

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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

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

| | |
|--|---|
| Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____ | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum |
|--|---|

| CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used | | | | | | | |
|---|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| Report all strings set-conductor, surface, intermediate, production, etc. | | | | | | | |
| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

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

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

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

| | | |
|---|---|------------------------------------|
| DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i> | METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> | PRODUCTION INTERVAL: Top Bottom |
|---|---|------------------------------------|

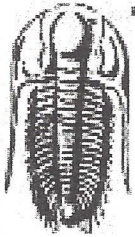
| Shots Per Foot | Perforation Top | Perforation Bottom | Bridge Plug Type | Bridge Plug Set At | Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i> |
|----------------|-----------------|--------------------|------------------|--------------------|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | | |
|----------------|-------|---------|------------|--|
| TUBING RECORD: | Size: | Set At: | Packer At: | |
|----------------|-------|---------|------------|--|

| | |
|-----------|------------------------|
| Form | ACO1 - Well Completion |
| Operator | Bird Dog Oil, LLC |
| Well Name | KELLER-GATES 2-17 |
| Doc ID | 1635353 |

All Electric Logs Run

| |
|-------|
| |
| DI |
| CDNL |
| Micro |
| Sonic |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Bird Dog Oil, LLC

17-22s-13w

1801 Broadway STE #200
Denver CO 80202

Keller Gates #2-17

ATTN: Jeff Lawler

Job Ticket: 67637

DST#: 1

Test Start: 2021.10.16 @ 19:47:00

GENERAL INFORMATION:

Formation: **LKC A - F**

Deviated: No Whipstock: 1907.00 ft (KB)

Time Tool Opened: 22:53:02

Time Test Ended: 03:33:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: **3428.00 ft (KB) To 3496.00 ft (KB) (TVD)**

Reference Elevations: 1907.00 ft (KB)

Total Depth: 3496.00 ft (KB) (TVD)

1899.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 6751

Outside

Press@RunDepth: 69.14 psig @ 3431.00 ft (KB)

Capacity: psig

Start Date: 2021.10.16

End Date:

2021.10.17

Last Calib.: 1899.12.30

Start Time: 19:47:01

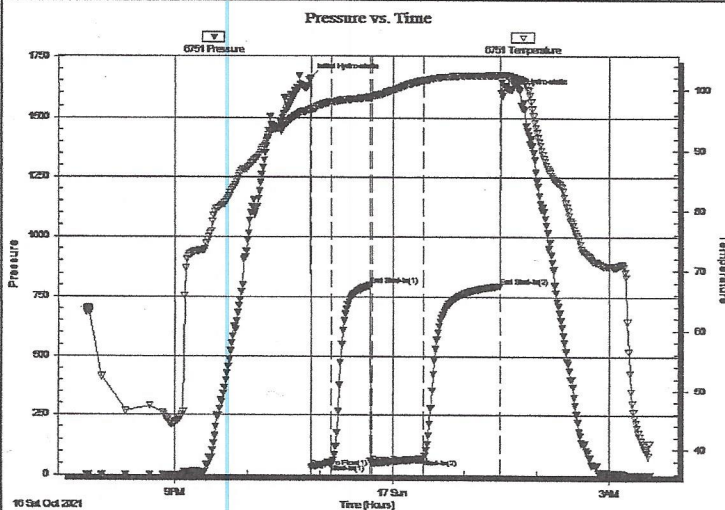
End Time:

03:33:02

Time On Btm: 2021.10.16 @ 22:52:17

Time Off Btm: 2021.10.17 @ 01:30:02

TEST COMMENT: IF: Weak surface blow, .5"
IS: No blow back
FF: Weak surface blow, .5"
FSI: No blow back



PRESSURE SUMMARY

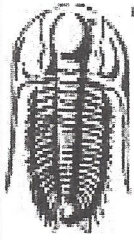
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1661.76 | 96.92 | Initial Hydro-static |
| 1 | 33.54 | 96.84 | Open To Flow (1) |
| 18 | 45.21 | 98.06 | Shut-In(1) |
| 50 | 797.40 | 98.80 | End Shut-In(1) |
| 51 | 48.34 | 98.81 | Open To Flow (2) |
| 94 | 69.14 | 101.58 | Shut-In(2) |
| 157 | 795.45 | 102.48 | End Shut-In(2) |
| 158 | 1599.70 | 102.54 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------------------|--------------|
| 120.00 | oil spotted watery mud 40%W,60%M | 1.06 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|--|----------------|-----------------|-------------------|
| | | | |



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Bird Dog Oil, LLC
 1901 Broadway STE #200
 Denver CO 80202
 ATTN: Jeff Lawler

17-22s-13w
Keller Gates #2-17
 Job Ticket: 67638 **DST#: 2**
 Test Start: 2021.10.16 @ 11:43:00

GENERAL INFORMATION:

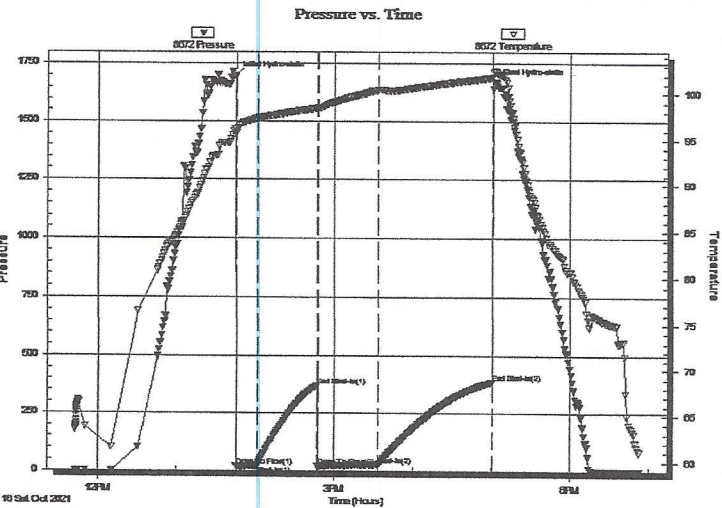
Formation: **LKC H**
 Deviated: No Whipstock: 1907.00 ft (KB)
 Time Tool Opened: 13:45:32
 Time Test Ended: 18:53:02
 Interval: **3528.00 ft (KB) To 3550.00 ft (KB) (TVD)**
 Total Depth: 3550.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman
 Unit No: 69
 Reference Elevations: 1907.00 ft (KB)
 1899.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8672

Inside

Press@RunDepth: 25.97 psig @ 3529.00 ft (KB) Capacity: psig
 Start Date: 2021.10.16 End Date: 2021.10.16 Last Calib.: 1899.12.30
 Start Time: 11:43:01 End Time: 18:53:02 Time On Btm: 2021.10.16 @ 13:45:02
 Time Off Btm: 2021.10.16 @ 17:03:02

TEST COMMENT: IF: Weak surface blow, .75"
 IS: No blow back
 FF: Fair dying blow, opened at 9.5", died to .5"
 FS: No blow back



PRESSURE SUMMARY

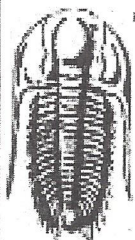
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1693.90 | 96.15 | Initial Hydro-static |
| 1 | 20.20 | 95.74 | Open To Flow (1) |
| 17 | 20.34 | 97.34 | Shut-In(1) |
| 63 | 369.57 | 98.46 | End Shut-In(1) |
| 63 | 19.00 | 98.50 | Open To Flow(2) |
| 109 | 25.97 | 100.44 | Shut-In(2) |
| 196 | 385.75 | 101.85 | End Shut-In(2) |
| 198 | 1664.44 | 102.44 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------|--------------|
| 30.00 | oily mud 5%O, 95%M | 0.15 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|----------------|-----------------|-------------------|
| | | |



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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

17-22s-13w
Keller Gates #2-17
 Job Ticket: 67639 **DST#: 3**
 Test Start: 2021.10.17 @ 03:12:00

GENERAL INFORMATION:

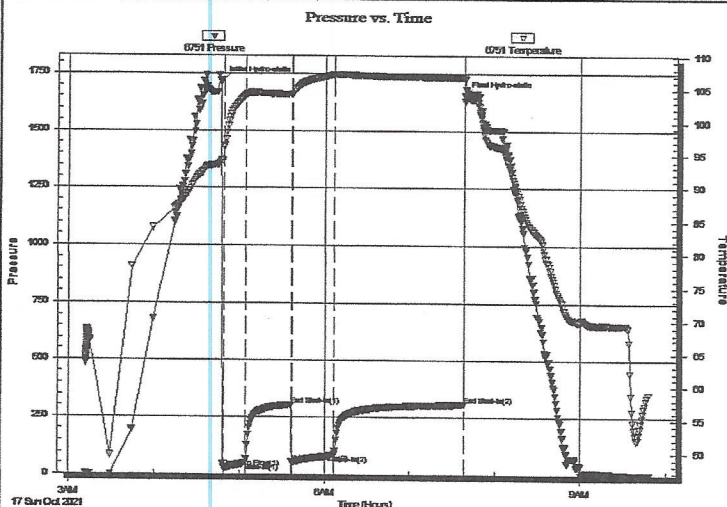
Formation: **LKC I J**
 Deviated: No Whipstock: 1907.00 ft (KB)
 Time Tool Opened: 04:49:17
 Time Test Ended: 09:48:02
 Interval: **3556.00 ft (KB) To 3593.00 ft (KB) (TVD)**
 Total Depth: 3593.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman
 Unit No: 69
 Reference Elevations: 1907.00 ft (KB)
 1899.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 6751

Outside

Press@RunDepth: 86.98 psig @ 3561.00 ft (KB) Capacity: psig
 Start Date: 2021.10.17 End Date: 2021.10.17 Last Calib.: 1899.12.30
 Start Time: 03:12:01 End Time: 09:48:02 Time On Btm: 2021.10.17 @ 04:47:17
 Time Off Btm: 2021.10.17 @ 07:38:17

TEST COMMENT: IF: 15 min., BOB 2 min., strong building blow, 12.6"
 IS: 30 min., No blow back
 FF: 30 min., BOB 1 min., strong dying blow, 8"
 FS: 90 min., No blow back



PRESSURE SUMMARY

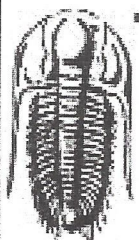
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1718.01 | 94.17 | Initial Hydro-static |
| 2 | 27.61 | 96.35 | Open To Flow (1) |
| 17 | 51.26 | 104.12 | Shut-In(1) |
| 49 | 302.25 | 104.28 | End Shut-In(1) |
| 51 | 52.92 | 104.39 | Open To Flow (2) |
| 80 | 86.98 | 107.22 | Shut-In(2) |
| 171 | 305.19 | 106.89 | End Shut-In(2) |
| 171 | 1654.37 | 106.65 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------|--------------|
| 120.00 | oil spotted water 100%W | 1.41 |
| 1350.00 | GIP 100%G | 18.94 |
| | | |
| | | |
| | | |

Gas Rates

| Choke (Inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|----------------|-----------------|-------------------|
| | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

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

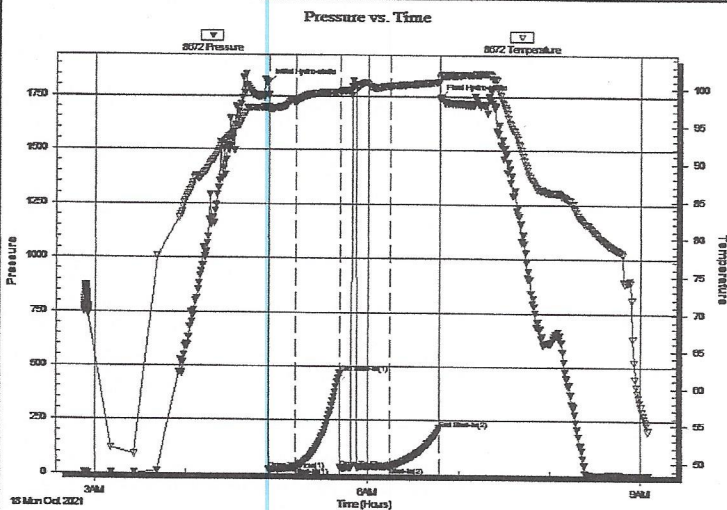
17-22s-13w
Keller Gates #2-17
Job Ticket: 67640 **DST#: 4**
Test Start: 2021.10.18 @ 02:53:00

GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: 1907.00 ft (KB)
Time Tool Opened: 04:54:17
Time Test Ended: 09:05:02
Interval: **3696.00 ft (KB) To 3760.00 ft (KB) (TVD)**
Total Depth: 3760.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Chris Hagman
Unit No: 69
Reference Elevations: 1907.00 ft (KB)
1899.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8672 **Inside**
Press@RunDepth: 37.79 psig @ 3698.00 ft (KB) Capacity: psig
Start Date: 2021.10.18 End Date: 2021.10.18 Last Calib.: 1899.12.30
Start Time: 02:53:01 End Time: 09:05:02 Time On Btm: 2021.10.18 @ 04:53:17
Time Off Btm: 2021.10.18 @ 06:47:17

TEST COMMENT: IF: 15 min., Weak surface blow, died 2 min.
IS: 30 min., No blow back
FF: 30 min., No blow, flushed tool, no change
FS: 30 min., No blow back



PRESSURE SUMMARY

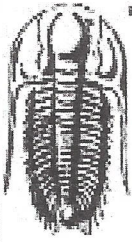
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1807.04 | 97.48 | Initial Hydro-static |
| 2 | 19.55 | 97.10 | Open To Flow (1) |
| 19 | 30.85 | 98.15 | Shut-In(1) |
| 49 | 464.03 | 99.50 | End Shut-In(1) |
| 49 | 28.84 | 99.48 | Open To Flow (2) |
| 81 | 37.79 | 100.38 | Shut-In(2) |
| 114 | 211.16 | 100.97 | End Shut-In(2) |
| 114 | 1738.72 | 101.45 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 40.00 | 100% mud | 0.29 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|----------------|-----------------|-------------------|
| | | |



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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

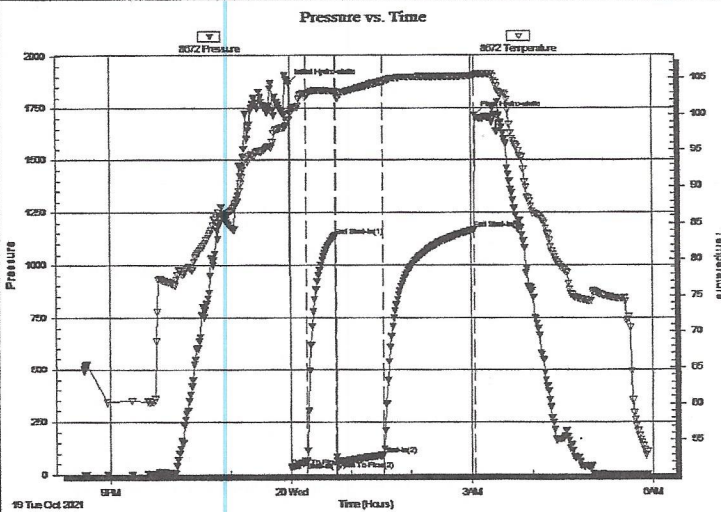
17-22s-13w
Keller Gates #2-17
 Job Ticket: 67641 **DST#: 5**
 Test Start: 2021.10.19 @ 20:35:00

GENERAL INFORMATION:

Formation: **Simpson Sand - Arbuc**
 Deviated: No Whipstock: 1907.00 ft (KB)
 Time Tool Opened: 00:00:47
 Time Test Ended: 05:54:47
 Interval: **3748.00 ft (KB) To 3826.00 ft (KB) (TVD)**
 Total Depth: 3826.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman
 Unit No: 69
 Reference Elevations: 1907.00 ft (KB)
 1899.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8672 **Inside**
 Press@RunDepth: 93.56 psig @ 3749.00 ft (KB) Capacity: psig
 Start Date: 2021.10.19 End Date: 2021.10.20 Last Calib.: 1899.12.30
 Start Time: 20:35:01 End Time: 05:54:47 Time On Btm: 2021.10.19 @ 23:59:02
 Time Off Btm: 2021.10.20 @ 03:04:17

TEST COMMENT: IF: 15 min., Weak surface blow, .8"
 IS: 30 min., No blow back
 FF: 45 min., Weak surface blow, .6"
 FSI: 90 min., No blow back



PRESSURE SUMMARY

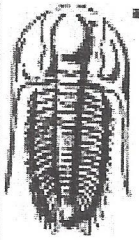
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1871.82 | 99.11 | Initial Hydro-static |
| 2 | 35.46 | 100.14 | Open To Flow (1) |
| 17 | 62.64 | 102.56 | Shut-In(1) |
| 46 | 1140.22 | 103.19 | End Shut-In(1) |
| 47 | 65.00 | 102.51 | Open To Flow (2) |
| 94 | 93.56 | 104.58 | Shut-In(2) |
| 185 | 1169.47 | 105.30 | End Shut-In(2) |
| 186 | 1715.03 | 105.44 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------|--------------|
| 30.00 | oily mud 10%O, 90%M | 0.15 |
| 190.00 | 100%O | 2.67 |
| | | |
| | | |
| | | |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|--|----------------|-----------------|-------------------|
| | | | |



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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

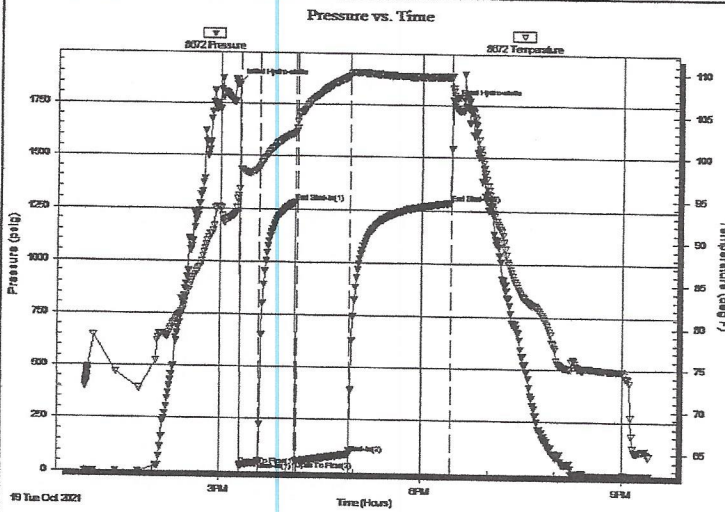
17-22s-13w
Keller Gates #2-17
 Job Ticket: 67642 **DST#: 6**
 Test Start: 2021.10.19 @ 13:00:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: 1907.00 ft (KB)
 Time Tool Opened: 15:17:47
 Time Test Ended: 21:24:02
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman
 Unit No: 69
 Interval: **3824.00 ft (KB) To 3833.00 ft (KB) (TVD)**
 Total Depth: 3833.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Reference Elevations: 1907.00 ft (KB)
 1899.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8672 Inside
 Press@RunDepth: 91.08 psig @ 3825.00 ft (KB) Capacity: psig
 Start Date: 2021.10.19 End Date: 2021.10.19 Last Calib.: 1899.12.30
 Start Time: 13:00:01 End Time: 21:24:02 Time On Btm: 2021.10.19 @ 15:15:32
 Time Off Btm: 2021.10.19 @ 18:28:02

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



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1845.54 | 94.81 | Initial Hydro-static |
| 3 | 33.40 | 98.40 | Open To Flow (1) |
| 20 | 49.02 | 98.64 | Shut-In(1) |
| 52 | 1280.64 | 102.79 | End Shut-In(1) |
| 53 | 54.71 | 103.33 | Open To Flow (2) |
| 100 | 91.08 | 109.63 | Shut-In(2) |
| 191 | 1285.18 | 109.61 | End Shut-In(2) |
| 193 | 1760.98 | 107.92 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------|--------------|
| 220.00 | gassy oil 5%G 95%O | 2.81 |
| 30.00 | GIP 100%G | 0.42 |
| | | |
| | | |
| | | |

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|----------------|-----------------|-------------------|
| | | |

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071

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

No. 2471

Cell 785-324-1041

| | | | | | | | | | | | | | | | |
|----------|----------|------|----|------|-----|-------|-----|---------------------|----------|-------|----|-------------|--|--------|---------|
| Date | 10/11/21 | Sec. | 17 | Twp. | 22S | Range | 13W | County | Stafford | State | KS | On Location | | Finish | 8:00 pm |
| Location | | | | | | | | 281 + 19 1W 1 1/2 S | | | | | | | |

| | | | | | |
|---------------------|------------------|------------|-------|--|------------------------------------|
| Lease | Keller-Gates | Well No. | 2-17 | Owner | To Quality Oilwell Cementing, Inc. |
| Contractor | Discovery Drills | RJ #2 | | You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. | |
| Type Job | Surface Sol | | | Charge To | Bird Dog |
| Hole Size | 12 1/4 | T.D. | 446 | Street | |
| Csg. | F 9/8 | Depth | 445 | City | |
| Tbg. Size | | Depth | | State | |
| Tool | | Depth | | The above was done to satisfaction and supervision of owner agent or contractor. | |
| Cement Left in Csg. | 15 " | Shoe Joint | | Cement Amount Ordered | |
| Meas Line | | Displace | 27.38 | 450 80/20 302 1/2 # F10 | |

EQUIPMENT

| | | | | | |
|---------|-----|----------|------|----------|-----|
| Pumptrk | No. | Cementer | | Common | 360 |
| | | Helper | Dave | Poz. Mix | 90 |
| Bulktrk | 21 | Driver | Pouy | Gel. | 9 |
| Bulktrk | | Driver | | Calcium | 16 |
| | | Driver | | | |

JOB SERVICES & REMARKS

| | |
|--------------------|-------------------------|
| Remarks: | Hulls |
| Rat Hole | Salt |
| Mouse Hole | Flowseal 225 # |
| Centralizers | Kol-Seal |
| Baskets | Mud CLR 48 |
| D/V or Port Collar | CFL-117 or CD110 CAF 38 |
| | Sand |
| | Handling 475 |
| | Mileage |

FLOAT EQUIPMENT

| | |
|--|-------------|
| | Guide Shoe |
| | Centralizer |
| | Baskets |
| | AFU Inserts |
| | Float Shoe |
| | Latch Down |

Pumptrk Charge Surface
Mileage 18

| | |
|--------------|--|
| Tax | |
| Discount | |
| Total Charge | |

X Signature *[Signature]*

Thanks

Cement did. Cool!

Thanks!

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. 2379

| | | | | | | | |
|----------|------|------|-------|-----------|-------|-------------|--------|
| Date | Sec. | Twp. | Range | County | State | On Location | Finish |
| 10-20-21 | 17 | 22 | 13 | Sto. Ford | KS | | 11:30p |

Location 281 + K-14 1/2 W 1 1/2 W into

| | | | | | |
|---------------------|-------------------|------------|------------|--|--|
| Lease | Keller Gates | Well No. | 2-17 | Owner | To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |
| Contractor | Rizoreny #2 | | | | |
| Type Job | Production String | | | | |
| Hole Size | 7 7/8 | T.D. | 3910 | Charge To | Bird Dog |
| Csg. | 5 1/2 15.50' | Depth | 3907 | Street | |
| Tbg. Size | | Depth | | City | State |
| Tool | | Depth | | The above was done to satisfaction and supervision of owner agent or contractor. | |
| Cement Left in Csg. | 21' | Shoe Joint | 21' | Cement Amount Ordered | 200com Q-Pro-C 3gal KCL |
| Meas Line | | Displace | 92 1/2 BCL | 10% Salt 5% Gilsomite 50 gal mud clar | |

EQUIPMENT

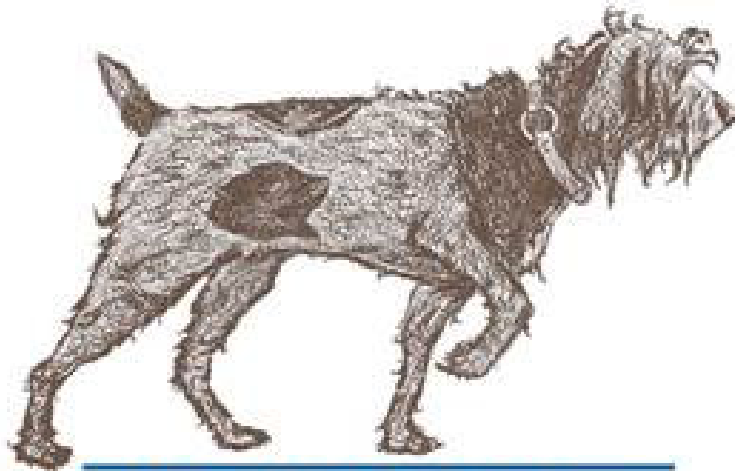
| | | | | | | |
|---------|----|-----|----------|-------|----------|-------------|
| Pumptrk | 16 | No. | Cementor | Craig | Common | 200 Q pro-c |
| | | | Helper | David | Poz. Mix | |
| Bulktrk | | No. | Driver | David | Gel. | |
| Bulktrk | 9 | No. | Driver | Doug | Calcium | |
| | | | Driver | | Halls | KCL 3 gal. |

JOB SERVICES & REMARKS

| | |
|---|-------------------------|
| Remarks: | Salt 17 |
| Rat Hole | 30 SK |
| Mouse Hole | 20 SK |
| Centralizers | Mud CLR 48 500 gal |
| Baskets | CFL-117 or CD110 CAF 38 |
| D/V or Port Collar | Sand |
| 5 1/2 spc @ 3907 3000 @ 3880 | Handling 225 |
| Est Circulation: Pump 500 yd mud clear | Mileage |
| 5 1/2 Water spacer - Plug rather than mud hole. | |
| Cement 5 1/2 with 150 SK - Clear lines | FLOAT EQUIPMENT |
| 4 D. space Plug 1 1/2 27 BCL KCL | Guide Shoe |
| Lift pressure 700# | Centralizer 8 |
| Plug load 1500# | Baskets 1 |
| | AFU Inserts |
| | Float Shoe 1 |
| | Latch Down 1 |

| | |
|----------------|-------------|
| Pumptrk Charge | prod string |
| Mileage | 15 |

| | | | |
|-----------|--------|--------------|--|
| Signature | Thanks | Tax | |
| | | Discount | |
| | | Total Charge | |



BIRD DOG OIL, LLC

Scale 1:240 Imperial

Well Name: KELLER GATES #2-17
Surface Location: Sec. 17 - 22S - 13W
Bottom Location:
API: 15-185-24092
License Number: 34655
Spud Date: 10/11/2021 Time: 8:15 AM
Region: STAFFORD COUNTY KANSAS
Drilling Completed: 10/20/2021 Time: 6:10 PM
Surface Coordinates: 1650' FNL & 330' FEL
Bottom Hole Coordinates:
Ground Elevation: 1899.00ft
K.B. Elevation: 1907.00ft
Logged Interval: 2900.00ft To: 3910.00ft
Total Depth: 3910.00ft
Formation: LANSING-KANSAS CITY; VIOLA; ARBUCKLE
Drilling Fluid Type: Chemical/Fresh Water Gel

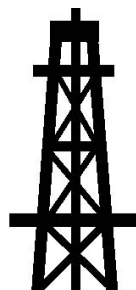
OPERATOR

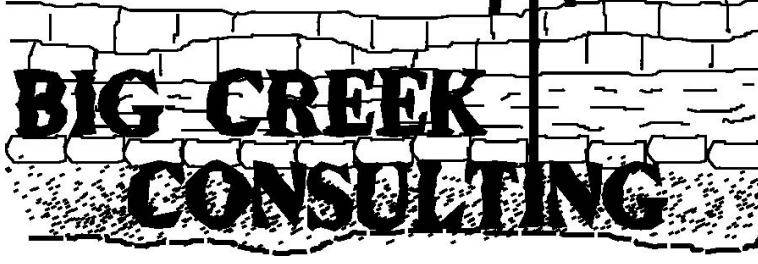
Company: BIRD DOG OIL, LLC.
Address: 1801 BROADWAY
STE. 200
DENVER, CO 80202-3840
Contact Geologist: MATTHEW STEWART
Contact Phone Nbr: (303) 534-1686
Well Name: KELLER GATES #2-17
Location: Sec. 17 - 22S - 13W
API: 15-185-24092
Pool:
State: Kansas
Field: KENILWORTH WEST
Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -98.767124
Latitude: 38.140349
N/S Co-ord: 1650' FNL
E/W Co-ord: 330' FEL

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: 10/11/2021
 TD Date: 10/20/2021
 Rig Release: 10/21/2021
 Time: 8:15 AM
 Time: 6:10 PM
 Time: 12:30 AM

ELEVATIONS

K.B. Elevation: 1907.00ft
 K.B. to Ground: 8.00ft
 Ground Elevation: 1899.00ft

NOTES

DUE TO ECONOMICAL RECOVERY ON DST'S DECISION WAS MADE TO RUN 5 1/2" CASING AND FURTHER EVALUATE ZONES OF INTEREST UPON COMPLETION.

RESPECTFULLY SUBMITTED,
 JEFF LAWLER

WELL COMPARISON SHEET

| FORMATION | KELLER-GATES #2-17 | | | | KELLER M #1 | | | | BIRD DOG OIL, LLC | | | | BIRD DOG OIL, LLC | | | | GRAVES DRILLING CO., INC. | | | |
|---------------|--------------------|-------|-------------|-------|-------------|-------|-------|-------|-------------------|-------|------------|-------|-------------------|-------|-----------------|-------|---------------------------|-------|-------|-------|
| | LOG TOPS | | SAMPLE TOPS | | LOGS | | LOGS | | COMP. CARD | | COMP. CARD | | COMP. CARD | | PLUGGING REPORT | | LOG | | SMPL. | |
| | DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM |
| | 1907 | 1899 | 1899 | 1899 | 1904 | 1904 | 1910 | 1910 | 1906 | 1906 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 |
| ANHYDRITE TOP | 769 | 1138 | 774 | 1133 | | | | | 772 | 1138 | + 0 | - 5 | 767 | 1139 | - 1 | - 6 | 765 | 1139 | - 1 | - 6 |
| BASE | 792 | 1115 | 792 | 1115 | | | | | 788 | 1122 | - 7 | - 7 | 789 | 1117 | - 2 | - 2 | | | | |
| TOPEKA | 2972 | -1065 | 2972 | -1065 | | | | | 2963 | -1053 | - 12 | - 12 | | | | | | | | |
| HEEBNER SHALE | 3270 | -1363 | 3272 | -1365 | 3268 | -1364 | + 1 | - 1 | 3267 | -1357 | - 6 | - 8 | 3271 | -1365 | + 2 | + 0 | 3272 | -1368 | + 5 | + 3 |
| TORONTO | 3291 | -1384 | 3295 | -1388 | 3288 | -1384 | + 0 | - 4 | 3288 | -1378 | - 6 | - 10 | 3291 | -1385 | + 1 | - 3 | | | | |
| DOUGLASSHALE | 3308 | -1401 | 3310 | -1403 | 3303 | -1399 | - 2 | - 4 | 3306 | -1396 | - 5 | - 7 | 3306 | -1400 | - 1 | - 3 | | | | |
| BROWN LIME | 3400 | -1493 | 3400 | -1493 | 3399 | -1495 | + 2 | + 2 | 3398 | -1488 | - 5 | - 5 | 3399 | -1493 | + 0 | + 0 | 3401 | -1497 | + 4 | + 4 |
| LKC | 3418 | -1511 | 3418 | -1511 | 3417 | -1513 | + 2 | + 2 | 3416 | -1506 | - 5 | - 5 | 3416 | -1510 | - 1 | - 1 | 3419 | -1515 | + 4 | + 4 |
| STARK | 3601 | -1694 | 3602 | -1695 | | | | | 3593 | -1683 | - 11 | - 12 | 3594 | -1688 | - 6 | - 7 | | | | |
| BKC | 3642 | -1735 | 3642 | -1735 | | | | | 3637 | -1727 | - 8 | - 8 | 3638 | -1732 | - 3 | - 3 | | | | |
| VIOLA | 3717 | -1810 | 3715 | -1808 | 3702 | -1798 | - 12 | - 10 | 3709 | -1799 | - 11 | - 9 | 3716 | -1810 | + 0 | + 2 | 3722 | -1818 | + 8 | + 10 |
| SIMPSON SHALE | 3756 | -1849 | 3760 | -1853 | 3763 | -1859 | + 10 | + 6 | 3754 | -1844 | - 5 | - 9 | 3763 | -1857 | + 8 | + 4 | | | | |
| SIMPSON SAND | 3765 | -1858 | 3772 | -1865 | | | | | 3772 | -1862 | + 4 | - 3 | 3792 | -1886 | + 28 | + 21 | | | | |
| ARBuckle | 3813 | -1906 | 3810 | -1903 | 3814 | -1910 | + 4 | + 7 | 3811 | -1901 | - 5 | - 2 | 3814 | -1908 | + 2 | + 5 | 3815 | -1911 | + 5 | + 8 |
| TOTAL DEPTH | 3913 | -2006 | 3910 | -2003 | 3827 | -1923 | - 80 | - 80 | 3890 | -1980 | - 26 | - 23 | 3900 | -1994 | - 9 | - 9 | 3825 | -1921 | - 85 | - 82 |

DST #1 LKC A - F 3428' - 3496'

| | | |
|--------------------------------------|--|---|
| <p>TRIOBITE TESTING, INC.</p> | DRILL STEM TEST REPORT | |
| | Bird Dog Oil, LLC 1801 Broadway STE#200 Denver CO 80202 ATTN: Jeff Lawler | 17/22/13 Keller Gates 2-17 Job Ticket: 67637 Test Start: 2021.10.16 @ 19:47:00 |

GENERAL INFORMATION:

Formation: **LKC A-F**
 Deviated: No Whipstock: 1910.00 ft (KB)
 Time Tool Opened: 22:53:02
 Time Test Ended: 03:33:02

Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman
 Unit No: 69

Interval: **3428.00 ft (KB) To 3496.00 ft (KB) (TVD)**
 Total Depth: 3496.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1910.00 ft (KB)
 1900.00 ft (CF)
 KB to GR/CF: 10.00 ft

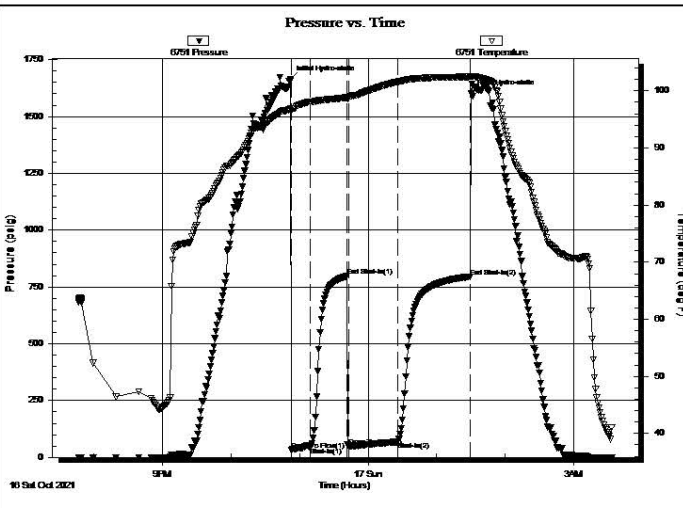
Serial #: 6751

Outside

Press@RunDepth: 69.14 psig @ 3431.00 ft (KB)
 Start Date: 2021.10.16 End Date: 2021.10.17
 Start Time: 19:47:01 End Time: 03:33:02

Capacity: psig
 Last Calib.: 1899.12.30
 Time On Btm: 2021.10.16 @ 22:52:17
 Time Off Btm: 2021.10.17 @ 01:30:02

TEST COMMENT: IF: Weak surface blow , .5 inches
 ISI: No blow back
 FF: Weak surface blow , .5 inches
 FSI: No blow back



| PRESSURE SUMMARY | | | |
|------------------|-----------------|--------------|----------------------|
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
| 0 | 1661.76 | 96.92 | Initial Hydro-static |
| 1 | 33.54 | 96.84 | Open To Flow (1) |
| 18 | 45.21 | 98.06 | Shut-In(1) |
| 50 | 797.40 | 98.80 | End Shut-In(1) |
| 51 | 48.34 | 98.81 | Open To Flow (2) |
| 94 | 69.14 | 101.58 | Shut-In(2) |
| 157 | 795.45 | 102.48 | End Shut-In(2) |
| 158 | 1599.70 | 102.54 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------------------|--------------|
| 120.00 | oil spotted w atery mud 40%W,60%M | 1.06 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|----------------|-----------------|-------------------|
| | | |

Trilobite Testing, Inc

Ref. No: 67637

Printed: 2021.10.16 @ 08:43:23

DST #2 LKC H 3528' - 3550'



DRILL STEM TEST REPORT

Bird Dog Oil, LLC **17/22/13**
 1801 Broadway STE#200 **Keller Gates 2-17**
 Denver CO 80202 Job Ticket: 67638 **DST#: 2**
 ATTN: Jeff Lawler Test Start: 2021.10.16 @ 11:43:00

GENERAL INFORMATION:

Formation: **LKC H**
 Deviated: No Whipstock: 1910.00 ft (KB)

Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman

Deviated: No Whipstock: 1907.00 ft (KB)
 Time Tool Opened: 13:45:32
 Time Test Ended: 18:53:02

Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman
 Unit No: 69

Interval: 3528.00 ft (KB) To 3550.00 ft (KB) (TVD)
 Total Depth: 3550.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1907.00 ft (KB)
 1900.00 ft (CF)
 KB to GR/CF: 7.00 ft

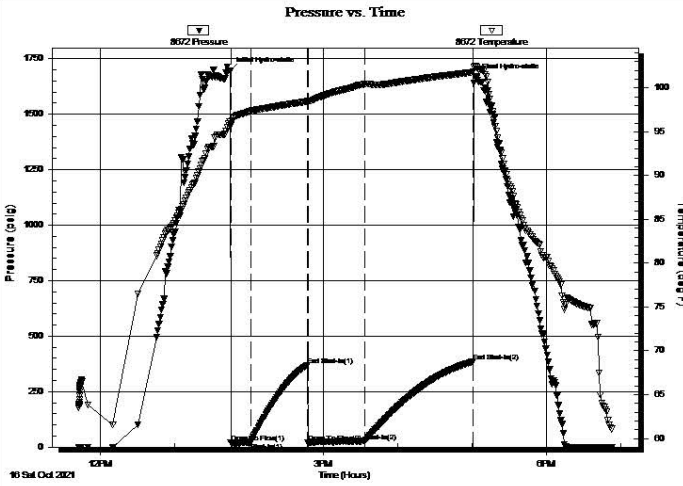
Serial #: 8672

Inside

Press@RunDepth: 25.97 psig @ 3529.00 ft (KB)
 Start Date: 2021.10.16 End Date: 2021.10.16
 Start Time: 11:43:01 End Time: 18:53:02

Capacity: psig
 Last Calib.: 1899.12.30
 Time On Btm: 2021.10.16 @ 13:45:02
 Time Off Btm: 2021.10.16 @ 17:03:02

TEST COMMENT: IF: Weak surface blow , .75 inches
 IS: No blow back
 FF: Fair dying blow , opened at 9.5 inches, died to .5 inches
 FS: No blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1693.90 | 96.15 | Initial Hydro-static |
| 1 | 20.20 | 95.74 | Open To Flow (1) |
| 17 | 20.34 | 97.34 | Shut-In(1) |
| 63 | 369.57 | 98.46 | End Shut-In(1) |
| 63 | 19.00 | 98.50 | Open To Flow (2) |
| 109 | 25.97 | 100.44 | Shut-In(2) |
| 196 | 385.75 | 101.85 | End Shut-In(2) |
| 198 | 1664.44 | 102.44 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------|--------------|
| 30.00 | SOCM 5%O, 95%M | 0.15 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

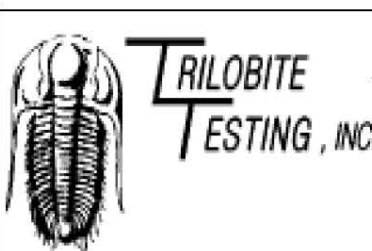
| | Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|--|----------------|-----------------|-------------------|
| | | | |

Trilobite Testing, Inc

Ref. No: 67638

Printed: 2021.10.16 @ 20:41:39

DST #3 LKC I - J 3556' - 3593'



DRILL STEM TEST REPORT

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

17/22/13
Keller Gates 2-17
 Job Ticket: 67639 **DST#: 3**
 Test Start: 2021.10.17 @ 03:12:00

GENERAL INFORMATION:

Formation: LKC I J
 Deviated: No Whipstock: 1907.00 ft (KB)
 Time Tool Opened: 04:49:17

Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman

Time Tool Opened: 04:49:17
 Time Test Ended: 09:48:02

Tester: Chris Hagman
 Unit No: 69

Interval: 3556.00 ft (KB) To 3593.00 ft (KB) (TVD)
 Total Depth: 3593.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

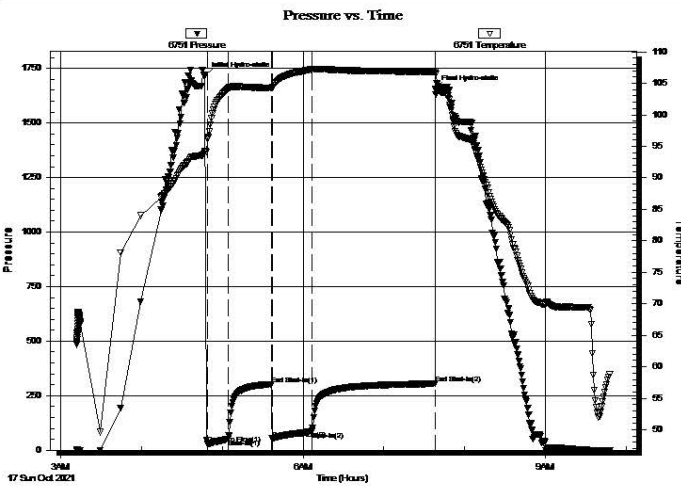
Reference Elevations: 1907.00 ft (KB)
 1899.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 6751 Outside

Press@RunDepth: 86.98 psig @ 3561.00 ft (KB)
 Start Date: 2021.10.17 End Date: 2021.10.17
 Start Time: 03:12:01 End Time: 09:48:02

Capacity: psig
 Last Calib.: 1899.12.30
 Time On Btm: 2021.10.17 @ 04:47:17
 Time Off Btm: 2021.10.17 @ 07:38:17

TEST COMMENT: IF: 15 min., BOB 2 min., strong building blow , 12.6 inches
 IS: 30 min., No blow back
 FF: 30 min., BOB 1 min., strong dying blow , 8 inches
 FS: 90 min., No blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1718.01 | 94.17 | Initial Hydro-static |
| 2 | 27.61 | 96.35 | Open To Flow (1) |
| 17 | 51.26 | 104.12 | Shut-In(1) |
| 49 | 302.25 | 104.28 | End Shut-In(1) |
| 51 | 52.92 | 104.39 | Open To Flow (2) |
| 80 | 86.98 | 107.22 | Shut-In(2) |
| 171 | 305.19 | 106.89 | End Shut-In(2) |
| 171 | 1654.37 | 106.65 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------|--------------|
| 120.00 | oil spotted w ater 100%W | 1.41 |
| 0.00 | 1350' GIP 100%G | 0.00 |
| | | |
| | | |
| | | |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|--|----------------|-----------------|-------------------|
| | | | |

Trilobite Testing, Inc

Ref. No: 67639

Printed: 2021.10.18 @ 11:13:07

DST #4 VIOLA 3696' - 3760'



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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

17/22/13
Keller Gates 2-17
 Job Ticket: 67640 **DST#: 4**
 Test Start: 2021.10.18 @ 02:53:00

GENERAL INFORMATION:

Formation: **Viola**
 Deviated: No Whipstock: 1907.00 ft (KB)
 Time Tool Opened: 04:54:17
 Time Test Ended: 09:05:02

Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman
 Unit No: 69

Interval: 3696.00 ft (KB) To 3760.00 ft (KB) (TVD)
 Total Depth: 3760.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1907.00 ft (KB)
 1899.00 ft (CF)
 KB to GR/CF: 8.00 ft

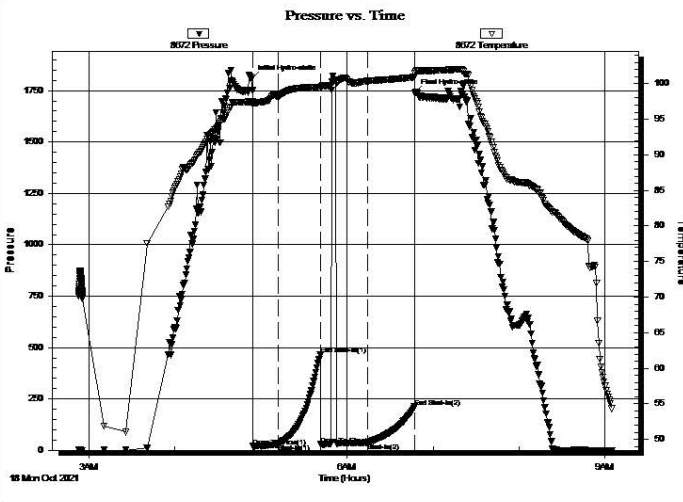
Serial #: 8672

Inside

Press@RunDepth: 37.79 psig @ 3698.00 ft (KB)
 Start Date: 2021.10.18 End Date: 2021.10.18
 Start Time: 02:53:01 End Time: 09:05:02

Capacity: psig
 Last Calib.: 2021.10.18
 Time On Btm: 2021.10.18 @ 04:53:17
 Time Off Btm: 2021.10.18 @ 06:47:17

TEST COMMENT: IF: 15 min., Weak surface blow , died 2 min.
 IS: 30 min., No blow back
 FF: 30 min., No blow , flushed tool, no change
 FS: 30 min., No blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1807.04 | 97.48 | Initial Hydro-static |
| 2 | 19.55 | 97.10 | Open To Flow (1) |
| 19 | 30.85 | 98.15 | Shut-In(1) |
| 49 | 464.03 | 99.50 | End Shut-In(1) |
| 49 | 28.84 | 99.48 | Open To Flow (2) |
| 81 | 37.79 | 100.38 | Shut-In(2) |
| 114 | 211.16 | 100.97 | End Shut-In(2) |
| 114 | 1738.72 | 101.45 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 40.00 | 100% mud | 0.29 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|----------------|-----------------|-------------------|
| | | |

Trilobite Testing, Inc

Ref. No: 67640

Printed: 2021.10.18 @ 11:08:46

ROCK TYPES

| | | | | |
|----------|----------|------------|------------|----|
| Cht | Chtcongl | Lmst fw7> | Carbon Sh | Ss |
| Cht vari | Dolprim | shale, grn | shale, red | |
| Congl | Dolsec | shale, gry | Shcol | |

ACCESSORIES

MINERAL
 Sandy

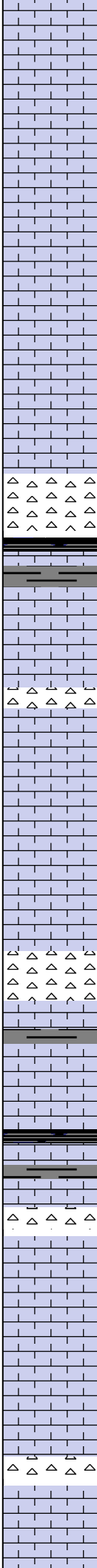
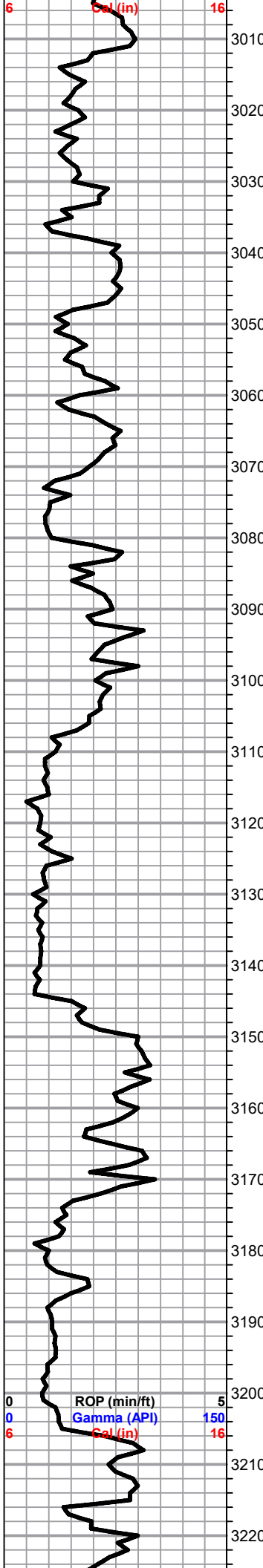
FOSSIL
 Oomoldic

STRINGER
 Chert
 red shale

OTHER SYMBOLS

MISC
 Daily Report
 Digital Photo
 Document
 Folder

DST
 DST Int
 DST alt
 Core



mod. dev. barren, sl chalky in part

Lm/Chert- Dove Gray, fsl w/ fusulinids, mix of sl cherty Ls & fsl fresh bedded chert, all w/ dense XLN porosity

Lm/Chert- Cream Off White, F-MXLN, fsl & sl oolitic mix of Ls, sl dolomitic Ls & fresh bedded vitreous chert, sctrd to dense XLN & vfn ppt porosity, all clean & barren

Lm- Cream Off White, FXLN, hvy fsl, massive, well to loosely cemented, semi-clastic, dense XLN & fn ppt porosity, some soft white chalk

Lm- A/A w/ influx of chalk

Lm- Cream Gray, F-MedXLN, hvy fsl some fragments, massive sl dolomitic Ls w/ dense XLN porosity, few pcs sl cherty Ls

Lm- Off White, VF-FXLN, dense & well cemented, sl dolomitic w/ consistent micro XLN porosity throughout, barren

Chert- Drk Gray, fsl vitreous fresh bedded, cryptoXLN

Sh- Black Gray Green, fissile & carbonaceous, sl calcareous, gummy wash

Lm- Cream Off White, FXLN, massive, granular, fsl, dense XLN porosity w/ consistent clear reXLN, barren

Chert- Gray, fsl, mix of vitreous cryptoXLN & dense XLN porosity, barren

Lm- Cream Buff, VFXLN, tight & well cemented w/ poor vis. porosity, clean & barren

Lm- Cream Off White, FXLN, well cemented dolomitic Ls w/ mostly consistent XLN & vry fn ppt porosity throughtout, barren

Chert- Milky Gray, fsl mix of gritty dolomitic chert w/ consistent microXLN porosity & vitreous cryptoXLN

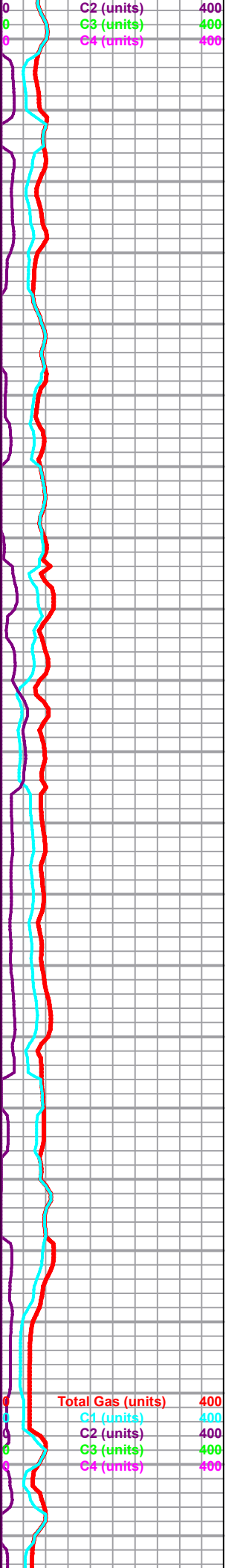
Lm- Cream Off White, FXLN, massive well cemented, sl fsl, consistent XLN & vry fn ppt porosity, sctrd clear reXLN, barren, much soft white chalk

Sh- Gray Maroon, dense slivers, gritty & earthy

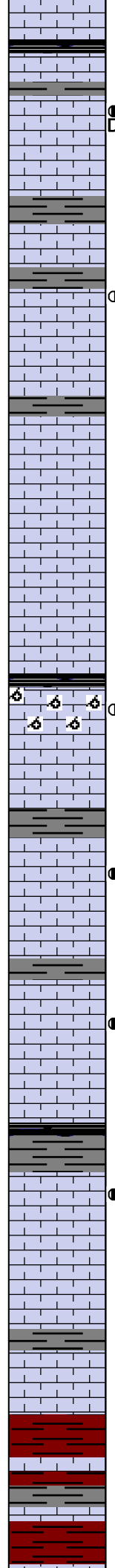
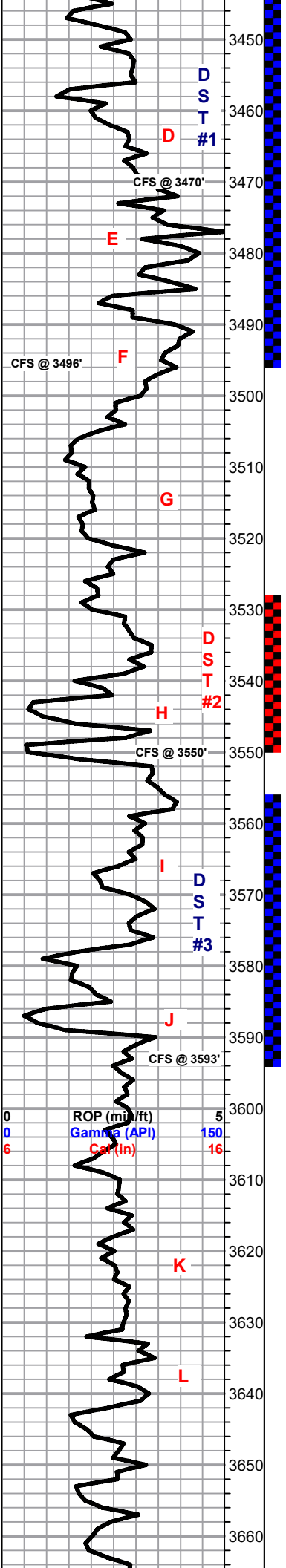
Lm- Off White, FXLN, fsl, some chalky in part, sctrd to dense XLN porosity, barren, some soft chalk

Chert- Lt Gray, fsl, some sl gritty, all w/ no vis. porosity

Lm- Gray, VFXLN, sl fsl, tight w/ min. vis. porosity, sl mottled



porosity, clean & barren



D Lm- Cream Off White, F-MedXLN, fsl & oolitic, dense XLN & sctrd fn ppt inter oolite porosity, sctrd clear reXLN, SCTRDRK STN, FEW W/ BLK STN, NSHWFO, FR ODR

Lm- Cream Off White, VF-FXLN, dense & well cemented, mostly tight w/ sctrd XLN porosity, clean & barren

Lm- Brown, F-MedXLN, sl trashy w/ fsl fragments, sl oolitic, sctrd to dense XLN & secondary reXLN porosity, sl sandy, SCTRDRK STN, NSFO, WK ODR

Lm- Cream Off White, FXLN, sl fsl & oolitic, mix of sctrd to dense XLN porosity, well cemented & mostly tight w/ rare sctrd XLN porosity,

Lm- Gray Buff, VF-FLXN, mix of dolomitic Ls w/ micro XLN & sctrd fn ppt porosity & fsl & oolitic w/ sctrd to dense XLN porosity

Lm- Cream Off White, FXLN, sl fsl & oolitic, mostly dense & well cemented w/ sctrd XLN & fn ppt interoolite porosity, clean & barren

Chert- Milky Gray Off White, vitreous sl fsl fresh bedded chert, cryptoXLN

H Lm- Cream Tan, FXLN, oolitic/oomoldic, well cemented, sctrd to consistent vuggy & interXLN porosity, SCTRDRK & BLK DO STN, TR FO UPON CRUSH, FR ODR

Lm- Cream Off White, VF-FXLN, brittle to well cemented, mostly tight w/ sctrd XLN porosity, all clean & barren

Sh- Dark Gray Maroon Green, dense & blocky, gritty & earthy, gummy wash

I Lm- Off White Cream, VFXLN, oolitic & oomoldic, oolitic clusters w/ clear replacement cementation & oomoldic w/ vuggy & micro XLN & ppt interoolite porosity, poor interconnectivity, SCTRDRK STN, NSHWFO, GD ODR

Lm- Off White, VFXLN, dense, well cemented, some brittle, sctrd XLN porosity, some soft white chalk, all vry clean & barren

J Lm- Off White Cream, FXLN, sl fsl & oolitic, dense XLN & fn ppt porosity, SCTRDRK STN, TR SHW FO, GD ODR

STARK SHALE 3602' (-1695) E-LOG 3601' (-1694) Sh- Black Gray Maroon, blocky & carbonaceous, dense & waxy

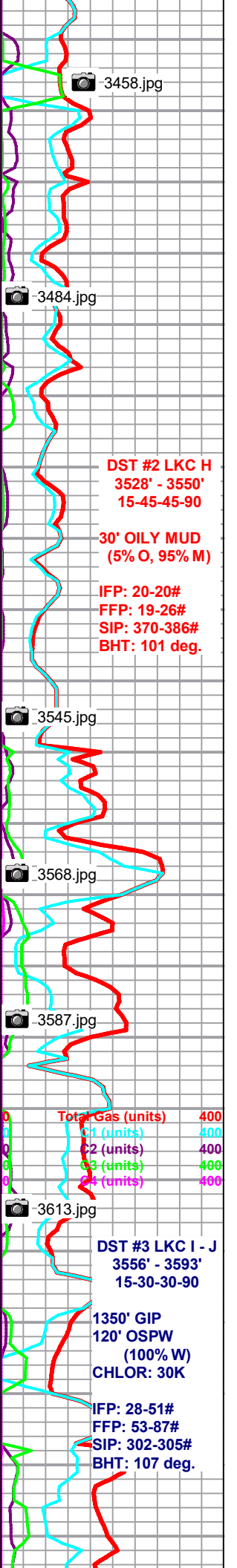
K Lm- Cream Off White, FXLN, fsl & oolitic w/ dense XLN & sctrd fn ppt interoolite porosity, SCTRDRK STN, 1 PCS W/ TR FO, FR ODR

Lm- Cream Off White, VFXLN, dense, & well cemented, mostly tight w/ sctrd XLN porosity, some chalky in part, some soft white chalk, clean & barren

Lm- Buff, FXLN, fsl & sl oolitic, well cemented, sctrd XLN porosity, clean & barren

BKC 3642' (-1735) E-LOG 3642' (-1735) Sh- Gray Maroon, abundant gummy wash, gritty & earthy, dense & blocky

ROP (mi/ft) 5
Gamma (API) 150
Cal (in) 16



3458.jpg

3484.jpg

DST #2 LKC H
3528' - 3550'
15-45-45-90

30' OILY MUD
(5% O, 95% M)

IFP: 20-20#
FFP: 19-26#
SIP: 370-386#
BHT: 101 deg.

3545.jpg

3568.jpg

3587.jpg

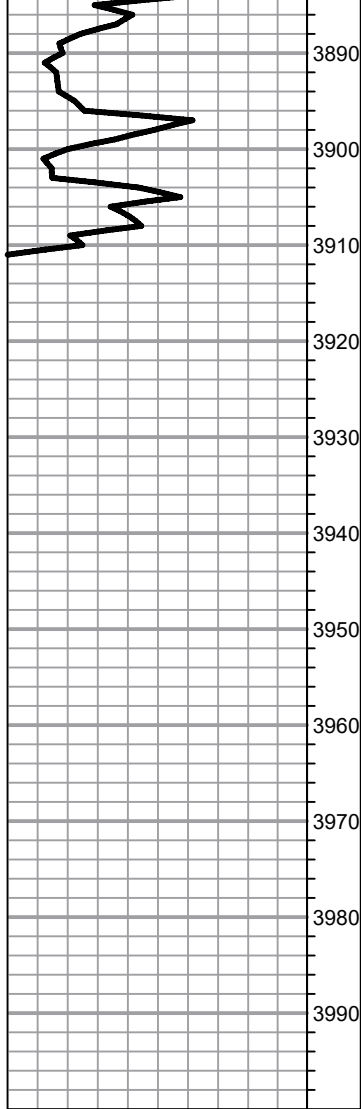
Total Gas (units) 400
C1 (units) 400
C2 (units) 400
C3 (units) 400
C4 (units) 400

3613.jpg

DST #3 LKC I - J
3556' - 3593'
15-30-30-90

1350' GIP
120' OSPW
(100% W)
CHLOR: 30K

IFP: 28-51#
FFP: 53-87#
SIP: 302-305#
BHT: 107 deg.

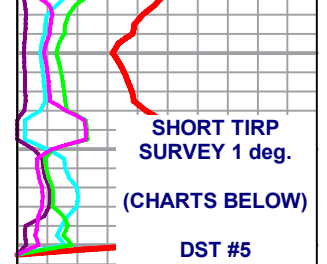


barren

DoI- MED XLN A/A, few pcs w/ light green tint

DoI- Off White Cream, F-MedXLN, massive, consistent micro XLN porosity throughout w/ sctrd large ppt porosity, clean & barren

**RTD 3910' (-2003) LTD 3913' (-2006) @ 06:10 10/20/2021
SURVEY 3/4 deg.**



**SHORT TIRP
SURVEY 1 deg.**

(CHARTS BELOW)

**DST #5
SIMPSON SAND -
ARBUCKLE
3748' - 3826'
15-30-45-90**

**220' TOTAL FLUID
30' OILY MUD
(10% O, 90% M)
190' OIL Gr: 20**

**IFP: 35-60#
FFP: 65-94#
SIP: 1140-1169#
BHT: 105 deg.**

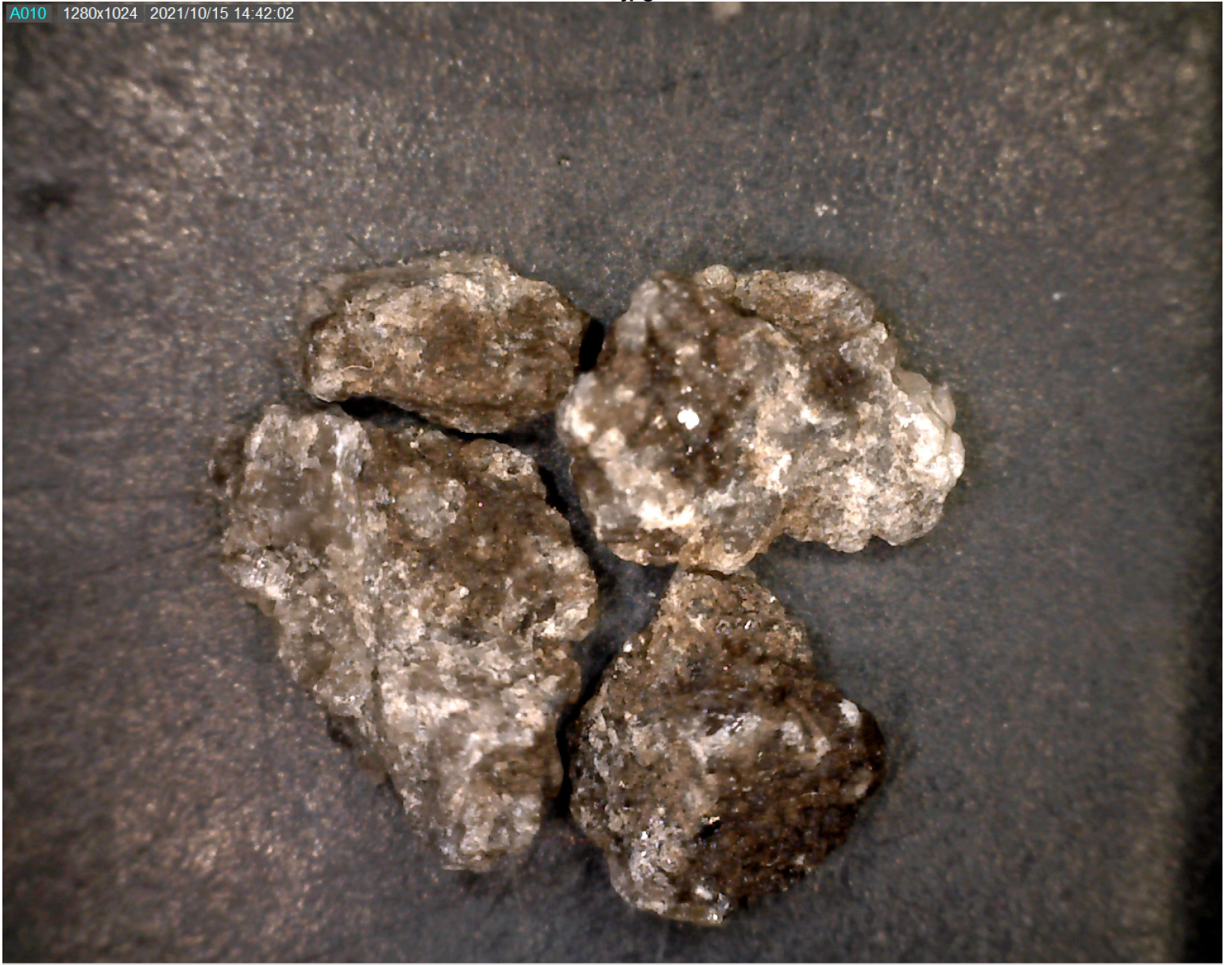
**(CHARTS BELOW)
DST #6 ARBUCKLE
3824' - 3833'
15-30-45-90**

**30' GIP
220' GSY OIL
(5% G, 95% O)
Gr: 21 deg.**

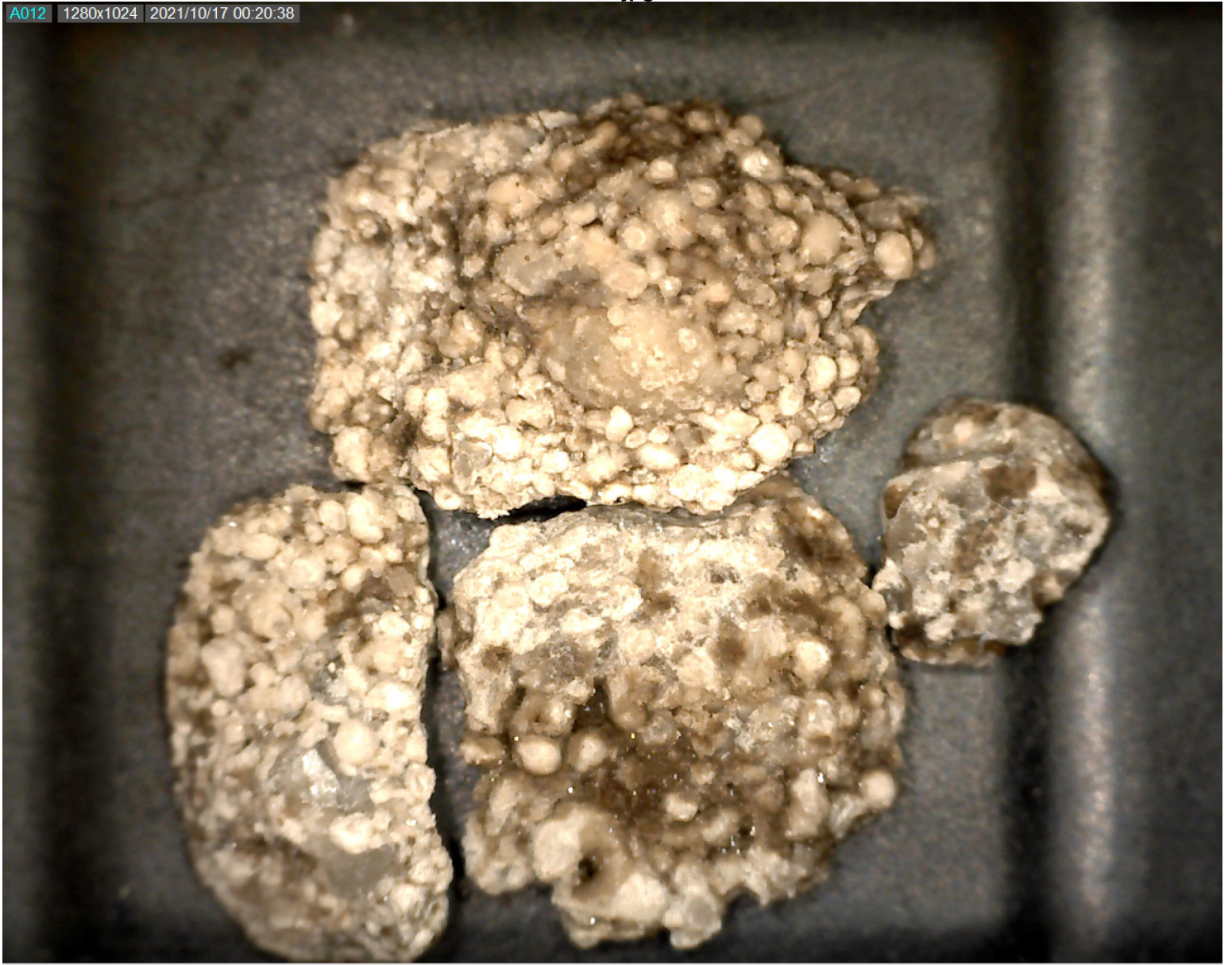
**IFP: 33-49#
FFP: 55-91#
SIP: 1281-1285#
BHT: 110 deg.**

















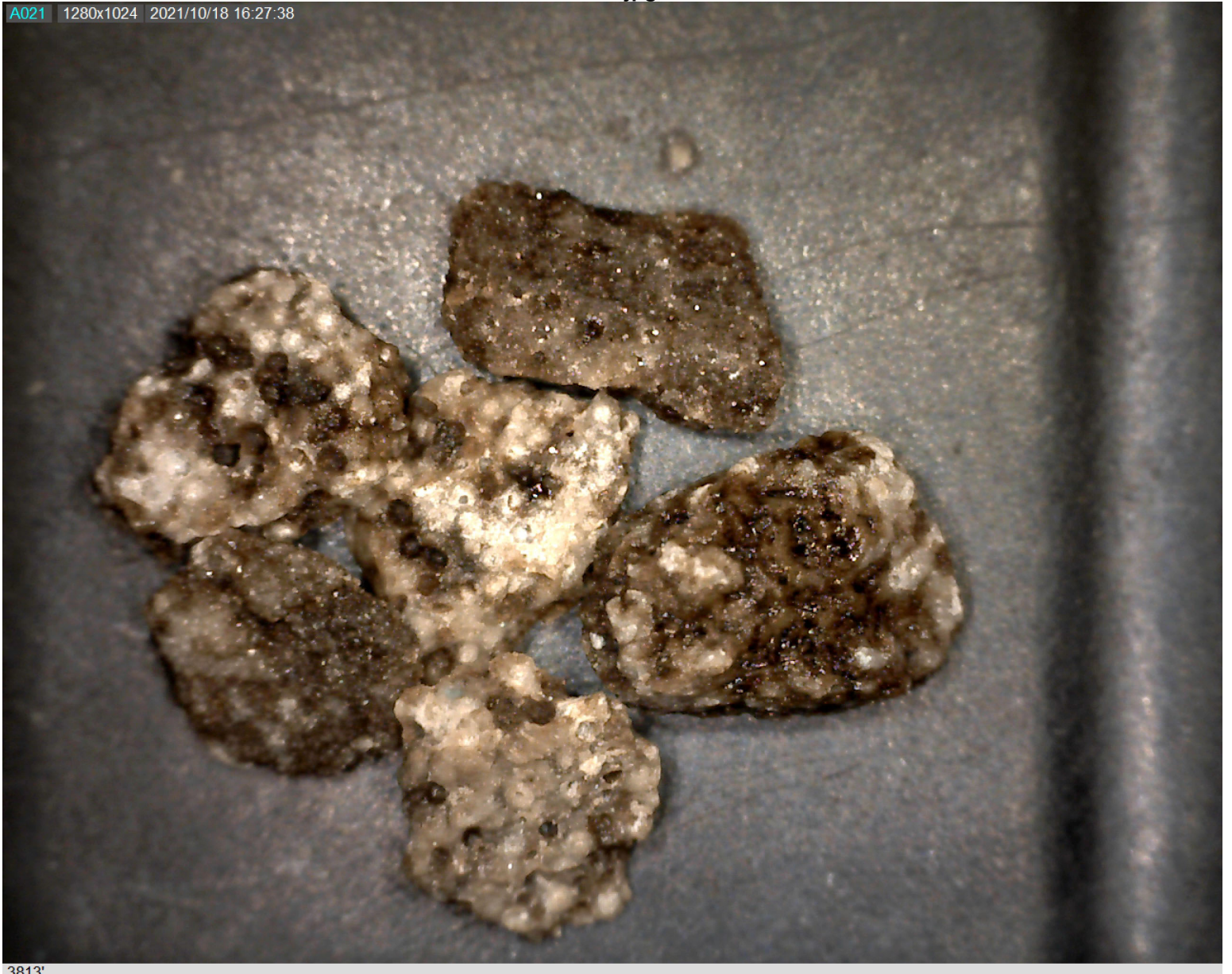





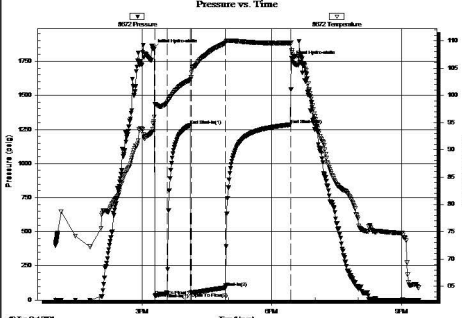










|  TRILOBITE TESTING, INC. | DRILL STEM TEST REPORT Bird Dog Oil, LLC 1801 Broadway STE#200 Denver CO 80202 ATTN: Jeff Lawler | 17/22/13 Keller Gates 2-17 Job Ticket: 67642 DST#: 6 Test Start: 2021.10.19 @ 13:00:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|----------------------|-------------|-------------|--------------|-------------|--------------------|--------------|------------|-----------|---------|-------|----------------------|---|-------|-------|------------------|----|-------|-------|--|----|-----------|--------|----------------|----|-------|----------------|------------------|-------------------|-------|--------|------------|-----|---------|--------|----------------|-----|---------|--------|--------------------|--|
| GENERAL INFORMATION: Formation: Arbuckle Deviated: No Whipstock: 1907.00 ft (KB) Time Tool Opened: 15:17:47 Time Test Ended: 21:24:02 Test Type: Conventional Bottom Hole (Initial) Tester: Chris Hagman Unit No: 69 Interval: 3824.00 ft (KB) To 3833.00 ft (KB) (TVD) Total Depth: 3833.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good Reference Elevations: 1907.00 ft (KB) 1899.00 ft (CF) KB to GR/CF: 8.00 ft | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Serial #: 8672 Inside Press@RunDepth: 91.08 psig @ 3825.00 ft (KB) Capacity: psig Start Date: 2021.10.19 End Date: 2021.10.19 Last Calib.: 1899.12.30 Start Time: 13:00:01 End Time: 21:24:02 Time On Btm: 2021.10.19 @ 15:15:32 Time Off Btm: 2021.10.19 @ 18:28:02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEST COMMENT: IF: 15 min., weak surface blow, .5 inches IS: 30 min., no blow back FF: 45 min., weak surface blow, .5 inches FS: 90 min., no blow back | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  <p style="font-size: small;">Pressure vs. Time graph showing Pressure (psig) on the left y-axis (0 to 1750) and Temperature (deg F) on the right y-axis (65 to 110). The x-axis is Time (Hours) from 0 to 194. Two curves are plotted: Pressure (solid line) and Temperature (dashed line). Key events are marked with vertical dashed lines at 3, 20, 52, 53, 100, 191, and 193 hours.</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">PRESSURE SUMMARY</th> </tr> <tr> <th style="width:10%;">Time (Min.)</th> <th style="width:15%;">Pressure (psig)</th> <th style="width:15%;">Temp (deg F)</th> <th style="width:60%;">Annotation</th> </tr> </thead> <tbody> <tr><td>0</td><td>1845.54</td><td>94.81</td><td>Initial Hydro-static</td></tr> <tr><td>3</td><td>33.40</td><td>98.40</td><td>Open To Flow (1)</td></tr> <tr><td>20</td><td>49.02</td><td>98.64</td><td>Shut-In(1)</td></tr> <tr><td>52</td><td>1280.64</td><td>102.79</td><td>End Shut-In(1)</td></tr> <tr><td>53</td><td>54.71</td><td>103.33</td><td>Open To Flow (2)</td></tr> <tr><td>100</td><td>91.08</td><td>109.63</td><td>Shut-In(2)</td></tr> <tr><td>191</td><td>1285.18</td><td>109.61</td><td>End Shut-In(2)</td></tr> <tr><td>193</td><td>1760.98</td><td>107.92</td><td>Final Hydro-static</td></tr> </tbody> </table> | | PRESSURE SUMMARY | | | | Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation | 0 | 1845.54 | 94.81 | Initial Hydro-static | 3 | 33.40 | 98.40 | Open To Flow (1) | 20 | 49.02 | 98.64 | Shut-In(1) | 52 | 1280.64 | 102.79 | End Shut-In(1) | 53 | 54.71 | 103.33 | Open To Flow (2) | 100 | 91.08 | 109.63 | Shut-In(2) | 191 | 1285.18 | 109.61 | End Shut-In(2) | 193 | 1760.98 | 107.92 | Final Hydro-static | |
| PRESSURE SUMMARY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1845.54 | 94.81 | Initial Hydro-static | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 33.40 | 98.40 | Open To Flow (1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 49.02 | 98.64 | Shut-In(1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 52 | 1280.64 | 102.79 | End Shut-In(1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | 54.71 | 103.33 | Open To Flow (2) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 91.08 | 109.63 | Shut-In(2) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 191 | 1285.18 | 109.61 | End Shut-In(2) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 193 | 1760.98 | 107.92 | Final Hydro-static | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Recovery</th> </tr> <tr> <th style="width:20%;">Length (ft)</th> <th style="width:50%;">Description</th> <th style="width:30%;">Volume (bbl)</th> </tr> </thead> <tbody> <tr><td>220.00</td><td>gassy oil 5%G 95%O</td><td>2.81</td></tr> <tr><td>30.00</td><td>GIP 100%G</td><td>0.42</td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table> | Recovery | | | Length (ft) | Description | Volume (bbl) | 220.00 | gassy oil 5%G 95%O | 2.81 | 30.00 | GIP 100%G | 0.42 | | | | | | | | | | <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Gas Rates</th> </tr> <tr> <th style="width:40%;"> </th> <th style="width:15%;">Choke (inches)</th> <th style="width:15%;">Pressure (psig)</th> <th style="width:30%;">Gas Rate (MMcf/d)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | | Gas Rates | | | | | Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) | | | | | | | | | | | | |
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| 220.00 | gassy oil 5%G 95%O | 2.81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30.00 | GIP 100%G | 0.42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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