

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	THRELKEL ET AL 1-23
Doc ID	1638110

All Electric Logs Run

D*N
DIL
SONIC
MICO



CEMENT TREATMENT REPORT

Customer: Black Oak Exploration	Well: Threlkel Et Al 1-23	Ticket: WP-2201
City, State: Oakley KS	County: Rawlins KS	Date: 12/10/2021
Field Rep: Arturo	S-T-R: 23-3E-35S	Service: Surface

Downhole Information	Calculated Slurry - Lead	Calculated Slurry - Tail
Hole Size: 12 1/4 in	Blend: H-325	Blend:
Hole Depth: 250 ft	Weight: 14.8 ppg	Weight: ppg
Casing Size: 8 5/8 in	Water / Sx: 6.9 gal / sx	Water / Sx: gal / sx
Casing Depth: 250 ft	Yield: 1.41 ft ³ / sx	Yield: ft ³ / sx
Tubing / Liner: in	Annular Bbls / Ft.: 0.0735 bbs / ft.	Annular Bbls / Ft.: bbs / ft.
Depth: ft	Depth: 250 ft	Depth: ft
Tool / Packer:	Annular Volume: 18.4 bbls	Annular Volume: 0 bbls
Tool Depth: ft	Excess: 100%	Excess:
Displacement: 15.9 bbls	Total Slurry: 50.2 bbls	Total Slurry: 0.0 bbls
	Total Sacks: 200 sx	Total Sacks: 0 sx

TIME	RATE	PSI	STAGE TOTAL		REMARKS
			BBLs	BBLs	
11:42a			-	-	Arrival
11:47a				-	Safety meeting
11:52a				-	Rig up
1:26p				-	Circulate hole
1:33p	4.7	200.0	5.0	5.0	H2O ahead
1:37p	4.5	330.0	50.2	55.2	Mixed 200 sks @ 14.8 ppg @ 250'
1:51p	3.5	280.0	14.7	69.9	Displaced H2O
2:00p				69.9	Plug down
2:02p				69.9	Wash up
2:07p				69.9	Rig down
2:20p				69.9	Depart location

CREW		UNIT	SUMMARY		
Cementer:	Jesse J	78	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Michael R	230	4.2 bpm	270 psi	70 bbls
Bulk #1:	Jose	165/235			
Bulk #2:					



CEMENT TREATMENT REPORT

Customer: Black Oak Exploration	Well: Threlkel Et Al # 1-23	Ticket: WP 2240
City, State: Oakley KS	County: Rawlins KS	Date: 12/19/2021
Field Rep: Josh Mosier	S-T-R: 23-3S-35W	Service: Longstring

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7.875 in	Blend:	H- con	Blend:	H - HLD
Hole Depth:	4670 ft	Weight:	12.0 ppg	Weight:	14.8 ppg
Casing Size:	5 1/2 in	Water / Sx:	15.5 gal / sx	Water / Sx:	6.5 gal / sx
Casing Depth:	4392 ft	Yield:	2.56 ft ³ / sx	Yield:	1.51 ft ³ / sx
Tubing / Liner:	in	Annular Bbls / Ft.:	0.0309 bbs / ft.	Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	ft	Depth:	4392 ft	Depth:	4392 ft
Tool / Packer:		Annular Volume:	135.7 bbls	Annular Volume:	135.7128 bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	103.3 bbls	Total Slurry:	214.3 bbls	Total Slurry:	40.3 bbls
		Total Sacks:	470 sx	Total Sacks:	150 sx

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
500P			-	-	GOT TO LOCATION
505P				-	SAFETY MEETING
510P				-	RIGGED UP TRUCKS
900P				-	LANDED CASING
910P				-	CIRCULATED HOLE
911P		800.0		-	BALL BROKE THROUGH 800 PSI
				-	
1103P	3.0	150.0	5.0	5.0	PUMPED H2O AHEAD
1105P	3.0	150.0	12.0	17.0	PUMPED 500 GAL OF MUD FLUSH
1109P	3.0	150.0	5.0	22.0	WASHED UP WITH H2O
1111P	3.0	150.0	6.8	28.8	PUMPED 15 SKS OF H- CON IN RH
1114P	3.0	150.0	11.3		PUMPED 25 SKS OF H-CON IN MH
1120P	8.9	300.0	196.1		PUMPED 430 SKS OF H- CON @ 4392 FT
1142P	5.0	300.0	40.4		PUMPED 150 SKS OF H-LD @ 4392 FT
1150P					SHUT DOWN AND WASHED UP PUMP AND LINES/ LOADED PLUG
1203A	5.4	1,500.0	103.3		DISPLACED WITH 2% KCL H2O
1222A		2,000.0			PLUG DOWN/ CIRCULATED 15 SKS TO PIT
1226A					RELEASED PRESSURE / PLUG HELD
1230A					WASHED UP PUMP TRUCK
1245A					RIGGED DOWN TRUCKS
100A					OFF LOCATION

CREW		UNIT	SUMMARY		
Cementer:	Josh	73	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jimmie	180/520	4.3 bpm	565 psi	380 bbls
Bulk #1:	John	194/235			
Bulk #2:	Trevino	242			



DRILL STEM TEST REPORT

Prepared For: **Black Oak Exploration, LLC**

1474 S St. Paul St.
Denver, CO 80210

ATTN: Clayton Camozzi

Threlkel Et Al #1-23

23-3s-35w Rawlins KS

Start Date: 2021.12.14 @ 03:22:00

End Date: 2021.12.14 @ 10:07:51

Job Ticket #: 68543 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.20 @ 10:36:46



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68543

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2021.12.14 @ 03:22:00

GENERAL INFORMATION:

Formation: **Oread - LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:00:21

Time Test Ended: 10:07:51

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 73

Interval: 3830.00 ft (KB) To 3933.00 ft (KB) (TVD)

Reference Elevations: 3002.00 ft (KB)

Total Depth: 3933.00 ft (KB) (TVD)

2997.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 586.65 psig @ 3831.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.14

End Date: 2021.12.14

Last Calib.: 2021.12.14

Start Time: 03:22:01

End Time: 10:07:51

Time On Btm: 2021.12.14 @ 05:59:51

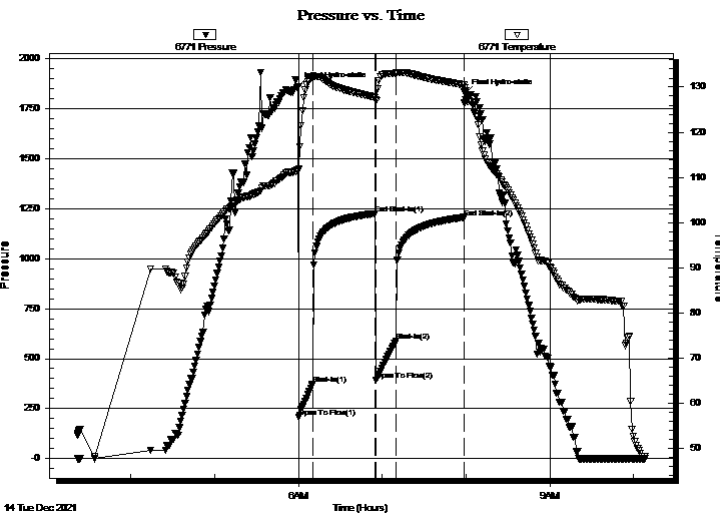
Time Off Btm: 2021.12.14 @ 07:59:06

TEST COMMENT: 10 - IF: Blow built to BOB (11") at 1 1/2 min., (Diesel in bucket) built to 55" in H2O

45 - IS: Blow back built to 2", died back to 1"

15 - FF: Blow built to BOB at 1 1/2 min., built to 65" in H2O

45 - FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1861.68	111.57	Initial Hydro-static
1	207.44	111.96	Open To Flow (1)
11	370.64	132.10	Shut-In(1)
56	1226.13	127.72	End Shut-In(1)
56	391.58	127.22	Open To Flow (2)
70	586.65	133.08	Shut-In(2)
119	1206.27	130.48	End Shut-In(2)
120	1827.81	128.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
815.00	Water 96%w , 4%m	9.25
250.00	MCW w/trace oil 82%w , 18%m	3.51
120.00	MW w/trace oil 63%w , 37%m	1.68

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68543

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2021.12.14 @ 03:22:00

Tool Information

Drill Pipe:	Length: 3579.00 ft	Diameter: 3.80 inches	Volume: 50.20 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 240.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 51.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3830.00 ft			Final 77000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	103.00 ft			
Tool Length:	136.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3798.00	
Shut In Tool	5.00			3803.00	
Hydraulic tool	5.00			3808.00	
Jars	5.00			3813.00	
Gap Sub	4.00			3817.00	
Safety Joint	3.00			3820.00	
Packer	5.00			3825.00	33.00 Bottom Of Top Packer
Packer	5.00			3830.00	
Packer - Shale	0.00			3830.00	
Stubb	1.00			3831.00	
Recorder	0.00	6771	Inside	3831.00	
Recorder	0.00	8367	Outside	3831.00	
Perforations	31.00			3862.00	
Blank Spacing	65.00			3927.00	
Perforations	3.00			3930.00	
Bullnose	3.00			3933.00	103.00 Bottom Packers & Anchor
Total Tool Length:	136.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68543

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2021.12.14 @ 03:22:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 62.00 sec/qt
Water Loss: 6.36 in³
Resistivity: ohm.m
Salinity: 2200.00 ppm
Filter Cake: 2.00 inches

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

Oil API: deg API
Water Salinity: 34000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
815.00	Water 96%w , 4%m	9.246
250.00	MCW w /trace oil 82%w , 18%m	3.507
120.00	MW w /trace oil 63%w , 37%m	1.683

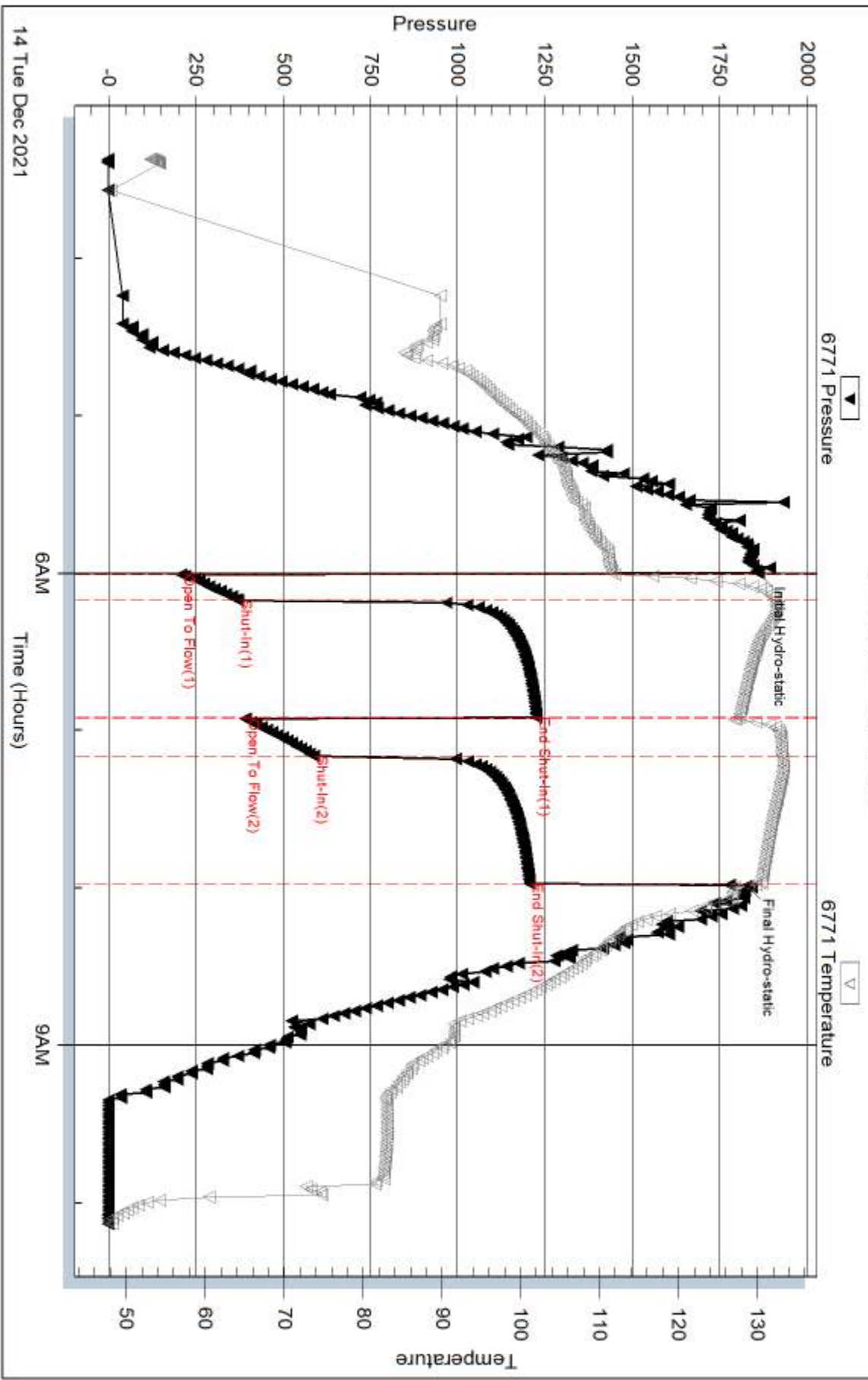
Total Length: 1185.00 ft Total Volume: 14.436 bbl

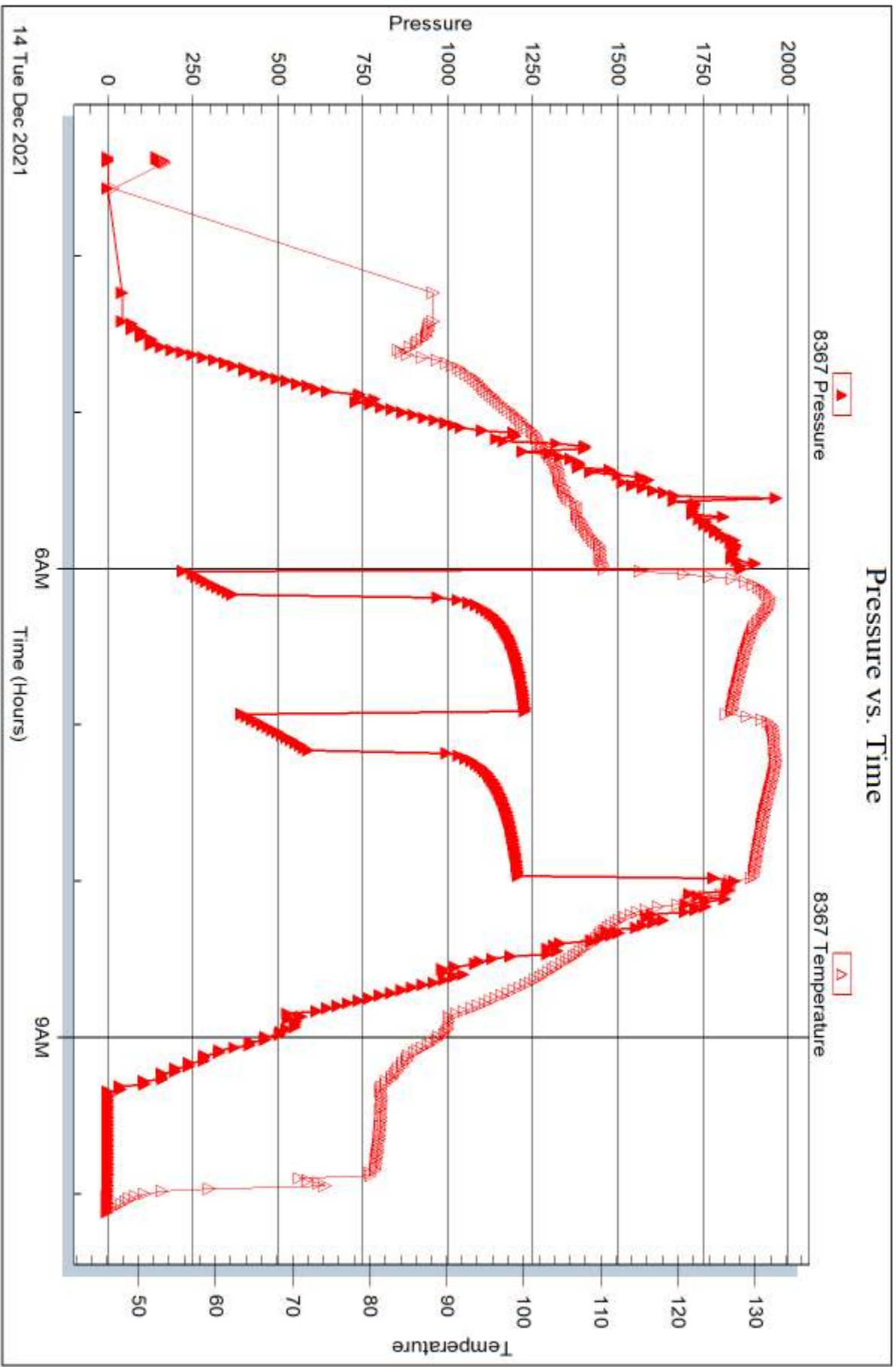
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW = .307 @ 48 deg F Chlorides = 34,000 ppm

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Black Oak Exploration, LLC**

1474 S St. Paul St.
Denver, CO 80210

ATTN: Clayton Camozzi

Threlkel Et Al #1-23

23-3s-35w Rawlins KS

Start Date: 2021.12.14 @ 10:54:00

End Date: 2021.12.14 @ 16:20:36

Job Ticket #: 68544 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.20 @ 10:36:05



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68544

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2021.12.14 @ 10:54:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:45:36

Time Test Ended: 16:20:36

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 3912.00 ft (KB) To 3933.00 ft (KB) (TVD)

Reference Elevations: 3002.00 ft (KB)

Total Depth: 3933.00 ft (KB) (TVD)

2997.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 17.78 psig @ 3913.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.14

End Date:

2021.12.14

Last Calib.: 2021.12.14

Start Time: 10:54:01

End Time:

16:20:36

Time On Btm: 2021.12.14 @ 12:45:21

Time Off Btm: 2021.12.14 @ 14:08:36

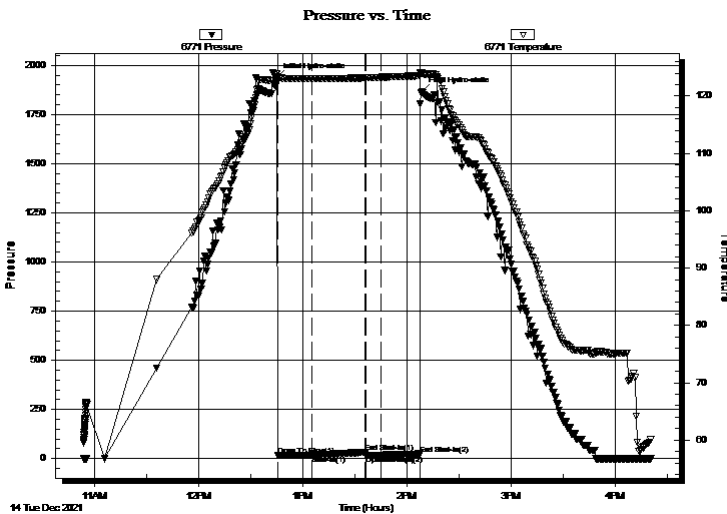
TEST COMMENT: 20 - IF: 1/4" Blow at open, died back to surface blow

30 - IS: No blow

10 - FF: No blow

20 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1939.75	123.86	Initial Hydro-static
1	16.48	123.41	Open To Flow (1)
21	18.24	123.00	Shut-In(1)
51	31.74	123.18	End Shut-In(1)
52	16.53	123.18	Open To Flow (2)
60	17.78	123.28	Shut-In(2)
82	23.46	123.54	End Shut-In(2)
84	1865.00	123.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68544

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2021.12.14 @ 10:54:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:45:36

Time Test Ended: 16:20:36

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 3912.00 ft (KB) To 3933.00 ft (KB) (TVD)

Total Depth: 3933.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3002.00 ft (KB)

2997.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8367 **Outside**

Press@RunDepth: psig @ 3913.00 ft (KB)

Start Date: 2021.12.14

End Date:

2021.12.14

Start Time: 10:54:01

End Time:

16:20:06

Capacity: 8000.00 psig

Last Calib.:

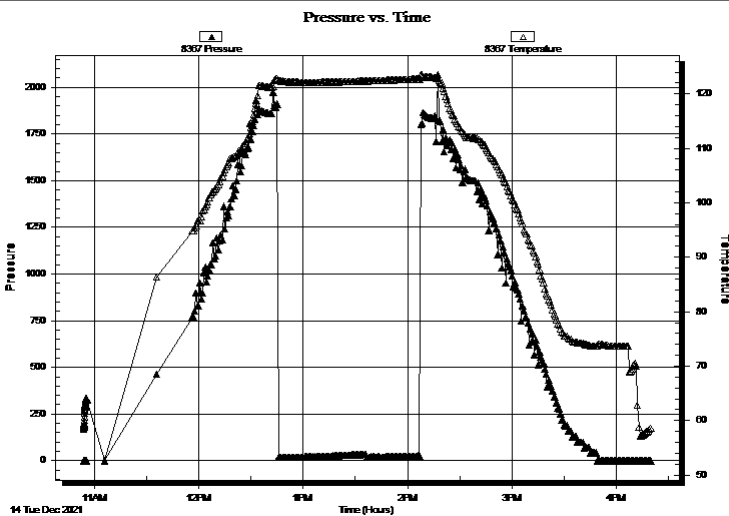
2021.12.14

Time On Btm:

Time Off Btm:

TEST COMMENT: 20 - IF: 1/4" Blow at open, died back to surface blow
30 - ISI: No blow
10 - FF: No blow
20 - FSI: No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68544

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2021.12.14 @ 10:54:00

Tool Information

Drill Pipe:	Length: 3671.00 ft	Diameter: 3.80 inches	Volume: 51.49 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 240.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 52.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3912.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	54.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3880.00	
Shut In Tool	5.00			3885.00	
Hydraulic tool	5.00			3890.00	
Jars	5.00			3895.00	
Gap Sub	4.00			3899.00	
Safety Joint	3.00			3902.00	
Packer	5.00			3907.00	33.00 Bottom Of Top Packer
Packer	5.00			3912.00	
Packer - Shale	0.00			3912.00	
Stubb	1.00			3913.00	
Recorder	0.00	6771	Inside	3913.00	
Recorder	0.00	8367	Outside	3913.00	
Perforations	17.00			3930.00	
Bullnose	3.00			3933.00	21.00 Bottom Packers & Anchor

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68544

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2021.12.14 @ 10:54:00

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: 6.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 100%	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

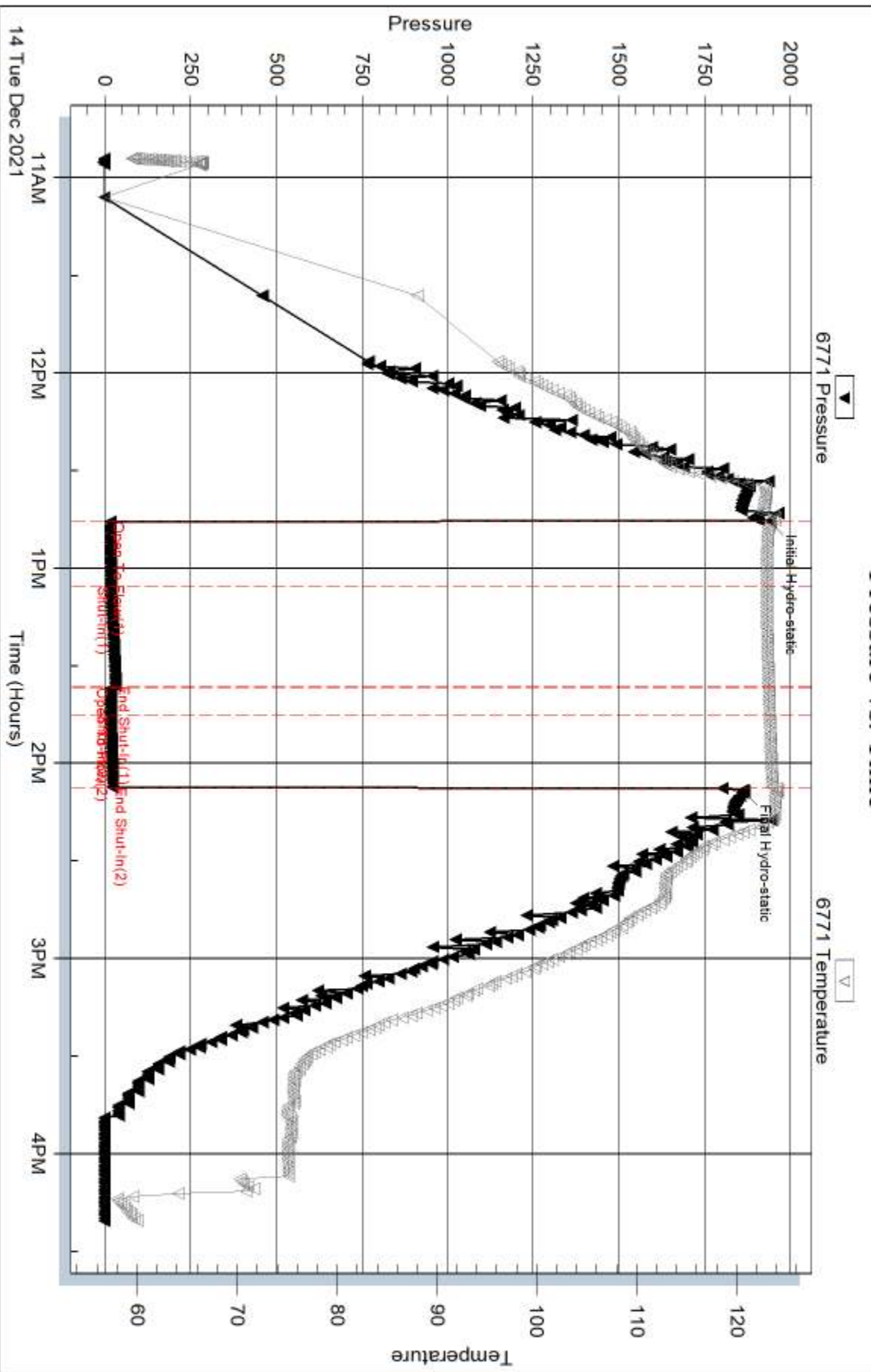
Serial #:

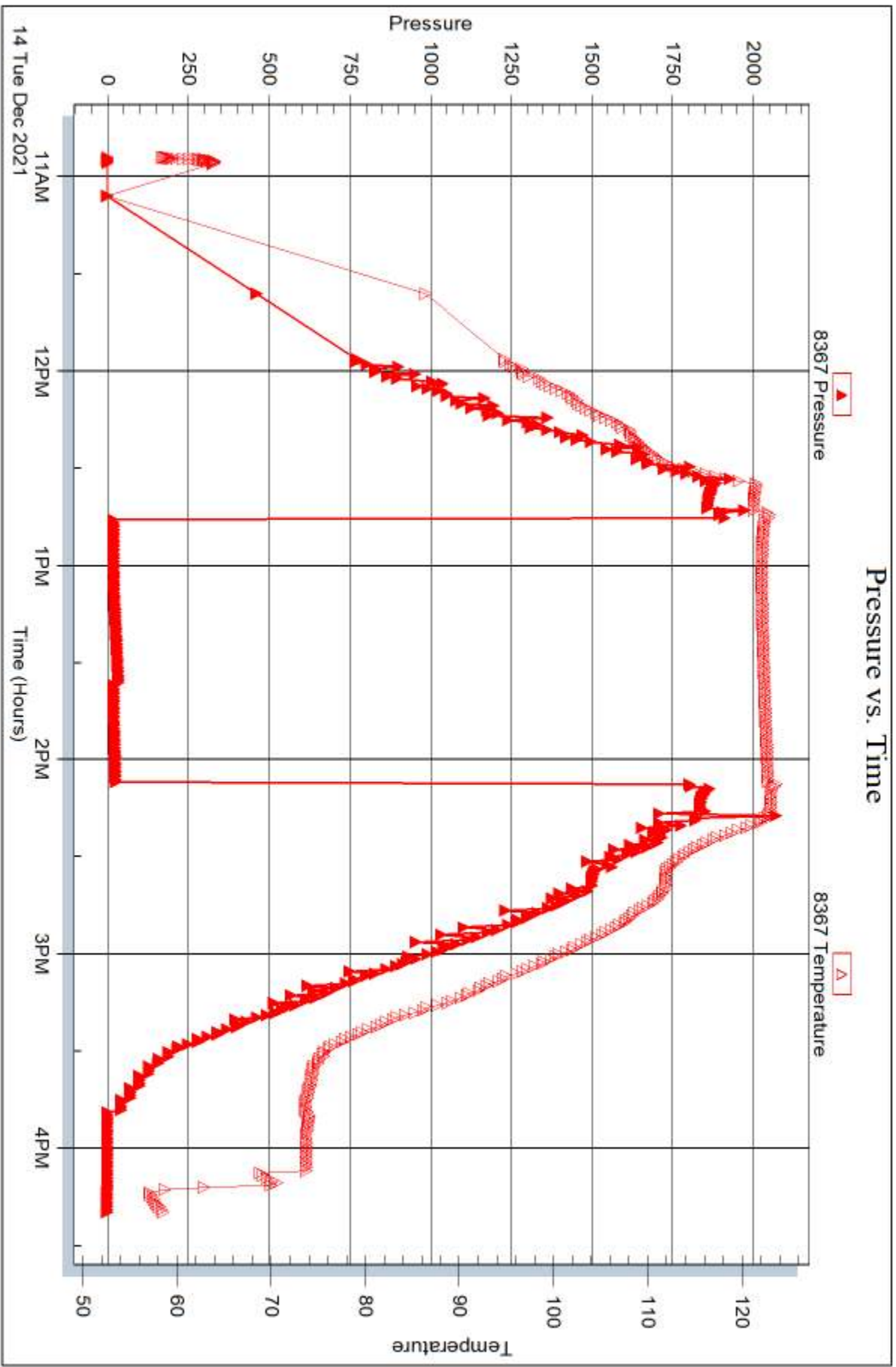
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Black Oak Exploration, LLC**

1474 S St. Paul St.
Denver, CO 80210

ATTN: Clayton Camozzi

Threlkel Et Al #1-23

23-3s-35w Rawlins KS

Start Date: 2021.12.15 @ 00:44:00

End Date: 2021.12.15 @ 08:33:36

Job Ticket #: 68545 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.20 @ 10:35:35



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68545

DST#: 3

ATTN: Clayton Camozzi

Test Start: 2021.12.15 @ 00:44:00

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:00:51

Time Test Ended: 08:33:36

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 3930.00 ft (KB) To 3979.00 ft (KB) (TVD)

Reference Elevations: 3002.00 ft (KB)

Total Depth: 3979.00 ft (KB) (TVD)

2997.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 567.39 psig @ 3931.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.15

End Date:

2021.12.15

Last Calib.:

2021.12.15

Start Time: 00:44:01

End Time:

08:33:36

Time On Btm:

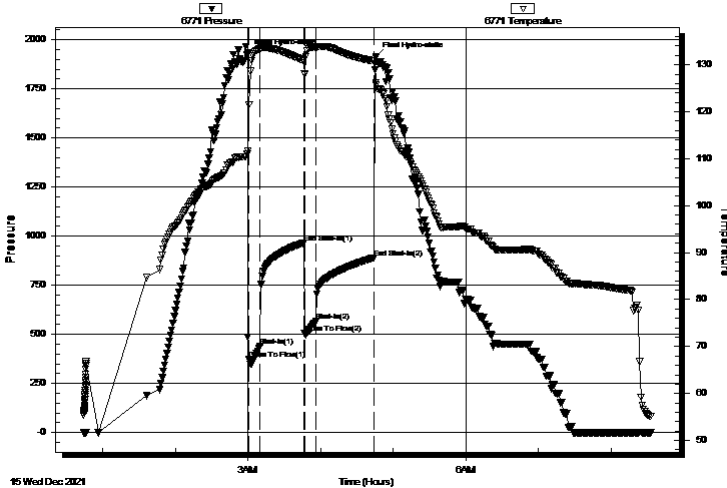
2021.12.15 @ 02:59:36

Time Off Btm:

2021.12.15 @ 04:45:36

TEST COMMENT: 10 - IF: Blow built to BOB (Diesel) (11") in under 45 sec., built to 184" in H2O
35 - IS: Bled off for 8 min., Blow back built to BOB at 3 min., built to 72" in H2O
10 - FF: Blow built to BOB at 40 sec., built to 82 1/2" in H2O
45 - FS: Blow back built to BOB at 7 1/2 min., built to 23" in H2O

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1931.48	111.11	Initial Hydro-static
2	371.89	121.51	Open To Flow (1)
11	439.00	133.36	Shut-In(1)
47	965.49	130.90	End Shut-In(1)
47	503.81	128.08	Open To Flow (2)
57	567.39	133.73	Shut-In(2)
105	890.22	130.78	End Shut-In(2)
106	1915.47	126.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MCGO 73%o, 15%g, 12%m	1.18
755.00	SMCGO 68%o, 24%g, 8%m	10.59
505.00	CGO 74%o, 26%g	7.08
0.00	GIP = 2030'	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68545

DST#: 3

ATTN: Clayton Camozzi

Test Start: 2021.12.15 @ 00:44:00

Tool Information

Drill Pipe:	Length: 3674.00 ft	Diameter: 3.80 inches	Volume: 51.54 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 240.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 52.72 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	3930.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			3898.00	
Shut In Tool	5.00			3903.00	
Hydraulic tool	5.00			3908.00	
Jars	5.00			3913.00	
Gap Sub	4.00			3917.00	
Safety Joint	3.00			3920.00	
Packer	5.00			3925.00	33.00 Bottom Of Top Packer
Packer	5.00			3930.00	
Stubb	1.00			3931.00	
Recorder	0.00	6771	Inside	3931.00	
Recorder	0.00	8367	Outside	3931.00	
Perforations	10.00			3941.00	
Blank Spacing	34.00			3975.00	
Perforations	1.00			3976.00	
Bullnose	3.00			3979.00	49.00 Bottom Packers & Anchor

Total Tool Length: 82.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68545

DST#: 3

ATTN: Clayton Camozzi

Test Start: 2021.12.15 @ 00:44:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37.6 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	MCGO 73%o, 15%g, 12%m	1.180
755.00	SMCGO 68%o, 24%g, 8%m	10.591
505.00	CGO 74%o, 26%g	7.084
0.00	GIP = 2030'	0.000

Total Length: 1500.00 ft Total Volume: 18.855 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

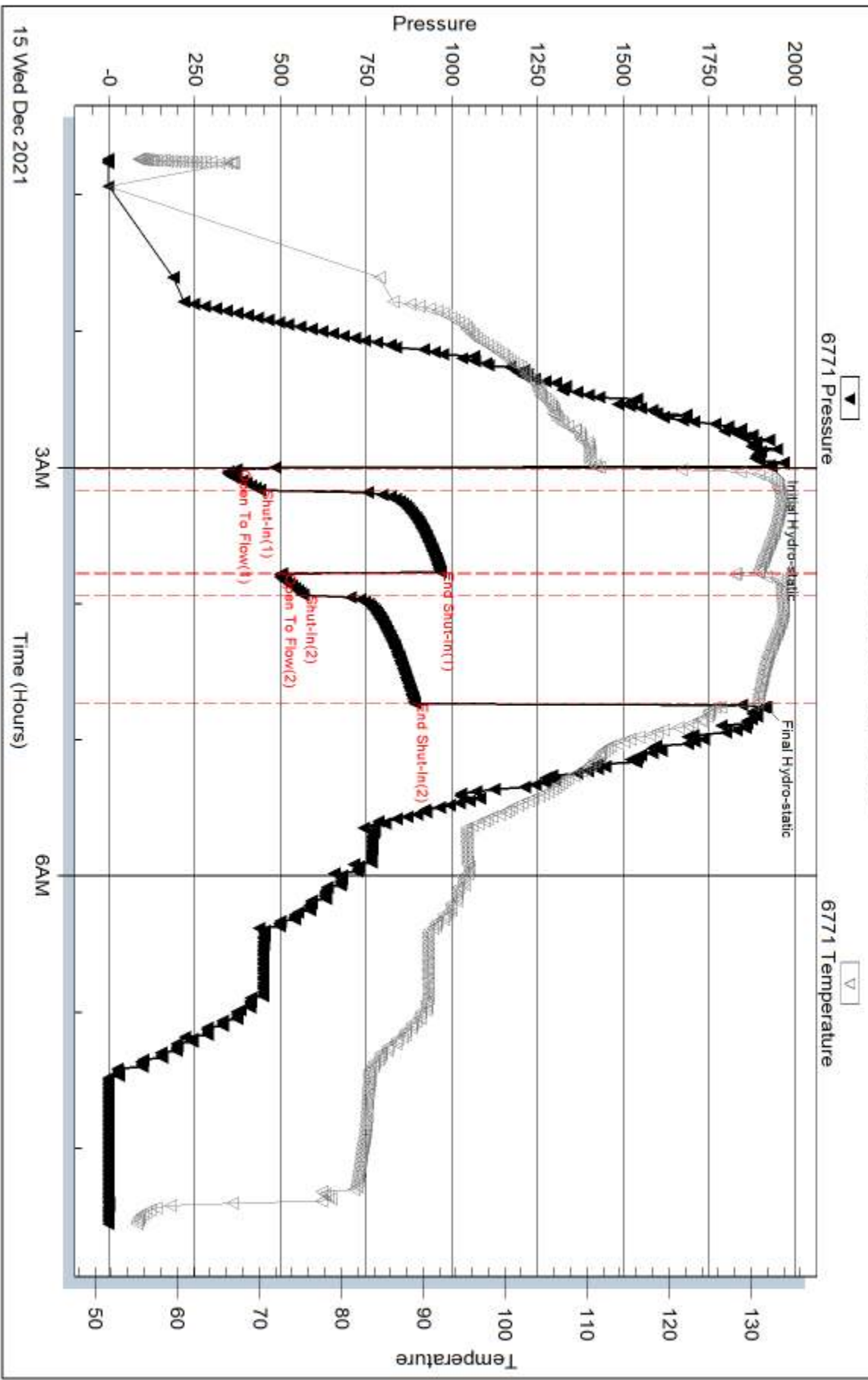
Serial #:

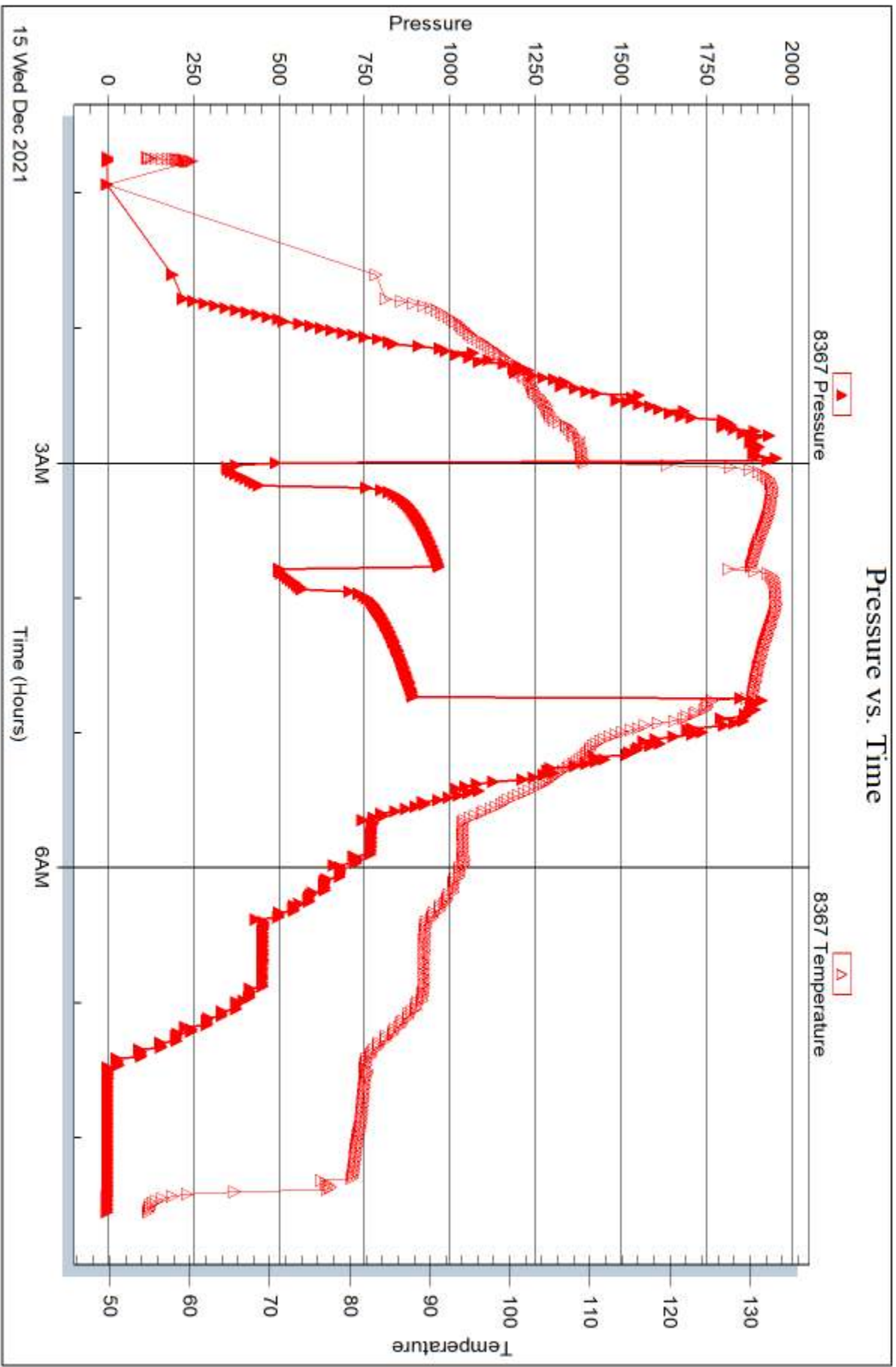
Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 37.6 api @ 60 deg F

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Black Oak Exploration, LLC**

1474 S St. Paul St.
Denver, CO 80210

ATTN: Clayton Camozzi

Threlkel Et Al #1-23

23-3s-35w Rawlins KS

Start Date: 2021.12.16 @ 01:00:00

End Date: 2021.12.16 @ 08:46:06

Job Ticket #: 68546 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.20 @ 10:34:51



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68546

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2021.12.16 @ 01:00:00

GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:30:51

Time Test Ended: 08:46:06

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 3985.00 ft (KB) To 4040.00 ft (KB) (TVD)

Reference Elevations: 3002.00 ft (KB)

Total Depth: 4040.00 ft (KB) (TVD)

2997.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 202.31 psig @ 3986.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.16

End Date: 2021.12.16

Last Calib.: 2021.12.16

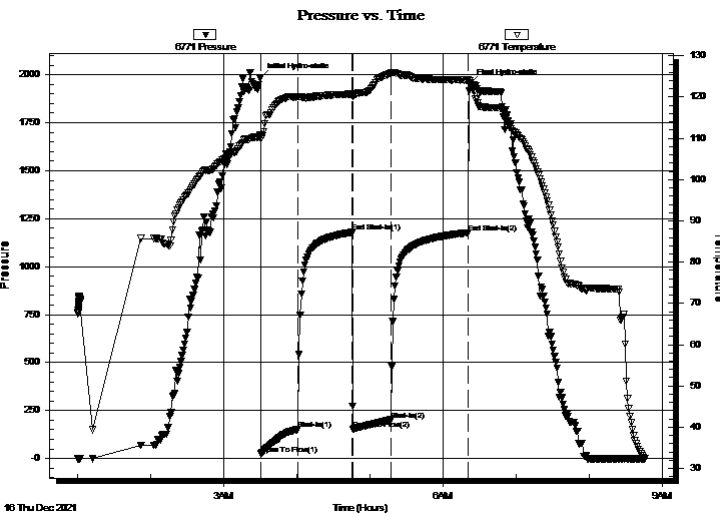
Start Time: 01:00:01

End Time: 08:46:06

Time On Btm: 2021.12.16 @ 03:30:36

Time Off Btm: 2021.12.16 @ 06:22:06

TEST COMMENT: 30 - IF: 1" Blow at open, built to BOB(Diesel) (11") at 19 3/4 min., built to 13 3/4" in H2O
45 - IS: No blow back
30 - FF: Blow built to BOB at 24 min., built to 13" in H2O
60 - FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1986.07	110.83	Initial Hydro-static
1	24.23	109.88	Open To Flow (1)
31	151.92	120.11	Shut-In(1)
75	1179.05	120.72	End Shut-In(1)
76	154.26	120.48	Open To Flow (2)
107	202.31	125.81	Shut-In(2)
171	1176.49	124.16	End Shut-In(2)
172	1954.57	123.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MW w/trace Oil 58%w, 42%m	1.18
125.00	WCM w/Oil spots 63%m, 30%w, 6%g	1.75
60.00	VSOCM 97%m, 3%o	0.84

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68546

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2021.12.16 @ 01:00:00

GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:30:51

Time Test Ended: 08:46:06

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 3985.00 ft (KB) To 4040.00 ft (KB) (TVD)

Reference Elevations: 3002.00 ft (KB)

Total Depth: 4040.00 ft (KB) (TVD)

2997.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8367

Outside

Press@RunDepth: psig @ 3986.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.16

End Date:

2021.12.16

Last Calib.:

2021.12.16

Start Time: 01:00:01

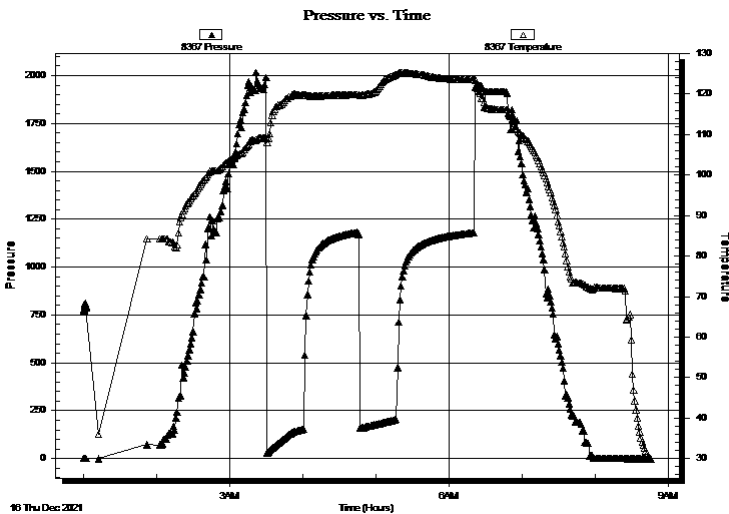
End Time:

08:45:51

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: 1" Blow at open, built to BOB(Diesel) (11") at 19 3/4 min., built to 13 3/4" in H2O
 45 - ISI: No blow back
 30 - FF: Blow built to BOB at 24 min., built to 13" in H2O
 60 - FSI: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MW w/trace Oil 58%w, 42%m	1.18
125.00	WCM w/Oil spots 63%m, 30%w, 6%g,	1.75
60.00	V/SOCM 97%m, 3%o	0.84

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68546

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2021.12.16 @ 01:00:00

Tool Information

Drill Pipe:	Length: 3738.00 ft	Diameter: 3.80 inches	Volume: 52.43 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 240.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 53.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3985.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	88.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3953.00	
Shut In Tool	5.00			3958.00	
Hydraulic tool	5.00			3963.00	
Jars	5.00			3968.00	
Gap Sub	4.00			3972.00	
Safety Joint	3.00			3975.00	
Packer	5.00			3980.00	33.00 Bottom Of Top Packer
Packer	5.00			3985.00	
Stubb	1.00			3986.00	
Recorder	0.00	6771	Inside	3986.00	
Recorder	0.00	8367	Outside	3986.00	
Perforations	15.00			4001.00	
Blank Spacing	34.00			4035.00	
Perforations	2.00			4037.00	
Bullnose	3.00			4040.00	55.00 Bottom Packers & Anchor

Total Tool Length: 88.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68546

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2021.12.16 @ 01:00:00

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:

23000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
240.00	MW w/trace Oil 58%w , 42%m	1.180
125.00	WCM w/Oil spots 63%m, 30%w , 6%g, 1%o	1.753
60.00	VSOCM 97%m, 3%o	0.842

Total Length: 425.00 ft Total Volume: 3.775 bbl

Num Fluid Samples: 0

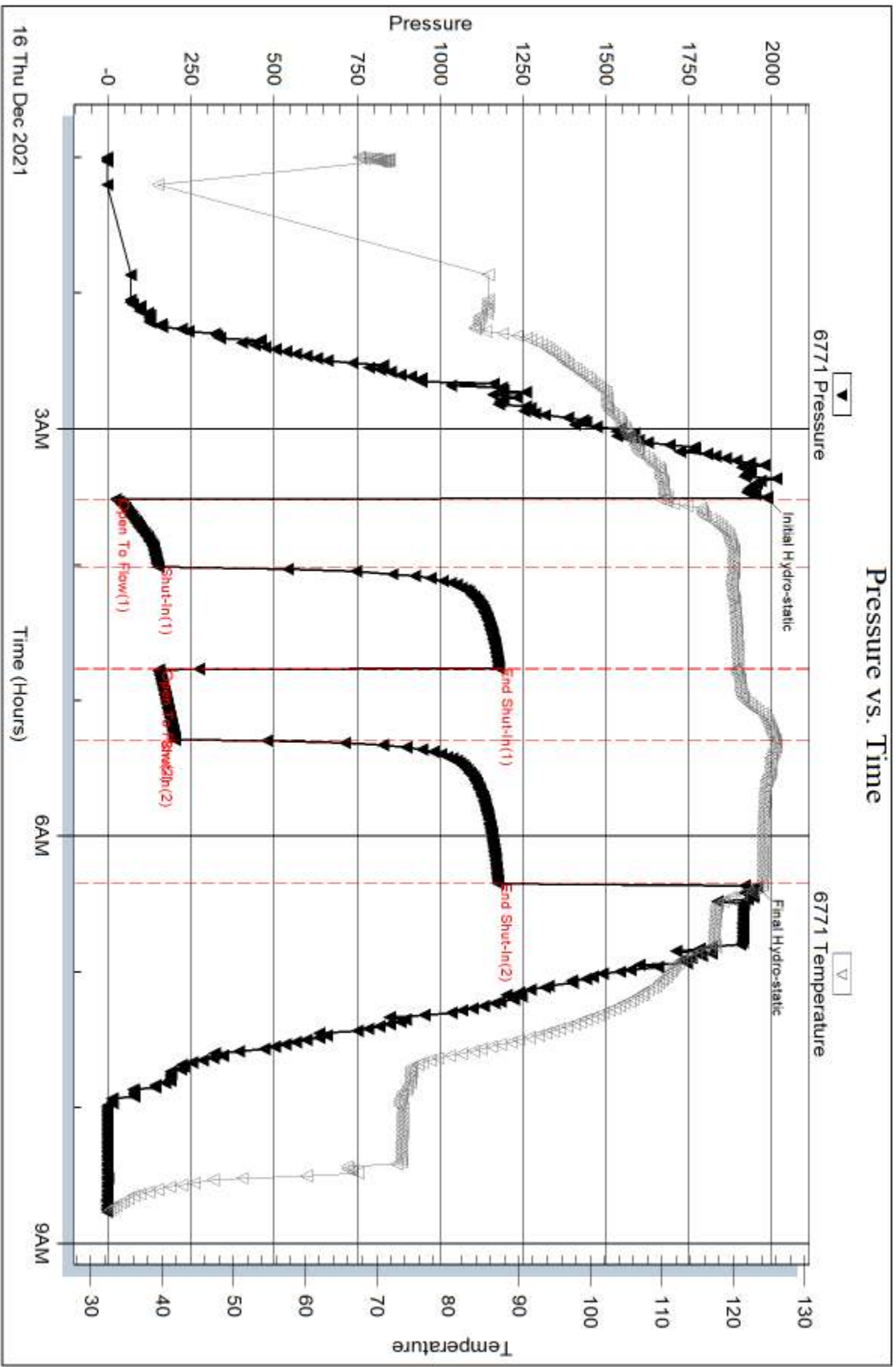
Num Gas Bombs: 0

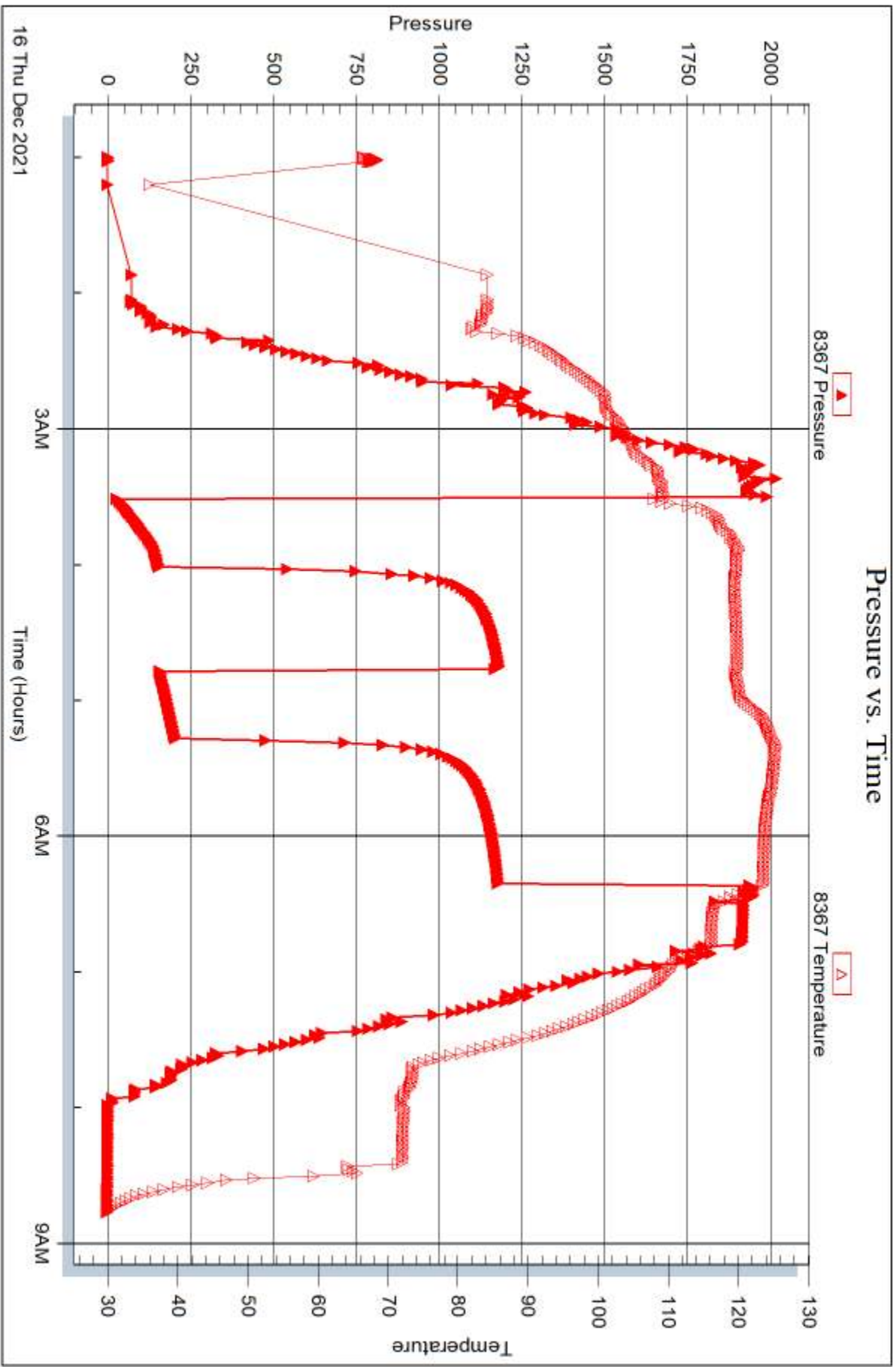
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .340 ohms @ 61.3 deg F Chlorides = 23,000 ppm







DRILL STEM TEST REPORT

Prepared For: **Black Oak Exploration, LLC**

1474 S St. Paul St.
Denver, CO 80210

ATTN: Clayton Camozzi

Threlkel Et Al #1-23

23-3s-35w Rawlins KS

Start Date: 2021.12.17 @ 01:28:00

End Date: 2021.12.17 @ 07:51:06

Job Ticket #: 68547 DST #: 5

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.20 @ 10:33:49



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68547

DST#: 5

ATTN: Clayton Camozzi

Test Start: 2021.12.17 @ 01:28:00

GENERAL INFORMATION:

Formation: **LKC "J - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:00:51

Time Test Ended: 07:51:06

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 4080.00 ft (KB) To 4172.00 ft (KB) (TVD)

Reference Elevations: 3002.00 ft (KB)

Total Depth: 4172.00 ft (KB) (TVD)

2997.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 20.95 psig @ 4081.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.17

End Date: 2021.12.17

Last Calib.: 2021.12.17

Start Time: 01:28:01

End Time: 07:51:06

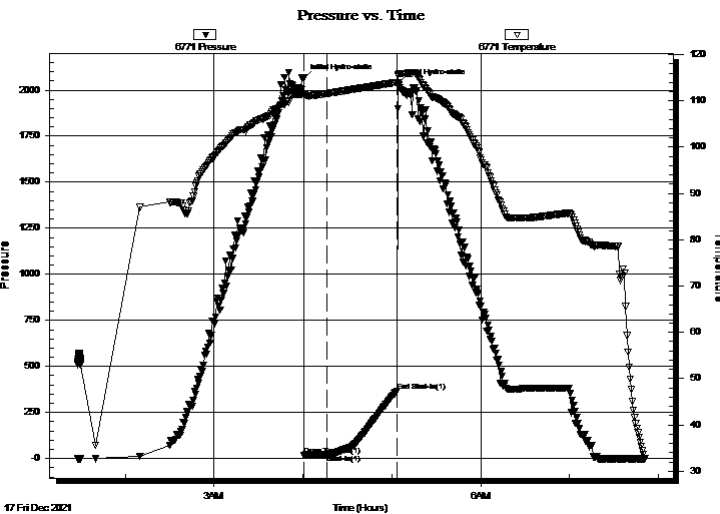
Time On Btm: 2021.12.17 @ 04:00:36

Time Off Btm: 2021.12.17 @ 05:04:21

TEST COMMENT: 15 - IF: 1/4" Blow at open, built to just under 1" (Diesel in bucket)

45 - ISI: No blow back

Pulled tools



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2063.82	111.64	Initial Hydro-static
1	19.00	111.28	Open To Flow (1)
16	20.95	111.58	Shut-In(1)
63	366.57	113.98	End Shut-In(1)
64	2037.38	115.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.00
0.00	Trace of oil in tool	0.00

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68547

DST#: 5

ATTN: Clayton Camozzi

Test Start: 2021.12.17 @ 01:28:00

GENERAL INFORMATION:

Formation: **LKC "J - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:00:51

Time Test Ended: 07:51:06

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 4080.00 ft (KB) To 4172.00 ft (KB) (TVD)

Total Depth: 4172.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3002.00 ft (KB)

2997.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 4081.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.17

End Date: 2021.12.17

Last Calib.: 2021.12.17

Start Time: 01:28:01

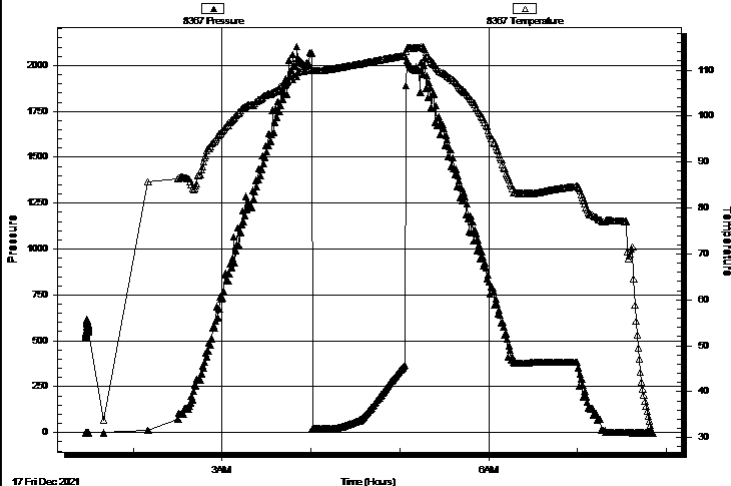
End Time: 07:50:51

Time On Btm:

Time Off Btm:

TEST COMMENT: 15 - IF: 1/4" Blow at open, built to just under 1" (Diesel in bucket)
45 - IS: No blow back
Pulled tools

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.00
0.00	Trace of oil in tool	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68547

DST#: 5

ATTN: Clayton Camozzi

Test Start: 2021.12.17 @ 01:28:00

Tool Information

Drill Pipe:	Length: 3832.00 ft	Diameter: 3.80 inches	Volume: 53.75 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 240.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 54.93 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4080.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	92.00 ft			
Tool Length:	125.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4048.00	
Shut In Tool	5.00			4053.00	
Hydraulic tool	5.00			4058.00	
Jars	5.00			4063.00	
Gap Sub	4.00			4067.00	
Safety Joint	3.00			4070.00	
Packer	5.00			4075.00	33.00 Bottom Of Top Packer
Packer	5.00			4080.00	
Stubb	1.00			4081.00	
Recorder	0.00	6771	Inside	4081.00	
Recorder	0.00	8367	Outside	4081.00	
Perforations	21.00			4102.00	
Blank Spacing	65.00			4167.00	
Perforations	2.00			4169.00	
Bullnose	3.00			4172.00	92.00 Bottom Packers & Anchor

Total Tool Length: 125.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68547

DST#: 5

ATTN: Clayton Camozzi

Test Start: 2021.12.17 @ 01:28:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
1.00	Mud 100%	0.005
0.00	Trace of oil in tool	0.000

Total Length: 1.00 ft Total Volume: 0.005 bbf

Num Fluid Samples: 0

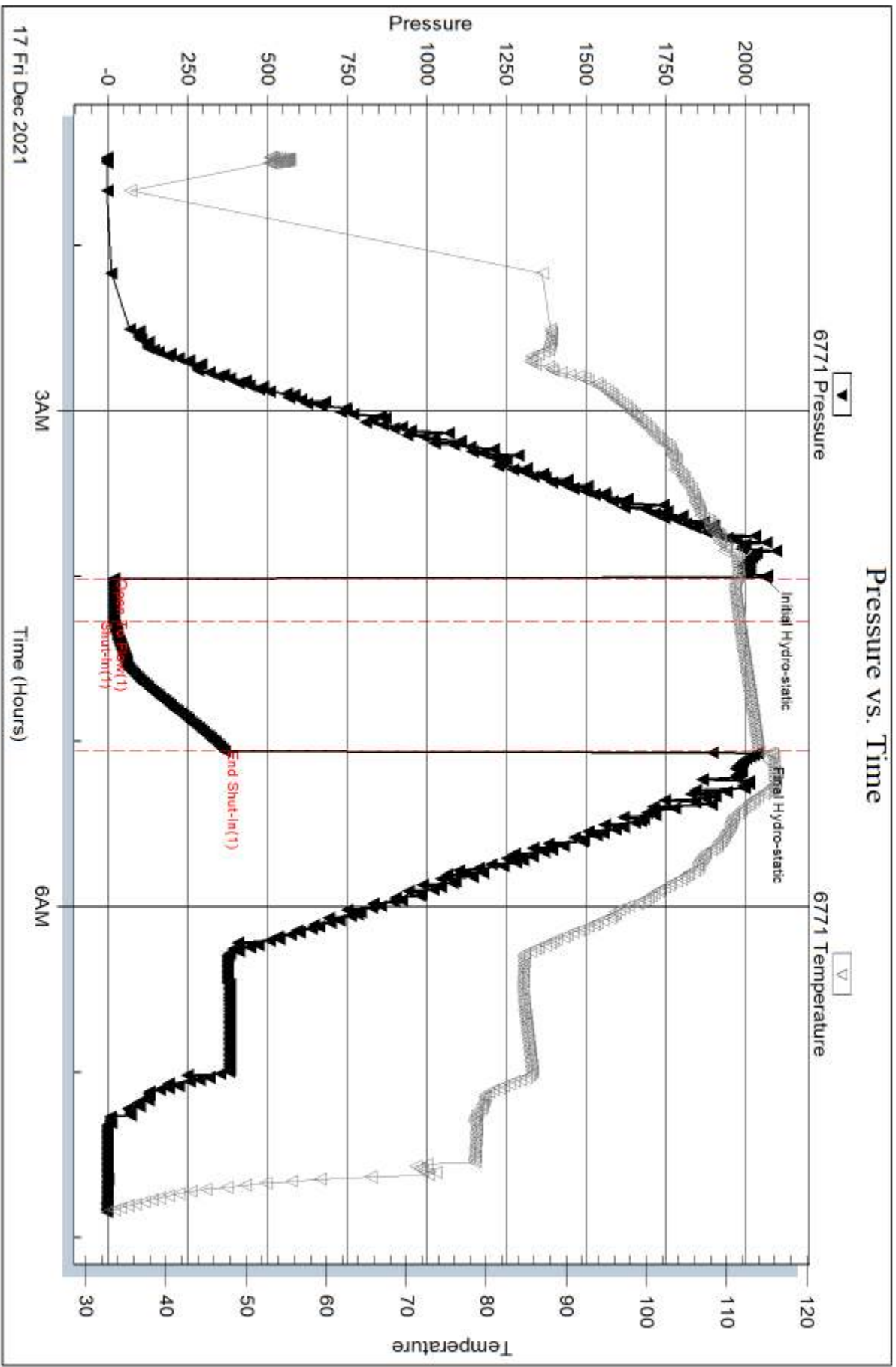
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

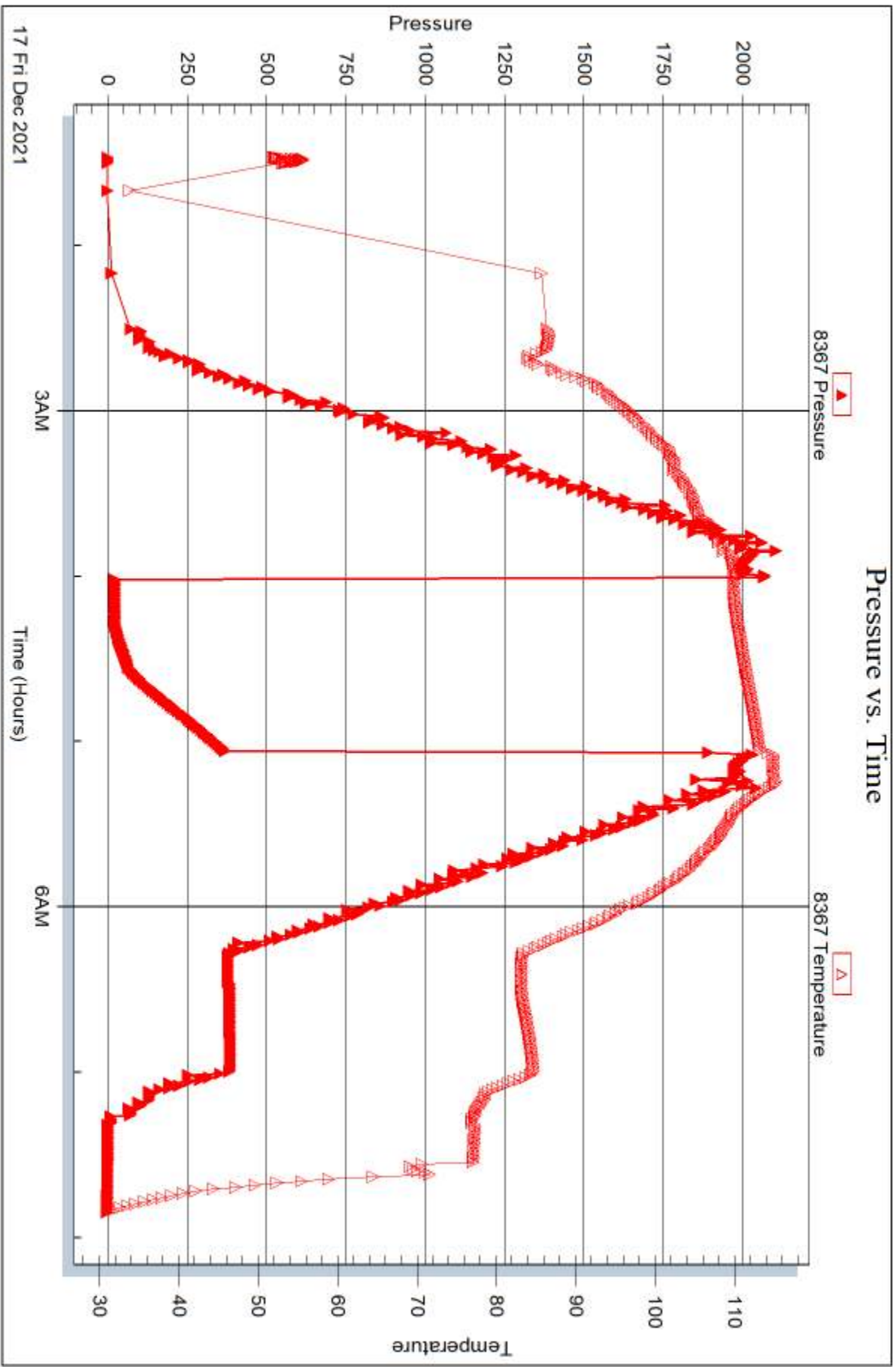


Serial #: 8367

Outside Black Oak Exploration, LLC

Threlkel B AI #1-23

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 68547

Printed: 2021.12.20 @ 10:33:50



DRILL STEM TEST REPORT

Prepared For: **Black Oak Exploration, LLC**

1474 S St. Paul St.
Denver, CO 80210

ATTN: Clayton Camozzi

Threlkel Et Al #1-23

23-3s-35w Rawlins KS

Start Date: 2021.12.18 @ 08:40:00

End Date: 2021.12.18 @ 14:28:06

Job Ticket #: 68548 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.20 @ 10:32:24



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68548

DST#: 6

ATTN: Clayton Camozzi

Test Start: 2021.12.18 @ 08:40:00

GENERAL INFORMATION:

Formation: **Ft Scott - Celia**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:59:51

Time Test Ended: 14:28:06

Test Type: Conventional Straddle (Reset)

Tester: James Winder

Unit No: 73

Interval: 4319.00 ft (KB) To 4390.00 ft (KB) (TVD)

Reference Elevations: 3002.00 ft (KB)

Total Depth: 4402.00 ft (KB) (TVD)

2997.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 21.84 psig @ 4320.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.18

End Date: 2021.12.18

Last Calib.: 2021.12.18

Start Time: 08:40:01

End Time: 14:28:06

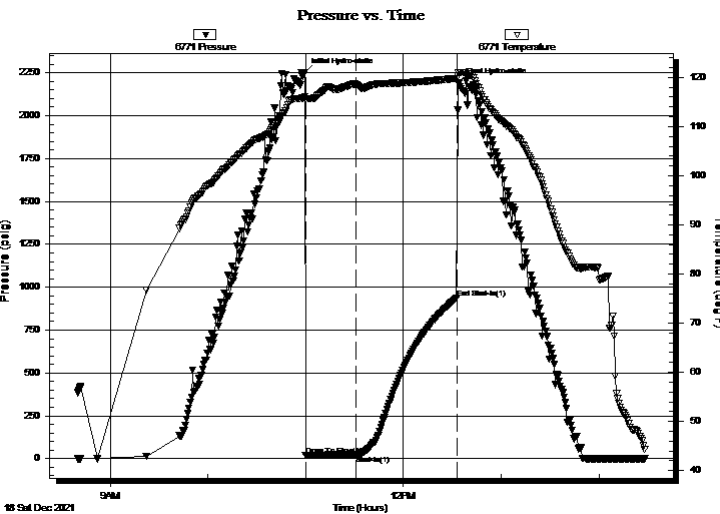
Time On Btm: 2021.12.18 @ 10:59:36

Time Off Btm: 2021.12.18 @ 12:33:51

TEST COMMENT: 30 - IF: 1/2" Blow at open, built to just under 1", died back to 3/4"

60 - ISI: No blow

Pulled tools



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2251.63	116.07	Initial Hydro-static
1	19.21	115.44	Open To Flow (1)
31	21.84	118.63	Shut-In(1)
94	937.59	119.80	End Shut-In(1)
95	2192.29	120.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

Gas Rates

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

* Recovery from multiple tests



DRILL STEM TEST REPORT

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68548

DST#: 6

ATTN: Clayton Camozzi

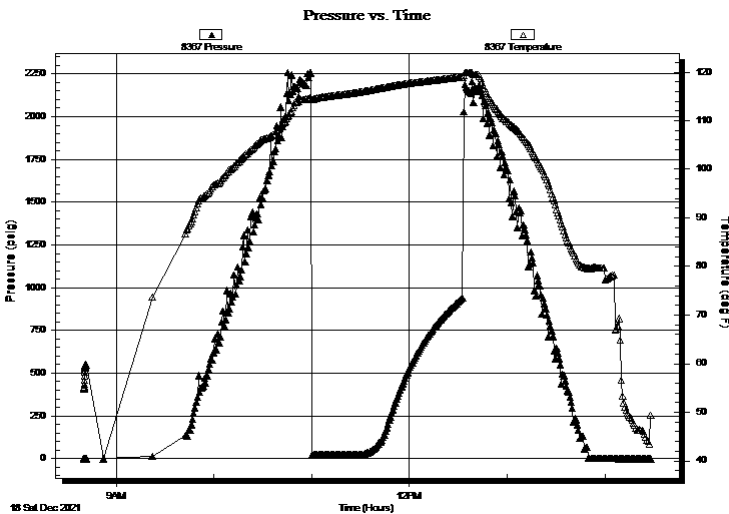
Test Start: 2021.12.18 @ 08:40:00

GENERAL INFORMATION:

Formation: **Ft Scott - Celia**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:59:51
Time Test Ended: 14:28:06
Interval: **4319.00 ft (KB) To 4390.00 ft (KB) (TVD)**
Total Depth: 4402.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 3002.00 ft (KB)
2997.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Straddle (Reset)
Tester: James Winder
Unit No: 73

Serial #: 8367 Outside
Press@RunDepth: psig @ 4320.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2021.12.18 End Date: 2021.12.18 Last Calib.: 2021.12.18
Start Time: 08:40:01 End Time: 14:28:06 Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF: 1/2" Blow at open, built to just under 1", died back to 3/4"
60 - IS: No blow
Pulled tools



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Black Oak Exploration, LLC

1474 S St. Paul St.
Denver, CO 80210

ATTN: Clayton Camozzi

23-3s-35w Rawlins KS

Threlkel Et Al #1-23

Job Ticket: 68548

DST#: 6

Test Start: 2021.12.18 @ 08:40:00

GENERAL INFORMATION:

Formation: **Ft Scott - Celia**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:59:51

Time Test Ended: 14:28:06

Interval: **4319.00 ft (KB) To 4390.00 ft (KB) (TVD)**

Total Depth: 4402.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Reset)

Tester: James Winder

Unit No: 73

Reference Elevations: 3002.00 ft (KB)

2997.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8700 Below (Straddle)

Press@RunDepth: psig @ 4391.00 ft (KB)

Start Date: 2021.12.18

End Date: 2021.12.18

Start Time: 08:40:01

End Time: 14:28:21

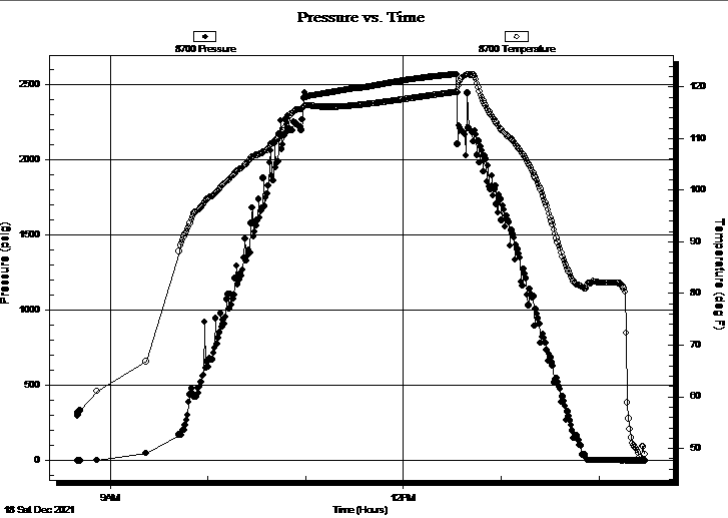
Capacity: 8000.00 psig

Last Calib.: 2021.12.18

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: 1/2" Blow at open, built to just under 1", died back to 3/4"
60 - IS: No blow
Pulled tools



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68548

DST#: 6

ATTN: Clayton Camozzi

Test Start: 2021.12.18 @ 08:40:00

Tool Information

Drill Pipe:	Length: 4053.00 ft	Diameter: 3.80 inches	Volume: 56.85 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 240.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 58.03 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4319.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	4390.00 ft			
Interval between Packers:	71.00 ft			
Tool Length:	116.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4287.00	
Shut In Tool	5.00			4292.00	
Hydraulic tool	5.00			4297.00	
Jars	5.00			4302.00	
EM Tool	4.00			4306.00	
Safety Joint	3.00			4309.00	
Packer	5.00			4314.00	33.00 Bottom Of Top Packer
Packer	5.00			4319.00	
Stubb	1.00			4320.00	
Recorder	0.00	6771	Inside	4320.00	
Recorder	0.00	8367	Outside	4320.00	
Perforations	30.00			4350.00	
Blank Spacing	33.00			4383.00	
Perforations	2.00			4385.00	
Blank Off Sub	1.00			4386.00	
Blank Spacing	4.00			4390.00	71.00 Tool Interval
Packer	0.00			4390.00	
Packer - Shale	0.00			4390.00	
Stubb	1.00			4391.00	
Recorder	0.00	8700	Below	4391.00	
Perforations	8.00			4399.00	
Bullnose	3.00			4402.00	12.00 Bottom Packers & Anchor

Total Tool Length: 116.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Oak Exploration, LLC

23-3s-35w Rawlins KS

1474 S St. Paul St.
Denver, CO 80210

Threlkel Et Al #1-23

Job Ticket: 68548

DST#: 6

ATTN: Clayton Camozzi

Test Start: 2021.12.18 @ 08:40:00

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: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud 100%	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

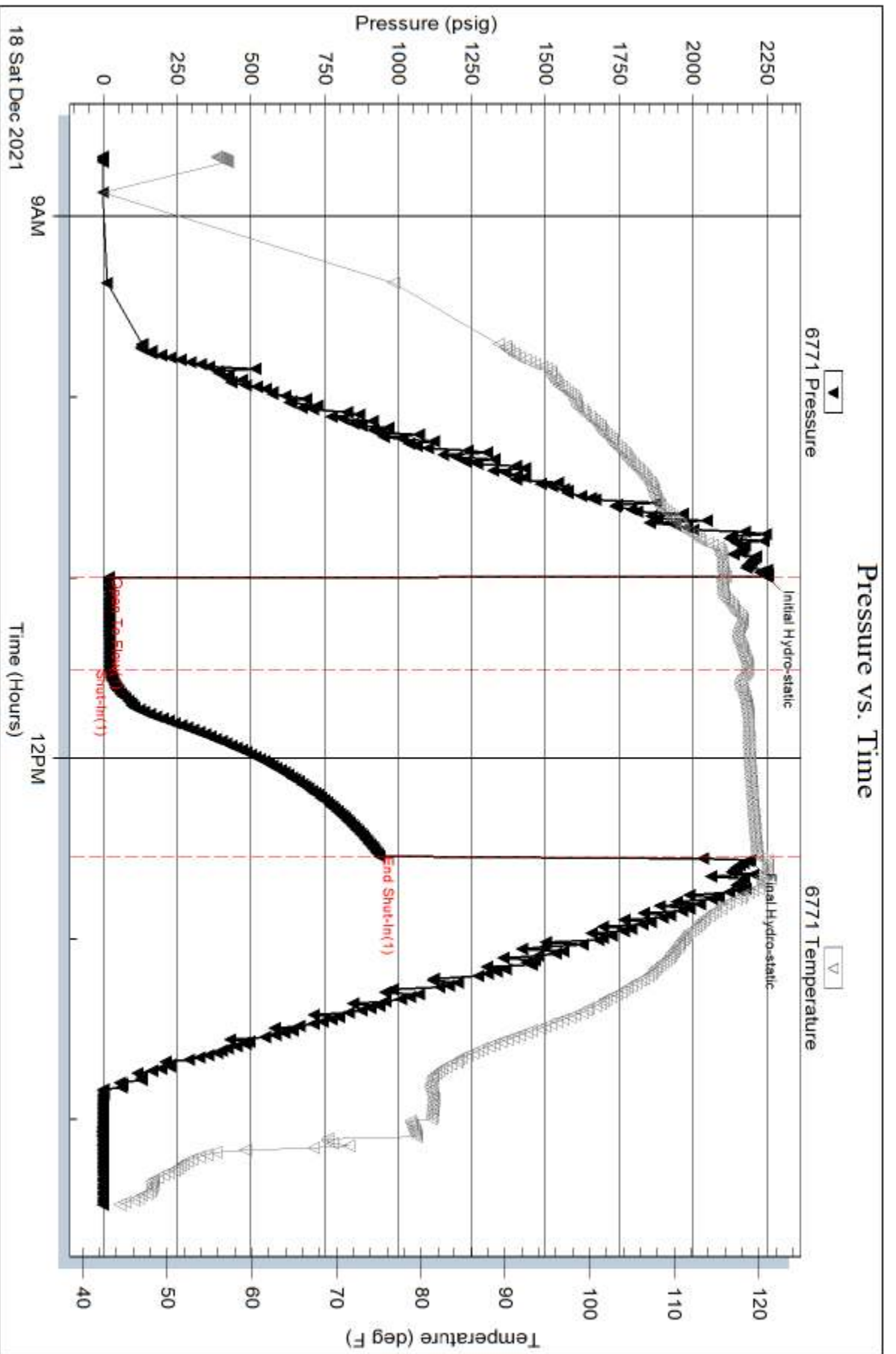
Num Gas Bombs: 0

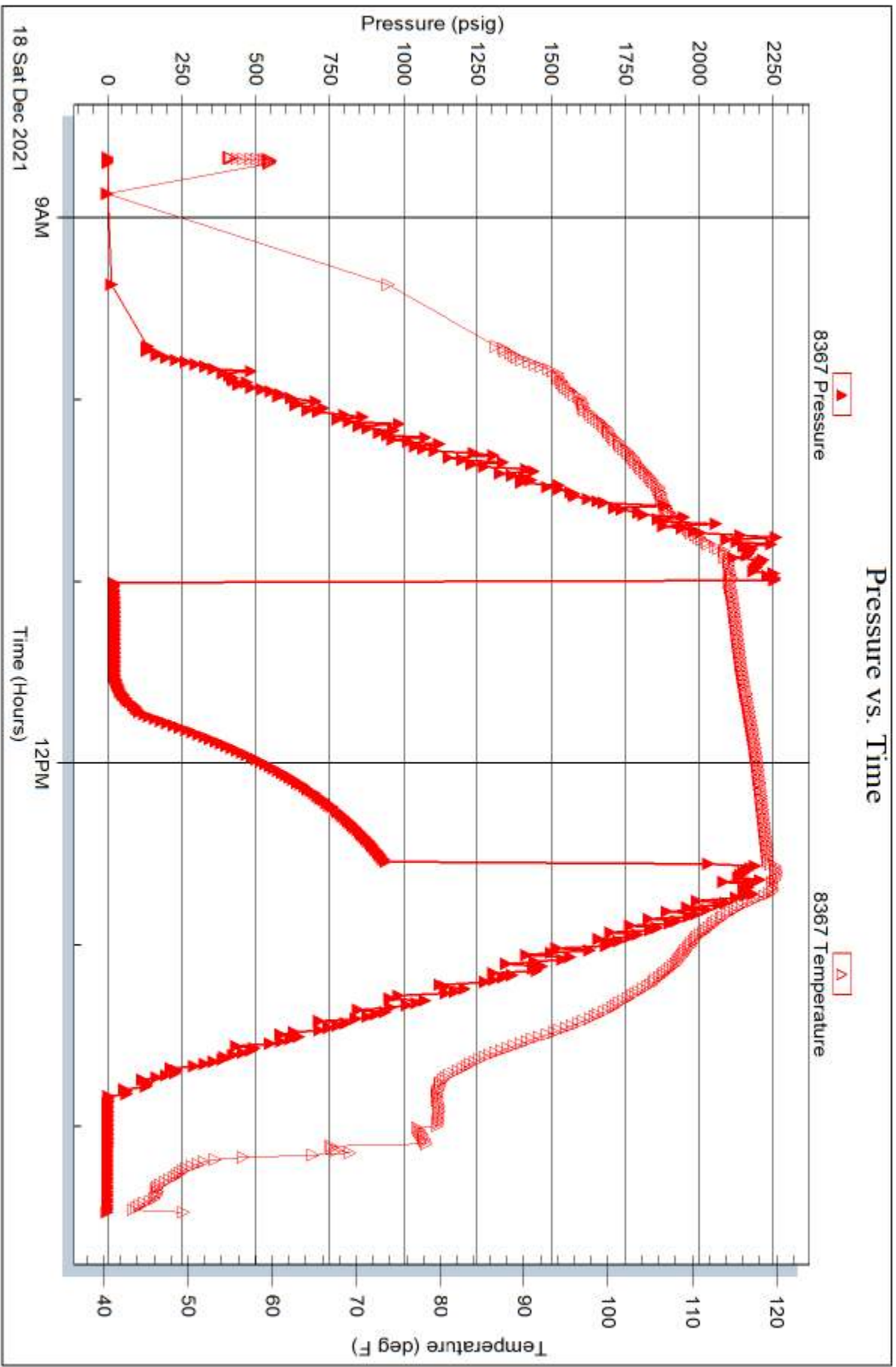
Serial #:

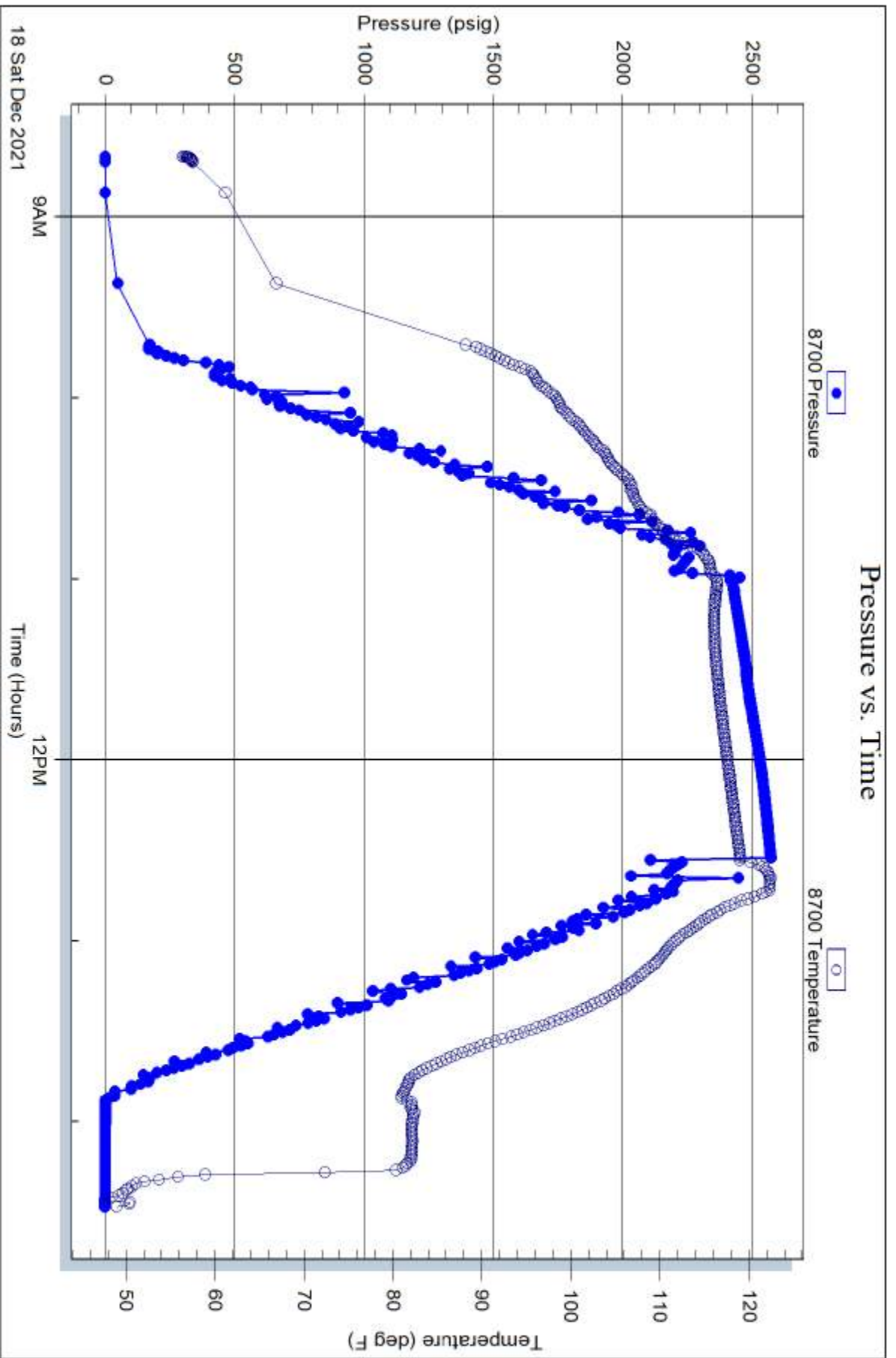
Laboratory Name:

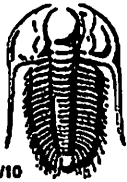
Laboratory Location:

Recovery Comments:









TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 68543

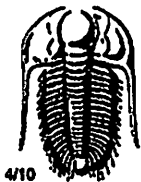
Well Name & No. Threlkel Et Al #1-23 Test No. 1 Date 12-14-21
 Company Black Oak Exploration LLC Elevation 3002 KB 2997 GL
 Address 1474 S. St Paul St Denver, CO 80210
 Co. Rep / Geo. Clayton Camozzi Rig Murfin #7
 Location: Sec. 23 Twp 3s Rge. 35w Co. Rawlins State KS

Interval Tested 3830-3933 Zone Tested Oread - Lans. "A"
 Anchor Length 103 Drill Pipe Run 3579 Mud Wt. 9.0
 Top Packer Depth 3825 Drill Collars Run 240 Vis 62
 Bottom Packer Depth 3830 (shale) Wt. Pipe Run - WL 6.4
 Total Depth 3933 Chlorides 2200 ppm System LCM 4
 Blow Description IF: Blow built to BOB(11") at 1/2 min., built to 55" in H₂O
ISI Blowback built to 2", died back to 1"
FF: Blow built to BOB at 1/2 min., built to 65" in H₂O
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>MW w/trace oil</u>	<u>trace</u>	<u>63</u>	<u>37</u>	
<u>250</u>	<u>MCW w/trace oil</u>	<u>trace</u>	<u>82</u>	<u>18</u>	
<u>815</u>	<u>Water</u>	<u>Slight trace</u>	<u>96</u>	<u>4</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1185 BHT 130 Gravity API RW .307 @ 48 °F Chlorides 34000 ppm
 (A) Initial Hydrostatic 1861 Test 1300 T-On Location 1:00
 (B) First Initial Flow 207 Jars 250 T-Started 3:22
 (C) First Final Flow 371 Safety Joint 75 T-Open 6:00
 (D) Initial Shut-In 1226 Circ Sub _____ T-Pulled 7:58
 (E) Second Initial Flow 391 Hourly Standby _____ T-Out 10:05
 (F) Second Final Flow 587 Mileage 74RT 92.50 Comments diesel in bucket
 (G) Final Shut-In 1206 Sampler _____
 (H) Final Hydrostatic 1828 Straddle _____ EM Tool 350
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 10 Extra Packer _____
 Initial Shut-In 6045 Extra Recorder _____
 Final Flow 15 Day Standby _____
 Final Shut-In 45 Accessibility _____
 Sub Total 1967.50 Sub Total 350
 Total 2317.50 MP/DST Disc't _____

Approved By _____ Our Representative James White
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 68544

Well Name & No. Threlkel Et Al #1-23 Test No. 2 Date 12-14-21
 Company Black Oak Exploration LLC Elevation 3002 KB 2997 GL
 Address 1474 S St Paul St Denver, CO 80210
 Co. Rep / Geo. Clayton Camozzi Rig Murfin #7
 Location: Sec. 23 Twp 3s Rge. 35w Co. Rawlins State KS

Interval Tested 3912 - 3933 Zone Tested Lans. "A"
 Anchor Length 21 Drill Pipe Run 3671 Mud Wt. 9.0
 Top Packer Depth 3907 Drill Collars Run 240 Vis 62
 Bottom Packer Depth 3912 (Shale) Wt. Pipe Run - WL 6.4
 Total Depth 3933 Chlorides 2200 ppm System LCM 4
 Blow Description IF: 1/4" Blow at open, died back to surface blow
ISI: No blow
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud</u>				<u>100</u>

Rec Total 1 BHT 124 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1940 Test 1300 T-On Location 10:35
 (B) First Initial Flow 16 Jars 250 T-Started 10:54
 (C) First Final Flow 18 Safety Joint 75 T-Open 12:45
 (D) Initial Shut-In 32 Circ Sub _____ T-Pulled 14:07
 (E) Second Initial Flow 17 Hourly Standby _____ T-Out 16:20
 (F) Second Final Flow 18 Mileage NA Comments _____
 (G) Final Shut-In 23 Sampler _____
 (H) Final Hydrostatic 1865 Straddle _____ EM Tool didn't work
 Initial Open 20 Shale Packer 250 Ruined Shale Packer _____
 Initial Shut-In 30 Extra Packer _____ Ruined Packer _____
 Final Flow 10 Extra Recorder _____ Extra Copies _____
 Final Shut-In 20 Day Standby _____ Sub Total 0
 Accessibility _____ Total 1875
 Sub Total 1875 MP/DST Disc't _____

Approved By _____ Our Representative James Winkler
 Triobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 68545

Well Name & No. Threlkel E+ A1 #1-23 Test No. 3 Date 12-15-21
 Company Black Oak Exploration LLC Elevation 3002 KB 2997 GL
 Address 1474 S St Paul St. Denver, CO 80210
 Co. Rep / Geo. Clayton Camozzi Rig Murfin #7
 Location: Sec. 23 Twp 3s Rge. 35W Co. Rawlins State KS

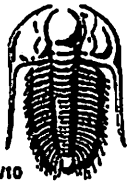
Interval Tested 3930 - 3979 Zone Tested Lans. "C"
 Anchor Length 49 Drill Pipe Run 3674 Mud Wt. 9.0
 Top Packer Depth 3925 Drill Collars Run 240 Vls 62
 Bottom Packer Depth 3930 Wt. Pipe Run - WL 6.4
 Total Depth 3979 Chlorides 2200 ppm System LCM 4
 Blow Description IF: Blow built to BOB (11") in ^{under} 45 sec, built to 184" in H₂O
ISI: Bled off for 8 min, Blowback built to BOB at 3 min, built to 72" in H₂O
FF: Blow built to BOB at 40 sec, built to 82 1/2" in H₂O
FSI: Blowback built to BOB at 7 3/4 min, built to 23" in H₂O

Rec	Feet of	%gas	%oil	%water	%mud
<u>505</u>	<u>CGO</u>	<u>26</u>	<u>74</u>		
<u>755</u>	<u>SMCGO</u>	<u>24</u>	<u>68</u>		<u>8</u>
<u>240</u>	<u>MCGO</u>	<u>15</u>	<u>73</u>		<u>12</u>
	<u>6IP=2030'</u>				

Rec Total 1500 BHT 131 Gravity 37.6 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1931 Test 1300 T-On Location 00:05
 (B) First Initial Flow 372 Jars 250 T-Started 00:44
 (C) First Final Flow 439 Safety Joint 75 T-Open 3:00
 (D) Initial Shut-In 965 Circ Sub _____ T-Pulled 4:44
 (E) Second Initial Flow 504 Hourly Standby _____ T-Out 8:30
 (F) Second Final Flow 567 Mileage 74RT 92.50 Comments diesel in bucket
 (G) Final Shut-In 890 Sampler _____ EM Tool didn't work
 (H) Final Hydrostatic 1915 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1717.50 Sub Total 0 Total 1717.50 MP/DST Disc't _____

Approved By _____ Our Representative James Winder
 Triobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 68546

Well Name & No. Threlkel E+ A1 #1-23 Test No. 4 Date 12-16-21
 Company Black Oak Exploration LLC Elevation 3002 KB 2997 GL
 Address 1474 S St Paul St. Denver CO 80210
 Co. Rep / Geo. Clayton Camozzi Rig Murfin #7
 Location: Sec. 23 Twp 3s Rge. 35w Co. Rawlins State KS

Interval Tested 3985-4040 Zone Tested Lans. "6"
 Anchor Length 55 Drill Pipe Run 3738 Mud Wt. 9.0
 Top Packer Depth 3980 Drill Collars Run 240 Vis 50
 Bottom Packer Depth 3985 Wt. Pipe Run - WL 7.2
 Total Depth 4040 Chlorides 2800 ppm System LCM 5
 Blow Description IF: 1' Blow at open, built to BOB (11") at 19 3/4 min., built to 13 3/4" in H₂O
ISI: No blowback
FF: Blow built to BOB at 24 min., built to 13" in H₂O
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>VSOCm</u>	<u>3</u>	<u>97</u>	<u>97</u>	<u>97</u>
<u>125</u>	<u>wem w/oil spots</u>	<u>6</u>	<u>30</u>	<u>63</u>	<u>63</u>
<u>240</u>	<u>MW w/trace oil</u>	<u>Trace</u>	<u>58</u>	<u>42</u>	<u>42</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 425 BHT 124 Gravity API RW .340 @ 61.3 °F Chlorides 23,000 ppm

(A) Initial Hydrostatic <u>1986</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>00:10</u>
(B) First Initial Flow <u>24</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1:00</u>
(C) First Final Flow <u>152</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>3:30</u>
(D) Initial Shut-In <u>1179</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>6:20</u>
(E) Second Initial Flow <u>154</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>8:45</u>
(F) Second Final Flow <u>202</u>	<input checked="" type="checkbox"/> Mileage <u>74RT</u> 92.50	Comments <u>diesel in bucket</u>
(G) Final Shut-In <u>1176</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1955</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>2217.50</u>
	Sub Total <u>1867.50</u>	MP/DST Disc't

Approved By _____ Our Representative James Winkler
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 68547

Well Name & No. Threlkel Et Al #1-23 Test No. 5 Date 12-17-21
 Company Black Oak Exploration LLC Elevation 3002 KB 2997 GL
 Address 1474 S St Paul St. Denver, CO 80210
 Co. Rep / Geo. Clayton Camozzi Rig Murfin #7
 Location: Sec. 23 Twp 3s Rge. 35w Co. Rawlins State KS

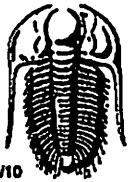
Interval Tested 4080 - 4172 Zone Tested Lans. "J-L"
 Anchor Length 92 Drill Pipe Run 3832 Mud Wt. 9.1
 Top Packer Depth 4075 Drill Collars Run 240 Vis 51
 Bottom Packer Depth 4080 Wt. Pipe Run - WL 7.2
 Total Depth 4172 Chlorides 4100 ppm System LCM 5
 Blow Description IF: 1/4" Blow at open, built to just under 1" (in diesel)
ISI: No blowback
Pulled Tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud</u>			<u>100</u>	
	<u>Trace of oil in tool</u>				

Rec Total 1 BHT 114 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2064 Test 1450 T-On Location 23:50 13 1/16
 (B) First Initial Flow 19 Jars 250 T-Started 1:28
 (C) First Final Flow 21 Safety Joint 75 T-Open 4:00
 (D) Initial Shut-In 367 Circ Sub _____ T-Pulled 5:03
 (E) Second Initial Flow - Hourly Standby _____ T-Out 7:50 12 1/16 17
 (F) Second Final Flow - Mileage 74 RT 92.50 Comments Diesel in bucket
 (G) Final Shut-In - Sampler _____
 (H) Final Hydrostatic 2037 Straddle _____ EM Tool 350
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Initial Open 15 Day Standby _____ Sub Total 350
 Initial Shut-In 45 Accessibility _____ Total 2217.50
 Final Flow - Sub Total 1867.50 MP/DST Disc't _____
 Final Shut-In -

Approved By _____ Our Representative James Winder
 Triobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 68548

Well Name & No. Threlkel #E+AI #1-23 Test No. 6 Date 12-18-21
 Company Black Oak Exploration LLC Elevation 3002 KB 2997 GL
 Address 1474 S St Paul St. Denver, CO 80210
 Co. Rep / Geo. Clayton Camozzi Rig Murfin #7
 Location: Sec. 23 Twp 3s Rge. 35w Co. Rawlins State KS

Interval Tested 4319-4390 Zone Tested Ft Scott-Celia
 Anchor Length 71 Anchor 12 Tail Drill Pipe Run 4053 Mud Wt. 9.2
 Top Packer Depth 4314-4319 Drill Collars Run 240 Vis 62
 Bottom Packer Depth 4390 Wt. Pipe Run - WL 7.6
 Total Depth 4402 Chlorides 3700 ppm System LCM 4
 Blow Description IF: 1/2" Blow at open, built to just under 1", died back to 3/4"
ISI: No blow
Pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>mud</u>			<u>100</u>	

Rec Total 2 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>22:52</u>	<input checked="" type="checkbox"/> Test 1450	T-On Location <u>7:30</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>8:40</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>10:59</u>
(D) Initial Shut-In <u>938</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>12:32</u>
(E) Second Initial Flow <u>-</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>14:25</u>
(F) Second Final Flow <u>-</u>	<input checked="" type="checkbox"/> Mileage <u>74 RT</u> 92.50	Comments _____
(G) Final Shut-In <u>-</u>	<input type="checkbox"/> Sampler	<input checked="" type="checkbox"/> EM Tool 350
(H) Final Hydrostatic <u>2192</u>	<input checked="" type="checkbox"/> Straddle 250	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>-</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>350</u>
Final Shut-In <u>-</u>	<input type="checkbox"/> Day Standby	Total <u>2467.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>2117.50</u>	

Approved By _____ Our Representative James Winder
 TriLOBITE Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

BLACK OAK



EXPLORATION

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

Well Name: THRELKEL Et Al 1-23
Well Id:
Location: Section 23 - 3S - 35W Rawlins Co, Kansas
License Number: API # 15-153-21275
Spud Date: 12/10/2021
Surface Coordinates: 2485' FSL & 200' FEL
Region: WILDCAT
Drilling Completed: 12/ 18/2021

Bottom Hole
Coordinates:
Ground Elevation (ft): 2991' K.B. Elevation (ft): 3002'
Logged Interval (ft): 3650' To: 4670' Total Depth (ft): 4670'
Formation: Lansing Kansas City
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: TIM HEDRICK
Company: EARTH TECH OGL, INC
Address: Po BOX 683
Hooker, okla. 73945
580-754-0062 Cell

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

Slt
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

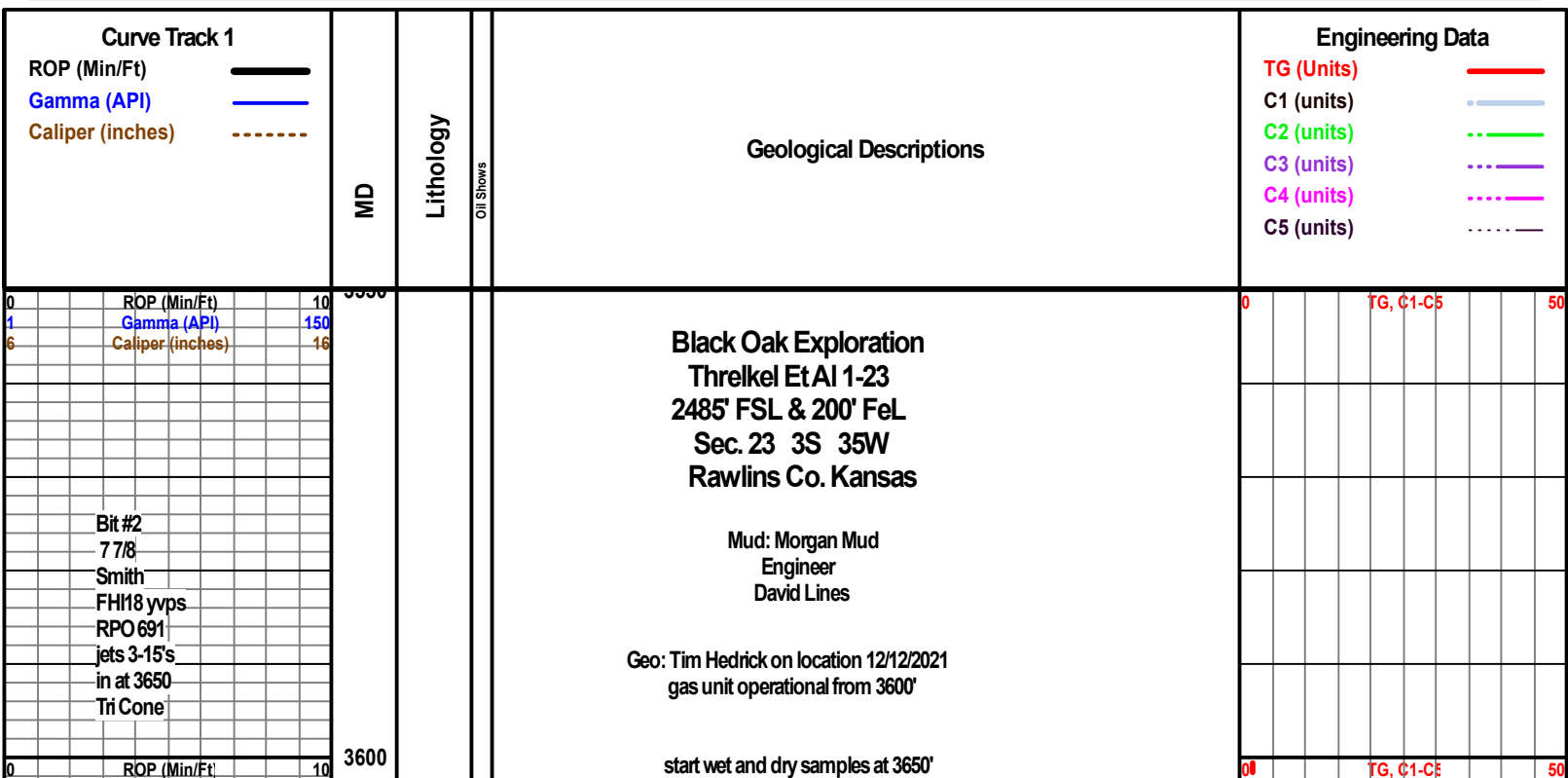
Dst
Core
Dst
Straddle test tail pipe

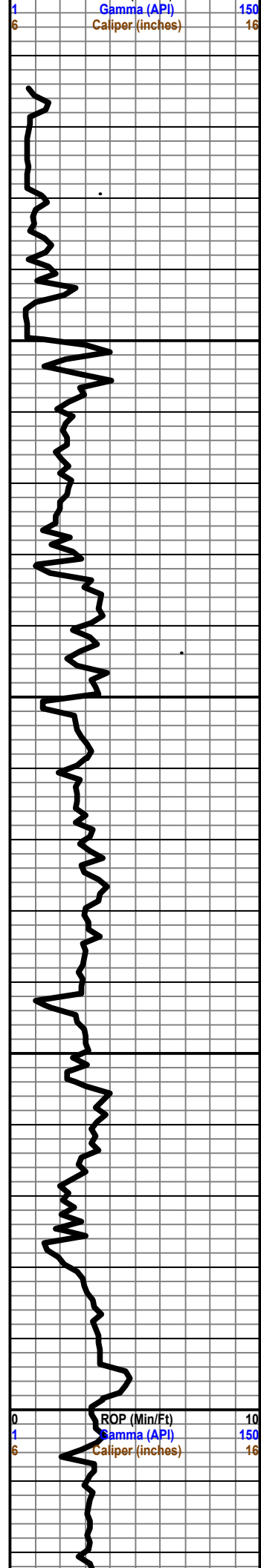
EVENT

Rft
Sidewall
Dst
Open hole
Perforations

FOSSIL

	Oomoldic
	Fuss
	Algae





3650
3700
3750
3800

Shale- red-firm blocky smooth texture green soft gummy txt in part , trace large pyrite clusters

Limestone, cream light tan hard dense fine crystalline to tight sucro in part re-crystalline, embed fossil fragments scattered thru, dull yellow mineral fluorescence, no visible porosity, no visible show or cut

Shale- red firm blocky grainy texture to very soft gummy in part,

Topeka 3702' - 700'

Limestone- cream light tan hard to brittle sucrosic to coarse sucrosic matrix, embedded fossil fragments thru, heavy traces free soft white chalk, traces glauconite or chlorite, dull yellow mineral fluor in part, no visible porosity, no visible show or cut

Shale- red firm in part smooth texture to very soft gummy in part

Limestone off white cream tan traces black dead oil stain in part, hard dens trace brittle tight sucrosic matrix, to sucrosic sub chalky in part, dull yellow fluor scattered thruout, no visible porosity, good flush cut in 30% to good slow stream cut in 30%, no odor

Deer Creek 3748' - 746'

Limestone- off white cream- hard to soft sucrosic to sucrosic sub chalky , heavy trace free soft white chalk, dull yellow fluor, no visible porosity, no visible show or cut

Shale- Red green mottled, firm blocky grainy texture, very calcareous to limy

Limestone- cream off white tan hard dense trace brittle in part, fine crystalline to very tight sucrosic matrix, small calcite crystals embedded in part, traces embed disseminated red shale in part, no fluor, no visible porosity, no visible show or cut

Limestone- cream off white tan reddish in part, hard dense trace brittle in part, fine crystalline to very tight sucrosic matrix, small calcite crystals embedded in part, traces embed disseminated and laminated red shale in part, no fluor, no visible porosity, no visible show or cut

Limestone- off white to cream, hard to brittle, coarse sucrosic matrix to fine crystalline in part, abundant soft white chalk in part, dull yellow mineral fluor, poor to trace fair inter-crystalline porosity in 20%, no visible show or cut

Limestone- cream tan hard dense very fine to crypto-crystalline, scattered embed disseminated pyrite thruout, dull yellow mineral fluor, no visible porosity, no visible cut or show

Limestone- cream light tan- hard brittle coarse sucrosic matrix re-crystalline, embed fossil fragments scattered in part, trace free soft white chalk, dull yellow mineral fluor, poor to trace fair inter- fossiliferous porosity in 10% to trace inter-crystalline porosity, no visible show or cut

Limestone- cream light gray- hard dense, crypto to very fine crystalline, traces laminated gray shale in part, no fluor,

6 u. bg

6 u. bg

Morgan Ck @ 3710'
7:55 am 12/13/21
Vis 69 Wt 8.7
PV 20 YP 22

W/L 6.4
Cake 2
PH 11.5
CHL 1800 ppm
CA 10

Sol 2.9
LCM: 4
DMC: \$2222
CMC: \$10,952

6 u. bg

9 u. bg

10 u. bg

TG, C1-C5 50

no visible porosity, no visible show or cut

Shale- light to medium gray- firm blocky smooth texture to slightly green in part, soft pty grading to dark gray firm blocky smooth texture slightly carbonaceous in part

Shale- black soft carbonaceous to very dark gray soft silty looking texture

Limestone - cream tan brown black due to oil stain in 80%, hard dense to brittle, fine crystalline to coarse sucrosic in part, re- crystalline in part, embed small medium and large calcite crystals with dark brown to black oil stain, dull yellow gold to bright yellow gold fluor in 50%, poor to fair to trace good inter-crystalline porosity in 20%, fair oil odor, excellent flush cut to excellent slow stream cut

Limestone- cream light tan tan with tan oil stain scattered thru, coarse sucrosic matrix, re-crystalline thruout, embed fossil fragments scattered thru, small oolites embed in part, dull yellow gold fluor thruout to bright yellow gold fluor scattered in 40%, poor to trace fair inter-crystalline porosity, trace micro vugular and vugular porosity in 30%, fair to good flush cut, good slow stream cut in 50%, light oil odor, abundant free soft white chalk in part but not embed

Heebner 3868' - 866'

Limestone- white off white cream hard brittle in part sucrosic to abundant white chalk, no fluor, no visible porosity, no ciible show or cut

Limestone- off white to white , brittle in part to soft , soft white chalk thru with abundant embed very fine quartz grains thruout with DOS scattered thruout, no fluor, no visible porosity, no flush cut fair gassy ring cut

Shale - red firm blocky in part to abundant soft gummy texture

Lansing 3915' - 913'

Limestone- tan dark tan brown due to live oil stain thruout, hard to brittle in part, coarse sucrosic matrix, re-crystalline embed small oolites and sub round lime grains thruout, dull yellow gold fluor thruout, poor fair to trace good visible inter-oolitic porosity, traces of scattered microvug porosity in part with oil stain, excellent flush to excellent slow stream cut thruout, good oil odor

Lansing C 3955' - 953'

3955' to 3960' Limestone- cream light tan tan to brown with live oil stain thruout, hard very brittle, coarse sucrosic matrix, very re-crystalline thruout , embed fossil fragments thruout, small calcite crystals embedded thruout, dull yellow gold fluor thruout very good inter-crystalline porosity and inter-fossiliferous porosity in 60% good vugular porosity scattered in part. excellent flush to excellent slow stream cut thruout, live oil drops in tray, good oil odor

3964' to 3967' Limestone- white off white hard dense fine crystalline to abundant firm white chalk in part, no inclusions, no fluor, no visible porosity, no visible show or cut

3970' Limestone-cream tan light brown due to oil stain in 20%, hard dense, sucrosic matrix, re-crystalline in part with embed fossil fragments and trace of small oolites in part with oil stain in 20%, dull yellow gold fluor in 70%, bright yellow gold fluor scattered in part, poor visible inter-fossiliferous and poor inter-crystalline porosity in 20% to no visible porosity in 70%, very good flush cut thru, excellent slow stream cut thruout, good oil odor, no live oil in tray

3971-3979' Limestone - hard dense white cream, very fine to crypto-crystalline thruout, fairly non descript, light yellow mineral fluor. no visible porosity, no visible cut

3980-3993' Limestone off white to cream hard dense to brittle in part, very fine to crypto-crystalline grading to abundant firm white chalk in part, light yellow mineral fluor in part or no fluor, no visible porosity, no visible show

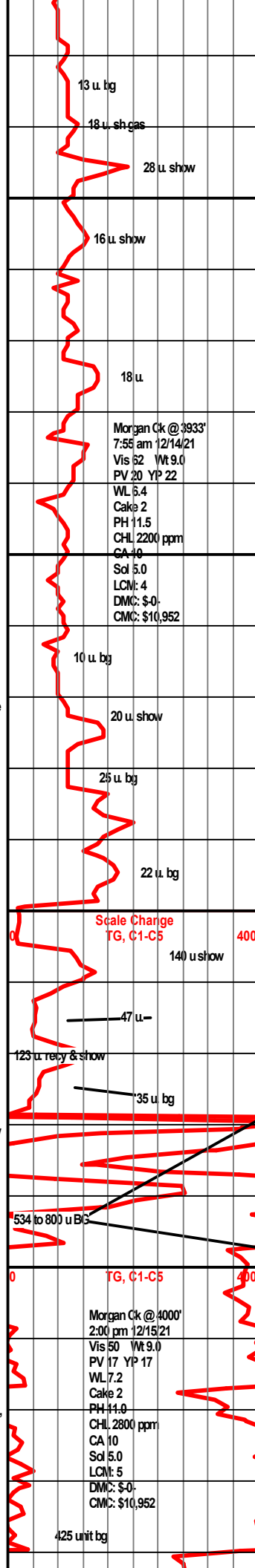
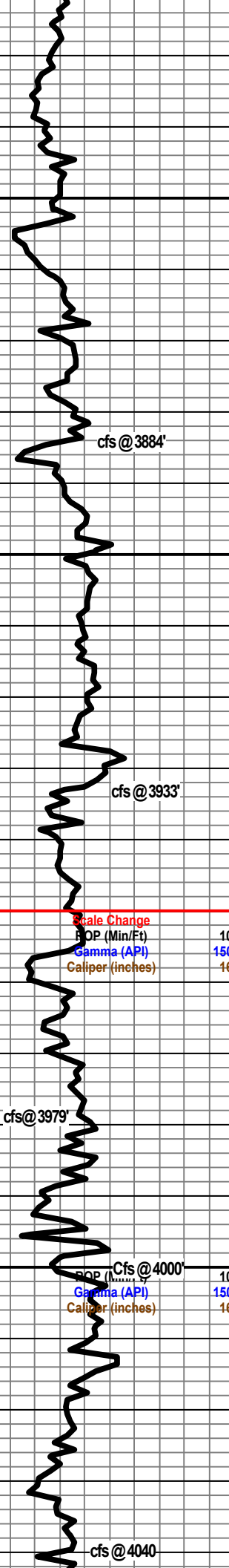
3994-3998' Limestone- tan darkbrown- hard dense crypto-very fine crystalline, embed fossil fragments, scatered embed disseminated pyrite in part, no fluor, no visible porosity, no visible show

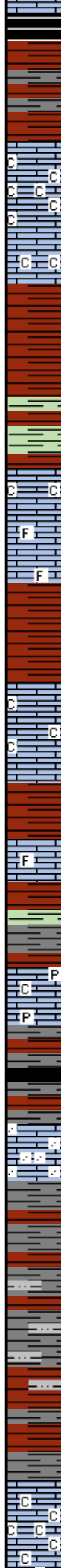
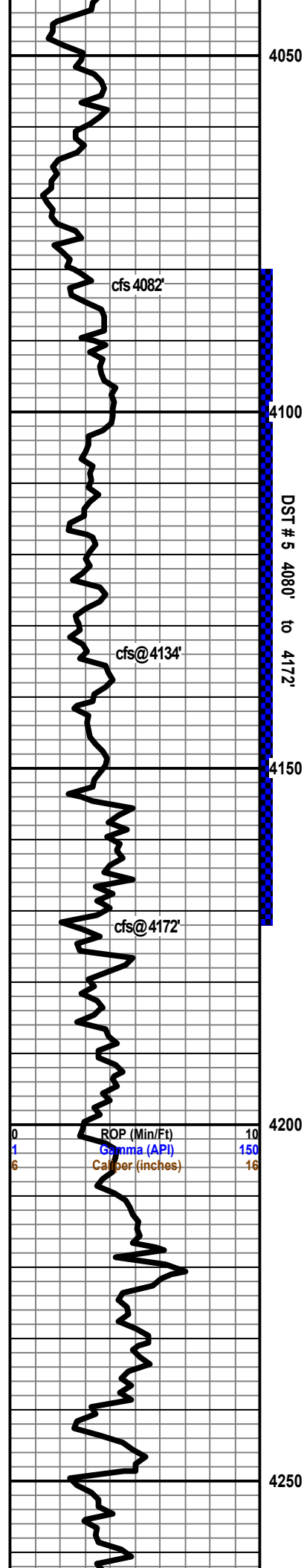
3998' - 4015' Shale red firm blocky smooth texture to green firm blocky smooth texture

Lansing 'G' 4015' - 1013'

4018-4028 Limestone- cream tan brown due to live oil stain in 80%, hard dense to very brittle, coarse sucrosic matrix, re-crystalline thruout, small oolites thruout, scattered embed fossil fragments in part, small calcite crystals interoolitic, dull yellow gold fluor thruout, poor fair to trace good visible inter-oolitic porosity, poor visible microvug porosity in part, excellent flush cut to excellent slow stream cut thru, fair oil odor, trace of oil skim inn cup

4029- 4032 Limestone, off white white abundant firm to soft white chalk to sucrosic sub chalky in part, light yellow mineral fluor, no visible porosity, no visible show





Lansing "H" 4063' - 1061'

Limestone - off white white to cream hard tight in part tight sucrosic matrix to sucrosic sub chalky grading to abundant free soft to firm white chalk thruout, dull yellow mineral fluor in part, no visible porosity, no visible show or cut

Limestone - cream off white, hard dense crypto to very fine crystalline with abundant soft to firm white chalk in part, dull yellow mineral fluor in part to no fluor, no visible porosity, no visible show or cut

Shale - red to dark red - firm in part smooth texture to very soft gummy texture in part

Shale - light green soft smooth texture

Lansing "J" 4108' - 1106'

Limestone - off white cream - hard dense crypto-crystalline grading to very soft chalk in part, no fluor, no visible porosity, no visible show or cut

Limestone - cream light tan to dark tan even brown stain in 30%, hard brittle in part, sucrosic, re-crystalline, scattered embed fossil fragments in part, small scattered calcite crystals in part, dull yellow gold fluor thruout, poor visible inter-xln to scattered poor visible micro vugular porosity in part, very good flush cut thruout to very good slow stream cut, good oil odor, slight skim oil in dish

Shale - red to dark red - firm blocky to very soft gummy grainy texture

Lansing "K" 4139' - 1137'

Limestone - off white cream hard dense in part, fine crystalline to sub chalky to chalky matrix, slight trace phantom fossil frgs, dull yellow fluor. no visible porosity, no show

Shale - red very soft gummy with grainy texture

Limestone - cream light tan hard dense to trace brittle, fine crystalline to tight sucrosic in part, heavy traces very fine fossil fragments in part, light yellow mineral fluor, no visible porosity, no visible show

Shales - red green maroon and dark gray mottled firm blocky smooth to grainy texture

BKC 4165' - 1163'

Limestone - cream light tan off white in part, hard dense in part to brittle, sucro sub chalky to very fine crystalline, embed disseminated pyrite in part, no fluor, no visible porosity, no visible show or cut

Shales - reddish brown to brown black in part, firm blocky smooth to grainy texture in part to hard splinty

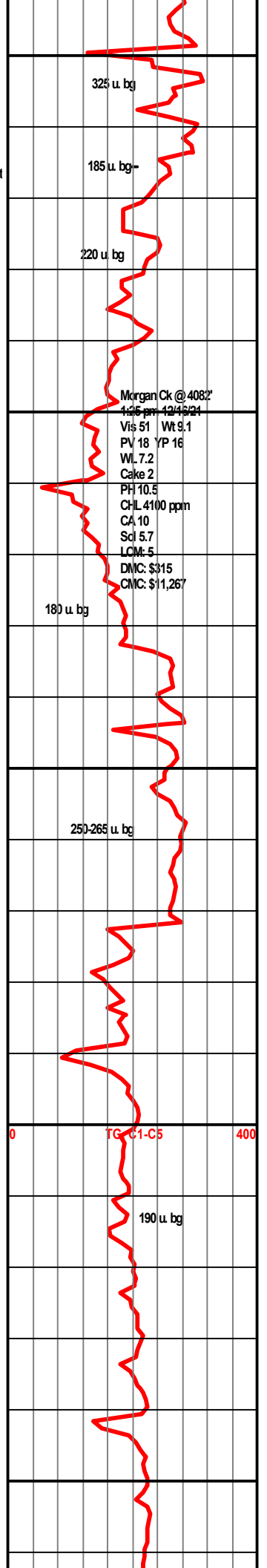
Limestone - cream light tan, hard dense very tight sucrosic matrix re-crystalline in part with embed small angular lime grains in part to scattered embed very fine clear quartz grains thruout, no fluor, no visible porosity, no visible show or cut

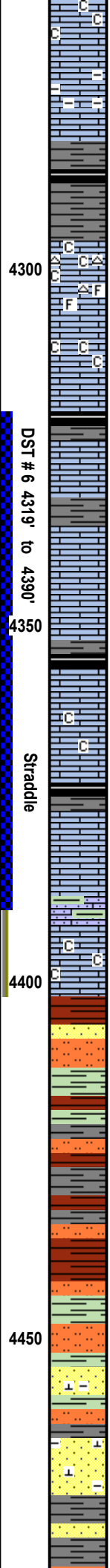
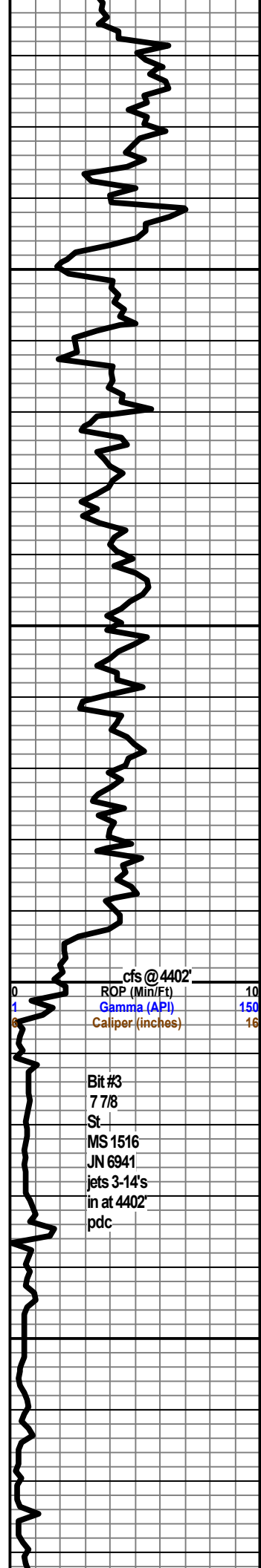
Shale - Light gray to medium gray brownish with trace of red, firm blocky smooth to slightly grainy texture in part

Shale - light gray firm blocky grading to brownish tan very soft gummy texture with scattered traces of creamsttstone in part, no visible fluor or porosity or show

Shale - red soft gummy texture grainy to red dark red firm blocky smooth texture, trace of dark brown shale very firm to hard smooth waxy texture

Limestone - cream buff to white, hard brittle very sucrosic matrix to sucrosic sub chalky in part, trace of fossil fragments in part, abundant free soft to firm white chalk, no fluor, no visible porosity, no visible show or cut





Limestone- cream light gray hard dense very fine crystalline to very tight sucrosic in part with disseminated gray shale in part, no fluor , no visible porosity, no visible show or cut

Shale- Black soft carbonaceous to medium gray firm blocky smooth texture to gummy in part

Ft. Scott 4296' - 1294'

Limestone- white off white, soft, abundant white chalk firm and soft with traces of white opaque red chert grading to cream tan very tight sucrosic with embed fossil fragments in part, no fluor, no visible porosity, no visible show or cut

Limestone- cream light tan to off white, hard brittle sucrosic matrix grading to abundant soft to firm white chalk, no fluor, poss inter-xln porosity , no visible show or cut

Shale- Black soft carbonaceous to dark gray smooth texture

Limestone- tan light brown due to even brown oil stain in 40%, hard very brittle very sucrosic matrix, small calcite crystals embed in part, dull yellow gold fluor thruout, poor visible micro pinpoint porosity in 10%, trace of vugular porosity, excellent flush to excellent slow stream cut thruout, good oil odor, no droplets

Limestone - cream light tan to light brown oil stain scattered in 60%, hard dense in part fine crystalline to very brittle very sucrosic matrix, small calcite crystals embed in part, dull yellow gold fluor. in 60%, poor visible inter-crystalline porosity, poor to trace fair micro pinpoint porosity, trace scattered microvug porosity in 5%, fair oil odor , no oil droplets

Cherokee 4356' - 1354'

Limestone- cream off white tan with oil stain scattered Hard dense to brittle in part, very fine to crypto-crystalline grading to very sucrosic with tan stain in 20-30%, trace free soft chlk in part, dull yellow gold fluor scattered in 50%, very poor visible micro pinpoint porosity in 20%, good flush cut to good slow stream cut in 50%, no odor, no droplets

Limestone- cream tan scattered light tan stain in part, hard dense very fine crystalline, dull yellow gold fluor in 10 %, no visible porosity, light flush cut in 20%, poor to fair slow stream cut in 20%, light oil odor

Limestone - cream light green hard dense to brittle, sucrosic matrix with abundant embed clear quartz grains, small medium angular to sub angular grains, laminated and disseminated light green shale thru, no fluor, no visible porosity, no visible cut or show

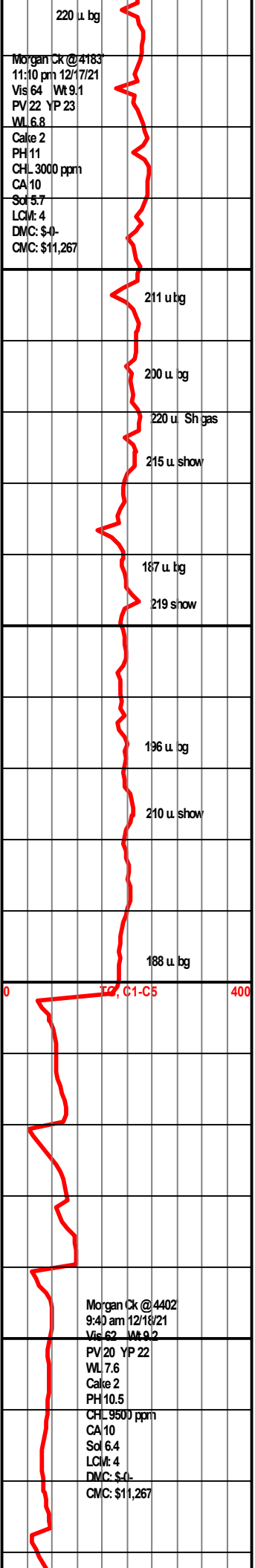
Limestone-off white cream tan- hard dense in part fine crystalline, re-crystalline with medium calcite crystals embed in part and abundant free soft white chalk, very dull yellow mineral fluor in part to no fluor, no visible porosity, no visible show

Shales and silts- light green very silty texture, abundant embed fine clear to angular quartz grains thruout to red very firm blocky smooth to slightly grainy texture in part

Shales and silts- green to reddish brown firm blocky smooth texture in part to very soft gummy in part, heavy trace of silty texture in part

Shales and silts- reddish brown firm blocky smooth texture in part to very soft gummy in part, heavy trace of silty texture

Sandstone- clear frosty white to greenish in part , fine to medium clear to frosty quartz grains, angular sub angular, siliceous to calcareous cementation, laminated light green shale embed in part, slight trace free soft white chalk in part, no fluor, no visible porosity, no visible show or cut



Morgan Ck @ 4183
11:10 pm 12/17/21
Vis 64 Wt 9.1
PV 22 YP 23
WL 6.8
Calte 2
PH 11
CHL 3000 ppm
CA 10
Sol 5.7
LCWt: 4
DMC: \$-
CMC: \$11,267

220 u bg
211 u bg
200 u bg
220 u Sh gas
215 u show
187 u bg
219 show
196 u bg
210 u show
188 u bg

0 100 200 300 400

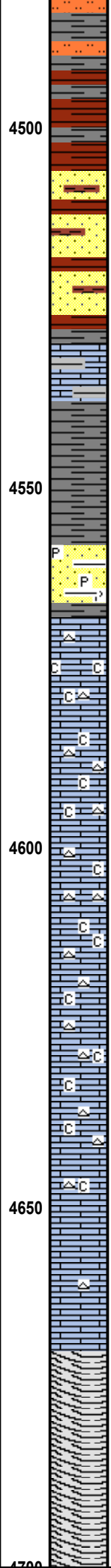
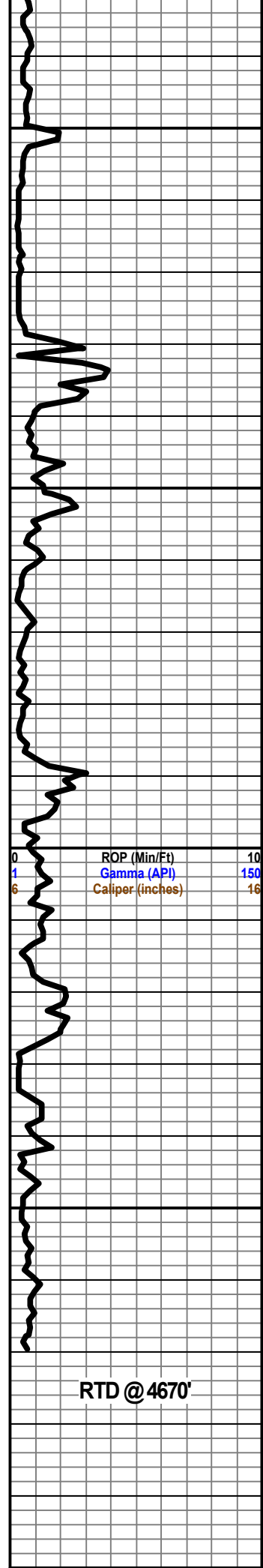
Morgan Ck @ 4402
9:40 am 12/18/21
Vis 62 Wt 9.2
PV 20 YP 22
WL 7.6
Calte 2
PH 10.5
CHL 9500 ppm
CA 10
Sol 6.4
LCWt: 4
DMC: \$-
CMC: \$11,267

cfs @ 4402'
ROP (Min/Ft) 10
Gamma (API) 150
Caliper (inches) 16

Bit #3
7 7/8
St
MS 1516
JN 6941
jets 3-14's
in at 4402'
pdc

DST # 6 4319' to 4390'

Straddle



Shales and silts- red very silty texture, abundant embed fine clear quartz grains thruout to reddish green very firm blocky smooth to slightly grainy texture in part

Shales- red green mustard yellow purpleke mottled-firm blocky smooth texture to splinty in part

Sandstone-clear frosty white reddish- medium large to pebble sized quartz grains, angular sub angular to sub round very poor sort, clear to red grains abundant free grains in tray laminated red shale in part, no fluorescence, good visible porosity in part, no visible cut

Limestone- light tan dark gray in part, hard dense, very fine to crypto-crystalline with laminated dark gray shale in part, no fluor, no visible porosity, no visible show or cut

Shale - dark brown green firm blocky smooth waxy texture in part to blocky grainy texture in part

Sandstone- clear frosty grains, abundant free small medium to pebble sized angular sub angular sub round clear grains laminated gray shale in part, with traces of disseminated pyrite in part, poor sort, no visible porosity, no visible show or cut

Mississippi 4568' - 1566'

Limestone- off white white to cream, hard dense fine crystalline to very sucrosic sub chalky, abundant free soft white chalk, tan white mottled chert, no fluorescence, no visible cut or show

Limestone- white off white to cream hard in part to medium hard, very firm chalky matrix to abundant soft white chalk, fine crystalline re-crystalline in part, abundant translucent white tan re worked chert, dull yellow fluorescence, no visible porosity, no show

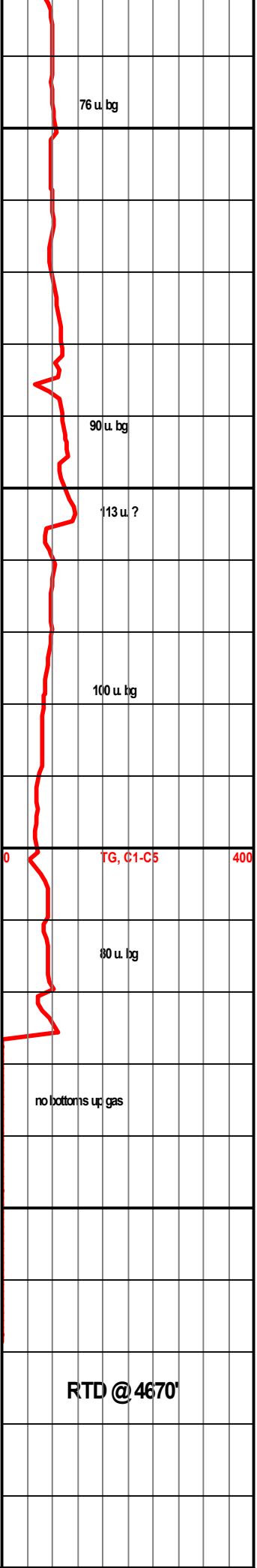
No samples / No bottoms up

RTD @4670' at 10:49 PM Dec 18th 2021

Short trip

CTCH 1 Hour

Trip out for logs



RTD @ 4670'

RTD @ 4670'

76 u. bg

90 u. bg

113 u. ?

100 u. bg

80 u. bg

no bottoms up gas

TG, C1-C5 400

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)

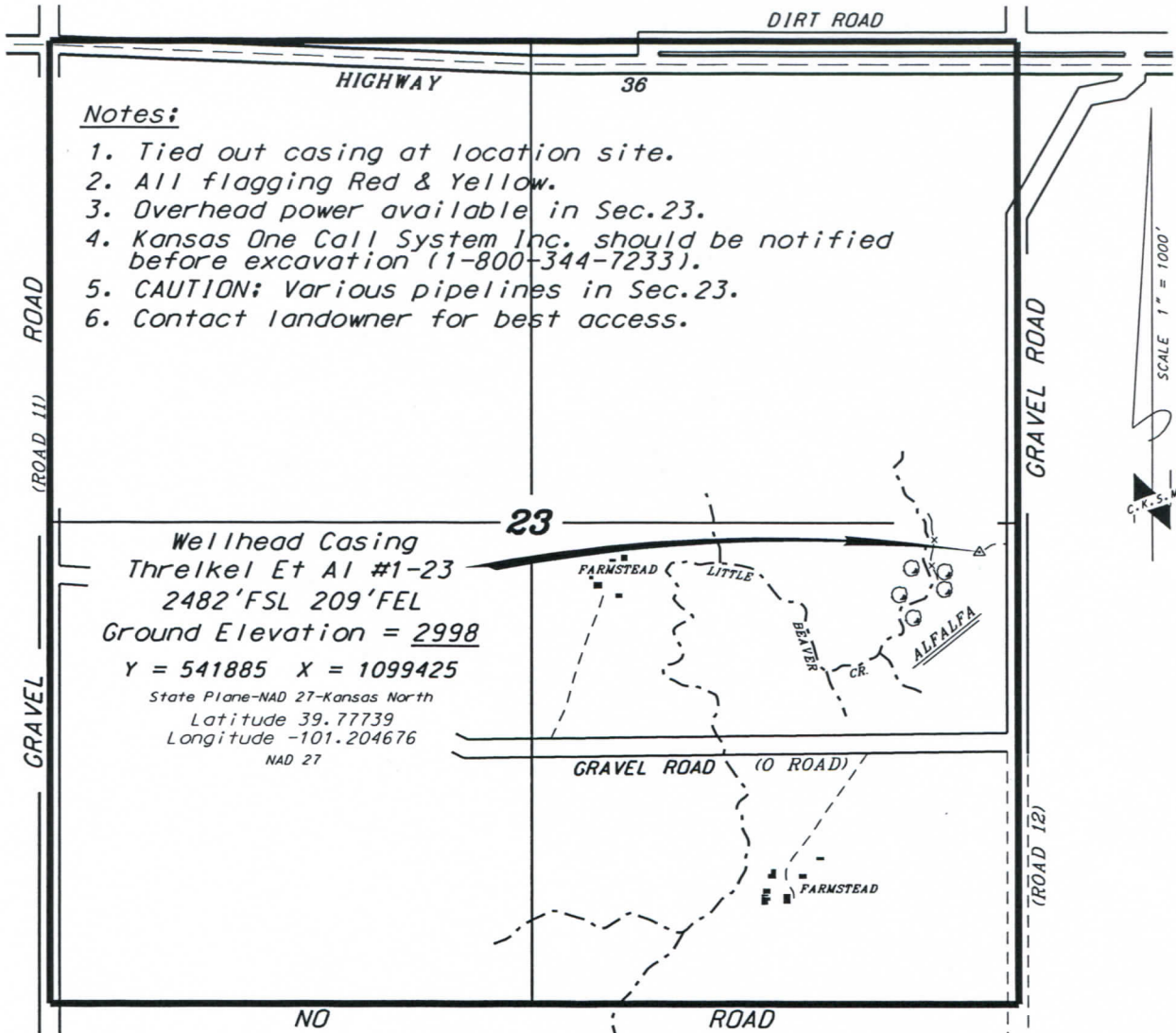
Well: Threlkel Et Al 1-23
 Location: 2485 FSL & 200 FEL
 Sec. 23 - 3S - 35W
 Rawlins Co., KS
 Wellsite Geologist: Tim Hedrick Cell: (580) 754-0062

Elevation: 2997' GL 3002' KB
 Field: Wildcat
 API No: 15-153-21275-0000
 Surface Casing: 8 5/8" set @ 243' KB

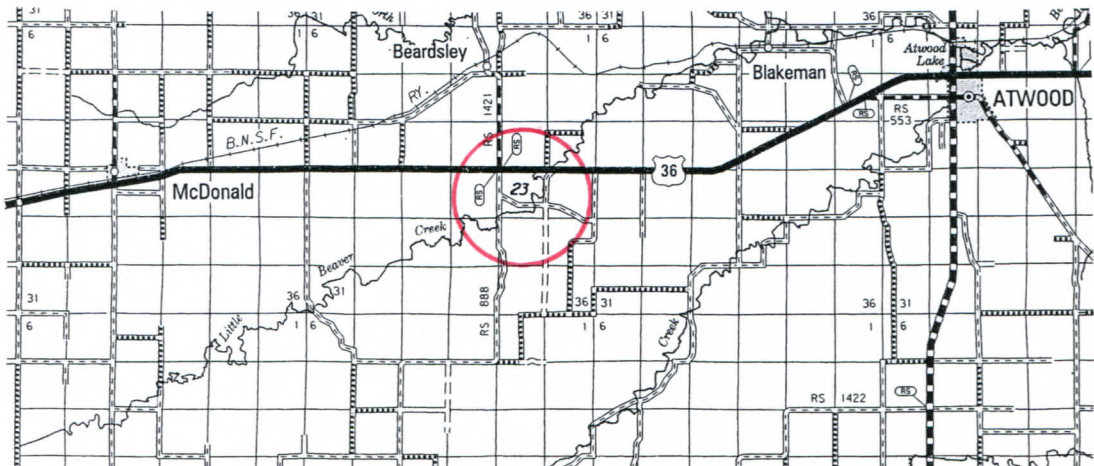
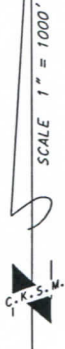
Drilling Contractor: Murfin Drilling Co Rig #7. Rig Phone (785-443-5616), Tool Pusher Arturo Cabezas (308-443-0495)

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
Black Oak Location					Source Petr: D&A				Empire Drlg: D&A			
Threlkel Et Al 1-23					Wright Bessie 'F' 1				Bishop 1			
2485 FSL / 200 FEL 23- 3S - 35W					391 FNL / 685 FEL 14 - 3S - 35W				660 FSL / 660 FWL 14 - 3S - 35W			
3002 KB					3028 KB		Structural Relationship		3130 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Stone Corral	2790	212	2784	218	2836	192	20	26	2937	193	19	25
Topeka	3702	-700	3719	-717	3741	-713	13	-4	3847	-717	17	0
Deer Creek	3748	-746	3776	-774	3787	-759	13	-15	3895	-765	19	-9
Heebner	3868	-866	3874	-872	3900	-872	6	0	4005	-875	9	3
Lansing	3915	-913	3922	-920	3946	-918	5	-2	4052	-922	9	2
Lansing C	3955	-953	3956	-954	3991	-963	10	9	4099	-969	16	15
Lansing G	4015	-1013	4018	-1016	4046	-1018	5	2	4154	-1024	11	8
Lansing H	4063	-1061	4060	-1058	4091	-1063	2	5	4201	-1071	10	13
Lansing J	4108	-1106	4109	-1107	4138	-1110	4	3	4245	-1115	9	8
Lansing K	4139	-1137	4142	-1140	4170	-1142	5	2	4278	-1148	11	8
BKC	4170	-1168	4171	-1169	4200	-1172	4	3	4309	-1179	11	10
Fort Scott	4296	-1294	4299	-1297	4328	-1300	6	3	4434	-1304	10	7
Cherokee	4356	-1354	4347	-1345	4385	-1357	3	12	4488	-1358	4	13
Mississippian	4568	-1566	4560	-1558	4603	-1575	9	17	4704	-1574	8	16
Total Depth	4670	-1668	4674	-1672	4774	-1746			4745	-1615		

**BLACK OAK EXPLORATION
THRELKEL LEASE
SE. 1/4, SECTION 23, T3S, R35W
RAWLINS COUNTY, KANSAS**



* Ingress and egress to location as shown on this plat is per usage only and may not be legally opened for public use. Contact landowner, tenant and county road department for access.



* Controlling data is based upon the best maps and photographs available to us and upon a regular section of land containing 640 acres.

* Approximate section lines were determined using the normal standard of care of oilfield surveyors practicing in the state of Kansas. The section corners, which establish the precise section lines, were not necessarily located, and the exact location of the drillsite location in the section is not guaranteed. Therefore, the operator securing this service and accepting this plat and all other parties relying thereon agree to hold Central Kansas Oilfield Services, Inc., its officers and employees harmless from all losses, costs and expenses and said entities released from any liability from incidental or consequential damages.

* Elevations derived from National Geodetic Vertical Datum.

Date January 13, 2022