

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 Recompletion Date \_\_\_\_\_ Date Reached TD \_\_\_\_\_ Completion Date or Recompletion Date \_\_\_\_\_

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

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

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

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

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

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

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

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Bird Dog Oil, LLC
Well Name	W. GATES-KAISER 2-14
Doc ID	1670019

All Electric Logs Run

DIL
Micro
Sonic
CDNL





## DRILL STEM TEST REPORT

Prepared For: **Bird Dog Oil, LLC**

1801 Broadway, STE 200  
Denver, CO 80202

ATTN: Jeff Lawler

### **W. Gates-Kaiser 2-14**

### **14-22s-14w Stafford,KS**

Start Date: 2022.05.23 @ 17:13:00

End Date: 2022.05.24 @ 00:51:02

Job Ticket #: 68512                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2022.06.02 @ 15:11:38

Bird Dog Oil, LLC  
14-22s-14w Stafford,KS  
W. Gates-Kaiser 2-14  
DST # 1  
LKC C - F  
2022.05.23



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
1801 Broadway, STE 200  
Denver, CO 80202  
ATTN: Jeff Lawler

**14-22s-14w Stafford,KS**  
**W. Gates-Kaiser 2-14**  
Job Ticket: 68512      **DST#: 1**  
Test Start: 2022.05.23 @ 17:13:00

## GENERAL INFORMATION:

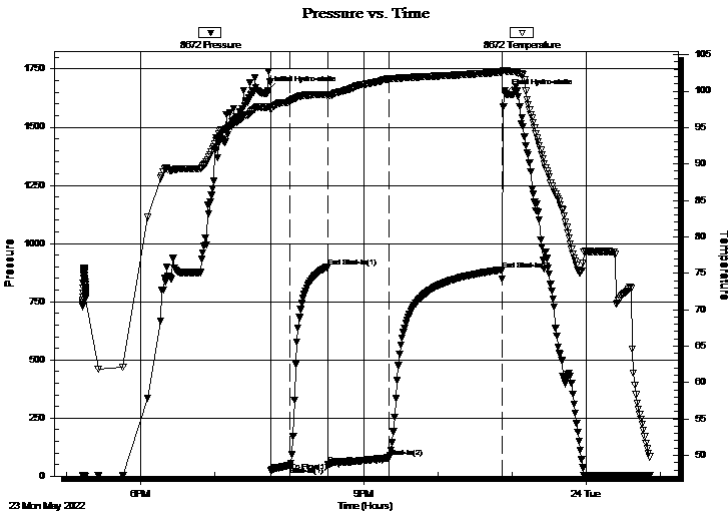
Formation: **LKC C - F**  
Deviated: No Whipstock: 1940.00 ft (KB)  
Time Tool Opened: 19:45:17  
Time Test Ended: 00:51:02  
Interval: **3458.00 ft (KB) To 3523.00 ft (KB) (TVD)**  
Total Depth: 3523.00 ft (KB) (TVD)  
Hole Diameter: 7.80 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Chris Hagman  
Unit No: 69  
Reference Elevations: 1940.00 ft (KB)  
1930.00 ft (CF)  
KB to GR/CF: 10.00 ft

## Serial #: 8672 Inside

Press@RunDepth: 79.34 psig @ 3461.00 ft (KB) Capacity: psig  
Start Date: 2022.05.23 End Date: 2022.05.24 Last Calib.: 2022.05.23  
Start Time: 17:13:01 End Time: 00:51:02 Time On Btm: 2022.05.23 @ 19:42:47  
Time Off Btm: 2022.05.23 @ 22:54:32

TEST COMMENT: IF: 15 min., fair building blow , 5 inches  
IS: 30 min., no blow back  
FF: 45 min., BOB 38 min., strong building blow , 12 inches  
FS: 90 min., no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1654.95	97.83	Initial Hydro-static
3	22.25	97.44	Open To Flow (1)
18	41.40	98.66	Shut-In(1)
49	899.08	99.55	End Shut-In(1)
49	52.13	99.24	Open To Flow (2)
98	79.34	101.68	Shut-In(2)
189	887.01	102.63	End Shut-In(2)
192	1644.45	102.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
130.00	gassy oily watery mud 5%G,5%O,30%M	1.55
60.00	100%G	0.84

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
 1801 Broadway, STE 200  
 Denver, CO 80202  
 ATTN: Jeff Lawler

**14-22s-14w Stafford,KS**  
**W. Gates-Kaiser 2-14**  
 Job Ticket: 68512      **DST#: 1**  
 Test Start: 2022.05.23 @ 17:13:00

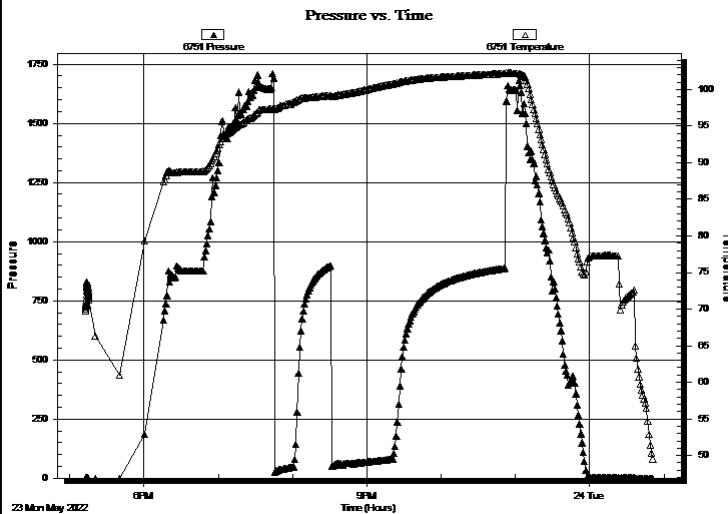
## GENERAL INFORMATION:

Formation: **LKC C - F**  
 Deviated: No      Whipstock: 1940.00 ft (KB)  
 Time Tool Opened: 19:45:17  
 Time Test Ended: 00:51:02  
 Interval: **3458.00 ft (KB) To 3523.00 ft (KB) (TVD)**  
 Total Depth: 3523.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches      Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Chris Hagman  
 Unit No: 69  
 Reference Elevations: 1940.00 ft (KB)  
 1930.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 6751

Press@RunDepth:	psig @	ft (KB)	Capacity:	psig
Start Date:	2022.05.23	End Date:	2022.05.24	Last Calib.: 1899.12.30
Start Time:	17:13:01	End Time:	00:51:02	Time On Btm:
				Time Off Btm:

**TEST COMMENT:** IF: 15 min., fair building blow , 5 inches  
 IS: 30 min., no blow back  
 FF: 45 min., BOB 38 min., strong building blow , 12 inches  
 FS: 90 min., no blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
130.00	gassy oily watery mud 5%G,5%O,30%M	1.55
60.00	100%G	0.84

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68512

**DST#: 1**

ATTN: Jeff Lawler

Test Start: 2022.05.23 @ 17:13:00

## Tool Information

Drill Pipe:	Length: 3414.00 ft	Diameter: 3.80 inches	Volume: 47.89 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 48.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3458.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3433.00	
Hydraulic tool	5.00			3438.00	
Isolator Sub	3.00			3441.00	
Jars	5.00			3446.00	
Safety Joint	3.00			3449.00	
Packer	5.00			3454.00	30.00 Bottom Of Top Packer
Packer	4.00			3458.00	
Stubb	1.00			3459.00	
Perforations	2.00			3461.00	
Recorder	0.00	8672	Inside	3461.00	
Recorder	0.00	6751	Outside	3461.00	
Pickup sub perf	5.00			3466.00	
Perforations	20.00			3486.00	
Change Over Sub	1.00			3487.00	
Drill Pipe	32.00			3519.00	
Change Over Sub	1.00			3520.00	
Bullnose	3.00			3523.00	65.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>95.00</b>				





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68512

**DST#: 1**

ATTN: Jeff Lawler

Test Start: 2022.05.23 @ 17:13:00

## 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:

22000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
130.00	gassy oily watery mud 5%G,5%O,30%W,60%	1.550
60.00	100%G	0.842

Total Length: 190.00 ft      Total Volume: 2.392 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.359@60F=22,000ppm

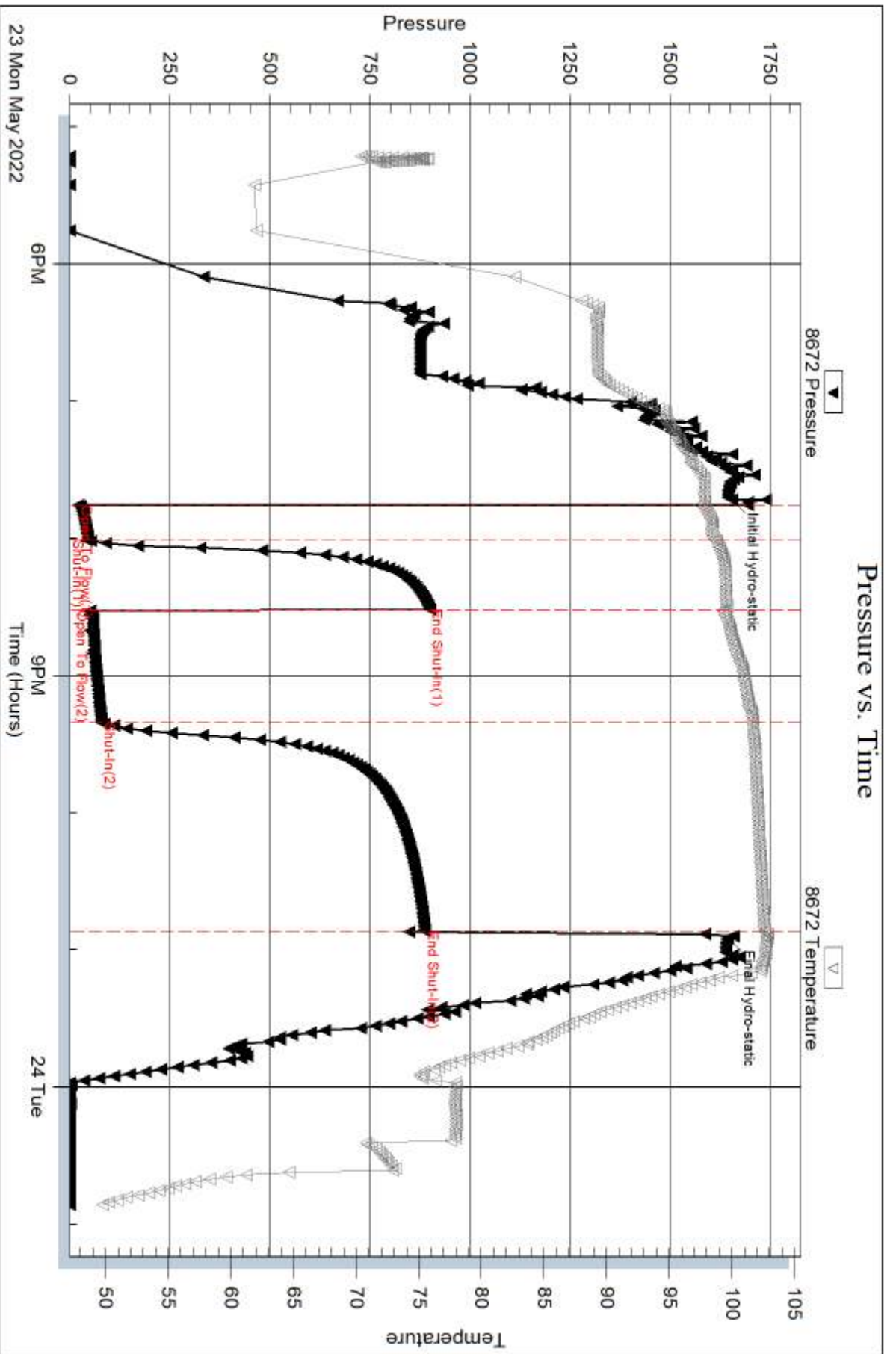
Serial #: 8672

Inside

Bird Dog Oil, LLC

W. Gates-Kaiser 2-14

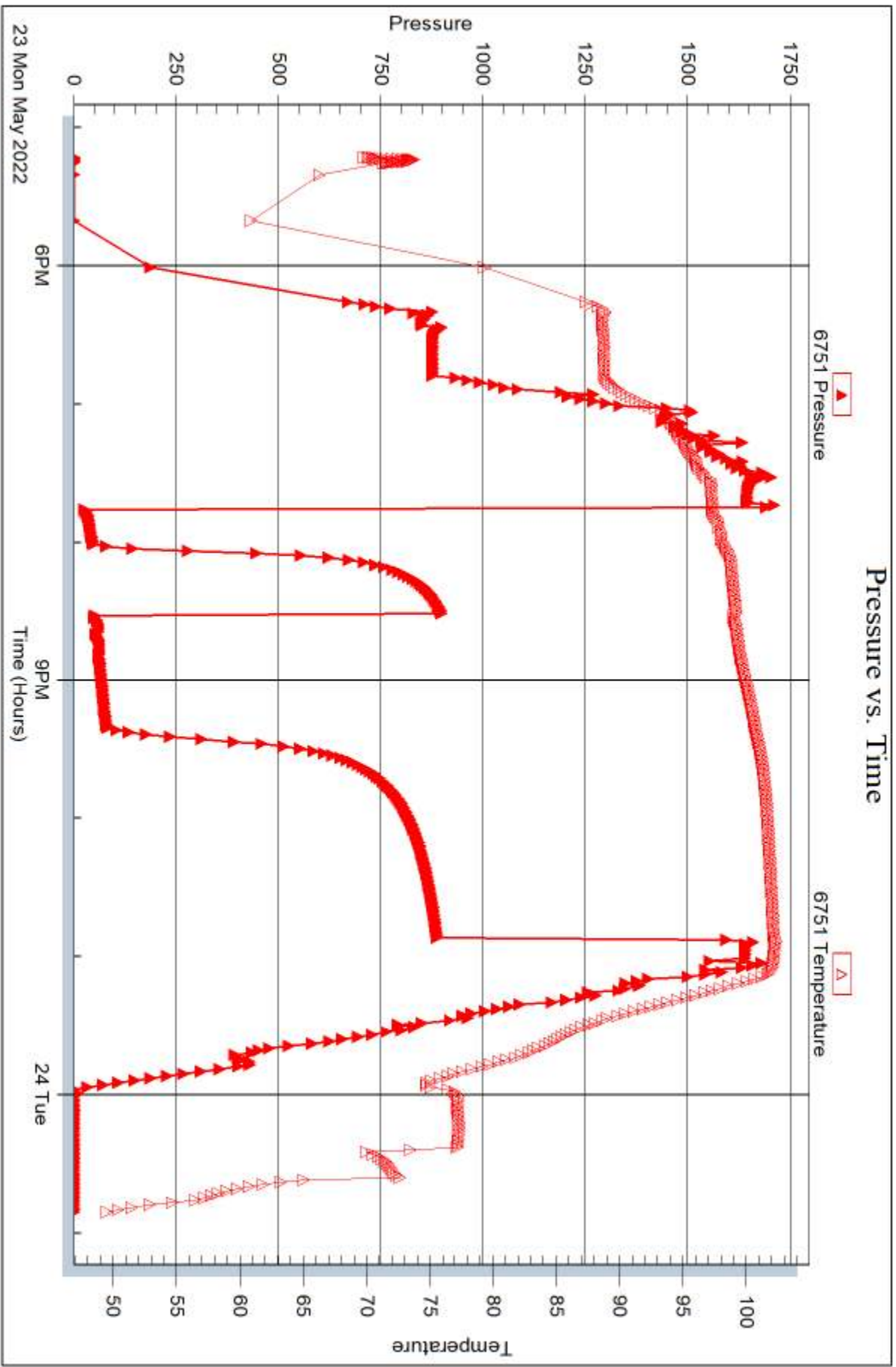
DST Test Number: 1



Trilobe Testing, Inc

Ref. No: 68512

Printed: 2022.06.02 @ 15:11:39





## DRILL STEM TEST REPORT

Prepared For: **Bird Dog Oil, LLC**

1801 Broadway, STE 200  
Denver, CO 80202

ATTN: Jeff Lawler

### **W. Gates-Kaiser 2-14**

### **14-22s-14w Stafford,KS**

Start Date: 2022.05.24 @ 11:20:00

End Date: 2022.05.24 @ 18:24:02

Job Ticket #: 68513                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2022.06.02 @ 15:10:48

Bird Dog Oil, LLC  
14-22s-14w Stafford,KS  
W. Gates-Kaiser 2-14  
DST # 2  
LKC H - I  
2022.05.24



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
1801 Broadway, STE 200  
Denver, CO 80202  
ATTN: Jeff Lawler

**14-22s-14w Stafford, KS**  
**W. Gates-Kaiser 2-14**  
Job Ticket: 68513      **DST#: 2**  
Test Start: 2022.05.24 @ 11:20:00

## GENERAL INFORMATION:

Formation: **LKC H-1**  
Deviated: No      Whipstock: 1940.00 ft (KB)  
Time Tool Opened: 13:29:17  
Time Test Ended: 18:24:02  
Interval: **3560.00 ft (KB) To 3600.00 ft (KB) (TVD)**  
Total Depth: 3600.00 ft (KB) (TVD)  
Hole Diameter: 7.80 inches      Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Chris Hagman  
Unit No: 69  
Reference Elevations: 1940.00 ft (KB)  
1930.00 ft (CF)  
KB to GR/CF: 10.00 ft

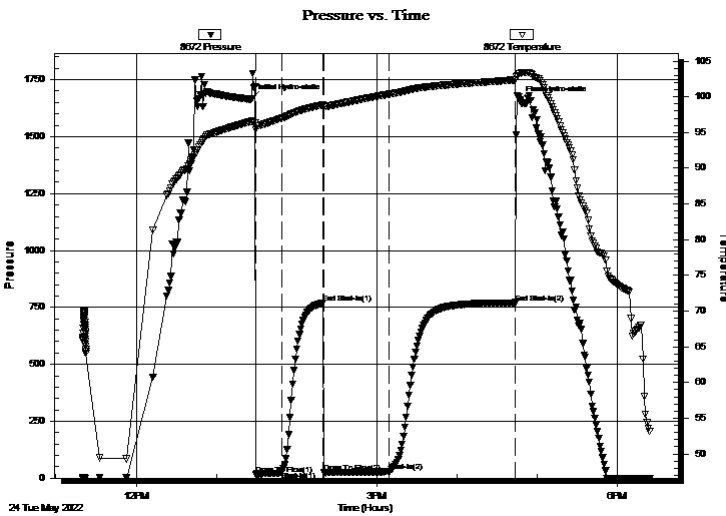
## Serial #: 8672

Inside

Press@RunDepth: 28.97 psig @ 3564.00 ft (KB)      Capacity:      psig  
Start Date: 2022.05.24      End Date: 2022.05.24      Last Calib.: 2022.05.24  
Start Time: 11:20:01      End Time: 18:24:02      Time On Btm: 2022.05.24 @ 13:26:47  
Time Off Btm: 2022.05.24 @ 16:46:47

TEST COMMENT: IF: 15 min., weak surface blow, .5 inches  
IS: 30 min., no blow back  
FF: 45 min., weak surface blow, .8 inches  
FS: 90 min., no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1666.98	96.57	Initial Hydro-static
3	16.91	95.45	Open To Flow (1)
23	29.28	97.01	Shut-In(1)
54	768.56	98.85	End Shut-In(1)
55	23.50	98.68	Open To Flow (2)
103	28.97	100.37	Shut-In(2)
197	770.97	102.40	End Shut-In(2)
200	1660.17	103.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	100%m	0.05

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68513

**DST#: 2**

ATTN: Jeff Lawler

Test Start: 2022.05.24 @ 11:20:00

## Tool Information

Drill Pipe:	Length: 3509.00 ft	Diameter: 3.80 inches	Volume: 49.22 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 49.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3560.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	70.00 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
Shut In Tool	5.00			3535.00	
Hydraulic tool	5.00			3540.00	
Isolator Sub	3.00			3543.00	
Jars	5.00			3548.00	
Safety Joint	3.00			3551.00	
Packer	5.00			3556.00	30.00 Bottom Of Top Packer
Packer	4.00			3560.00	
Stubb	1.00			3561.00	
Perforations	3.00			3564.00	
Recorder	0.00	8672	Inside	3564.00	
Recorder	0.00	6751	Outside	3564.00	
Change Over Sub	1.00			3565.00	
Drill Pipe	31.00			3596.00	
Change Over Sub	1.00			3597.00	
Bullnose	3.00			3600.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68513

**DST#: 2**

ATTN: Jeff Lawler

Test Start: 2022.05.24 @ 11:20:00

## 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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	100%m	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

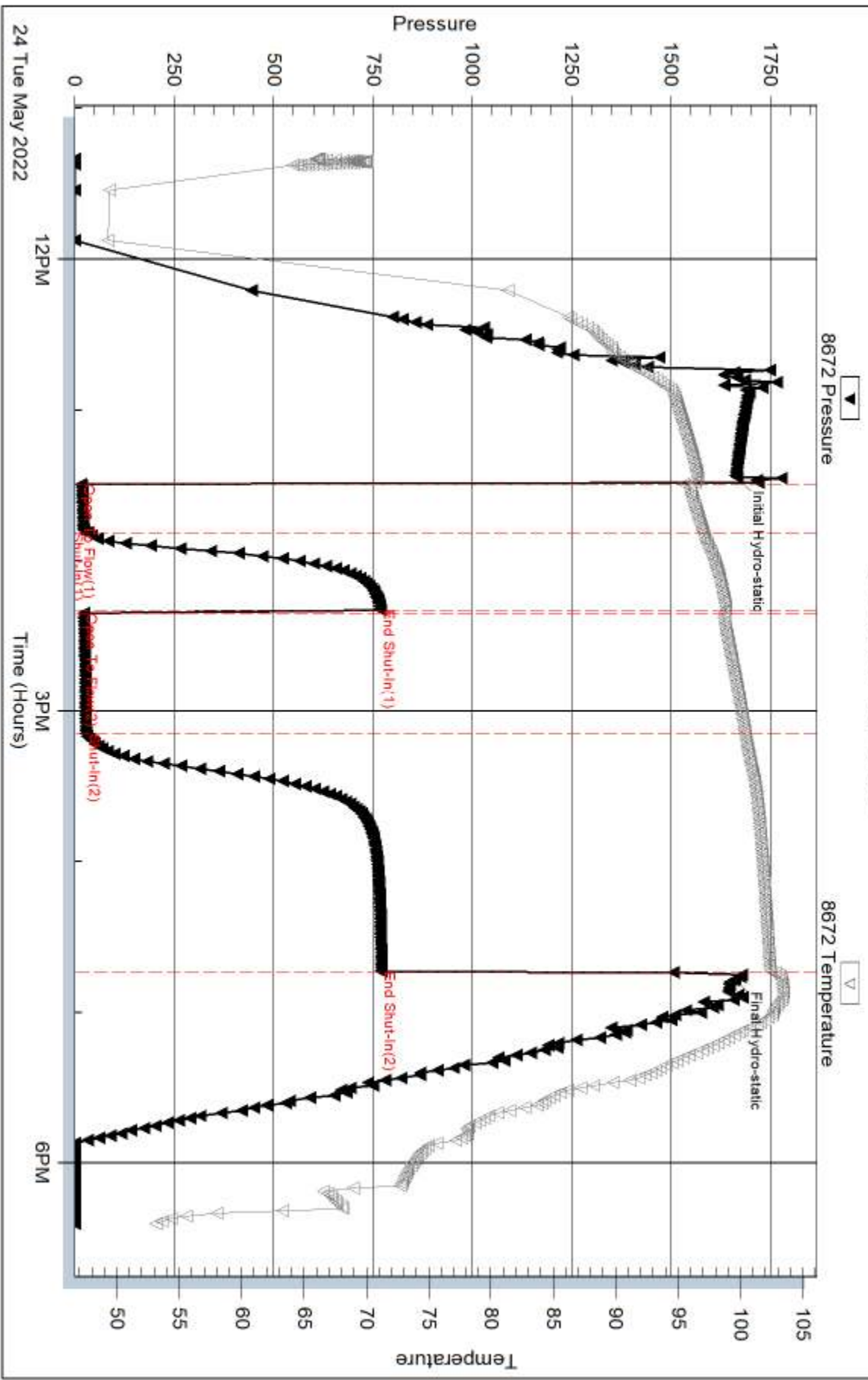
Laboratory Name:

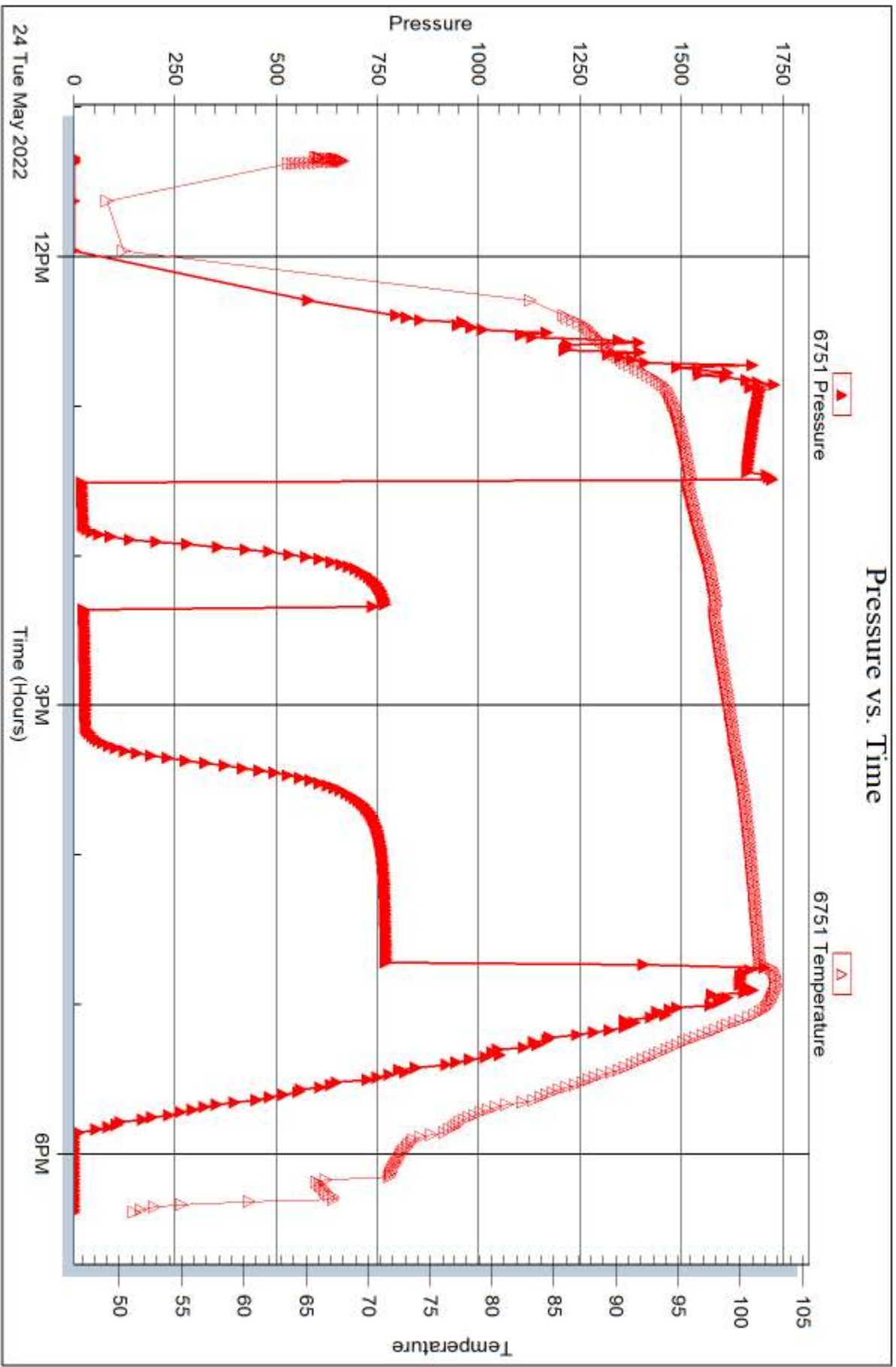
Laboratory Location:

Recovery Comments:



### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Bird Dog Oil, LLC**

1801 Broadway, STE 200  
Denver, CO 80202

ATTN: Jeff Lawler

### **W. Gates-Kaiser 2-14**

### **14-22s-14w Stafford,KS**

Start Date: 2022.05.25 @ 02:12:00

End Date: 2022.05.25 @ 09:06:02

Job Ticket #: 68514                      DST #: 3

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

Printed: 2022.06.02 @ 15:09:56

Bird Dog Oil, LLC  
14-22s-14w Stafford,KS  
W. Gates-Kaiser 2-14  
DST # 3  
LKC J  
2022.05.25



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
 1801 Broadway, STE 200  
 Denver, CO 80202  
 ATTN: Jeff Lawler

**14-22s-14w Stafford, KS**  
**W. Gates-Kaiser 2-14**  
 Job Ticket: 68514 **DST#: 3**  
 Test Start: 2022.05.25 @ 02:12:00

## GENERAL INFORMATION:

Formation: **LKC J**  
 Deviated: No Whipstock: 1940.00 ft (KB)  
 Time Tool Opened: 04:02:32  
 Time Test Ended: 09:06:02  
 Interval: **3596.00 ft (KB) To 3622.00 ft (KB) (TVD)**  
 Total Depth: 3622.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Chris Hagman  
 Unit No: 69  
 Reference Elevations: 1940.00 ft (KB)  
 1930.00 ft (CF)  
 KB to GR/CF: 10.00 ft

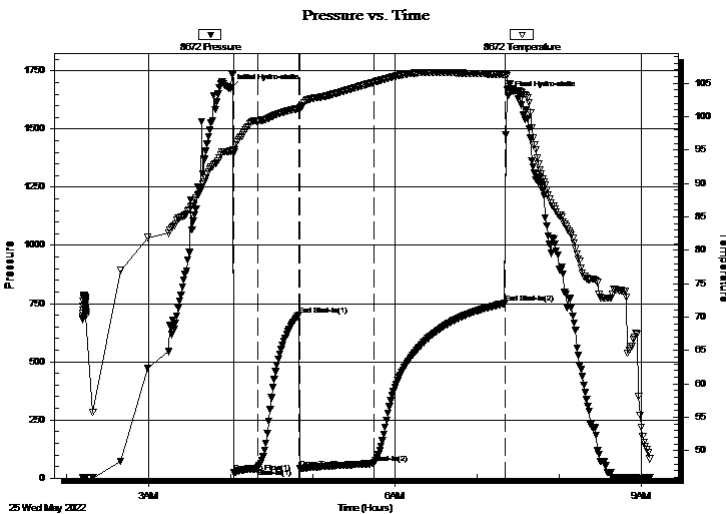
## Serial #: 8672

Inside

Press@RunDepth: 65.00 psig @ 3598.00 ft (KB) Capacity: psig  
 Start Date: 2022.05.25 End Date: 2022.05.25 Last Calib.: 2022.05.25  
 Start Time: 02:12:01 End Time: 09:06:02 Time On Btm: 2022.05.25 @ 03:59:47  
 Time Off Btm: 2022.05.25 @ 07:22:47

TEST COMMENT: IF: 15 min., fair building blow, 4.5 inches  
 IS: 30 min., no blow back  
 FF: 45 min., fair building blow, 8.25 inches  
 FS: 90 min., no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1673.86	94.79	Initial Hydro-static
3	22.94	94.66	Open To Flow (1)
20	43.05	99.28	Shut-In(1)
51	702.90	101.19	End Shut-In(1)
51	40.77	101.28	Open To Flow (2)
105	65.00	105.12	Shut-In(2)
201	751.13	106.30	End Shut-In(2)
203	1644.10	104.52	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
100.00	oily muddy water 2%O, 13%M, 85%W	1.13

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
1801 Broadway, STE 200  
Denver, CO 80202  
ATTN: Jeff Lawler

**14-22s-14w Stafford, KS**  
**W. Gates-Kaiser 2-14**  
Job Ticket: 68514 **DST#: 3**  
Test Start: 2022.05.25 @ 02:12:00

## GENERAL INFORMATION:

Formation: **LKC J**  
Deviated: No Whipstock: 1940.00 ft (KB)  
Time Tool Opened: 04:02:32  
Time Test Ended: 09:06:02  
**Interval: 3596.00 ft (KB) To 3622.00 ft (KB) (TVD)**  
Total Depth: 3622.00 ft (KB) (TVD)  
Hole Diameter: 7.80 inches Hole Condition: Good

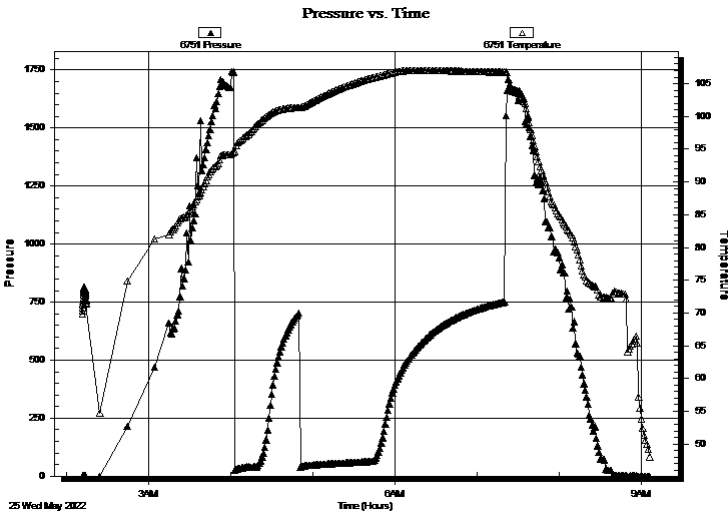
Test Type: Conventional Bottom Hole (Initial)  
Tester: Chris Hagman  
Unit No: 69  
Reference Elevations: 1940.00 ft (KB)  
1930.00 ft (CF)  
KB to GR/CF: 10.00 ft

## Serial #: 6751 Outside

Press@RunDepth:                      psig @ 3598.00 ft (KB)                      Capacity:                                      psig  
Start Date:                                  2022.05.25                      End Date:                                  2022.05.25                      Last Calib.:                                  1899.12.30  
Start Time:                                  02:12:01                      End Time:                                  09:06:02                      Time On Btm:                                    
Time Off Btm:

TEST COMMENT: IF: 15 min., fair building blow, 4.5 inches  
IS: 30 min., no blow back  
FF: 45 min., fair building blow, 8.25 inches  
FS: 90 min., no blow back

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
100.00	oily muddy water 2%O, 13%M, 85%W	1.13

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68514

**DST#: 3**

ATTN: Jeff Lawler

Test Start: 2022.05.25 @ 02:12:00

## Tool Information

Drill Pipe:	Length: 3541.00 ft	Diameter: 3.80 inches	Volume: 49.67 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 49.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3596.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3571.00	
Hydraulic tool	5.00			3576.00	
Isolator Sub	3.00			3579.00	
Jars	5.00			3584.00	
Safety Joint	3.00			3587.00	
Packer	5.00			3592.00	30.00 Bottom Of Top Packer
Packer	4.00			3596.00	
Stubb	1.00			3597.00	
Perforations	1.00			3598.00	
Recorder	0.00	8672	Inside	3598.00	
Recorder	0.00	6751	Outside	3598.00	
Pickup sub perf	5.00			3603.00	
Perforations	16.00			3619.00	
Bullnose	3.00			3622.00	26.00 Bottom Packers & Anchor

**Total Tool Length: 56.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68514

**DST#: 3**

ATTN: Jeff Lawler

Test Start: 2022.05.25 @ 02:12:00

## 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:

45000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	oily muddy water 2%O, 13%M, 85%W	1.129

Total Length: 100.00 ft      Total Volume: 1.129 bbl

Num Fluid Samples: 0

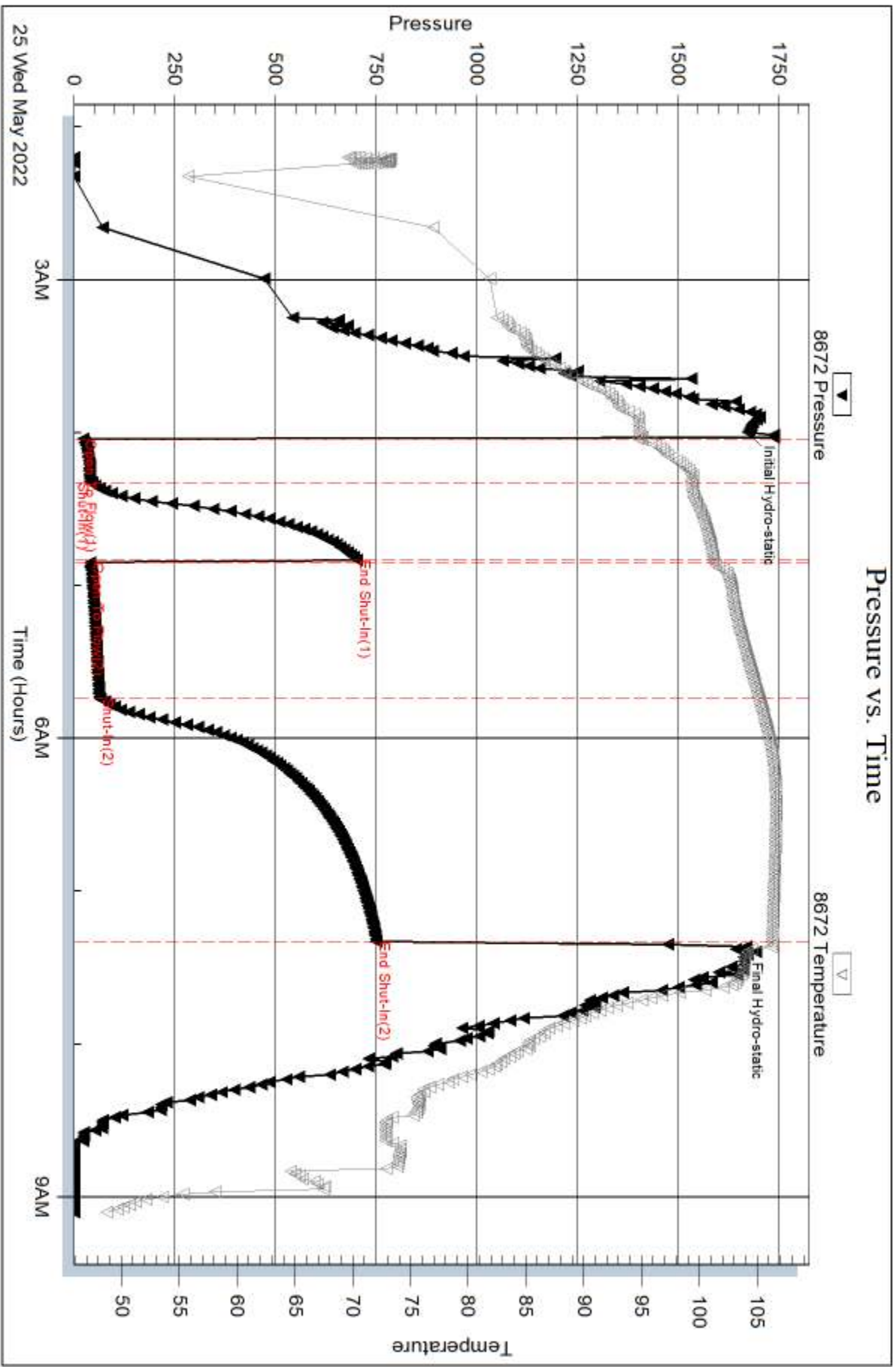
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.198@58F=45000ppm



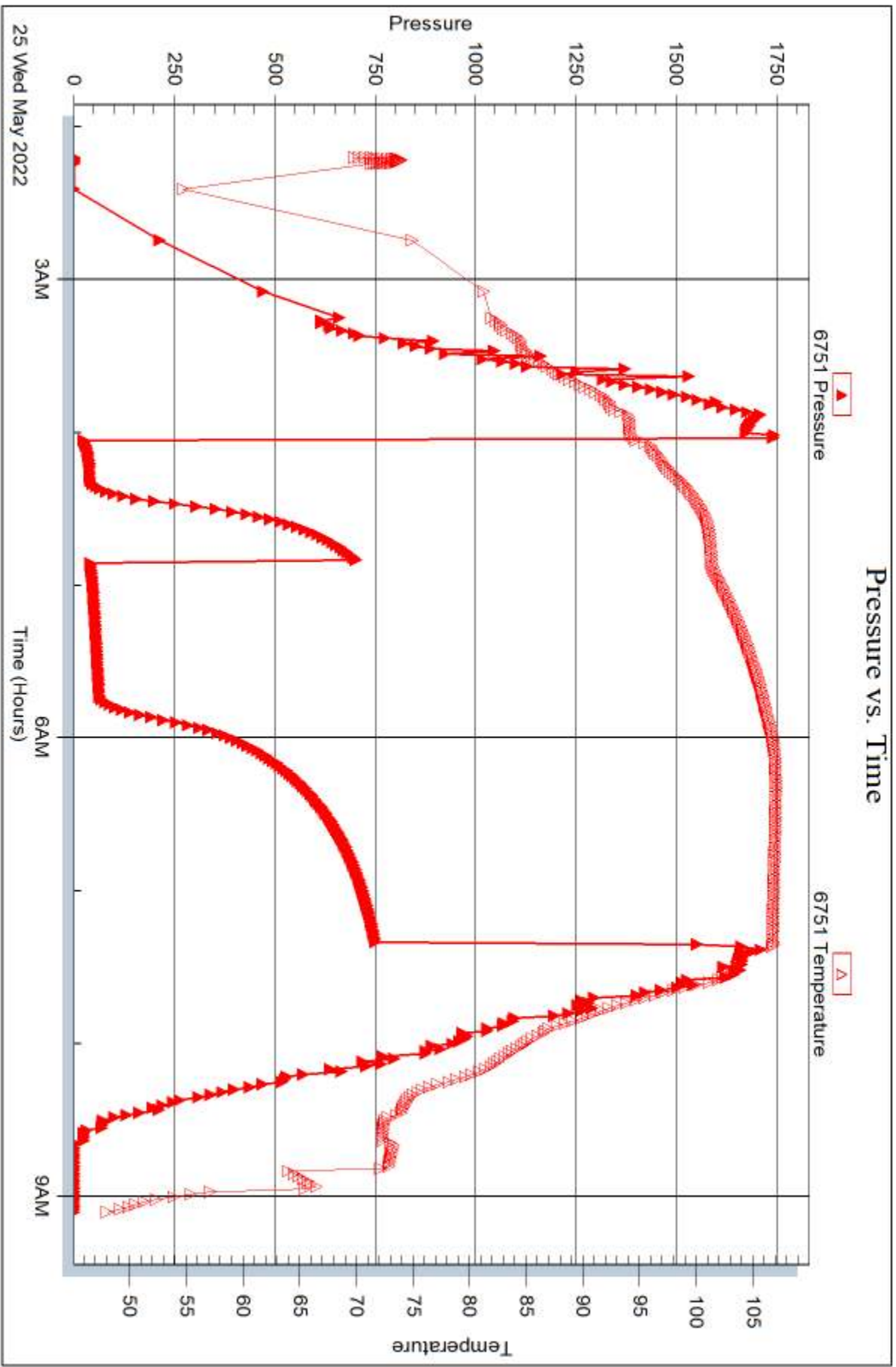


Serial #: 6751

Outside Bird Dog Oil, LLC

W. Gates-Kaiser 2-14

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Bird Dog Oil, LLC**

1801 Broadway, STE 200  
Denver, CO 80202

ATTN: Jeff Lawler

### **W. Gates-Kaiser 2-14**

### **14-22s-14w Stafford,KS**

Start Date: 2022.05.25 @ 17:02:00

End Date: 2022.05.26 @ 00:54:02

Job Ticket #: 68515                      DST #: 4

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

Printed: 2022.06.02 @ 15:01:32

Bird Dog Oil, LLC  
14-22s-14w Stafford,KS  
W. Gates-Kaiser 2-14  
DST # 4  
LKC K  
2022.05.25



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
 1801 Broadway, STE 200  
 Denver, CO 80202  
 ATTN: Jeff Lawler

**14-22s-14w Stafford, KS**  
**W. Gates-Kaiser 2-14**  
 Job Ticket: 68515      **DST#: 4**  
 Test Start: 2022.05.25 @ 17:02:00

## GENERAL INFORMATION:

Formation: **LKC K**  
 Deviated: No Whipstock: 1940.00 ft (KB)  
 Time Tool Opened: 19:30:17  
 Time Test Ended: 00:54:02  
 Interval: **3620.00 ft (KB) To 3650.00 ft (KB) (TVD)**  
 Total Depth: 3650.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Chris Hagman  
 Unit No: 69  
 Reference Elevations: 1940.00 ft (KB)  
 1930.00 ft (CF)  
 KB to GR/CF: 10.00 ft

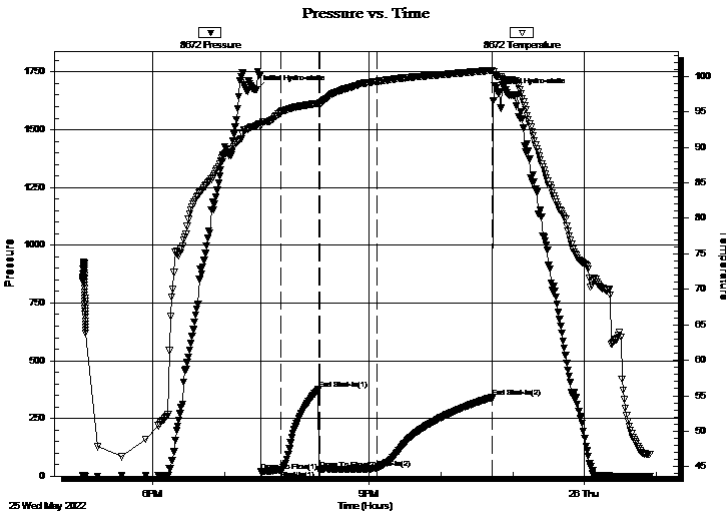
## Serial #: 8672

Inside

Press@RunDepth: 35.17 psig @ 3622.00 ft (KB)      Capacity:      psig  
 Start Date: 2022.05.25      End Date: 2022.05.26      Last Calib.: 2022.05.25  
 Start Time: 17:02:01      End Time: 00:54:02      Time On Btm: 2022.05.25 @ 19:26:47  
 Time Off Btm: 2022.05.25 @ 22:47:47

TEST COMMENT: IF: 15 min., weak building blow, 1.5 inches  
 IS: 30 min., no blow back  
 FF: 45 min., weak building blow, 1.2 inches  
 FS: 90 min., no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1672.57	93.00	Initial Hydro-static
4	19.40	92.92	Open To Flow (1)
21	25.63	95.04	Shut-In(1)
52	376.34	96.19	End Shut-In(1)
53	28.51	96.19	Open To Flow (2)
100	35.17	99.28	Shut-In(2)
197	340.05	100.83	End Shut-In(2)
201	1659.40	99.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	oil spotted mud 1%O, 99%M	0.05

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
 1801 Broadway, STE 200  
 Denver, CO 80202  
 ATTN: Jeff Lawler

**14-22s-14w Stafford,KS**  
**W. Gates-Kaiser 2-14**  
 Job Ticket: 68515 **DST#: 4**  
 Test Start: 2022.05.25 @ 17:02:00

**GENERAL INFORMATION:**

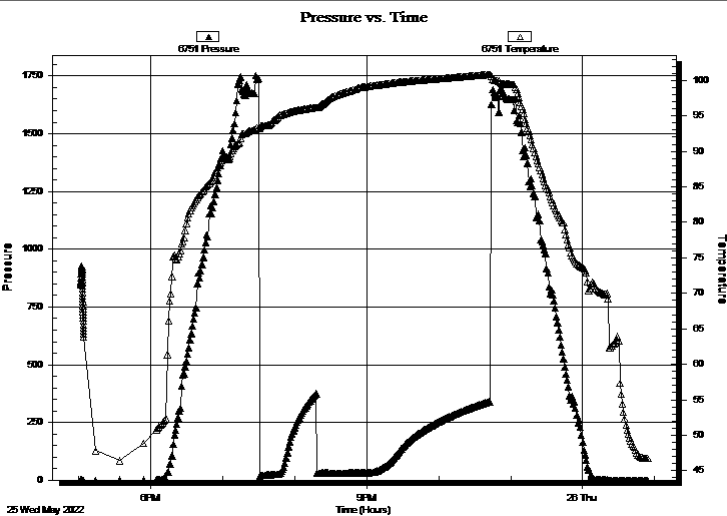
Formation: <b>LKC K</b>	
Deviated: No Whipstock: 1940.00 ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 19:30:17	Tester: Chris Hagman
Time Test Ended: 00:54:02	Unit No: 69
<b>Interval: 3620.00 ft (KB) To 3650.00 ft (KB) (TVD)</b>	Reference Elevations: 1940.00 ft (KB)
Total Depth: 3650.00 ft (KB) (TVD)	1930.00 ft (CF)
Hole Diameter: 7.80 inches Hole Condition: Good	KB to GR/CF: 10.00 ft

**Serial #: 6751**

**Outside**

Press@RunDepth: psig @ 3622.00 ft (KB)	Capacity: psig
Start Date: 2022.05.25 End Date: 2022.05.26	Last Calib.: 1899.12.30
Start Time: 17:02:01 End Time: 00:54:02	Time On Btm:
	Time Off Btm:

**TEST COMMENT:** IF: 15 min., weak building blow, 1.5 inches  
 IS: 30 min, no blow back  
 FF: 45 min., weak building blow, 1.2 inches  
 FS: 90 min., no blow back



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
10.00	oil spotted mud 1%O, 99%M	0.05

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68515

**DST#: 4**

ATTN: Jeff Lawler

Test Start: 2022.05.25 @ 17:02:00

## Tool Information

Drill Pipe:	Length: 3572.00 ft	Diameter: 3.80 inches	Volume: 50.11 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 50.26 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3620.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3595.00	
Hydraulic tool	5.00			3600.00	
Isolator Sub	3.00			3603.00	
Jars	5.00			3608.00	
Safety Joint	3.00			3611.00	
Packer	5.00			3616.00	30.00 Bottom Of Top Packer
Packer	4.00			3620.00	
Stubb	1.00			3621.00	
Perforations	1.00			3622.00	
Recorder	0.00	8672	Inside	3622.00	
Recorder	0.00	6751	Outside	3622.00	
Pickup sub perf	5.00			3627.00	
Perforations	20.00			3647.00	
Bullnose	3.00			3650.00	30.00 Bottom Packers & Anchor

**Total Tool Length: 60.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68515

**DST#: 4**

ATTN: Jeff Lawler

Test Start: 2022.05.25 @ 17:02:00

## 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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	oil spotted mud 1%O, 99%M	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

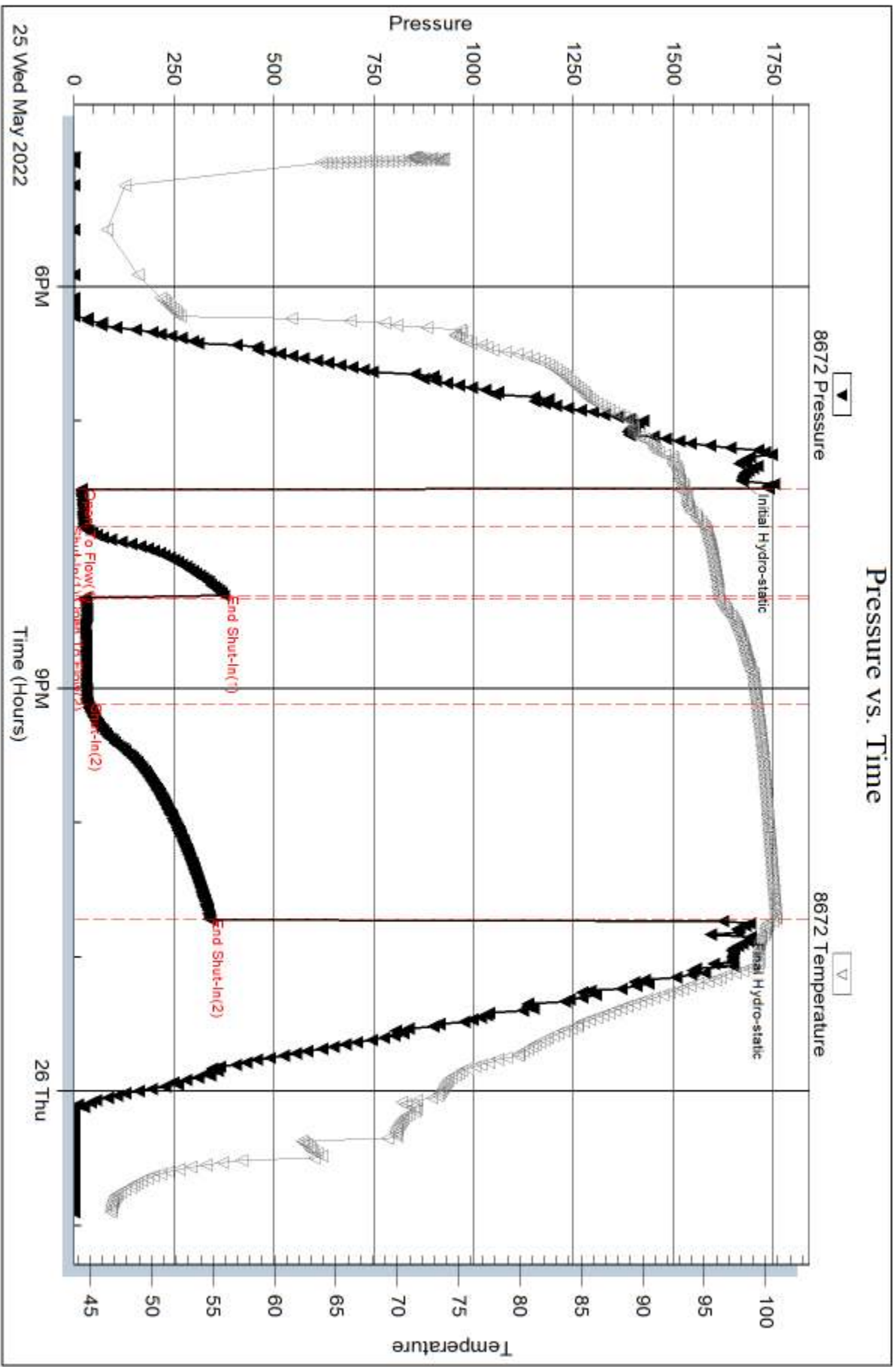
Serial #: 8672

Inside

Bird Dog Oil, LLC

W. Gates-Kaiser 2-14

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 68515

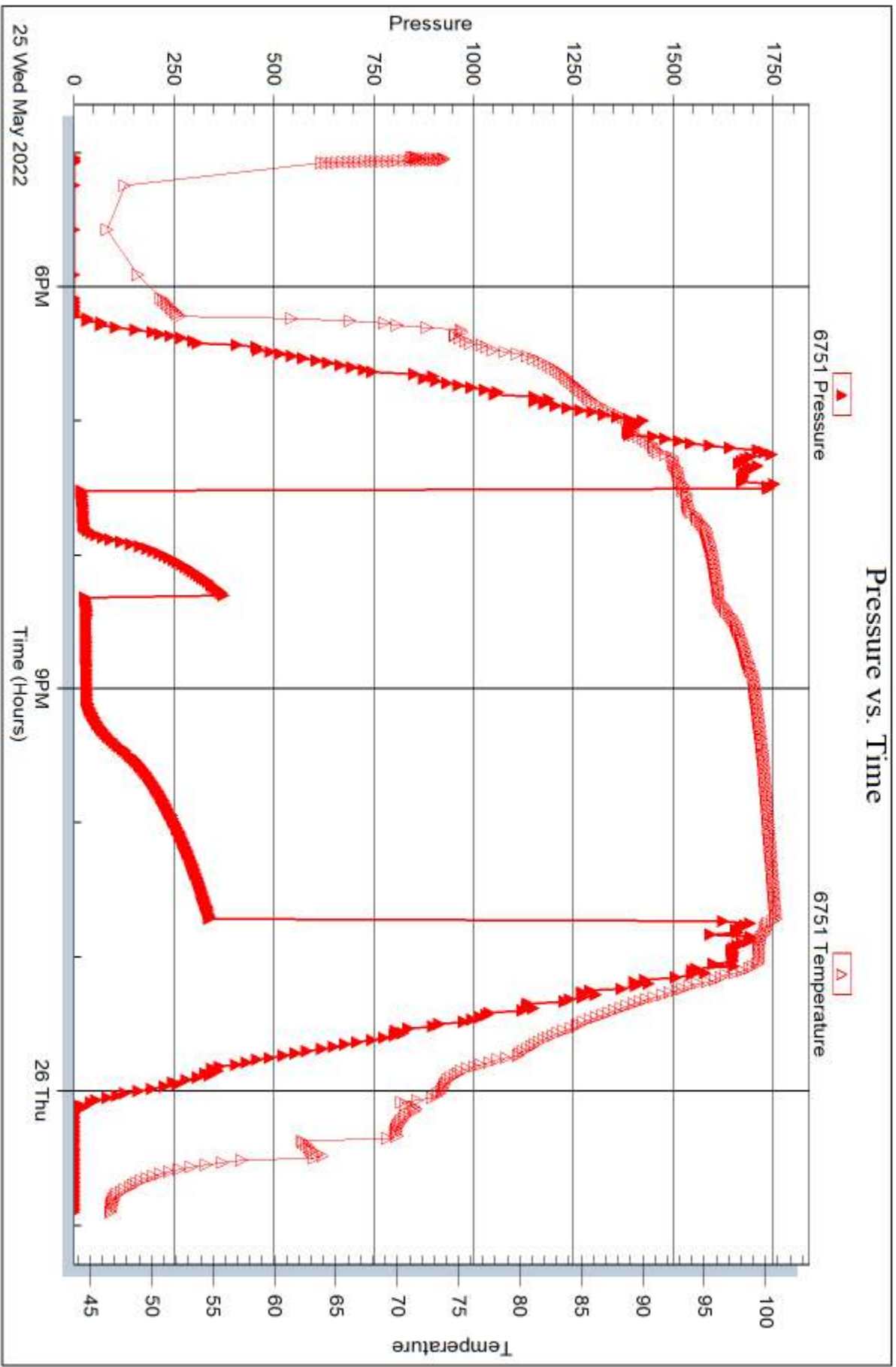
Printed: 2022.06.02 @ 15:01:33

Serial #: 6751

Outside Bird Dog Oil, LLC

W. Gates-Kaiser 2-14

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 68515

Printed: 2022.06.02 @ 15:01:33





## DRILL STEM TEST REPORT

Prepared For: **Bird Dog Oil, LLC**

1801 Broadway, STE 200  
Denver, CO 80202

ATTN: Jeff Lawler

### **W. Gates-Kaiser 2-14**

### **14-22s-14w Stafford,KS**

Start Date: 2022.05.26 @ 12:00:00

End Date: 2022.05.26 @ 19:22:02

Job Ticket #: 68516                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2022.06.02 @ 15:00:49

Bird Dog Oil, LLC  
14-22s-14w Stafford,KS  
W. Gates-Kaiser 2-14  
DST # 5  
Viola  
2022.05.26



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
 1801 Broadway, STE 200  
 Denver, CO 80202  
 ATTN: Jeff Lawler

**14-22s-14w Stafford,KS**  
**W. Gates-Kaiser 2-14**  
 Job Ticket: 68516 **DST#: 5**  
 Test Start: 2022.05.26 @ 12:00:00

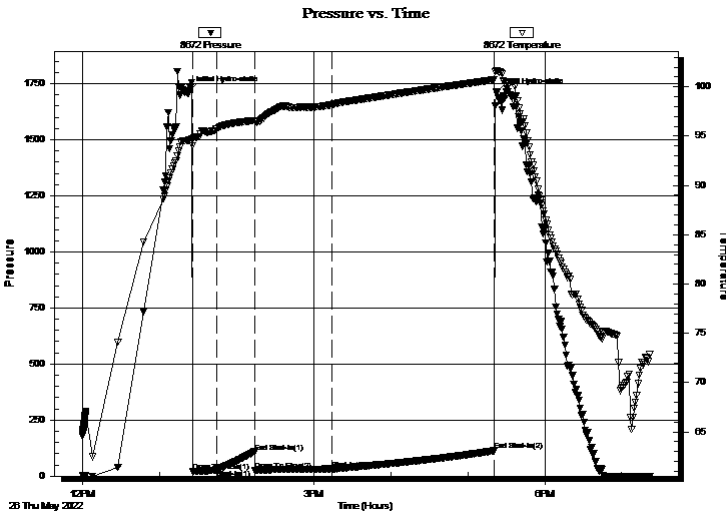
## GENERAL INFORMATION:

Formation: **Viola**  
 Deviated: No Whipstock: 1940.00 ft (KB)  
 Time Tool Opened: 13:25:47  
 Time Test Ended: 19:22:02  
 Interval: **3650.00 ft (KB) To 3744.00 ft (KB) (TVD)**  
 Total Depth: 3744.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Chris Hagman  
 Unit No: 69  
 Reference Elevations: 1940.00 ft (KB)  
 1930.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8672 Inside**  
 Press@RunDepth: 32.22 psig @ 3652.00 ft (KB) Capacity: psig  
 Start Date: 2022.05.26 End Date: 2022.05.26 Last Calib.: 2022.05.26  
 Start Time: 12:00:01 End Time: 19:22:02 Time On Btm: 2022.05.26 @ 13:23:32  
 Time Off Btm: 2022.05.26 @ 17:22:17

**TEST COMMENT:** IF: 15 min., weak building blow, 1.2 inches  
 IS: 30 min., no blow back  
 FF: 60 min., weak building blow, .7 inches  
 FS: 120 min., no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1718.15	94.62	Initial Hydro-static
3	19.93	94.04	Open To Flow (1)
22	30.00	95.78	Shut-In(1)
51	107.37	96.57	End Shut-In(1)
51	26.76	96.52	Open To Flow (2)
111	32.22	98.17	Shut-In(2)
238	113.73	100.74	End Shut-In(2)
239	1711.29	101.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	oil spotted mud 1%O,99%M	0.07

## Gas Rates

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



# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
 1801 Broadway, STE 200  
 Denver, CO 80202  
 ATTN: Jeff Lawler

**14-22s-14w Stafford,KS**  
**W. Gates-Kaiser 2-14**  
 Job Ticket: 68516 **DST#: 5**  
 Test Start: 2022.05.26 @ 12:00:00

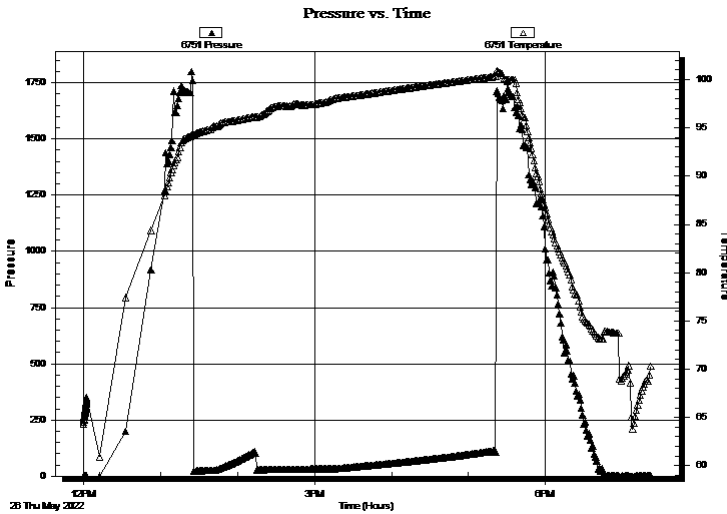
## GENERAL INFORMATION:

Formation: **Viola**  
 Deviated: No Whipstock: 1940.00 ft (KB)  
 Time Tool Opened: 13:25:47  
 Time Test Ended: 19:22:02  
 Interval: **3650.00 ft (KB) To 3744.00 ft (KB) (TVD)**  
 Total Depth: 3744.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Chris Hagman  
 Unit No: 69  
 Reference Elevations: 1940.00 ft (KB)  
 1930.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 6751 Outside

Press@RunDepth: psig @ 3652.00 ft (KB) Capacity: psig  
 Start Date: 2022.05.26 End Date: 2022.05.26 Last Calib.: 1899.12.30  
 Start Time: 12:00:01 End Time: 19:22:02 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF: 15 min., weak building blow, 1.2 inches  
 IS: 30 min., no blow back  
 FF: 60 min., weak building blow, .7 inches  
 FS: 120 min., no blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	oil spotted mud 1%O,99%M	0.07

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68516

**DST#: 5**

ATTN: Jeff Lawler

Test Start: 2022.05.26 @ 12:00:00

## Tool Information

Drill Pipe:	Length: 3602.00 ft	Diameter: 3.80 inches	Volume: 50.53 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 50.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3650.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	94.00 ft			
Tool Length:	124.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3625.00	
Hydraulic tool	5.00			3630.00	
Isolator Sub	3.00			3633.00	
Jars	5.00			3638.00	
Safety Joint	3.00			3641.00	
Packer	5.00			3646.00	30.00 Bottom Of Top Packer
Packer	4.00			3650.00	
Stubb	1.00			3651.00	
Perforations	1.00			3652.00	
Recorder	0.00	8672	Inside	3652.00	
Recorder	0.00	6751	Outside	3652.00	
Pickup sub perf	5.00			3657.00	
Perforations	18.00			3675.00	
Change Over Sub	1.00			3676.00	
Drill Pipe	64.00			3740.00	
Change Over Sub	1.00			3741.00	
Bullnose	3.00			3744.00	94.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>124.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68516

**DST#: 5**

ATTN: Jeff Lawler

Test Start: 2022.05.26 @ 12:00:00

## 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:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	oil spotted mud 1%O,99%M	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl

Num Fluid Samples: 0

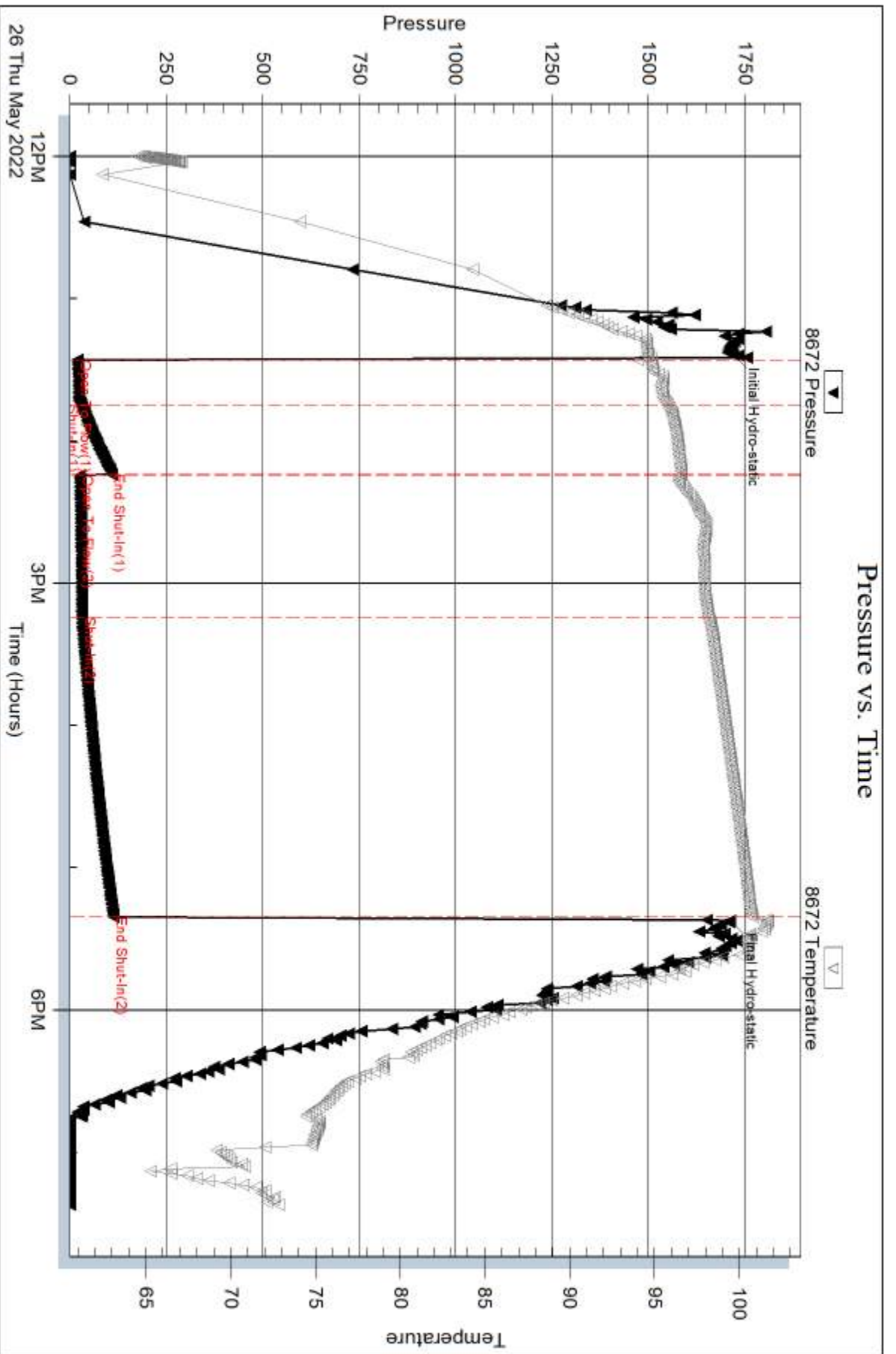
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

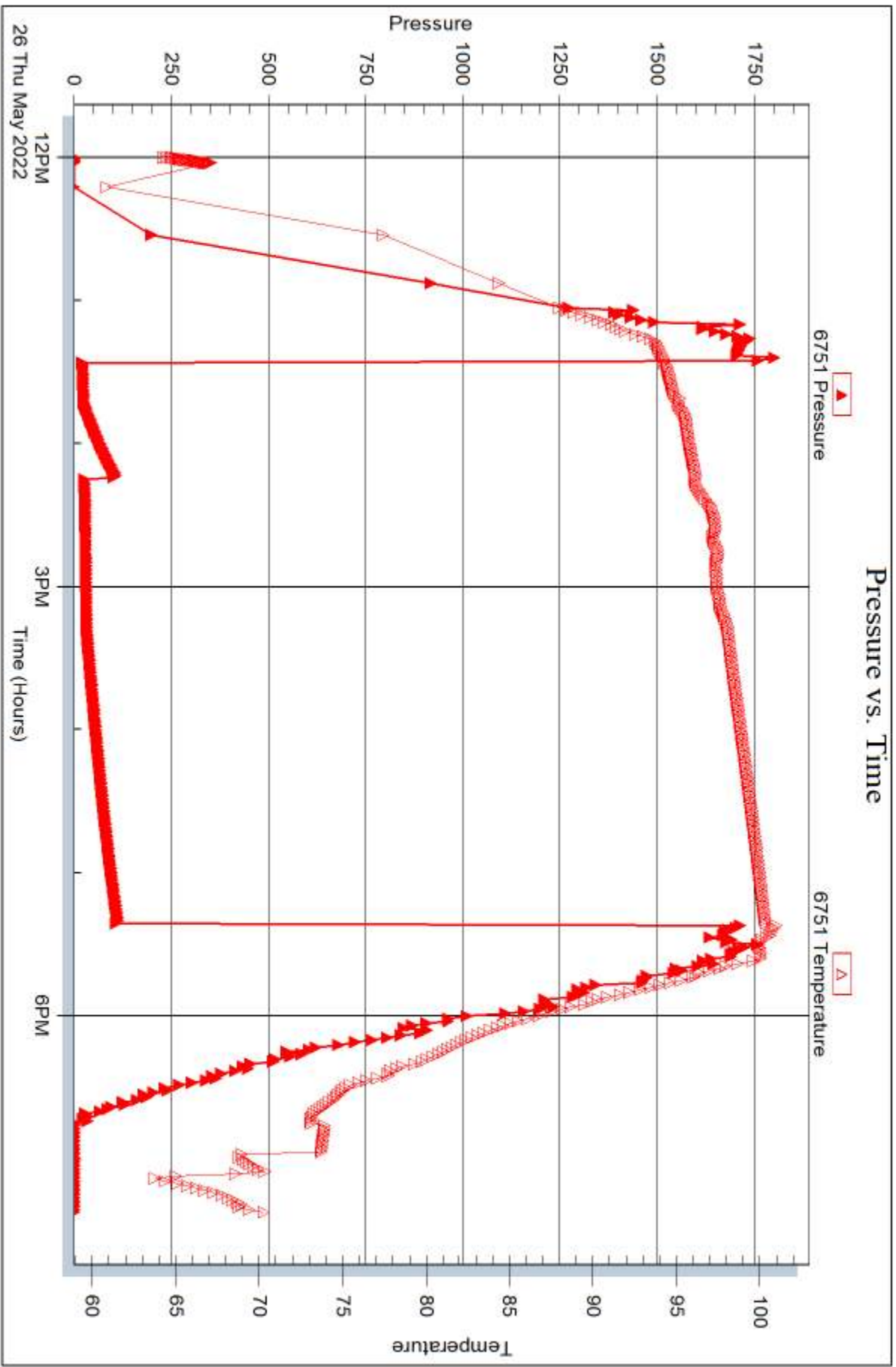


Serial #: 6751

Outside Bird Dog Oil, LLC

W. Gates-Kaiser 2-14

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 69516

Printed: 2022.06.02 @ 15:00:52



## DRILL STEM TEST REPORT

Prepared For: **Bird Dog Oil, LLC**

1801 Broadway, STE 200  
Denver, CO 80202

ATTN: Jeff Lawler

### **W. Gates-Kaiser 2-14**

### **14-22s-14w Stafford,KS**

Start Date: 2022.05.27 @ 08:04:00

End Date: 2022.05.27 @ 15:04:02

Job Ticket #: 68517                      DST #: 6

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

Printed: 2022.06.02 @ 14:56:44

Bird Dog Oil, LLC  
14-22s-14w Stafford,KS  
W. Gates-Kaiser 2-14  
DST # 6  
Arbuckle  
2022.05.27





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
1801 Broadway, STE 200  
Denver, CO 80202  
ATTN: Jeff Lawler

**14-22s-14w Stafford, KS**  
**W. Gates-Kaiser 2-14**  
Job Ticket: 68517 **DST#: 6**  
Test Start: 2022.05.27 @ 08:04:00

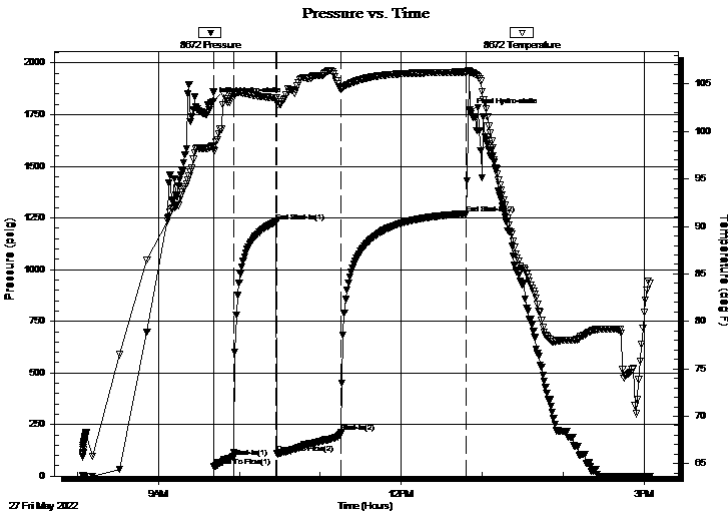
## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock: 1940.00 ft (KB)  
Time Tool Opened: 09:41:02  
Time Test Ended: 15:04:02  
Interval: **3737.00 ft (KB) To 3806.00 ft (KB) (TVD)**  
Total Depth: 3806.00 ft (KB) (TVD)  
Hole Diameter: 7.80 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Chris Hagman  
Unit No: 69  
Reference Elevations: 1940.00 ft (KB)  
1930.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 8672 Inside**  
Press@RunDepth: 210.36 psig @ 3740.00 ft (KB) Capacity: psig  
Start Date: 2022.05.27 End Date: 2022.05.27 Last Calib.: 2022.05.27  
Start Time: 08:04:01 End Time: 15:04:02 Time On Btm: 2022.05.27 @ 09:40:32  
Time Off Btm: 2022.05.27 @ 12:51:02

**TEST COMMENT:** IF: 15 min., BOB 14 min., strong building blow , 13 inches  
IS: 30 min., no blow back  
FF: 45 min., BOB 15 min., strong building blow , 27 inches  
FS: 90 min., no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1814.24	98.42	Initial Hydro-static
1	48.00	98.05	Open To Flow (1)
15	93.11	103.61	Shut-In(1)
47	1231.15	103.50	End Shut-In(1)
48	109.30	103.13	Open To Flow (2)
95	210.36	104.50	Shut-In(2)
187	1270.95	106.27	End Shut-In(2)
191	1761.63	106.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
324.00	gassy oil 30%G, 70%O	4.27
126.00	gassy oily mud 5%G, 30%O, 65%M	1.77

## Gas Rates

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



# DRILL STEM TEST REPORT

Bird Dog Oil, LLC  
1801 Broadway, STE 200  
Denver, CO 80202  
ATTN: Jeff Lawler

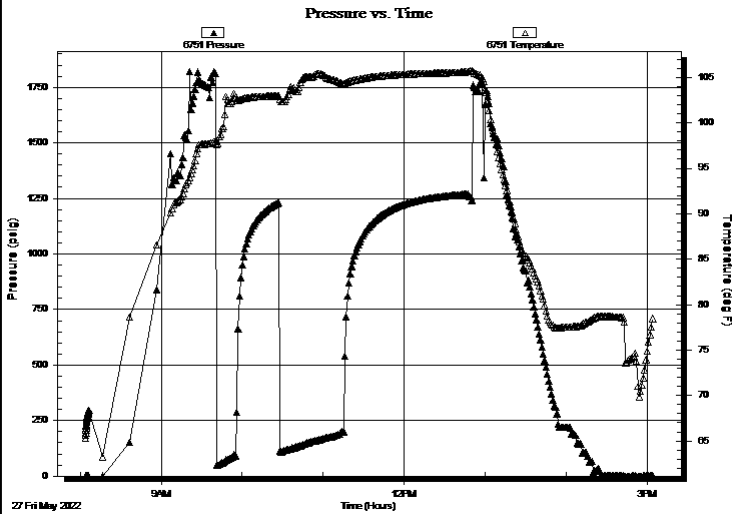
**14-22s-14w Stafford,KS**  
**W. Gates-Kaiser 2-14**  
Job Ticket: 68517     **DST#: 6**  
Test Start: 2022.05.27 @ 08:04:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock: 1940.00 ft (KB)     Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 09:41:02     Tester: Chris Hagman  
Time Test Ended: 15:04:02     Unit No: 69  
**Interval: 3737.00 ft (KB) To 3806.00 ft (KB) (TVD)**     Reference Elevations: 1940.00 ft (KB)  
Total Depth: 3806.00 ft (KB) (TVD)     1930.00 ft (CF)  
Hole Diameter: 7.80 inches     Hole Condition: Good     KB to GR/CF: 10.00 ft

**Serial #: 6751     Outside**  
Press@RunDepth:     psig @     3740.00 ft (KB)     Capacity:     psig  
Start Date:     2022.05.27     End Date:     2022.05.27     Last Calib.:     1899.12.30  
Start Time:     08:04:01     End Time:     15:04:02     Time On Btm:  
Time Off Btm:

**TEST COMMENT:** IF: 15 min., BOB 14 min., strong building blow , 13 inches  
IS: 30 min., no blow back  
FF: 45 min., BOB 15 min., strong building blow , 27 inches  
FS: 90 min., no blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
324.00	gassy oil 30%G, 70%O	4.27
126.00	gassy oily mud 5%G, 30%O, 65%M	1.77

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68517

**DST#: 6**

ATTN: Jeff Lawler

Test Start: 2022.05.27 @ 08:04:00

## Tool Information

Drill Pipe:	Length: 3698.00 ft	Diameter: 3.80 inches	Volume: 51.87 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 52.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3737.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	69.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3712.00	
Hydraulic tool	5.00			3717.00	
Isolator Sub	3.00			3720.00	
Jars	5.00			3725.00	
Safety Joint	3.00			3728.00	
Packer	5.00			3733.00	30.00 Bottom Of Top Packer
Packer	4.00			3737.00	
Stubb	1.00			3738.00	
Perforations	2.00			3740.00	
Recorder	0.00	8672	Inside	3740.00	
Recorder	0.00	6751	Outside	3740.00	
Pickup sub perf	5.00			3745.00	
Perforations	24.00			3769.00	
Change Over Sub	1.00			3770.00	
Drill Pipe	32.00			3802.00	
Change Over Sub	1.00			3803.00	
Bullnose	3.00			3806.00	69.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>99.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bird Dog Oil, LLC

**14-22s-14w Stafford,KS**

1801 Broadway, STE 200  
Denver, CO 80202

**W. Gates-Kaiser 2-14**

Job Ticket: 68517

**DST#: 6**

ATTN: Jeff Lawler

Test Start: 2022.05.27 @ 08:04:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

19 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
324.00	gassy oil 30%G, 70%O	4.272
126.00	gassy oily mud 5%G, 30%O, 65%M	1.767

Total Length: 450.00 ft      Total Volume: 6.039 bbl

Num Fluid Samples: 0

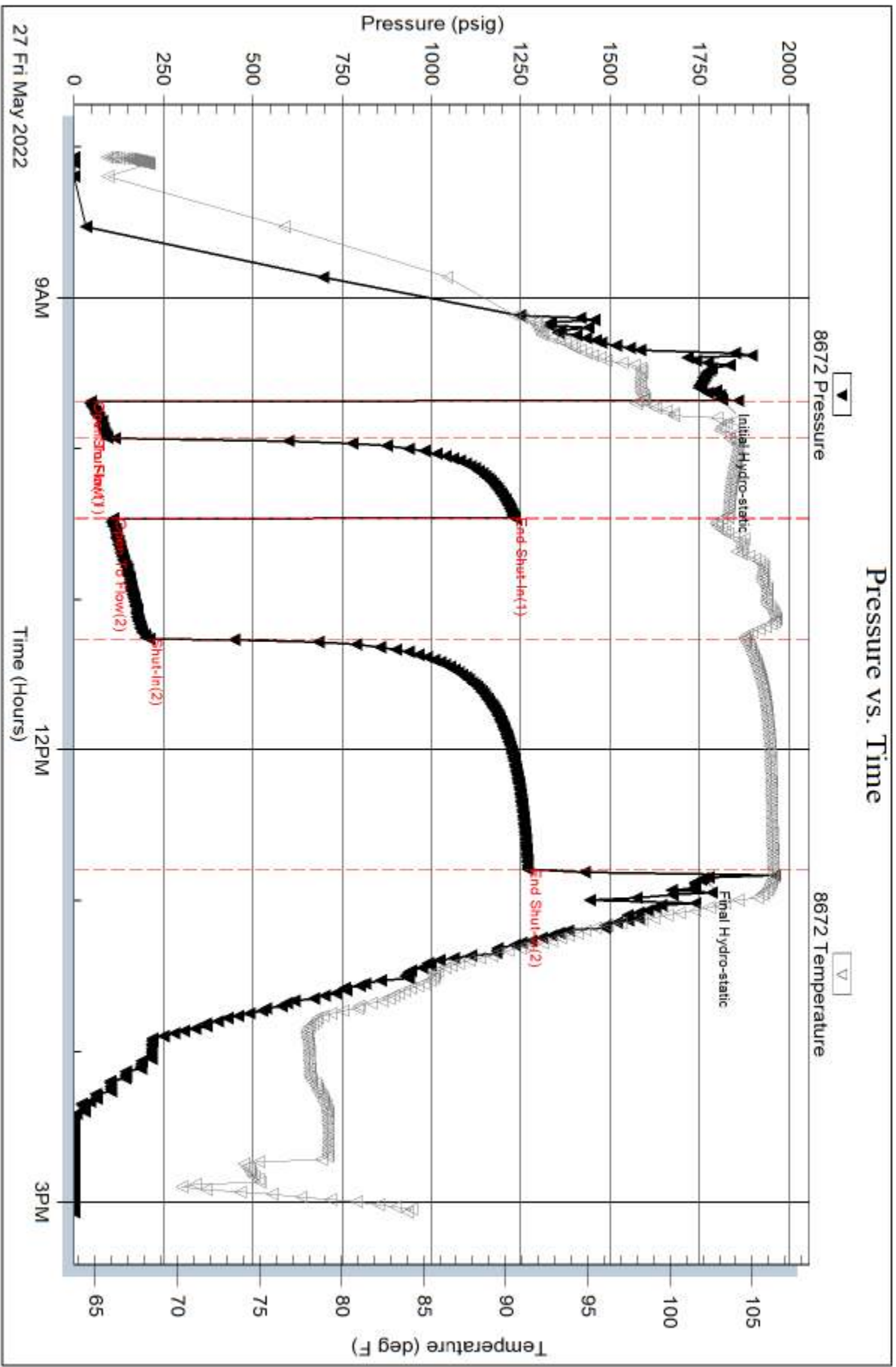
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API=22@90F=19

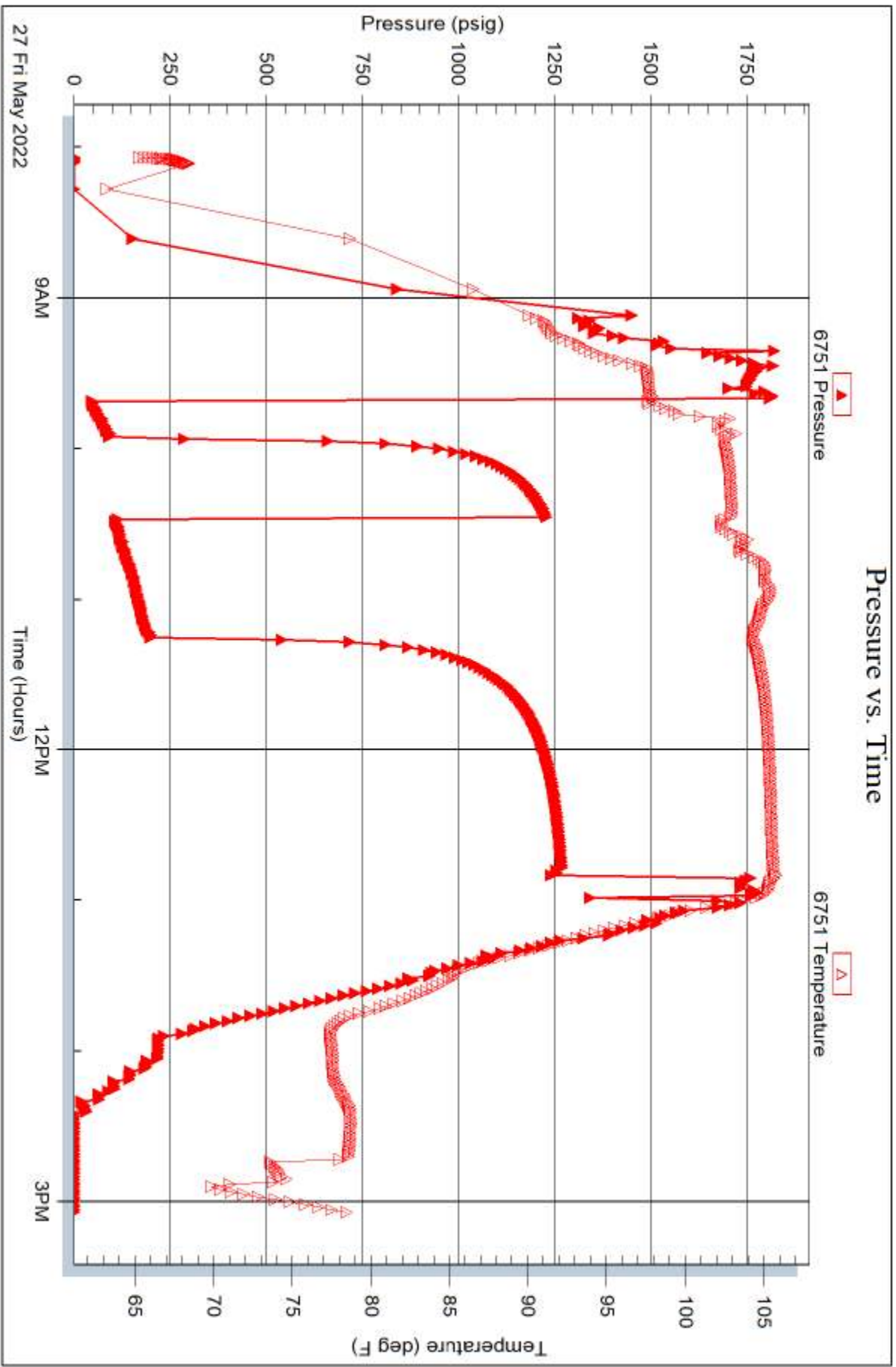


Serial #: 6751

Outside Bird Dog Oil, LLC

W. Gates-Kaiser 2-14

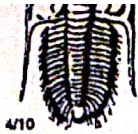
DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 68517

Printed: 2022.06.02 @ 14:56:58



# TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

NO. 68512

Well Name & No. W Gates-Kaiser 214 Test No. 1 Date 5-23-22  
 Company Bird Dog Oil, LLC Elevation 1940 KB 1930 GL  
 Address 1801 Broadway, STE #200 Denver, CO 80202  
 Co. Rep / Geo. Jeff Lawler Rig Discovery #2  
 Location: Sec. 14 Twp 22 Rge. 14 Co. Stafford State KS

Interval Tested 3458-3523 Zone Tested LKC C-F  
 Anchor Length 65' Drill Pipe Run 3414 Mud Wt. 9.3  
 Top Packer Depth 3453 Drill Collars Run 30 Vls 52  
 Bottom Packer Depth 3458 Wt. Pipe Run W.A. WL 8.8  
 Total Depth 3523 Chlorides 5000 ppm System LCM Ø

Blow Description IF: 15 min., fair building blow, 5 inches  
1ST: 30 min., no blow back  
FP: 45 min., BOB 38 min., strong building blow, 12 inches  
FSI: 90 min., no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>130</u>	<u>gassy oily watery mud</u>	<u>5</u>	<u>5</u>	<u>30</u>	<u>60</u>
<u>Ø</u>					
	<u>60' GBP</u>				

Rec Total 130 BHT 102 Gravity API RW .359 @ 60 °F Chlorides 22,000 ppm

(A) Initial Hydrostatic 1655  Test CONV. 1800 T-On Location 1230  
 (B) First Initial Flow 22  Jars 300 T-Started 1730  
 (C) First Final Flow 41  Safety Joint T-Open 1945  
 (D) Initial Shut-In 899  Circ Sub T-Pulled 2245  
 (E) Second Initial Flow 52  Hourly Standby T-Out Ø100  
 (F) Second Final Flow 79  Mileage 80 120 Comments late on @ 1713  
 (G) Final Shut-In 887  Sampler EM @ 1715  
 (H) Final Hydrostatic 1644  Straddle  EM Tool good  
 Ruined Shale Packer  
 Ruined Packer

Initial Open 15  Extra Packer  
 Initial Shut-In 30  Extra Recorder  
 Final Flow 45  Day Standby  
 Final Shut-In 90  Accessibility  
 Sub Total 2220 MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Chris Hegman

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68513

Well Name & No. W. Gates-Kaiser 2-14 Test No. 2 Date 5-24-22  
 Company Bird Dog Oil, LLC Elevation 1940 KB 1930 GL  
 Address 1801 Broadway, STE #200 Denver, CO 80202  
 Co. Rep / Geo. Jeff Lawler Rig Discovery #2  
 Location: Sec. 14 Twp 22 Rge. 14 Co. Stafford State KS

Interval Tested 3560-3600 Zone Tested LKC H-T  
 Anchor Length 40' Drill Pipe Run 3509 Mud Wt. 9.1  
 Top Packer Depth 3555 Drill Collars Run 30' Vis 49  
 Bottom Packer Depth 3560 Wt. Pipe Run N.A. WL 8.8  
 Total Depth 3600 Chlorides 6000 ppm System LCM 2-5

Blow Description IF: 15 min., weak surface blow, .5 inches  
TS: 30 min., no blow back  
FF: 45 min., weak surface blow, .8 inches  
FS: 90 min., no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>mud</u>				<u>100%</u>

Rec Total 10 BHT 102 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1667  Test conv. 1800 T-On Location 1100  
 (B) First Initial Flow 17  Jars 300 T-Started 1130  
 (C) First Final Flow 29  Safety Joint \_\_\_\_\_ T-Open 1330  
 (D) Initial Shut-In 769  Circ Sub \_\_\_\_\_ T-Pulled 1630  
 (E) Second Initial Flow 24  Hourly Standby \_\_\_\_\_ T-Out 1830  
 (F) Second Final Flow 29  Mileage 80 miles 120 Comments bits on @ 1120  
 (G) Final Shut-In 771  Sampler \_\_\_\_\_ EM @ 1123  
 (H) Final Hydrostatic 1660  Straddle \_\_\_\_\_  EM Tool good  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 2220  
 Sub Total 2220 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chris Hegran

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.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68514

Well Name & No. W. Gates-Kaiser 2-14 Test No. 3 Date 5-25-22  
 Company Bird Dog Oil, LLC Elevation 1940 KB 1930 GL  
 Address 1801 Broadway, STE #200 Denver, CO 80202  
 Co. Rep / Geo. Jeff Lawler Rig Discovery #2  
 Location: Sec. 14 Twp 22 Rge. 14 Co. Stafford State KS

Interval Tested 3596-3622 Zone Tested LKCJ  
 Anchor Length 26' Drill Pipe Run 3541 Mud Wt. 9.1  
 Top Packer Depth 3491 Drill Collars Run 30 Vis 49  
 Bottom Packer Depth 3496 Wt. Pipe Run N.A. WL 8.8  
 Total Depth 3622 Chlorides 6000 ppm System LCM 2.5

Blow Description IF: 15 min, fair building blow, 4.5 inches  
ISB: 30 min, NO blow back  
FF: 45 min, fair building blow, 8.25 inches  
FSI: 90 min, no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>100</u>	<u>oily muddy water</u>	<u>2</u>	<u>85</u>	<u>13</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 100 BHT 106 Gravity API RW .198 @ 58 °F Chlorides 45,000 ppm

(A) Initial Hydrostatic 1674  Test conv. 1800 T-On Location 0145  
 (B) First Initial Flow 23  Jars 300 T-Started 0230  
 (C) First Final Flow 43  Safety Joint \_\_\_\_\_ T-Open 0405  
 (D) Initial Shut-In 703  Circ Sub \_\_\_\_\_ T-Pulled 0705  
 (E) Second Initial Flow 41  Hourly Standby \_\_\_\_\_ T-Out 0900  
 (F) Second Final Flow 65  Mileage x 80 120 Comments back @ 0212  
 (G) Final Shut-In 751  Sampler \_\_\_\_\_ EM @ 0215  
 (H) Final Hydrostatic 1644  Straddle \_\_\_\_\_  EM Tool good  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 2220  
 Sub Total 2220 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chris Hagan

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.



# TRIBLUTE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

NO. **68515**

Well Name & No. W Gates-Kaiser 2-14 Test No. 4 Date 2-25-23  
 Company Bird Dog Oil, LLC Elevation 1940 KB 1930 GL  
 Address 1801 Broadway STE #200 Denver, CO 80202  
 Co. Rep / Geo. Jeff Lawler Rig Discover #2  
 Location: Sec. 14 Twp 22 Rge. 14 Co. Stafford State KS

Interval Tested 3620-3650 Zone Tested LKC 1C  
 Anchor Length ~~30~~ 30' Drill Pipe Run 3572 Mud Wt. 9.1  
 Top Packer Depth ~~3615~~ 3615 Drill Collars Run 30 Vis 48  
 Bottom Packer Depth ~~3620~~ 3620 Wt. Pipe Run W.A. WL 8.8  
 Total Depth 3650 Chlorides 8,500 ppm System LCM 1#  
 Blow Description IF: 15 min., weak building blow, 1.5 inches  
TSB: 30 min., no blow back  
FP: 45 min., weak surface blow, 1.2 inches  
FSB: 90 min., no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>oil spotted mud</u>				<u>99</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 100 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1673  Test CONV. 1800 T-On Location 1700  
 (B) First Initial Flow 19  Jars 300 T-Started 1730  
 (C) First Final Flow 26  Safety Joint \_\_\_\_\_ T-Open 1935  
 (D) Initial Shut-In 376  Circ Sub \_\_\_\_\_ T-Pulled 2235  
 (E) Second Initial Flow 29  Hourly Standby \_\_\_\_\_ T-Out 0100  
 (F) Second Final Flow 35  Mileage X80 120 Comments back on @ 1702  
 (G) Final Shut-In 340  Sampler \_\_\_\_\_ FM @ 1705  
 (H) Final Hydrostatic 1659  Straddle \_\_\_\_\_  EM Tool good  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 2220  
 Sub Total 2220 MP/DST Disc 1 \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chris Hagan

Triblute 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.



# TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68516

Well Name & No. W Gates-Kaiser 2-14 Test No. 5 Date 5-26-22  
 Company Bird Dog Oil, LLC Elevation 1940 KB 1930 GL  
 Address 1801 Broadway STE #200 Denver, CO 80202  
 Co. Rep / Geo. Jeff Lawler Rig Discovery #2  
 Location: Sec. 14 Twp 22 Rge. 14 Co. Stafford State KS

Interval Tested 3650-3744 Zone Tested Viola  
 Anchor Length 94 Drill Pipe Run 3602 Mud Wt. 8.9  
 Top Packer Depth 3645 Drill Collars Run 30 Vls 49  
 Bottom Packer Depth 3650 Wt. Pipe Run N.A. WL 8.0  
 Total Depth 3744 Chlorides 6000 ppm System LCM 2<sup>nd</sup>

Blow Description IF: 15 min., weak building blow, 1.2 inches  
IS: 30 min., no blow back  
FP: 60 min., weak building blow, .7 inches  
FS: 120 min., no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>oil spotted mud</u>		<u>1</u>		<u>99</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 100 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1718  Test CONV. 1800 T-On Location 1200  
 (B) First Initial Flow 20  Jars 300 T-Started 1230  
 (C) First Final Flow 30  Safety Joint \_\_\_\_\_ T-Open 1330  
 (D) Initial Shut-In 107  Circ Sub \_\_\_\_\_ T-Pulled 1715  
 (E) Second Initial Flow 27  Hourly Standby \_\_\_\_\_ T-Out 1930  
 (F) Second Final Flow 32  Mileage x 80 120 Comments back one 1200  
 (G) Final Shut-In 114  Sampler \_\_\_\_\_ EM @ 1202  
 (H) Final Hydrostatic 1711  Straddle \_\_\_\_\_  EM Tool good  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 2220  
 Sub Total 2220 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chris Hagan

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Test Ticket

TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

NO. 68517



Well Name & No. W. Gates-Kaiser 7-14 Test No. 6 Date 5-27-72  
 Company Bird Dog Oil, LLC Elevation 1940 KB 1930 GL  
 Address 1801 Broadway STE #200 Denver, CO 80202  
 Co. Rep / Geo. Jeff Lawler Rig Discovery #2  
 Location: Sec. 14 Twp 22 Rge. 14 Co. Stafford State KS

Interval Tested 3737-3806 Zone Tested Arbuckle  
 Anchor Length 69' Drill Pipe Run 3698 Mud Wt. 8.9  
 Top Packer Depth 3732 Drill Collars Run 30 Vls 49  
 Bottom Packer Depth 3737 Wt. Pipe Run N.A. WL 8.0  
 Total Depth 3806 Chlorides 6000 ppm System LCM 2#

Blow Description IF: 15 min., BOB 14 min., strong building blow, 13 inches  
IS: 30 min., no blow back  
FF: 45 min., BOB 15 min., strong building blow, 27 inches  
FS: 90 min., no blow back

Rec	Feet of	%gas	%oil	%water	%mud
324'	gassy oil	30%	70%		
126'	gassy oily mud	5%	30%		65%

Rec Total 450' BHT 106 Gravity 19 API 22 @ 90 °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1814  Test LOW 1800 T-On Location 0745  
 (B) First Initial Flow 48  Jars 300 T-Started 0800  
 (C) First Final Flow 93  Safety Joint \_\_\_\_\_ T-Open 0945  
 (D) Initial Shut-In 1231  Circ Sub \_\_\_\_\_ T-Pulled 1245  
 (E) Second Initial Flow 109  Hourly Standby \_\_\_\_\_ T-Out \_\_\_\_\_  
 (F) Second Final Flow 210  Mileage x80 120 Comments lets @ 0804  
 (G) Final Shut-In 1271  Sampler \_\_\_\_\_ EM @ 0805  
 (H) Final Hydrostatic 1762  Straddle \_\_\_\_\_  EM Tool good  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 2220  
 Sub Total 2220 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chris Hagan  
 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.

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071  
Cell 785-324-1041

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

No. 2837

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-25-52	14	22	14	Stafford	Ks		9:45 PM
W Gates Kaiser				Location			
Lease				Well No. 2-14		Owner	
Contractor				To Quality Oilwell Cementing, Inc.			
Type Job				You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Hole Size		T.D.		Charge To			
17 7/8"		3900'		Bird Dog oil LLC			
Csg. 15.30 3/4 new		Depth		Street			
3965.60							
Tbg. Size		Depth		City			
				State			
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg. 20.71		Shoe Joint		Cement Amount Ordered			
20.71'		20.71'		200 Q.P. C 10/5/52			
Meas Line		Displace		Common			
		91 1/2 BCS		Sulfonate Surfactant mud 20 KCL KCC			
<b>EQUIPMENT</b>							
Pumptrk	No.	Cement	Common				
		Helper	Poz. Mix				
Bulktrk	No.	Driver	Gel.				
		Driver	Calcium				
Bulktrk	No.	Driver	Hulls				
		Driver	Salt				
<b>JOB SERVICES &amp; REMARKS</b>							
Remarks:							
Rat Hole 300x							
Mouse Hole 800x							
Centralizers 1, 3, 5, 7, 9, 11, 13, 15							
Baskets 11							
D/V or Port Collar							
pump on bottom break							
Change 300 gal mud clear							
200 gal + mouse hole's Hook to 5 1/2'							
1500x Cement. Shut							
pump + lines displaced							
191 1/2 BCS at 1170 Feet							
200 gal of Displacement mud KCC							
hooked + hold							
1 ft cement 700 #.							
mud plug to 1500 #.							
<b>FLOAT EQUIPMENT</b>							
Guide Shoe							
Centralizer 8							
Baskets 1							
AFU Inserts							
Float Shoe 1							
Latch Down 1							
Pumptrk Charge							
Mileage							
Tax							
Discount							
Total Charge							
Signature							

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071  
Cell 785-324-1041

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

No. 2893

Date	5-19-22	Sec.	14	Twp.	22	Range	14	County	Stafford	State	Ks	On Location		Finish	12/20/22
------	---------	------	----	------	----	-------	----	--------	----------	-------	----	-------------	--	--------	----------

Lease Coates - Kainer Well No. 2-14 Owner h. Ra.

Contractor Discovery A2 To Quality Oilwell Cementing, Inc.  
Type Job Surface You are hereby requested to rent cementing equipment and furnish  
center and helper to assist owner or contractor to do work as listed.

Hole Size 12 1/4" T.D. 351' Charge To Bird Dog 01  
Csg. 8 5/8" Depth 351' Street

Tbg. Size Depth City State  
Tool Depth

Cement Left in Csg. 15' Shoe Joint 15' The above was done to satisfaction and supervision of owner agent or contractor.  
Cement Amount Ordered 450 Bu. 2500 2x Gel

Meas Line Displace 21 1/4 BU 1/2 Fl. Seal

**EQUIPMENT**

Pumptrk	16	No.	Cementer	<u>David</u>	Common
			Helper		
Bulktrk	19	No.	Driver	<u>Beath</u>	Poz. Mix
			Driver		
Bulktrk	<u>20</u>	No.	Driver	<u>Beath</u>	Gel.
			Driver		
			Driver	<u>Beath</u>	Calcium

**JOB SERVICES & REMARKS**

Remarks:	<u>Cement did Circulate</u>	Hulls
Rat Hole		Salt
Mouse Hole		Flowseal
Centralizers		Kol-Seal
Baskets		Mud CLR 48
D/V or Port Collar		CFL-117 or CD110 CAF 38
		Sand
		Handling
		Mileage

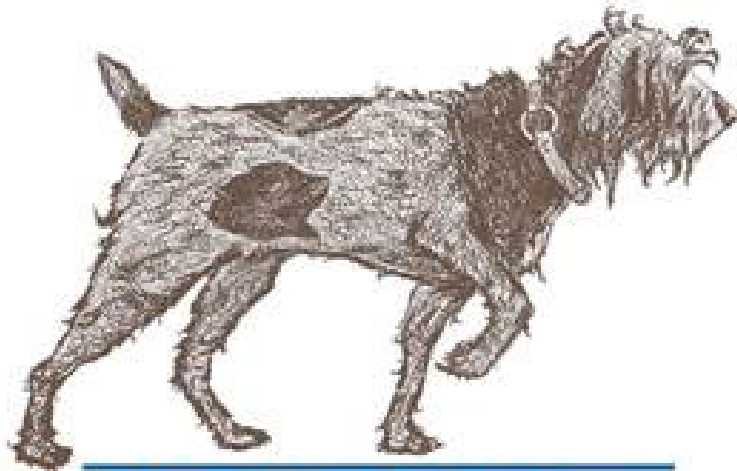
**FLOAT EQUIPMENT**

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

	Pumptrk Charge
	Mileage

	Tax
	Discount
	Total Charge

X Signature [Signature]



## BIRD DOG OIL, LLC

Scale 1:240 Imperial

Well Name: W. GATES - KAISER # 2-14  
Surface Location: NE SW SE SW Sec. 14 - 22S - 14W  
Bottom Location:  
API: 15-185-24109  
License Number: 34655  
Spud Date: 5/19/2022 Time: 4:30 PM  
Region: STAFFORD COUNTY KANSAS  
Drilling Completed: 5/28/2022 Time: 1:35 AM  
Surface Coordinates: 475' FSL & 1960' FWL  
Bottom Hole Coordinates:  
Ground Elevation: 1928.00ft  
K.B. Elevation: 1936.00ft  
Logged Interval: 2900.00ft To: 3900.00ft  
Total Depth: 3900.00ft  
Formation: LANSING-KANSAS CITY; VIOLA; ARBUCKLE  
Drilling Fluid Type: Chemical/Fresh Water Gel

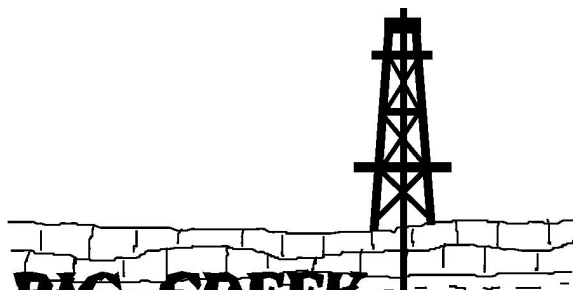
### OPERATOR

Company: BIRD DOG OIL, LLC  
Address: 1801 BROADWAY  
STE 200  
DENVER, CO 80202-3840  
Contact Geologist: MATTHEW STEWART  
Contact Phone Nbr: (303) 534-1686  
Well Name: W. GATES - KAISER # 2-14  
Location: NE SW SE SW Sec. 14 - 22S - 14W  
API: 15-185-24109  
Pool:  
State: Kansas Field: OSCAR NORTH  
Country: USA

### SURFACE CO-ORDINATES

Well Type: Vertical  
Longitude: -98.832342  
Latitude: 38.131816  
N/S Co-ord: 475' FSL  
E/W Co-ord: 1960' FWL

### LOGGED BY





Company: BIG CREEK CONSULTING, INC  
 Address: 3504 DUNCAN ST  
 ST. JOE, MO 64507

Phone Nbr: (785) 259-3737  
 Logged By: Geologist

Name: JEFF LAWLER

**CONTRACTOR**

Contractor: DISCOVERY DRILLING  
 Rig #: 2  
 Rig Type: MUD ROTARY  
 Spud Date: 5/19/2022  
 TD Date: 5/28/2022  
 Rig Release: 5/28/2022  
 Time: 4:30 PM  
 Time: 1:35 AM  
 Time: 11:30 PM

**ELEVATIONS**

K.B. Elevation: 1936.00ft  
 K.B. to Ground: 8.00ft  
 Ground Elevation: 1928.00ft

**NOTES**

DUE TO ECONOMICAL RECOVERY ON DST #6 DECISION WAS MADE TO RUN 5 1/2" PRODUCTION STRING AND FURTHER EVALUATE THE ARBUCKLE ON COMPLETION.

RESPECTFULLY SUBMITTED,  
 JEFF LAWLER

**WELL COMPARISON SHEET**

FORMATION	W GATES - KAISER #2-14				SE NE NW 15-22-13				NW SE SW 14-22-14				SW NW SW 14-22-14				NE SE SW 14-22-14					
	LOG TOPS		SAMPLE TOPS		LOGS		LOG CORR.		SMPL. CORR.		LOGS		LOG CORR.		SMPL. CORR.		LOGS		LOG CORR.		SMPL. CORR.	
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM
ANHYDRITE TOP	824	1112	826	1110	824	1114	-2	-4	820	1114	-2	-4	821	1118	-6	-8	819	1116	-4	-6		
BASE	839	1097	848	1088	844	1094	+3	-6	841	1093	+4	-5	843	1096	+1	-8	842	1093	+4	-5		
TOPEKA	3003	-1067	3006	-1070	3004	-1066	-1	-4					2930	-991	-76	-79						
HEEDNERSHALE	3301	-1365	3304	-1368	3304	-1366	+1	-2	3303	-1369	+4	+1	3310	-1371	+6	+3	3303	-1368	+3	+0		
TORONTO	3325	-1389	3325	-1389	3325	-1387	-2	-2	3326	-1392	+3	+3	3333	-1394	+5	+5	3325	-1390	+1	+1		
DOUGLASSHALE	3340	-1404	3341	-1405	3340	-1402	-2	-3	3340	-1406	+2	+1	3344	-1405	+1	+0	3340	-1405	+1	+0		
BROWN LIME	3431	-1495	3434	-1498	3434	-1496	+1	-2	3433	-1499	+4	+1	3437	-1498	+3	+0	3430	-1495	+0	-3		
LKC	3444	-1508	3446	-1510	3444	-1506	-2	-4	3444	-1510	+2	+0	3449	-1510	+2	+0	3442	-1507	-1	-3		
STARK	3619	-1683	3622	-1686	3622	-1684	+1	-2									3618	-1683	+0	-3		
BKC	3668	-1732	3670	-1734	3667	-1729	-3	-5	3651	-1717	-15	-17					3662	-1727	-5	-7		
VIOLA	3709	-1773	3711	-1775	3722	-1784	+11	+9	3707	-1773	+0	-2										
SIMPSON SHALE	3746	-1810	3748	-1812	3761	-1823	+13	+11	3752	-1818	+8	+6										
SIMPSON SAND																						
ARBUCKLE	3793	-1857	3797	-1861	3808	-1870	+13	+9	3805	-1871	+14	+10					3820	-1885	+28	+24		
TOTAL DEPTH	3868	-1932	3900	-1964	3866	-1928	-4	-36	3815	-1881	-51	-83					3900	-1965	+33	+1		

**DST #1 LKC C - F 3458' - 3523'**

	<b>DRILL STEM TEST REPORT</b>	
	Bird Dog Oil, LLC 1801 Broadway, STE 200 Denver, CO 80202 ATTN: Jeff Lawler	<b>14/22/14</b> <b>W. Gates-Kaiser 2-14</b> Job Ticket: 68512 <b>DST#: 1</b> Test Start: 2022.05.23 @ 17:13:00
<b>GENERAL INFORMATION:</b>		
Formation: <b>LKC C-F</b> Deviated: No Whipstock: 1940.00 ft (KB) Time Tool Opened: 19:45:17 Time Test Ended: 00:51:02	Test Type: Conventional Bottom Hole (Initial) Tester: Chris Hagman Unit No: 69	Reference Elevations: 1940.00 ft (KB) 1930.00 ft (CF) KB to GR/CF: 10.00 ft
<b>Interval: 3458.00 ft (KB) To 3523.00 ft (KB) (TVD)</b> Total Depth: 3523.00 ft (KB) (TVD) Hole Diameter: 7.80 inches Hole Condition: Good		



Serial #: 8672 Inside

Press@RunDepth: 79.34 psig @ 3461.00 ft (KB)

Start Date: 2022.05.23

End Date:

2022.05.24

Capacity:

psig

Start Time: 17:13:00

End Time:

00:51:02

Last Calib.:

1899.12.30

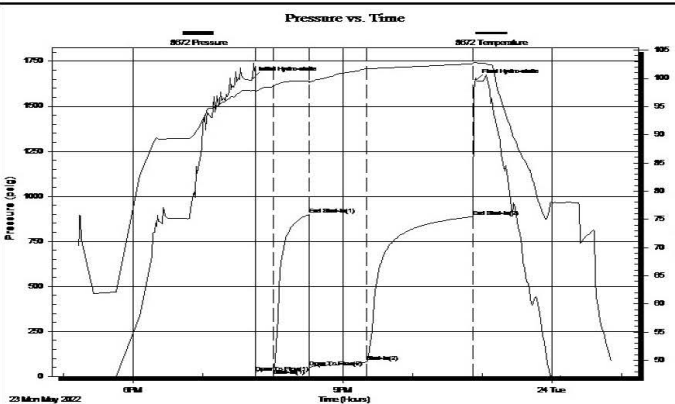
Time On Btm:

2022.05.23 @ 19:42:47

Time Off Btm:

2022.05.23 @ 22:54:32

TEST COMMENT: IF: 15 min., fair building blow, 5 inches  
ISl: 30 min., no blow back  
FF: 45 min., BOB 38 min., strong building blow, 12 inches  
FSl: 90 min., no blow back



PRESSURE SUMMARY

Table with 4 columns: Time (Min.), Pressure (psig), Temp (deg F), Annotation. Includes data points for initial hydro-static, open to flow, shut-in, and final hydro-static.

Recovery

Table with 3 columns: Length (ft), Description, Volume (bbl). Lists recovery data for gassy oily watery mud and 100%G.

Gas Rates

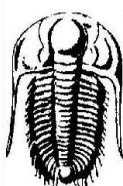
Table with 3 columns: Choke (inches), Pressure (psig), Gas Rate (Mcf/d).

Trilobite Testing, Inc

Ref. No: 68512

Printed: 2022.05.24 @ 01:14:08

DST #2 LKC H - I 3560' - 3600'



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Bird Dog Oil, LLC
1801 Broadway, STE 200
Denver, CO 80202
ATTN: Jeff Lawler

14/22/14
W. Gates-Kaiser 2-14
Job Ticket: 68513 DST#: 2
Test Start: 2022.05.24 @ 11:20:00

GENERAL INFORMATION:

Formation: LKC H-I
Deviated: No Whipstock: 1940.00 ft (KB)
Time Tool Opened: 13:29:17
Time Test Ended: 18:24:02
Interval: 3560.00 ft (KB) To 3600.00 ft (KB) (TVD)
Total Depth: 3600.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good
Reference Elevations: 1940.00 ft (KB) 1930.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8672

Inside

Press@RunDepth: 28.97 psig @ 3564.00 ft (KB)

2022.05.24

Capacity:

psig

Start Date: 2022.05.24

End Date:

18:24:02

Last Calib.:

1899.12.30

Start Time: 11:20:00

End Time:

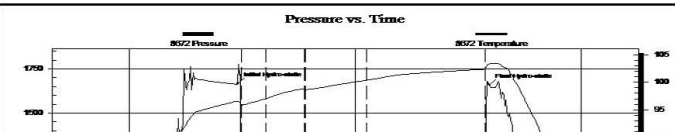
Time On Btm:

2022.05.24 @ 13:26:47

Time Off Btm:

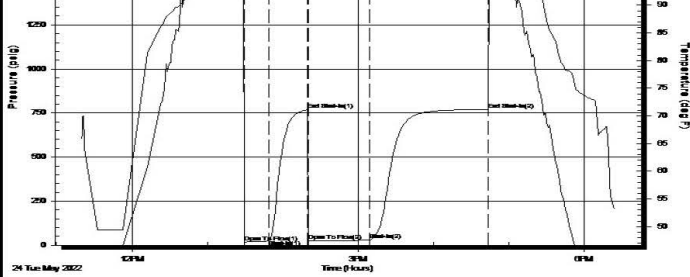
2022.05.24 @ 16:46:47

TEST COMMENT: IF: 15 min., weak surface blow, .5 inches
ISl: 30 min., no blow back
FF: 45 min., weak surface blow, .8 inches
FSl: 90 min., no blow back



PRESSURE SUMMARY

Table with 4 columns: Time (Min.), Pressure (psig), Temp (deg F), Annotation. Includes data points for initial hydro-static and open to flow.



23	29.28	97.01	Shut-In(1)
54	768.56	98.85	End Shut-In(1)
55	23.50	98.68	Open To Flow (2)
103	28.97	100.37	Shut-In(2)
197	770.97	102.40	End Shut-In(2)
200	1660.17	103.27	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (tbb)
10.00	100%m	0.05

**Gas Rates**

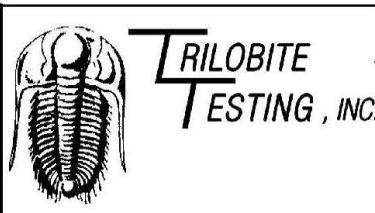
Choke (inches)	Pressure (psig)	Gas Rate (Mcft/d)

TriLOBite Testing, Inc

Ref. No: 68513

Printed: 2022.05.24 @ 18:57:32

**DST #3 LKC J 3596' - 3622'**



**DRILL STEM TEST REPORT**

Bird Dog Oil, LLC  
 1801 Broadway, STE 200  
 Denver, CO 80202  
 ATTN: Jeff Lawler

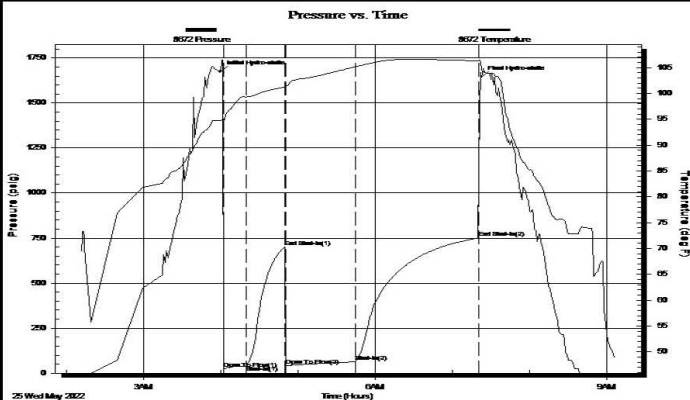
**14/22/14**  
**W. Gates-Kaiser 2-14**  
 Job Ticket: 68514      **DST#: 3**  
 Test Start: 2022.05.25 @ 02:12:00

**GENERAL INFORMATION:**

Formation: **LKC J**  
 Deviated: No Whipstock: 1940.00 ft (KB)  
 Time Tool Opened: 04:02:32  
 Time Test Ended: 09:06:02  
 Interval: **3596.00 ft (KB) To 3622.00 ft (KB) (TVD)**  
 Total Depth: 3622.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Chris Hagman  
 Unit No: 69  
 Reference Elevations: 1940.00 ft (KB)  
 1930.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8672 Inside**  
 Press@RunDepth: 65.00 psig @ 3598.00 ft (KB)  
 Start Date: 2022.05.25      End Date: 2022.05.25  
 Start Time: 02:12:00      End Time: 09:06:02  
 Capacity:      psig  
 Last Calib.: 1899.12.30  
 Time On Btm: 2022.05.25 @ 03:59:47  
 Time Off Btm: 2022.05.25 @ 07:22:47

**TEST COMMENT:** IF: 15 min., fair building blow, 4.5 inches  
 IS: 30 min., no blow back  
 FF: 45 min., fair building blow, 8.25 inches  
 FS: 90 min., no blow back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1673.86	94.79	Initial Hydro-static
3	22.94	94.66	Open To Flow (1)
20	43.05	99.28	Shut-In(1)
51	702.90	101.19	End Shut-In(1)
51	40.77	101.28	Open To Flow (2)
105	65.00	105.12	Shut-In(2)
201	751.13	106.30	End Shut-In(2)
203	1644.10	104.52	Final Hydro-static

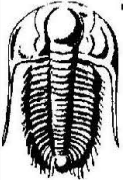
**Recovery**

Length (ft)	Description	Volume (tbb)
100.00	oily mudd w water 2%O, 13%M, 85%W	1.13

**Gas Rates**

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


**DST #4 LKC K 3620' - 3650'**

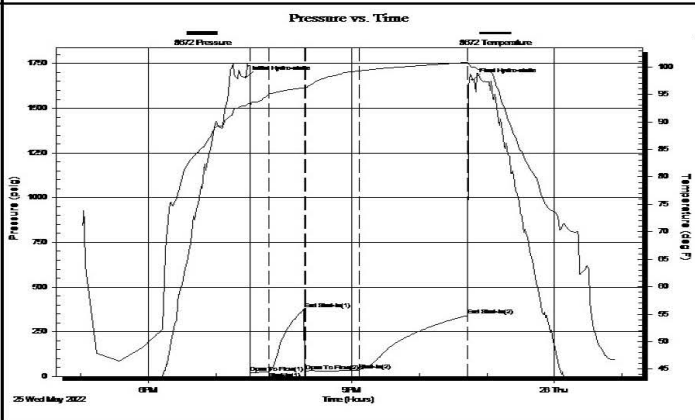
 <p><b>TRILOBITE TESTING, INC.</b></p>	<b>DRILL STEM TEST REPORT</b>	
	Bird Dog Oil, LLC 1801 Broadway, STE 200 Denver, CO 80202 ATTN: Jeff Lawler	14/22/14 <b>W. Gates-Kaiser 2-14</b> Job Ticket: 68515 <b>DST#: 4</b> Test Start: 2022.05.25 @ 17:02:00

**GENERAL INFORMATION:**

Formation: <b>LKC K</b>	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: 1940.00 ft (KB)	Tester: Chris Hagman
Time Tool Opened: 19:30:17	Unit No: 69
Time Test Ended: 00:54:02	
<b>Interval: 3620.00 ft (KB) To 3650.00 ft (KB) (TVD)</b>	Reference Elevations: 1940.00 ft (KB)
Total Depth: 3650.00 ft (KB) (TVD)	1930.00 ft (CF)
Hole Diameter: 7.80 inches Hole Condition: Good	KB to GR/CF: 10.00 ft

<b>Serial #: 8672</b> <b>Inside</b>	Capacity: _____ psig
Press@RunDepth: 35.17 psig @ 3622.00 ft (KB)	Last Calib.: 1899.12.30
Start Date: 2022.05.25      End Date: 2022.05.26	Time On Btm: 2022.05.25 @ 19:26:47
Start Time: 17:02:00      End Time: 00:54:02	Time Off Btm: 2022.05.25 @ 22:47:47

**TEST COMMENT:** IF: 15 min., weak building blow, 1.5 inches  
 IS: 30 min, no blow back  
 FF: 45 min., weak building blow, 1.2 inches  
 FS: 90 min., no blow back



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1672.57	93.00	Initial Hydro-static
4	19.40	92.92	Open To Flow (1)
21	25.63	95.04	Shut-In(1)
52	376.34	96.19	End Shut-In(1)
53	28.51	96.19	Open To Flow (2)
100	35.17	99.28	Shut-In(2)
197	340.05	100.83	End Shut-In(2)
201	1659.40	99.98	Final Hydro-static

Length (ft)	Description	Volume (bbl)
10.00	oil spotted mud 1%O, 99%M	0.05

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

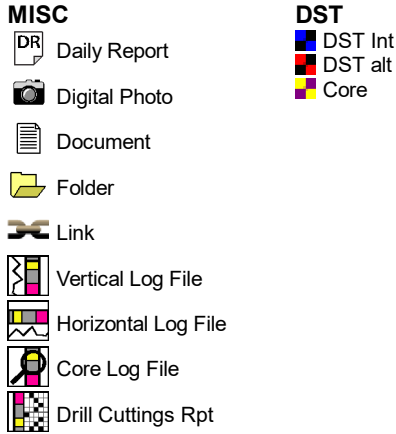
**ROCK TYPES**



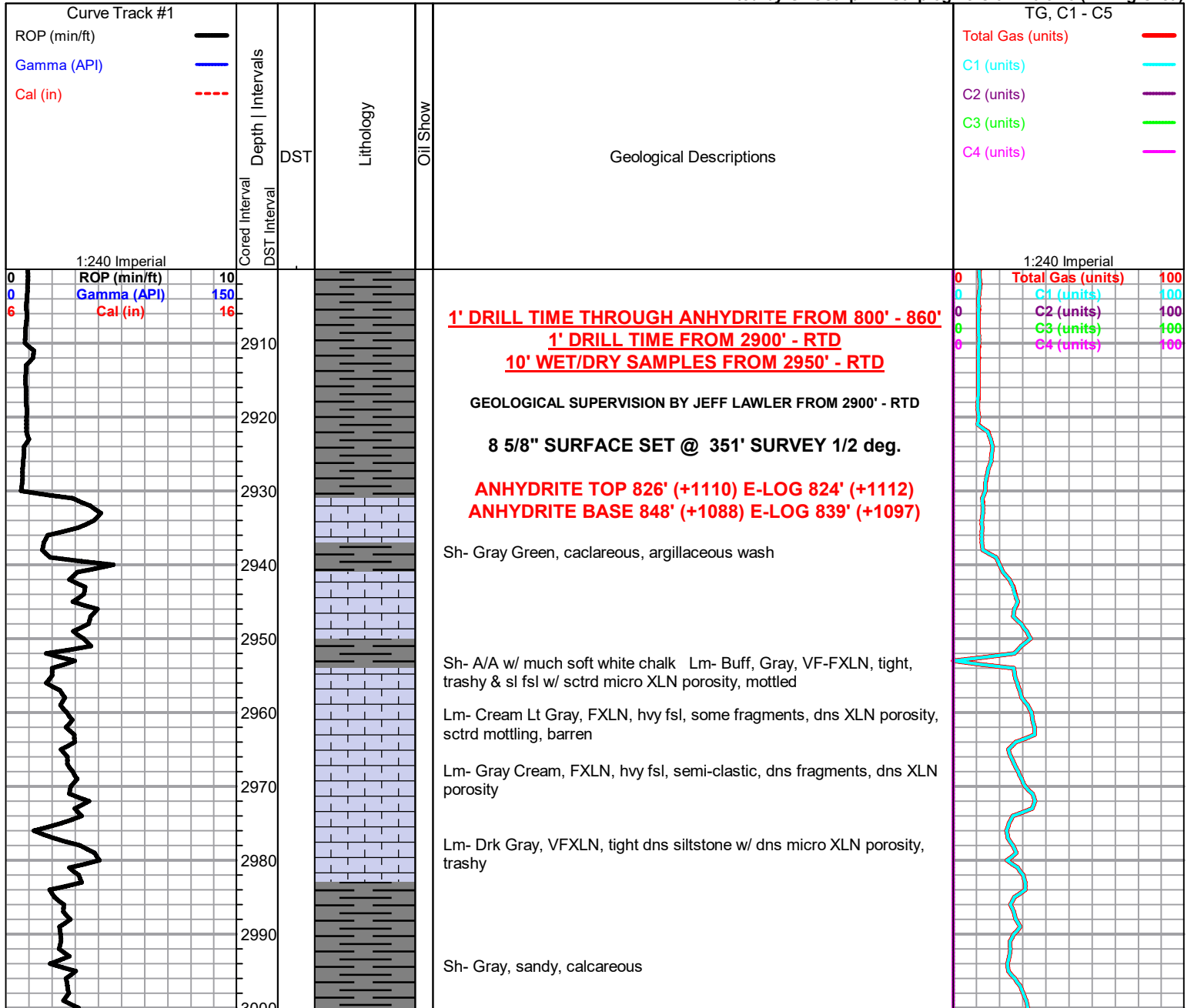
**ACCESSORIES**



**OTHER SYMBOLS**



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



**1' DRILL TIME THROUGH ANHYDRITE FROM 800' - 860'**  
**1' DRILL TIME FROM 2900' - RTD**  
**10' WET/DRY SAMPLES FROM 2950' - RTD**

GEOLOGICAL SUPERVISION BY JEFF LAWLER FROM 2900' - RTD

**8 5/8" SURFACE SET @ 351' SURVEY 1/2 deg.**

**ANHYDRITE TOP 826' (+1110) E-LOG 824' (+1112)**  
**ANHYDRITE BASE 848' (+1088) E-LOG 839' (+1097)**

Sh- Gray Green, caclareous, argillaceous wash

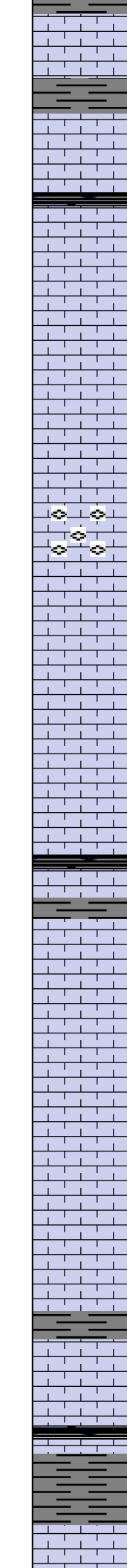
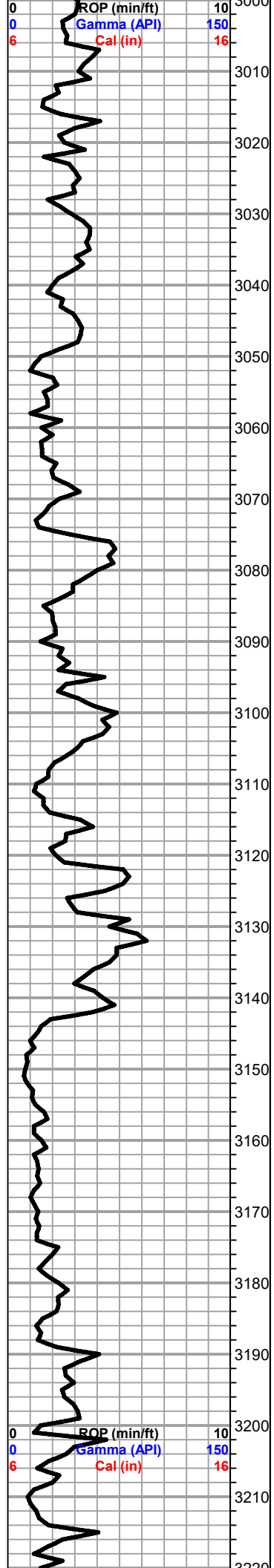
Sh- A/A w/ much soft white chalk Lm- Buff, Gray, VF-FXLN, tight, trashy & sl fsl w/ sctrd micro XLN porosity, mottled

Lm- Cream Lt Gray, FXLN, hvy fsl, some fragments, dns XLN porosity, sctrd mottling, barren

Lm- Gray Cream, FXLN, hvy fsl, semi-clastic, dns fragments, dns XLN porosity

Lm- Drk Gray, VFXLN, tight dns siltstone w/ dns micro XLN porosity, trashy

Sh- Gray, sandy, calcareous



**TOPEKA 3006' (-1070) E-LOG 3003' (-1067)** Lm- Buff Cream,

FXLN, dns, tight w/ microXLN porosity

Lm- Cream, VF-FXLN, dns, tight, sctrd micro XLN porosity, sctrd mottling

Lm- Off White Buff, VF-FXLN, A/A w/ some tight cherty Ls w/ dns XLN porosity, soft white chalk

Lm- Cream Off White, FXLN, fsl w/ fusulinids, dns XLN & secondary reXLN veins, barren, some soft white chalk

Lm- Creamy White, CryptoXLN, sl fsl fresh bedded vitreous chert/cherty Ls & massive dolomitic Ls w/ dns XLN porosity, much chalk

Lm/Chert- Cream Buff, FXLN, massive dolomitic & cherty Ls, fsl, dns XLN & fn ppt porosity, several pcs of gray fsl fresh bedded chert

Lm- Cream, FXLN, clastic fusulinids, fragments, tight, barren

Lm- Cream, FXLN, hvy fsl, dns XLN porosity, some chalky in part

Lm- Cream Buff, VF-FXLN, dns & tight w/ sctrd micro XLN porosity

Lm- Cream, FXLN, hvy fsl w/ hvy fragments, massive, high-energy, dns XLN & secondary reXLN porosity, barren

Sh- Black Gray Maroon, fissile & carbonaceous, calcareous, earthy

Lm- Buff, VFXLN, sl cherty Ls w/o vis. porosity

Lm- Cream, FXLN, sl fsl dolomitic Ls w/ dns XLN & vry fn ppt porosity throughout, sl chalky in part, barren

Lm- A/A Chert- Lt Gray, vitreous cryptoXLN sl fsl fresh bedded

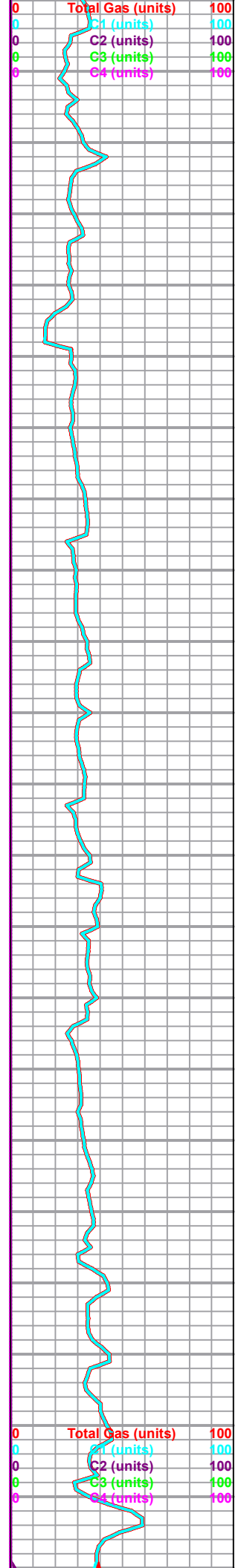
Lm- Cream Off White, A/A

Sh- Lt Gray, calcareous, argillaceous

Lm- Lt Gray, VFXLN, hvy fsl cherty Ls w/ sctrd micro XLN porosity, abundant white chalk

Sh- Black Gray Maroon, fissile & carbonaceous, earthy, calcareous & argillaceous

Sh- White Gray, abundant soft white chalk, calcareous



3220  
3230  
3240  
3250  
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3300  
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3430  
3440

Lm- Cream Tan, MedXLN, massive, fsl & oolitic mix of loosely cemented & chalky in part, dns XLN & secondary reXLN porosity & sl cherty Ls, VFXLN, dns w/ poor vis. porosity, abundant white chalk

Lm- Buff, FXLN, hvy fsl, some sl cherty Ls w/ sctrd micro XLN & XLN porosity

Lm- Cream, VF-FXLN, dns, loostly to well cemented cherty Ls, all w/ poor vis por, some chalky in part

Lm- Buff Tan, VFXLN, tight cherty Ls w/o vis. por

Lm- Cream, Fn Grn, sl fsl, sctrd XLN porosity, chalky in part

**HEEBNER 3304' (-1368) E-LOG 3301' (-1365)** Sh- Black Gray Maroon, fissile & carbonaceous, calcareous, argillaceous, earthy

Sh- Gray, abundant argillaceous, sandy, waxy

**TORONTO 3325' (-1389) E-LOG 3325' (-1389)** Lm- Off White, FXLN, grainy, hvy oolitic, dns micro XLN & XLN porosity, some soft white chalk

Lm- Cream, FXLN, sl fsl, dns XLN por, barren, much white chalk

**DOUGLAS SHALE 3341' (-1405) E-LOG 3340' (-1404)** Sh- Maroon Green Gray, earthy, semi-calcareous

Sh- Gray Brown Maroon, calareous, argillaceous, waxy

Sh- Gray, sl sandy, argillaceous, waxy

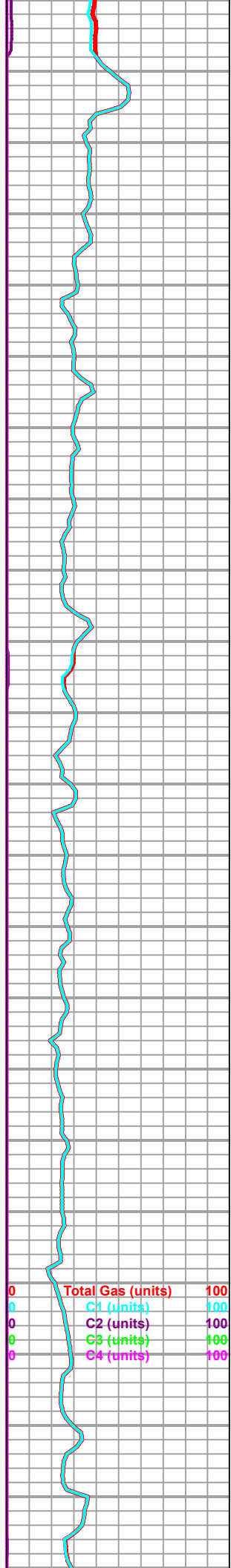
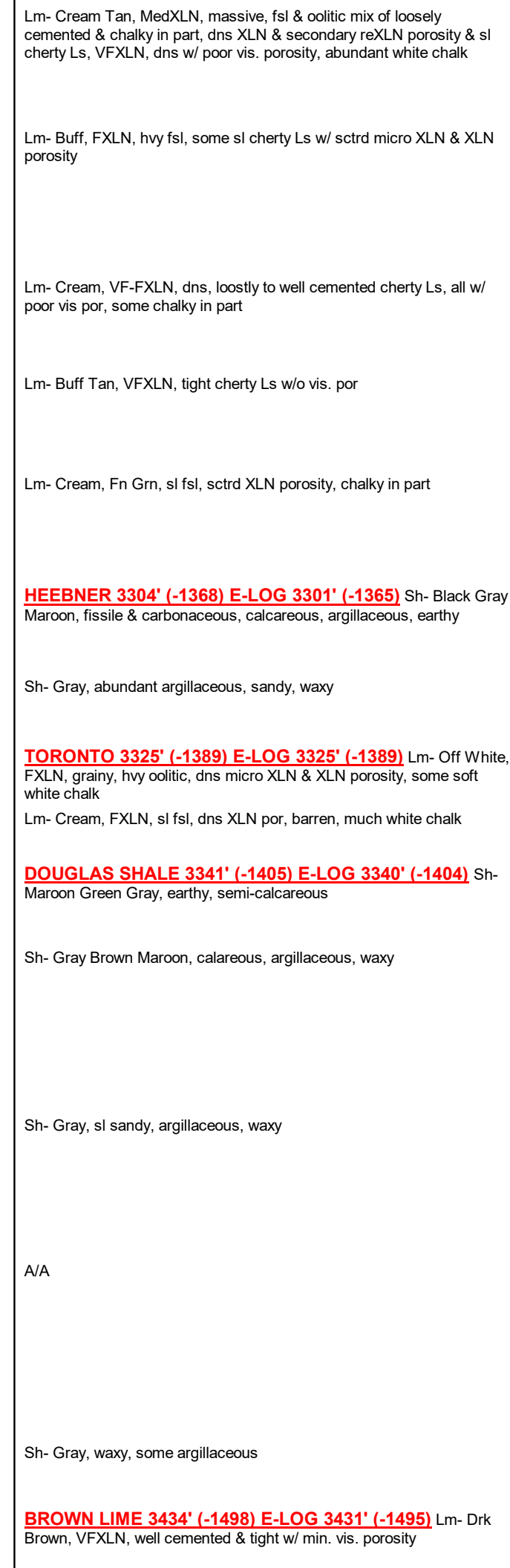
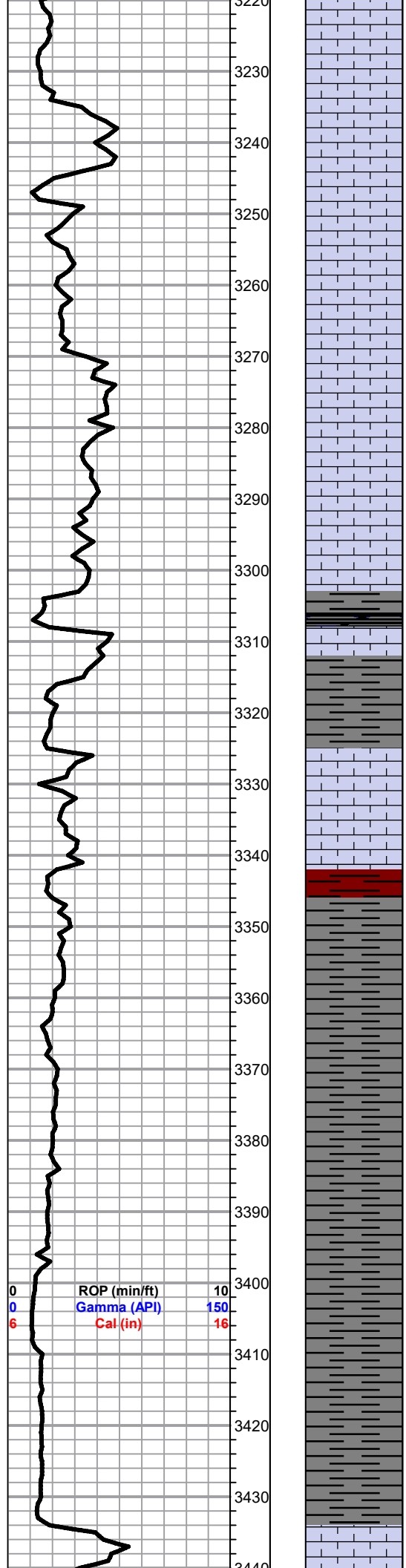
A/A

Sh- Gray, waxy, some argillaceous

**BROWN LIME 3434' (-1498) E-LOG 3431' (-1495)** Lm- Drk Brown, VFXLN, well cemented & tight w/ min. vis. porosity

0	ROP (min/ft)	10
0	Gamma (API)	150
6	Cal (in)	16

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



**LKC 3446' (-1510) E-LOG 3444' (-1508)** Lm- Off White Cream, VF-FXLN, fsl & sl oolitic, sctrd-dns XLN porosity, some chalky in part, vry clean & barren

Lm- Gray Buff, FXLN, semi-brittle cherty Ls w/ dns XLN porosity

Lm- Off White, VF-FXLN, sl fsl & oolitic w/ dns XLN & sctrd secondary reXLN porosity, barren, several pcs of VFXLN, sl fsl w/ sctrd ppt porosity, LT STN, TR FO UPON CRUSH, WK ODR, BRT YLW FLOR.

Lm- Cram Tan, FXLN, dns, sl chalky in part, sl fsl, sctrd XLN porosity, barren

Lm- Tan Brown, FXLN, sl fsl, trashy high-energy, dns XLN porosity, barren

Lm- Cream Off White, FXLN, fsl & sl oolitic, dns, sctrd micro XLN & XLN porosity, mostly tight, some soft white chalk, barren

Lm- Cream Buff, FXLN, sl fsl, mostly tight w/ sctrd-dns XLN & sctrd fn ppt porosity, barren

Lm- Tan Buff, VF-FXLN, dns, tight w/ sctrd XLN por, barren, some soft white chalk

Lm- Brown, FXLN, sl fsl, dns XLN por, barren

Sh- Gray, sl calcareous, semi-waxy

Lm- Cream, FXLN, oolitic/oolimoldic, sctrd vuggy porosity, barren

Lm- Cream, VF-FXLN, tight sl cherty Ls w/ sctrd XLN porosity, vry clean & barren, some chalk

Lm- Off White, FXLN, oolitic, sctrd fn-vry fn ppt interoolite & secondary reXLN porosity, SCTRD BLK DO STN, NSFO, TR ODR

Lm- Cream Off White, FXLN, densely packed small oolites, sctrd-dns XLN porosity, barren, some chalk

Lm- Cream Off White, VF-FXLN, mix of dns siltstone w/ sctrd vry fn ppt porosity, fsl & sl oolitic w/ dns XLN & fn ppt porosity, ALL W/ DRK STN, SHW FO, GD ODR, FREE OIL IN WET CUP

Lm- Off White Cream, F-MedXLN, well dev. oolitic w/ dns XLN & sctrd ppt interoolite por, SCTRD DRK STN, GD SHW FO, FR ODR

Lm- Off White, VF-FXLN, sl fsl, sctrd XLN por, much soft white chalk, vry clean & barren

Lm- Tan, VFXLN, dns cherty Ls w/o vis. por, barren

Sh- Black Gray, waxy, calcareous

Lm- Cream Off White, mix of siltstone w/ sctrd XLN & vr fn ppt, sctrd XLN por, DRK STN, SHW FO, GD ODR, FREE OIL IN WET CUP

3482.jpg

SHORT TRIP SURVEY 1 deg STRAP -1.19

DST #1 LKC C - F 3458' - 3523' 15-30-45-90

60' GIP 130' GOWM (5%G, 5%O, 30%W, 60%M)

IFP: 22-41# FFP: 52-79# SIP: 899-887# BHT: 103 deg.

SURVEY 1 3/4

DST #2 LKC H - I 3560' - 3600' 15-30-45-90

10' MUD

IFP: 17-29# FFP: 24-29# SIP: 769-771# BHT: 102 deg

3592.jpg

Total Gas (units) 100  
C1 (units) 100  
C2 (units) 100  
C3 (units) 100  
N2 (units) 100

3608.jpg

DST #3 LKC J 3596' - 3622' 15-30-45-90

100' OMW (2%O, 85%W, 13%M)

IFP: 23-43# FFP: 41-65# SIP: 703-751# CHLOR: 45K BHT: 106

SURVEY 2 1/4

DST #4 LKC K 3620' - 3650' 15-30-45-90

10' OSPM (1%O, 99%M)

CFS @ 3500'

CFS @ 3523'

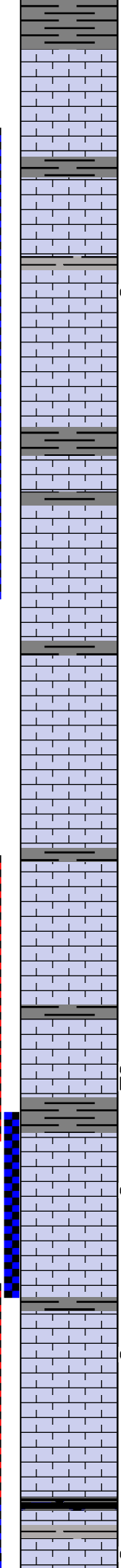
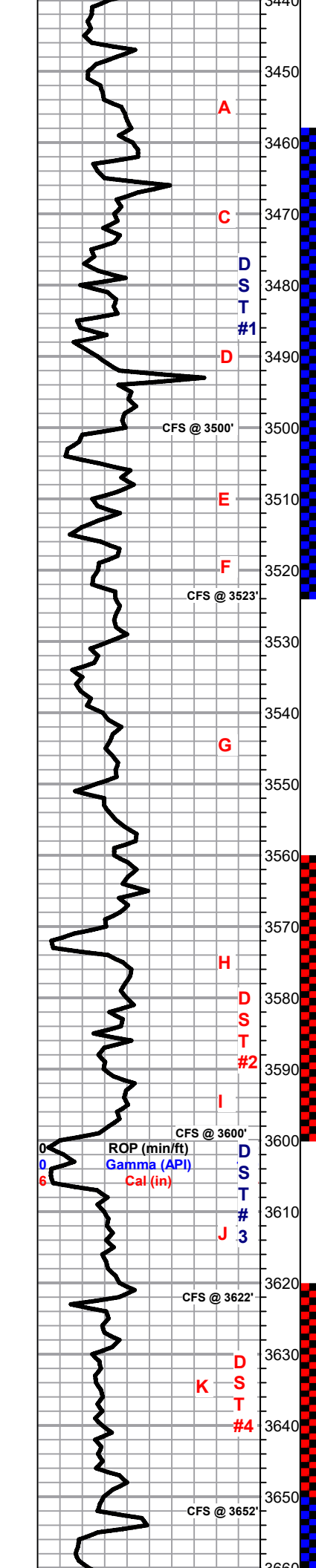
CFS @ 3600'

CFS @ 3622'

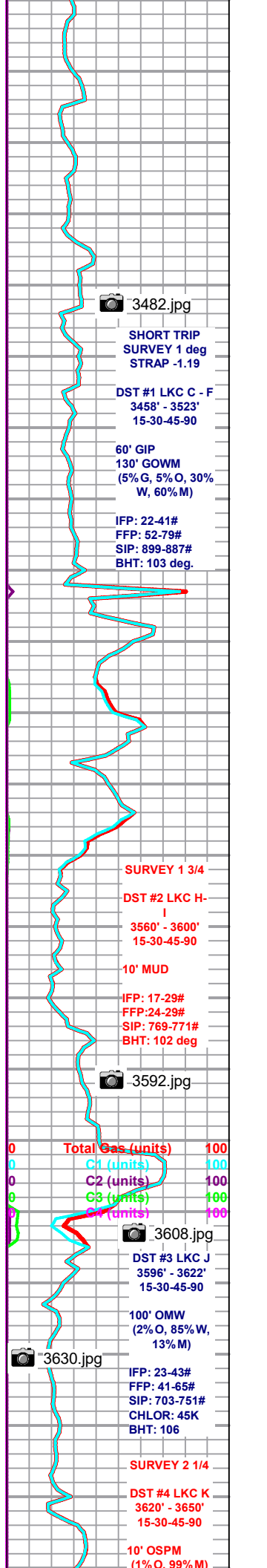
CFS @ 3652'

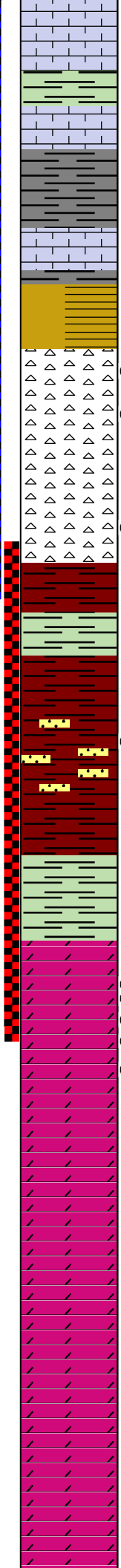
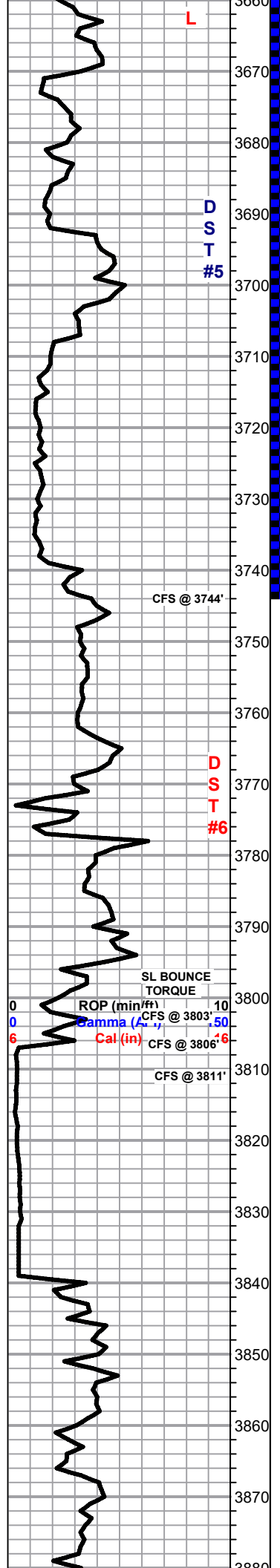
ROP (min/ft)  
Gamma (API)  
Cal (in)

A  
C  
D  
DST #1  
D  
E  
F  
G  
H  
DST #2  
I  
DST #3  
J  
K  
DST #4



Well log descriptions and data points for LKC 3446' (-1510) E-LOG 3444' (-1508).





**BKC 3670' (-1734) E-LOG 3668' (-1732)** Sh- Gray Green, calcareous, sandy

Sh- Gray Green, waxy

Lm- Tan Cream, VFXLN, mix of tight cherty Ls & oolitic cherty Ls, all w/ min. vis. por.

Sh- Gray Green Maroon Purple, calcareous & sandy, semi-waxy

**VIOLA 3711' (1775) E-LOG 3709' (-1773)** Chert- Opaque, Semi-Translucent, Salmon, CryptoXLN, VFXLN, mix of mostly fresh bedded vitreous crypto & sl dolomitic chert w/ sctrd microXLN, SCTRD LT STN, NSFO, NO ODR

Chert- Bone White, A/A w/ dns XLN por, SCTRD-SAT DRK STN, SHW FO, FR ODR

Chert- Bone White, Crypto, fresh bedded vitreous chert, barren

Chert- A/A w/ influx of consistent XLN por. throughout w/ SUB-SAT/SAT STN, SHW FO, FR ODR

Sh- Maroon Brown Green, earthy, some argillaceous, waxy

**SIMPSON SHALE 3748' (-1812) E-LOG 3746' (-1810)**

Sh- Green Maroon, waxy, earthy Ss- Med Grn, frosted/clear, sub-angular, consolidated & mod. sorted, friable, SAT BLK DO STN, NSFO, NO ODR, WK YLW FLOR.

Sh- Maroon Gray, waxy & dns, sl calcareous

Sh- Mint Green Mustard Yellow, dns & waxy

Sh- Mint Green, A/A, few w/ micro pyrite inclusions

**ARBUCKLE 3797' (-1861) E-LOG 3793' (-1857)** Dol- Cream Lt Pink Off White, VF-MedXLN, mix of VFXLN w/ consistent microXLN throughout, barren, F-MXLN, w/ consistent XLN & fn ppt porosity, SCTRD-SUB SAT STN, SHW FO, oomoldic w/ XLN & vuggy por, SUB-SAT DRK STN, SHW FO, MedXLN, sucrosic, consistent ppt porosity, SCTRD TO EVEN STN, SHW FO, few pcs of Med Grn, sandy dolomite, friable, sub-rounded, SAT DRK STN, SHW FO, ALL W/ FR SULPHURIC ODR

**40"**- A/A w/ influx of FXLN, sucrosic, consistent XLN & fn ppt por, SAT DRK STN, BLEEDING FO, GD SULPHURIC ODR

**3806'**- Dol- Cream, MedXLN, well dev. w/ consistent XLN & fn ppt, HVY DRK STN, FR SHW FO UPON CRUSH, STRONG PUNGENT SULPHURIC ODR

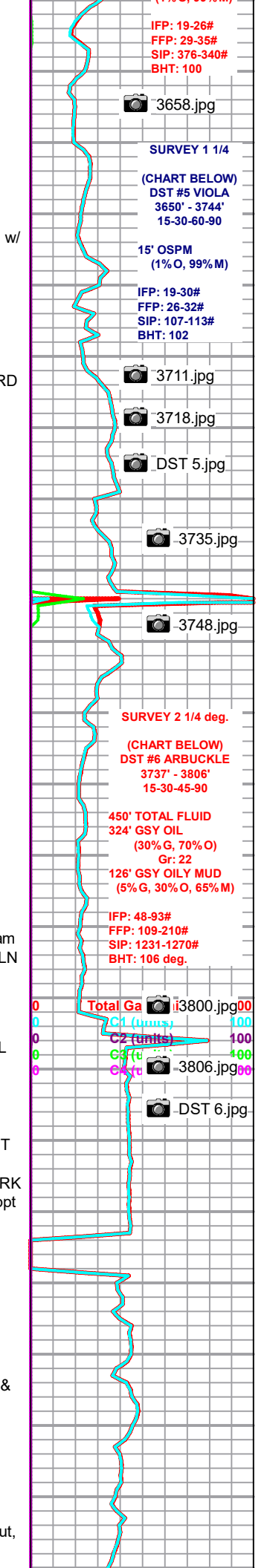
**3811'**- Clear Med Grn sandy dolomite, friable, mature & rounded, DRK FO UPON CRUSH, WK-FR ODR, MedXLN sucrosic w/ consistent ppt interXLN por, SCTRD DRK STN, SL SHW FO, ODR A/A

Dol- Cream Off White, VF-Med XLN, mix of VFXLN, consistent microXLN, sucrosic w/ consistent ppt & Med XLN, massive, w/ consistent ppt por., all clean & barren

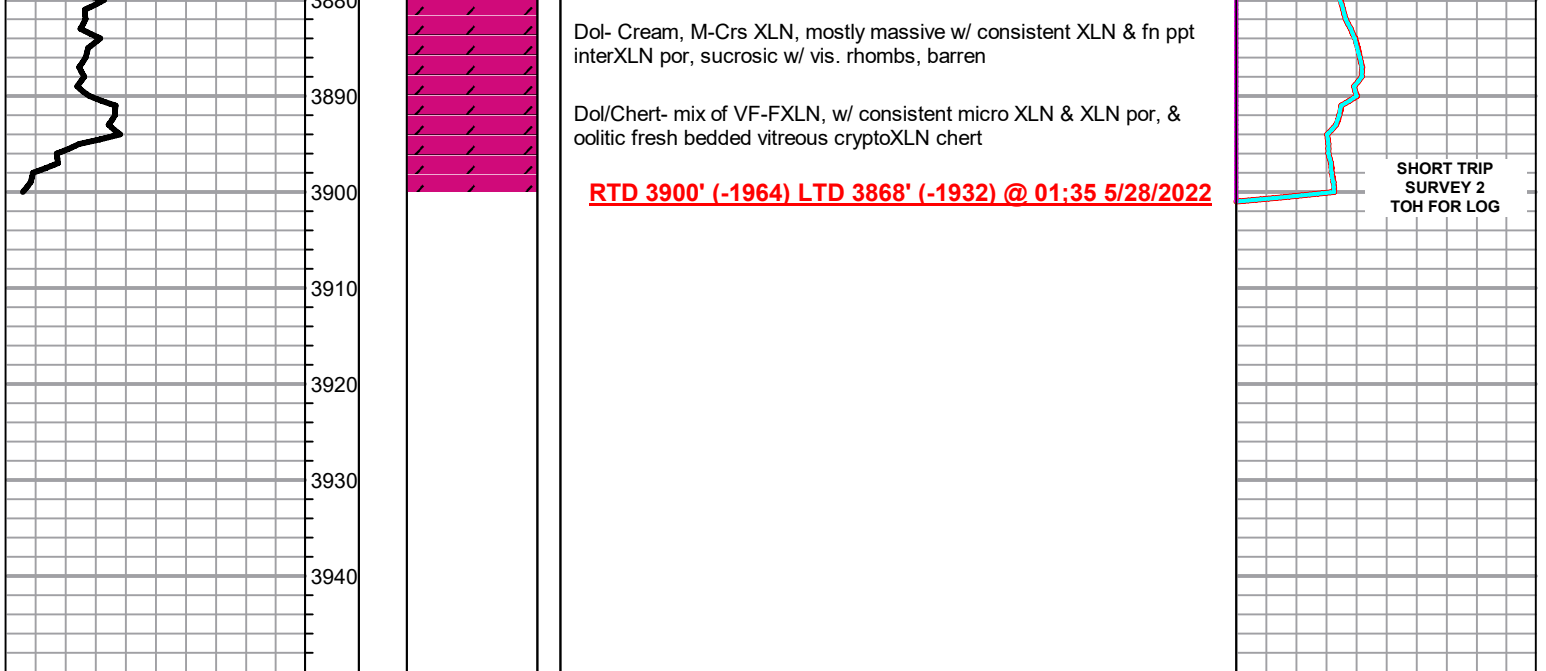
Lm- Cream Off White, F-M XLN, mostly massive w/ consistent XLN & fn ppt por, some w/ consistent XLN por, few w/ rounded med grn qtz inclusions, barren

Dol- Cream, M-Crs XLN, sucrosic, visible rhombs, massive w/ consistent ppt interXLN por, barren

Dol- Off White, MedXLN, consistent micro XLN & XLN por throughout, barren

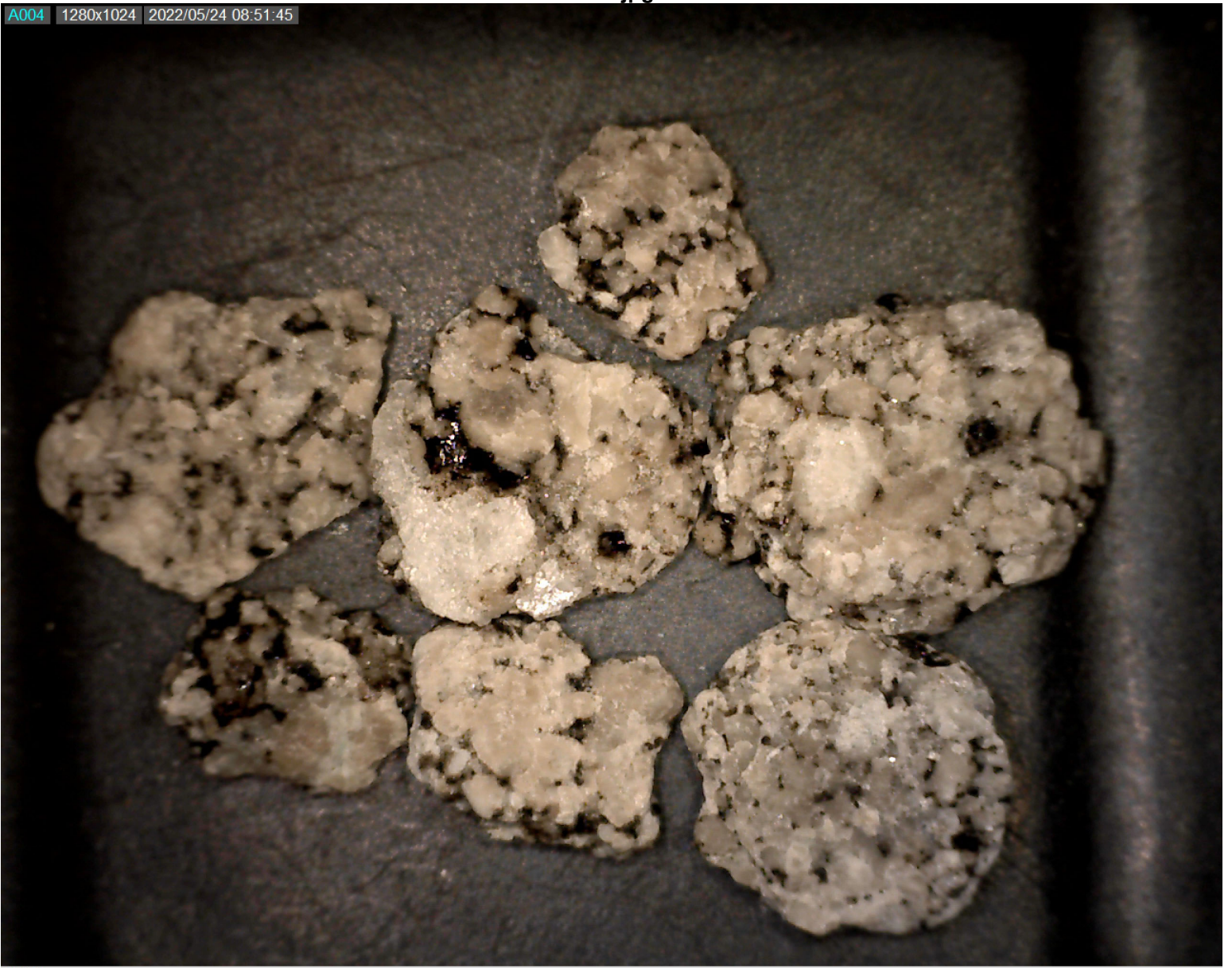




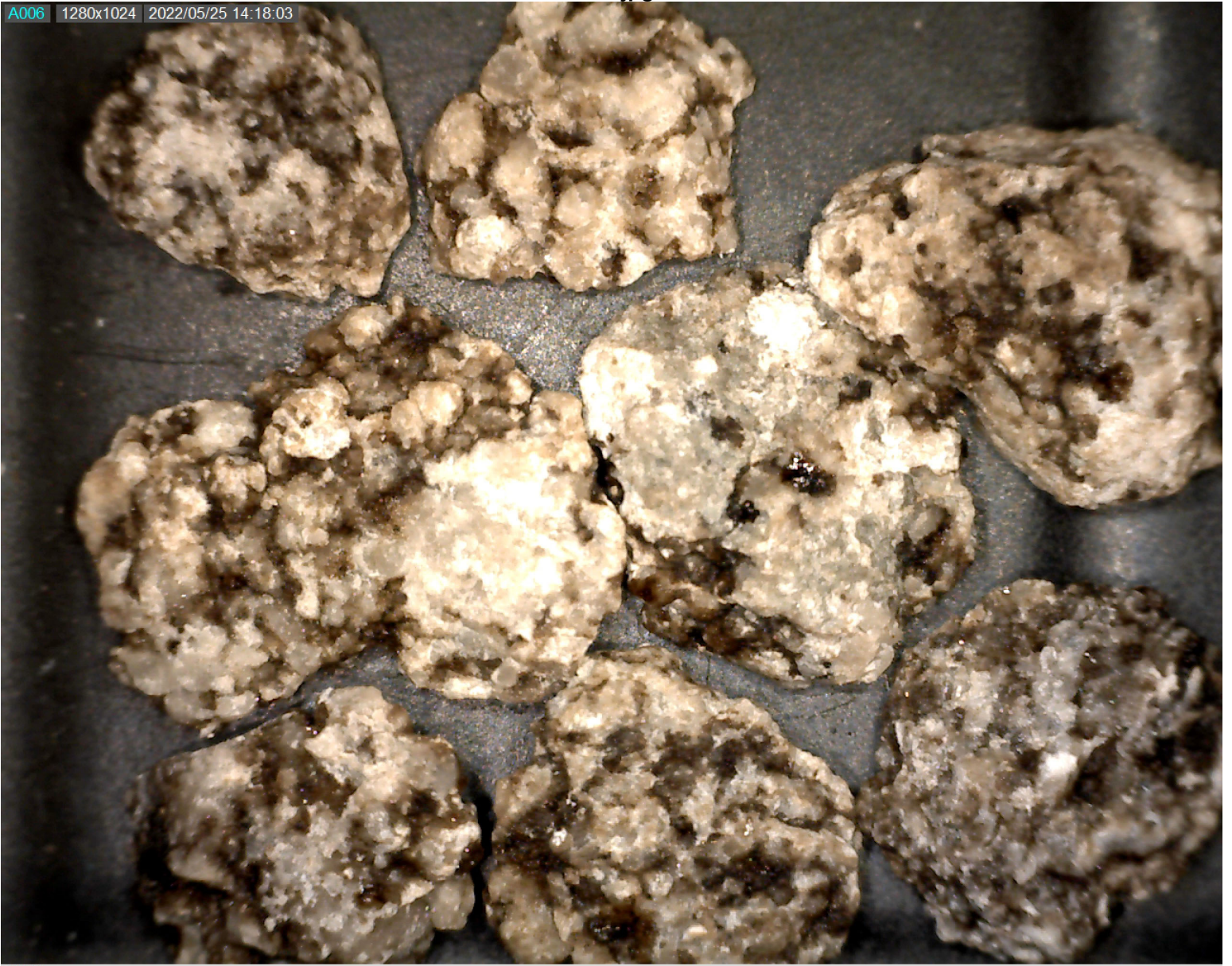


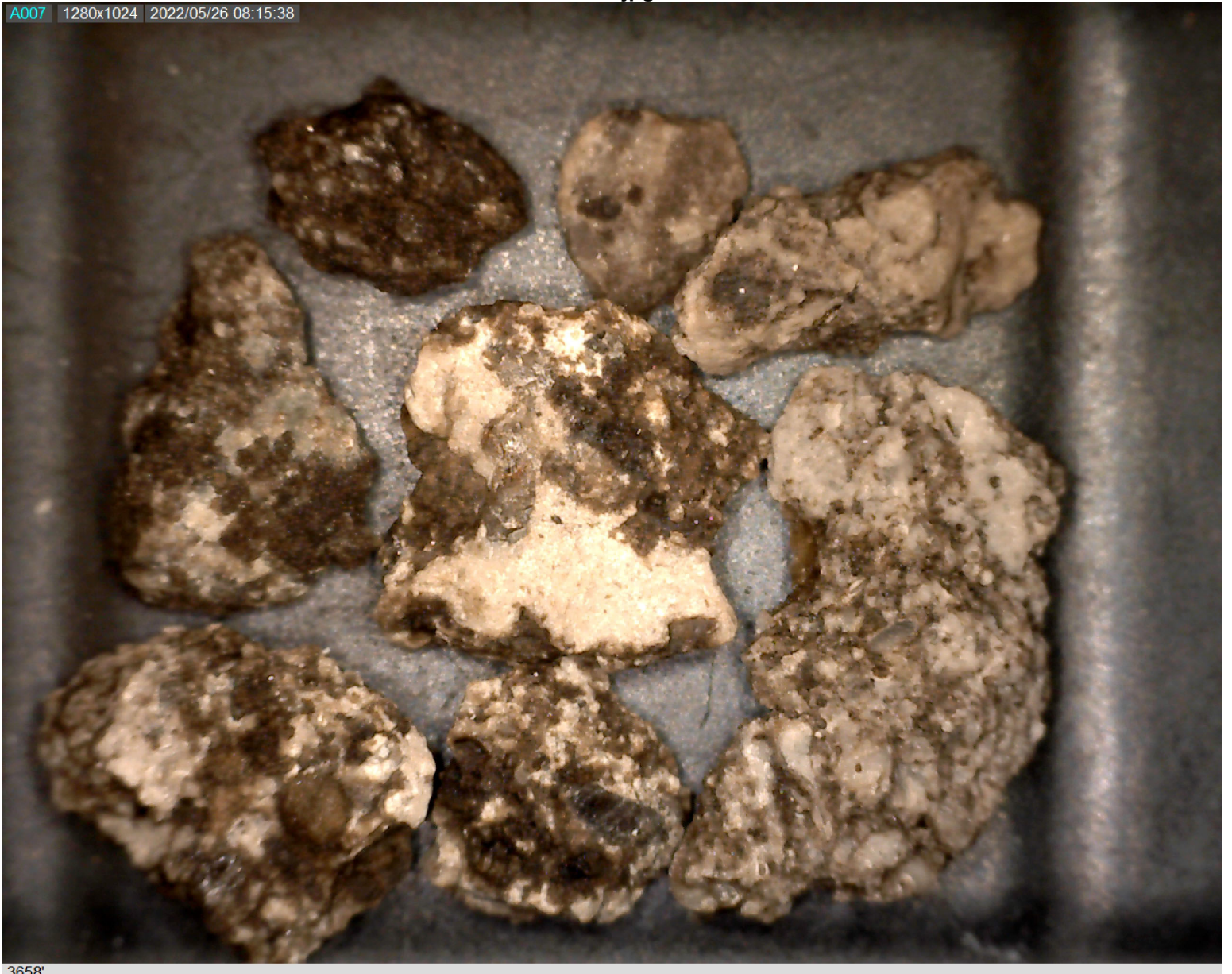
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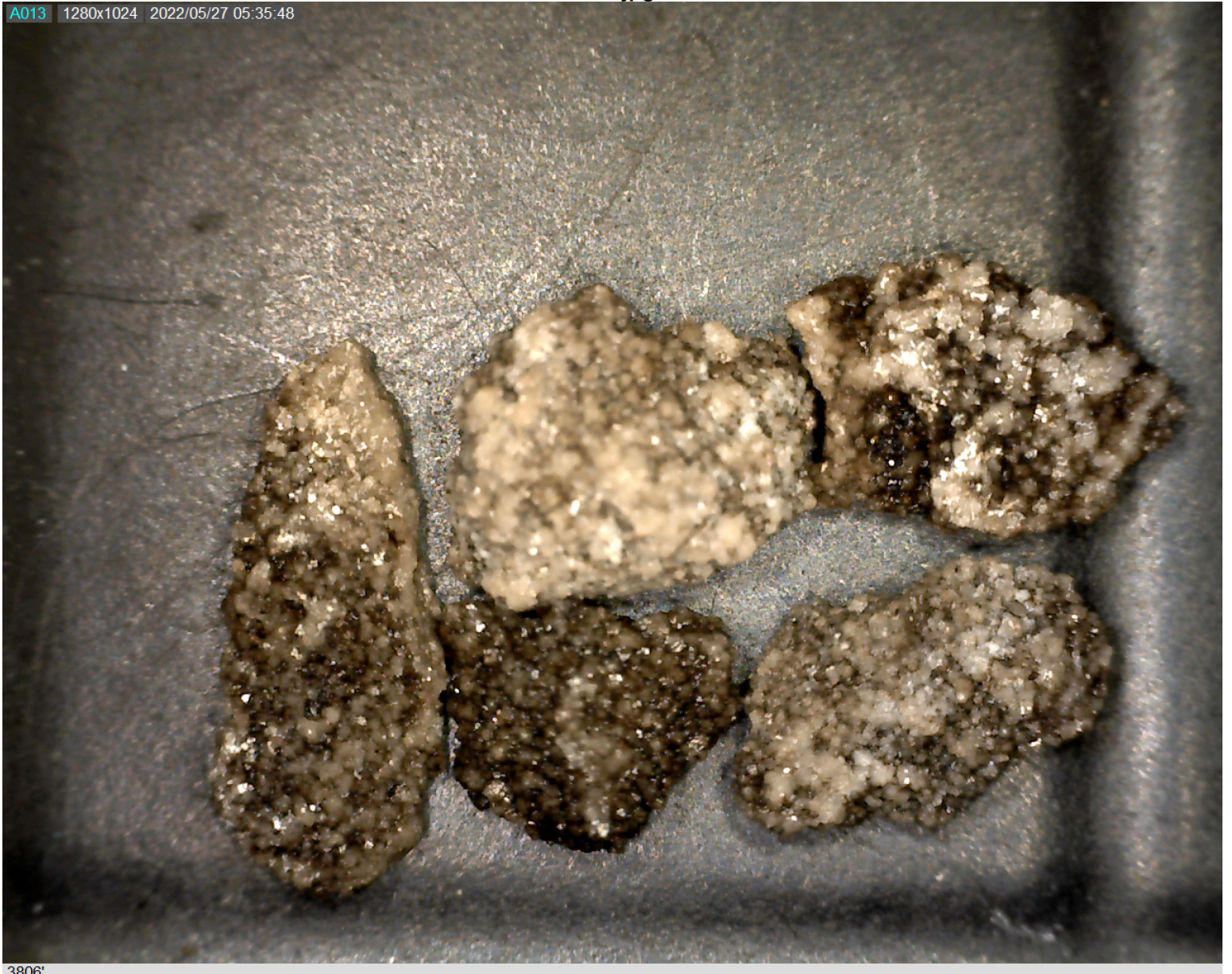



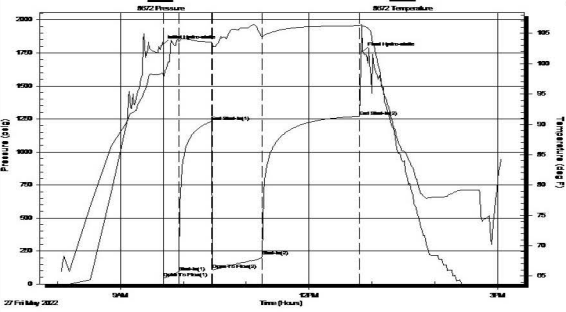










 <b>TRILOBITE TESTING, INC.</b>	<b>DRILL STEM TEST REPORT</b>				
Bird Dog Oil, LLC 1801 Broadway, STE200 Denver, CO 80202 ATTN: Jeff Lawler	<b>14/22/14</b>  <b>W. Gates-Kaiser 2-14</b> Job Ticket: 68517 <b>DST#: 6</b> Test Start: 2022.05.27 @ 08:04:00				
<b>GENERAL INFORMATION:</b> Formation: <b>Arbuckle</b> Deviated: No      Whipstock: 1940.00 ft (KB)      Test Type: Conventional Bottom Hole (Initial) Time Tool Opened: 09:41:02      Tester: Chris Hagman Time Test Ended: 15:04:02      Unit No: 69 <b>Interval: 3737.00 ft (KB) To 3806.00 ft (KB) (TVD)</b> Reference Elevations: 1940.00 ft (KB) Total Depth: 3806.00 ft (KB) (TVD)      1930.00 ft (CF) Hole Diameter: 7.80 inches      Hole Condition: Good      KB to GR/CF: 10.00 ft					
<b>Serial #: 8672      Inside</b> Press@RunDepth: 210.36 psig @ 3740.00 ft (KB)      Capacity:      psig Start Date: 2022.05.27      End Date: 2022.05.27      Last Calib.: 1899.12.30 Start Time: 08:04:00      End Time: 15:04:02      Time On Btm: 2022.05.27 @ 09:40:32 Time Off Btm: 2022.05.27 @ 12:51:02					
<b>TEST COMMENT:</b> IF: 15 min., BOB 14 min., strong building blow, 13 inches IS: 30 min., no blow back FF: 45 min., BOB 15 min., strong building blow, 27 inches FS: 90 min., no blow back					
	<b>PRESSURE SUMMARY</b>				
	Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	
	0	1814.24	98.42	Initial Hydro-static	
	1	48.00	98.05	Open To Flow (1)	
	15	93.11	103.61	Shut-In(1)	
	47	1231.15	103.50	End Shut-In(1)	
	48	109.30	103.13	Open To Flow (2)	
	95	210.36	104.50	Shut-In(2)	
	187	1270.95	106.27	End Shut-In(2)	
	191	1761.63	106.22	Final Hydro-static	
<b>Recovery</b>		<b>Gas Rates</b>			
Length (ft)	Description	Volume (bbl)	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
324.00	gassy oil 30%G, 70%O	4.27			
126.00	gassy oily mud 5%G, 30%O, 65%M	1.77			