

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 |
|--|---|

| 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 | Farmer, John O., Inc. |
| Well Name | WAUGH B 4 |
| Doc ID | 1482070 |

All Electric Logs Run

| |
|---------------------------------|
| |
| Dual Induction Log |
| Micro Resistivity Log |
| Compensated Density Neutron Log |
| Cement Bond Log |

| | |
|-----------|------------------------|
| Form | ACO1 - Well Completion |
| Operator | Farmer, John O., Inc. |
| Well Name | WAUGH B 4 |
| Doc ID | 1482070 |

Tops

| Name | Top | Datum |
|--------------|-------|---------|
| Mississippi | 2282' | (-992) |
| Kinderhook | 2605' | (-1315) |
| Hunton | 2753' | (-1463) |
| Maquoketa | 2840' | (-1550) |
| Viola | 2873' | (-1583) |
| Simpson Sand | 2988' | (-1698) |
| Arbuckle | 3039' | (-1749) |
| L.T.D. | 3100' | (-1810) |



Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: Discovery Drilling Co., Inc. LIC#31548
370 West Wichita Avenue - P.O. Box 352 PO Box 763
Russell, KS 67665 + 0352 Hays, KS 67601

Lease: Waugh "B" # 4 Location: 410 FSL - 485 FWL
NE/SW/SW?SW
Section 18/ 15S/ 12E
Wabaunsee County, KS

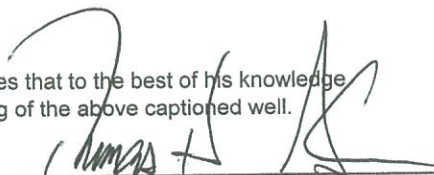
Loggers Total Depth: 3100' API#15- 197-20,311-00-00
Rotary Total Depth: 3100' Elevation: 1282 GL - 1290 KB
Commenced: 7/13/2019 Completed: 7/20/2019
Casing: 8 5/8" @ 307'W/180sks Status: SWD
5 1/2" @ 3096'W/170sks

DEPTHS & FORMATIONS (All from KB)

| | | | |
|----------------------|--------------|----------|--------------|
| Surface Rock - Shale | <u>0'</u> | Arbuckle | <u>3040'</u> |
| Shale | <u>166'</u> | RTD | <u>3100'</u> |
| Shale & Lime | <u>627'</u> | | |
| Mississippian | <u>2269'</u> | | |
| Kinderhook | <u>2606'</u> | | |
| Hunton | <u>2750'</u> | | |
| Simpson | <u>2988'</u> | | |

STATE OF KANSAS)
) ss
COUNTY OF ELLIS)

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

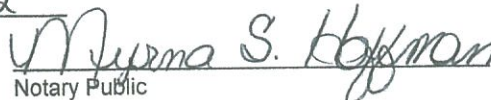


Thomas H. Alm

Subscribed and sworn to before me on 7-29-19

My Commission expires: 6-28-2022

(Place stamp or seal below)



Notary Public



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 1469

| | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|------|----|------------|------------|-------|-------------------------|--|--------------------------------|-------|-----|-------------|--|--------|----------|
| Date | 7-14-19 | Sec. | 18 | Twp. | 15 | Range | 12 | County | Wabaunsee | State | Ks. | On Location | | Finish | 10:30 AM |
| Location | | | | | | | | Allen - 7 N to 390 rd, 2E to N Rd, | | | | | | | |
| Lease | Waugh B | | | Well No. | 4 | | | Owner | 1 1/2 - 2 N, E H into S to Rig | | | | | | |
| Contractor | Discovery 2 | | | | | | | 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. | | | | | | | |
| Type Job | Surface | | | | | | | | | | | | | | |
| Hole Size | 10 1/4" | | | T.D. | 307' | | | Charge To | John G Farmer | | | | | | |
| Csg. | 8 5/8" | | | Depth | 307' | | | 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. | 15' | | | Shoe Joint | 15' | | | Cement Amount Ordered | 180 Com 3% cc 2% gel | | | | | | |
| Meas Line | | | | Displace | 18 1/2 Bbs | | | | | | | | | | |
| EQUIPMENT | | | | | | | | Common 18.0 | | | | | | | |
| Pumptrk | 16 | No. | | Cementer | Rick | | | Poz. Mix | | | | | | | |
| | | | | Helper | | | | | | | | | | | |
| Bulktrk | 21 | No. | | Driver | Doug | | | Gel. 3 | | | | | | | |
| | | | | Driver | | | | | | | | | | | |
| Bulktrk | | No. | | Driver | | | | Calcium 6 | | | | | | | |
| | | | | Driver | | | | | | | | | | | |
| JOB SERVICES & REMARKS | | | | | | | | Hulls | | | | | | | |
| Remarks: | Cement did | | | Circulate | | | Salt | | | | | | | | |
| Rat Hole | | | | | | | Flowseal | | | | | | | | |
| Mouse Hole | | | | | | | Kol-Seal | | | | | | | | |
| Centralizers | | | | | | | Mud CLR 48 | | | | | | | | |
| Baskets | | | | | | | CFL-117 or CD110 CAF 38 | | | | | | | | |
| D/V or Port Collar | | | | | | | Sand | | | | | | | | |
| | | | | | | | Handling 169 | | | | | | | | |
| | | | | | | | Mileage | | | | | | | | |
| FLOAT EQUIPMENT | | | | | | | | | | | | | | | |
| | | | | | | | Guide Shoe | | | | | | | | |
| | | | | | | | Centralizer | | | | | | | | |
| | | | | | | | Baskets | | | | | | | | |
| | | | | | | | AFU Inserts | | | | | | | | |
| | | | | | | | Float Shoe | | | | | | | | |
| | | | | | | | Latch Down | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | Pumptrk Charge Surface | | | | | | | | |
| | | | | | | | Mileage 80 | | | | | | | | |
| | | | | | | | | Tax | | | | | | | |
| | | | | | | | | Discount | | | | | | | |
| | | | | | | | | Total Charge | | | | | | | |
| X Signature | The Whit | | | | | | | | | | | | | | |

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. 1505

| | | | | | | | | | | | | | | | |
|--------------------------------------|-------------------|------|--------|------------|------------|-------|-------------------------|--|--|-------|----|-------------|--|--------|---------|
| Date | 7-20-19 | Sec. | 18 | Twp. | 15 | Range | 12 | County | Wabaunsee KS | State | KS | On Location | | Finish | 9:15 AM |
| Location | | | | | | | | Alan KS 170.390RD 2E N/ RD 1 1/2 N E into | | | | | | | |
| Lease | Waugh B | | | Well No. | 4 | | | 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 | Discovery #2 | | | | | | | | | | | | | | |
| Type Job | Production String | | | | | | | | | | | | | | |
| Hole Size | 7 7/8 | | | T.D. | 3100 | | | Charge To | J.O. Farmer | | | | | | |
| Csg. | 5 1/2 14# | | | Depth | 3097 | | | 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. | 35' | | | Shoe Joint | 35' | | | Cement Amount Ordered | 200 ^{com} 10/ salt 5/ Gilsonite | | | | | | |
| Meas Line | | | | Displace | 74 3/4 B/L | | | 500 gal mud Clear 20 B/L KCL | | | | | | | |
| EQUIPMENT | | | | | | | | Common 200 | | | | | | | |
| Pumptrk | 16 | No. | Cement | Craig | | | Poz. Mix | | | | | | | | |
| | | | Helper | David | | | | | | | | | | | |
| Bulktrk | | No. | Driver | David | | | Gel. | | | | | | | | |
| Bulktrk | 9 | No. | Driver | Tom/L | | | Calcium | | | | | | | | |
| JOB SERVICES & REMARKS | | | | | | | | Hulls | | | | | | | |
| Remarks: | | | | | | | Salt 17 | | | | | | | | |
| Rat Hole | 30SK | | | | | | Flowseal | | | | | | | | |
| Mouse Hole | | | | | | | Kol-Seal 900# | | | | | | | | |
| Centralizers | | | | | | | Mud CLR 48 500 gal | | | | | | | | |
| Baskets | | | | | | | CFL-117 or CD110 CAF 38 | | | | | | | | |
| D/V or Port Collar | | | | | | | Sand | | | | | | | | |
| 5 1/2 sets @ 3097. Baffle @ 3062 | | | | | | | | Handling 226 | | | | | | | |
| Est. Circulation - Pump 500 gal mud | | | | | | | | Mileage | | | | | | | |
| Clear of 10 B/L KCL. Plug Rathole w/ | | | | | | | | FLOAT EQUIPMENT | | | | | | | |
| 30SK - Cement 5 1/2 with 170SK. | | | | | | | | Guide Shoe | | | | | | | |
| Clear lines & Displace Plug. 1 1/2 | | | | | | | | Centralizer 2 | | | | | | | |
| 9 B/L KCL. | | | | | | | | Baskets 1 | | | | | | | |
| Lift pressure 700# | | | | | | | | AFU Inserts | | | | | | | |
| Plug lander @ 1500# | | | | | | | | Float Shoe 1 | | | | | | | |
| | | | | | | | | Latch Down 1 | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | Pumptrk Charge prod string | | | | | | | |
| | | | | | | | | Mileage 80 | | | | | | | |
| | | | | | | | | Tax | | | | | | | |
| | | | | | | | | Discount | | | | | | | |
| | | | | | | | | Total Charge | | | | | | | |
| Signature <i>Mike B. [unclear]</i> | | | | | | | | | | | | | | | |

Thanks
6

AUSTIN B. KLAUS

PO BOX 352
Russell, KS 67665

Cell 785.650.3629 PO BOX 352
 Work 785.483.3145 Russell, KS 67665
 Ext 225 austin.klaus@johnofarmer.com

Scale 1:240 (3"=100') Imperial
 Measured Depth Log

Well Name: Waugh B #4
 Location: Wabaunsa County, Region: Kansas
 License Number: APT 616-0203100-00 Drilling Completed: 7/19/2019
 Surface Coordinates: Section: 15 Township: 15 South, Range: 17 East
 UTM: 16Q UTM: 48Q UTM: 16Q
 Bottom Hole Coordinates: Vertical well w/ minimal deviation, same as above
 Ground Elevation (ft): 1,200 To: RTD K.B. Elevation (ft): 1,200
 Logged Interval (ft): 2,200 Total Depth (ft): 3,100
 Formation: Miss-Murphy
 Type of Drilling Fluid: Chemical (Andy's Mud)
Powered by STRIP LOGS from IntelliLog Systems 1-800-647-1324 www.IntelliLog.com

OPERATOR

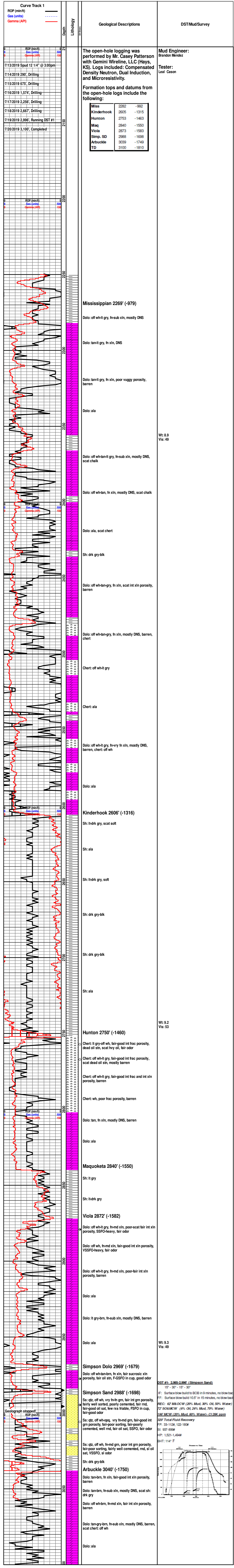
Company: John O. Farmer, Inc.
 Address: 210 W. Wichita Ave.
 Russell, KS 67665

Comments

The Waugh B #4 well was drilled by Discovery Drilling Rig #7 (Tom Puster-Terry Wickham).
 The location for the Waugh B #4 well encountered in 2D seismic. Most samples were gathered and evaluated from 2,200' - 2,100'. Oil shows were encountered in the Hunton, Viola, & Simpson Sand. Structurally, the Mississippi top was picked 11 feet in the composite well. Waugh B #4 (John O. Farmer, Inc.). Structural thinning occurred through the Mississippi, which resulted in a Kinderhook picked 8' high to the completion well. The Kinderhook section thinned and the Hunton was encountered 2' low. The primary pay zone (Simpson Sand) was picked 7' low in the composition well. A drill stem test was conducted over the top 8' of the Simpson Sand, which resulted in oil-mud cut water. After evaluation of all oil shows, DST results, & electric logs, it was decided that 5 1/2" production casing be set to utilize the Waugh B #4 as a DWSOP well.

| ROCK TYPES | | | |
|------------|-----------|--|-----------|
| | Sandstone | | Limestone |
| | Shale | | Siltstone |
| | Claystone | | Gypsum |
| | Salt | | Anhydrite |
| | Other | | Other |

| OTHER SYMBOLS | |
|---------------|------------------|
| | Spotted |
| | Dotted |
| | Cross-hatched |
| | Horizontal lines |
| | Vertical lines |
| | Diagonal lines |
| | Wavy lines |
| | Stippled |





DRILL STEM TEST REPORT

Prepared For: **John O Farmer inc**

PO Box 352
Russel, KS 67665

ATTN: Austin Klaus

Waugh B #4

18-15S-12E Wabaunsee,KS

Start Date: 2019.07.19 @ 04:32:00

End Date: 2019.07.19 @ 09:26:02

Job Ticket #: 65883 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.07.19 @ 11:53:33



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer inc

18-15S-12E Wabaunsee,KS

PO Box 352
Russel, KS 67665

Waugh B #4

Job Ticket: 65883

DST#: 1

ATTN: Austin Klaus

Test Start: 2019.07.19 @ 04:32:00

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:00:02

Time Test Ended: 09:26:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 74

Interval: 2985.00 ft (KB) To 2996.00 ft (KB) (TVD)

Reference Elevations: 1290.00 ft (KB)

Total Depth: 2996.00 ft (KB) (TVD)

1282.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8875

Inside

Press@RunDepth: 179.97 psig @ 2986.00 ft (KB)

Capacity: psig

Start Date: 2019.07.19

End Date:

2019.07.19

Last Calib.:

2019.07.19

Start Time: 04:32:01

End Time:

09:26:02

Time On Btm:

2019.07.19 @ 05:59:17

Time Off Btm:

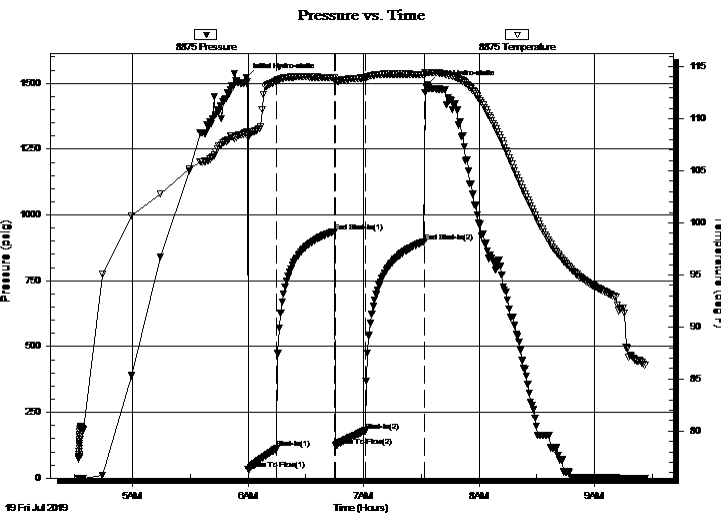
2019.07.19 @ 07:33:02

TEST COMMENT: IF: Strong Blow , BOB in 9 minutes, Built to 16"

IS: No Blow Back

FF: Fair Blow , Built to 10 1/2"

FS: No Blow Back



PRESSURE SUMMARY

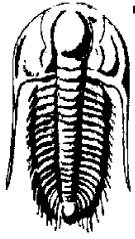
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1521.66 | 108.66 | Initial Hydro-static |
| 1 | 32.89 | 108.19 | Open To Flow (1) |
| 16 | 111.78 | 113.62 | Shut-In(1) |
| 46 | 937.05 | 113.87 | End Shut-In(1) |
| 47 | 122.35 | 113.57 | Open To Flow (2) |
| 62 | 179.97 | 113.93 | Shut-In(2) |
| 93 | 899.10 | 114.28 | End Shut-In(2) |
| 94 | 1493.65 | 114.41 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------|--------------|
| 62.00 | OMCW 30%O 20%M 50%W | 0.47 |
| 186.00 | MCW 20%M 80%W | 1.46 |
| 72.00 | SOMCW 6%O 24%M 70%W | 1.01 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer inc

18-15S-12E Wabaunsee,KS

PO Box 352
Russel, KS 67665

Waugh B #4

Job Ticket: 65883

DST#: 1

ATTN: Austin Klaus

Test Start: 2019.07.19 @ 04:32:00

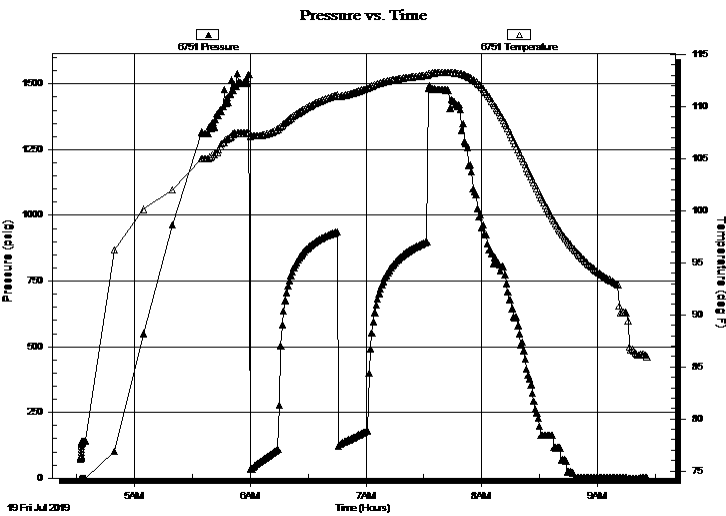
GENERAL INFORMATION:

Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 06:00:02
 Tester: Leal Cason
 Time Test Ended: 09:26:02
 Unit No: 74
 Interval: **2985.00 ft (KB) To 2996.00 ft (KB) (TVD)**
 Reference Elevations: 1290.00 ft (KB)
 Total Depth: 2996.00 ft (KB) (TVD) 1282.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 8.00 ft

Serial #: 6751 **Outside**

Press@RunDepth: psig @ 2986.00 ft (KB) Capacity: psig
 Start Date: 2019.07.19 End Date: 2019.07.19 Last Calib.: 2019.07.19
 Start Time: 04:32:01 End Time: 09:26:02 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 9 minutes, Built to 16"
 IS: No Blow Back
 FF: Fair Blow , Built to 10 1/2"
 FS: No Blow Back



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------|--------------|
| 62.00 | OMCW 30%O 20%M 50%W | 0.47 |
| 186.00 | MCW 20%M 80%W | 1.46 |
| 72.00 | SOMCW 6%O 24%M 70%W | 1.01 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer inc

18-15S-12E Wabaunsee,KS

PO Box 352
Russel, KS 67665

Waugh B #4

Job Ticket: 65883

DST#: 1

ATTN: Austin Klaus

Test Start: 2019.07.19 @ 04:32:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 2753.00 ft | Diameter: 3.80 inches | Volume: 38.62 bbl | Tool Weight: | 2100.00 lb |
| Heavy Wt. Pipe: | Length: 242.00 ft | Diameter: 2.80 inches | Volume: 1.84 bbl | Weight set on Packer: | 25000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 2.25 inches | Volume: 0.00 bbl | Weight to Pull Loose: | 60000.00 lb |
| | | | <u>Total Volume: 40.46 bbl</u> | Tool Chased | ft |
| Drill Pipe Above KB: | 29.00 ft | | | String Weight: Initial | 53000.00 lb |
| Depth to Top Packer: | 2985.00 ft | | | Final | 54000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 11.00 ft | | | | |
| Tool Length: | 30.00 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments: Shale Packer on Top

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|--------------|------------|----------|------------|----------------------------|
| Shut In Tool | 5.00 | | | 2971.00 | |
| Hydraulic tool | 5.00 | | | 2976.00 | |
| Packer - Shale | 5.00 | | | 2981.00 | |
| Packer | 4.00 | | | 2985.00 | 19.00 Bottom Of Top Packer |
| Stubb | 1.00 | | | 2986.00 | |
| Recorder | 0.00 | 8875 | Inside | 2986.00 | |
| Recorder | 0.00 | 6751 | Outside | 2986.00 | |
| Perforations | 7.00 | | | 2993.00 | |
| Bullnose | 3.00 | | | 2996.00 | 11.00 Anchor Tool |
| Total Tool Length: | 30.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer inc

18-15S-12E Wabaunsee,KS

PO Box 352
Russel, KS 67665

Waugh B #4

Job Ticket: 65883

DST#: 1

ATTN: Austin Klaus

Test Start: 2019.07.19 @ 04:32:00

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:

28000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|---------------------|----------------|
| 62.00 | OMCW 30%O 20%M 50%W | 0.472 |
| 186.00 | MCW 20%M 80%W | 1.455 |
| 72.00 | SOMCW 6%O 24%M 70%W | 1.010 |

Total Length: 320.00 ft Total Volume: 2.937 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

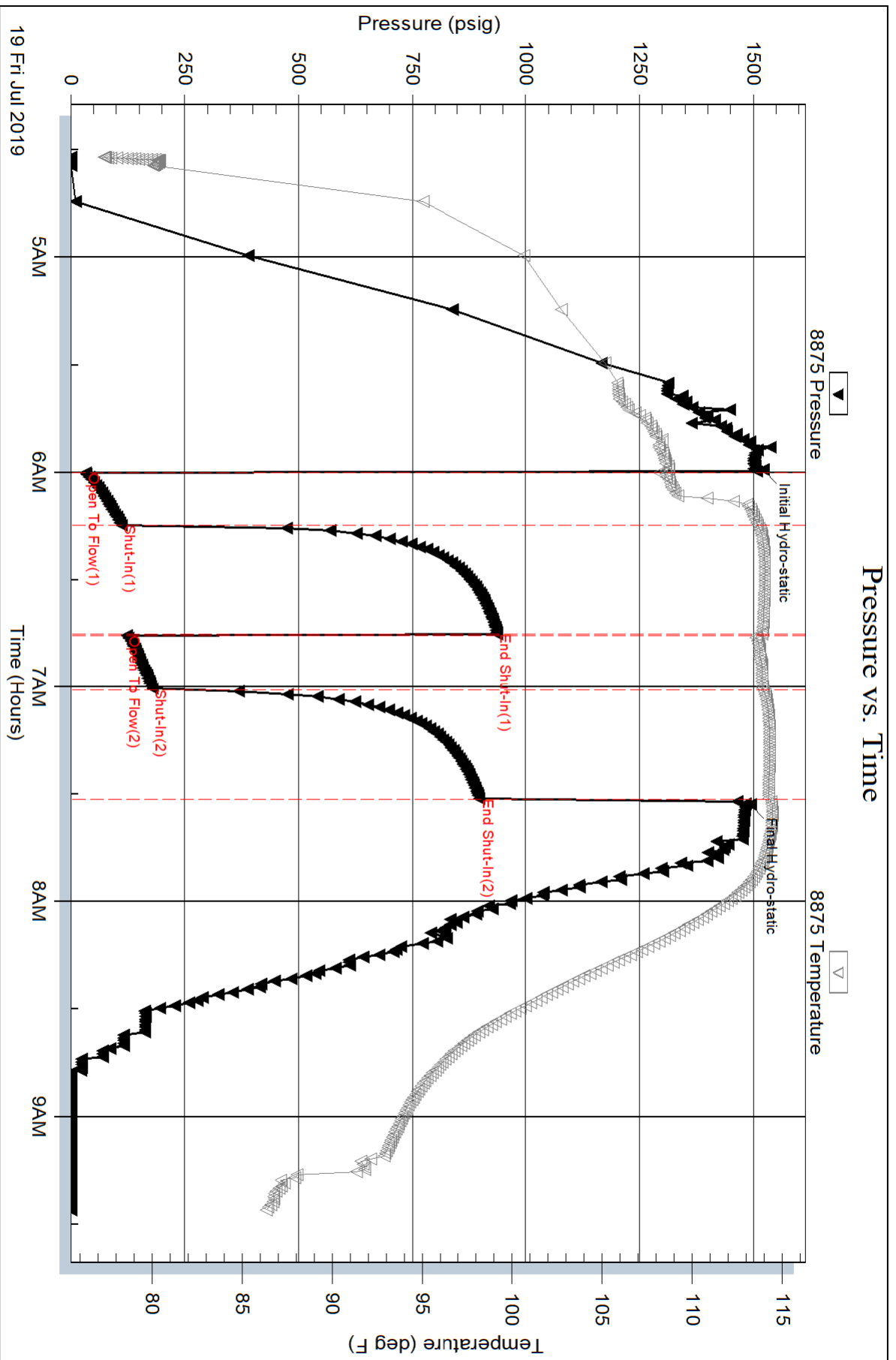
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .21 @ 80 degrees

Pressure vs. Time

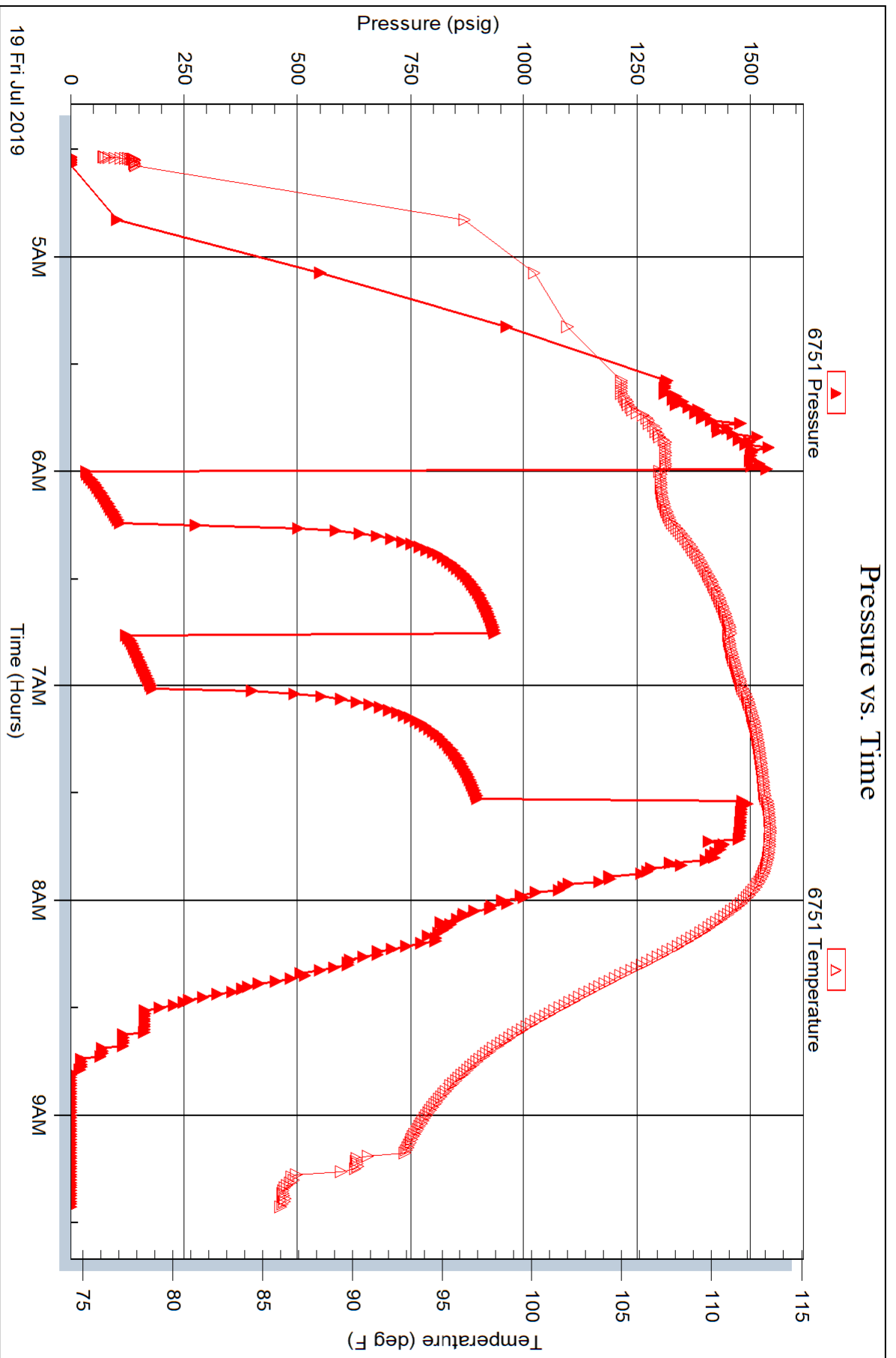


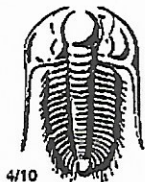
Serial #: 6751

Outside John O Farmer inc

Waugh B #4

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65883

NO.

Well Name & No. Wagh B 4 Test No. 1 Date 07/19/19
 Company John O Farmer Inc Elevation 1290 KB 1282 GL
 Address PO BOX 352 Russel, KS 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery 2
 Location: Sec. 18 Twp 15 S Rge. 12 E Co. Wabaunsee State KS

Interval Tested 2985 - 2996 Zone Tested Simpson
 Anchor Length 11 Drill Pipe Run 2753 Mud Wt. 9.2
 Top Packer Depth 2980 Drill Collars Run 0 Vis 53
 Bottom Packer Depth 2985 Wt. Pipe Run 242.94 WL 8.8
 Total Depth 2996 Chlorides 1000 ppm System LCM 1

Blow Description IF: Strong Blow, BOB in 9 minutes, Built to 16 inches

ESI: NO Blow Back

FF: Fair Blow, Built to 10 1/2 inches

FSI: NO Blow Back

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------------------|-----------------------|-----------|-----------|-----------|---------|
| <u>72</u> | <u>50 MCW</u> | <u>6</u> | <u>70</u> | <u>24</u> | <u></u> |
| <u>176</u> | <u>MCW</u> | <u></u> | <u>80</u> | <u>20</u> | <u></u> |
| <u>62</u> | <u>0 CMW</u> | <u>30</u> | <u>50</u> | <u>20</u> | <u></u> |
| <u></u> | <u></u> | <u></u> | <u></u> | <u></u> | <u></u> |
| <u></u> | <u></u> | <u></u> | <u></u> | <u></u> | <u></u> |

Rec Total 320 BHT 114 Gravity N/C API RW .21 @ 80 ° F Chlorides 28000 ppm

(A) Initial Hydrostatic 1521 Test 1200 T-On Location 04:00
 (B) First Initial Flow 33 Jars T-Started 04:32
 (C) First Final Flow 112 Safety Joint T-Open 06:00
 (D) Initial Shut-In 937 Circ Sub T-Pulled 07:31
 (E) Second Initial Flow 122 Hourly Standby T-Out 09:26
 (F) Second Final Flow 180 Mileage (380) 330 Comments
 (G) Final Shut-In 899 Sampler
 (H) Final Hydrostatic 1494 Straddle
 Shale Packer 250 EM Tool
 Extra Packer Ruined Shale Packer
 Extra Recorder Ruined Packer
 Day Standby Extra Copies
 Accessibility Sub Total 0
 Sub Total 1780 Total 1780 MP/DST Disc't

Approved By _____ Our Representative [Signature]

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.

Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513



Phone: 316-337-6200
Fax: 346-337-6211
<http://kcc.ks.gov/>

Dwight D. Keen, Chair
Shari Feist Albrecht, Commissioner
Susan K. Duffy, Commissioner

Laura Kelly, Governor

November 12, 2019

Marge Schulte
Farmer, John O., Inc.
370 W WICHITA AVE
PO BOX 352
RUSSELL, KS 67665-2635

Re: ACO-1
API 15-197-20311-00-00
WAUGH B 4
SW/4 Sec.18-15S-12E
Wabaunsee County, Kansas

Dear Marge Schulte:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 07/13/2019 and the ACO-1 was received on November 11, 2019 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department