut

limestone, gray to cream, mixed fossiliferous, pelletal and lithographic, some porous microcrystalline, some solution etching and small intercrystalline and interclast vugs with light stain, no free oil, faint odor, scattered good fluorescence, no cut

limestone, gray to dark gray, microcrystalline, fossiliferous to bioclastic and pelletal, dense, some arenaceous, poor visible porosity, scattered spotty stain, no free oil, no odor, abundant chalk

limestone, gray to light gray and cream, oolitic and sub-oomoldic to oomoldic, some fair oomold and inter-oolite porosity, light, mostly even golden stain, good odor, fair show oil and good streaming sheen on break, some fair fluorescence, good cut

limestone, cream to light gray, chalky, fossiliferous to sub-lithographic, grading to a.a. with variable darker grays, mostly dense cryptocrystalline, fossiliferous to lithographic, some scattered cherts, no shows

Muncie Creek Shale 3143 -1372

shale, black carbonaceous

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100
0	C5 (units)	100

Mud-Co Mud chk @ 3120 ft.
0725 hrs. 1/8/21
Vis. 49 Wt. 8.9
PV 13 YP 20
WL 5.4
Cake 1/32,
pH 11.0
CHL 5300 ppm
Ca tr ppm
Sol 4.0 LCM 2#
DMC \$2913.43
CMC \$9828.72

80 unit total gas
80 unit re-cycle during cfs
strap 2.47' LTB survey 3/4 deg

BOP (min/ft) 5
Gamma (API) 150
Cal (in) 16

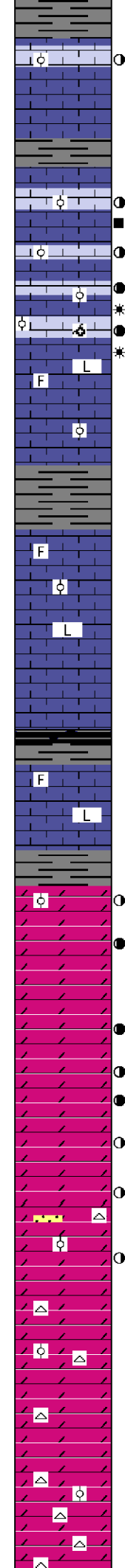
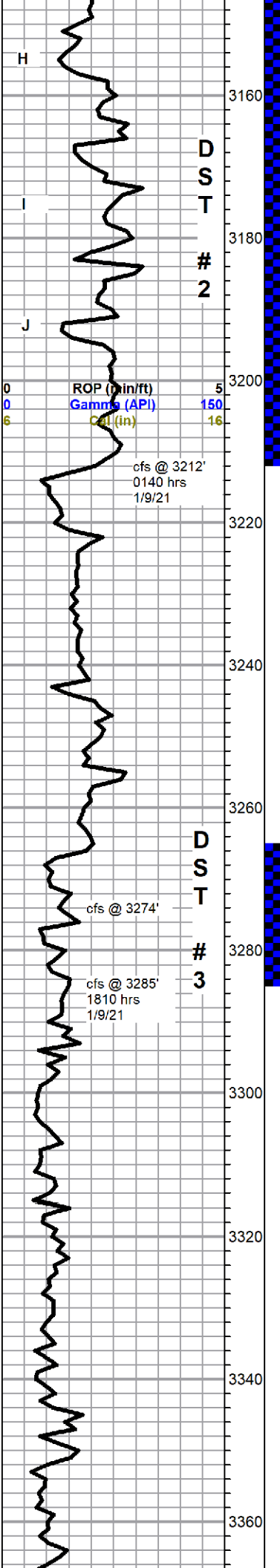
cfs @ 3060'
0320 hrs
1/8/21

cfs @ 3087'
0520 hrs
1/8/21

cfs @ 3120'
0715 hrs
1/8

D
S
T

1



few peices limestone, dark gray, cryptocrystalline, dense, some crystal lined lightly stained oomold remnants, no oil on break, with limestone, white to light gray, oomoldic to oolitic, slightly chalky, some scattered fair molds and vugs, black asphaltic stain, fair odor, trace oil droplets and gas bubbles on break, fair blue cut

I zone limestone, light gray, chalky fine oolitic, fairly homogeneous, few specimens with light golden stain and small solution vugs, trace gas bubble, fair streaming sheen and trace oil droplets on break, faint odor, poor fluorecence, good milky cut

J zone limestone, light gray, chalky very fine oolitic, fair inter-oolite porosity, saturated brown stain, gassy fair streaming sheen and trace oil droplets on break, some free oil, fair odor, fair fluorecence, fair slow milky cut

J zone grades to: limestone, light gray, oolitic to oomoldic, dark some good oomold porosity, dark brown to black stain, gassy, some free oil and fair show oil on break, faint odor, poor fluorecence, fair slow milky cut

limestone, cream to gray, cryptocrystalline, fossiliferous to oolitic, chalky in part but dense overall, no shows

grades to gray to light gray, lithographic and dense to partly chalky, no shows

shale, black and gray

limestone, mixed gray to cream, fossiliferous to lithographic, dense, no shows

Ar buckle 3271 -1500
dolomite, tan to cream, microcrystalline, re-crystallized sub-rhombic to oolitic, dense, scattered small vugs, scattered spotty to saturated stain, slight show free oil, strong odor, good fluorecence

3274-85 dolomite, white to lt. gray, micro-crytalline, rhombic to re-crystallized sub-rhombic, some dense sucrosic, fair inter-crystalline porosity, strong odor, light brown stain, fair show free oil, gassy, good fluorecence, fair cut, some chert

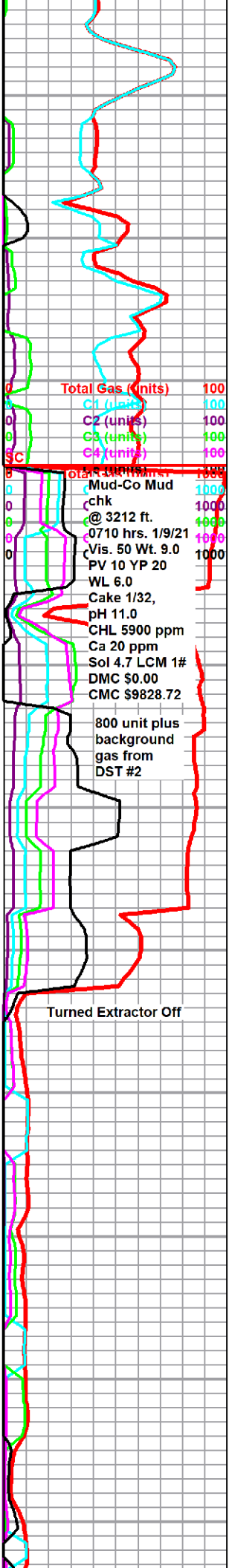
poor samples, cavings from DST

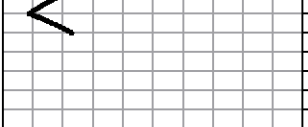
dolomite, mixed cream to gray, microcrystalline to sucrosic to oolitic, some cream lithographic, some of the crystalline dolomite very friable, variable porosity, mostly good, variabe staining, overall good, show free oil, faint odor, bright green fluorecence, slow good milky cut with halo

beginning 3330 sample, sluff cleans up, marked decrease in show with increase in dense white to light gray microcrystalline, some cherts, trace very fine grain quartz sandstone, stained, fleeting odor, some sheen in tray

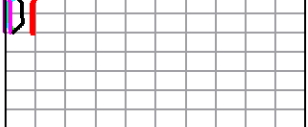
begginng 3340 sample, dolomite, primarily gray, micro-cryptocrystalline, dense, no show, with scattered mixed crystalline and re-crystallized oolitic dolomites, good solution vugs and staining, flood white to frosted cherts, sour odor

cfs samples, mixed dolomite a.a., increase in cherts a.a., show virtually drops out





Rotary TD 3370 ft @ 1240 hrs 1/10/21
ELI Wireline TD 3366 ft
Complete Logging Operations 1900 hrs 1/10/21





DRILL STEM TEST REPORT

Prepared For: **Younger Energy Company**

9431 E Harry Street Suite 40 Building 400
Wichita, Kansas 67207

ATTN: Keith Reevis

Paning B-21

2-20s-11w Barton

Start Date: 2021.01.08 @ 12:27:00

End Date: 2021.01.08 @ 07:00:00

Job Ticket #: 01459 DST #: 1

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

Printed: 2021.01.08 @ 19:37:13



DRILL STEM TEST REPORT

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 400
Wichhita ,Kansas 67207

Paning B-21

Job Ticket: 01459

DST#: 1

ATTN: Keith Reevis

Test Start: 2021.01.08 @ 12:27:00

GENERAL INFORMATION:

Formation: **Kansas City "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:29:00

Time Test Ended: 07:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3090.00 ft (KB) To 3120.00 ft (KB) (TVD)**

Reference Elevations: 1771.00 ft (KB)

Total Depth: 3120.00 ft (KB) (TVD)

1763.00 ft (CF)

Hole Diameter: 7.81 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9139

Press@RunDepth: 583.18 psig @ ft (KB)

Capacity: psig

Start Date: 2021.01.08

End Date: 2021.01.08

Last Calib.: 1899.12.30

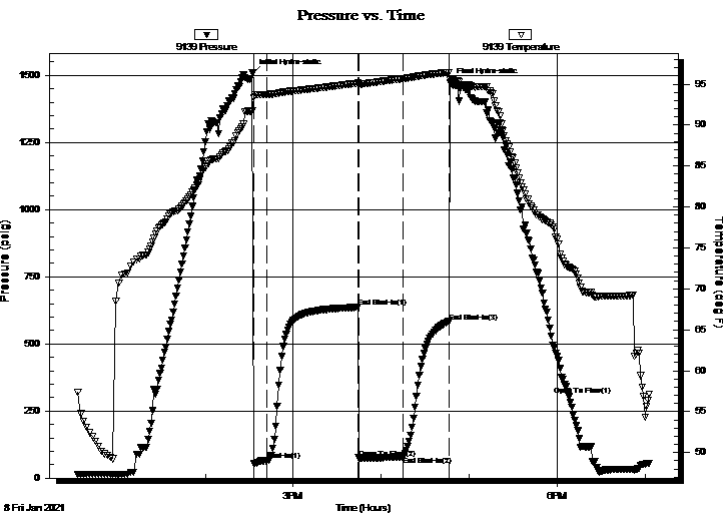
Start Time: 12:30:00

End Time: 19:03:00

Time On Btm: 2021.01.08 @ 14:32:00

Time Off Btm: 2021.01.08 @ 16:46:59

TEST COMMENT: 1st Opening 10 Minutes Weak blow built to 1 1/2 inches
1st Shut-In 60 Minutes
2nd Opening 30 Minutes weak 1/2 inch blow
2ndn Shut-in 30 Minutes



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1508.51	91.79	Initial Hydro-static
1	53.46	93.37	Open To Flow (1)
10	65.73	93.73	Shut-In(1)
72	636.30	95.11	End Shut-In(1)
73	75.26	94.98	Open To Flow (2)
103	80.78	95.65	End Shut-In(2)
134	583.18	96.43	End Shut-In(3)
135	1471.47	95.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	DRILLING MUD	0.05
60.00	MUDDY WATER 30 % MUD 70% WATER	0.30
0.00	CHLORIDES 32000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 400
Wichhita ,Kansas 67207

Paning B-21

Job Ticket: 01459

DST#: 1

ATTN: Keith Reevis

Test Start: 2021.01.08 @ 12:27:00

GENERAL INFORMATION:

Formation: **Kansas City "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:29:00

Time Test Ended: 07:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3090.00 ft (KB) To 3120.00 ft (KB) (TVD)**

Reference Elevations: 1771.00 ft (KB)

Total Depth: 3120.00 ft (KB) (TVD)

1763.00 ft (CF)

Hole Diameter: 7.81 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119

Press@RunDepth: 586.15 psig @ ft (KB)

Capacity: psig

Start Date: 2021.01.08

End Date: 2021.01.08

Last Calib.: 1899.12.30

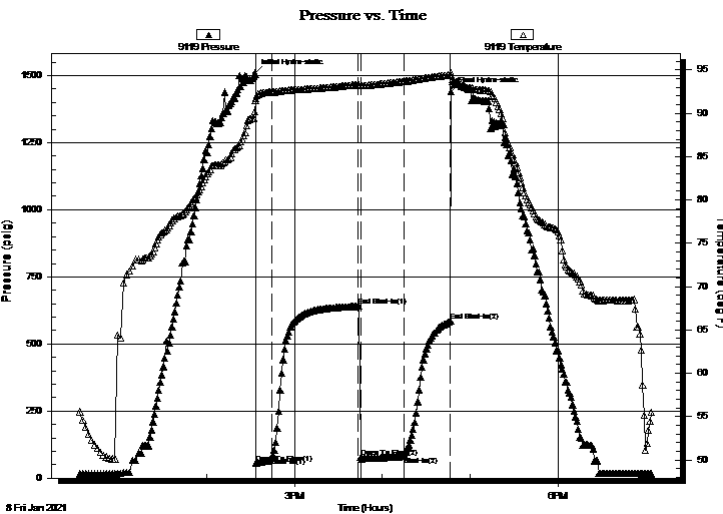
Start Time: 12:30:00

End Time: 19:04:00

Time On Btm: 2021.01.08 @ 14:32:30

Time Off Btm: 2021.01.08 @ 16:47:00

TEST COMMENT: 1st Opening 10 Minutes Weak blow built to 1 1/2 inches
1st Shut-In 60 Minutes
2nd Opening 30 Minutes weak 1/2 inch blow
2ndn Shut-in 30 Minutes



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1509.13	90.17	Initial Hydro-static
1	57.04	91.72	Open To Flow (1)
12	78.50	92.46	Shut-In(1)
71	640.59	93.31	End Shut-In(1)
73	76.59	93.20	Open To Flow (2)
102	82.17	93.68	Shut-In(2)
103	85.96	93.69	
134	586.15	94.44	End Shut-In(2)
135	1440.39	94.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	DRILLING MUD	0.05
60.00	MUDDY WATER 30 % MUD 70% WATER	0.30
0.00	CHLORIDES 32000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 400
Wichhita ,Kansas 67207

Paning B-21

Job Ticket: 01459

DST#: 1

ATTN: Keith Reevis

Test Start: 2021.01.08 @ 12:27:00

Tool Information

Drill Pipe:	Length: 2907.00 ft	Diameter: 3.80 inches	Volume: 40.78 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 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: 65000.00 lb
			<u>Total Volume: 41.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3090.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	1	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			3067.00	
Hydraulic tool	5.00			3072.00	
Jars	6.00			3078.00	
Safety Joint	2.00		Fluid	3080.00	
Top Packer	5.00			3085.00	
Packer	5.00			3090.00	28.00 Bottom Of Top Packer
Anchor	25.00			3115.00	
Recorder	1.00	9119	Inside	3116.00	
Recorder	1.00	9139	Outside	3117.00	
Bullnose	3.00			3120.00	30.00 Anchor Tool
Total Tool Length:	58.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 400
Wichhita ,Kansas 67207

Paning B-21

Job Ticket: 01459

DST#: 1

ATTN: Keith Reevis

Test Start: 2021.01.08 @ 12:27:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 49.00 sec/qt
Water Loss: 5.40 in³
Resistivity: ohm.m
Salinity: 5300.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	DRILLING MUD	0.049
60.00	MUDDY WATER 30 % MUD 70%WATER	0.295
0.00	CHLORIDES 32000	0.000

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

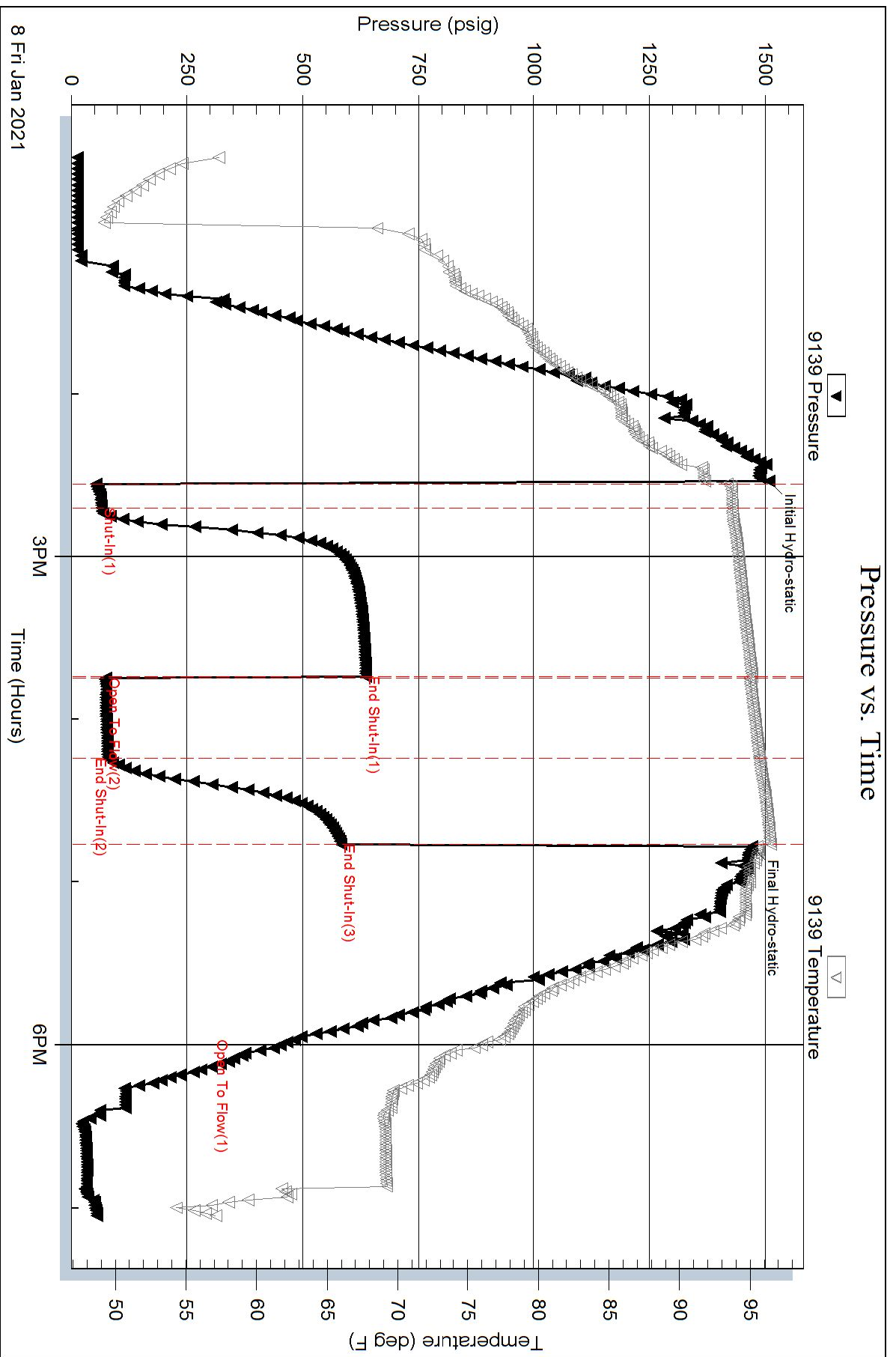
Num Gas Bombs: 0

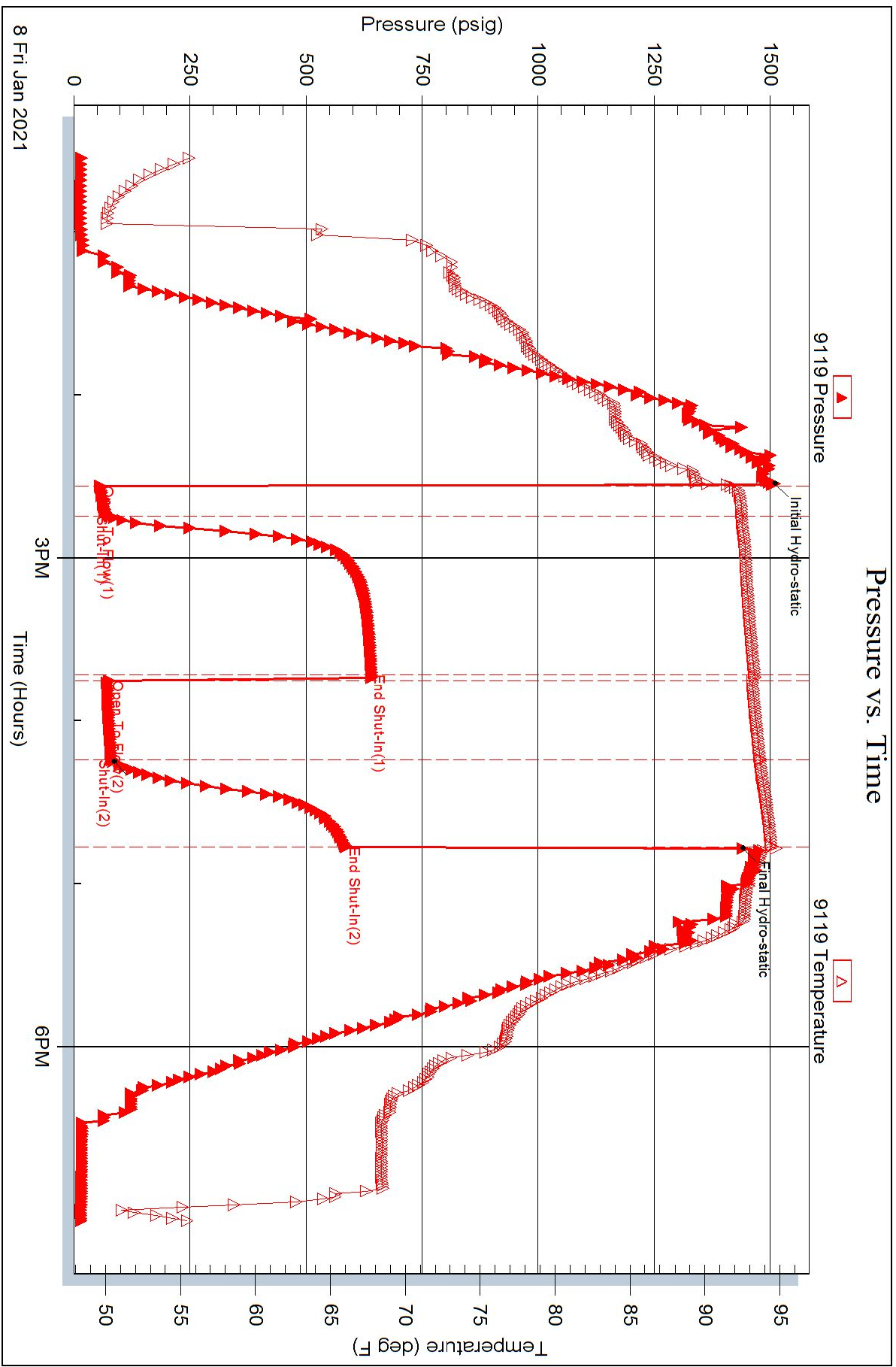
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Younger Energy Company**

9431 E Harry Street Suite 40 Building 400
Wichita, Kansas 67207

ATTN: Keith Reevis

Panning B-21

2-20s-11w Barton

Start Date: 2021.01.09 @ 04:50:00

End Date: 2021.01.09 @ 12:05:00

Job Ticket #: 01460 DST #: 2

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

Printed: 2021.01.09 @ 12:38:33



DRILL STEM TEST REPORT

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 40
Wichhita ,Kansas 67207

Panning B-21

Job Ticket: 01460

DST#: 2

ATTN: Keith Reevis

Test Start: 2021.01.09 @ 04:50:00

GENERAL INFORMATION:

Formation: **Kansas City "H-I & J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:19:00

Time Test Ended: 12:05:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3140.00 ft (KB) To 3212.00 ft (KB) (TVD)**

Reference Elevations: 1771.00 ft (KB)

Total Depth: 3212.00 ft (KB) (TVD)

1763.00 ft (CF)

Hole Diameter: 7.81 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 388.31 psig @ 3208.32 ft (KB)

Capacity: psig

Start Date: 2021.01.09

End Date: 2021.01.09

Last Calib.: 1899.12.30

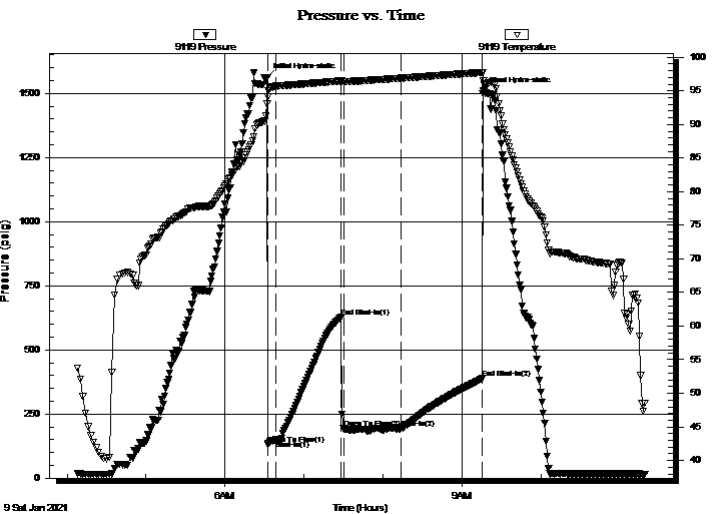
Start Time: 04:05:00

End Time: 11:19:30

Time On Btm: 2021.01.09 @ 06:32:00

Time Off Btm: 2021.01.09 @ 09:16:30

TEST COMMENT: 1st opening 10 Minutes good blow built to the bottom of a 5 gallon bucket in 9 minutes
1st shut-in 45 Minutes surface blow back
2nd Opening 45 Minutes good blow built to the bottom of a 5 gallon bucket in 3 minutes'
2nd Shut-In 60 Minutes surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1562.15	93.11	Initial Hydro-static
1	131.02	94.09	Open To Flow (1)
7	149.21	95.70	Shut-In(1)
57	628.37	96.48	End Shut-In(1)
58	193.04	96.37	Open To Flow (2)
102	194.90	96.89	Shut-In(2)
164	388.31	97.73	End Shut-In(2)
165	1508.67	96.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1800.00	Gas in the pipe	23.62
100.00	Frothy gassy oil cut mud	1.40
0.00	50%Gas 10% oil 40% Mud	0.00
60.00	Frothy gassy oil cut mud	0.84
0.00	45%Gas 20%Oil 35% mud	0.00
60.00	Frothy gassy oil cut mud	0.84

Gas Rates

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



DRILL STEM TEST REPORT

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 40
Wichhita ,Kansas 67207

Panning B-21

Job Ticket: 01460

DST#: 2

ATTN: Keith Reevis

Test Start: 2021.01.09 @ 04:50:00

GENERAL INFORMATION:

Formation: **Kansas City "H-I & J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:19:00

Time Test Ended: 12:05:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3140.00 ft (KB) To 3212.00 ft (KB) (TVD)**

Reference Elevations: 1771.00 ft (KB)

Total Depth: 3212.00 ft (KB) (TVD)

1763.00 ft (CF)

Hole Diameter: 7.81 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9139 Outside

Press@RunDepth: 387.08 psig @ 3209.32 ft (KB)

Capacity: psig

Start Date: 2021.01.09

End Date: 2021.01.09

Last Calib.: 1899.12.30

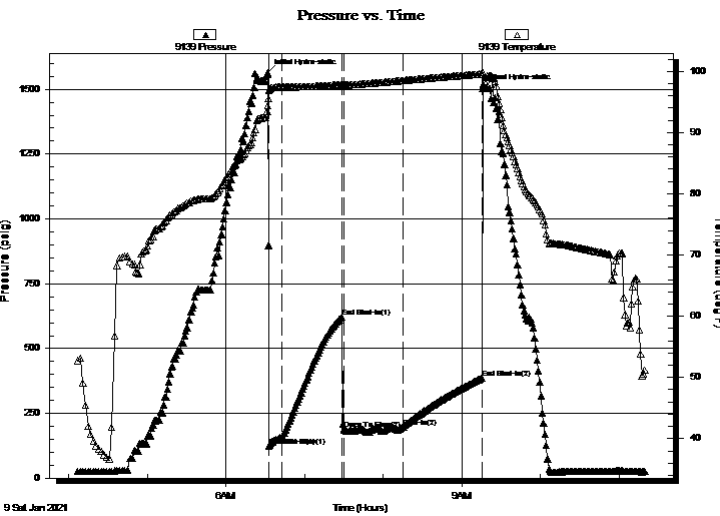
Start Time: 04:05:00

End Time: 11:19:30

Time On Btm: 2021.01.09 @ 06:32:00

Time Off Btm: 2021.01.09 @ 09:16:00

TEST COMMENT: 1st opening 10 Minutes good blow built to the bottom of a 5 gallon bucket in 9 minutes
1st shut-in 45 Minutes surface blow back
2nd Opening 45 Minutes good blow built to the bottom of a 5 gallon bucket in 3 minutes'
2nd Shut-In 60 Minutes surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1562.76	94.34	Initial Hydro-static
1	124.69	96.87	Open To Flow (1)
11	156.37	97.44	Shut-In(1)
57	621.06	97.84	End Shut-In(1)
58	188.57	97.73	Open To Flow (2)
103	196.66	98.49	Shut-In(2)
164	387.08	99.56	End Shut-In(2)
164	1502.21	99.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1800.00	Gas in the pipe	23.62
100.00	Frothy gassy oil cut mud	1.40
0.00	50% Gas 10% oil 40% Mud	0.00
60.00	Frothy gassy oil cut mud	0.84
0.00	45% Gas 20% Oil 35% mud	0.00
60.00	Frothy gassy oil cut mud	0.84

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 40
Wichhita ,Kansas 67207

Panning B-21

Job Ticket: 01460

DST#: 2

ATTN: Keith Reevis

Test Start: 2021.01.09 @ 04:50:00

Tool Information

Drill Pipe:	Length: 2943.00 ft	Diameter: 3.80 inches	Volume: 41.28 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: 200.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 42.16 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3140.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.32 ft			
Tool Length:	100.32 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			3117.00	
Hydraulic tool	5.00			3122.00	
Jars	6.00			3128.00	
Safety Joint	2.00		Fluid	3130.00	
Top Packer	5.00			3135.00	
Packer	5.00			3140.00	28.00 Bottom Of Top Packer
Anchor	5.00			3145.00	
Change Over Sub	0.75			3145.75	
Drill Pipe	30.82			3176.57	
Change Over Sub	0.75			3177.32	
Anchor	30.00			3207.32	
Recorder	1.00	9119	Inside	3208.32	
Recorder	1.00	9139	Outside	3209.32	
Bullnose	3.00			3212.32	72.32 Anchor Tool

Total Tool Length: 100.32



DRILL STEM TEST REPORT

FLUID SUMMARY

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 400
Wichhita ,Kansas 67207

Panning B-21

Job Ticket: 01460

DST#: 2

ATTN: Keith Reevis

Test Start: 2021.01.09 @ 04:50:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 50.00 sec/qt
Water Loss: 6.00 in³
Resistivity: ohm.m
Salinity: 5900.00 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
1800.00	Gas in the pipe	23.619
100.00	Frothy gassy oil cut mud	1.403
0.00	50%Gas 10% oil 40% Mud	0.000
60.00	Frothy gassy oilcut mud	0.842
0.00	45%Gas 20%Oil 35% mud	0.000
60.00	Frothy gassy oil cut mud	0.842
0.00	60%Gas 20%Oil 29%Mud	0.000
60.00	Frothy gassy Oil cut mud	0.842
0.00	65%Gas 20%Oil 15% mud	0.000
60.00	frothy gassy oil cut mud	0.842
0.00	20%Gas 30%Oil 50% Mud	0.000

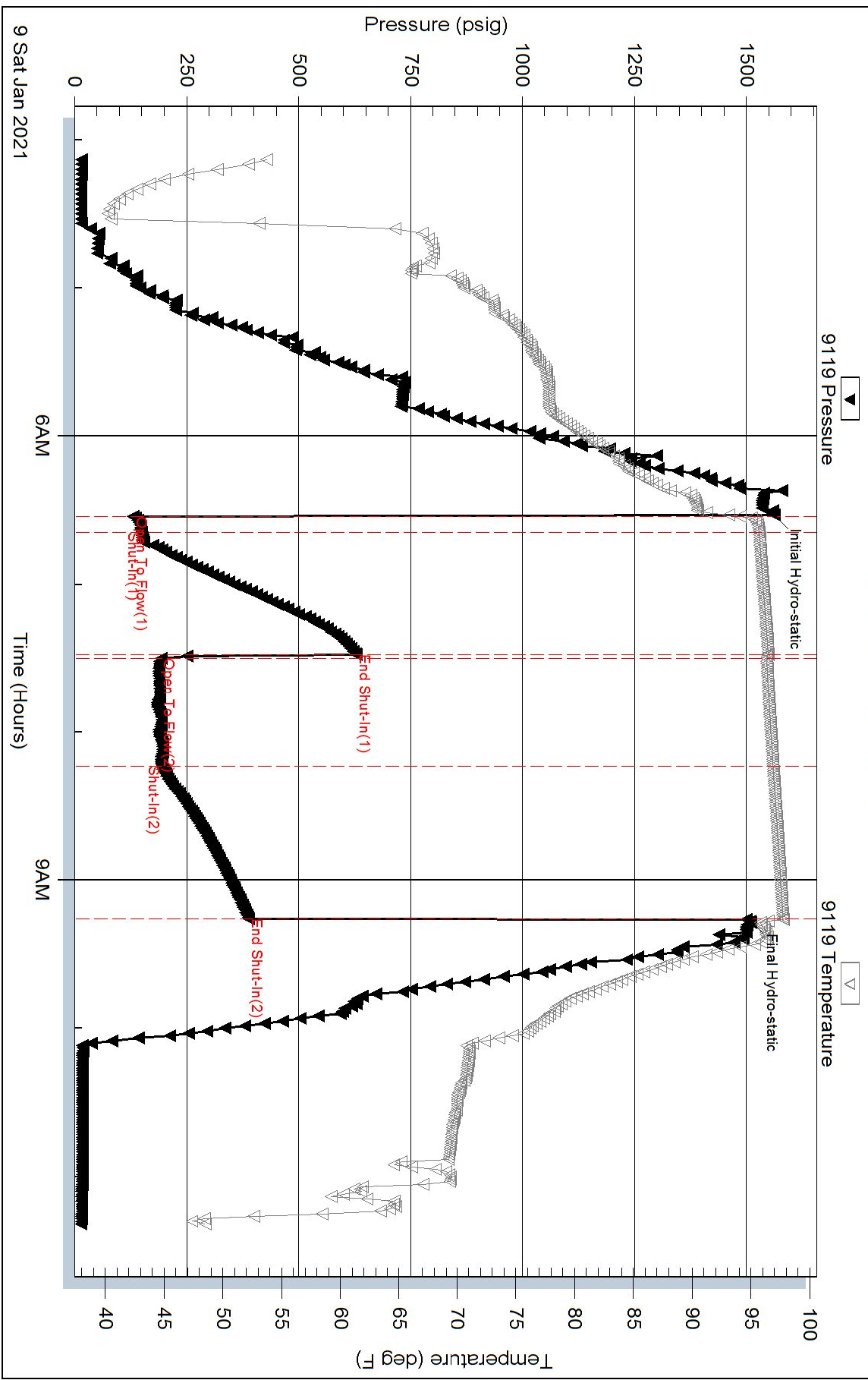
Total Length: 2140.00 ft Total Volume: 28.390 bbl

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

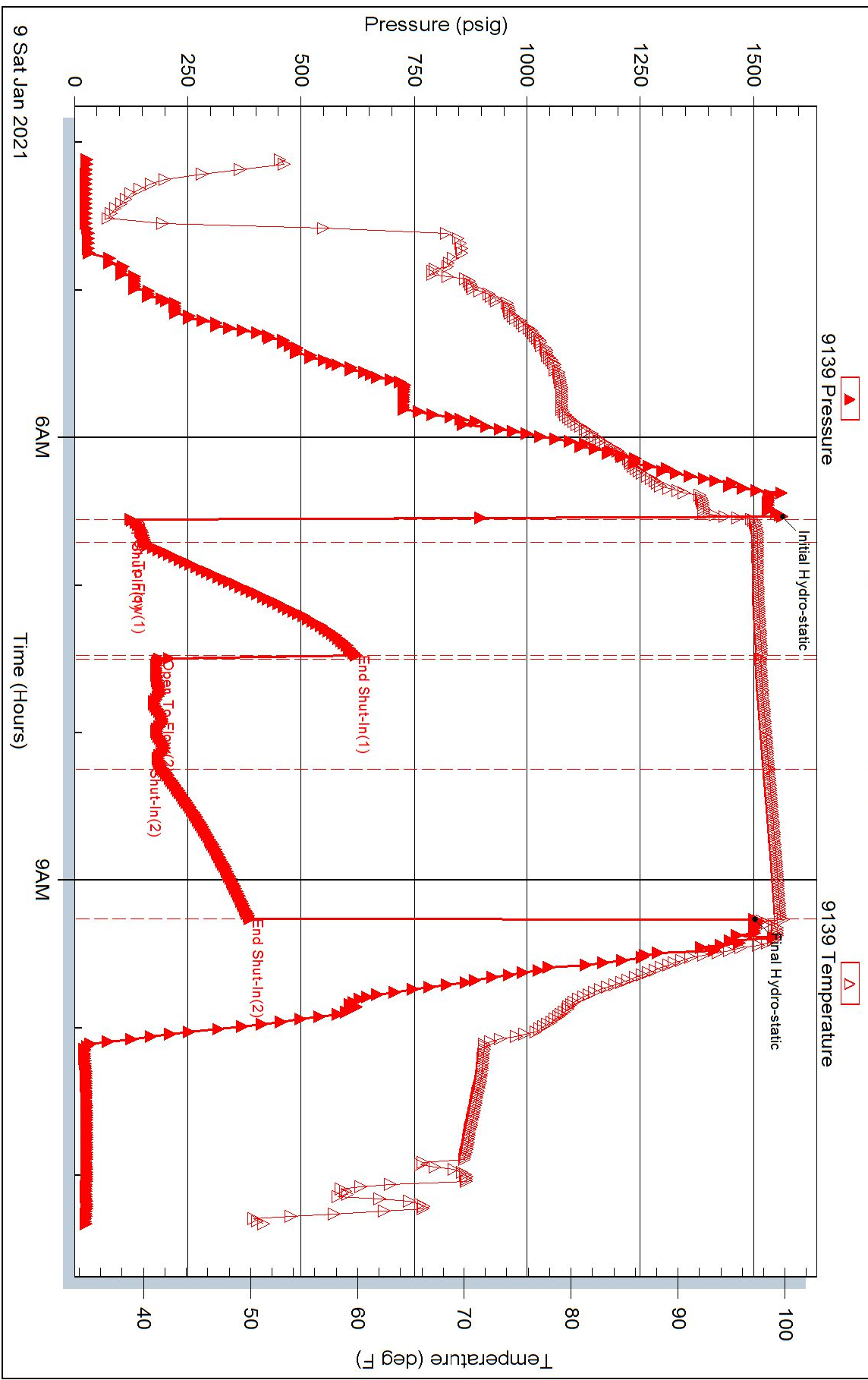
Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Younger Energy Company**

9431 E Harry Street Suite 40 Building 400
Wichita ,Kansas 67207

ATTN: Keith Reevis

Panning B-21

2-20s-11w Barton

Start Date: 2021.01.10 @ 21:26:00

End Date: 2021.01.10 @ 07:36:00

Job Ticket #: 01461 DST #: 3

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

Printed: 2021.01.10 @ 07:54:40



DRILL STEM TEST REPORT

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 40
Wichhita ,Kansas 67207

Panning B-21

Job Ticket: 01461

DST#: 3

ATTN: Keith Reevis

Test Start: 2021.01.10 @ 21:26:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:37:00

Time Test Ended: 07:36:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3265.00 ft (KB) To 3285.00 ft (KB) (TVD)**

Reference Elevations: 1771.00 ft (KB)

Total Depth: 3265.00 ft (KB) (TVD)

1763.00 ft (CF)

Hole Diameter: 7.81 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **9139** Outside

Press@RunDepth: 1173.43 psig @ 3282.00 ft (KB)

Capacity: psig

Start Date: 2021.01.09

End Date: 2021.01.10

Last Calib.: 1899.12.30

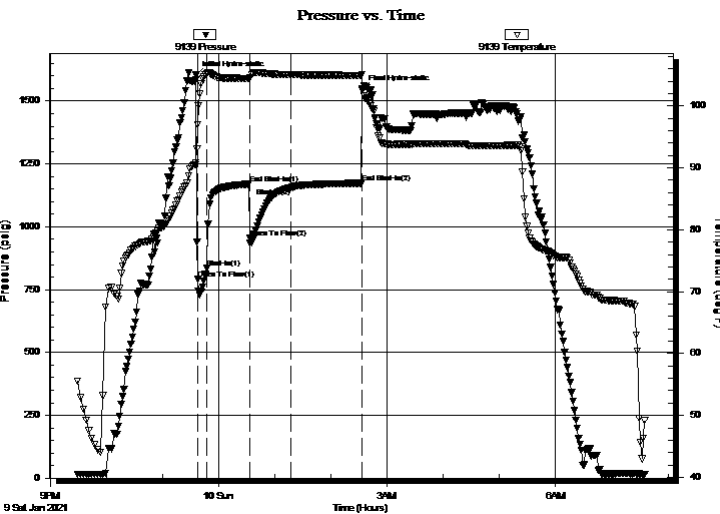
Start Time: 21:26:00

End Time: 07:35:30

Time On Btm: 2021.01.09 @ 23:35:30

Time Off Btm: 2021.01.10 @ 02:33:00

TEST COMMENT: 1st Opening 10 Minutes Strong blow bottom of the bucket in less than 1 minute
1st Shut-In 45 Minutes no blow back
2nd Opening 45 Minutes strong blow bottom of the bucket in less than 1 minute
2nd Shut-In 75 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1602.92	90.83	Initial Hydro-static
2	790.74	96.93	Open To Flow (1)
12	834.59	105.17	Shut-In(1)
57	1169.92	104.47	End Shut-In(1)
58	954.93	104.39	Open To Flow (2)
102	1155.89	105.03	Shut-In(2)
177	1173.43	104.91	End Shut-In(2)
178	1544.01	105.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Gas in the pipe	0.59
3100.00	Clean Gassy Oil	42.95

Gas Rates

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



DRILL STEM TEST REPORT

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 40
Wichhita ,Kansas 67207

Panning B-21

Job Ticket: 01461

DST#: 3

ATTN: Keith Reevis

Test Start: 2021.01.10 @ 21:26:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:37:00

Time Test Ended: 07:36:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: 3265.00 ft (KB) To 3285.00 ft (KB) (TVD)

Reference Elevations: 1771.00 ft (KB)

Total Depth: 3265.00 ft (KB) (TVD)

1763.00 ft (CF)

Hole Diameter: 7.81 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 1165.46 psig @ 3281.00 ft (KB)

Capacity: psig

Start Date: 2021.01.09

End Date: 2021.01.10

Last Calib.: 1899.12.30

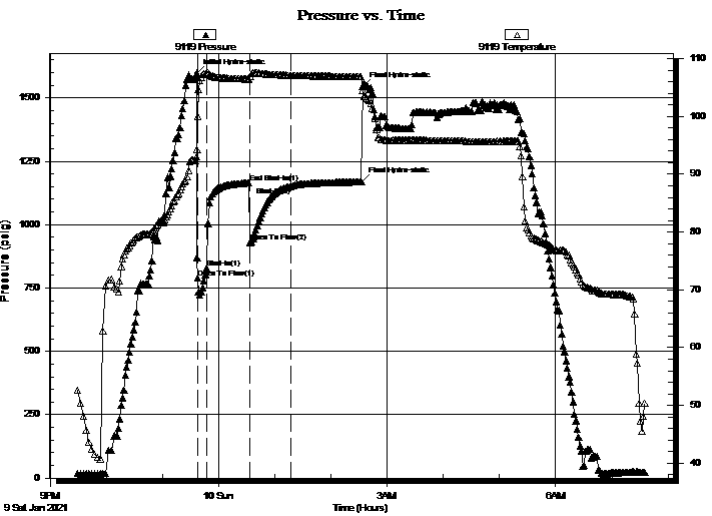
Start Time: 21:26:00

End Time: 07:35:30

Time On Btm: 2021.01.09 @ 23:36:00

Time Off Btm: 2021.01.10 @ 02:32:30

TEST COMMENT: 1st Opening 10 Minutes Strong blow bottom of the bucket in less than 1 minute
1st Shut-In 45 Minutes no blow back
2nd Opening 45 Minutes strong blow bottom of the bucket in less than 1 minute
2nd Shut-In 75 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1597.93	93.00	Initial Hydro-static
1	790.44	100.05	Open To Flow (1)
11	828.83	107.49	Shut-In(1)
57	1165.46	106.44	End Shut-In(1)
58	930.28	106.92	Open To Flow (2)
101	1151.48	107.06	Shut-In(2)
177	1168.78	106.85	Final Hydro-static
178	1545.91	104.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Gas in the pipe	0.59
3100.00	Clean Gassy Oil	42.95

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 400
Wichhita ,Kansas 67207

Panning B-21

Job Ticket: 01461

DST#: 3

ATTN: Keith Reevis

Test Start: 2021.01.10 @ 21:26:00

Tool Information

Drill Pipe:	Length: 3063.00 ft	Diameter: 3.80 inches	Volume: 42.97 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 78000.00 lb
		Total Volume: 43.85 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3265.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	48.00 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			3242.00	
Hydraulic tool	5.00			3247.00	
Jars	6.00			3253.00	
Safety Joint	2.00		Fluid	3255.00	
Top Packer	5.00			3260.00	
Packer	5.00			3265.00	28.00 Bottom Of Top Packer
Anchor	15.00			3280.00	
Recorder	1.00	9119	Inside	3281.00	
Recorder	1.00	9139	Outside	3282.00	
Bullnose	3.00			3285.00	20.00 Anchor Tool
Total Tool Length:	48.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Younger Energy Company

2-20s-11w Barton

9431 E Harry Street Suite 40 Building 40
Wichhita ,Kansas 67207

Panning B-21

Job Ticket: 01461

DST#: 3

ATTN: Keith Reevis

Test Start: 2021.01.10 @ 21:26:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 50.00 sec/qt
Water Loss: 6.00 in³
Resistivity: ohm.m
Salinity: 5900.00 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

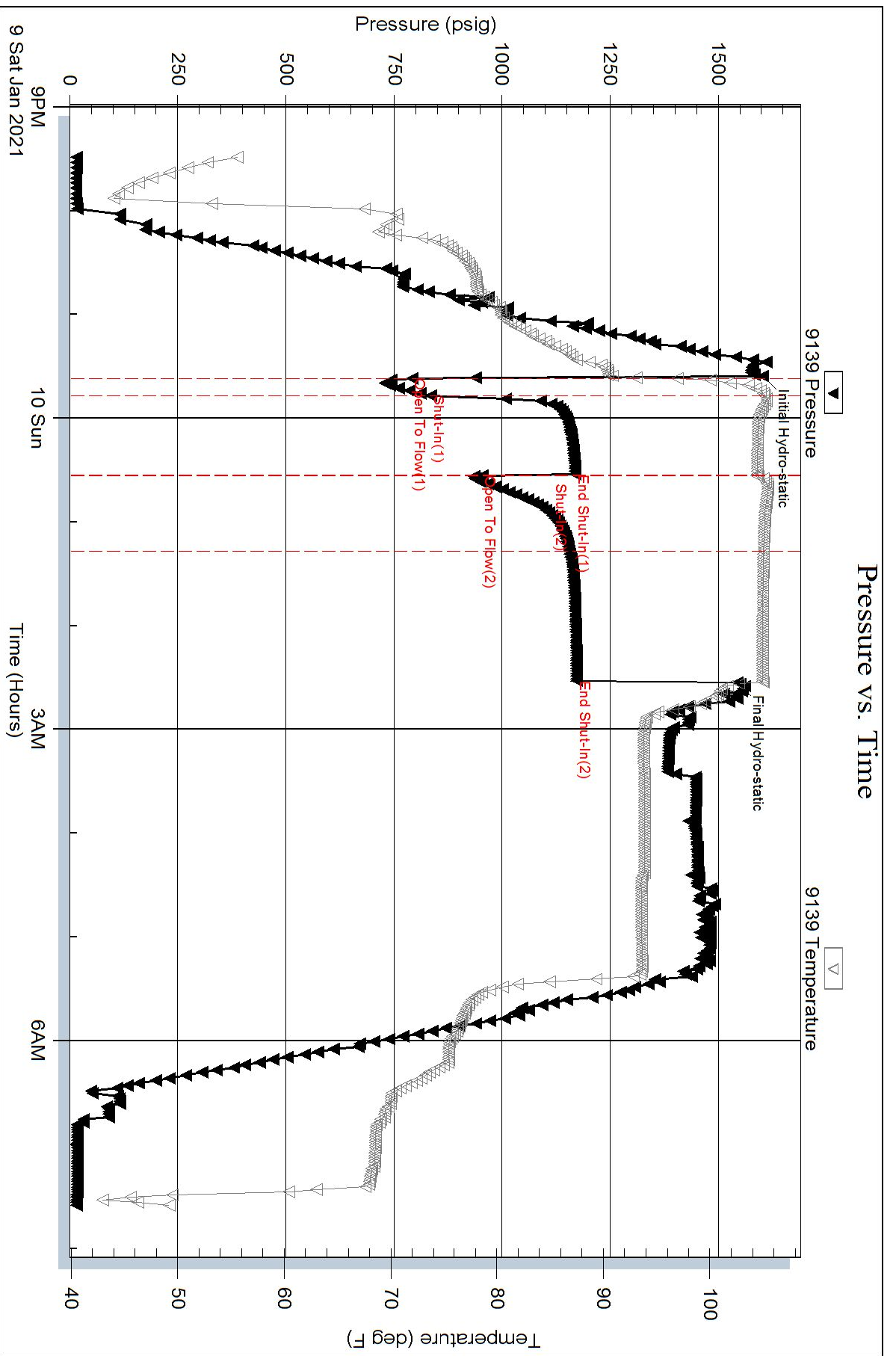
Length ft	Description	Volume bbl
120.00	Gas in the pipe	0.590
3100.00	Clean Gassy Oil	42.947

Total Length: 3220.00 ft Total Volume: 43.537 bbl

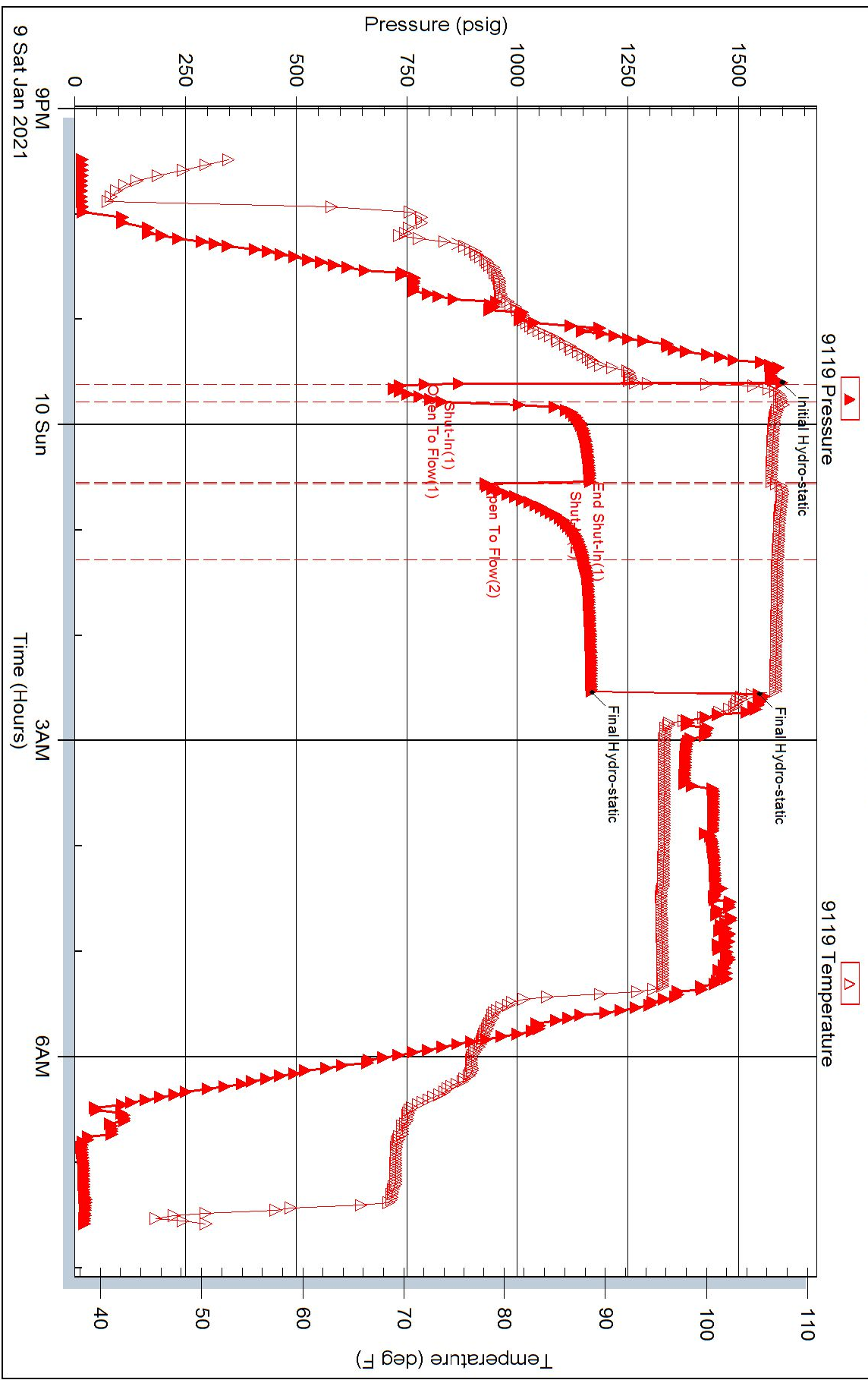
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:



Pressure vs. Time





RECEIVED JAN 18 2021

HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202
316-303-9515

Customer:
YOUNGER ENERGY COMPANY
9415 E HARRY ST
SUITE 403, BUILDING 400
WICHITA, KS 67207-5083

Invoice Date: 1/5/2021
Invoice #: 0351082
Lease Name: Panning B
Well #: 21 (New)
County: Barton, Ks
Job Number: WP1069
District: Oakley

Date/Description	HRS/QTY	Rate	Total
Surface	0.000	0.000	0.00
Cement Pump Service	1.000	600.000	600.00
Cement plug container	1.000	200.000	200.00
Ton Mileage	283.140	1.200	339.77
Heavy Eq Mileage	15.000	3.200	48.00
Light Eq Mileage	15.000	1.600	24.00
Calcium Chloride	722.000	0.600	433.20
Cello Flake	41.800	1.400	58.52
Cement Class A	175.000	13.600	2,380.00
H-Lite	200.000	10.400	2,080.00
8 5/8" Top rubber plug	1.000	140.000	140.00

Total 6,303.49

TERMS: Net 30 days. Interest may be charged on past due invoice at rate of 1 1/2% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

SALES TAX: Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

WE APPRECIATE YOUR BUSINESS!

*Panning B-21
copy to Ker
J 18*

PR



Customer	Younger Energy Company	Lease & Well #	Panning # B-21	Date	1/5/2020
Service District	Oakley KS	County & State	Barton KS	Legals S/T/R	2/20/11W
Job Type	Surface	<input checked="" type="checkbox"/> PROD	<input type="checkbox"/> INJ	<input type="checkbox"/> SWD	Job #
				Legals S/T/R New Well?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> No
					Ticket #
					WP 1069

Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures			
73	Josh	<input checked="" type="checkbox"/> Hard hat	<input checked="" type="checkbox"/> Gloves	<input checked="" type="checkbox"/> Lockout/Tagout	<input checked="" type="checkbox"/> Warning Signs & Flagging
208	John	<input checked="" type="checkbox"/> H2S Monitor	<input checked="" type="checkbox"/> Eye Protection	<input checked="" type="checkbox"/> Required Permits	<input checked="" type="checkbox"/> Fall Protection
194,254	Kale	<input checked="" type="checkbox"/> Safety Footwear	<input type="checkbox"/> Respiratory Protection	<input checked="" type="checkbox"/> Slip/Trip/Fall Hazards	<input type="checkbox"/> Specific Job Sequence/Expectations
		<input checked="" type="checkbox"/> FRC/Protective Clothing	<input type="checkbox"/> Additional Chemical/Acid PPE	<input checked="" type="checkbox"/> Overhead Hazards	<input checked="" type="checkbox"/> Muster Point/Medical Locations
		<input checked="" type="checkbox"/> Hearing Protection	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below	

Comments

Product/ Service Code	Description	Unit of Measure	Quantity	Net Amount
C010	Cement Pump Service	ea	1.00	\$800.00
C050	Cement Plug Container	job	1.00	\$200.00
M020	Ton Mileage	tm	283.14	\$339.77
M010	Heavy Equipment Mileage	mi	15.00	\$48.00
M015	Light Equipment Mileage	mi	15.00	\$24.00
CP100	Calcium Chloride	lb	722.00	\$433.20
CP120	Cello-flake	lb	41.80	\$58.52
CP010	Class A Cement	sack	175.00	\$2,380.00
CP050	H-Lite	sack	200.00	\$2,080.00
FE285	8 5/8" Rubber Plug	ea	1.00	\$140.00

Customer Section: On the following scale, how would you rate Hurricane Services Inc.?		Total Taxable	\$ -	Tax Rate:		Net:	\$6,303.49
Based on this job, how likely is it you would recommend HSI to a colleague?		Slate tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.		Sale Tax:	\$ -	Total:	\$ 6,303.49
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unlikely	1	2	3	4	5	6	7
	8	9	10	Extremely Likely			
HSI Representative: <i>Josh Minter</i>							

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/2% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

X _____ **CUSTOMER AUTHORIZATION SIGNATURE**



HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202
316-303-9515

RECEIVED JAN 20 2021

Customer:

YOUNGER ENERGY COMPANY
9415 E HARRY ST
SUITE 403, BUILDING 400
WICHITA, KS 67207-5083

Invoice Date: 1/11/2021
Invoice #: 0351140
Lease Name: Panning B
Well #: 21 (New)
County: Barton, Ks
Job Number: WP1081
District: Pratt

Date/Description	HRS/QTY	Rate	Total
Longstring	0.000	0.000	0.00
H-Long	150.000	22.400	3,360.00
H-Plug	30.000	10.400	312.00
5 1/2" Floatshoe-Flapper AFU	1.000	300.000	300.00
5 1/2" LD Plug & Baffle	1.000	280.000	280.00
5 1/2" Turbolizers	8.000	64.000	512.00
Mud flush	500.000	0.800	400.00
Light Eq Mileage	15.000	1.600	24.00
Heavy Eq Mileage	15.000	3.200	48.00
Ton Mileage Minimum	1.000	240.000	240.00
Cement Pump Service	1.000	1,200.000	1,200.00
Cement Plug Container	1.000	200.000	200.00

Total 6,876.00

TERMS: Net 30 days. Interest may be charged on past due invoice at rate of 1 ½% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

SALES TAX: Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

WE APPRECIATE YOUR BUSINESS!

*Panning B-21
copy to Ks. TX
copy to DR
J B*




Customer:	YOUNGER ENERGY COMPANY		Lease & Well #	PANNING B 21		Date	1/11/2021
Service District	PRATT		County & State	BARTON KS		Legals S/T/R	2/20/2011
Job Type	LONGSTRING	<input type="checkbox"/> PROD	<input type="checkbox"/> INJ	<input type="checkbox"/> SWD	New Well?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> No
Equipment #	Driver	Ticket #					
912	MATTAL	WP1081					
528/521	MCELMORE	Job Safety Analysis - A Discussion of Hazards & Safety Procedures					
181/532	WHIFIELD	<input checked="" type="checkbox"/> Hard hat	<input checked="" type="checkbox"/> Gloves	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Warning Signs & Flagging		
916	BRUNGARDT	<input checked="" type="checkbox"/> H2S Monitor	<input checked="" type="checkbox"/> Eye Protection	<input type="checkbox"/> Required Permits	<input type="checkbox"/> Fall Protection		
170/522	ORIELY	<input checked="" type="checkbox"/> Safety Footwear	<input checked="" type="checkbox"/> Respiratory Protection	<input type="checkbox"/> Slip/Trip/Fall Hazards	<input type="checkbox"/> Specific Job Sequence/Expectations		
		<input checked="" type="checkbox"/> FRC/Protective Clothing	<input type="checkbox"/> Additional Chemical/Acid PPE	<input type="checkbox"/> Overhead Hazards	<input type="checkbox"/> Muster Point/Medical Locations		
		<input type="checkbox"/> Hearing Protection	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below			
Comments							

Product/Service Code	Description	Unit of Measure	Quantity	Net Amount
CP030	H-Long	sack	150.00	\$3,300.00
CP055	H-Plug	sack	30.00	\$312.00
FE145	5 1/2" Float Shoe - AFU Flapper Type	ea	1.00	\$300.00
FE170	5 1/2" Latch Down Plug & Baffle	ea	1.00	\$280.00
FE135	5 1/2" Turbolizer	ea	8.00	\$512.00
CP170	Mud Flush	gal	500.00	\$400.00
MD15	Light Equipment Mileage	mi	15.00	\$24.00
MD10	Heavy Equipment Mileage	mi	15.00	\$48.00
MO25	Ton Mileage - Minimum	each	1.00	\$240.00
CO15	Cement Pump Service	ea	1.00	\$1,200.00
CO50	Cement Plug Container	job	1.00	\$200.00

Customer Section: On the following scale how would you rate Hurricane Services, Inc.?		Net:	\$6,876.00	
Based on this job, how likely is it you would recommend HSI to a colleague?		Total Taxable	\$ -	
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <i>Extremely Likely</i>		Tax Rate:		
		State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.	Sale Tax:	\$ -
			Total:	\$ 6,876.00
HSI Representative: <i>Mike Mattal</i>				

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/2% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to effect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

X  Agent **CUSTOMER AUTHORIZATION SIGNATURE**



CEMENT TREATMENT REPORT

Customer:	YOUNGER ENERGY COMPANY	Well:	PANNING B 21	Ticket:	WP1081
City, State:	ELLINWOOD KS	County:	BARTON KS	Date:	1/11/2021
Field Rep:		S-T-R:	40594	Service:	LONGSTRING

Downhole Information	
Hole Size:	in
Hole Depth:	ft
Casing Size:	5 1/2 in
Casing Depth:	3365.89 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	77.7 bbls

Calculated Slurry - Lead	
Blend:	H-LONG
Weight:	15.0 ppg
Water / Sx:	6.0 gal / sx
Yield:	1.42 ft³ / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	36.0 bbls
Total Sacks:	150 sx

Calculated Slurry - Tail	
Blend:	H-PLUG
Weight:	13.78 ppg
Water / Sx:	6.0 gal / sx
Yield:	1.43 ft³ / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	7.0 bbls
Total Sacks:	30 sx

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
2:00 AM			-	-	ON LOCATION, SAFTEY MEETING
				-	RUN 5 1/2" 17# CASING TURBOLIZERS ON 1,3,5,7,9,11,13,15
				-	21.04 SHOE JT
5:30 AM				-	CASING ON BOTTOM
5:40 AM				-	HOOK TO CASING
5:45 AM				-	BREAK CIRCULATION WITH RIG
8:15 AM			5.0	5.0	PUMP 5 BBL WATER
8:20 AM			12.0	17.0	PUMP 12 BBL MUD FLUSH
8:22 AM			5.0	22.0	PUMP 5 BBL WATER
8:55 AM				22.0	MIX 10 SKS H-LONG
				22.0	FAULTY RECIRCULATOR, CALL FOR NEW PUMP TRUCK
11:15 AM				22.0	PUMP TRUCK ON LOCATION
11:40 AM	5.0	200.0	5.0	27.0	PUMP 5 BBL WATER
11:42 AM	5.0	200.0	12.0	39.0	PUMP 12 BBL MUD FLUSH
11:46 AM	5.0	200.0	5.0	44.0	PUMP 5 BBL WATER
11:48 AM	5.0	200.0	38.0	82.0	MIX 150 SKS H-LONG
11:55 AM			5.0	87.0	WASH PUMP AND LINE, DROP PLUG
11:58 AM	6.0	150.0		87.0	START DISPLACEMENT
12:08 PM	6.0	250.0	55.0	142.0	LIFT PRESSURE
12:11 PM		1,600.0		142.0	PLUG DOWN, RELEASED AND HELD
12:15 PM			7.0	149.0	MIX 30 SKS H-PLUG FOR RATHOLE
					CIRCULATION THROUGH JOB
					JOB COMPLETE, THANK YOU!
					MIKE MATTAL
					SCOTTY, MARK, KEVEN, BRIAN, GARRET, & BRIAN

CREW		UNIT	SUMMARY		
Cementor:	MATTAL	912	Average Rate	Average Pressure	Total Fluid
Pump Operator:	MCELMORE	528/521	5.3 bpm	386 psi	149 bbls
Bulk #1:	WHIFIELD	181/532			
Bulk #2:	BRUNGARDT	916			

Kelly Brannon