

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 | Indian Oil Co., Inc. |
| Well Name | WARREN 4-35 |
| Doc ID | 1649318 |

All Electric Logs Run

| |
|----------------------|
| |
| dual induction |
| frac finder |
| micro |
| comp density/neutron |
| sonic |

| | |
|-----------|------------------------|
| Form | ACO1 - Well Completion |
| Operator | Indian Oil Co., Inc. |
| Well Name | WARREN 4-35 |
| Doc ID | 1649318 |

Tops

| Name | Top | Datum |
|--------------------|------|-------|
| Heebner | 3546 | -1890 |
| Douglas | 3576 | -1920 |
| Upper Douglas Sand | 3601 | -1945 |
| Lower Douglas Sand | 3692 | -2036 |
| Brown Lime | 3740 | -2084 |
| Lansing | 3752 | -2096 |
| Stark | 4080 | -2424 |
| Hushpuckney | 4118 | -2462 |
| Mississippi | 4256 | -2600 |
| Kinderhook | 4320 | -2664 |
| Viola | 4528 | -2872 |
| Simpson Shale | 4604 | -2948 |
| Simpson Sand | 4606 | -2950 |
| Arbuckle | 4724 | -3068 |



CEMENT TREATMENT REPORT

| | | |
|----------------------------------|----------------------------|----------------------------|
| Customer: INDIAN OIL | Well: WARREN 4-35 | Ticket: WP 2525 |
| City, State: | County: BARBER, KS. | Date: 3/14/2022 |
| Field Rep: ANTHONY FARRAR | S-T-R: 35-30S-12W | Service: LONGSTRING |

| Downhole Information | |
|----------------------|-------------------|
| Hole Size: | 7 7/8 in |
| Hole Depth: | 4774 ft |
| Casing Size: | 5 1/2 in |
| Casing Depth: | 4747.26 ft |
| Tubing / Liner: | in |
| PLUG Depth: | 4704.88 ft |
| Tool / Packer: | |
| Tool Depth: | ft |
| Displacement: | 112.0 bbls |

15.5#

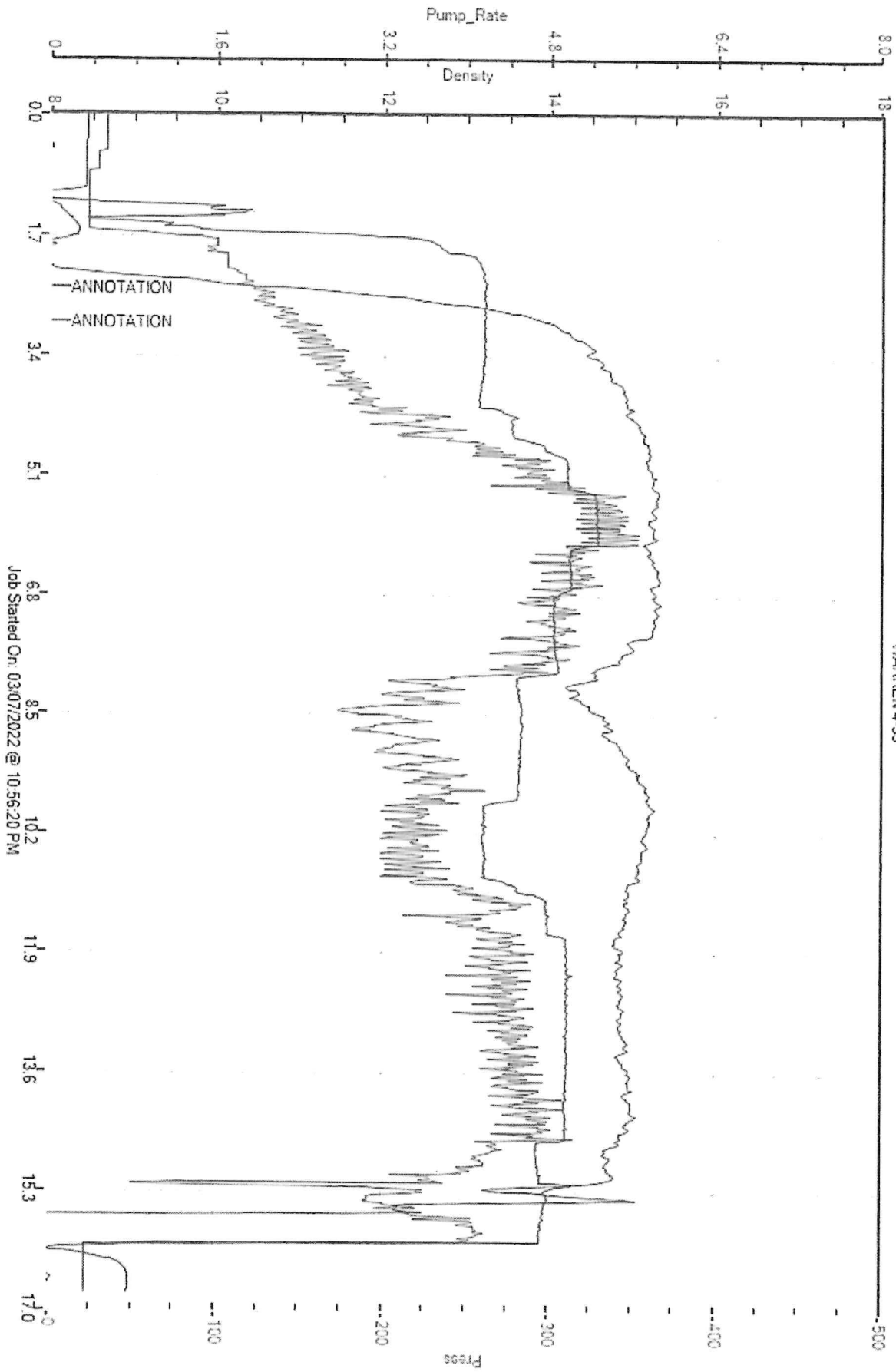
| Calculated Slurry - Lead | |
|--------------------------|----------------------------|
| Blend: | |
| Weight: | ppg |
| Water / Sx: | gal / sx |
| Yield: | ft³ / sx |
| Annular Bbls / Ft.: | bbs / ft. |
| Depth: | ft |
| Annular Volume: | 0.0 bbls |
| Excess: | |
| Total Slurry: | 0.0 bbls |
| Total Sacks: | 0 sx |

| Calculated Slurry - Tail | |
|--------------------------|---------------------------------|
| Blend: | H-LONG |
| Weight: | 15 ppg |
| Water / Sx: | 6.0 gal / sx |
| Yield: | 1.42 ft³ / sx |
| Annular Bbls / Ft.: | bbs / ft. |
| Depth: | ft |
| Annular Volume: | 0 bbls |
| Excess: | |
| Total Slurry: | 44.3 bbls |
| Total Sacks: | 175 sx |

| TIME | RATE | PSI | BBLs | TOTAL BBLs | REMARKS |
|---------|------|---------|-------|------------|---|
| 7:30AM | | | - | - | ON LOCATION- SPOT EQUIPMENT |
| 11:30AM | | | - | - | RUN 113 JTS 5 1/2"X 15.5# CASING |
| | | | - | - | TURBOLIZERS- 1,3,5,7,9,11,12,13 |
| | | | - | - | BASKET-10 (CIRCULATE 1/2 WAY IN HOLE) |
| 2:00PM | | | - | - | CASING ON BOTTOM- HOOK UP TO CASING AND BREAK CIRCULATION WITH RIG PUMP AND MUD |
| 3:05PM | 6.0 | 400.0 | 5.0 | 5.0 | H2o AHEAD |
| 3:08PM | 6.0 | 400.0 | 12.0 | 17.0 | MUD FLUSH |
| 3:10PM | 6.0 | 350.0 | 5.0 | 22.0 | H2o SPACER |
| 3:11PM | 6.0 | 350.0 | 44.3 | 66.3 | MIX 175 SKS H-LONG CEMENT @ 15 PPG |
| 3:19PM | | | | 66.3 | SHUT DOWN- CLEAR PUMP AND LINES- DROP LATCH DOWN PLUG |
| 3:27PM | 5.5 | - | - | 66.3 | START DISPLACEMENT |
| 3:50PM | 5.0 | 300.0 | 76.0 | | LIFT PRESSURE |
| 3:56PM | 4.0 | 700.0 | 100.0 | | SLOW RATE |
| 4:00PM | 3.0 | 1,500.0 | 112.0 | | PLUG DOWN- HELD |
| | | | | | CIRCULATION THRU JOB |
| | 2.0 | | 7.0 | | PLUG RATHOLE WITH 30 SKS H-PLUG |
| | 2.0 | | 5.0 | | PLUG MOUSEHOLE WITH 20 SKS H-PLUG |
| | | | | | WASH UP PUMP TRUCK |
| | | | | | JOB COMPLETE, |
| | | | | | THANKS- KEVEN AND CREW |

| CREW | | UNIT | SUMMARY | | |
|----------------|-----------------|----------------|----------------|------------------|-----------------|
| Cementer: | LESLEY | 926 | Average Rate | Average Pressure | Total Fluid |
| Pump Operator: | BROCKMAN | 189-521 | 4.6 bpm | 500 psi | 366 bbls |
| Bulk #1: | TRAVINO | 182-256 | | | |
| Bulk #2: | | | | | |

INDIAN OIL
WARREN 4-35





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Indian Oil Co LLC
308 S Main St
Medicine Lodge, KS. 67104
ATTN: Aaron Young

Sec 35-30S-12W

Warren #4-35

Job Ticket: 67617

DST#: 1

Test Start: 2022.03.12 @ 09:29:29

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 11:59:09

Time Test Ended: 17:48:08

Test Type: Conventional Bottom Hole (Initial)

Tester: Eric Burgess

Unit No: 80

Interval: 4224.00 ft (KB) To 4320.00 ft (KB) (TVD)

Reference Elevations: 1656.00 ft (KB)

Total Depth: 4320.00 ft (KB) (TVD)

1644.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 12.00 ft

Serial #: 8369

Press@RunDepth: 64.10 psig @ 4231.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.03.12

End Date:

2022.03.12

Last Calib.:

2022.03.12

Start Time: 09:29:30

End Time:

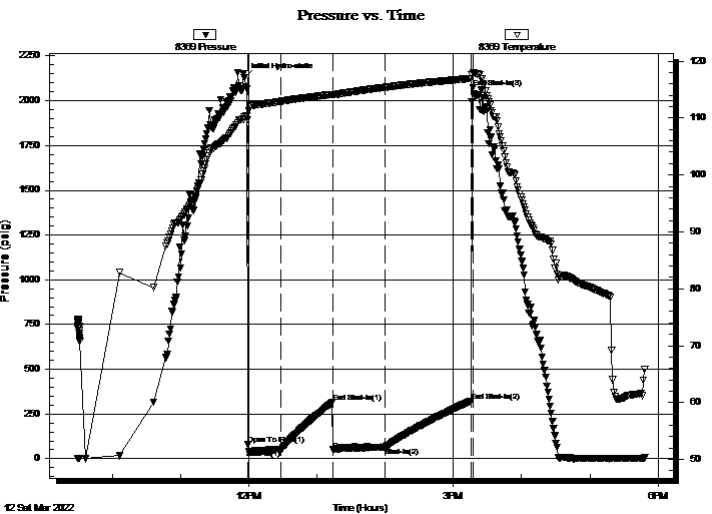
17:48:09

Time On Btm:

2022.03.12 @ 11:56:09

Time Off Btm:

TEST COMMENT: IF:Strong Building Blow Built to 31.60" (30)
IS:No Blow Back (45)
FF:Strong Building Blow Built to 21.64" (45)
FS:No Blow Back (60)



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2130.26 | 110.17 | Initial Hydro-static |
| 3 | 78.51 | 109.75 | Open To Flow (1) |
| 32 | 52.40 | 112.92 | Shut-In(1) |
| 78 | 314.25 | 114.14 | End Shut-In(1) |
| 78 | 49.93 | 114.08 | Open To Flow (2) |
| 124 | 64.10 | 115.40 | Shut-In(2) |
| 200 | 323.00 | 116.94 | End Shut-In(2) |
| 201 | 2073.60 | 118.01 | End Shut-In(3) |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------|--------------|
| 0.00 | 317' GIP | 0.00 |
| 120.00 | GOSM 5%G 95%M | 0.61 |
| | | |
| | | |
| | | |

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Indian Oil Co LLC
308 S Main St
Medicine Lodge, KS. 67104
ATTN: Aaron Young

Sec 35-30S-12W
Warren #4-35
Job Ticket: 67617 **DST#: 1**
Test Start: 2022.03.12 @ 09:29:29

GENERAL INFORMATION:

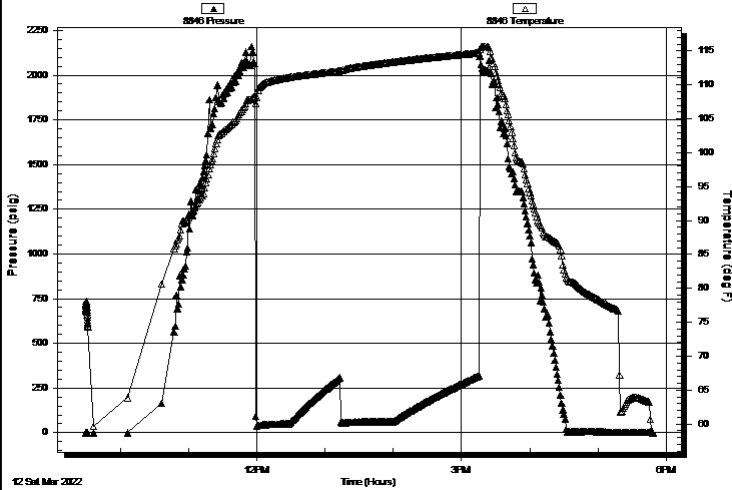
Formation: **Miss**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 11:59:09
Time Test Ended: 17:48:08
Interval: **4224.00 ft (KB) To 4320.00 ft (KB) (TVD)**
Total Depth: 4320.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1656.00 ft (KB)
1644.00 ft (CF)
KB to GR/CF: 12.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: Eric Burgess
Unit No: 80

Serial #: 8846

Press@RunDepth: psig @ ft (KB)
Capacity: 8000.00 psig
Start Date: 2022.03.12 End Date: 2022.03.12 Last Calib.: 1899.12.30
Start Time: 09:29:27 End Time: 17:48:16 Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Strong Building Blow Built to 31.60" (30)
IS:No Blow Back (45)
FF:Strong Building Blow Built to 21.64" (45)
FS:No Blow Back (60)

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------|--------------|
| 0.00 | 317' GIP | 0.00 |
| 120.00 | GOSM 5%G 95%M | 0.61 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Indian Oil Co LLC
308 S Main St
Medicine Lodge, KS. 67104
ATTN: Aaron Young

Sec 35-30S-12W
Warren #4-35
Job Ticket: 67617 **DST#: 1**
Test Start: 2022.03.12 @ 09:29:29

Mud and Cushion Information

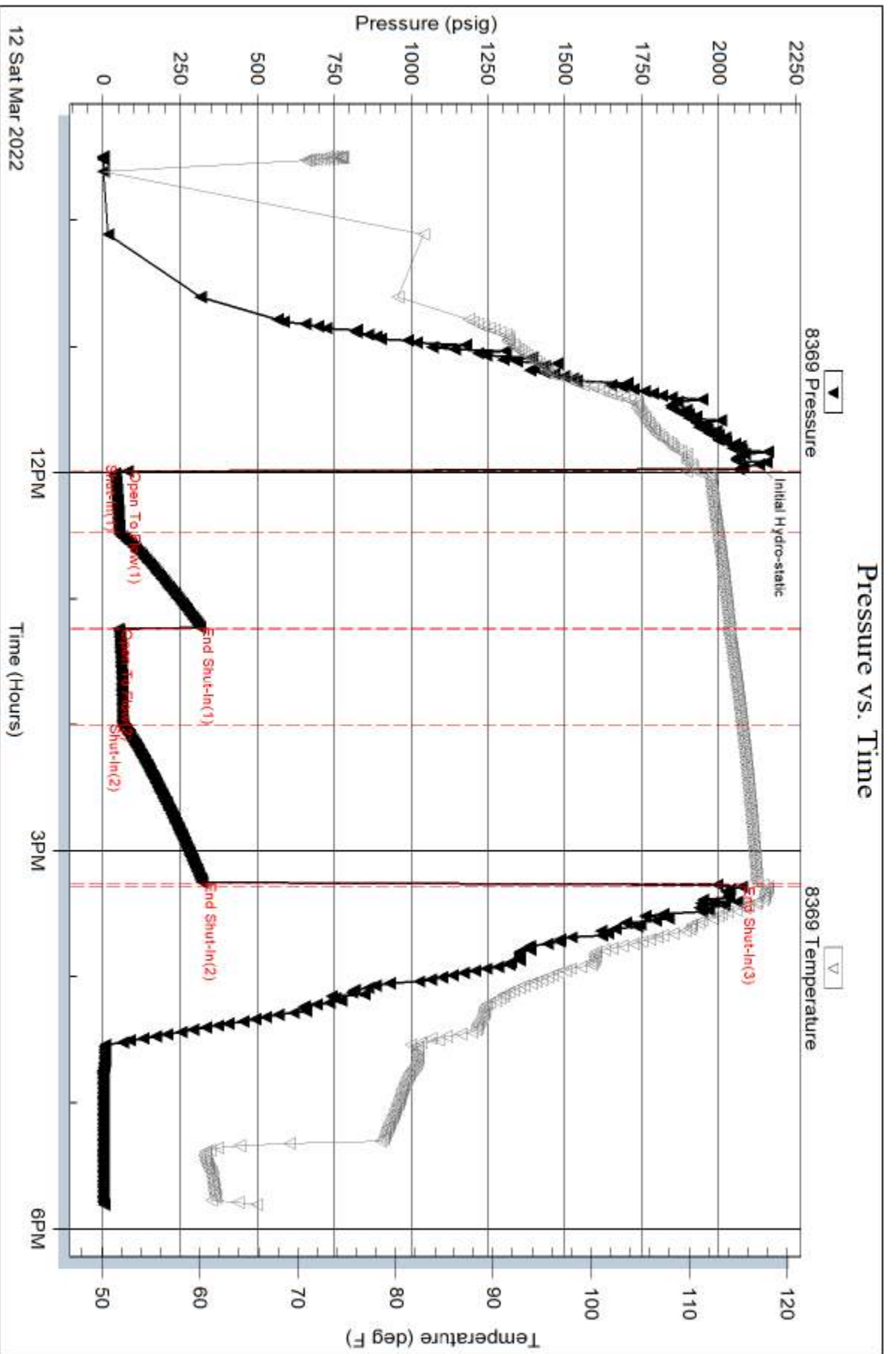
| | | | |
|----------------------------------|----------------------------|-----------------|---------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: | deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: | ppm |
| Viscosity: 56.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 8.79 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 5500.00 ppm | | | |
| Filter Cake: 0.20 inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------|---------------|
| 0.00 | 317' GIP | 0.000 |
| 120.00 | GOSM 5%G 95%M | 0.608 |

Total Length: 120.00 ft Total Volume: 0.608 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

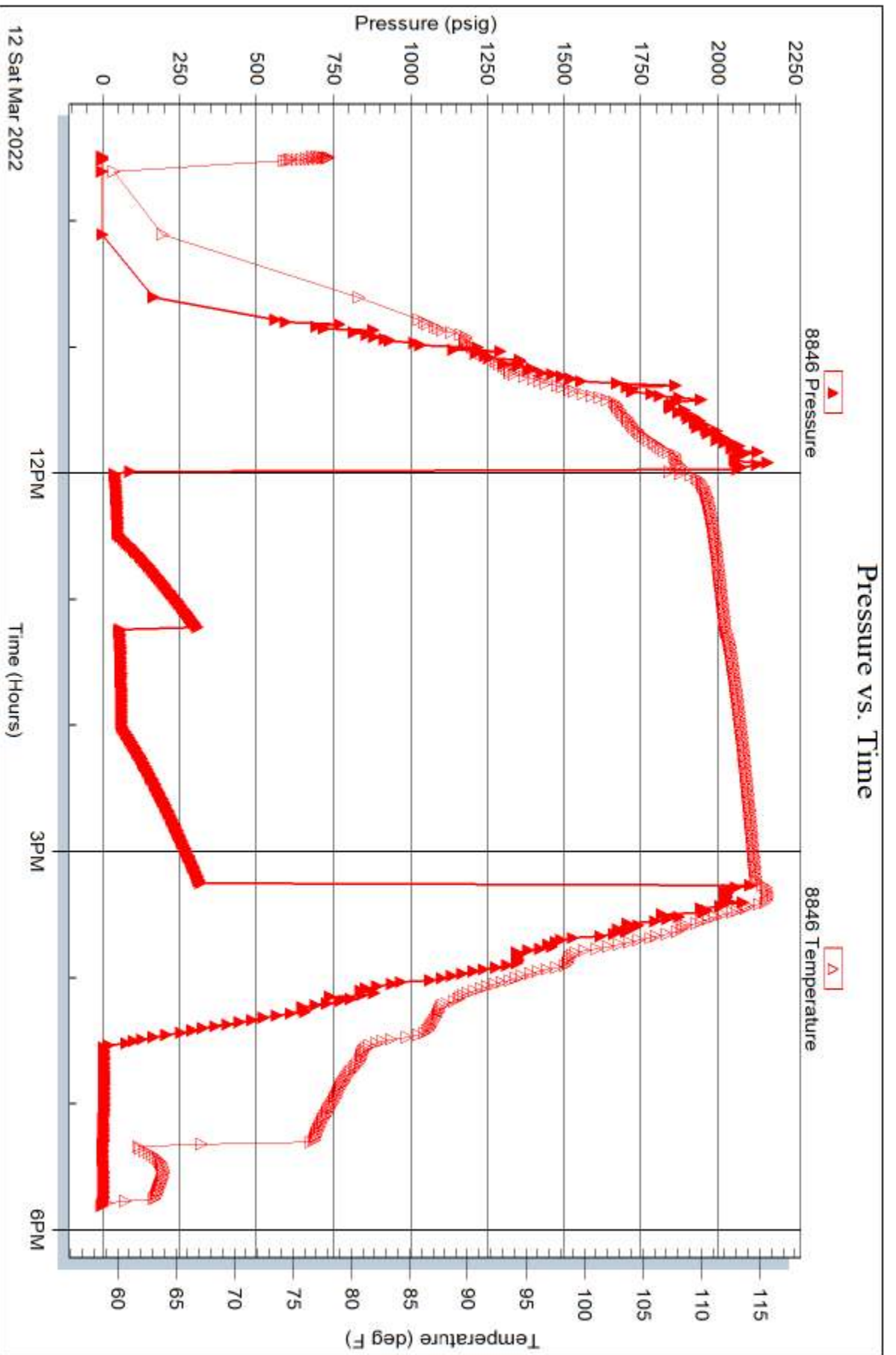


Serial #: 8846

Indian Oil Co LLC

Warren #4-35

DST Test Number: 1



Geologic Report
Aaron L. Young

Drilling Time and Sample Log

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

Well Name: Warren #4-35
API: 15-007-24407
Location: Section 35 - T30S - R12W
License Number: 31938
Spud Date: 03/07/2022
Surface Coordinates: 3040' FSL and 2380' FEL
Region: Barber Co., KS
Drilling Completed: 03/13/2022

Bottom Hole
Coordinates:
Ground Elevation (ft): 1644' K.B. Elevation (ft): 1656'
Logged Interval (ft): 3500' To: 4780' Total Depth (ft): 4780'
Formation: Arbuckle
Type of Drilling Fluid: Chemical - MudCo

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

OPERATOR

Company: Indian Oil Co., Inc
Address: PO Box 209
Medicine Lodge, KS 67104-0209

GEOLOGIST

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

General Info

CONTRACTOR: Fossil Drilling Rig #3

BIT RECORD:

| No. | Size | Make | Jets | Out | Feet | Hours |
|-----|--------|--------|----------|-------|-------|-------|
| 1 | 12-1/4 | TC HPC | 16-16-16 | 365' | 365' | 3.75 |
| 2 | 7-8/8 | MI 616 | 16-16-16 | 365' | 4320' | 59.00 |
| 3 | 7-7/8 | MI 516 | 16-16-16 | 4780' | 460' | 12.00 |

Surveys: 365'-1.75, 604'-.75, 1109'-.25, 2122-1, 2629'-1, 3106'-.75, 3615'-.75, 4122'-1, 4320'-2.25, 4780'-1.5

GENERAL DRILLING AND PUMP INFORMATION:

Drilling with 8,000-10,000 lbs. on bit and approx 100-110 RPM.

Pumping approx 950 psi at standpipe @ 56 SPM

Daily Status

03/07/22 Spud @ 2:00pm, Ran 8 joints of 8-5/8" surface casing, set at 355'
 03/08/22 WOC
 03/09/22 Drilling @ 1780'
 03/10/22 Drilling @ 3102'
 03/11/22 Running wireline survey @ 3615'
 03/12/22 DST #1
 03/13/22 Drilling @ 4552', TD, Logged
 03/14/22 LDDP, ran 113 jts of new MW-55 5-1/2" 15.50# production casing set at 4747'. Cem w/ 175 sx H-long mix. 50 sx for rat and mouse holes.

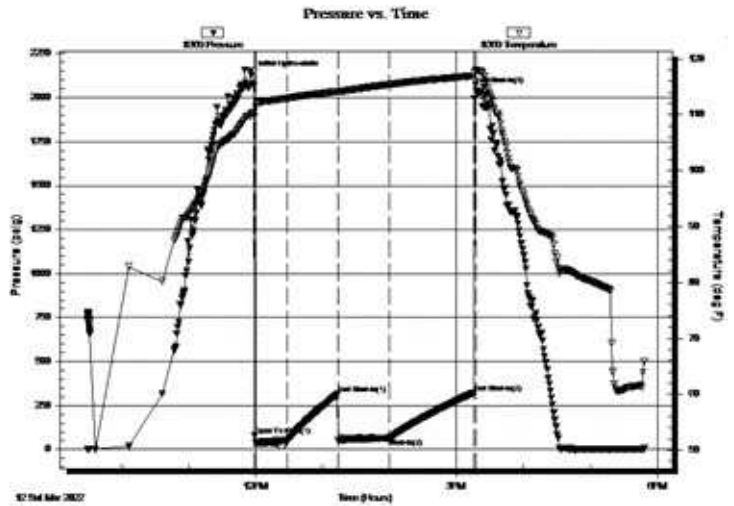
DST #1

Miss 4224'-4320'
 30-45-45-60

IF: BOB in 2.5 min. Built to 31.60"
 SI: No return
 FF: BOB in 7 min. Built to 21.64"
 FSI: No return

Rec'd: 317' GIP, 120' GOSM (5% G, 95% M)

SIP: 314-323#
 FP: 79-52#, 50-64#
 HP: 2130-2074#



| Log tops | | |
|--------------------|------|-------|
| | | |
| Heebner | 3546 | -1890 |
| Douglas | 3576 | -1920 |
| Upper Douglas Sand | 3601 | -1945 |
| Lower Douglas Sand | 3692 | -2036 |
| Brown Lime | 3740 | -2084 |
| Lansing | 3752 | -2096 |
| Stark | 4080 | -2424 |
| Hushpuckney | 4118 | -2462 |
| Mississippi | 4256 | -2600 |
| Kinderhook | 4320 | -2664 |
| Viola | 4528 | -2872 |
| Simpson Shale | 4604 | -2948 |
| Simpson Sand | 4606 | -2950 |
| Arbuckle | 4724 | -3068 |

ROCK TYPES

| | |
|--|-------|
| | Anhy |
| | Bent |
| | Brec |
| | Cht |
| | Clyst |
| | Coal |
| | Congl |
| | Dol |

| | |
|--|-------|
| | Gyp |
| | Igne |
| | Lmst |
| | Meta |
| | Mrlst |
| | Salt |
| | Shale |
| | Shcol |

| | |
|--|---------|
| | Shgy |
| | Sltst |
| | Ss |
| | Till |
| | Carb sh |
| | Dol |
| | Dtd |
| | Gry sh |

| | |
|--|----------|
| | Sandylms |
| | Shale |
| | Sltstn |
| | Shlyslts |
| | Sltlysh |
| | Lms |

ACCESSORIES

MINERAL

| | |
|--|----------|
| | Anhy |
| | Arggrn |
| | Arg |
| | Bent |
| | Bit |
| | Brecfrag |
| | Calc |
| | Carb |
| | Chtdk |
| | Chtlt |
| | Dol |
| | Feldspar |
| | Ferrpel |
| | Ferr |
| | Glau |
| | Gyp |
| | Hvymin |
| | Kaol |
| | Marl |
| | Minxl |
| | Nodule |
| | Phos |
| | Pyr |

| | |
|--|----------|
| | Salt |
| | Sandy |
| | Silt |
| | Sil |
| | Sulphur |
| | Tuff |
| | Chlorite |
| | Dol |
| | Sand |
| | Sltly |

FOSSIL

| | |
|--|---------|
| | Algae |
| | Amph |
| | Belm |
| | Bioclst |
| | Brach |
| | Bryozoa |
| | Cephal |
| | Coral |
| | Crin |
| | Echin |
| | Fish |
| | Foram |

| | |
|--|----------|
| | Fossil |
| | Gastro |
| | Oolite |
| | Ostra |
| | Pelec |
| | Pellet |
| | Pisolite |
| | Plant |
| | Strom |
| | Fuss |
| | Oomold |

STRINGER

| | |
|--|---------|
| | Anhy |
| | Arg |
| | Bent |
| | Coal |
| | Dol |
| | Gyp |
| | Ls |
| | Mrst |
| | Sltstrg |
| | Ssstrg |
| | Carbsh |

| | |
|--|----------|
| | Clystn |
| | Dol |
| | Grysh |
| | Gryslt |
| | Lms |
| | Sandylms |
| | Sh |
| | Sltstn |

TEXTURE

| | |
|--|----------|
| | Boundst |
| | Chalky |
| | Cryxln |
| | Earthy |
| | Finexln |
| | Grainst |
| | Lithogr |
| | Microxln |
| | Mudst |
| | Packst |
| | Wackst |

OTHER SYMBOLS

POROSITY TYPE

| | |
|--|----------|
| | Earthy |
| | Fenest |
| | Fracture |
| | Inter |
| | Moldic |
| | Organic |
| | Pinpoint |
| | Vuggy |

SORTING

| | |
|--|----------|
| | Well |
| | Moderate |
| | Poor |

ROUNDING

| | |
|--|---------|
| | Rounded |
| | Subrnd |
| | Subang |
| | Angular |

OIL SHOWS

| | |
|--|----------|
| | Even |
| | Spotted |
| | Ques |
| | Dead |
| | Gas show |

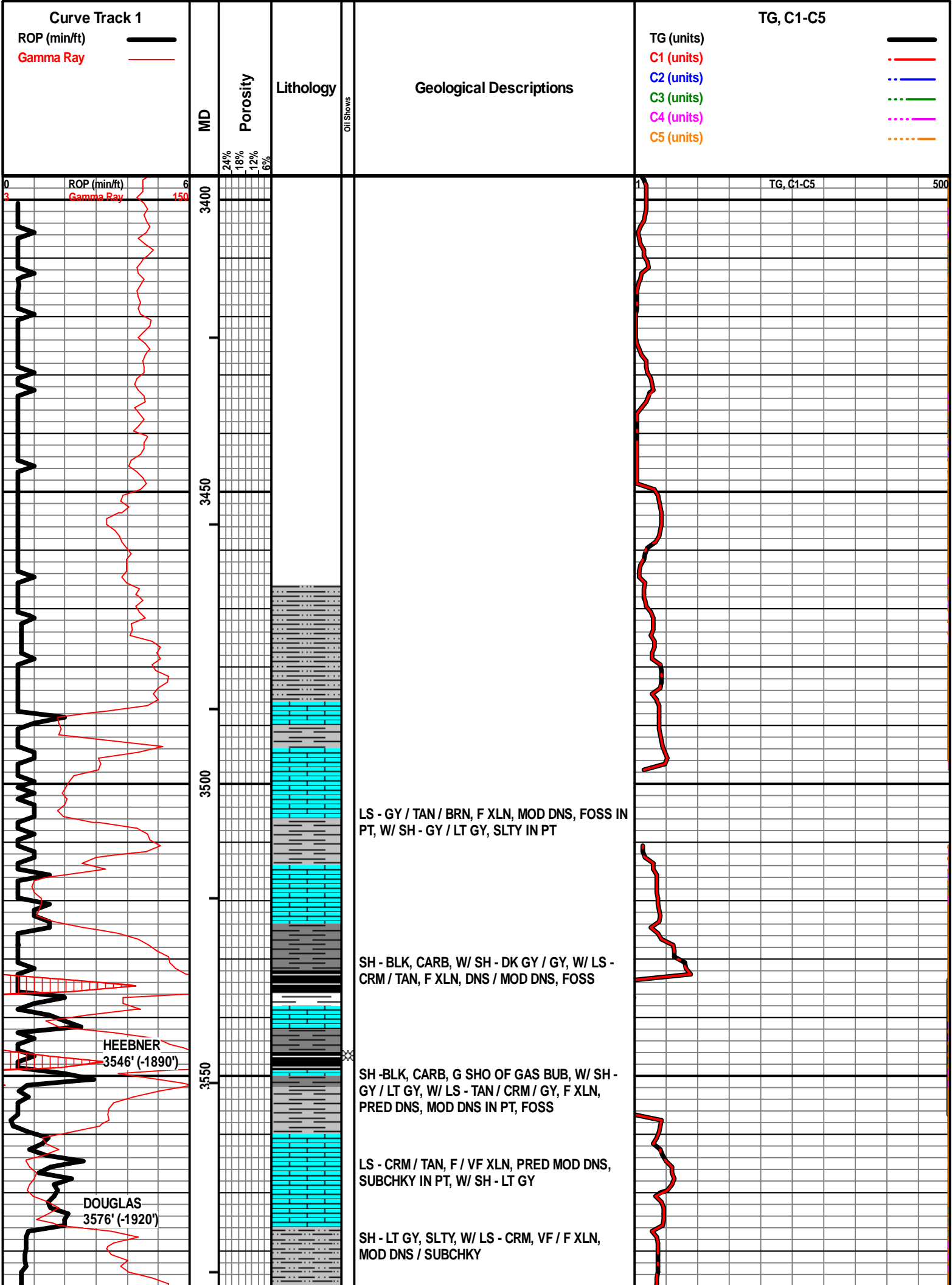
INTERVALS

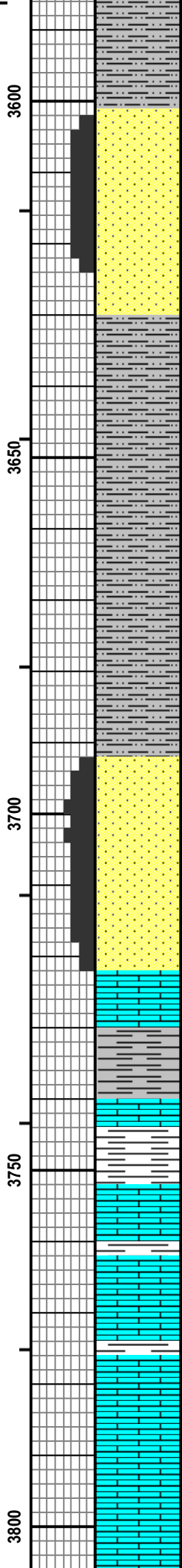
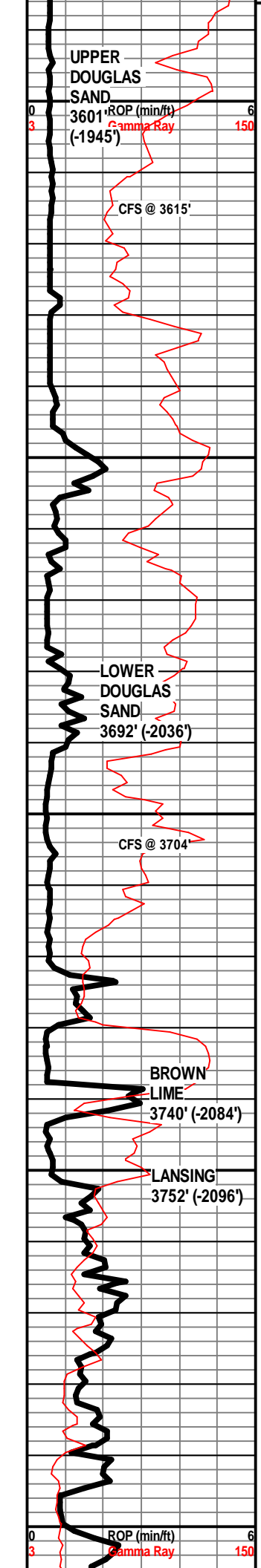
| | |
|--|------|
| | Core |
| | Dst |

| | |
|--|-----|
| | Dst |
|--|-----|

EVENTS

| | |
|--|----------|
| | Rft |
| | Sidewall |
| | Conn |





SH - LT GY / LT GRN, SLTY, PYRITIC IN PT

SS - GY / CLR, VF GR, SUB-ANG / SUB RND, W SRTD, MOD / P CEM, P / F INTERGR POR, NS, NO ODOR, GLAUC IN PT, ARG IN PT

SH - LT GY, SLI SLTY IN PT

SH - LT GY, LT GRN IN PT, SLI SLTY

SH - LT GY / GY, SLI SLTY

SH - LT GY / GY / DK GY IN PT, SLI SLTY IN PT

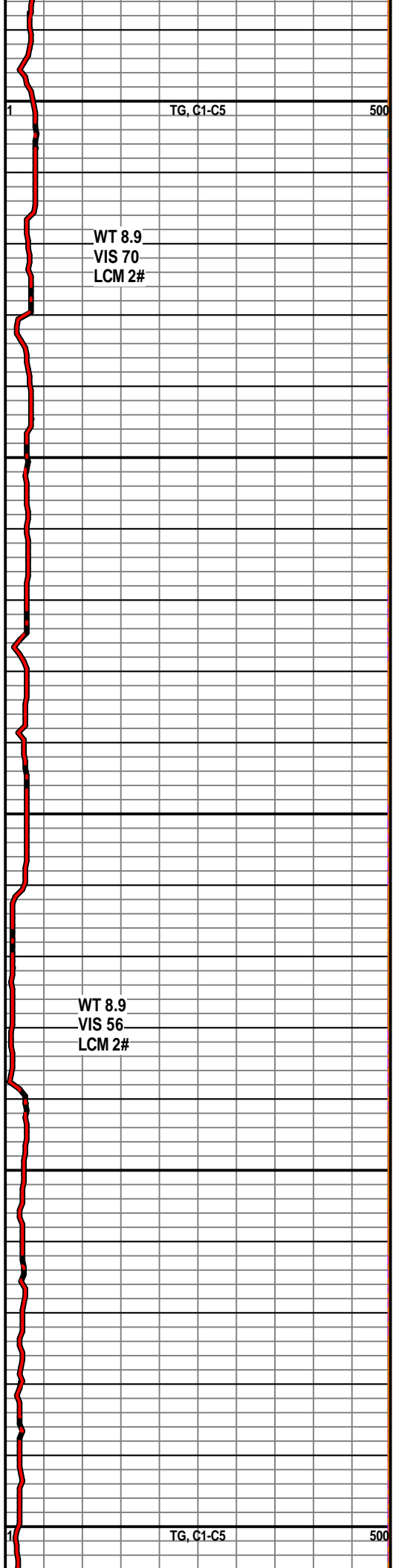
SS - GY / CLR, VF GR, SUB-ANG, W SRTD, MOD CEM, GLAUC IN PT, ARG IN PT, P / F INTERGR POR, NS, NO ODOR, NO FLUOR

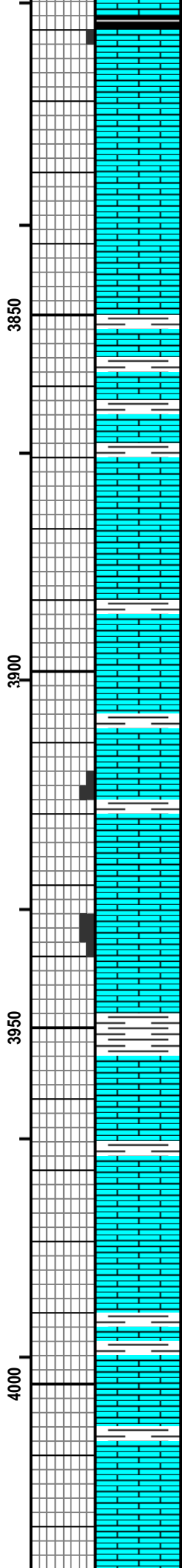
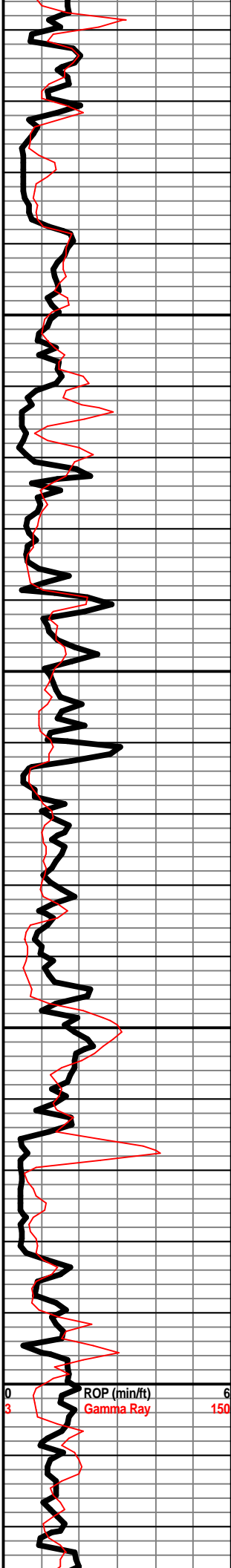
SS - CLR / GY IN PT, VF XLN, SUB-ANG / SUB-RND, MOD SRTD, MOD / P CEM, FRI IN FEW PIECES, SLI GLAUC IN PT, F / G INTERGR POR, NS, NO ODOR, NO FLUOR

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

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

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





LS - CRM, VF / F XLN, MOD DNS / SUBCHKY, CHKY IN PT, W/ SH - DK GY / BLK, CARB IN PT

LS - CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY, CHKY IN PT, FEW DNS PIECES, FOSS, P VUG & INTERPART POR IN PT, W/ SH - LT GY

LS - PRED TAN, CRM / WHT IN PT, PRED F / M XLN, PRED DNS / MOD DNS, V CHKY IN PT, FOSS IN PT

LS - CRM / TAN, F / M XLN, DNS / MOD DNS, SUBCHKY / CHKY IF FEW PIECES, FOSS

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

LS - CRM / TAN / GY IN PT, PRED F XLN, M XLN IN PT, MOD DNS / DNS, FOSS, P INTERXLN POR IN FEW PIECES, P OOLMODIC POR IN FEW PIECES, W/ SH - LT GY / GY

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

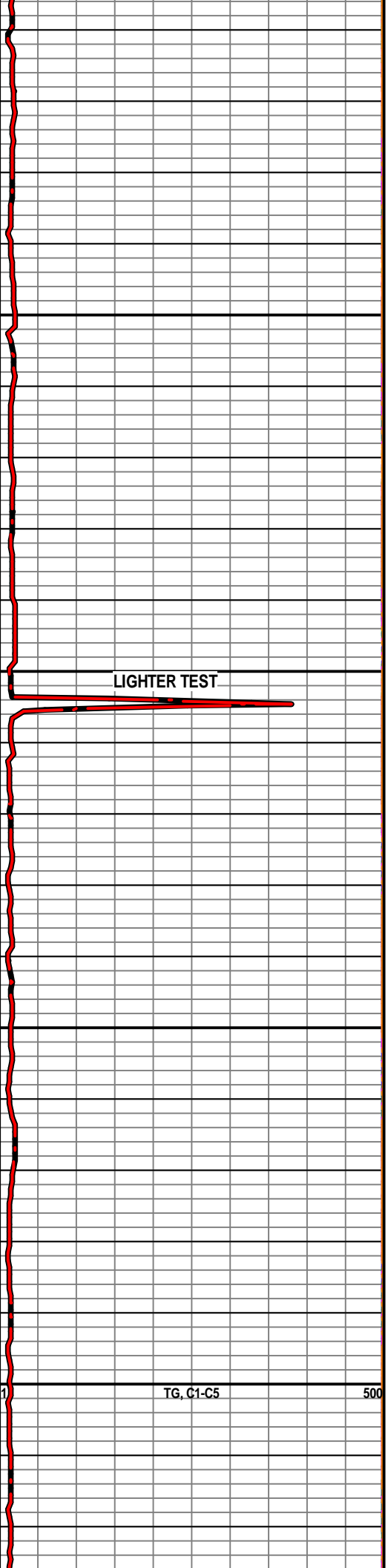
LS - TAN / CRM, F XLN, MOD DNS, P / F OOLMOLDIC & INTERXLN POR, NS, NO ODOR, ABUND FOSS, W/ FEW SH IN PT - GRN / MAR / DK GY / GY

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

LS - TAN / BRN / CRM / GY, F / VF XLN, M XLN IN PT, PRED DNS / MOD DNS, SUBCHKY IN PT, FOSS IN PT, W/ SH - GY / GRN / MAR

LS - PRED TAN, GY / CRM IN PT, F XLN, P / F OOLMOLDIC POR, NS, NO ODOR, FOSS, W/ SH - TURQ / GY

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



3650

3900

3950

4000

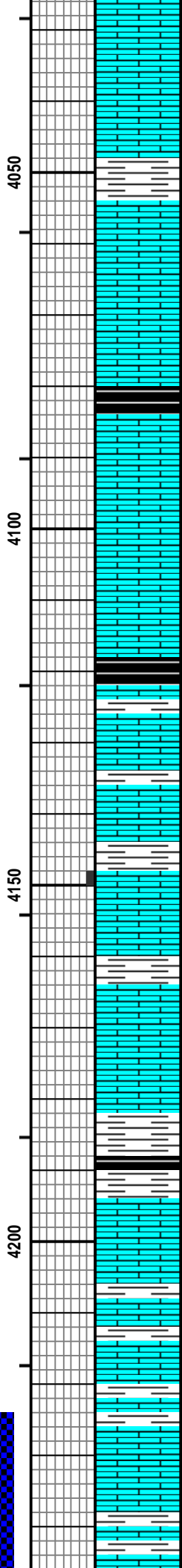
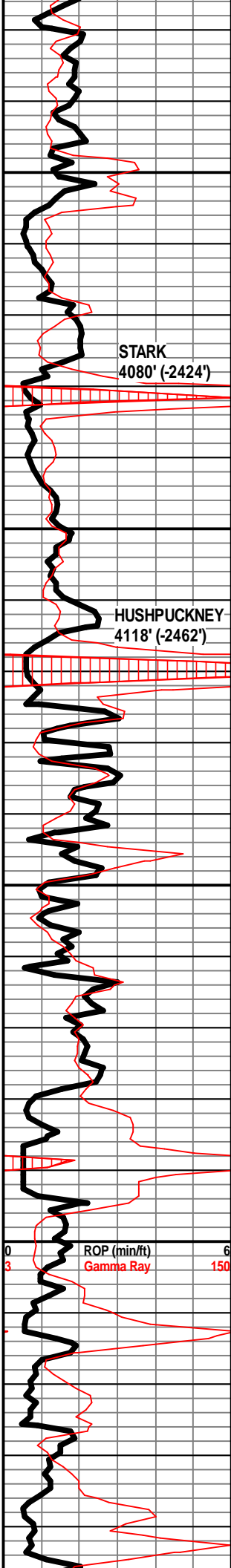
LIGHTER TEST

TG, C1-C5

500

ROP (min/ft)
Gamma Ray

6
150



LS - CRM / TAN / GY, F / M XLN, MOD DNS / DNS, FOSS I NPT

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

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

SH - BLK, CARB, SHO OF GAS BUB

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

SH - BLK, CARB, SHO OF GAS BUB, W/ SH - LT GRN, W/ LS - CRM / TAN, F / M XLN, MOD DNS / DNS, FOSS

LS - TAN / CRM / GY, F XLN, DNS / MOD DNS, P INTERXLN POR IN PT, SSFO IN FEW PIECES, BLEEDING V LT BRN OIL, NO ODOR, V SLI YEL-GRN FLUOR, W/ SH - GRN / MAR

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

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

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

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

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

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

WT 9.1
VIS 50
LCM 2#

TG, C1-C5 500

DST #1
Miss 4224'-4320'
30-45-45-60

IF: BOB in 2.5 min. Built to 31.60"
SI: No return
FF: BOB in 7 min. Built to 21.64"
FSI: No return

MISSISSIPPI
4256' (-2600')

4250

4300

4350

4400

4450

● CHT - WHT / GY, OPAQ, F / G WEATH POR,
ABUND OF FOSS IN PT, INTERPART POR IN PT,
COMP SAT STN, GSFO, F CUP ODOR, SLI SHO
OF GAS, MOD YEL-GRN FLUOR

● CHT - TAN / CRM / GY, FRSH IN PT, PRED F
WEATH POR, VUG POR IN PT, FSFO, SLI SHO
OF GAS, FOSS IN PT, MOD YEL-GRN FLUOR

● CHT - WHT / CRM, 75% FRSH, 25% P / F WEATH
POR, SSFO, SHO OF GAS, F CUP ODOR, SLI /
MOD YEL-GRN FLUOR

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

LS - TAN, F / M XLN, MOD DNS / DNS, W/ SH -
GY / GRN / MAR

LS - TAN / PURP, F XLN, MOD DNS, FOSS, ARG
W/ PURP SH IN PT

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

SH - LT GY / GY

SH - LT GY / GY

SH - LT GY / GY

SH - GY / DK GY

Rec'd: 317' GIP, 120' GOSM (5% G, 95%
M)

SIP: 314-323#
FP: 79-52#, 50-64#
HP: 2130-2074#

FROZEN FLOW
LINE ON GAS
DETECTION
REPLACED AND
IMMEDIATELY
FROZE AGAIN

STRAP 2.01' LONG
TO BOARD

WT 9.4
VIS 52
LCM 2#

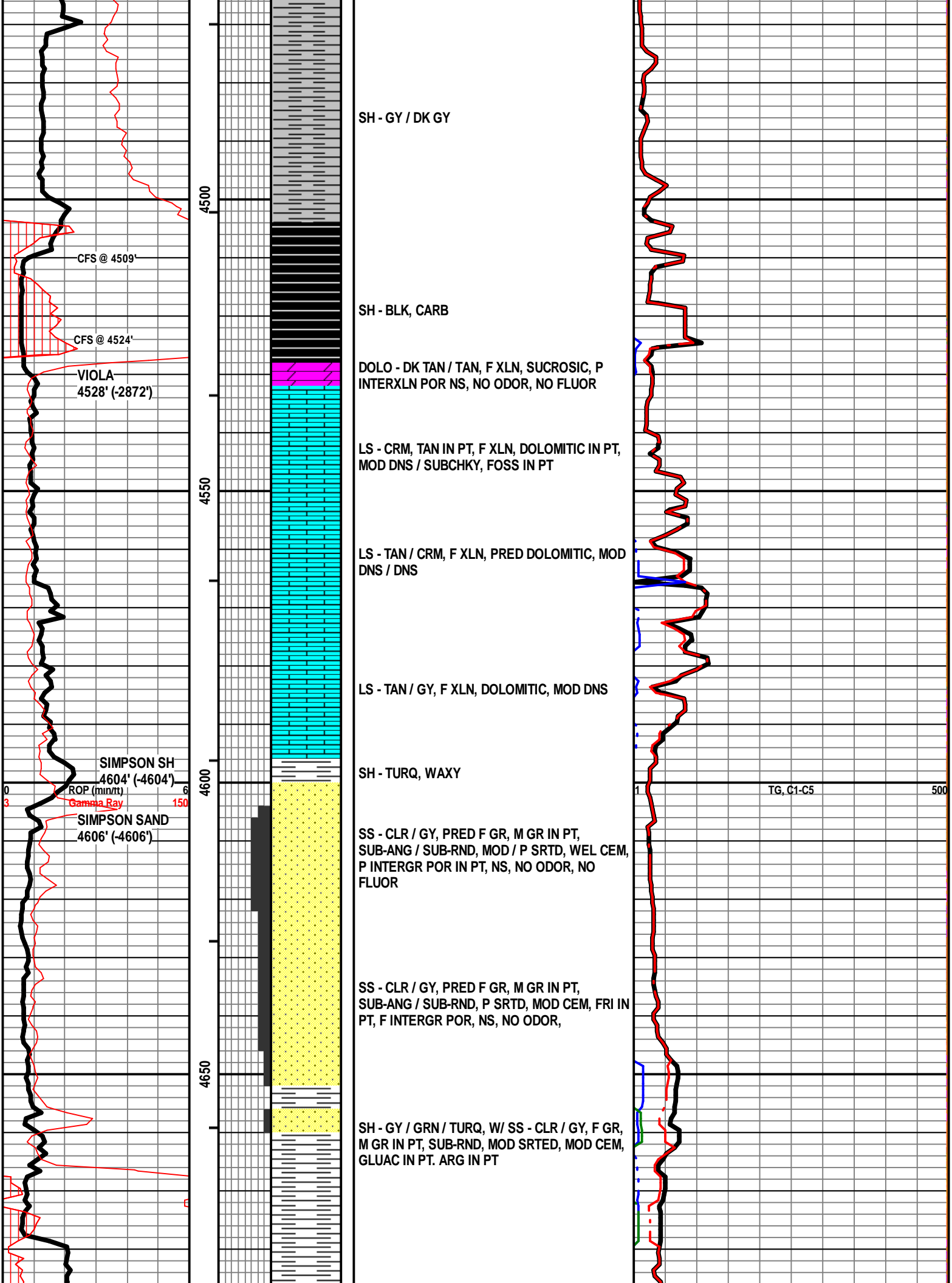
CFS @ 4320'

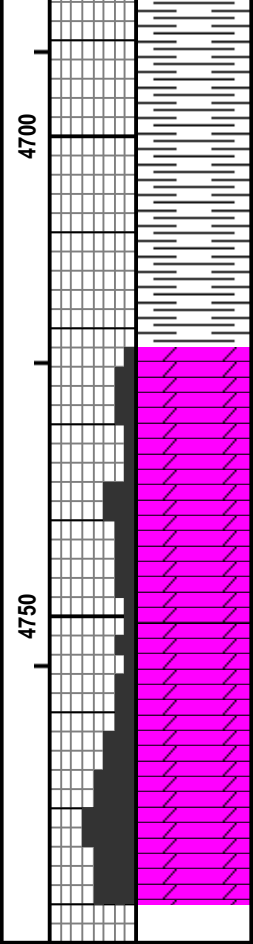
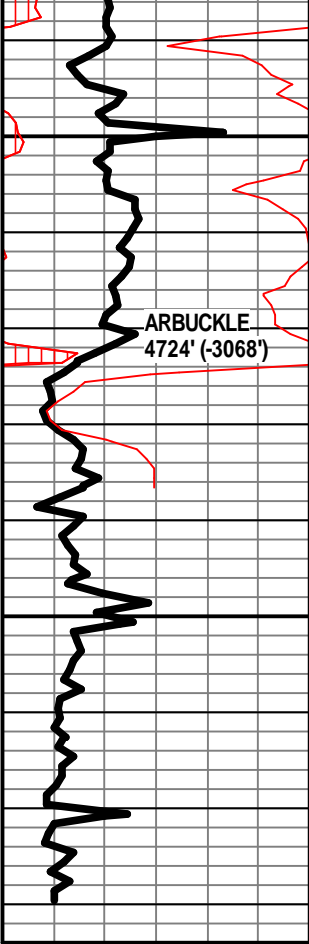
KINDERHOOK
4320' (-2664')

ROP (min/ft)
Gamma Ray

TG, C1-C5

500





SH - GY / GRN / TURQ

SH - GY / GRN / TURQ

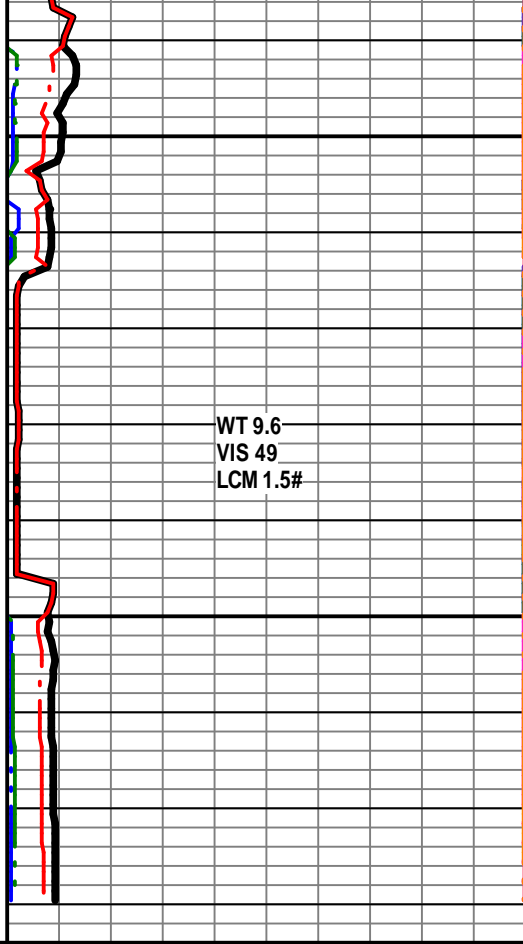
DOLO - TAN / BRN, F / M XLN, SUCR IN FEW
PIECES, P INTERXLN POR IN FEW PIECES, NS,
NO ODOR, MOD YEL-GRN MINERAL FLUOR

DOLO - TAN, F / M XLN, P / F INTERXLN POR IN
PT, NS, NO ODOR, MOD YEL-GRN FLUOR

DOLO - TAN / CRM, F / M XLN, MOD DNS / DNS,
P INTERXLN POR IN PT, NS

DOLO - TAN, F / M XLN, F / G INTERXLN & VUG
POR, FOSS, NS, NO ODOR, BRI YEL-GRN
MINERAL FLUOR

RTD 4780'



WT 9.6
VIS 49
LCM 1.5#

| | |
|--------------------------------|---------------|
| Fracture Start Date/Time | 3/30/22 15:06 |
| Fracture End Date/Time | 3/30/22 17:36 |
| State | Kansas |
| County | Barber |
| API Number | |
| Operator Number | |
| Well Name | Warren 4-85 |
| Federal Well | No |
| Tribal Well | No |
| Latitude | |
| Longitude | |
| True Lat Projection | NAD83 |
| True Vertical Depth (TVD) | |
| Total Clean Fluid Volume (TVL) | 197,530 |



REG. ID: XX-XXXX-0000

Total Shows Mass (lbs)
3,552,269

Ingredients Section:

| Trade Name | Supplier | Purpose | Ingredients | Chemical Abstract Service Number (CAS #) | Maximum Ingredient Concentration in Additive (% by mass)** | Mass per Component (LBS) | Maximum Ingredient Concentration in HF Fluid (% by mass)** | Comments | Claimant Company | Claimant First Name | Claimant Last Name | Claimant Email | Claimant Phone (nnn-aaa-bbbb) |
|--------------------------|-------------------|-----------------------------------|---|--|--|--------------------------|--|----------|------------------|---------------------|--------------------|-----------------------------------|-------------------------------|
| Water | Insum Oil | Carrier/Base Fluid | Water | 7732-18-5 | 100.00% | 3,375,888 | 93.37496% | | | | | | |
| 20/40 Premium Sand | SPS | Propping Agent | | Listed Below | | | | | | | | | |
| LD-100 Wash Sand | SPS | Propping Agent | | Listed Below | | | | | | | | | |
| LG-1 Liquid Gel | Moon Chemical | Gelling Agent | | Listed Below | | | | | | | | | |
| FR-1 Friction Reducer | Chemplex Chemical | Friction Reducer | | Listed Below | | | | | | | | | |
| FB-1 Liquid Biocide | FES | Biocide | | Listed Below | | | | | | | | | |
| W-11 NF-Surfactant | Stratco Oilfield | NF-Surfactant | | Listed Below | | | | | | | | | |
| K-C-L-Liquid LCI Subst | Stratco Oilfield | NF-Surfactant | | Listed Below | | | | | | | | | |
| SP-400-125 Inhibitor | Stratco Oilfield | H2S Scribe Inhibitor | | Listed Below | | | | | | | | | |
| DB-1 FR Breaker | FES | Polymer Breaker | | Listed Below | | | | | | | | | |
| Brinkner LR | Insumco Oilfield | Liquid Enzyme Breaker | | Listed Below | | | | | | | | | |
| NL-B-Gel Complexer and H | FES | Gel Complexer and Buffering Agent | | Listed Below | | | | | | | | | |
| PropCare XA Component | Hexxon | Amidamine | | Listed Below | | | | | | | | | |
| PropCare XB Component | Hexxon | Epoxy | | Listed Below | | | | | | | | | |
| | | | Crysiline Silica | 14808-60-7 | 100.00% | 144,000 | 4.05319% | | | | | | |
| | | | Crysiline Silica | 14808-60-7 | 100.00% | 80,000 | 2.25177% | | | | | | |
| | | | Persulfate disulfates | 66752-87-8 | 50.00% | 1,007 | 0.02844% | | | | | | |
| | | | Ononaphilic Clay | 71011-26-2 | 3.00% | 40 | 0.00113% | | | | | | |
| | | | Crysiline Silica | 14808-60-7 | 0.00% | 7 | 0.00020% | | | | | | |
| | | | Alcohol ethoxylate | 35798-01-1 | 1.00% | 20 | 0.00057% | | | | | | |
| | | | Gum Gum | 9000-30-0 | 50.00% | 1,007 | 0.02842% | | | | | | |
| | | | Dioxolene (Pentoxum), Hydroxylated salt | 6432-27-8 | 30.00% | 442 | 0.01260% | | | | | | |
| | | | Citric Acid | 77-92-9 | 5.00% | 77 | 0.00217% | | | | | | |
| | | | Alcohols, C10-16, Ethoxylated | 68002-97-1 | 5.00% | 77 | 0.00217% | | | | | | |
| | | | Alcohols, C12-14, Ethoxylated | 68439-80-0 | 5.00% | 77 | 0.00217% | | | | | | |
| | | | Alcohols, C12-16, Ethoxylated | 68551-12-2 | 5.00% | 77 | 0.00217% | | | | | | |
| | | | Water | 7732-18-5 | 50.00% | 770 | 0.02164% | | | | | | |
| | | | Glycerolglycol | 111-30-8 | 20.00% | 154 | 0.00443% | | | | | | |
| | | | Didecylmethyl ammonium chloride | 7171-51-5 | 3.00% | 23 | 0.00065% | | | | | | |
| | | | Alky(C12-16) dimethylbenzyl ammonium chloride | 68424-85-1 | 3.00% | 23 | 0.00065% | | | | | | |
| | | | Water | 7732-18-5 | 80.00% | 615 | 0.01750% | | | | | | |
| | | | Methanol | 67-56-1 | 15.00% | 117 | 0.00330% | | | | | | |
| | | | Polyoxyethylene Nonyl Phenyl Ether | 171087-87-0 | 20.00% | 158 | 0.00449% | | | | | | |
| | | | Supplier Proprietary Mixture | 65.00% | 509 | 0.01451% | | | Stratco Oilfield | Greg | Ferguson | greg.ferguson@stratcooilfield.com | 940-736-0352 |
| | | | Choline Chloride | 67-48-1 | 75.00% | 2,670 | 0.07532% | | | | | | |
| | | | Water | 7732-18-5 | 35.00% | 800 | 0.02280% | | | | | | |
| | | | Corrosion Inhibitor | Proprietary | 70.00% | 538 | 0.01514% | | Stratco Oilfield | Greg | Ferguson | greg.ferguson@stratcooilfield.com | 940-736-0352 |
| | | | Methanol | 67-56-1 | 30.00% | 230 | 0.00649% | | | | | | |
| | | | Sodium chloride | 7732-18-2 | 10.00% | 60 | 0.00169% | | | | | | |
| | | | Water | 7732-18-5 | 90.00% | 542 | 0.01524% | | | | | | |
| | | | Sucrose | 57-50-1 | 100.00% | 230 | 0.00620% | | | | | | |
| | | | Sodium metaborate 8 | 10255-76-7 | 24.00% | 198 | 0.00562% | | | | | | |
| | | | Fatty Acid polyamine condensate | Proprietary | 35.00% | 56 | 0.00161% | | Hexxon | Logan | Caboni | logan.caboni@hexxon.com | 405-301-5073 |
| | | | Solvent naptha (petroleum), heavy arom | 64742-94-5 | 10.00% | 72 | 0.00204% | | | | | | |
| | | | 1,6,9,12-Tetraoxatetradecane-1-ol | 8626-26-4 | 5.00% | 7 | 0.00020% | | | | | | |
| | | | Naphthalene | 91-20-3 | 1.00% | 7 | 0.00020% | | | | | | |
| | | | 4,4'-Isopropylidenediphenyl-Fenchylolamine Capoly | 52066-38-6 | 35.00% | 112 | 0.00316% | | | | | | |

*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