

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	Black Oak Exploration, LLC
Well Name	FRISBIE FAMILY 2-14 SWD
Doc ID	1530029

All Electric Logs Run

DUCP
DIL
BHCS
MEL

Black Oak Exploration, LLC

WELL COMPARISON SHEET

Company: Black Oak Exploration, LLC
 1474 S St Paul St
 Denver, CO 80210
 Contact: Clayton Camozzi 303-968-4999 (Cell)

Well: Frisbie Family 2-14
 Location: 2220 FSL & 1250 FWL
 Sec. 14 - 2s - 36w
 Rawlins Co., KS
 Wellsite Geologist: Clayton Camozzi Cell: (303) 968-4999

Elevation: 3318' GL 3323' KB
 Field: Wildcat
 API No: 15-153-21252-0000
 Surface Casing: 8 5/8" set @ 396.68' KB

Drilling Contractor: Murfin Drilling Co Rig #7. Rig Phone (785-443-5616), Tool Pusher Arturo Cabezas (308-443-5616)

Formation	DRILLING WELL				COMPARISON WELL				COMPARISON WELL			
	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Stone Corral	3205	118	3202	121	3196	124	-6	-3	3216	114	4	7
Topeka	4043	-720	4044	-721	4036	-716	-4	-5	4049	-719	-1	-2
Oread	4163	-840	4162	-839	4154	-834	-6	-5	4169	-839	-1	0
Heebner	4208	-885	4208	-885	4199	-879	-6	-6	4212	-882	-3	-3
Lansing	4258	-935	4258	-935	4249	-929	-6	-6	4264	-934	-1	-1
Lansing D	4320	-997	4318	-995	4310	-990	-7	-5	4326	-996	-1	1
Lansing G	4377	-1054	4377	-1054	4366	-1046	-8	-8	4381	-1051	-3	-3
Lansing J	4464	-1141	4464	-1141	4454	-1134	-7	-7	4468	-1138	-3	-3
BKC	4521	-1198	4526	-1203	4517	-1197	-1	-6	4535	-1205	7	2
Pawnee	4614	-1291	4614	-1291	4609	-1289	-2	-2	4625	-1295	4	4
Fort Scott	4649	-1326	4647	-1324	4643	-1323	-3	-1	4656	-1326	0	2
Cherokee	4700	-1377	4703	-1380	4694	-1374	-3	-6	4713	-1383	6	3
Mississippian	4920	-1597	4914	-1591								
Arbuckle	5102	-1779	5103	-1780								
Total Depth	5350	-2027	5350	-2027	4880	-1560			4855	-1525		

2' Uphole Correction
 Drill Time vs E-logs



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

ATTN: Clayton Camozzi

Job Ticket: 66547

DST#: 1

Test Start: 2020.07.12 @ 13:45:00

GENERAL INFORMATION:

Formation: **LKC " A "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:32:30

Time Test Ended: 21:22:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols

Unit No: 71

Interval: 4242.00 ft (KB) To 4270.00 ft (KB) (TVD)

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4242.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: 163.23 psig @ 4243.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.12

End Date:

2020.07.12

Last Calib.: 2020.07.12

Start Time: 13:45:01

End Time:

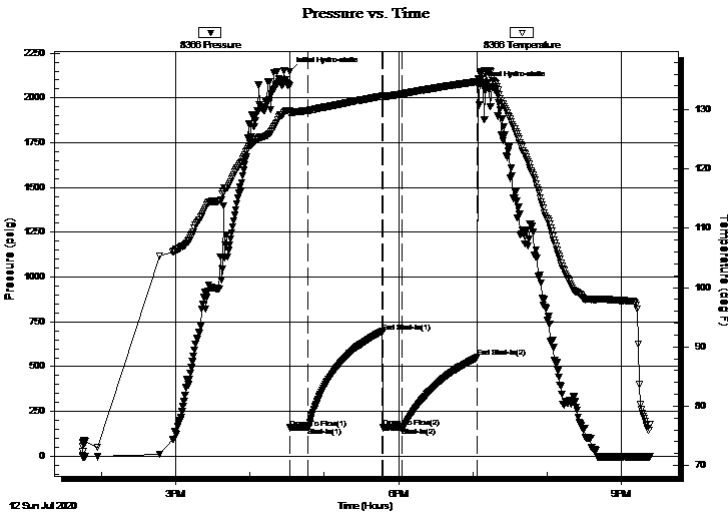
21:22:40

Time On Btm: 2020.07.12 @ 16:32:10

Time Off Btm: 2020.07.12 @ 19:04:20

TEST COMMENT: 15 IF - Surface blow
60 ISI - No return
15 FF - No blow
60 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2145.91	129.89	Initial Hydro-static
1	158.59	129.29	Open To Flow (1)
15	163.17	129.87	Shut-In(1)
75	695.55	132.28	End Shut-In(1)
75	159.14	132.06	Open To Flow (2)
91	163.23	132.65	Shut-In(2)
152	550.94	134.74	End Shut-In(2)
153	2067.25	135.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
290.00	Mud 100%M	1.92

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66547

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2020.07.12 @ 13:45:00

GENERAL INFORMATION:

Formation: **LKC " A "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:32:30

Time Test Ended: 21:22:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols

Unit No: 71

Interval: 4242.00 ft (KB) To 4270.00 ft (KB) (TVD)

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4242.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8353 Inside

Press@RunDepth: psig @ 4243.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.12

End Date: 2020.07.12

Last Calib.: 2020.07.12

Start Time: 13:45:01

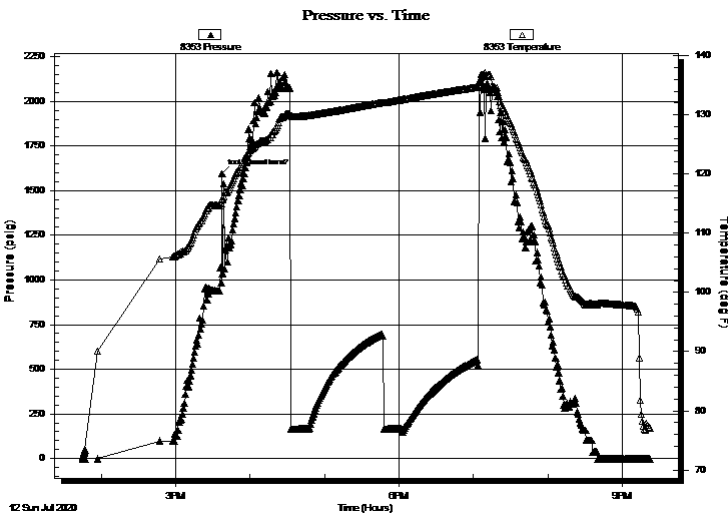
End Time: 21:22:30

Time On Btm:

Time Off Btm:

TEST COMMENT: 15 IF - Surface blow
60 ISI - No return
15 FF - No blow
60 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1595.07	115.66	tool opened here?

Recovery

Length (ft)	Description	Volume (bbl)
290.00	Mud 100%M	1.92

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66547

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2020.07.12 @ 13:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
290.00	Mud 100%M	1.918

Total Length: 290.00 ft Total Volume: 1.918 bbl

Num Fluid Samples: 0

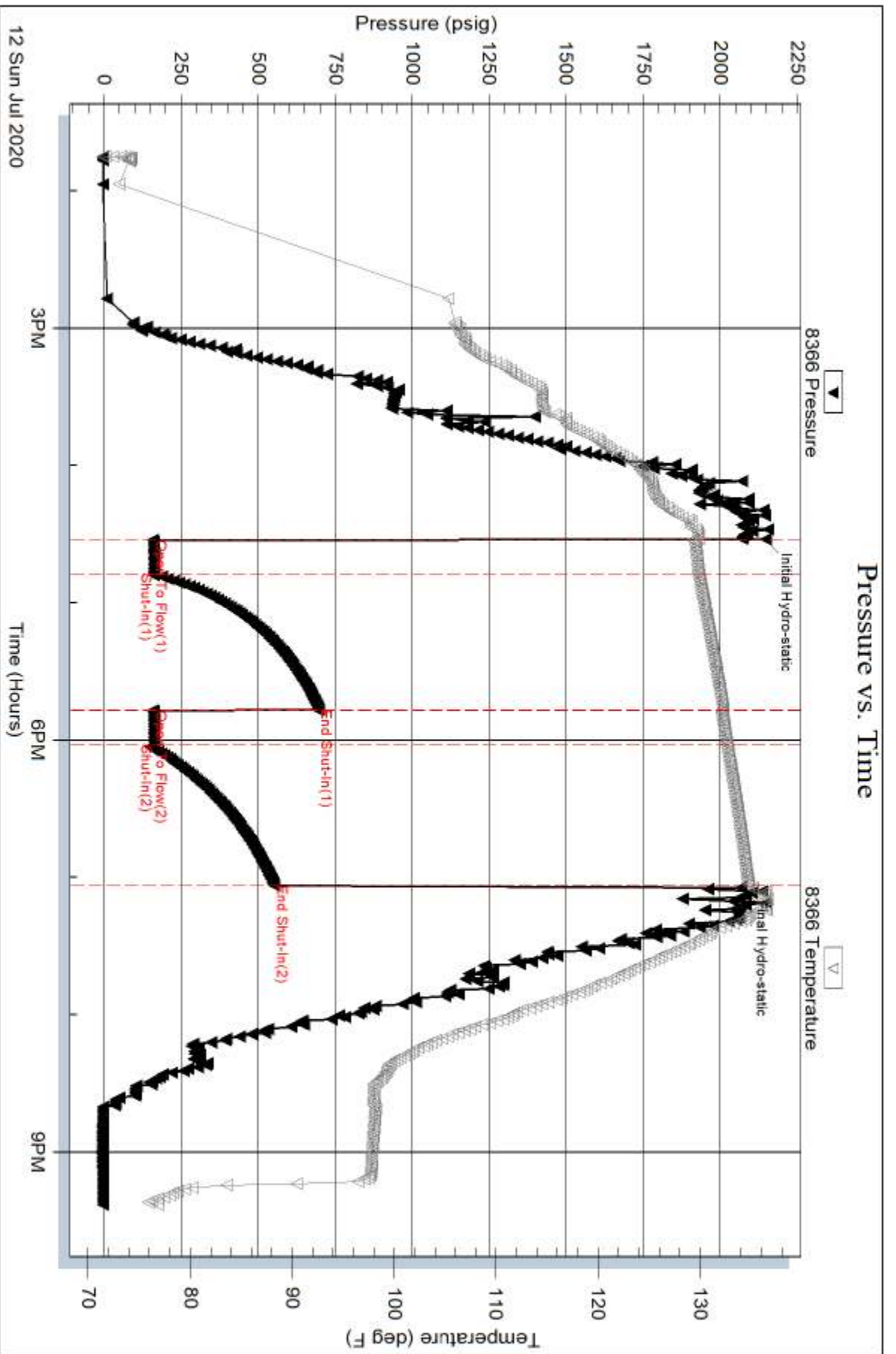
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: tool opened on bridge about half way in hole



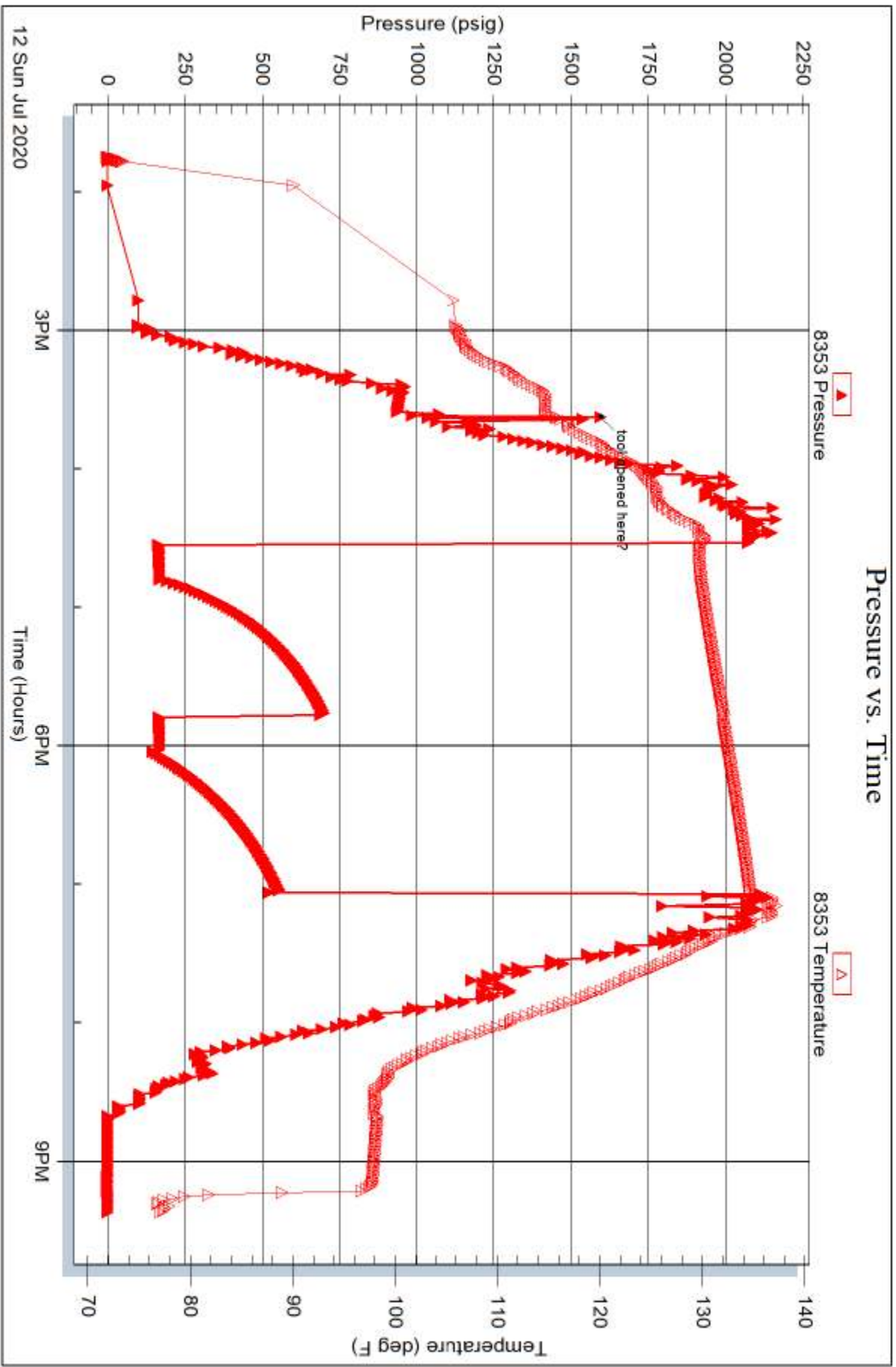
Serial #: 8353

Inside

Black Oak Exploration

Friskie Family #2-14

DST Test Number: 1





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66548

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2020.07.13 @ 11:15:00

GENERAL INFORMATION:

Formation: **LKC " D "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:34:00

Time Test Ended: 18:44:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4280.00 ft (KB) To 4351.00 ft (KB) (TVD)

Total Depth: 4351.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3323.00 ft (KB)

3318.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: 32.58 psig @ 4281.00 ft (KB)

Start Date: 2020.07.13

End Date: 2020.07.13

Start Time: 11:15:01

End Time: 18:44:10

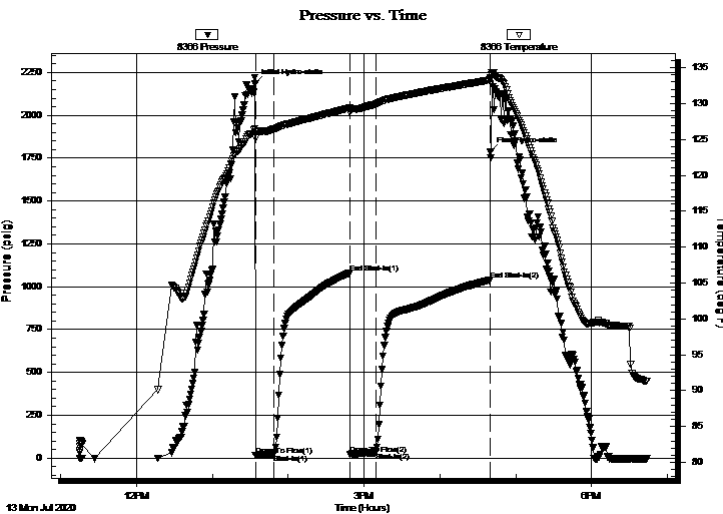
Capacity: 8000.00 psig

Last Calib.: 2020.07.13

Time On Btm: 2020.07.13 @ 13:33:50

Time Off Btm: 2020.07.13 @ 16:40:00

TEST COMMENT: 15 IF - 1/4" blow built to 1"
60 ISI - No return
20 FSI - Surface blow started @ 10 mins stayed at surface blow
90 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2183.65	126.49	Initial Hydro-static
1	17.12	125.19	Open To Flow (1)
15	23.88	126.48	Shut-In(1)
75	1079.70	129.37	End Shut-In(1)
76	24.03	128.79	Open To Flow (2)
96	32.58	129.95	Shut-In(2)
186	1038.94	133.28	End Shut-In(2)
187	1787.95	133.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w/oil spots in tool 100%M	0.07

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66548

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2020.07.13 @ 11:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud w /oil spots in tool 100%M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

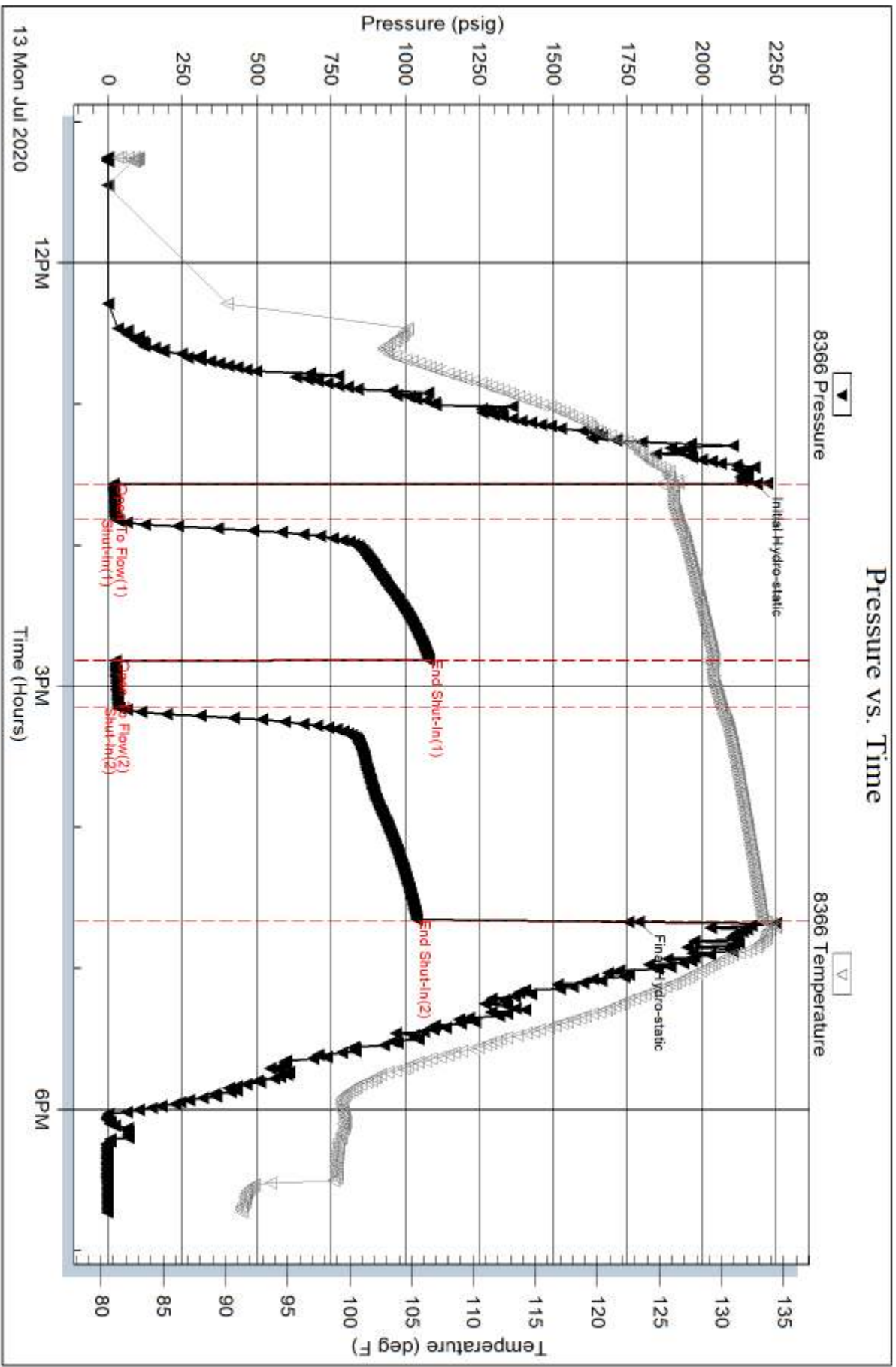
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



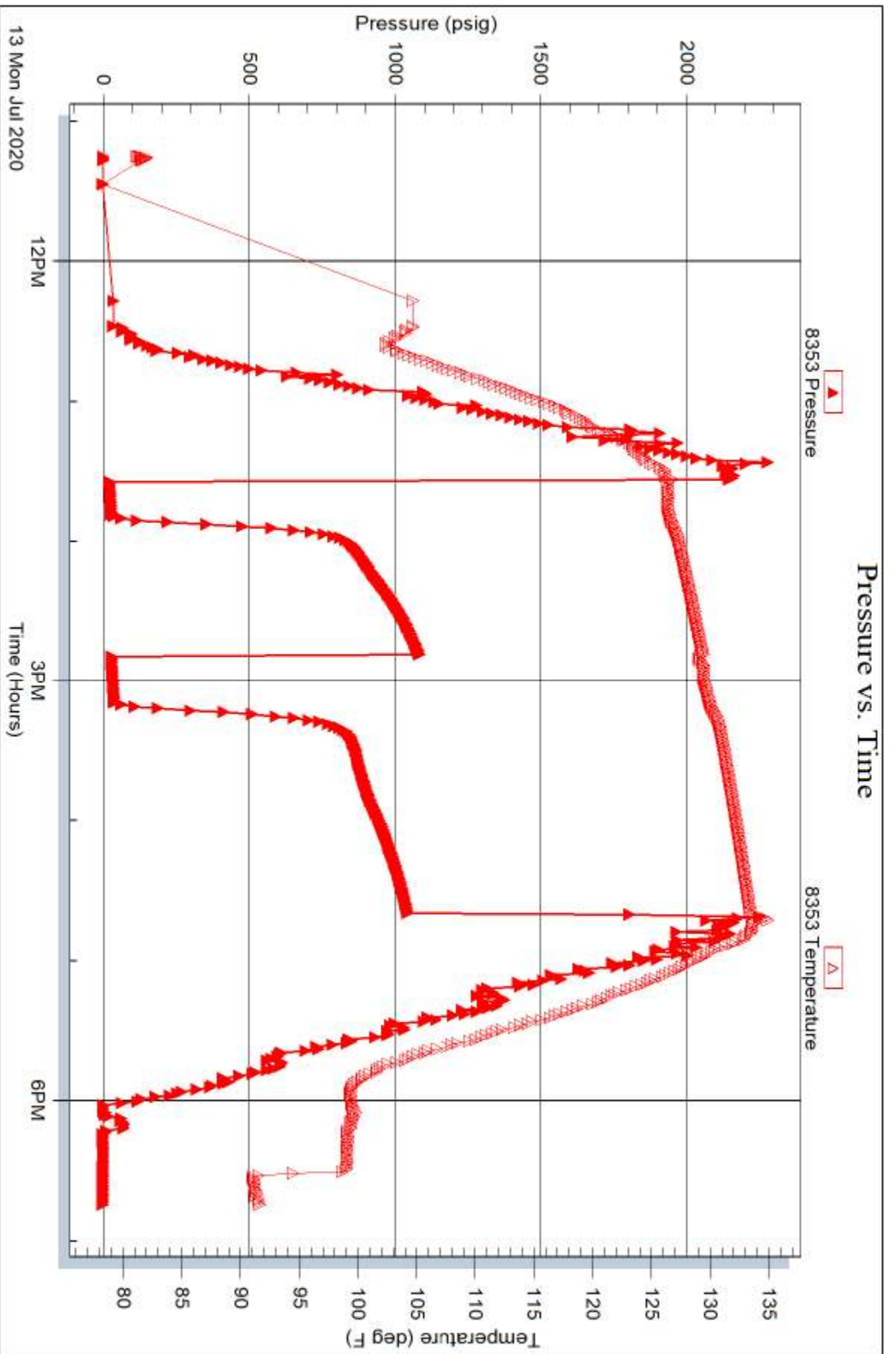
Serial #: 8353

Inside

Black Oak Exploration

Friskie Family #2-14

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 66548

Printed: 2020.07.13 @ 23:10:54



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

ATTN: Clayton Camozzi

Job Ticket: 66549

DST#: 3

Test Start: 2020.07.14 @ 06:11:00

GENERAL INFORMATION:

Formation: **LKC " G "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:22:50

Time Test Ended: 13:53:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4354.00 ft (KB) To 4401.00 ft (KB) (TVD)

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4451.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 642.40 psig @ 4355.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.14

End Date:

2020.07.14

Last Calib.:

2020.07.14

Start Time: 06:11:01

End Time:

13:53:00

Time On Btm:

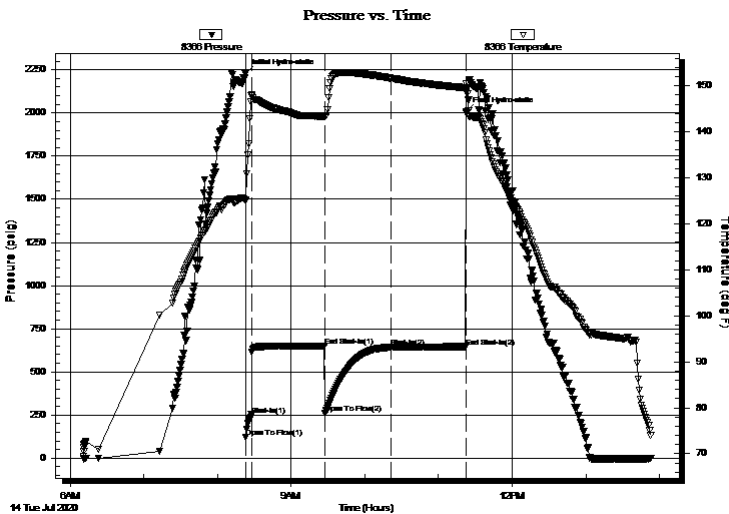
2020.07.14 @ 08:22:40

Time Off Btm:

2020.07.14 @ 11:22:30

TEST COMMENT: 5 IF - BoB @ 2 mins
60 ISI - No return
55 FF - BoB @ 4 mins
60 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2228.11	125.26	Initial Hydro-static
1	119.21	124.96	Open To Flow (1)
5	251.02	147.77	Shut-In(1)
65	647.83	143.35	End Shut-In(1)
66	261.71	143.23	Open To Flow (2)
119	642.40	151.57	Shut-In(2)
180	645.56	149.56	End Shut-In(2)
180	2007.16	150.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	WCM - 30%M - 70%W	0.30
995.00	MCW - 5%M - 95%W	12.35
356.00	MCW - 50%M - 50%W	4.99

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66549

DST#: 3

ATTN: Clayton Camozzi

Test Start: 2020.07.14 @ 06:11:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	WCM - 30%M - 70%W	0.295
995.00	MCW - 5%M - 95%W	12.354
356.00	MCW - 50%M - 50%W	4.994

Total Length: 1411.00 ft Total Volume: 17.643 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

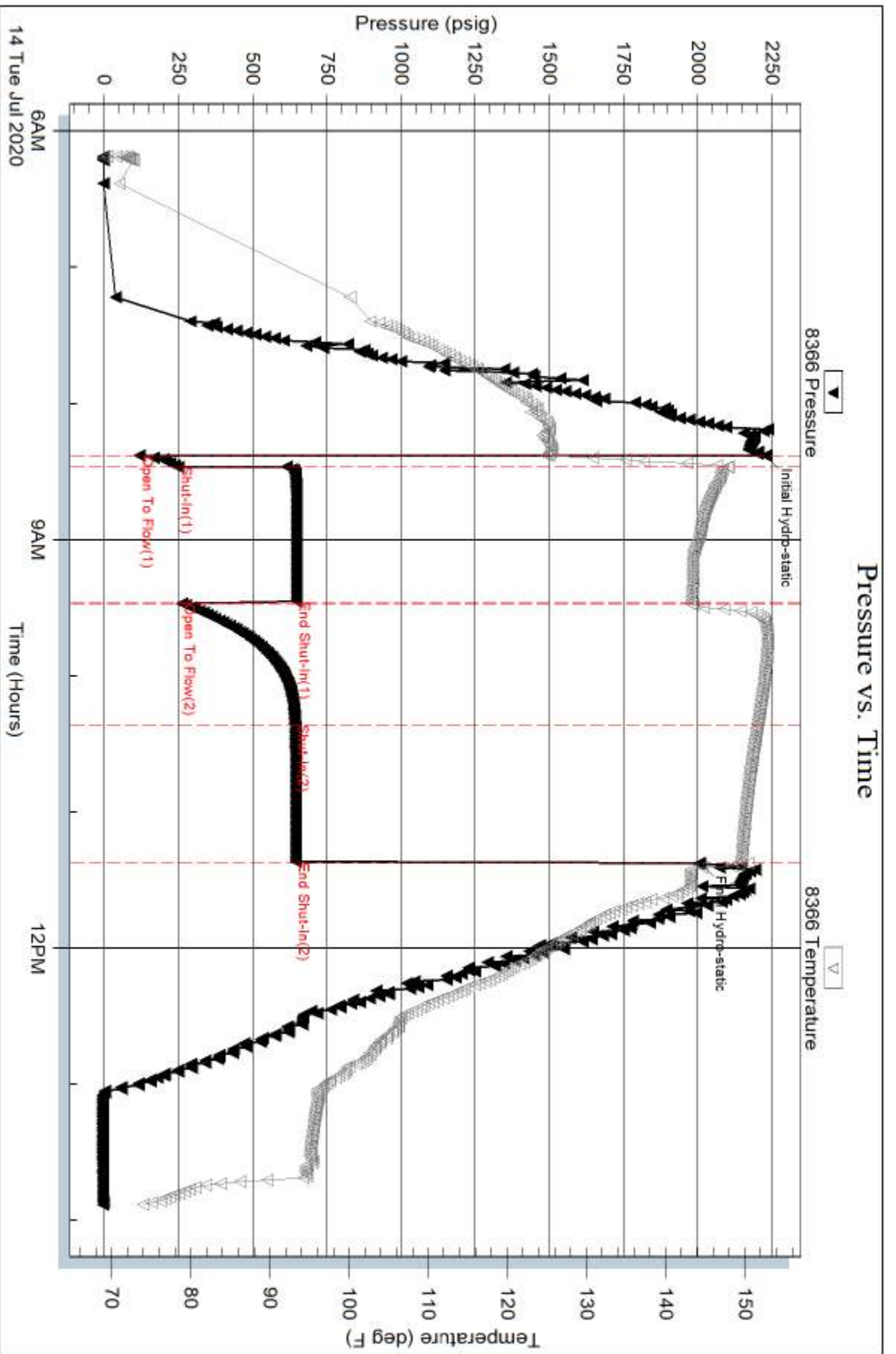
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .735 @ 66 DEG F

CHLORIDES = 120,000 PPM



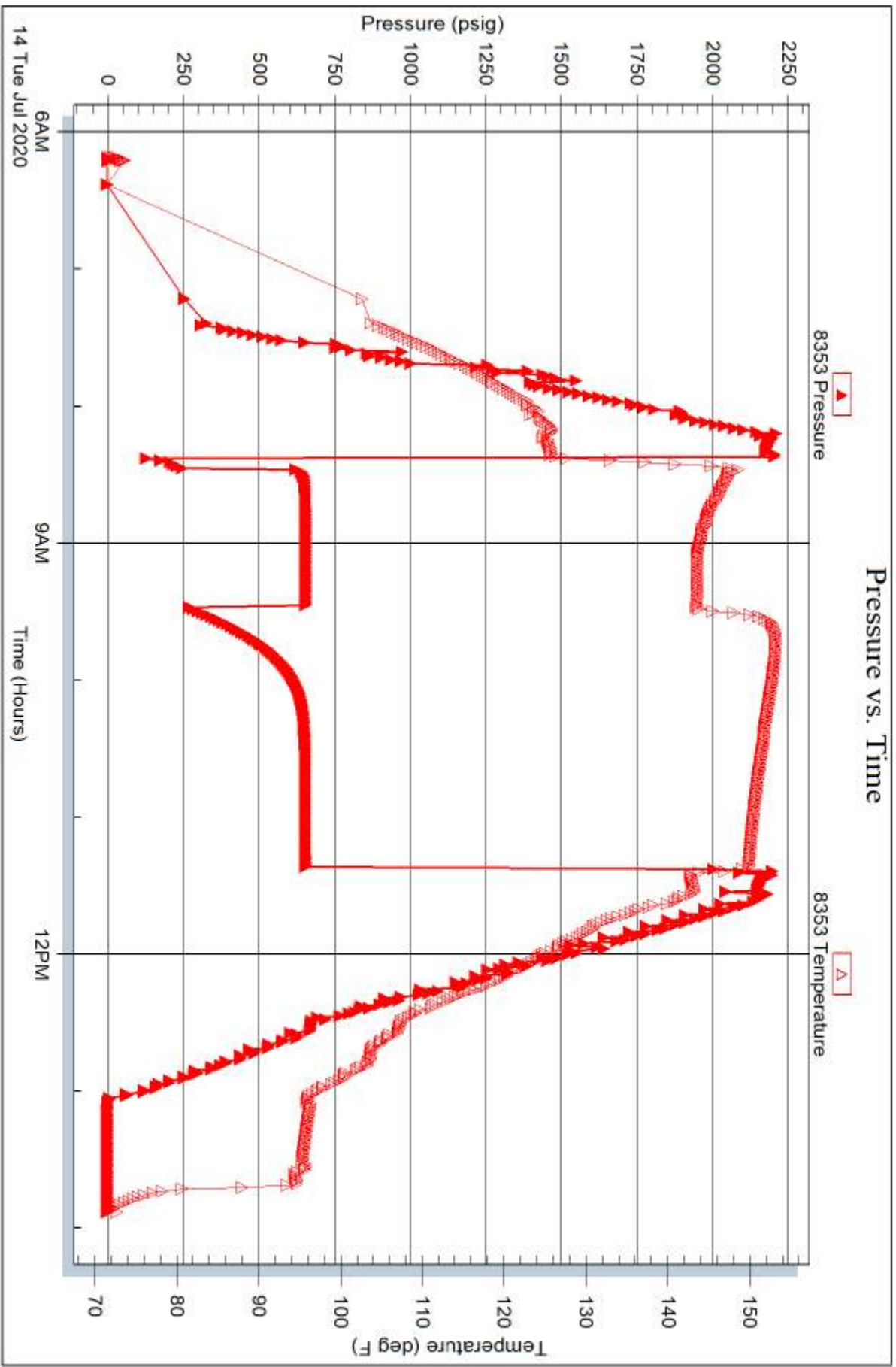
Serial #: 8353

Inside

Black Oak Exploration

Friskie Family #2-14

DST Test Number: 3





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66550

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2020.07.14 @ 23:36:00

GENERAL INFORMATION:

Formation: **LKC " H "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:49:50

Time Test Ended: 06:21:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4410.00 ft (KB) To 4436.00 ft (KB) (TVD)

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4436.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: 20.30 psig @ 4411.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.14

End Date:

2020.07.15

Last Calib.: 2020.07.15

Start Time: 23:36:01

End Time:

06:21:30

Time On Btm: 2020.07.15 @ 01:49:40

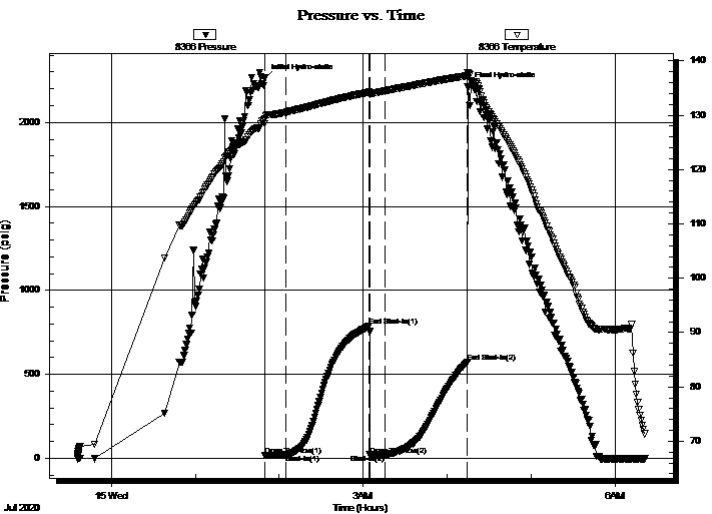
Time Off Btm: 2020.07.15 @ 04:14:50

TEST COMMENT: 15 IF - 1" blow built to 1 1/4"

60 ISI - No return

10 FF - No blow

60 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2262.02	129.38	Initial Hydro-static
1	17.85	128.47	Open To Flow (1)
15	20.29	130.54	Shut-In(1)
75	787.55	134.24	End Shut-In(1)
75	20.23	133.86	Open To Flow (2)
86	20.30	134.44	Shut-In(2)
145	574.55	137.28	End Shut-In(2)
146	2212.52	137.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/oil spots in tool 100%M	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66550

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2020.07.14 @ 23:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /oil spots in tool 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

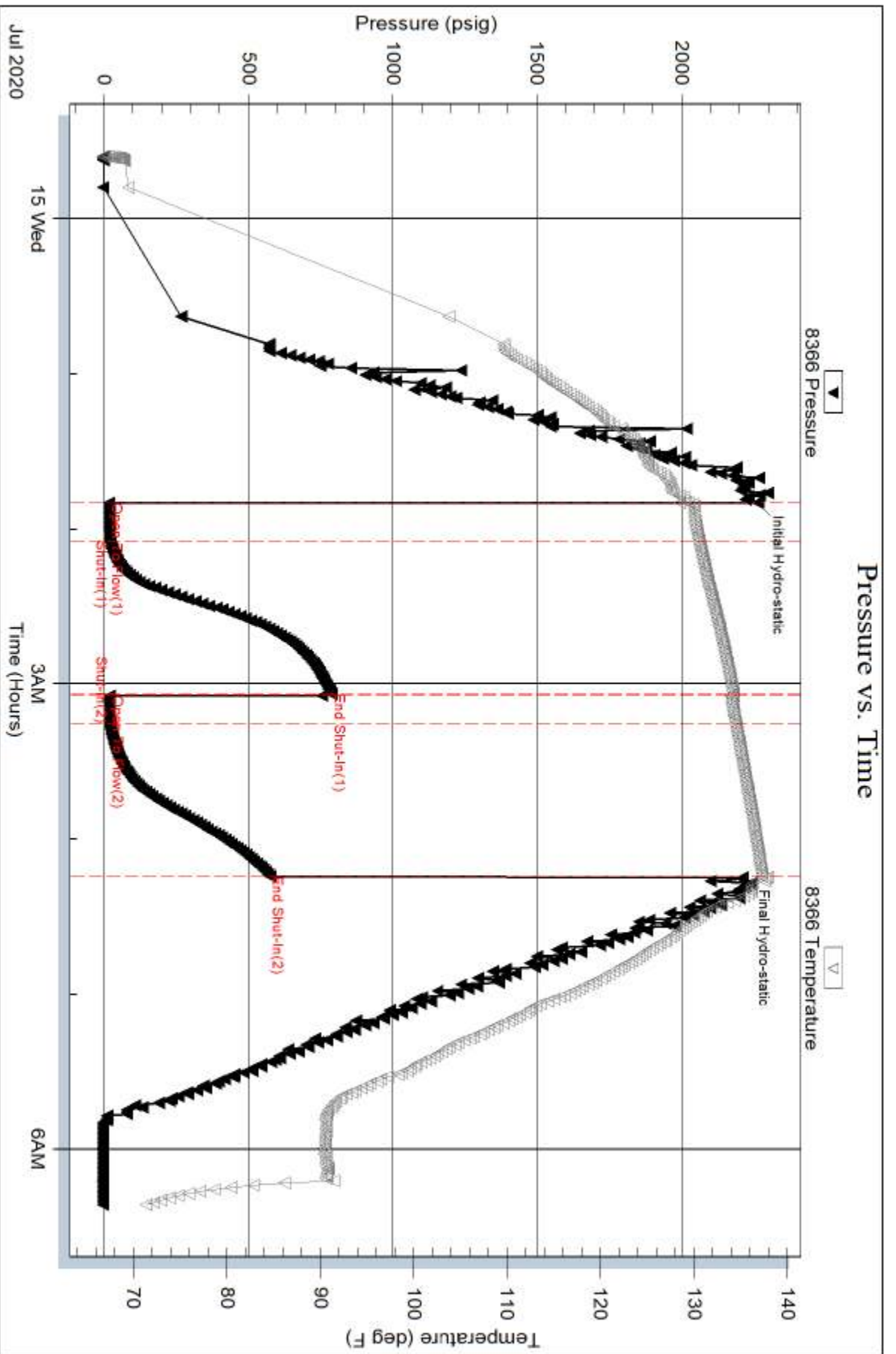
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



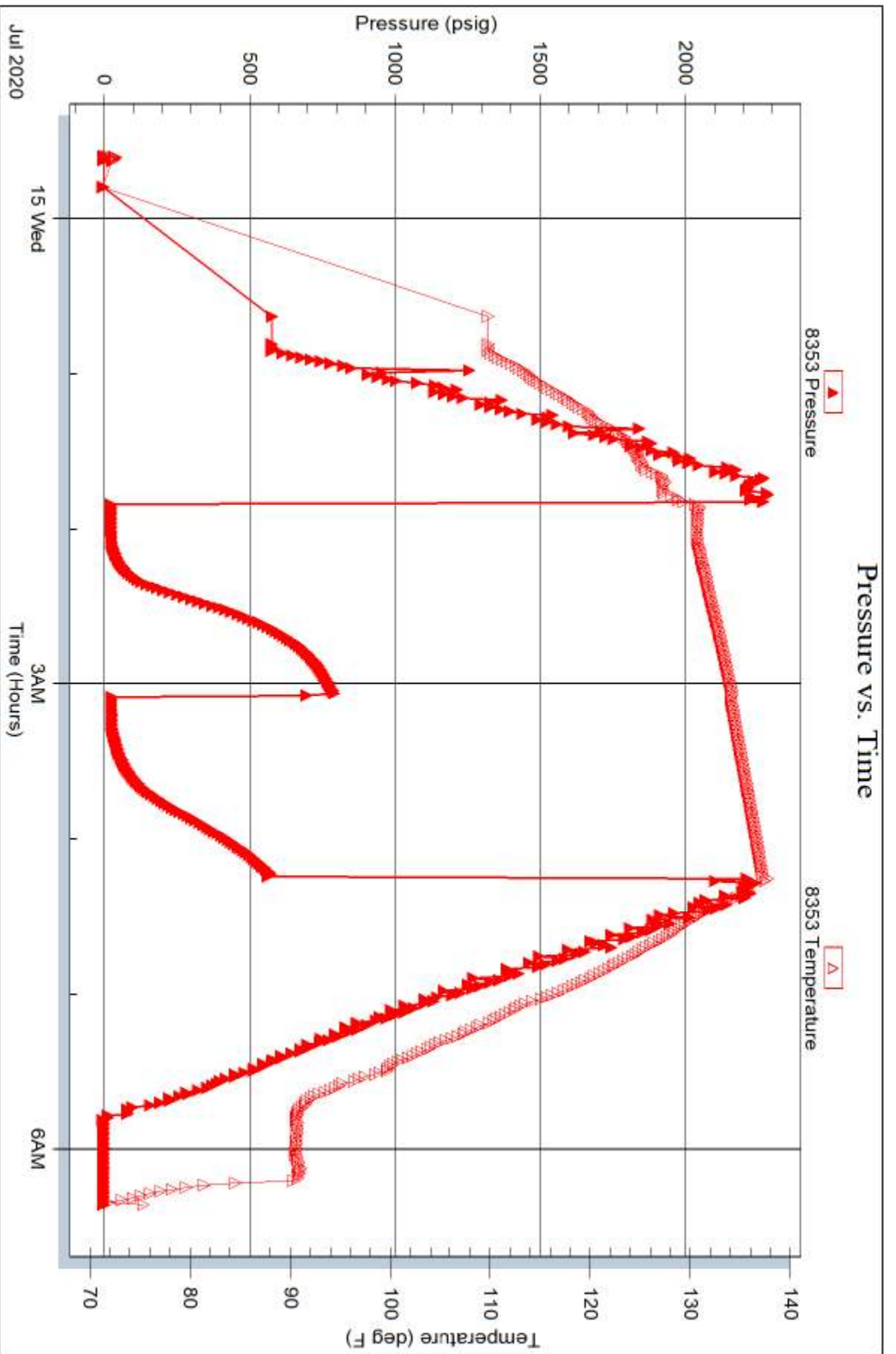
Serial #: 8353

Inside

Black Oak Exploration

Friskie Family #2-14

DST Test Number: 4





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

ATTN: Clayton Camozzi

Job Ticket: 66651

DST#: 5

Test Start: 2020.07.15 @ 15:43:00

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:06:40

Time Test Ended: 22:50:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4433.00 ft (KB) To 4480.00 ft (KB) (TVD)

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4480.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: 21.48 psig @ 4434.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.15

End Date:

2020.07.15

Last Calib.: 2020.07.15

Start Time: 15:43:01

End Time:

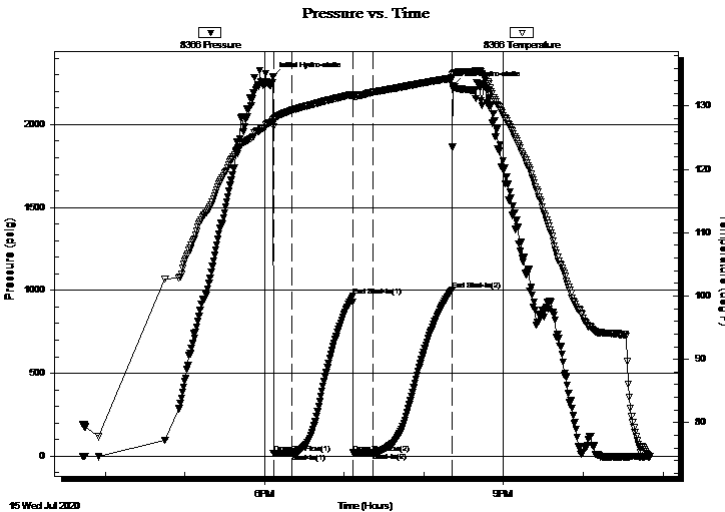
22:50:10

Time On Btm: 2020.07.15 @ 18:06:30

Time Off Btm: 2020.07.15 @ 20:21:39

TEST COMMENT: 15 IF - 1/4" blow
45 ISI - No return
15 FF - No blow, flushed tool, no blow
60 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2289.08	127.80	Initial Hydro-static
1	17.01	126.78	Open To Flow (1)
15	19.44	129.35	Shut-In(1)
60	964.58	131.82	End Shut-In(1)
61	20.21	131.40	Open To Flow (2)
76	21.48	132.19	Shut-In(2)
135	1003.58	134.41	End Shut-In(2)
136	2235.99	134.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/oil spots in tool 100%M	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66651

DST#: 5

ATTN: Clayton Camozzi

Test Start: 2020.07.15 @ 15:43:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /oil spots in tool 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

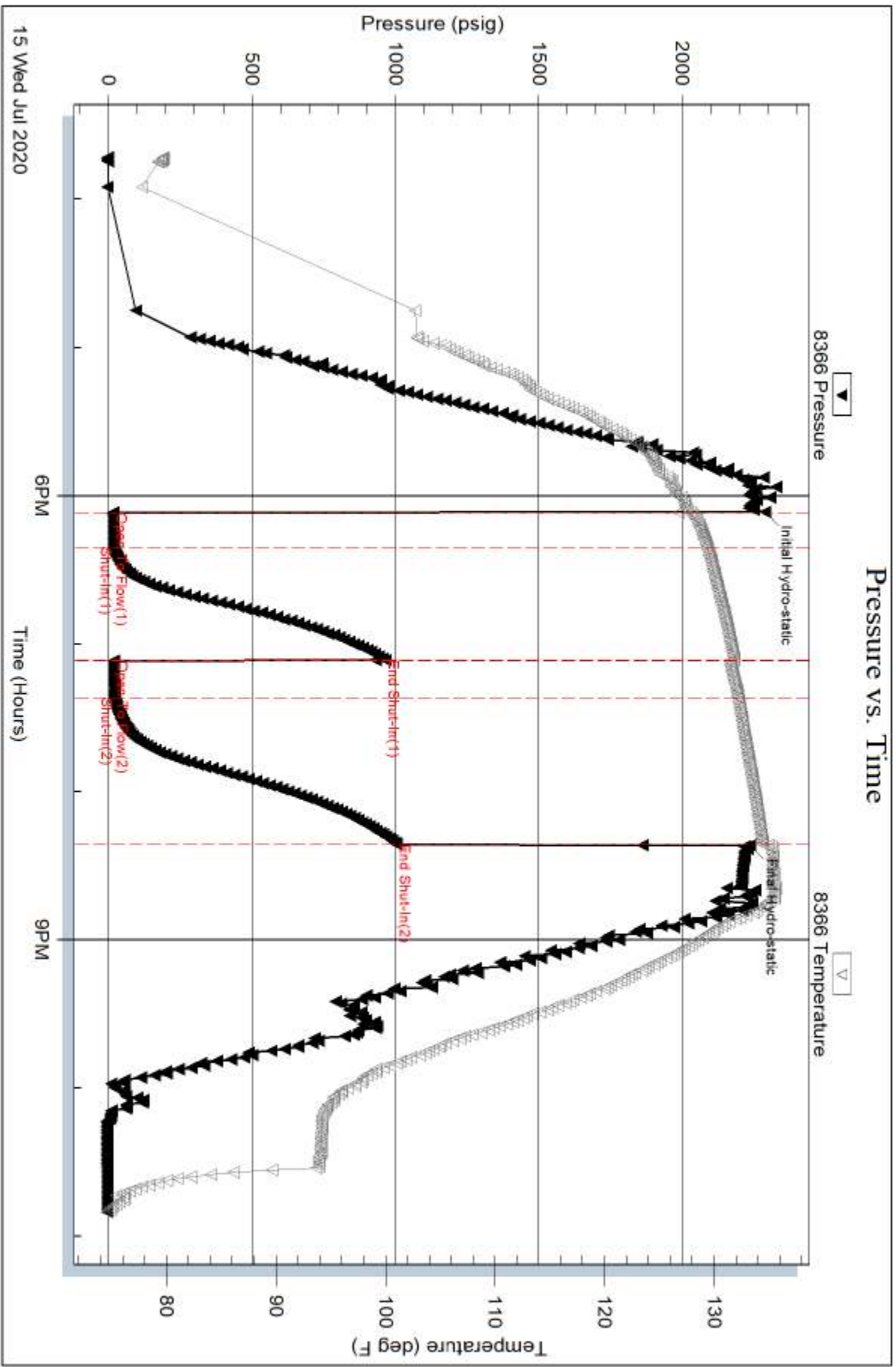
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



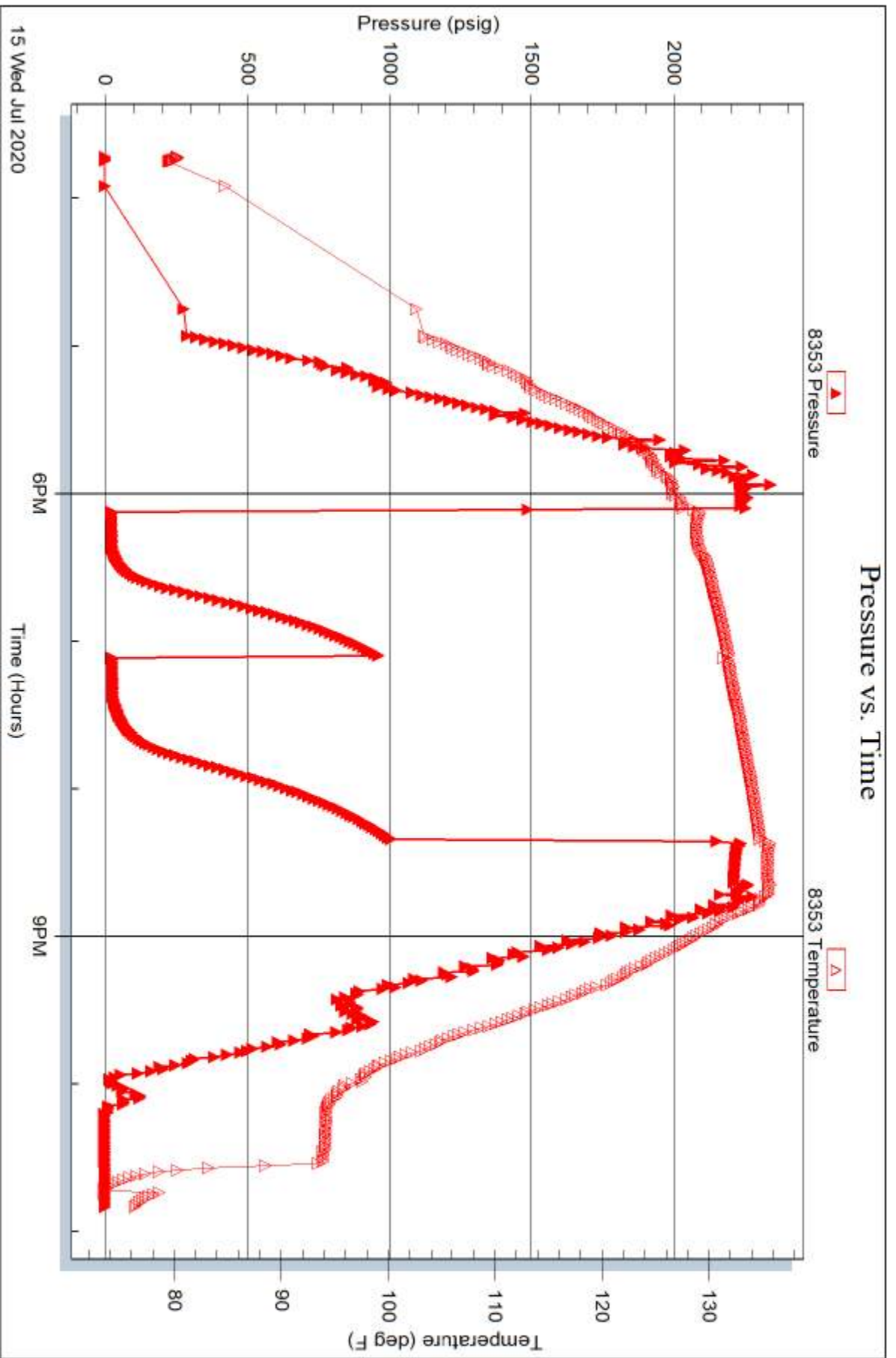
Serial #: 8353

Inside

Black Oak Exploration

Friskie Family #2-14

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 66651

Printed: 2020.07.16 @ 08:04:15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66652

DST#: 6

ATTN: Clayton Camozzi

Test Start: 2020.07.16 @ 23:27:00

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:45:40

Time Test Ended: 05:44:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4630.00 ft (KB) To 4675.00 ft (KB) (TVD)

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4675.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: 16.00 psig @ 4631.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.16

End Date: 2020.07.17

Last Calib.: 2020.07.17

Start Time: 23:27:01

End Time: 05:44:50

Time On Btm: 2020.07.17 @ 01:45:30

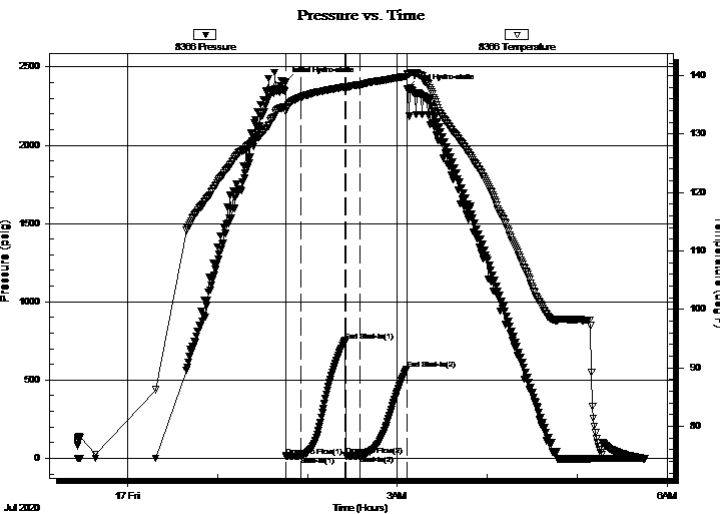
Time Off Btm: 2020.07.17 @ 03:06:40

TEST COMMENT: 10 IF - 3/4" built to 1"

30 ISI - No return

10 FF - No blow

30 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2404.68	134.74	Initial Hydro-static
1	13.20	133.82	Open To Flow (1)
11	14.19	136.29	Shut-In(1)
40	751.34	138.08	End Shut-In(1)
40	15.79	137.68	Open To Flow (2)
50	16.00	138.43	Shut-In(2)
81	571.42	139.89	End Shut-In(2)
82	2360.93	140.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%M	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66652

DST#: 6

ATTN: Clayton Camozzi

Test Start: 2020.07.16 @ 23:27:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

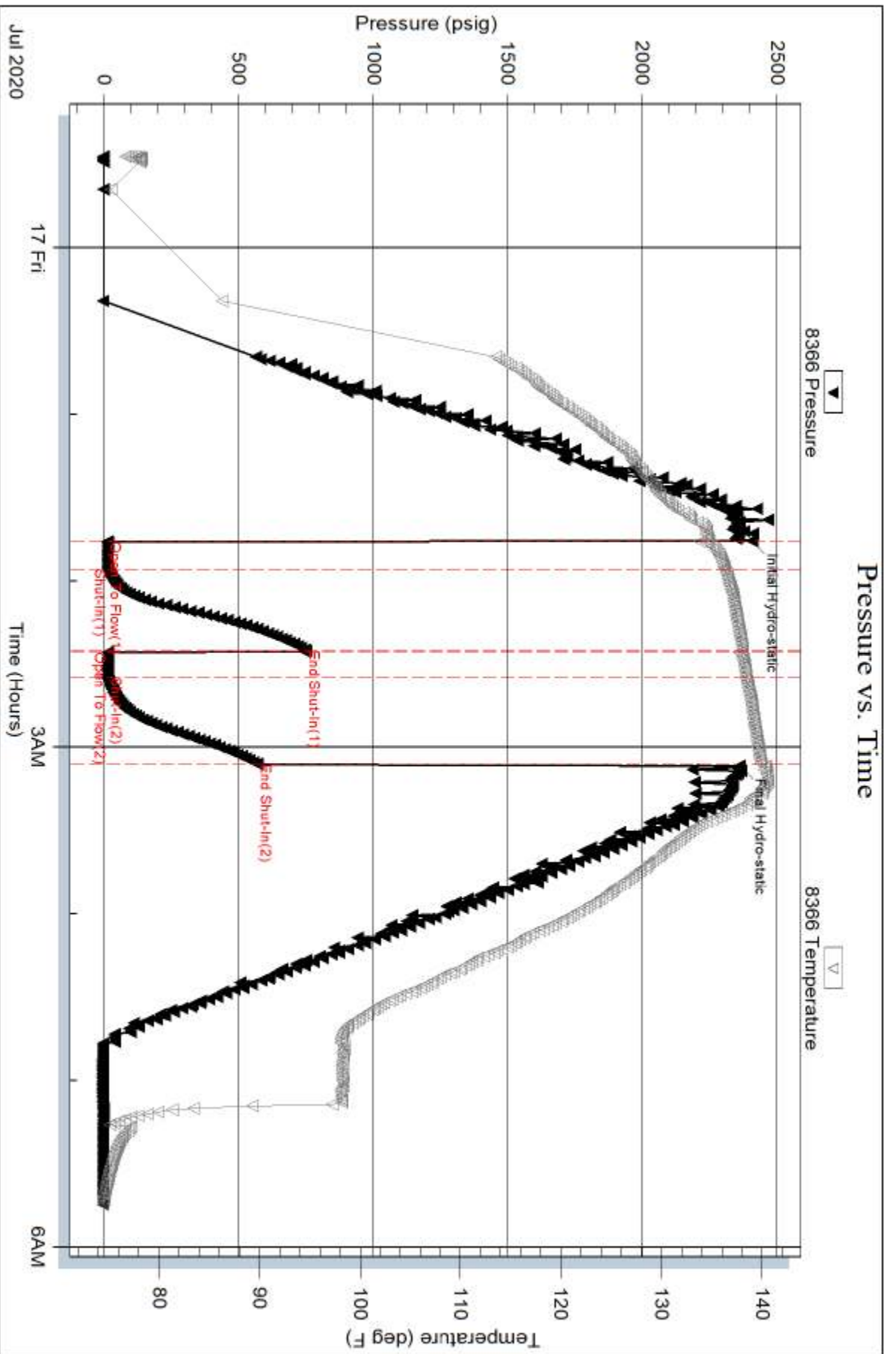
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



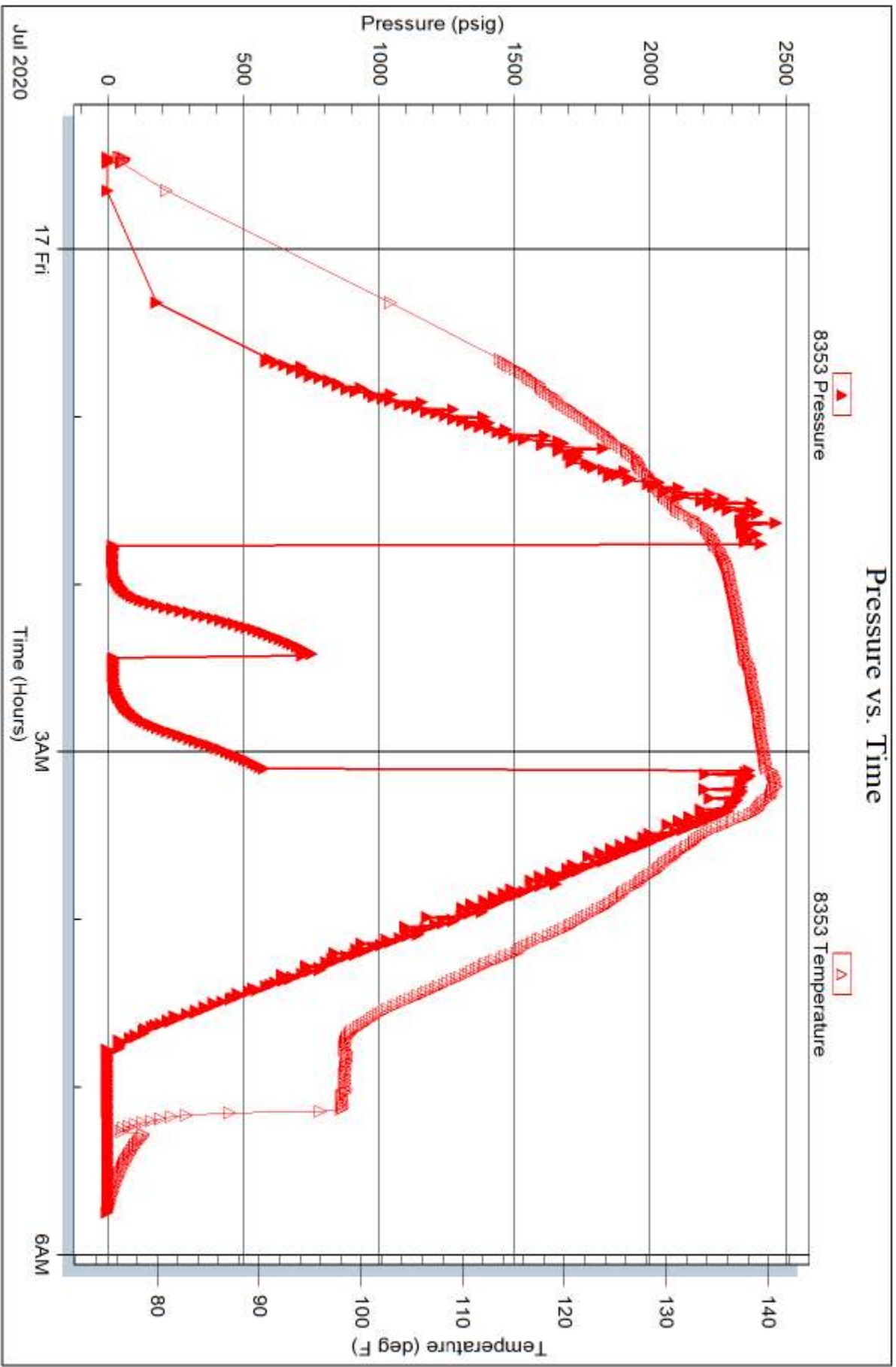
Serial #: 8353

Inside

Black Oak Exploration

Friskie Family #2-14

DST Test Number: 6



BLACK OAK



EXPLORATION

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

Well Name: Frisbie Family 2-14
Well Id:
Location: Section 14 - 2S - 36W Rawlins Co, Kansas
License Number: API # 15-153-21252-0000
Spud Date: 07/08/2020
Surface Coordinates: 2200 FSL & 1250 FWL
Region: Wildcat
Drilling Completed: 07/18/2020

Bottom Hole
Coordinates:
Ground Elevation (ft): 3318' K.B. Elevation (ft): 3323'
Logged Interval (ft): 4000 To: 5350 Total Depth (ft): 5350
Formation:
Type of Drilling Fluid: Chemical Gel/Polymer Fresh Water -Based

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

OPERATOR

Company: BLACK OAK EXPLORATION, LLC
Address: 1474 S St Paul St
Denver CO 80210

GEOLOGIST

Name: Clayton Camozzi
Company: Black Oak Exploration, LLC
Address: 1474 S St Paul St
Denver CO 80210
Cell: 303.968.4999

REMARKS

After review of the open hole logs, DST data and geological log data it was recommended to run 5-1/2" production casing on the Frisbie Family 2-14 for an Arbuckle SWD. *Note - The drill time, DST intervals, and sample tops are 2' uphole/shallow to the E-logs. The GR curve has been shifted 2' downhole to match the aforementioned on this log. The samples will be delivered, processed, and available for review at the KGS Library located in Wichita, Kansas
Respectfully, Clayton Camozzi

Black Oak Exploration, LLC

WELL COMPARISON SHEET

Company: Black Oak Exploration, LLC
 1474 S St Paul St
 Denver, CO 80210
 Contact: Clayton Camozzi 303-968-4999 (Cell)

Well: Frisbie Family 2-14
 Location: 2220 FSL & 1250 FWL
 Sec. 14 - 2s - 36w
 Rawlins Co., KS
 Wellsite Geologist: Clayton Camozzi Cell: (303) 968-4999

Elevation: 3318' GL 3323' KB
 Field: Wildcat
 API No: 15-153-21252-0000
 Surface Casing: 8 5/8" set @ 396.68' KB

Drilling Contractor: Murfin Drilling Co Rig #7. Rig Phone (785-443-5616), Tool Pusher Arturo Cabezas (308-443-5616)

2' Uphole Correction
 Drill Time vs E-logs

Formation	DRILLING WELL			COMPARISON WELL			COMPARISON WELL		
	Sample	Sub-Sea	Log	Sub-Sea	Sample	Log	Sub-Sea	Sample	Log
Stone Corral	3205	118	3202	124	-6	3196	114	4	3216
Topeka	4043	-720	4044	-716	-4	4036	-719	-1	4049
Oread	4163	-840	4162	-834	-6	4154	-839	-1	4169
Heebner	4208	-885	4208	-879	-6	4199	-882	-3	4212
Lansing	4258	-935	4258	-929	-6	4249	-934	-1	4264
Lansing D	4320	-997	4318	-990	-7	4310	-996	-1	4326
Lansing G	4377	-1054	4377	-1046	-8	4366	-1051	-3	4381
Lansing J	4464	-1141	4464	-1134	-7	4454	-1138	-3	4468
BKC	4521	-1198	4526	-1197	-1	4517	-1205	7	4535
Pawnee	4614	-1291	4614	-1289	-2	4609	-1295	4	4625
Fort Scott	4649	-1326	4647	-1324	-3	4643	-1326	0	4656
Cherokee	4700	-1377	4703	-1380	-3	4694	-1383	6	4713
Mississippian	4920	-1597	4914	-1591					
Arbuckle	5102	-1779	5103	-1780					
Total Depth	5350	-2027	5350	-2027		4880	-1560		4855

COMPARISON WELL
 Black Oak Exploration Frisbie Family #1-14
 2396 FSL & 2970 FEL Producer
 Sec. 14 - 2s - 36w
 3320 KB

Structural Relationship		
Log	Sample	Log
3196	-6	-3
4036	-4	-5
4154	-6	-5
4199	-6	-6
4249	-6	-6
4310	-7	-5
4366	-8	-8
4454	-7	-7
4517	-1	-6
4609	-2	-2
4643	-3	-1
4694	-3	-6
4880		

COMPARISON WELL
 Ritchie Exp, Frisbie #1-15
 2050 FSL & 1440 FEL Producer
 Sec. 15 - 2s - 36w
 3330 KB

Structural Relationship		
Log	Sample	Log
3216	4	7
4049	-1	-2
4169	-1	0
4212	-3	-3
4264	-1	-1
4326	-1	1
4381	-3	-3
4468	-3	-3
4535	7	2
4625	4	4
4656	0	2
4713	6	3
4855		



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66547

DST#: 1

ATTN: Clayton Camozzi

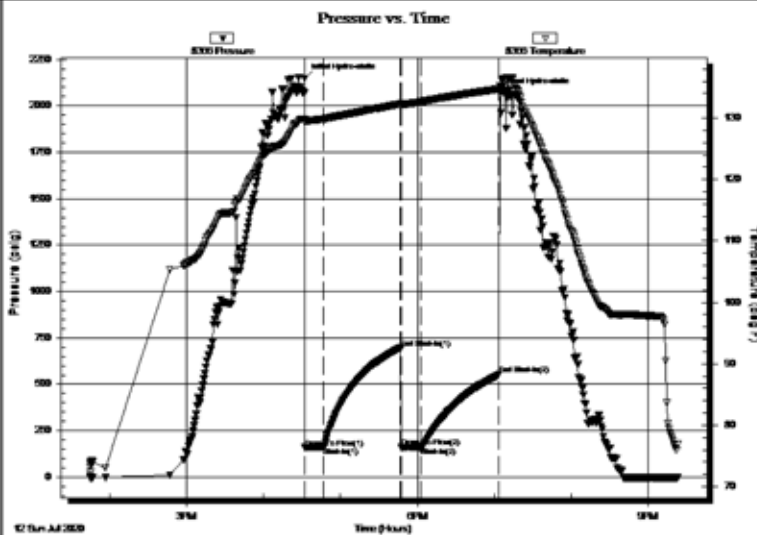
Test Start: 2020.07.12 @ 13:45:00

GENERAL INFORMATION:

Formation: **LKC " A "**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 16:32:30 Tester: Ryan Nichols
 Time Test Ended: 21:22:39 Unit No: 71
 Interval: **4242.00 ft (KB) To 4270.00 ft (KB) (TVD)** Reference Elevations: 3323.00 ft (KB)
 Total Depth: 4242.00 ft (KB) (TVD) 3318.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8366 Outside
 Press@RunDepth: 163.23 psig @ 4243.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2020.07.12 End Date: 2020.07.12 Last Calib.: 2020.07.12
 Start Time: 13:45:01 End Time: 21:22:40 Time On Btm: 2020.07.12 @ 16:32:10
 Time Off Btm: 2020.07.12 @ 19:04:20

TEST COMMENT: 15 IF - Surface blow
 60 ISI - No return
 15 FF - No blow
 60 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2145.91	129.89	Initial Hydro-static
1	158.59	129.29	Open To Flow (1)
15	163.17	129.87	Shut-In(1)
75	695.55	132.28	End Shut-In(1)
75	159.14	132.06	Open To Flow (2)
91	163.23	132.65	Shut-In(2)
152	550.94	134.74	End Shut-In(2)
153	2067.25	135.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
290.00	Mud 100%M	1.92

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66548

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2020.07.13 @ 11:15:00

GENERAL INFORMATION:

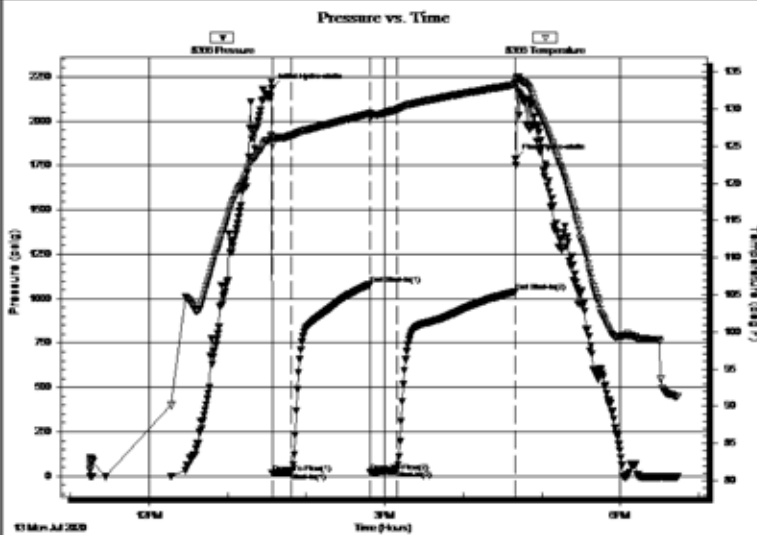
Formation: **LKC " D "**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 13:34:00
 Tester: Ryan Nichols
 Time Test Ended: 18:44:09
 Unit No: 71
 Interval: **4280.00 ft (KB) To 4351.00 ft (KB) (TVD)**
 Reference Elevations: 3323.00 ft (KB)
 Total Depth: 4351.00 ft (KB) (TVD)
 3318.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 32.58 psig @ 4281.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2020.07.13 End Date: 2020.07.13 Last Calib.: 2020.07.13
 Start Time: 11:15:01 End Time: 18:44:10 Time On Btm: 2020.07.13 @ 13:33:50
 Time Off Btm: 2020.07.13 @ 16:40:00

TEST COMMENT: 15 IF - 1/4" blow built to 1"
 60 ISI - No return
 20 FSI - Surface blow started @ 10 mins stayed at surface blow
 90 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2183.65	126.49	Initial Hydro-static
1	17.12	125.19	Open To Flow (1)
15	23.88	126.48	Shut-In(1)
75	1079.70	129.37	End Shut-In(1)
76	24.03	128.79	Open To Flow (2)
96	32.58	129.95	Shut-In(2)
186	1038.94	133.28	End Shut-In(2)
187	1787.95	133.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w/oil spots in tool 100%M	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66549

DST#: 3

ATTN: Clayton Camozzi

Test Start: 2020.07.14 @ 06:11:00

GENERAL INFORMATION:

Formation: **LKC " G "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:22:50

Time Test Ended: 13:53:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: **4354.00 ft (KB) To 4401.00 ft (KB) (TVD)**

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4451.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 642.40 psig @ 4355.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.14

End Date:

2020.07.14

Last Calib.:

2020.07.14

Start Time: 06:11:01

End Time:

13:53:00

Time On Btm:

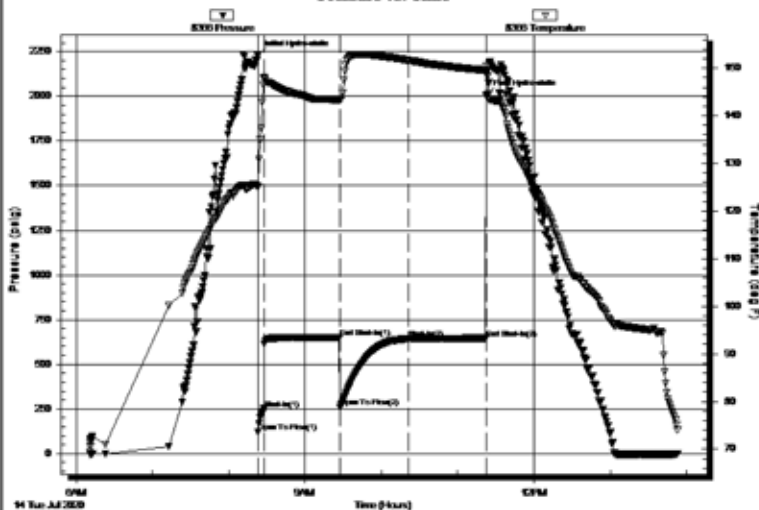
2020.07.14 @ 08:22:40

Time Off Btm:

2020.07.14 @ 11:22:30

TEST COMMENT: 5 IF - BoB @ 2 mins
60 ISI - No return
55 FF - BoB @ 4 mins
60 FSI - No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2228.11	125.26	Initial Hydro-static
1	119.21	124.96	Open To Flow (1)
5	251.02	147.77	Shut-In(1)
65	647.83	143.35	End Shut-In(1)
66	261.71	143.23	Open To Flow (2)
119	642.40	151.57	Shut-In(2)
180	645.56	149.56	End Shut-In(2)
180	2007.16	150.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	WCM - 30%M - 70%W	0.30
995.00	MCW - 5%M - 95%W	12.35
356.00	MCW - 50%M - 50%W	4.99

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66550

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2020.07.14 @ 23:36:00

GENERAL INFORMATION:

Formation: **LKC " H "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:49:50

Time Test Ended: 06:21:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: **4410.00 ft (KB) To 4436.00 ft (KB) (TVD)**

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4436.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 20.30 psig @ 4411.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.14

End Date:

2020.07.15

Last Calib.:

2020.07.15

Start Time: 23:36:01

End Time:

06:21:30

Time On Btm:

2020.07.15 @ 01:49:40

Time Off Btm:

2020.07.15 @ 04:14:50

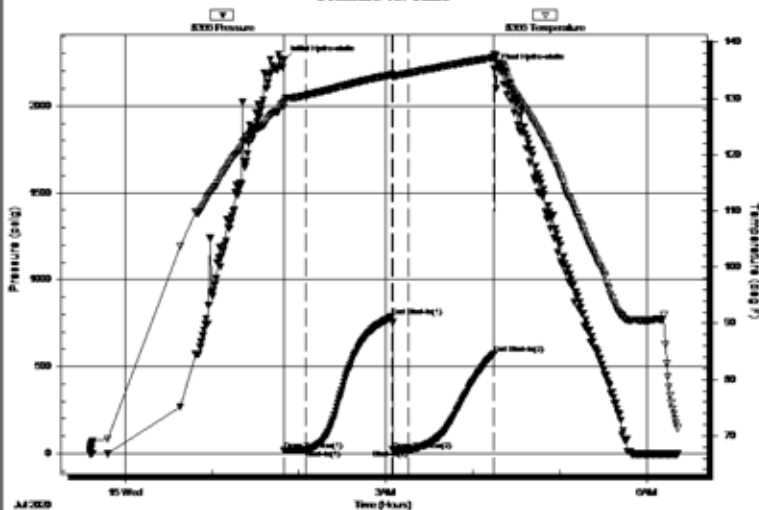
TEST COMMENT: 15 IF - 1" blow built to 1 1/4"

60 ISI - No return

10 FF - No blow

60 FSI - No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2262.02	129.38	Initial Hydro-static
1	17.85	128.47	Open To Flow (1)
15	20.29	130.54	Shut-In(1)
75	787.55	134.24	End Shut-In(1)
75	20.23	133.86	Open To Flow (2)
86	20.30	134.44	Shut-In(2)
145	574.55	137.28	End Shut-In(2)
146	2212.52	137.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/oil spots in tool 100%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66651

DST#: 5

ATTN: Clayton Camozzi

Test Start: 2020.07.15 @ 15:43:00

GENERAL INFORMATION:

Formation: **LKC " J "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:06:40

Time Test Ended: 22:50:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: **4433.00 ft (KB) To 4480.00 ft (KB) (TVD)**

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4480.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 21.48 psig @ 4434.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.15

End Date:

2020.07.15

Last Calib.:

2020.07.15

Start Time: 15:43:01

End Time:

22:50:10

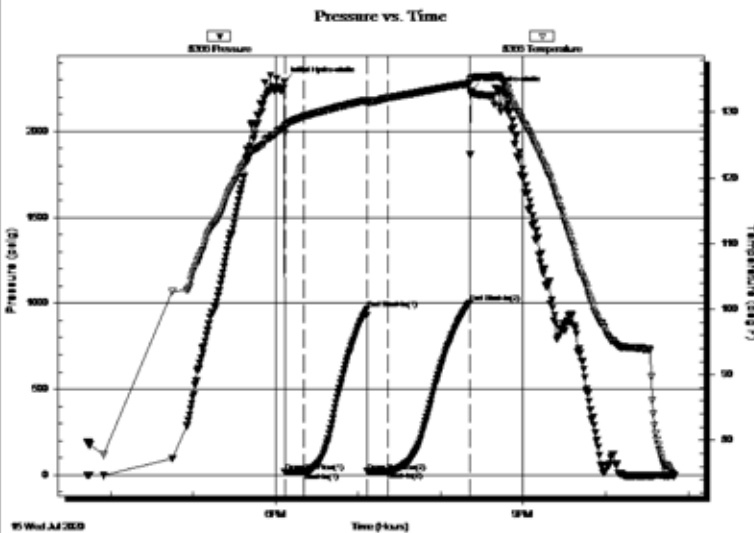
Time On Btm:

2020.07.15 @ 18:06:30

Time Off Btm:

2020.07.15 @ 20:21:39

TEST COMMENT: 15 IF - 1/4" blow
45 ISI - No return
15 FF - No blow , flushed tool, no blow
60 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2289.08	127.80	Initial Hydro-static
1	17.01	126.78	Open To Flow (1)
15	19.44	129.35	Shut-In(1)
60	964.58	131.82	End Shut-In(1)
61	20.21	131.40	Open To Flow (2)
76	21.48	132.19	Shut-In(2)
135	1003.58	134.41	End Shut-In(2)
136	2235.99	134.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/oil spots in tool 100%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Black Oak Exploration

14-2s-36w Rawlin KS

1474 S. St Paul St.
Denver Co 80210

Frisbie Family #2-14

Job Ticket: 66652

DST#: 6

ATTN: Clayton Camozzi

Test Start: 2020.07.16 @ 23:27:00

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:45:40

Time Test Ended: 05:44:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: **4630.00 ft (KB) To 4675.00 ft (KB) (TVD)**

Reference Elevations: 3323.00 ft (KB)

Total Depth: 4675.00 ft (KB) (TVD)

3318.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 16.00 psig @ 4631.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.07.16

End Date:

2020.07.17

Last Calib.:

2020.07.17

Start Time: 23:27:01

End Time:

05:44:50

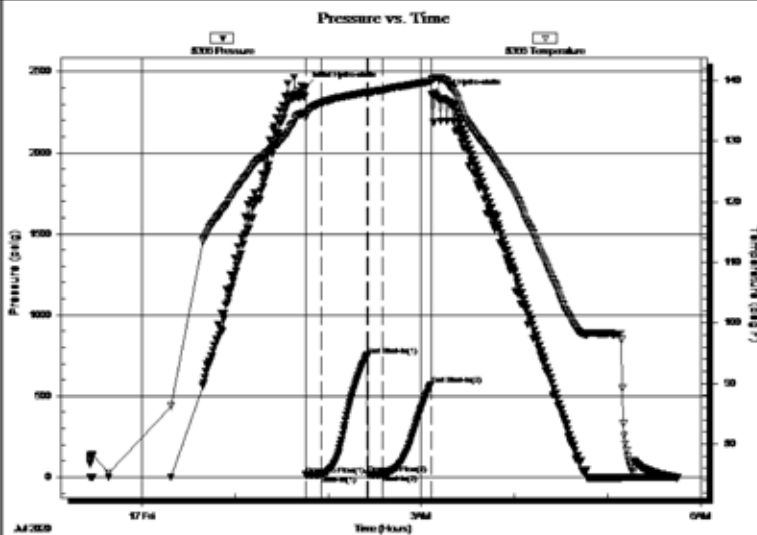
Time On Btm:

2020.07.17 @ 01:45:30

Time Off Btm:

2020.07.17 @ 03:06:40

TEST COMMENT: 10 IF - 3/4" built to 1"
30 ISI - No return
10 FF - No blow
30 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2404.68	134.74	Initial Hydro-static
1	13.20	133.82	Open To Flow (1)
11	14.19	136.29	Shut-In(1)
40	751.34	138.08	End Shut-In(1)
40	15.79	137.68	Open To Flow (2)
50	16.00	138.43	Shut-In(2)
81	571.42	139.89	End Shut-In(2)
82	2360.93	140.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%M	0.02

Gas Rates

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

ROCK TYPES

LITHOLOGY

	Anhy	
	Bent	
	Brec	
	Cht	
	Clyst	
	Coal	
	Congl	
	Dol	
	Gyp	
	Igne	
	Lmst	
	Meta	
	Mrlst	
	Salt	
	Shale	
	Shcol	
	Shgy	
	Sltst	
	Ss	
	Till	
	Sltstn	
	Shale	
	Sandylms	
	Lms	
	Gry sh	
	Dtd	
	Dol	
	Carb sh	
	pipesymbol	
	unknown lith	
	Red shale	

MINERAL

Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite
Ostra
Pelec
Pellet
Pisolite
Plant
Strom

Sltly
Sand
Dol
Chlorite
Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol

STRINGER

Feldspar
Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

Sh
Sandylms
Lms
Gryslt
Grysh
Dol
Clystn
Carbsh
Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst
Sltstrg



Ssstrg

TEXTURE

Boundst
Chalky
Cryxln
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

OIL SHOW

Gas show
Even
Spotted
Ques
Dead

INTERVAL

Dst
Core
Dst
Straddle test tail pipe

EVENT

Rft
Sidewall
Dst
Open hole
Perforations

FOSSIL

	Oomoldic
	Fuss
	Algae

Curve Track 1

ROP (Min/Ft)

Gamma (API)

Caliper (inches)

MD

Lithology

Oil Shows

Geological Descriptions

Engineering Data

TG (Units)

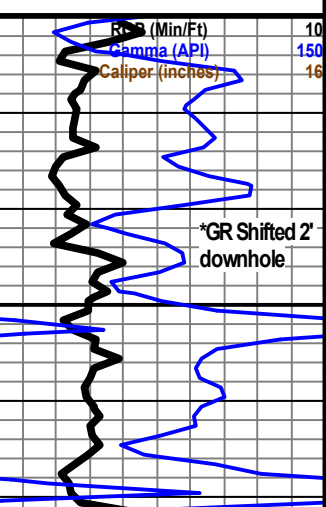
C1 (units)

C2 (units)

C3 (units)

C4 (units)

C5 (units)

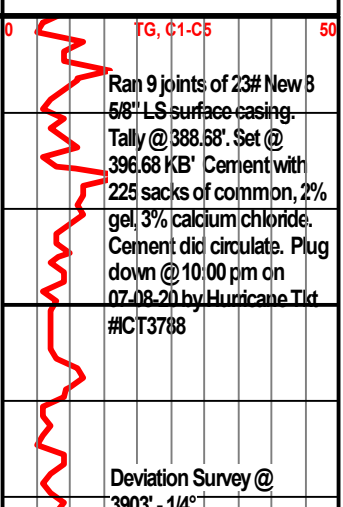


3950

Black Oak Exploration
Frisbie Family 2-14
2220' FSL & 1250' FWL
Sec. 14-2S - 36W
Rawlins Co, KS

Drilling Company: Murfin Drilling Co
 Rig #7 785-443-5616 Tool Pusher: Arturo Cabezas 785-443-5616

Mud: Morgan Mud
 Engineer(s):
 Dave Lines 308-340-5946



Deviation Survey @
3903' - 1/4°

Start Wet & Dry Samples @ 4000'

Morgan Ck @ 3903'
7:30am 07/11/20
Vis 73 Wt 8.6
PV 22 YP 23
WL 6.4
Cake 2
PH 11.5
CHL 600 ppm
CA 10
Sol 2.2
LCM: 4# / bbl
DMC: \$2312
CMC: \$9,050

0 ROP (Min/Ft) 10
1 Gamma (API) 150
6 Caliper (inches) 16

4000



Limestone, cream, hard dense to scattered brittle, microcrystalline to scattered fossiliferous, calcareous chalky matrix, poor to no visible porosity, very faint oil odor, black spotted stain in 10%, poor fluorescence, poor cuts, no show free oil, scattered trace fusulinids part, scattered red soft gummy micaceous shale throughout

Limestone, cream, hard dense to scattered soft, oolitic dense calcareous matrix, chalky matrix in 30% to scattered shaly matrix, poor visible interoolitic porosity, very faint odor, spotted black tarry dead oil stain in 40%, dull yellow mineral fluorescence throughout, poor cuts, no show free oil, trace pyrite in part, scattered red soft gummy shale throughout

Topeka 4043 (-720)

4050

Limestone, cream to tan, hard dense, microcrystalline to scattered oolitic in a dense calcareous matrix, poor to no visible porosity throughout, very slight oil odor, spotted black tarry oil stain in 10%, poor flush cut to poor slow stream cut, no show free oil, scattered calcite crystals in part

Limestone cream to tan, microcrystalline in part to oolitic, semi to dense calcareous/ chalky matrix throughout, large oolite grains in 20%, poor to small trace fair interoolitic porosity to no porosity, spotted black stain in 30%, poor oil odor, dull yellow fluorescence in 20%, samples very slowly bleeding light brown oil in 5%, poor flush cut to fair flow stream cut, poor show free oil, pyrite in part, trace fusulinids

Limestone to scattered limy shale, white to light tan, microcrystalline throughout to trace scattered cryptocrystalline, scattered trace shale inclusions in part, no odor, no fluorescence, no show free oil

Limy silstone, white to scattered light pink, hard dense, very fine quartz grains in a dense calcareous matrix, round, good sorting, fair intergranular porosity, no stain, no odor, no show free oil, trace glauconite scattered light gray to green gummy calcareous shale throughout, no fluorescence

4100

Limestone, white to cream, hard dense, to trace soft, microcrystalline throughout to trace oolitic to small trace oolitic/oolitic matrix, trace recrystalline matrix, no visible intercrystalline porosity to poor/fair scattered interoolitic porosity, black spotted tarry stain in 25%, very faint oil odor, yellow fluorescence in 40%, dull yellow fluorescence throughout, fair cuts, very poor show light brown free oil, calcite crystals in part

Limestone, white very hard dense, cryptocrystalline to scattered microcrystalline, no porosity, no stain, no odor no show free oil, scattered calcite crystals

Limestone light gray to cream, hard dense, microcrystalline, scattered cryptocrystalline, no visible porosity, no stain, dull yellow mineral fluorescence no show free oil

Shale to limy shale, light gray to maroon to light green, hard dense microcrystalline with abundant shale inclusions, micaceous, no visible porosity, dull yellow fluorescence, no stain no show free oil, scattered trace soft white chalk

4150

Shale as above, include pyrite scattered throughout

Oread 4163 (-840)

Limestone cream, hard dense, microcrystalline to scattered oolitic/recrystalline matrix, dense calcareous matrix, trace fracture, no visible porosity trace black spotted stain in 5%, no odor, scattered fluorescence in 15%, poor cuts, no show free oil, trace calc

Limestone cream to light tan, hard dense, microcrystalline to scattered subsucrosic matrix, calcite crystals in part poor intercrystalline porosity, spotted light brown stain in 60%, very faint odor, yellow fluorescence in 20%, poor flush cuts, poor show light brown free oil

Limestone, cream to tan, hard dense, microcrystalline to scattered cryptocrystalline, very small trace subsucrosic, dense calcareous matrix, no visible porosity throughout, to poor intercrystalline porosity in 5%, spotted black stain in 5%, very faint oil odor yellow fluorescence in 5%, poor cuts, poor show light brown free oil, trace chalk

Calibrate Gas

4UN Gas Increase

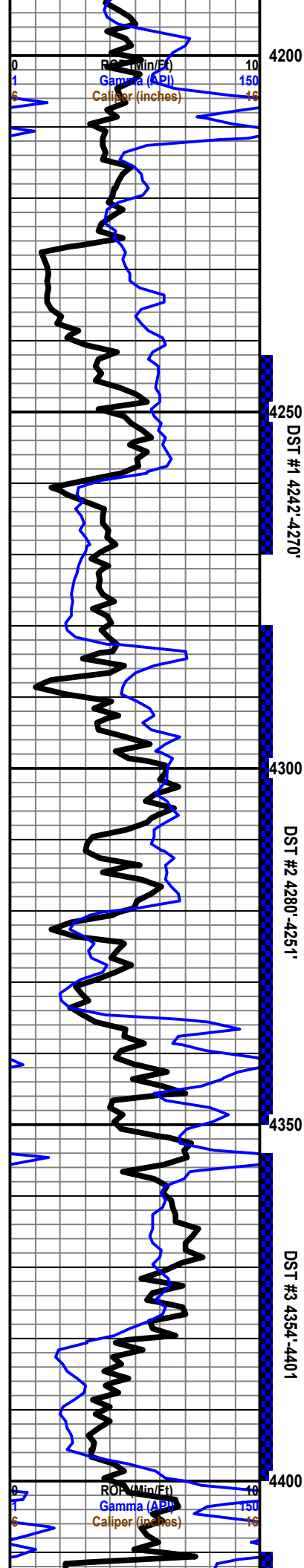
Scale Change
TG, C1-C5

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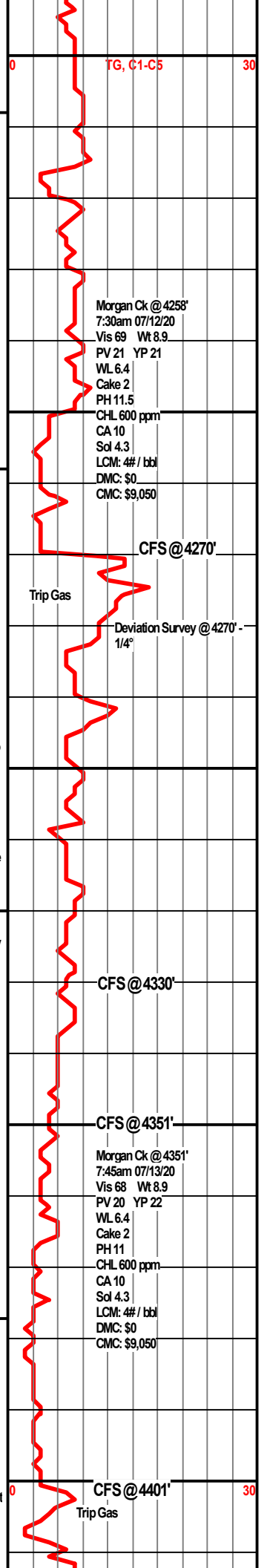
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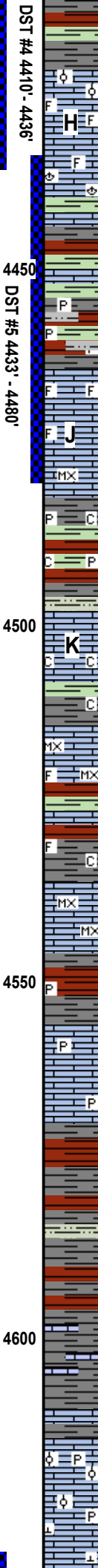
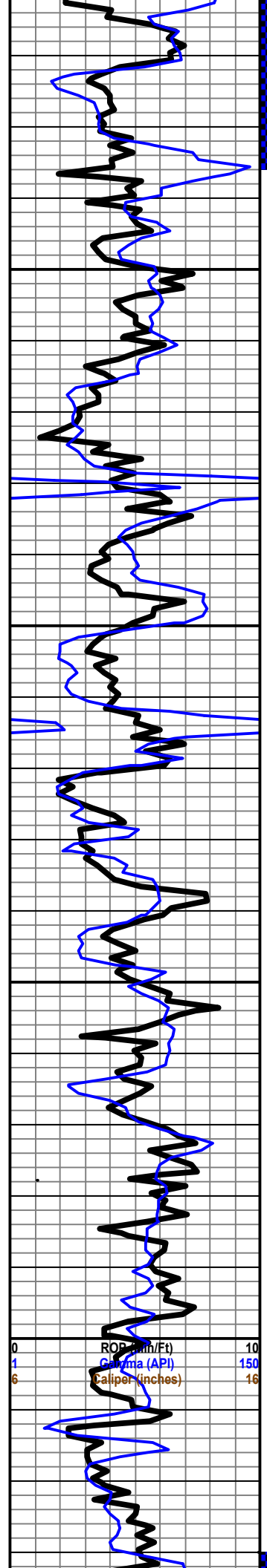
50

30



4200	C	Limestone, light tan, hard dense, cryptocrystalline throughout, no visible porosity, no odor, dull yellow fluorescence no show free oil, trace chalk
Heebner 4208 (-885)		
		Shale, light gray to trace black, soft, splinty, scattered carbonaceous in part, micaceous throughout, no fluorescence
		Shale, light gray to gray, soft to hard, micaceous, no fluorescence
		Siltstone, clear to off white, brittle, very fine quartz grains, dense calcareous matrix with lime frags in part, good intergranular porosity, no stain, no odor, no fluorescence no show free oi
		Limestone, light gray to cream, hard dense, microcrystalline to scattered cryptocrystalline streaky gray shale inclusions, no visible porosity, no odor, no stain, no show free oil
		Shale, red to maroon to light green to scattered gray, hard dense trace gummy, calcareous, no fluorescence
Lansing 4258 (-935)		
		Limestone, cream, hard to brittle, subsucrosic matrix with small calcite crystals in part, fair to good intercrystalline porosity, light brown stain in 80%, fair oil odor, yellow fluorescence in 30%, poor flush cut to good slow stream cut, samples slowly bleeding light brown oil, good show free oil in tray
	A	Limestone light tan, very hard dense, cryptocrystalline to microcrystalline matrix, no visible porosity, no odor, dull yellow mineral fluorescence, no show free oil
		Siltstone/Sandy Silt, very fine grained, well rounded, well sorted quartz grains calcareous matrix, no stain, no odor, no fluorescence, no cuts, no show free oil, Scattered red to light gray shale, soft to gummy, no fluorescence, trace pyrite in part
		Limestone, cream to white, hard dense, microcrystalline scattered cryptocrystalline, no visible porosity, slight light black stain in 5%, no odor, no fluorescence, poor cuts, no show free oil. Scattered shale, red to green, soft gummy, no fluorescence, scattered soft white chalk
		Shale, light gray, to green, to red to maroon, soft to hard, splinty to gummy, calcareous, no fluorescence, scattered light yellow siltstringer, no show
		Limestone white to cream, microcrystalline throughout to very small trace oolitic in a dense calcareous matrix, no visible porosity to poor interoolitic porosity, light brown stain in 5%, no odor, no fluorescence, poor cuts, no show free oil
Lansing "D" 4320 (-997)		
		Limestone, cream, brittle, microcrystalline to subsucrosic matrix with calcite crystals, fair intercrystalline porosity, light brown spotted stain to trace streaky black stain in 40%, very faint odor, yellow fluorescence in 20%, no cut, very poor show light brown free oil, trace crinoids, small trace pyrite in part
	D	Limestone, white to cream, hard dense, subsucrosic to trace fossiliferous to recrystalline matrix, large calcite crystals in part, fair intercrystalline porosity throughout, light brown stain in 70%, yellow fluorescence in 40%, fair flush cut to good slow stream cut, sample slowly bleeding light brown oil, good show free oil in tray, scattered chalk throughout
		Limestone, light gray, very hard dense, microcrystalline to cryptocrystalline matrix, no visible porosity, no stain, no fluorescence, no show free oil
		Limestone cream to light gray, hard dense, microcrystalline matrix with abundant dense shale inclusion, no visible porosity, no show, scattered pyrite
		Shale light gray to black streaky inclusions, slightly carbonaceous, pyrite frags scattered throughout no fluorescence
		Shale, red to maroon to scattered light green, very soft to brittle, gummy to blocky, calcareous, no fluorescence, trace pyrite, trace gray silt stringer
		Shale, red to gray, splinty to gummy, calcareous, micaceous in part
Lansing "G" 4377 (-1054)		
		Limestone, cream, subsucrosic to scattered microcrystalline matrix recrystalline matrix, calcite crystals in part, fair intercrystalline porosity possible fracture porosity, spotted scattered stain in 40%, faint oil odor, spotted yellow fluorescence in 20%, no cuts, poor show light brown free oil, abundant chalk, trace fusulinids
	G	Limestone, tan, hard dense to brittle. subsucrosic to sucrosic matrix to recrystallized matrix, fair to trace good intercrystalline porosity to possible fracture porosity, light brown dotted stain in 70%, faint oil odor, dull yellow fluorescence throughout to small trace yellow fluorescence in 10%. no cuts, poor show light brown free oil, scattered chalk
		Shale, red to light gray, soft brittle to small trace hard, micaceous in part, calcareous, no fluorescence, small trace silt stringer
		Limestone light gray to cream, hard dense, microcrystalline throughout with scattered shale inclusions, no visible porosity, no stain, dull yellow mineral fluorescence throughout, no show free oil, trace pyrite





Shale, light gray to green to maroon, hard to soft, splintery to blocky, no fluorescence,
Limestone white to cream, hard, oolitic matrix throughout, scattered sub round lime grains in part, scattered fossil frags in part, trace calcite veins, fair interooidic porosity, to possible fracture porosity, fair oil odor, light brown spotted stain in 60%, yellow fluorescence in 80%, no cuts, samples bleeding abundant free oil, good show light brown free oil in tray,

Limestone cream, hard dense, subsucrosic to fossiliferous hash, trace oomoldic, all in a dense calcareous matrix possible recrystalline matrix, abundant calcite crystals in matrix, poor interfossiliferous porosity to no visible porosity, light brown spotted stain in 30%, slight oil odor, spotted yellow fluorescence in 60%, no cuts, poor-fair show light brown free oil in tray, trace pyrite, trace fusulinids in part, trace brachiopods in part

Shale, red to gray to green, soft gummy to hard splintery, micaceous, no fluorescence, small pyrite clusters in part

Shale as above, trace light gray siltstringer

Lansing "J" 4464 (-1141)

Limestone, white to cream, hard to brittle, sub sucrosic matrix throughout to trace fossiliferous, fair intercrystalline porosity to fair interfossiliferous porosity, trace spotted vugular porosity, light brown stain in 80%, fair oil odor, yellow fluorescence in 80%, fair flush cut to fair slow stream cut, samples bleeding light brown oil, excellent show light brown free oil, trace fossil frags

Limestone, cream to tan, very hard dense, microcrystalline throughout, no visible porosity, no stain, no odor, dull yellow fluorescence, no show free oil

Shale, red to maroon to gray to trace green, soft to hard, gummy to blocky to splintery, micaceous, no fluorescence, trace pyrite scattered throughout, trace scattered chalk

Shale as above, silstone, maroon matrix, brittle, blocky, calcareous matrix, no fluorescence

Limestone, cream, hard dense, microcrystalline throughout, no visible porosity, no stain, no odor, dull yellow fluorescence, no cuts, no show free oil, trace chalk

Limestone, cream to light gray, hard to brittle microcrystalline to small trace fossiliferous very dense calcareous matrix trace large round brown lime grains in matrix, no visible porosity, no stain, no odor, dull yellow fluorescence, no show free oil

BKC 4521 (-1198)

Shale, red to gray, soft to hard, blocky to splintery to trace gummy, no fluorescence, trace scattered pyrite

Limestone cream to tan, hard dense, microcrystalline to fossiliferous dense calcareous matrix, no visible porosity, no stain, no odor, no fluorescence, no show free oil, trace chalk, small trace red shale

Limestone, cream to tan, very hard dense, microcrystalline throughout, no visible porosity, no stain, no odor, no fluorescence, no show free oil

Shale, light gray to green to trace red, soft, blocky to splintery, no fluorescence, trace scattered pyrite

Limestone, cream to tan, hard dense, microcrystalline throughout, no visible porosity, no stain, no odor, dull yellow fluorescence, no show free oil, scattered trace pyrite

Shale gray to red, very hard dense, splintery to scattered blocky, no fluorescence

Shale light gray to red, very hard dense, splintery to black, no fluorescence, small trace light gray siltstone scattered throughout

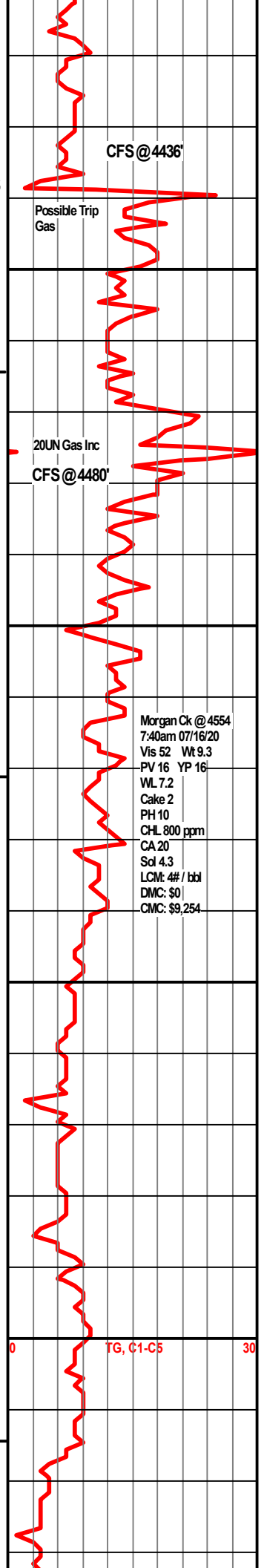
Shale, as above

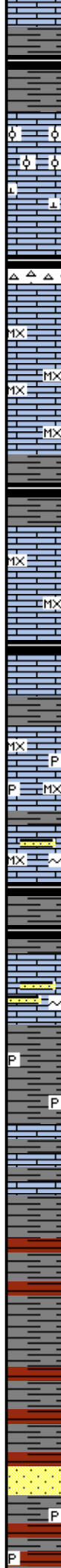
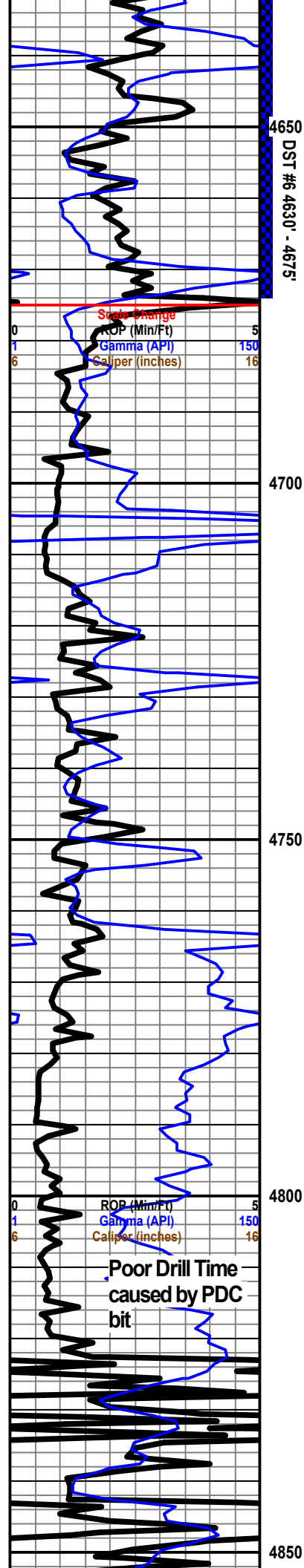
Shale light gray to red to trace light purple, soft to hard, trace scattered large sub round lime grains in matrix, calcareous, no fluorescence

Pawnee 4614 (-1291)

Limestone cream to tan, microcrystalline to subsucrosic to micro-oolitic to trace fossiliferous, dense calcareous matrix throughout, no visible porosity, no stain, no odor, yellow mineral fluorescence throughout, no show free oil, trace scattered pyrite

Limestone cream, microcrystalline to sub sucrosic to scattered fossiliferous dense calcareous matrix, no visible porosity, no stain, no odor, dull yellow mineral fluorescence throughout, no show free oil, large calcite crystals scattered throughout.





Shale, gray to trace black, very gummy to hard, splinty to blocky, trace carbonaceous, no fluorescence

Fort Scott 4649 (-1326)

Limestone, cream, hard dense to brittle, subsucrosic to micro-oolitic, heavy trace recrystalline matrix, abundant calcite in matrix, poor to fair intercrystalline porosity, possible fracture porosity, spotted stain in 70%, very faint oil odor, dull yellow fluorescence throughout to small trace yellow fluorescence in 5%, poor cuts, samples bleeding light brown free oil, good show free oil in tray

Chert, opaque to light pink, very hard dense, trace calcite veins. Trace shale black soft carbonaceous scattered throughout

Change over to PDC Bit @4675

Limestone cream to tan to scattered gray, hard dense, microcrystalline matrix throughout, no visible porosity, no stain, no odor, no fluorescence, no show free oil

Limestone, cream, hard dense, microcrystalline matrix, no visible porosity, no stain, no odor, no fluorescence, no show free oil

Cherokee 4700 (-1377)

Shale black soft carbonaceous, scattered gray to trace maroon, soft, splinty, no fluorescence

Limestone cream to tan to scattered gray, microcrystalline throughout to trace cryptocrystalline, hard dense, no visible porosity, no stain no odor, no fluorescence, no show free oil

Limestone cream to tan, hard dense, microcrystalline to trace recrystalline matrix, no visible porosity to 1 piece poor intercrystalline porosity, spotted streaky stain in 15%, no fluorescence no odor, no cut, no show free oil

Shale black soft carbonaceous, no fluorescence

Shale light gray, hard dense, splinty, small trace black shale in part, no fluorescence

Limestone, cream to tan, hard dense, microcrystalline to small trace cryptocrystalline, no visible porosity, no stain, no odor, no fluorescence, no show free oil, small trace pyrite scattered throughout

Limestone cream to light gray, hard dense, microcrystalline to cryptocrystalline matrix, no visible porosity, no stain, no fluorescence no show free oil, Very small trace sand cluster, sub round poorly sorted quartz grains, abundant glauconite in matrix, calcareous matrix, fair intergranular porosity, no stain no show

Limestone cream to tan, hard dense, microcrystalline matrix throughout, no visible porosity, no stain, no stain, no fluorescence, no show free oil. Small trace Sandstone, dense calcareous matrix abundant shale inclusions, sub round to sub angular poorly sorted quartz grains, fair intergranular porosity, no show, glauconite in part

Shale, light gray to maroon to tan, soft to hard, splinty, micaceous, no fluorescence, trace pyrite in part

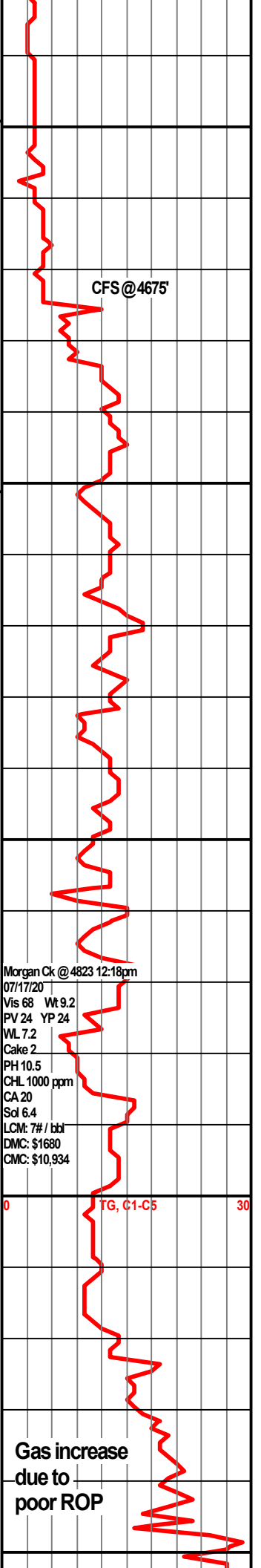
Limestone, cream to tan, microcrystalline to scattered cryptocrystalline matrix, no visible porosity, no stain, no fluorescence, no odor, no show free oil

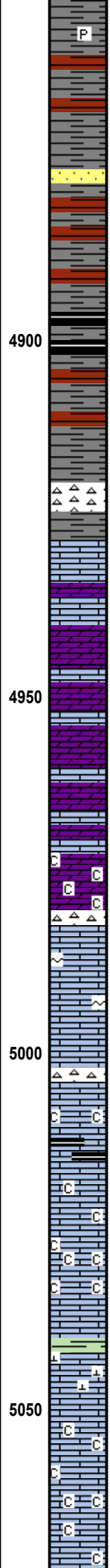
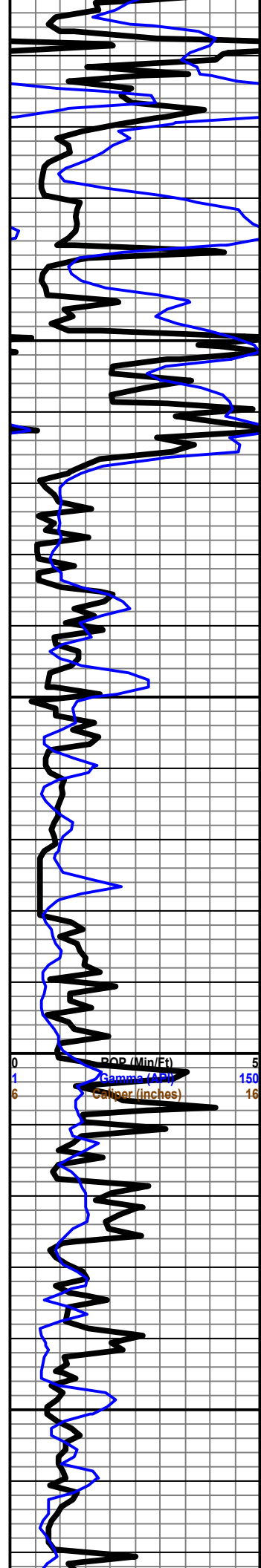
Shale, light gray to scattered red to scattered maroon, soft, splinty, micaceous, no fluorescence

Shale, light gray to maroon to trace green, soft to hard, splinty to blocky, no fluorescence

Shale light gray to maroon to scattered red, soft to hard, blocky to splinty, slightly micaceous, no fluorescence

Sandstone, fair sorted sub angular clear quartz grains, calcareous matrix, shale inclusions, fair intergranular porosity, no stain, no odor no fluorescence no show free oil





Shale light gray to abundant red/maroon, hard, dense, blocky to trace splintry, no fluorescence, trace scattered pyrite

Shale as above

Sandstone, light gray to clear, fair sorting small sub round quartz grains, calcareous matrix trace imbedded shale frags, fair to good intergranular porosity, no stain, no odor, no fluorescence no show free oil, glauconite in part. Very small trace carbonaceous black shale

Shale light gray to green to maroon, hard to brittle, blocky to splintry, no fluorescence,

Shale light gray to red, hard dense, splintry, no fluorescence, small trace black soft carbonaceous shale

Shale, gray to red to trace green, splintry throughout, no fluorescence, small trace black soft carbonaceous shale

Mississippian 4920 (-1602)

Chert, cream to opaque/pink, hard dense, slightly weathered, blocky, no fluorescence no show. Interbedded light gray shale

Limestone cream to tan, soft, brittle sub-sucrosic chalky matrix, fair intercrystalline porosity, no stain no odor, slight trace yellow fluorescence, no show free oil. Trace dolomite sub angular dense matrix, no show

Dolomite to Dolomitic Lime, cream to tan, hard to brittle, sub angular dol grains, dense dolomitic/limy matrix, poor to fair intercrystalline porosity, no stain no fluorescence no odor no show

Limestone to dolomitic lime, cream to tan, hard brittle, sub angular dolomite grains, calcareous matrix, poor intercrystalline porosity, no stain, yellow fluorescence in 20%, no cut, no show free oil.

Limy-Dolomite, cream to tan, brittle to scattered hard, subrhombic to subsucrosic lime grains, calcareous to very chalky matrix, poor intercrystalline porosity, no stain no odor no show, trace off white to opaque chert, hard dense

Limestone cream to tan, hard to trace soft, microcrystalline to subsucrosic matrix, scattered imbedded glauconite, poor to no visible porosity, no stain no odor, dull yellow mineral fluorescence, no show

Limestone cream to tan to trace white, hard dense, microcrystalline to trace sub sucrosic matrix, slightly chalky matrix, no visible porosity, no odor, dull yellow mineral fluorescence, no show, scattered white to opaque chert scattered throughout

Limestone cream to tan, hard to brittle, microcrystalline to subsucrosic chalky matrix trace cryptocrystalline, no visible porosity, no stain no odor, dull yellow mineral fluorescence, no show, small trace scattered black soft splintry carbonaceous shale

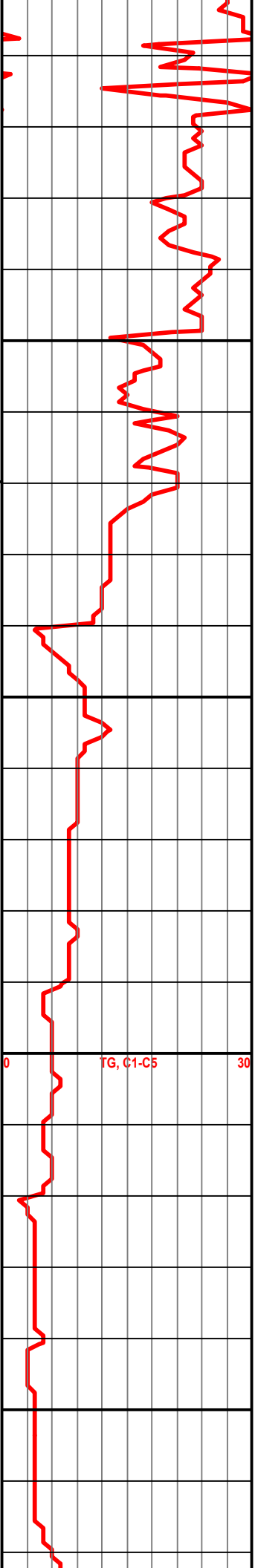
Limestone cream to tan, hard to brittle, microcrystalline to scattered subsucrosic chalky matrix, no visible porosity, no odor, dull yellow mineral fluorescence to no fluorescence, no show

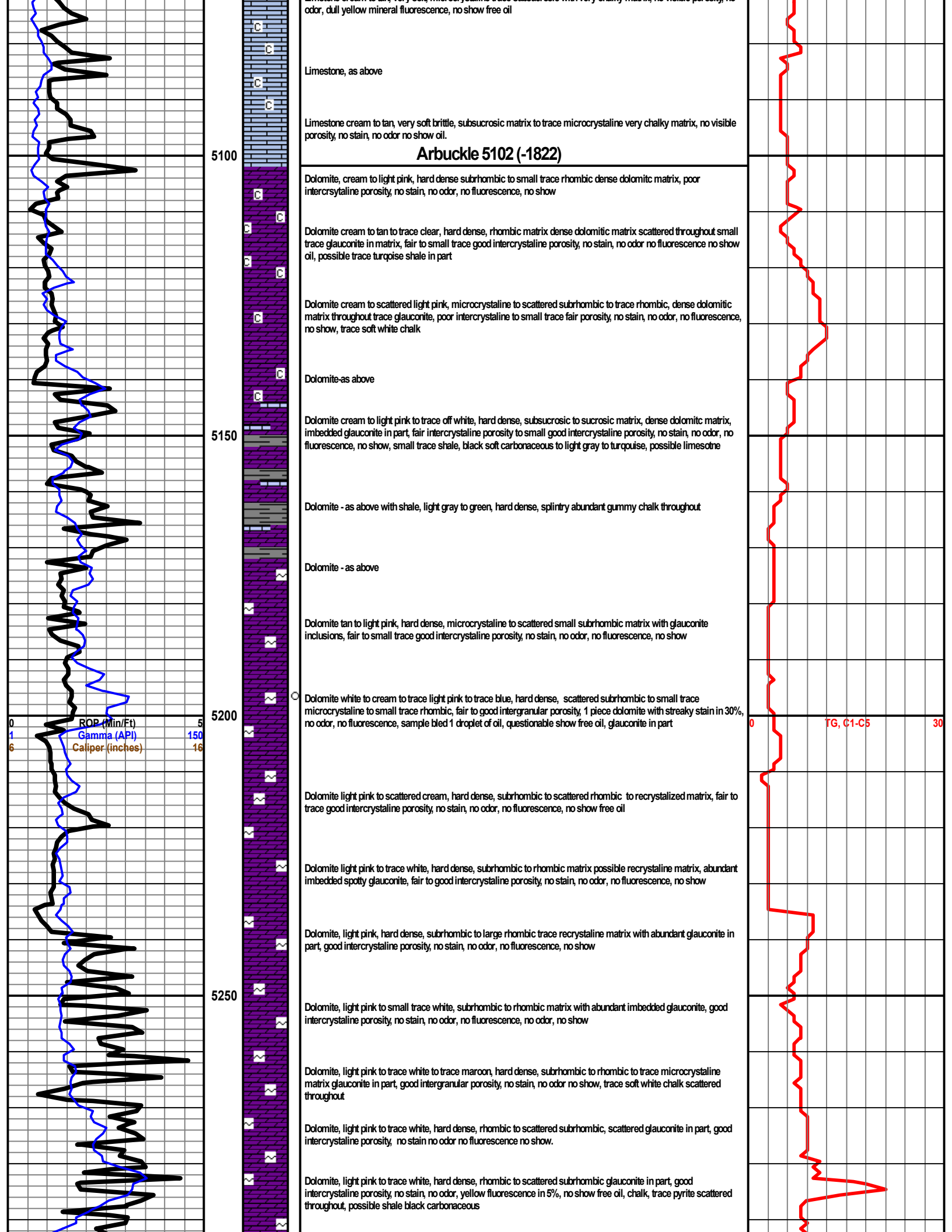
Limestone, cream to tan, microcrystalline to cryptocrystalline to small trace subsucrosic chalky matrix, very poor no visible porosity, no stain, no odor, no fluorescence, no show free, abundant soft white chalk scattered throughout

Limestone cream to tan, microcrystalline to trace subsucrosic, recrystallized matrix, abundant calcite veins and crystals in part, very poor intercrystalline porosity, no stain, no fluorescence no show free oil, small trace turquoise splintry shale scattered through

Limestone cream to tan, very soft, subsucrosic very chalky matrix, no visible porosity, no odor, dull yellow mineral fluorescence, no show free oi

Limestone cream to tan, very soft, microcrystalline trace subsucrosic with very chalky matrix, no visible porosity, no





5300

Dolomite, light pink to white, hard dense, rhombic to scattered subrhombic glauconite in part, good intercrystalline porosity, no stain, no odor, no fluorescence, no show

Dolomite light pink to white, hard dense, scattered microcrystalline to subrhombic abundant glauconite in part, fair intercrystalline porosity, no odor, yellow fluorescence in 5%, no cuts, no show

Dolomite light pink, hard dense, scattered microcrystalline to subrhombic abundant glauconite in part, fair intercrystalline porosity, no odor, no fluorescence no show.

Dolomite white to off white, hard dense, microcrystalline throughout, poor to no visible intercrystalline porosity, no stain, no odor no fluorescence no show.

Dolomite, pink to cream, hard to soft, microcrystalline to rhombic matrix with scattered glauconite in part, good intercrystalline porosity, no stain, no odor, no fluorescence no show free oil

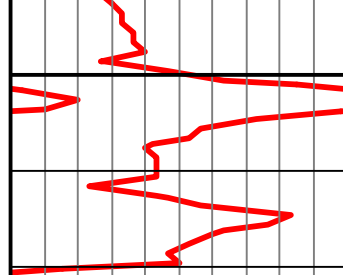
Dolomite, very poor sample, as above

5350

Dolomite, cream to scattered light pink, microcrystalline to subrhombic matrix, poor to fair intercrystalline porosity, no stain no odor no fluorescence no show

TD 5350' @ 8:27am CDT 7/18/2020

Pioneer Wireline on Location @ 1:00pm CDT



Gas Unit Down

Morgan Ck @ 5350' 10:20am

07/18/20

Vis 77 Wt 9.4

PV 26 YP 25

WL 8.0

Cake 2

PH 10.

CHL 1000 ppm

CA 20

Sol 7.8

CFS @ 5350'

LCM: 8# / bbl

DMC: \$527

CMC: \$11,461