

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 | Deutsch, Kent A. dba Deutsch Oil Company |
| Well Name | BRADSHAW 1-3 |
| Doc ID | 1490861 |

All Electric Logs Run

| |
|-----------------|
| |
| Neutron/Density |
| Dual Induction |
| Micro |
| Frac Finder |

QUALITY WELL SERVICE, INC.

7221

Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124

Mailing Address P.O. Box 468

Office 620-727-3410

Fax 620-672-3663

Rich's Cell 620-727-3409

Brady's Cell 620-727-6964

| Date | Sec. | Twp. | Range | County | State | On Location | Finish |
|--|------|---------------|-------|---|-------|-------------|--------|
| 9-9-19 | 13 | 20S | 11W | PRATT | Ks | | |
| Lease BRADSHAW | | Well No. #1-3 | | Location Preston Ks N to 110 th SE E to 120 th AVE | | | |
| Contractor Pickrell Orlg Rig #10 | | | | Owner 3/4 N E into | | | |
| Type Job SURFACE | | | | To Quality Well Service, Inc. 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 12 1/4 | | T.D. 308 | | | | | |
| Csg. 8 5/8 23' | | Depth 307 | | Charge To Deutch OIL Co. | | | |
| Tbg. Size | | Depth | | Street | | | |
| Tool | | Depth | | City State | | | |
| Cement Left in Csg. 20 | | Shoe Joint 20 | | The above was done to satisfaction and supervision of owner agent or contractor. | | | |
| Meas Line | | Displace 13.4 | | Cement Amount Ordered 325# Common | | | |
| EQUIPMENT | | | | | | | |
| Pumptrk 8 | No. | | | Common 325 SX | | | |
| Bulktrk 7 | No. | | | Poz. Mix | | | |
| Bulktrk | No. | | | Gel. 611 # | | | |
| Pickup | No. | | | Calcium 917 # | | | |
| JOB SERVICES & REMARKS | | | | | | | |
| Rat Hole | | | | Hulls | | | |
| Mouse Hole | | | | Salt | | | |
| Centralizers | | | | Flowseal 163 # | | | |
| Baskets | | | | Kol-Seal | | | |
| D/V or Port Collar | | | | Mud CLR 48 | | | |
| Run 7 J's 8 5/8 23" Csg set @ 307 | | | | CFL-117 or CD110 CAF 38 | | | |
| START Csg Csg on Bottom | | | | Sand | | | |
| Hook up to Csg & Break circ w/REG | | | | Handling 349 | | | |
| START Pumping 6 Bbls H2O | | | | Mileage 20 / 6930 | | | |
| START mix! Pump 325 SX Common | | | | 8 5/8 FLOAT EQUIPMENT | | | |
| 2 1/2 GEL 3 1/2 CC 1/2" PS @ 14.8" / GAL | | | | Guide Shoe HEAD & MANIFOLD 1EA | | | |
| SHUT DOWN RELEASE 8 5/8 WOODEN PLUG | | | | Centralizer 8 5/8 WOODEN PLUG 1EA | | | |
| START DISP | | | | Baskets | | | |
| PLUG DOWN 13.4 Bbls out | | | | AFU Inserts | | | |
| GOOD CIRC thru JOB | | | | Float Shoe | | | |
| CIRC CUT TO PET | | | | Latch Down | | | |
| THANK YOU | | | | SERVICE Sppv 1EA | | | |
| PLEASE CALL AGAIN | | | | LMV 20 | | | |
| TODD TS JAIG | | | | Pumptrk Charge SURFACE | | | |
| | | | | Mileage 40 | | | |
| | | | | Tax | | | |
| | | | | Discount | | | |
| | | | | Total Charge | | | |
| X Signature Doug Brady | | | | | | | |

BASIC

energy services, L.P.

TREATMENT REPORT

| | | | | | |
|-------------------------------------|------------------|-----------------|-------------------|--------------------------------|-------------|
| Customer Deutsch oil company | | Lease No. | | Date 9-18-19 | |
| Lease Brodshaw | | Well # -1-3 | | | |
| Field Order # 18289 | Station Pratt | Casing 5 1/2 | Depth LTD 4196 | County Pratt | State KS |
| Type Job 2:42 5 1/2" Long string | | | Formation | Legal Description 3-265-11W | |

| PIPE DATA | | PERFORATING DATA | | FLUID USED | | TREATMENT RESUME | | |
|-----------------------|--------------|------------------|----|-------------------|--------------------|------------------|------|--|
| Casing Size 5 1/2 | Tubing Size | Shots/Ft | | Acid 55 60/4 | RATE 4 1/2 | PRESS 5 | ISIP | |
| Depth 4198 | Depth | From | To | Pre Pad 175 AA | Max Deutsch Blm | 15 Min. | | |
| Volume 97.4 | Volume | From | To | Pad | Min | 10 Min. | | |
| Max Press 1150 | Max Press | From | To | Frac | Avg | 15 Min. | | |
| Well Connection 42 | Annulus Vol. | From | To | | HHP Used | Annulus Pressure | | |
| Plug Depth 4177 | Packer Depth | From | To | Flush 96.9 | Gas Volume | Total Load | | |

| | | |
|---|------------------------------|-------------------|
| Customer Representative David Homish | Station Manager Westerman | Treater MATTAI |
|---|------------------------------|-------------------|

| | | | | |
|------------------------|--------|-------|----------|-------|
| Service Units 83353 | 77656 | 86779 | 19960 | 21010 |
| Driver Names MATTAI | Mcgraw | | CLARENCE | |

| Time | Casing Pressure | Tubing Pressure | Bbls. Pumped | Rate | Service Log |
|------|-----------------|-----------------|--------------|------|------------------------------------|
| 9:30 | | | | | ON LOCATION / SAFETY MEETINGS |
| 2:50 | | | | | Run 5 1/2" casing - 20.45' shot |
| | | | | | Bottom on top of 7 |
| | | | | | TURBOS 1, 3, 5, 7, 9, 11, 13 |
| 5:00 | | | | | Casing on bottom |
| 5:30 | | | | | Hook to casing / Break circ w. Rig |
| 6:45 | 250 | | 12 | 4 | PUMP 12 bbl mud flush |
| 6:49 | 250 | | 5 | 4 | PUMP 5 bbl water |
| 6:52 | 250 | | 6 | 4 | Mix 35 SKI SCARVES |
| 6:52 | 225 | | 45 | 5 | Mix 175 SKI AA-2 |
| 7:00 | | | 4 | 4 | WASH PUMP + LINE / DROP PLUG |
| 7:10 | 130 | | - | 6.3 | START displacement |
| 7:21 | 220 | | 65 | 6.3 | LIFT Pressure |
| 7:25 | 510 | | 86 | 3 | SLOW rate |
| 7:27 | 1500 | | 96.9 | | plug down, release + hold |
| | | | | | Plug RAT hole |
| | | | | | circulation thru job |
| | | | | | JOB COMPLETE |
| | | | | | Thank You! |
| | | | | | MIKE MATTAI |
| | | | | | MIKE + CLARENCE |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Deutsch Oil Co
8100 E 22nd St N Bldg 600
Wichita, KS 67226
ATTN: Logan Walker

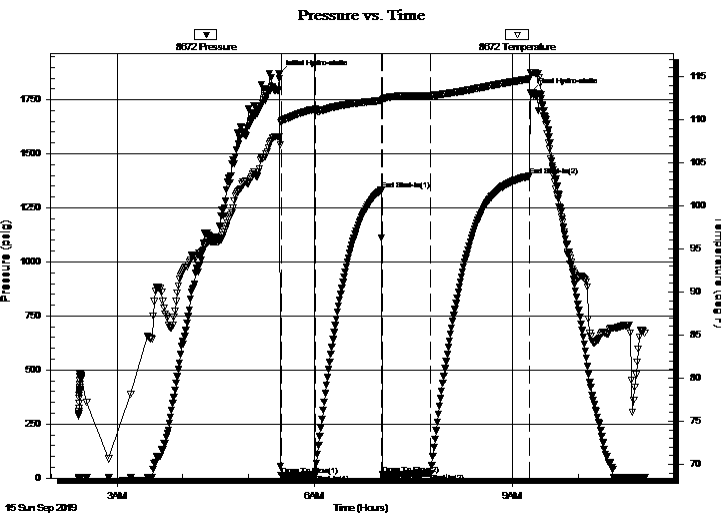
3-26S-11W Pratt
Bradshaw 1-3
Job Ticket: 65906 **DST#: 1**
Test Start: 2019.09.15 @ 02:25:00

GENERAL INFORMATION:

Formation: **Hertha**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:29:32
Time Test Ended: 11:01:02
Interval: **3846.00 ft (KB) To 3861.00 ft (KB) (TVD)**
Total Depth: 3861.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 74
Reference Elevations: 1829.00 ft (KB)
1824.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8672 **Inside**
Press@RunDepth: 22.25 psig @ 3847.00 ft (KB) Capacity: psig
Start Date: 2019.09.15 End Date: 2019.09.15 Last Calib.: 2019.09.15
Start Time: 02:25:01 End Time: 11:01:02 Time On Btm: 2019.09.15 @ 05:27:32
Time Off Btm: 2019.09.15 @ 09:17:02

TEST COMMENT: IF: Strong Blow , BOB in 3 minutes, Built to 64 inches
IS: No Blow Back
FF: Strong Blow , BOB Immediate, Built to 243 inches
FS: No Blow Back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1868.49 | 108.00 | Initial Hydro-static |
| 2 | 12.42 | 109.63 | Open To Flow (1) |
| 33 | 15.87 | 111.20 | Shut-In(1) |
| 93 | 1331.70 | 112.21 | End Shut-In(1) |
| 95 | 16.64 | 112.35 | Open To Flow (2) |
| 139 | 22.25 | 112.75 | Shut-In(2) |
| 229 | 1396.78 | 114.77 | End Shut-In(2) |
| 230 | 1782.42 | 115.47 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------|--------------|
| 0.00 | 2001 GIP | 0.00 |
| 15.00 | SOGCM 2%G 2%O 96%M | 0.21 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Deutsch Oil Co
8100 E 22nd St N Bldg 600
Wichita, KS 67226
ATTN: Logan Walker

3-26S-11W Pratt
Bradshaw 1-3
Job Ticket: 65906 **DST#: 1**
Test Start: 2019.09.15 @ 02:25:00

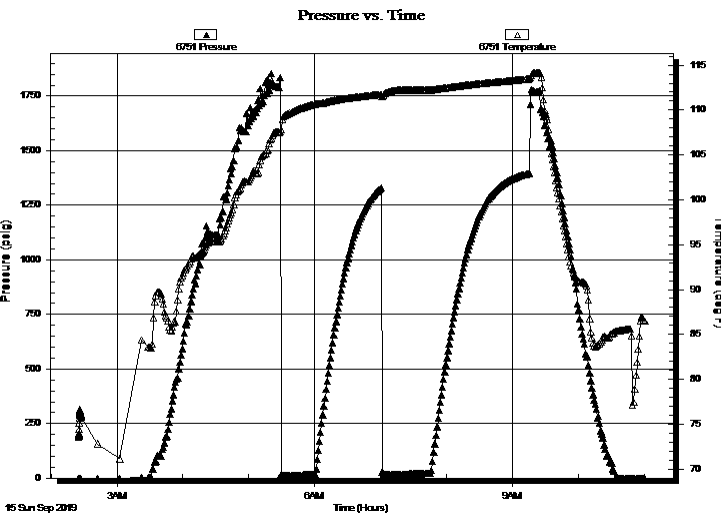
GENERAL INFORMATION:

Formation: **Hertha**
Deviated: No Whipstock: ft (KB)
Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 05:29:32
Tester: Leal Cason
Time Test Ended: 11:01:02
Unit No: 74
Interval: 3846.00 ft (KB) To 3861.00 ft (KB) (TVD)
Reference Elevations: 1829.00 ft (KB)
Total Depth: 3861.00 ft (KB) (TVD) 1824.00 ft (CF)
Hole Diameter: 7.88 inches
Hole Condition: Good
KB to GR/CF: 5.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 3847.00 ft (KB) Capacity: psig
Start Date: 2019.09.15 End Date: 2019.09.15 Last Calib.: 2019.09.15
Start Time: 02:25:01 End Time: 11:01:02 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 3 minutes, Built to 64 inches
IS: No Blow Back
FF: Strong Blow , BOB Immediate, Built to 243 inches
FS: No Blow Back



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------|--------------|
| 0.00 | 2001 GIP | 0.00 |
| 15.00 | SOGCM 2%G 2%O 96%M | 0.21 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Deutsch Oil Co

3-26S-11W Pratt

8100 E 22nd St N Bldg 600
Wichita, KS 67226

Bradshaw 1-3

Job Ticket: 65906

DST#: 1

ATTN: Logan Walker

Test Start: 2019.09.15 @ 02:25:00

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------------|---------------|
| 0.00 | 2001 GIP | 0.000 |
| 15.00 | SOGCM 2%G 2%O 96%M | 0.210 |

Total Length: 15.00 ft Total Volume: 0.210 bbl

Num Fluid Samples: 0

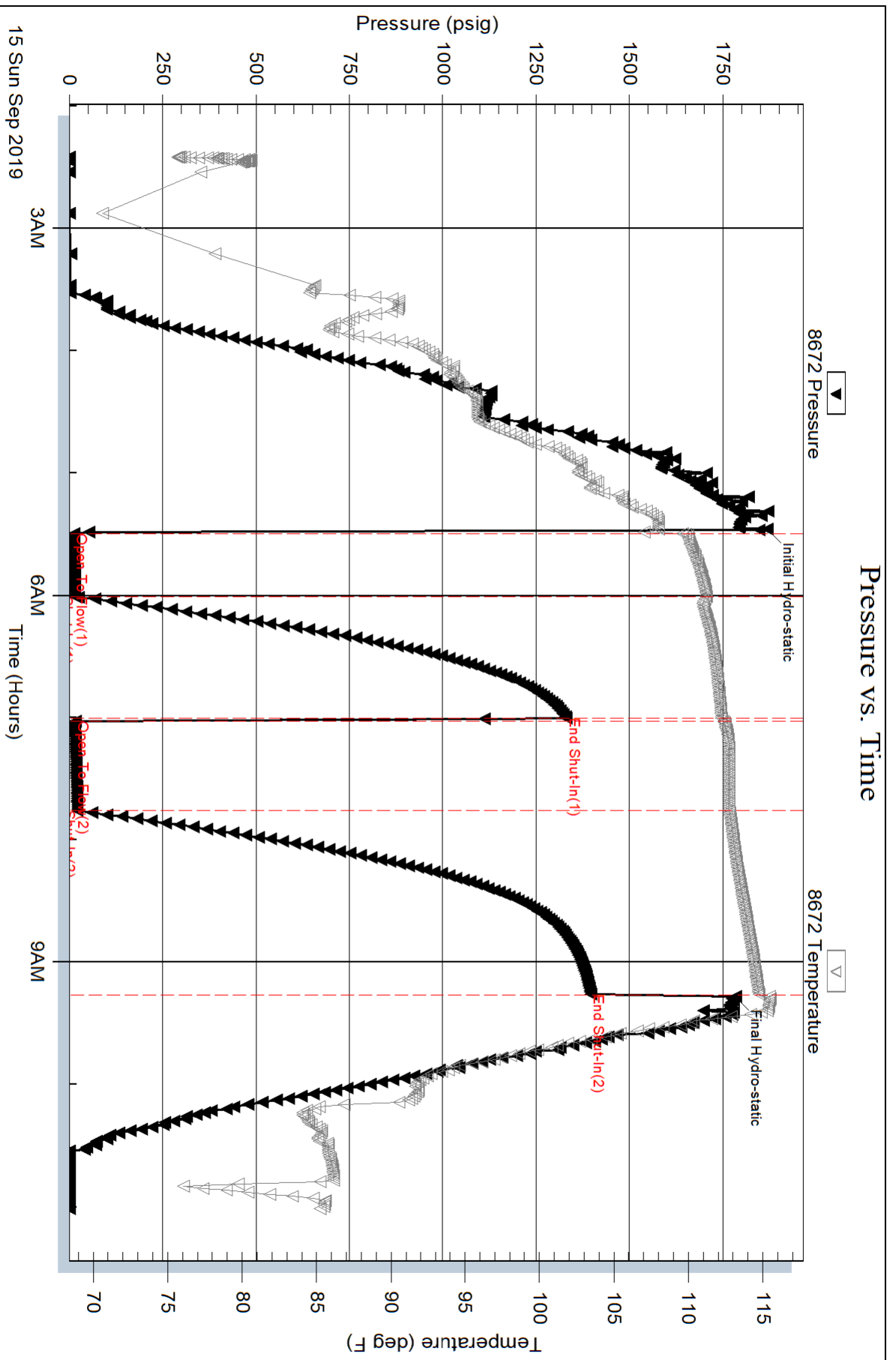
Num Gas Bombs: 0

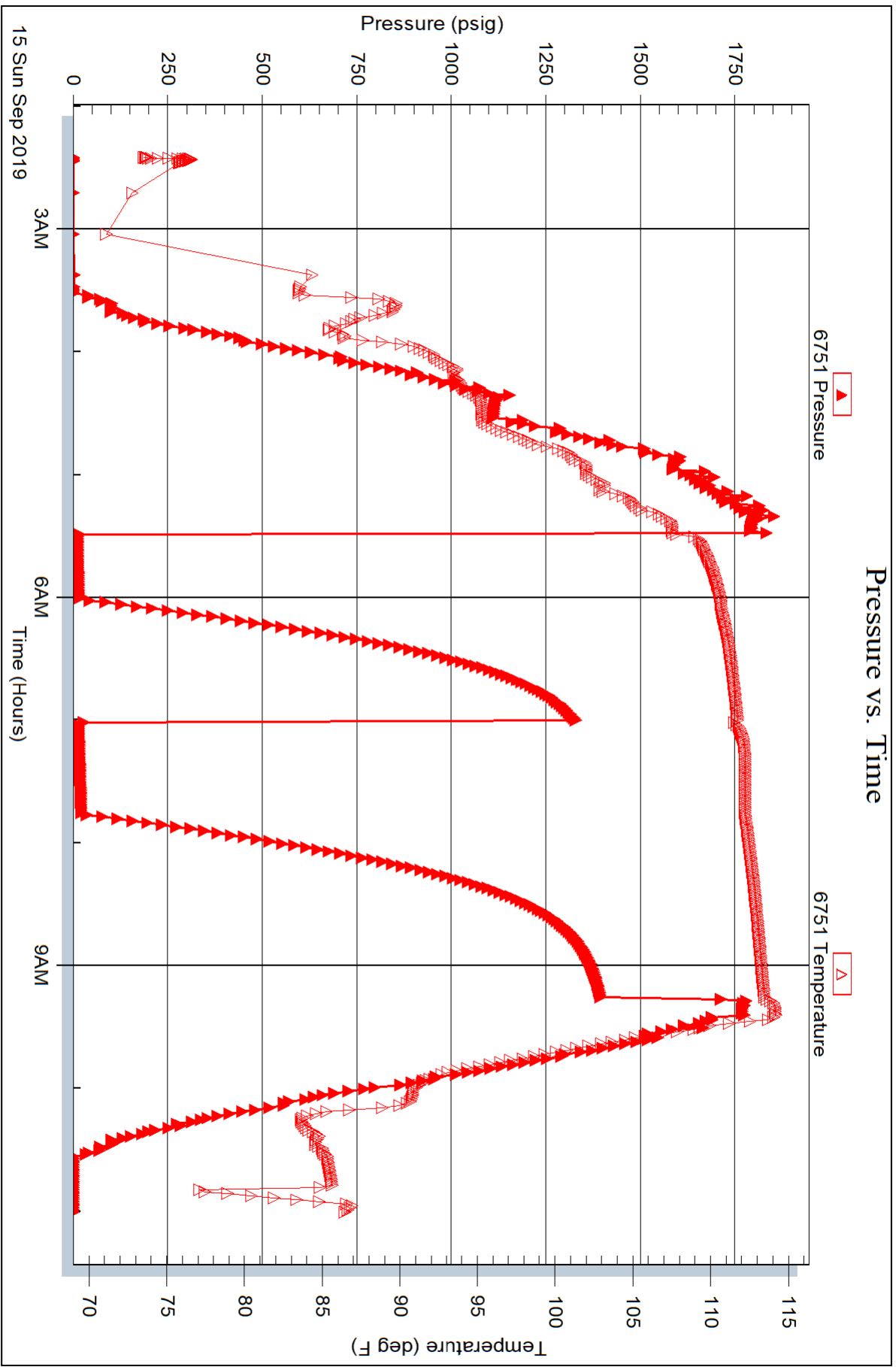
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Deutsch Oil Co
 8100 E 22nd St N Bldg 600
 Wichita, KS 67226
 ATTN: Logan Walker

3-26S-11W Pratt
Bradshaw 1-3
 Job Ticket: 65907 **DST#: 2**
 Test Start: 2019.09.16 @ 01:17:00

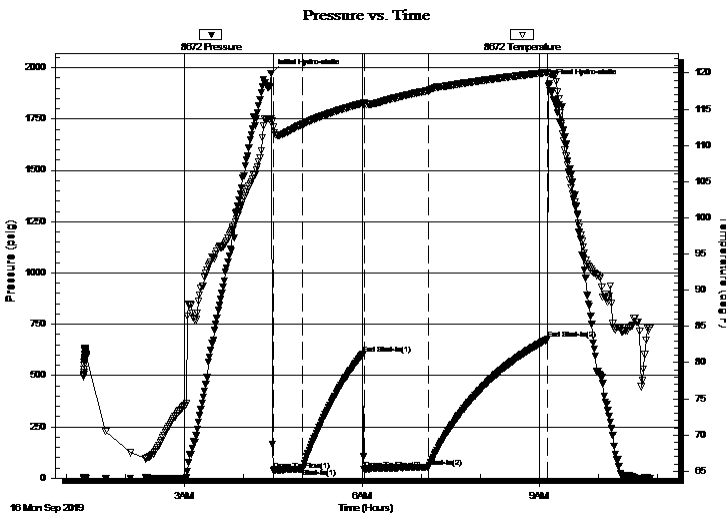
GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:30:02
 Time Test Ended: 10:52:47
 Interval: **3972.00 ft (KB) To 4042.00 ft (KB) (TVD)**
 Total Depth: 4042.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1829.00 ft (KB)
 1824.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8672 **Inside**
 Press@RunDepth: 53.38 psig @ 3973.00 ft (KB) Capacity: psig
 Start Date: 2019.09.16 End Date: 2019.09.16 Last Calib.: 2019.09.16
 Start Time: 01:17:01 End Time: 10:52:47 Time On Btm: 2019.09.16 @ 04:27:32
 Time Off Btm: 2019.09.16 @ 09:10:17

TEST COMMENT: IF: Strong Blow , BOB in 30 seconds, Built to 80 inches
 IS: No Blow Back
 FF: Strong Blow , BOB Immediate, Built to 126 inches
 FS: No Blow Back

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1972.19 | 113.72 | Initial Hydro-static |
| 3 | 39.49 | 112.51 | Open To Flow (1) |
| 32 | 45.45 | 112.90 | Shut-In(1) |
| 94 | 605.94 | 115.80 | End Shut-In(1) |
| 95 | 41.72 | 115.86 | Open To Flow (2) |
| 161 | 53.38 | 117.58 | Shut-In(2) |
| 282 | 677.24 | 120.07 | End Shut-In(2) |
| 283 | 1921.14 | 119.92 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------|--------------|
| 0.00 | 1913 GIP | 0.00 |
| 40.00 | GCM 5%G 95%M | 0.56 |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Deutsch Oil Co
8100 E 22nd St N Bldg 600
Wichita, KS 67226
ATTN: Logan Walker

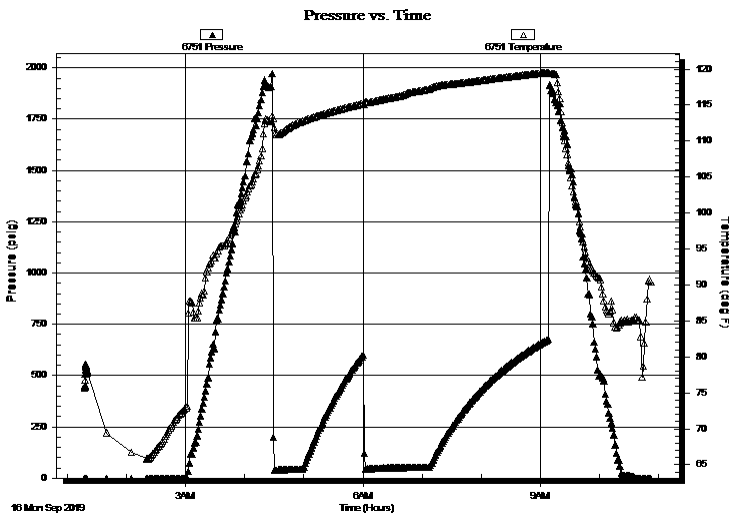
3-26S-11W Pratt
Bradshaw 1-3
Job Ticket: 65907 **DST#: 2**
Test Start: 2019.09.16 @ 01:17:00

GENERAL INFORMATION:

| | | | |
|---|----------------------|---|--|
| Formation: Mississippi | | | |
| Deviated: No Whipstock: | ft (KB) | Test Type: Conventional Bottom Hole (Reset) | |
| Time Tool Opened: 04:30:02 | | Tester: Leal Cason | |
| Time Test Ended: 10:52:47 | | Unit No: 74 | |
| Interval: 3972.00 ft (KB) To 4042.00 ft (KB) (TVD) | | Reference Elevations: 1829.00 ft (KB) | |
| Total Depth: 4042.00 ft (KB) (TVD) | | 1824.00 ft (CF) | |
| Hole Diameter: 7.88 inches | Hole Condition: Good | KB to GR/CF: 5.00 ft | |

| | | | | | |
|--|----------------------|-------------------------|--|--|--|
| Serial #: 6751 | Outside | | | | |
| Press@RunDepth: psig @ 3973.00 ft (KB) | Capacity: psig | | | | |
| Start Date: 2019.09.16 | End Date: 2019.09.16 | Last Calib.: 2019.09.16 | | | |
| Start Time: 01:17:01 | End Time: 10:52:47 | Time On Btm: | | | |
| | | Time Off Btm: | | | |

TEST COMMENT: IF: Strong Blow , BOB in 30 seconds, Built to 80 inches
 IS: No Blow Back
 FF: Strong Blow , BOB Immediate, Built to 126 inches
 FS: No Blow Back



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------|--------------|
| 0.00 | 1913 GIP | 0.00 |
| 40.00 | GCM 5%G 95%M | 0.56 |
| | | |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Deutsch Oil Co

3-26S-11W Pratt

8100 E 22nd St N Bldg 600
Wichita, KS 67226

Bradshaw 1-3

Job Ticket: 65907

DST#: 2

ATTN: Logan Walker

Test Start: 2019.09.16 @ 01:17:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------|---------------|
| 0.00 | 1913 GIP | 0.000 |
| 40.00 | GCM 5%G 95%M | 0.561 |

Total Length: 40.00 ft Total Volume: 0.561 bbl

Num Fluid Samples: 0

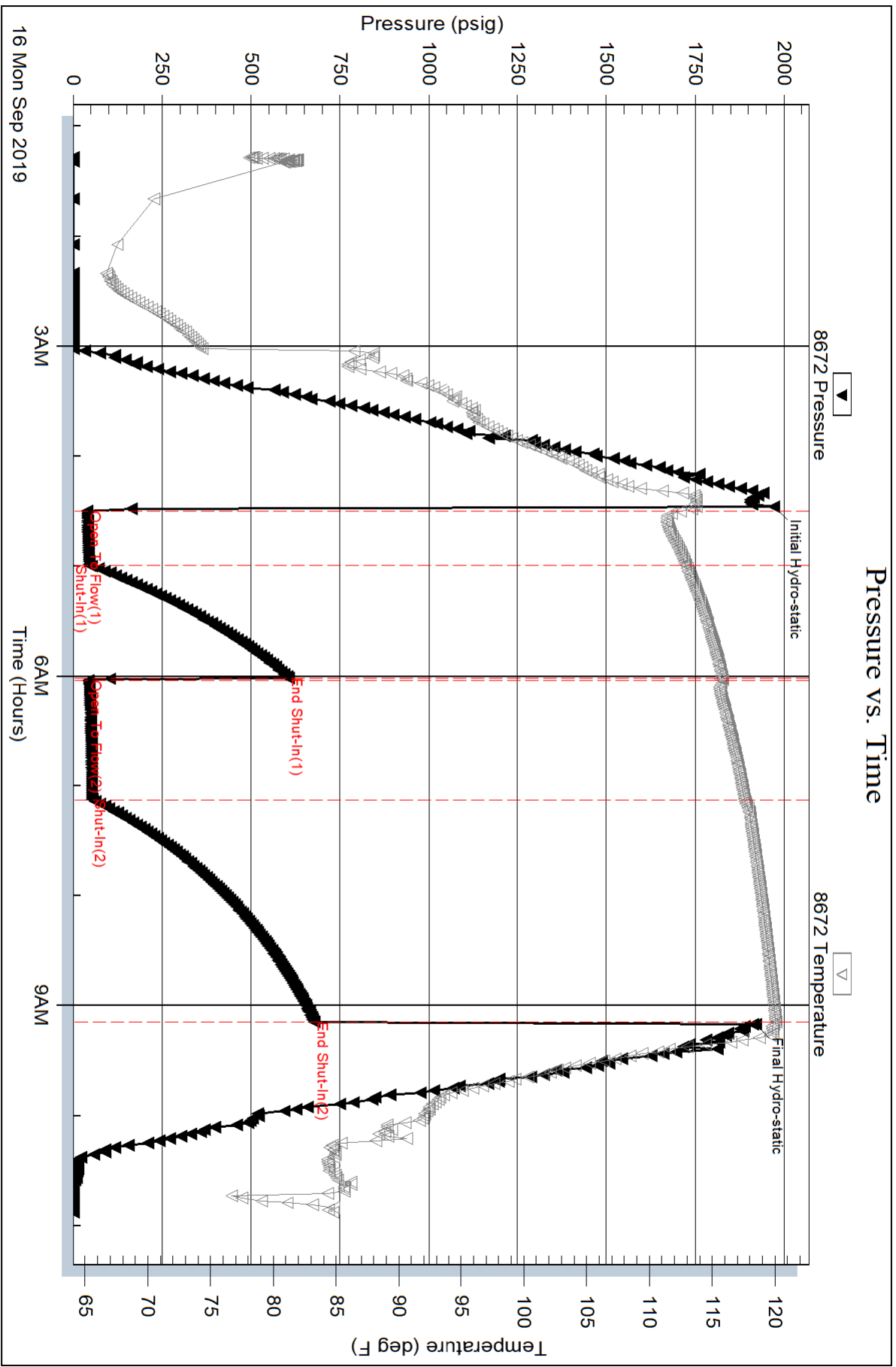
Num Gas Bombs: 0

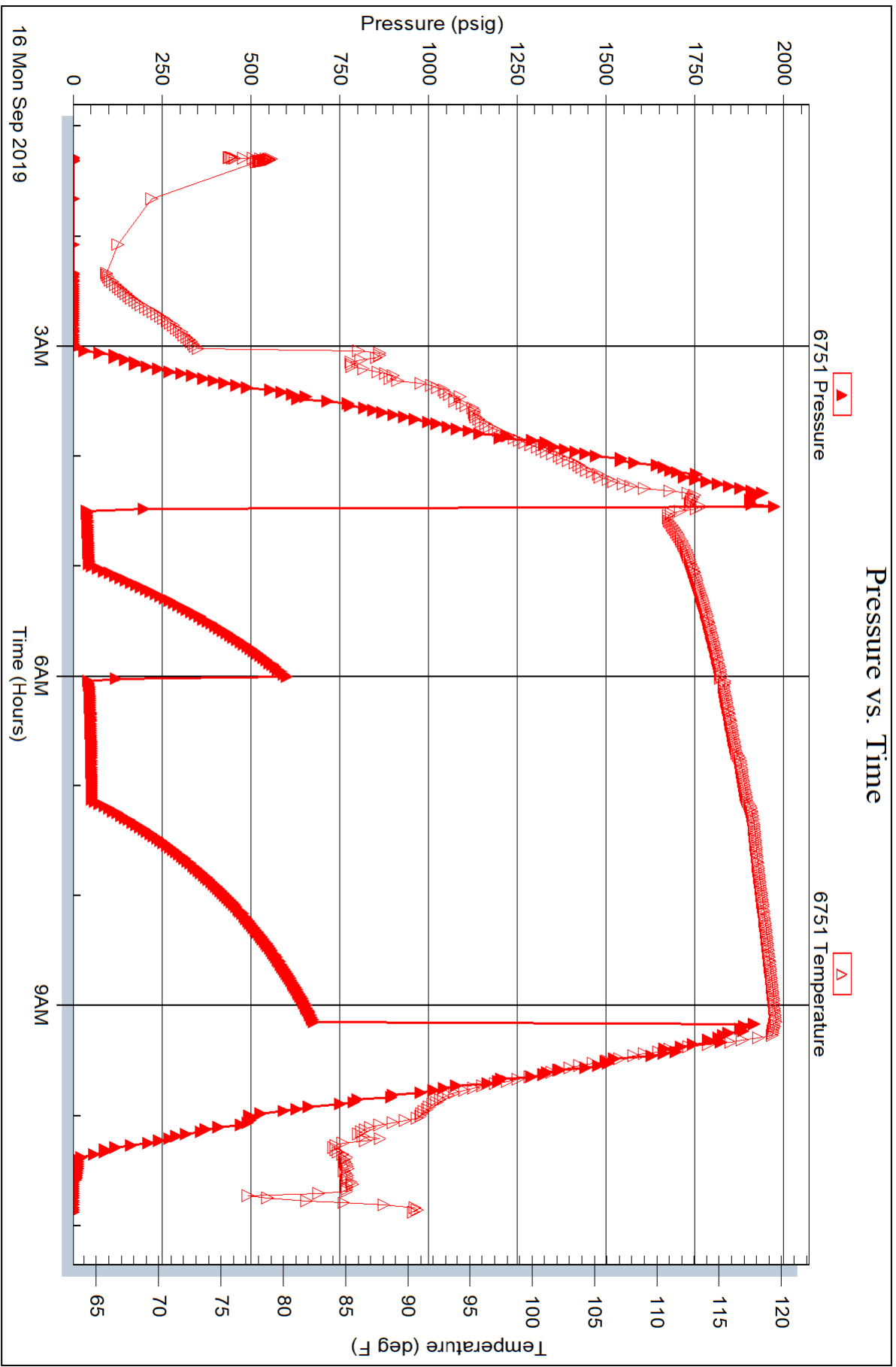
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Deutsch Oil Co
 8100 E 22nd St N Bldg 600
 Wichita, KS 67226
 ATTN: Logan Walker

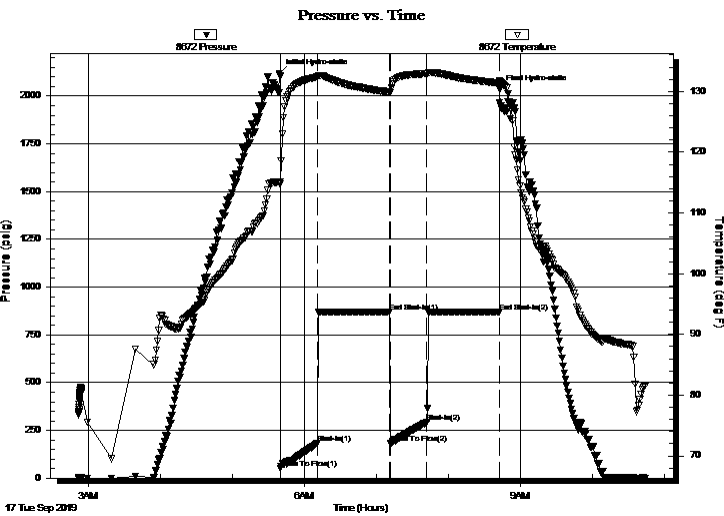
3-26S-11W Pratt
Bradshaw 1-3
 Job Ticket: 65908 **DST#: 3**
 Test Start: 2019.09.17 @ 02:52:00

GENERAL INFORMATION:

Formation: **Viola**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 05:40:17
 Tester: Leal Cason
 Time Test Ended: 10:44:02
 Unit No: 74
Interval: 4188.00 ft (KB) To 4197.00 ft (KB) (TVD)
 Reference Elevations: 1829.00 ft (KB)
 Total Depth: 4197.00 ft (KB) (TVD)
 1824.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

Serial #: 8672 **Inside**
 Press@RunDepth: 292.95 psig @ 4189.00 ft (KB) Capacity: psig
 Start Date: 2019.09.17 End Date: 2019.09.17 Last Calib.: 2019.09.17
 Start Time: 02:52:01 End Time: 10:44:02 Time On Btm: 2019.09.17 @ 05:39:32
 Time Off Btm: 2019.09.17 @ 08:43:02

TEST COMMENT: IF: Fair Blow , BOB in 9 minutes, Built to 40 inches
 IS: Blow Back Built to 1 1/2 inches
 FF: Fair Blow , BOB in 14 minutes, Built to 29 inches
 FS: 1/2 inch Blow Back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2118.79 | 114.88 | Initial Hydro-static |
| 1 | 51.32 | 115.13 | Open To Flow (1) |
| 32 | 181.56 | 132.39 | Shut-In(1) |
| 92 | 869.72 | 129.90 | End Shut-In(1) |
| 93 | 179.92 | 129.83 | Open To Flow (2) |
| 123 | 292.95 | 132.94 | Shut-In(2) |
| 183 | 870.17 | 131.41 | End Shut-In(2) |
| 184 | 2035.71 | 131.59 | Final Hydro-static |

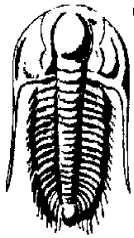
Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------|--------------|
| 0.00 | 282 GIP | 0.00 |
| 451.00 | Water | 6.33 |
| 30.00 | MCW 30%M 70%W | 0.42 |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Deutsch Oil Co
8100 E 22nd St N Bldg 600
Wichita, KS 67226
ATTN: Logan Walker

3-26S-11W Pratt
Bradshaw 1-3
Job Ticket: 65908 **DST#: 3**
Test Start: 2019.09.17 @ 02:52:00

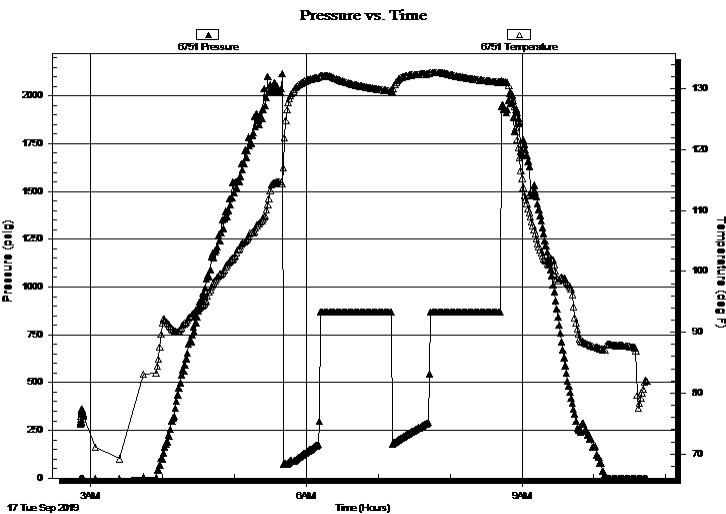
GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:40:17
Time Test Ended: 10:44:02
Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 74
Interval: 4188.00 ft (KB) To 4197.00 ft (KB) (TVD)
Reference Elevations: 1829.00 ft (KB)
1824.00 ft (CF)
Total Depth: 4197.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
KB to GR/CF: 5.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 4189.00 ft (KB) Capacity: psig
Start Date: 2019.09.17 End Date: 2019.09.17 Last Calib.: 2019.09.17
Start Time: 02:52:01 End Time: 10:44:02 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Fair Blow , BOB in 9 minutes, Built to 40 inches
IS: Blow Back Built to 1 1/2 inches
FF: Fair Blow , BOB in 14 minutes, Built to 29 inches
FS: 1/2 inch Blow Back



PRESSURE SUMMARY

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

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------|--------------|
| 0.00 | 282 GIP | 0.00 |
| 451.00 | Water | 6.33 |
| 30.00 | MCW 30%M 70%W | 0.42 |
| | | |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Deutsch Oil Co

3-26S-11W Pratt

8100 E 22nd St N Bldg 600
Wichita, KS 67226

Bradshaw 1-3

Job Ticket: 65908

DST#: 3

ATTN: Logan Walker

Test Start: 2019.09.17 @ 02:52:00

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:

74000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------|---------------|
| 0.00 | 282 GIP | 0.000 |
| 451.00 | Water | 6.326 |
| 30.00 | MCW 30%M 70%W | 0.421 |

Total Length: 481.00 ft Total Volume: 6.747 bbl

Num Fluid Samples: 0

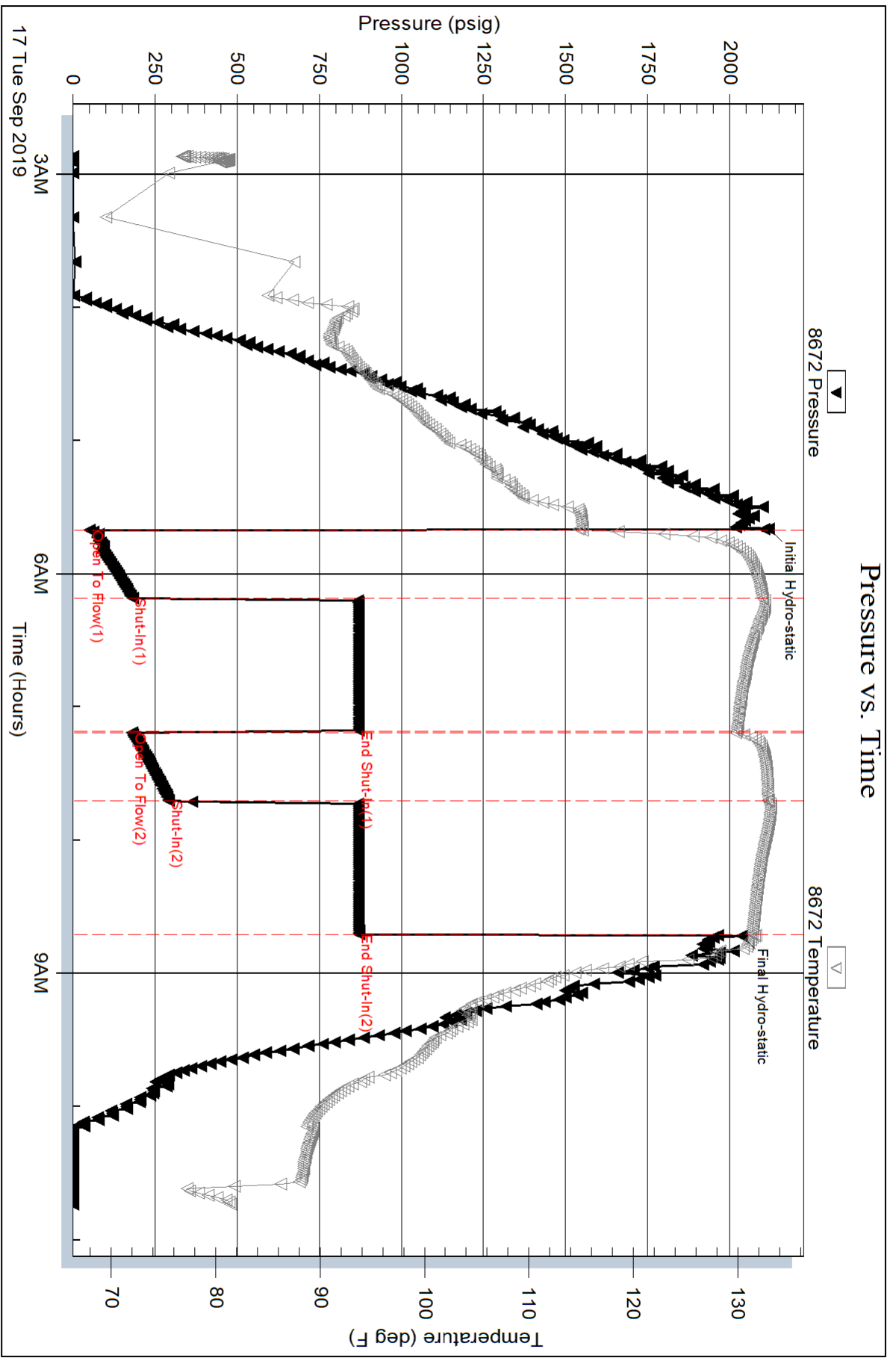
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .09 @ 83 degrees

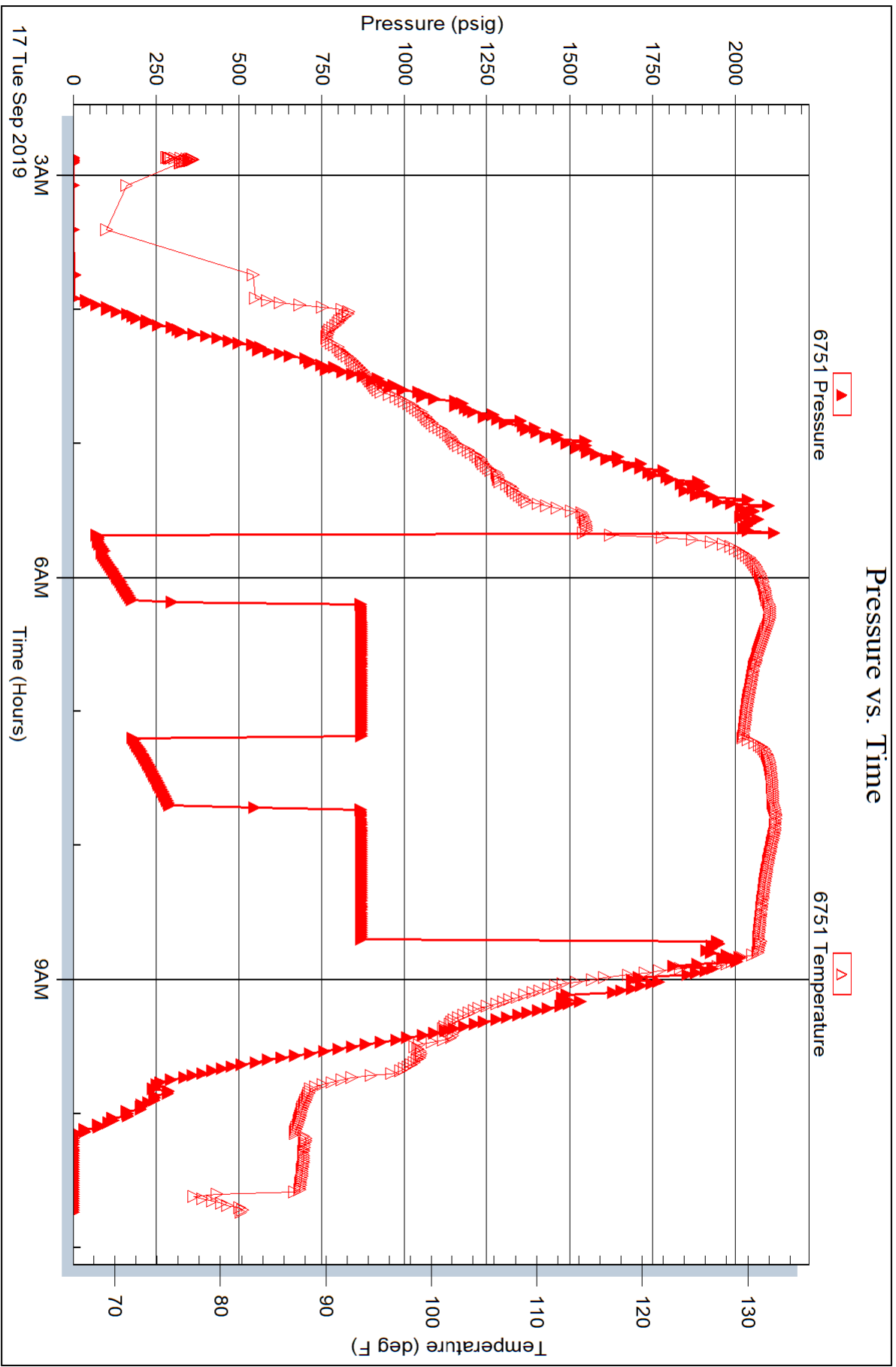


Serial #: 6751

Outside Deutsch Oil Co

Bradshaw 1-3

DST Test Number: 3



| | |
|----------------------------------|-------------------|
| Fracture Start Date/Time: | 10/7/19 10:34 |
| Fracture End Date/Time: | 10/7/19 12:30 |
| State: | Kansas |
| County: | Pratt |
| API Number: | 15-151-22502-0000 |
| Operator Number: | |
| Well Name: | Bradshaw 1-3 |
| Federal Well: | No |
| Tribal Well: | No |
| Longitude: | -98.5184976 |
| Latitude: | 37.821733 |
| Long/Lat Projection: | NAD27 |
| True Vertical Depth (TVD): | 4,034' |
| Total Clean Fluid Volume* (gal): | 366,580 |



(e.g. XX-XXX-XXXXX-0000)

Ingredients Section:

| Trade Name | Supplier | Purpose | Ingredients |
|-----------------|----------------------|--------------------|--|
| Water | Operator | Carrier/Base Fluid | Water |
| Sand | Superior Silica Sand | Proppant | Crystalline Silica in the form of quartz |
| Plexcide P5 | Chemplex | Biocide | Tributyl Tetradecyl Phosphonium Chloride |
| Plexcide P5 | Chemplex | Biocide | Methanol |
| Plexslick 957 | Chemplex | Friction Reducer | Petroleum Hydrotreated Light Distillate |
| Plexsurf 580 ME | Chemplex | Surfactant | Diathanolamone |
| Plexsurf 580 ME | Chemplex | Surfactant | Ethylene glycol monobutyl ether |

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*Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%
All component information

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Geologic Report
Aaron L. Young

Drilling Time and Sample Log

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

Well Name: Bradshaw #1-3
API: 15-151-22502
Location: Section 3 - T26S - R11W
License Number: 3180
Spud Date: 09 / 09 / 2019
Surface Coordinates: 990' FNL and 330' FWL
Approx. SW - NW - NW - NW
Region: Pratt Co., KS
Drilling Completed: 09 / 17 / 2019
Bottom Hole Coordinates:
Ground Elevation (ft): 1822' K.B. Elevation (ft): 1829'
Logged Interval (ft): 3200' To: 4197' Total Depth (ft): 4197'
Formation: Viola
Type of Drilling Fluid: Mud-Co

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

OPERATOR

Company: Deutsch Oil Company
Address: 8100 E 22nd St N, Bldg 600
Wichita, KS 67226

GEOLOGIST

Name: Aaron L. Young, M. S.
Company: Young Consulting LLC
Address: 100 S Main Ste 505
Wichita, KS 67202

General Info

CONTRACTOR: Pickrell Drilling, Rig #10

BIT RECORD:

| No. | Size | Make | Jets | Out | Feet | Hours |
|-----|--------|--------|----------|-------|-------|--------|
| 1 | 12-1/4 | RR | 15-15-15 | 308' | 308' | 5.50 |
| 2 | 7-7/8 | HA 20C | 14-14-16 | 4197' | 3889' | 108.00 |

Surveys: 308-.75, 3861'-1, 4042'-1

GENERAL DRILLING AND PUMP INFORMATION:

Drilling with 35,000 -38,000 lbs. on bit and approx 70 RPM.

Running 7.5 stands of collars; 446.95'

Pumping approx 700 psi at standpipe; 60 strokes/min

Daily Status

09/09/19- Spud well at 2:00 pm. Drilled 12 1/4" surface hole to 308 ft. Ran 7 jts., new 8 5/8", 23# surface casing. Set at 308 ft., cemented with 325 sx. common cement. Plug down at 11:15 pm. Quality Services ticket #7221.
09/10/19 - WOC
09/11/19 - Drilling, @ 1630'
09/12/19 - Drilling, @ 2400'
09/13/19 - Drilling, @ 3000'
09/14/19 - Drilling, @ 3628'
09/15/19 - Running DST #1
09/16/19 - Running DST #2
09/17/19 - Running DST #3, Run logs. Prepare to run production casing.
09/18/19 - Run 99 jts. 5 1/2", 17# K-55 used production casing. Cem w/ 35 sx poz. to plug rat hole and mouse hole. Cem prod casing w/ 175 sx. AA-2, 2% defoamer, 10% salt, 5% C-17, 5# gillsonite. 500 gal mud flush. Plug down at 7:17am

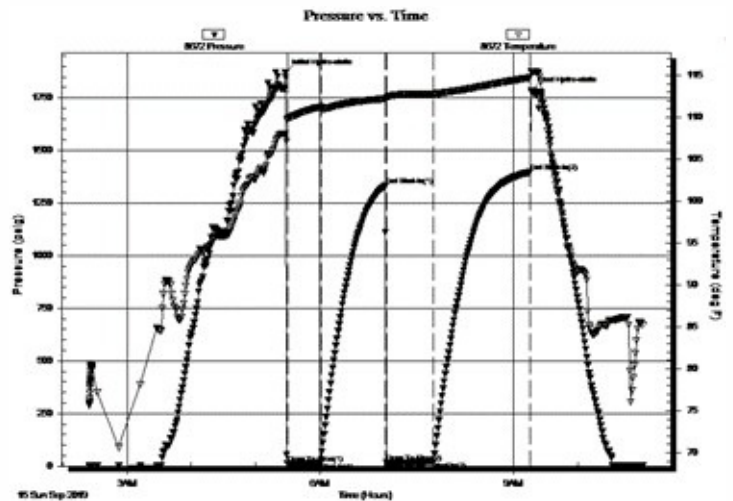
DST #1

Hertha 3846'-3861'
30-60-45-90

IF: BOB in 3 min, built to 64 inches
ISI: No blow back
FF: BOB immed, built to 243 inches
FSI: No blow back

Rec'd: 2001' GIP, 15' SOGCM (2% G, 2% O, 96% M)

SIP: 1332-1397#
FP: 12-16#, 17-22#
HP : 1868-1782#



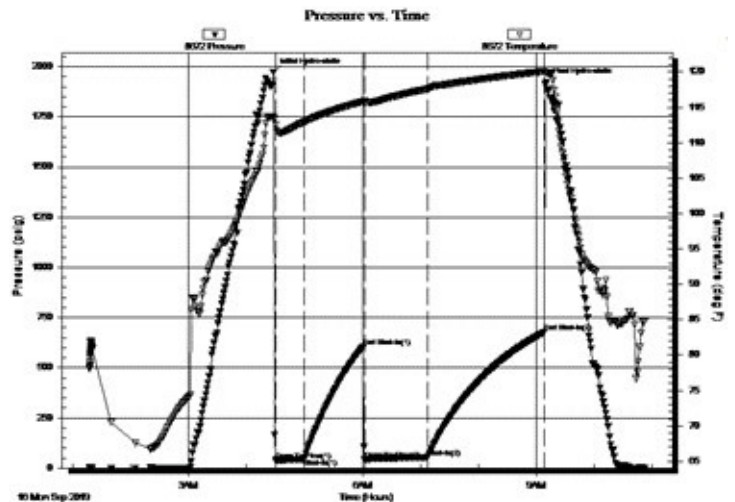
DST #2

Mississippi 3972'-4042'
30-60-60-120

IF: BOB in 30 sec, built to 80 inches
ISI: No blow back
FF: BOB immed, built to 126 inches
FSI: No blow back

Rec'd: 1913' GIP, 40' GCM (5% G, 95% M)

SIP: 606-677#
FP: 39-45#, 42-53#
HP : 1917-1921#

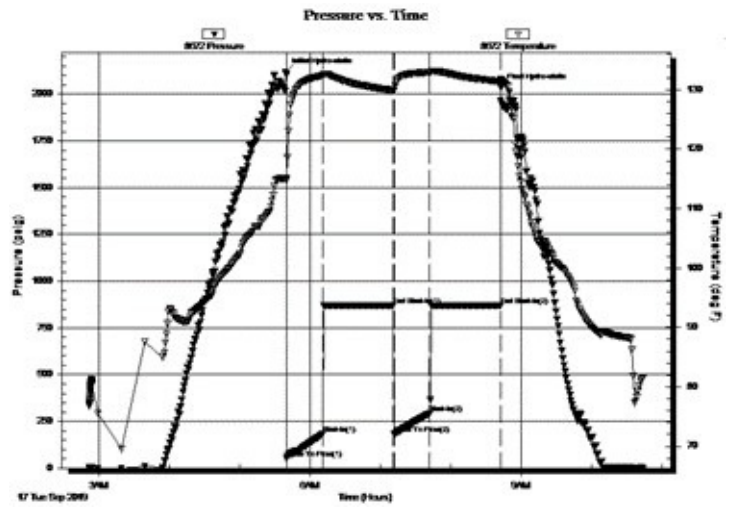


DST #3
 Viola 4188'-4197'
 30-60-30-60

IF: BOB in 9 min, built to 40 inches
 ISI: No blow back
 FF: BOB in 14 min, built to 29 inches
 FSI: No blow back

Rec'd: 2001' GIP, 15' SOGCM (2% G, 2% O, 96% M)

SIP: 1332-1397#
 FP: 12-16#, 17-22#
 HP : 1868-1782#



ROCK TYPES

| | | | | | | | |
|--|-------|--|-------|--|---------|--|----------|
| | Anhy | | Gyp | | Shgy | | Sandylms |
| | Bent | | Igne | | Sltst | | Shale |
| | Brec | | Lmst | | Ss | | Sltstn |
| | Cht | | Meta | | Till | | Shlyslts |
| | Clyst | | Mrlst | | Carb sh | | Slttysh |
| | Coal | | Salt | | Dol | | Lms |
| | Congl | | Shale | | Dtd | | |
| | Dol | | Shcol | | Gry sh | | |

ACCESSORIES

| | | | | | | | |
|----------------|----------|---------------|----------|--------|----------|----------------|----------|
| MINERAL | | Salt | | Fossil | | Clystn | |
| | Arggrn | | Sandy | | Gastro | | Dol |
| | Arg | | Silt | | Oolite | | Grysh |
| | Bent | | Sil | | Ostra | | Gryst |
| | Bit | | Sulphur | | Pelec | | Lms |
| | Brecfrag | | Tuff | | Pellet | | Sandylms |
| | Calc | | Chlorite | | Pisolite | | Sh |
| | Carb | | Dol | | Plant | | Sltstn |
| | Chtdk | | Sand | | Strom | | |
| | Chtlt | | Silty | | Fuss | | |
| | Dol | FOSSIL | | | Oomold | TEXTURE | |
| | Feldspar | | Algae | | Anhy | | Boundst |
| | Ferrpel | | Amph | | Arg | | Chalky |
| | Ferr | | Belm | | Bent | | Cryxln |
| | Glau | | Bioclst | | Coal | | Earthy |
| | Gyp | | Brach | | Dol | | Finexln |
| | Hvymin | | Bryozoa | | Gyp | | Grainst |
| | Kaol | | Cephal | | Ls | | Lithogr |
| | Marl | | Coral | | Mrst | | Microxln |
| | Minxl | | Crin | | Sltstrg | | Mudst |
| | Nodule | | Echin | | Ssstrg | | Packst |
| | Phos | | Fish | | Carbsh | | Wackst |
| | Pyr | | Foram | | | | |

OTHER SYMBOLS

POROSITY TYPE

- E Earthy
- F Fenest
- X Fracture
- I Inter
- M Moldic
- P Organic
- V Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- F Subrnd
- a Subang
- A Angular

OIL SHOWS

- Even
- ◉ Spotted
- ◻ Ques
- ◻ Dead
- ⊠ Gas show

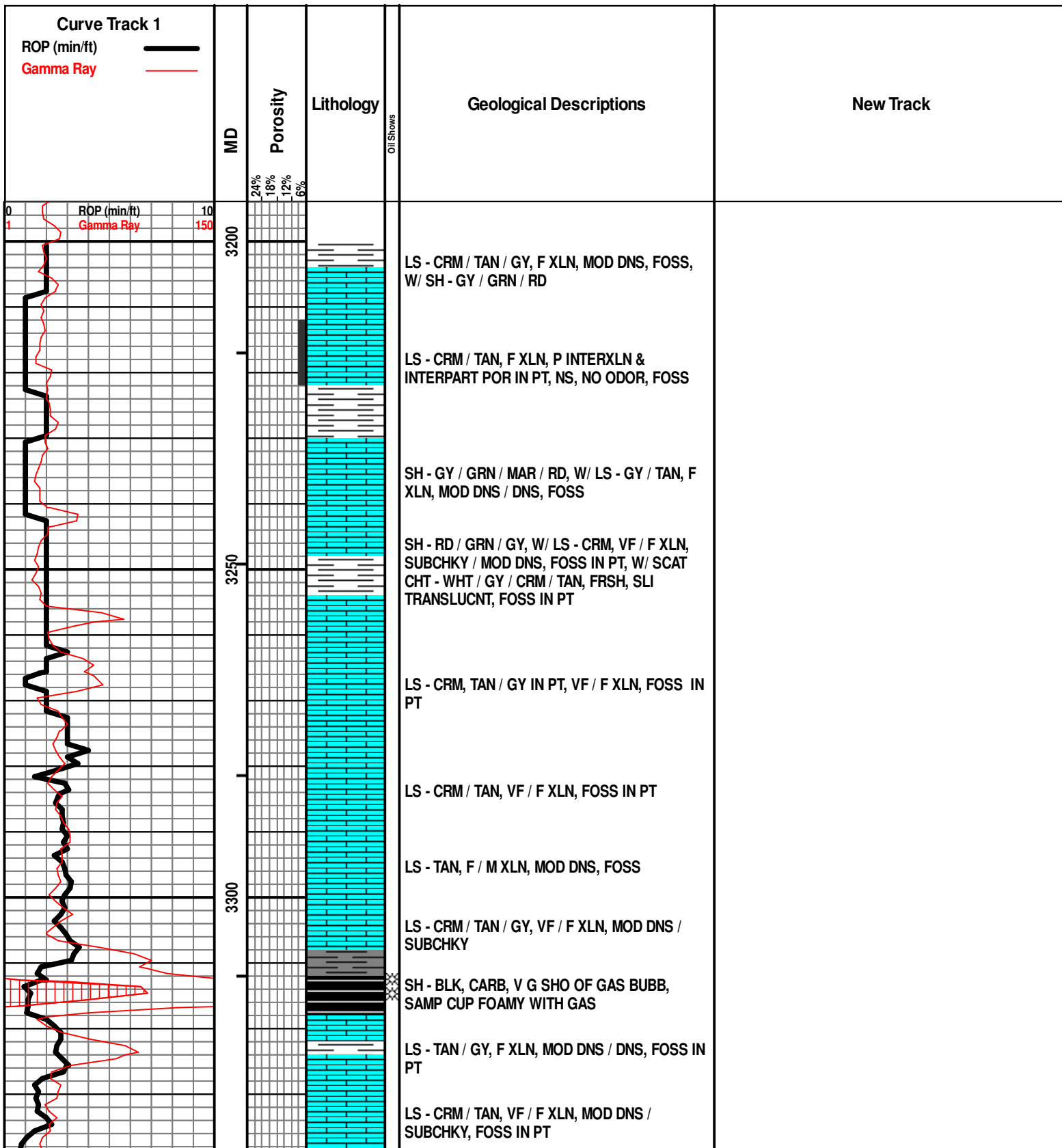
INTERVALS

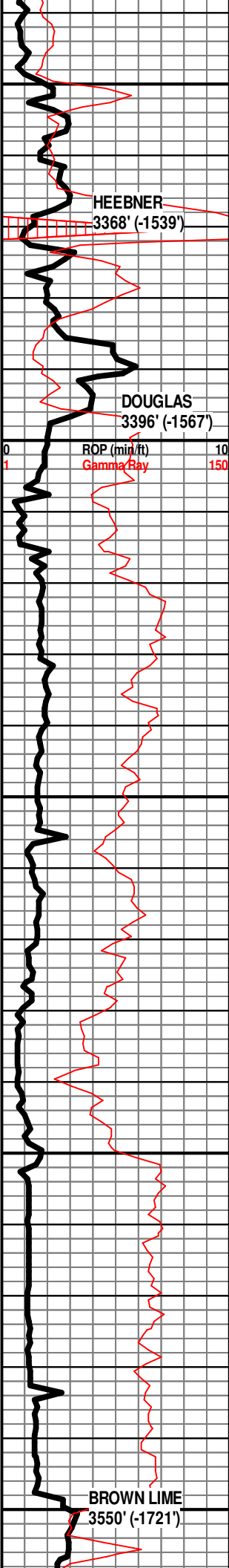
- Core
- Dst

- Dst

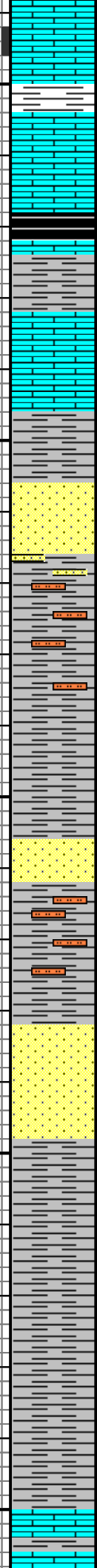
EVENTS

- ▽ Rft
- ▾ Sidewall
- ▬ Conn





3350
3400
3450
3500
3550



LS - CRM, VF / F XLN, MOD DNS / SUBCHKY, P INTERXLN IN PT, OIL SHEEN IN ONE PIECE

SH - GY / GRN / RD, W/ LS - CRM / TAN / GY, VF / F XLN, MOD DNS, FOSS IN PT

SH - BLK, CARB, SLI SHO OF GAS

LS - GY / TAN / CRM, F XLN, MOD DNS / DNS, V DNS IN PT, FOSS, W/ SH - GY

LS - CRM / TAN / GY / CRM, F XLN, MOD DNS / DNS, FOSS IN PT, PYRITIC IN PT, STYLITIZED IN PT

SH - GY / GRN

SS - GY, VF GR, SUB-ANG / SUB-RND, W SRTEG, P CEM, FRI IN PT, P / F INTGR POR, NSFO, BUB WHEN WHEN BRKN, NO ODOR

SH - LT GY / GY, SLTY IN PT, SNDY IN PT

SH - LT GY / GY

SH - LT GY / GY, SLTY IN PT

SS - GY, VF G, SUB-RND, W SRTEG, MOD CEM, P INTERGR POR, NS, W/ SH - GY, SNDY & SLTY

SH - LT GY / GY, SLI SLTY IN PT

SS - GY, VF GR, SUB-RND, W SRTEG, W CEM, DNS, P INTERGR POR IN PT, NS

SH - LT GY / GY, SLI SLTY IN PT

SH - GY

SH - GY

SH - GY

LS - DK BRN / GY, F / M XLN, DNS, FOSS IN PT

WT 9.0
VIS 44
LCM 2#

WT 9.0
VIS 44
LCM 2#

WT 9.0
VIS 46
LCM 2#

WT 9.0
VIS 47
LCM 2#

WT 9.0
VIS 47

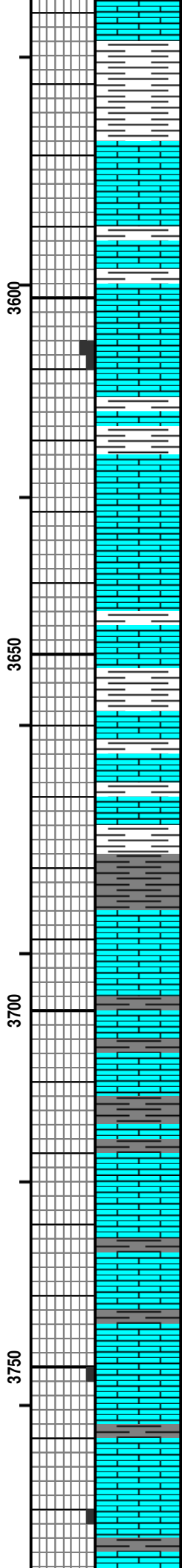
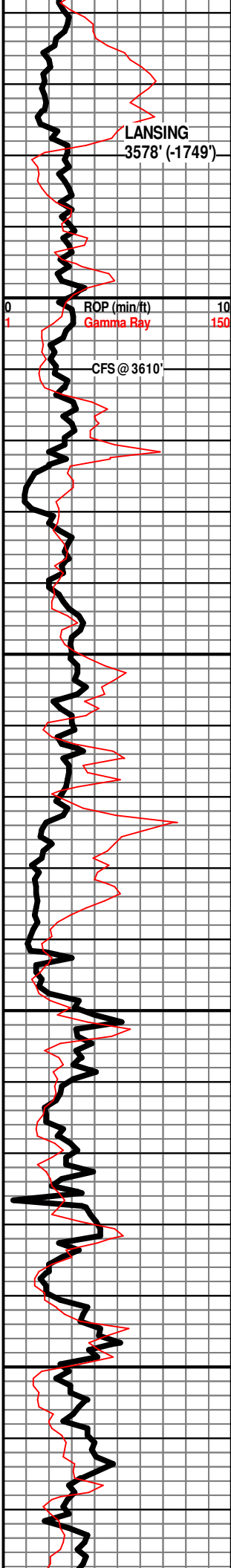
HEEBNER
3368' (-1539')

DOUGLAS
3396' (-1567')

BROWN LIME
3550' (-1721')

ROP (min/ft)
Gamma Ray

10
150



SH - GY / RD, W/ LS - GY, F / M XLN, DNS, FOSS IN PT

LS - CRM / TAN, F XLN, MOD DNS, ABUND FOSS, NS

SH - GY / GRN / RD

LS - TAN / GY, F XLN, MOD DNS / DNS, FOSS, NS

LS - CRM / TAN / GY, F XLN, P INTERXLN AND VUG POR, SSFO, SLI SHO GAS BUB, F ODOR, MOD YEL-GRN FLUOR, FOSS

SH - GY, W/ LS - CRM / TAN / GY IN PT, F XLN, MOD DNS

SH - GY, W/ LS - CRM / TAN, F XLN, MOD DNS, FOSS IN PT

LS - CRM / TAN, VF / F XLN, SUBCHKY / MOD DNS, FOSS IN PT

LS - CRM / TAN, F XLN, MOD DNS / DNS, FOSS, W/ SH - GY

LS - CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY, W/ SH - GRN / GY / MAR

Logan Walker - on location, geological discriptions going forward.

Shale - light gray to gray, pyritic

Limestone- cream to whie, microcrystalline, fossiferous, soft to dense, sub chalky, no shows, Shale- gray

Limestone- cream to tan, microcrystalline, fossiferous, oolitic, dense, sharp chert, light gray/opac, no shows, Shale- gray

Limestone- white to cream to tan, micocrystalline, fossiferous, bioclastic, soft to dense, white/opac, angular chert, no shows

Limestone- cream to tan, microcrystalline, fossiferous, soft to dense, sub chalky, no shows, Shale- gray

Limestone- cream, microcrystalline, fossiferous, oolitic, pin hole vugs, soft to dense, spotty free on break, spotty gas on break, poor to fair porosity, Shale- gray

Limestone, cream, microcrystalline, fossiferous, soft to dense, sharp chert, opac, sub chalky Shale- light gray

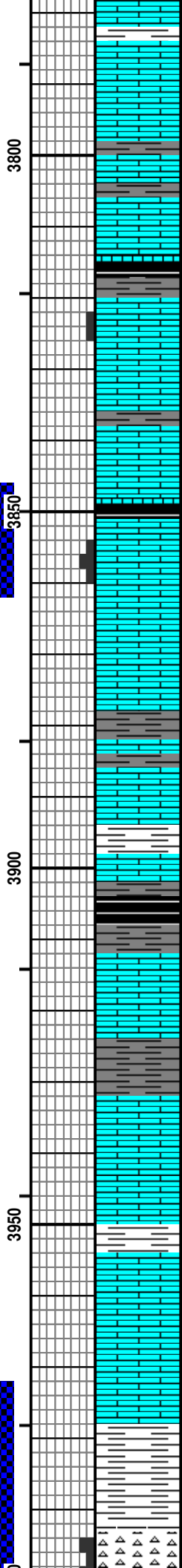
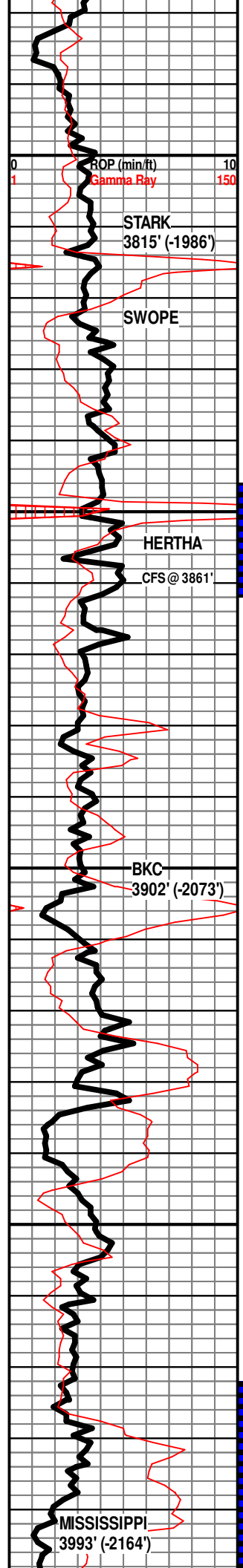
Limestone- cream, microcrystalline, fossiferous, soft to dense, sharp opac chert, sub chalky, faint spotty free shows in tray.

LCM 2#

WT 9.0
VIS 47
LCM 2#

WT 9.1
VIS 50
LCM 1.5#

WT 9.0
VIS 45
LCM 3#



3800' - crew change, sample taken and then lost

Limetone- white to cream, microcrystalline, fossiliferous, sub bioclastic, dense, sub chalky, no shows

Limetone- cream, microcrystalline, fossiliferous, sharp chert, light brown/opac, dense, sub chalky, no shows

Limetone- white to cream, microcrystalline, fossiliferous, sub bioclastic, pin hole vugs, poor porosity, dense, dead stain, sub chalky, Shale- Light gray to black carbonaceous

Limetone- cream, microcrystalline, fossiliferous, sub bioclastic, poor porosity, dense, spotty free oil and gas on break, fleeting odor, bright yel-grn fluor, Shale- black carbonaceous

Limestone- same as above, poor to fair porosity

Limetone- cream, microcrystalline, fossiliferous, dense, sub chalky, no shows, Shale- gray

LS - CRM / LT BRN, F XLN, ABUND FOSS, OOLITIC IN PT, P / F INTERPART & INTERXLN POR, ABUND SAT STN, SSFO, F ODOR, SLI SHO GAS, BRI YEL-GRN FLUOR

LS - CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY IN PT, FOSS IN PT, NO VIS POR NS

SH - GY, W/ LS - CRM / TAN, F XLN, MOD DNS, FOSS

LS - TAN / CRM, F / VF XLN, M XLN IN PT, PRED MOD DNS, SUBCHKY IN PT, DNS IN PT, FOSS IN PT

SH - GY / GRN IN PT, W/ LS - CRM / TAN / GY, F XLN, MOD DNS, FOSS IN PT

SH - DK GY / BLK, SLI CARB

LS - CRM / TAN, F XLN, P INTEROOLITIC & INTERXLN POR IN PT, SLI STN NSFO, FEW PIECES W/ P / F OOLMOLDIC POR, SSFO, F ODOR, W/ LS - CRM VF XLN, MOD DNS / SUBCHKY, W/ SH - GRN / GY

SH - GY / DK GY / GRN, W/ LS - GY, F XLN DNS, W/ LS - CRM / WHT, VF XLN, CHKY / SUBCHKY

LS - CRM / TAN, F XLN, MOD DNS, ABUND OF FOSS

SH - GRN / GY, W/ LS - CRM / TAN, F / VF XLN, MOD DNS / SUBCHKY IN PT

LS - CRM / TAN / GY, F / M XLN, DNS

LS - CRM / TAN, VF / F XLN, MOD DNS

LMY SH - GY / GRN, VF XLN, MOD DNS, FOSS

CHT - WHT, PRED OPAQ, TRANSLUCNT IN FEW FRSH PIECES, PRED WEATH, P / F WEATH POR, F ODOR, ABUND STN, F OIL SHEEN, F SHO GAS BUB, BRI YEL-GRN FLUOR

3818' jet mud pit

WT 9.0
VIS 52
LCM 1.5#

survey 1degree
Pipe strap 0.4 long to board

DST #1
Hertha 3846'-3861'
30-60-45-90

IF: BOB in 3 min, built to 64 inches
ISI: No blow back
FF: BOB immed, built to 243 inches
FSI: No blow back

Rec'd: 2001' GIP, 15' SOGCM (2% G, 2% O, 96% M)

SIP: 1332-1397#
FP: 12-16#, 17-22#
HP: 1868-1782#

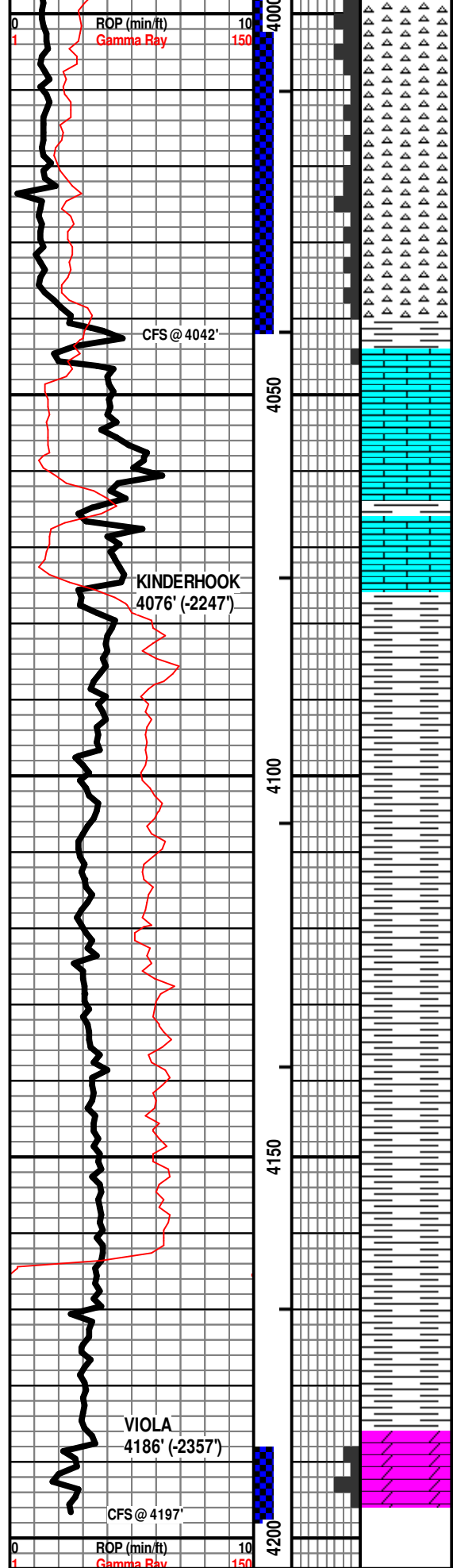
WT 9.3
VIS 48
LCM 3#

DST #2
Mississippi 3972'-4042'
30-60-60-120

IF: BOB in 30 sec, built to 80 inches
ISI: No blow back
FF: BOB immed, built to 126 inches
FSI: No blow back

Rec'd: 1913' GIP, 40' GCM (5% G, 95% M)

SIP: 606-677#
FP: 39-45#, 42-53#
HP: 1917-1921#



CHT - WHT, PRED OPAQ, F WEATH POR, G WEATH POR IN PT, SAT STN, G ODOR, FSFO IN FEW PIECES, G SHO GAS, BRI YEL-GRN FLUOR
 CHT - WHT / GY, TRANSLUCNT & OPAQ, 50% FRSH / 50% WEATH, P / F WEATH POR, FSFO, G SHO GAS, BRI YEL-GRN FLUOR
 CHT - WHT / GY, TRANSLUCNT & OPAQ, 75% FRSH, 25% WEATH, F WEATH POR, FSFO, F ODOR, G SHO GAS, BRI YEL-GRN FLUOR
 LS - LT BRN / CRM, F XLN, V DNS / DNS, FOSS IN PT, VP INTERXLN POR IN FEW PIECES, SLI STN, SSFO, OIL SHEEN, BRI YEL-GRN FLUOR, W/SH - GRN / GY
 LS - TAN, F XLN, V DNS / DNS, FOSS, NO VIS POR, NS
 LS - CRM / TAN, VF / F XLN, SUBCHKY / MOD DNS
 SH - DK GY / GY / GRN, PYRITIC IN PT
 SH - LT GY / GY
 SH - GY / LT GY
 SH - GY / LT GY / LT GRN
 SH - LT GY / LT GRN IN PT
 SH - LT GY
 SH - LT GY, V SOFT
 SH - GY
 SH - LT GY / GY
 SH - LT GY / GY, FOSS IN PT
 DOLO - GY, F XLN, SEMI-RHOMBIC, F / G INTERXLN POR IN PT, SSFO, F CUP ODOR, G ODOR WHEN BRKN, SLI OIL SHEEN, V LT OIL, OIL DROPLETS FLUOR BRI YEL-GRN, ROCK DOESN NOT FLUOR, SHO GAS IN FEW PIECES

WT 9.0
 VIS 49
 LCM 2#

 WT 9.1
 VIS 52
 LCM 2#

 WT 9.0
 VIS 49
 LCM 2#

 DST #3
 Viola 4188'-4197'
 30-60-30-60

 IF: BOB in 9 min, built to 40 inches
 ISI: No blow back
 FF: BOB in 14 min, built to 29 inches
 FSI: No blow back

 Rec'd: 2001' GIP, 15' SOGCM (2% G, 2% O, 96% M)

 SIP: 1332-1397#
 FP: 12-16#, 17-22#
 HP : 1868-1782#

 WT 9.2
 VIS 61
 LCM 2#

RTD 4197'