KOLAR Document ID: 1510077

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 # 34318
Name: BEREXCO LLC
Address 1: 2020 N. BRAMBLEWOOD
Address 2:
City: WICHITA State: KS Zip: 67206 + 1094
Contact Person: Brett Blazer
Phone: ( 316 ) 265-3311
CONTRACTOR: License # 34317
Name: BEREDCO LLC
Wellsite Geologist: Ed Grieves
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 #:

1/27/2020 — Spud Date or Recompletion Date
2/10/2020 — Date Reached TD
2/10/2020 — Completion Date or Recompletion Date

API No.: 15-055-22531-00-00
Spot Description:
NE - SW - NW - SW Sec. 21 Twp. 22 S. R. 33 ☐ East ☑ West
1780 Feet from ☐ North / ☑ South Line of Section
335 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Finney
Lease Name: DAMME Well #: 8-21
Field Name:
Producing Formation: Morrow
Elevation: Ground: 2896 Kelly Bushing: 2908
Total Vertical Depth: 4900 Plug Back Total Depth: 4855
Amount of Surface Pipe Set and Cemented at: 1803 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 3228 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: 10900 ppm Fluid volume: 700 bbls
Dewatering method used: Evaporated
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: 03/16/2020
☐ **Confidential Release Date:** 03/16/2022
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
**ALT** ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 03/16/2020

Operator Name: BEREXCO LLC Lease Name: DAMME Well #: 8-21

Sec. 21 Twp. 22 S. R. 33 ☐ East ☑ West County: Finney

**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 *(Attach Additional Sheets)* | ☑ Yes | ☐ No |
| Samples Sent to Geological Survey | ☑ Yes | ☐ No |
| Cores Taken | ☐ Yes | ☑ No |
| Electric Log Run | ☑ Yes | ☐ No |
| Geologist Report / Mud Logs | ☑ Yes | ☐ No |

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

| Name | Top | Datum |
|---|---|---|
| Heebner | 3813 | -905 |
| Lansing | 3852 | -944 |
| Marmaton | 4352 | -1444 |
| St Louis | 4738 | -1830 |

CASING RECORD ☑ New ☐ 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 |
|---|---|---|---|---|---|---|---|
| Surface | 12.25 | 8.625 | 23 | 1795 | 65/35 poz (Lead), Class A (Tail | 825 | 6% gel, 1/4# flakes, 3% CC (Lead), 3% C |
| Production | 7.875 | 5.5 | 15.5 | 4899 | 65/35 poz (Lead), Thixotropic (T | 260 | 6% gel, 1/4# flakes (Lead), 10% gyp, 10% |
| Production | 7.875 | 5.5 | 15.5 | 3228 | 65/35 poz (Lead), Thixotropic (T | 370 | 6% gel, 1/4# flakes (Lead) |

ADDITIONAL CEMENTING / SQUEEZE RECORD

| Purpose: | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
|---|---|---|---|---|
| ☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* |
|---|---|

| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|---|---|---|---|---|---|
| | | | | | |

| DISPOSITION OF GAS: | METHOD OF COMPLETION: | PRODUCTION INTERVAL: |
|---|---|---|
| ☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)* | ☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* | Top / Bottom |

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

TUBING RECORD: Size: Set At: Packer At:

**Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202**

| | |
|---|---|
| Form | ACO1 - Well Completion |
| Operator | BEREXCO LLC |
| Well Name | DAMME 8-21 |
| Doc ID | 1510077 |

All Electric Logs Run

| |
|---|
| Microlog |
| Sonic |
| Induction |
| Neutron Density |

| | |
|---|---|
| Form | ACO1 - Well Completion |
| Operator | BEREXCO LLC |
| Well Name | DAMME 8-21 |
| Doc ID | 1510077 |

Casing

| Purpose Of String | Size Hole Drilled | Size Casing Set | Weight | Setting Depth | Type Of Cement | Number of Sacks Used | Type and Percent Additives |
|---|---|---|---|---|---|---|---|
| Surface | 12.25 | 8.625 | 23 | 1795 | 65/35 poz (Lead), Class A (Tail) | 825 | 6% gel, 1/4# flakes, 3% CC (Lead), 3% CC (Tail) |
| Production | 7.875 | 5.5 | 15.5 | 4899 | 65/35 poz (Lead), Thixotropic (Tail) | 260 | 6% gel, 1/4# flakes (Lead), 10% gyp, 10% salt, 5# gilsonite, 0.5% fluid loss, 0.25# defoamer (Tail) |
| Production | 7.875 | 5.5 | 15.5 | 3228 | 65/35 poz (Lead), Thixotropic (Tail) | 370 | 6% gel, 1/4# flakes (Lead) |
| | | | | | | | |

# CEMENT TREATMENT REPORT

| | | | | | |
|---|---|---|---|---|---|
| Customer: | Berexco | Well: | Damme 8-21 | Ticket: | ICT 3168 |
| City, State: | | County: | Finney KS | Date: | 1/30/2020 |
| Field Rep: | | S-T-R: | 21-22S-33W | Service: | Surface |

| Downhole Information | |
|---|---|
| Hole Size: | 12 1/4 in |
| Hole Depth: | 1803 ft |
| Casing Size: | 8 5/8 in |
| Casing Depth: | 1800.4 ft |
| Tubing / Liner: | in |
| Depth: | ft |
| Tool / Packer: | |
| Depth: | ft |
| Displacement: | 112.5 bbls |

| Calculated Slurry | |
|---|---|
| Weight: | 13.2 # / sx |
| Water / Sx: | gal / sx |
| Yield: | 1.90 $ft^3$ / sx |
| Bbls / Ft.: | |
| Depth: | ft |
| Annular Volume: | 0 bbls |
| Excess: | |
| Total Slurry: | 194.6 bbls |
| Total Sacks: | 575 sx |

| Product | % / # | # |
|---|---|---|
| Class A | 65.00 | 35133 |
| Poz | 35.00 | 14893 |
| Gel | 6.00 | 3002 |
| CaCl | 3.00 | 1501 |
| Gypsum | | |
| Metso | | |
| Kol Seal | | |
| Flo Seal | 0.25 | 125 |
| Salt (bww) | | |
| Total | | 54,652 |

| TIME | RATE | PSI | BBLs | REMARKS |
|---|---|---|---|---|
| 100A | | | | ON LOCATION |
| 115A | | | | GET THE FOLLOWING FROM PUSHER: 12 1/4 OPEN HOLE, 8 5/8 23# CASING (RACK VERIFIED), 1803 FT TD, 1800.43 FT CASIN |
| | | | | CENTRALIZERS ON JOINT 1, 2, 3 |
| 215A | | | | EQUIPMENT ARRIVES ON LOCATION |
| 230A | | | | SAFETY MEETING |
| 1100P | | | | RIG UP |
| 1200P | | | | CASING ON BOTTOM |
| 1215P | | | | CIRCULATE |
| 137P | 4.5 | 200.0 | 5.0 | H2O AHEAD |
| 140P | 6.3 | 340.0 | 194.6 | LEAD CEMENT 575 SKS 65/35/6 |
| 221P | 6.0 | 450.0 | 31.5 | TAIL CEMENT 150 SKS 3% CaCl |
| 232P | | | | SHUT DOWN/DROP PLUG |
| 235P | 7.0 | 350.0 | 25.0 | DISPLACE H2O |
| 240P | 7.0 | 510.0 | 25.0 | DISPLACE H2O |
| 245P | 7.0 | 700.0 | 25.0 | DISPLACE H2O |
| 248P | 7.0 | 890.0 | 25.0 | DISPLACE H2O |
| 252P | 4.0 | 910.0 | 12.5 | DISPLACE H2O |
| 255P | | 2,000.0 | | PLUG LANDED |
| 257P | | | | CHECK FLOAT/ IT HELD |
| 300P | | | | WASH UP |
| 310P | | | | RIG DOWN |
| 330P | | | | LEFT LOCATION |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| | CREW | UNIT |
|---|---|---|
| Cementer: | Jimmie Cottrell | 73 |
| Pump Operator: | Jesse Jones | 231 |
| Bulk #1: | John Polley | 242 |
| Bulk #2: | Jeff Jackson | 180/250 |

| SUMMARY | | |
|---|---|---|
| Average Rate | Average Pressure | Total Fluid |
| 6.1 bpm | 706 psi | 344 bbls |

Hurricane Services, Inc.
250 N. Water
Wichita, KS 67202

# CEMENT TREATMENT REPORT

| | | | | | |
|---|---|---|---|---|---|
| Customer: | Berexco | Well: | Damme #8-21 | Ticket: | ICT 3224 |
| City, State: | | County: | Finney, Ks | Date: | 2/9/2020 |
| Field Rep: | | S-T-R: | 21-22s-33w | Service: | 2 Stage |

| Downhole Information | |
|---|---|
| Hole Size: | 7.875 in |
| Hole Depth: | 4900 ft |
| Casing Size: | 5.5 15.5# in |
| Casing Depth: | 4901.58 ft |
| Tubing / Liner: | in |
| Shoe Joint | 43.18 ft |
| Tool / Packer: | D.V Tool |
| Depth: | 3228.18 ft |
| Displacement: | 115.6 bbls |

| Calculated Slurry | |
|---|---|
| Weight: | # / sx |
| Water / Sx: | gal / sx |
| Yield: | $ft^3$ / sx |
| Bbls / Ft.: | |
| Depth: | ft |
| Annular Volume: | 0 bbls |
| Excess: | |
| Total Slurry: | 0.0 bbls |
| Total Sacks: | #DIV/0! sx |

| Product | % / # | # |
|---|---|---|
| Class A | | |
| Poz | | |
| Gel | | |
| CaCl | | |
| Gypsum | | |
| Metso | | |
| Kol Seal | | |
| Flo Seal | | |
| Salt (bww) | | |
| | Total | - |

| TIME | RATE | PSI | BBLs | REMARKS |
|---|---|---|---|---|
| 8:00 PM | | | | On location safety meeting. Spot in and rig up. |
| | | | | Wait on rig. |
| 11:00 PM | | | | Run float equipment. Centrailzers on 1,3,5,7,9,11,13,15,17,38 and 40. Baskets on 2,3,7,38. D.V tool in between 39 and 40 |
| | | | | Break circulation on 55 |
| | | | | 115 joints of casing run. Break circulation with rig and finish rigging up pump and bulk equipment. |
| | 4.5 | 250.0 | 10.0 | Mix and pump 10 BBL Mudflush |
| | 4.5 | 250.0 | 47.4 | Mix and pump 47.37 BBL lead cement. 140 sacks 65/35/6 .25 lb poly at 1.9 yield and 12.6 PPG. Company request |
| | 4.5 | 150.0 | 32.3 | Mix and pump 32.27 BBL tail cement . 120 sacks A 10% gyp 10% salt 5# kolseal .5% FL .25# defoamer at 1.51 yield and 14.8 PPG |
| | | | | Stop |
| | 4.0 | | 10.0 | Wash pump and lines. Drop plug. Start displacement |
| | 5.0 | 150.0 | 40.0 | Continue water displacement. Slow rate as plug went through D.V Tool |
| | 5.0 | 150.0 | | Start Mud Displacement |
| | 4.5 | 750.0 | 75.0 | See lift pressure |
| | 4.5 | 250.0 | | Pressure decrease |
| | 3.0 | 250.0 | 119.0 | Stop pumping. 116 BBL add 3%. Pump to 119 BBL. Stop. Meeting with company man. |
| 4:30 AM | | | | Plug did not bump. Floats did not hold. Shut in head and wait 4 hours for second stage. |

| CREW | | UNIT |
|---|---|---|
| Cementer: | Jake - Keven | 77 |
| Pump Operator: | Kevin | 265 |
| Bulk #1: | Riley | 242 |
| Bulk #2: | John P | 180-250 |

| SUMMARY | | |
|---|---|---|
| Average Rate | Average Pressure | Total Fluid |
| 4.38889 bpm | 275 psi | 334 bbls |

Hurricane Services, Inc.
250 N. Water
Wichita, KS 67202

# CEMENT TREATMENT REPORT

| | | | | | |
|---|---|---|---|---|---|
| Customer: | Berexco | Well: | Damme #8-21 | Ticket: | ICT 3224 |
| City, State: | | County: | Finney, Ks | Date: | 2/9/2020 |
| Field Rep: | | S-T-R: | 21-22s-33w | Service: | 2 Stage |

| Downhole Information | |
|---|---|
| Hole Size: | 7.875 in |
| Hole Depth: | 4900 ft |
| Casing Size: | 5.5 15.5# in |
| Casing Depth: | 4901.58 ft |
| Tubing / Liner: | in |
| Depth: | ft |
| Tool / Packer: | D.V Tool |
| Depth: | 3228.18 ft |
| Displacement: | 76.8 bbls |

| Calculated Slurry | |
|---|---|
| Weight: | # / sx |
| Water / Sx: | gal / sx |
| Yield: | $ft^3$ / sx |
| Bbls / Ft.: | |
| Depth: | ft |
| Annular Volume: | 0 bbls |
| Excess: | |
| Total Slurry: | 0.0 bbls |
| Total Sacks: | #DIV/0! sx |

| Product | % / # | # |
|---|---|---|
| Class A | | |
| Poz | | |
| Gel | | |
| CaCl | | |
| Gypsum | | |
| Metso | | |
| Kol Seal | | |
| Flo Seal | | |
| Salt (bww) | | |
| Total | | - |

| TIME | RATE | PSI | BBLs | REMARKS |
|---|---|---|---|---|
| 8:30 AM | | | | Hook up truck to see returns from 4 Hour wait (SECOND STAGE) |
| | | | | 2.5 BBL back to truck |
| | | | | Open head and drop dart and load closing plug |
| | 2.5 | 250.0 | 10.0 | Shift tool with truck |
| | | | | Hook up to circulate mud with rig. |
| 10:05 AM | 2.0 | 50.0 | 7& 5 | Plug mouse and rat hole |
| 10:15 AM | 4.5 | 250.0 | 10.0 | Mix and pump mudflush |
| 10:25 AM | 4.5 | 250.0 | 108.3 | Mix and pump 320 sacks lead cement. 108.28 BBL at 1.9 yield and 12.6 PPG 65/36/6 .25# poly. Per company request |
| | 4.5 | 150.0 | 13.4 | Mix and pump 50 sacks tail cement. 13.44 BBL at 1.51 yield and 14.8 PPG. Class A 10% gyp 10% salt, 5# kolseal .5% Fl .25# Def |
| | | | | Stop |
| | 4.0 | | 10.0 | Wash pump and lines. Drop plug |
| 10:50 AM | 4.5 | 100.0 | 1.0 | Start water displacement |
| | 4.5 | 125.0 | 10.0 | Continue displacement |
| | 4.5 | 300.0 | 58.0 | See lift pressure. |
| | 3.0 | 500.0 | 70.0 | Slow rate |
| 11:14 AM | 3.0 | 1,750.0 | 76.0 | Bump plug |
| | | | | Release pressure |
| | | | 0.3 | Float held. .25 BBL returns |
| | | | | Rig down and leave location |
| 11:45 AM | | | | |

| CREW | | UNIT |
|---|---|---|
| Cementer: | Jake - Keven | 77 |
| Pump Operator: | Kevin | 265 |
| Bulk #1: | Riley | 242 |
| Bulk #2: | John P | 180-250 |

| SUMMARY | | |
|---|---|---|
| Average Rate | Average Pressure | Total Fluid |
| 3.77273 bpm | 373 psi | 367 bbls |

Hurricane Services, Inc.
250 N. Water
Wichita, KS 67202

# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

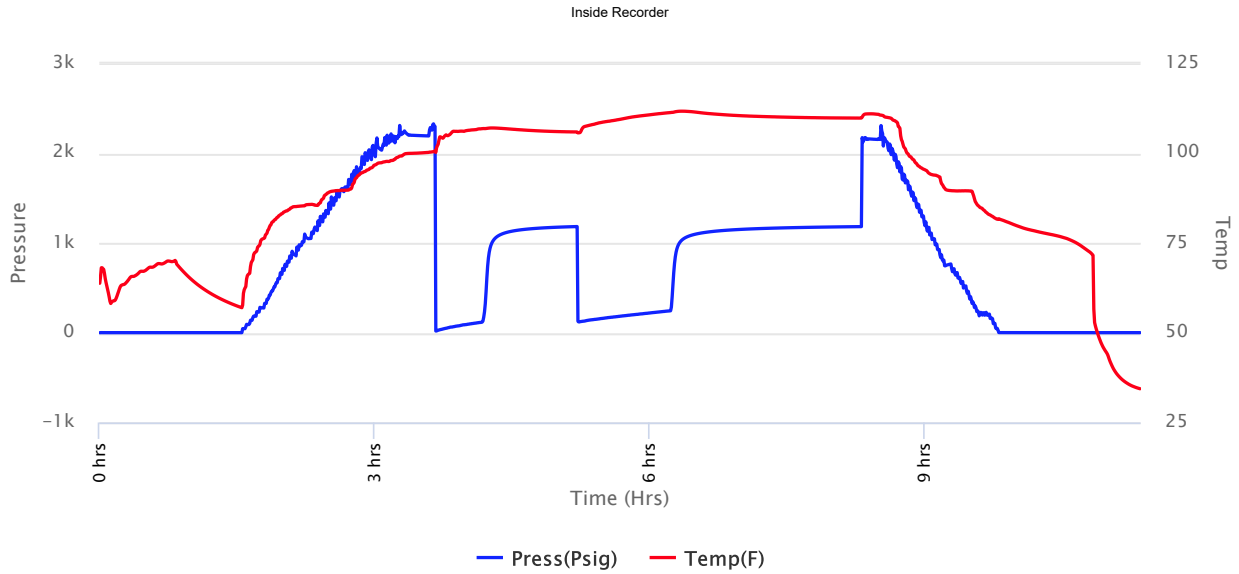
**Operation:**
Uploading recovery & pressures

**DATE**
February
**06**
2020

**DST #1** **Formation: Morrow Sd.** **Test Interval: 4650 - 4720'** **Total Depth: 4720'**

Time On: 10:25 02/06 Time Off: 21:55 02/06
Time On Bottom: 13:58 02/06 Time Off Bottom: 18:28 02/06

| Electronic Volume Estimate: | 1st Open | 1st Close | 2nd Open | 2nd Close |
|---|---|---|---|---|
| 1755' | Minutes: 30<br>Current Reading:<br>42.2" at 30 min<br>Max Reading: 42.2" | Minutes: 60<br>Current Reading:<br>0" at 60 min<br>Max Reading: 0" | Minutes: 60<br>Current Reading:<br>89.4" at 60 min<br>Max Reading: 89.4" | Minutes: 120<br>Current Reading:<br>26.1" at 120 min<br>Max Reading: 26.1" |



# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

**Operation:**
Uploading recovery & pressures

**DATE**
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**06**
2020

**DST #1** **Formation: Morrow Sd.** **Test Interval: 4650 - 4720'** **Total Depth: 4720'**

Time On: 10:25 02/06 Time Off: 21:55 02/06
Time On Bottom: 13:58 02/06 Time Off Bottom: 18:28 02/06

Recovered

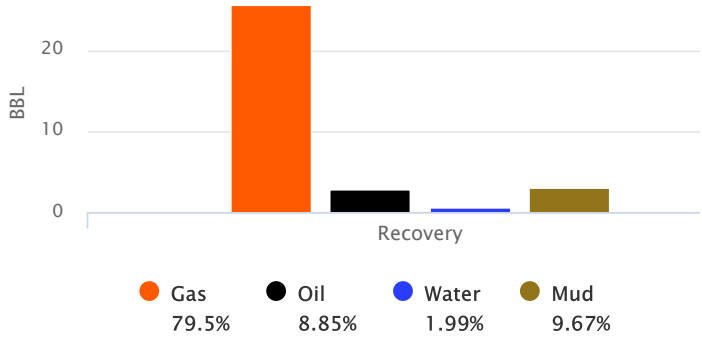
| Foot | BBLS | Description of Fluid | Gas % | Oil % | Water % | Mud % |
|---|---|---|---|---|---|---|
| 1740 | 24.7602 | G | 100 | 0 | 0 | 0 |
| 50 | 0.7115 | SLGCO | 8 | 92 | 0 | 0 |
| 95 | 1.35185 | SLMCSLGCO | 8 | 87 | 0 | 5 |
| 375 | 5.33625 | SLGCSLWCSLOCM | 12 | 19 | 12 | 57 |

Total Recovered: 2260 ft
Total Barrels Recovered: 32.1598

Reversed Out
NO

| | | |
|---|---|---|
| Initial Hydrostatic Pressure | 2256 | PSI |
| Initial Flow | 19 to 118 | PSI |
| **Initial Closed in Pressure** | **1182** | **PSI** |
| Final Flow Pressure | 121 to 244 | PSI |
| **Final Closed in Pressure** | **1182** | **PSI** |
| Final Hydrostatic Pressure | 2247 | PSI |
| Temperature | 112 | °F |
| Pressure Change Initial Close / Final Close | 0.0 | % |

**Recovery at a glance**




GIP cubic foot volume: 143.53816

# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

**Operation:**
Uploading recovery & pressures

**DATE**
February
**06**
2020

**DST #1** **Formation: Morrow Sd.** **Test Interval: 4650 - 4720'** **Total Depth: 4720'**

Time On: 10:25 02/06 Time Off: 21:55 02/06
Time On Bottom: 13:58 02/06 Time Off Bottom: 18:28 02/06

**BUCKET MEASUREMENT:**
1st Open: 1/2" blow building to BOB 101/2 min
1st Close: No BB
2nd Open: 1/2" blow building to BOB 7 1/2 min.
2nd Close: BOB BB

**REMARKS:**
We bled line off for 20 min into final shut-in period and it took 32 1/2 min. after that for blow back to hit BOB.

Tool Sample: 3% Gas 65% Oil 24% Water 8% Mud

Gravity: 30.9 @ 60 °F

Ph: 6.0

Measured RW: .36 @ 49 degrees °F

RW at Formation Temp: 0.169 @ 112 °F

Chlorides: 35,000 ppm


# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL

**Operation:**
Uploading recovery & pressures

Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

**DATE**
February
**06**
2020

**DST #1** **Formation: Morrow Sd.** **Test Interval: 4650 - 4720'** **Total Depth: 4720'**

Time On: 10:25 02/06 Time Off: 21:55 02/06
Time On Bottom: 13:58 02/06 Time Off Bottom: 18:28 02/06

## Down Hole Makeup

**Heads Up:** 11.23 FT

**Drill Pipe:** 4628.4 FT
*ID-3 1/2*

**Weight Pipe:** 0 FT

**Collars:** 0 FT
*ID-2 1/4*

**Test Tool:** 34.07 FT
*ID-3 1/2-FH*
*Jars*
*Safety Joint*

**Total Anchor:** 69.76

**Anchor Makeup**

**Packer Sub:** 1 FT

**Perforations: (top):** 3 FT
*4 1/2-FH*

**Change Over:** 1 FT

**Drill Pipe: (in anchor):** 31.76 FT
*ID-3 1/2*

**Change Over:** 1 FT

**Perforations: (below):** 32 FT
*4 1/2-FH*

**Packer 1:** 4644.74 FT

**Packer 2:** 4650.24 FT

**Top Recorder:** 4634.16 FT

**Bottom Recorder:** 4689 FT

**Well Bore Size:** 7 7/8

**Surface Choke:** 1"

**Bottom Choke:** 5/8"

# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield

**Operation:**

Uploading recovery & pressures

Job Number: 440
API #: 15-055-22531-00-00

**DATE**
February
**06**
2020

**DST #1** **Formation: Morrow Sd.** **Test Interval: 4650 - 4720'** **Total Depth: 4720'**

Time On: 10:25 02/06 Time Off: 21:55 02/06
Time On Bottom: 13:58 02/06 Time Off Bottom: 18:28 02/06

## Mud Properties

**Mud Type:** Chemical **Weight:** 9.1 **Viscosity:** 44 **Filtrate:** 8.4 **Chlorides:** 2,500 ppm

# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

**Operation:**
Uploading recovery & pressures

| DATE |
|---|
| February |
| **06** |
| 2020 |

**DST #1** **Formation: Morrow Sd.** **Test Interval: 4650 - 4720'** **Total Depth: 4720'**

Time On: 10:25 02/06 Time Off: 21:55 02/06

Time On Bottom: 13:58 02/06 Time Off Bottom: 18:28 02/06

## Gas Volume Report

| 1st Open | | | |
|---|---|---|---|
| **Time** | **Orifice** | **PSI** | **MCF/D** |

| 2nd Open | | | |
|---|---|---|---|
| **Time** | **Orifice** | **PSI** | **MCF/D** |

# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

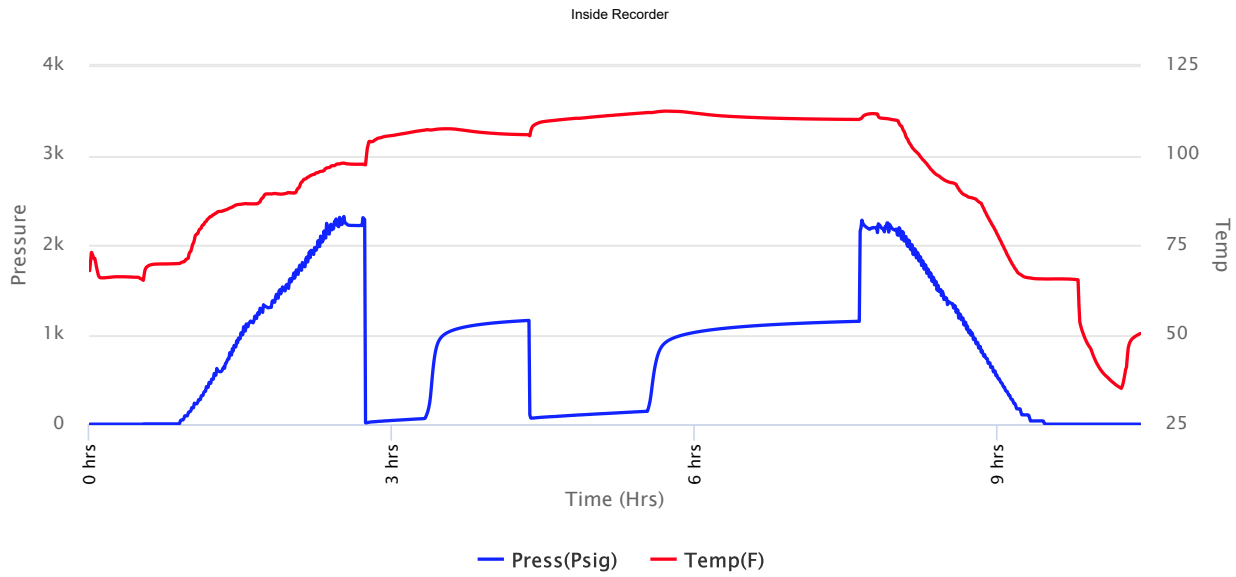
**Operation:**
Uploading recovery & pressures

**DATE**
February
**07**
2020

**DST #2** **Formation: Morrow Sdst** **Test Interval: 4721 - 4740'** **Total Depth: 4740'**

Time On: 13:48 02/07 Time Off: 23:57 02/07
Time On Bottom: 16:27 02/07 Time Off Bottom: 21:12 02/07

| Electronic Volume Estimate: | 1st Open | 1st Close | 2nd Open | 2nd Close |
|---|---|---|---|---|
| 2358' | Minutes: 35<br>Current Reading:<br>65.5" at 35 min<br>Max Reading: 65.5" | Minutes: 60<br>Current Reading:<br>3.4" at 60 min<br>Max Reading: 3.4" | Minutes: 65<br>Current Reading:<br>134.6" at 65 min<br>Max Reading: 134.6" | Minutes: 120<br>Current Reading:<br>9.7" at 120 min<br>Max Reading: 9.7" |



# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

**Operation:**
Uploading recovery & pressures

**DATE**
February
**07**
2020

**DST #2** **Formation: Morrow Sdst** **Test Interval: 4721 - 4740'** **Total Depth: 4740'**

Time On: 13:48 02/07 Time Off: 23:57 02/07
Time On Bottom: 16:27 02/07 Time Off Bottom: 21:12 02/07

Recovered

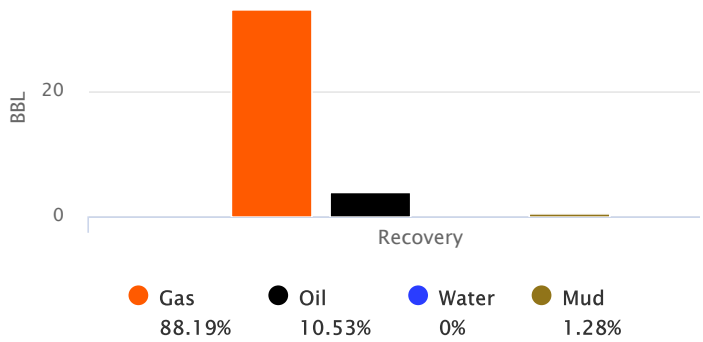
| Foot | BBLS | Description of Fluid | Gas % | Oil % | Water % | Mud % |
|---|---|---|---|---|---|---|
| 2300 | 32.729 | G | 100 | 0 | 0 | 0 |
| 240 | 3.4152 | SLMCSLGCO | 2 | 97 | 0 | 1 |
| 95 | 1.35185 | GCHMCO | 20 | 47 | 0 | 33 |

Total Recovered: 2635 ft
Total Barrels Recovered: 37.49605

Reversed Out
NO

| | | |
|---|---|---|
| Initial Hydrostatic Pressure | 2215 | PSI |
| Initial Flow | 16 to 69 | PSI |
| **Initial Closed in Pressure** | **1158** | **PSI** |
| Final Flow Pressure | 69 to 144 | PSI |
| **Final Closed in Pressure** | **1147** | **PSI** |
| Final Hydrostatic Pressure | 2207 | PSI |
| Temperature | 113 | °F |
| Pressure Change Initial Close / Final Close | 1.0 | % |

**Recovery at a glance**




GIP cubic foot volume: 185.65846

# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

**Operation:**
Uploading recovery & pressures

**DATE**
February
**07**
2020

**DST #2** **Formation: Morrow Sdst** **Test Interval: 4721 - 4740'** **Total Depth: 4740'**

Time On: 13:48 02/07 Time Off: 23:57 02/07
Time On Bottom: 16:27 02/07 Time Off Bottom: 21:12 02/07

**BUCKET MEASUREMENT:**
1st Open: 1/4" blow building to BOB 8 min.
1st Close: 3 inch BB
2nd Open: 1 1/4" blow building to BOB 3 1/2 min.
2nd Close: 9 1/4 inch BB

**REMARKS:**
We went over 5 min. on initial flow period because we had to get different slips. Same thing happened on final flow and had to use a wedding band to help hold it in slips

Tool Sample: 0% Gas 93% Oil 0% Water 7% Mud

Gravity: 30 @ 60 °F


# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL

**Operation:**
Uploading recovery & pressures

Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

**DATE**
February
**07**
2020

**DST #2** **Formation: Morrow Sdst** **Test Interval: 4721 - 4740'** **Total Depth: 4740'**

Time On: 13:48 02/07 Time Off: 23:57 02/07
Time On Bottom: 16:27 02/07 Time Off Bottom: 21:12 02/07

## Down Hole Makeup

| | |
|---|---|
| **Heads Up:** | 33.51 FT |
| **Drill Pipe:** *ID-3 1/2* | 4721.44 FT |
| **Weight Pipe:** | 0 FT |
| **Collars:** *ID-2 1/4* | 0 FT |
| **Test Tool:** *ID-3 1/2-FH* *Jars* *Safety Joint* | 34.07 FT |
| **Total Anchor:** | 19 |

**Anchor Makeup**

| | |
|---|---|
| **Packer Sub:** | 1 FT |
| **Perforations: (top):** *4 1/2-FH* | 0 FT |
| **Change Over:** | 0 FT |
| **Drill Pipe: (in anchor):** *ID-3 1/2* | 0 FT |
| **Change Over:** | 0 FT |
| **Perforations: (below):** *4 1/2-FH* | 18 FT |

| | |
|---|---|
| **Packer 1:** | 4715.5 FT |
| **Packer 2:** | 4721 FT |
| **Top Recorder:** | 4704.92 FT |
| **Bottom Recorder:** | 4723 FT |
| **Well Bore Size:** | 7 7/8 |
| **Surface Choke:** | 1" |
| **Bottom Choke:** | 5/8" |

DIAMOND TESTING LLC

# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield

**Operation:**

Uploading recovery & pressures

Job Number: 440
API #: 15-055-22531-00-00

**DATE**
February
**07**
2020

**DST #2** **Formation: Morrow Sdst** **Test Interval: 4721 - 4740'** **Total Depth: 4740'**

Time On: 13:48 02/07 Time Off: 23:57 02/07
Time On Bottom: 16:27 02/07 Time Off Bottom: 21:12 02/07

## Mud Properties

**Mud Type:** Chemical **Weight:** 9.05 **Viscosity:** 59 **Filtrate:** 5.6 **Chlorides:** 2,900 ppm

# Company: Berexco, LLC
# Lease: Damme #8-21

**Operation:**
Uploading recovery & pressures

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

| DATE |
|---|
| February |
| **07** |
| 2020 |

**DST #2** **Formation: Morrow Sdst** **Test Interval: 4721 - 4740'** **Total Depth: 4740'**

Time On: 13:48 02/07 Time Off: 23:57 02/07

Time On Bottom: 16:27 02/07 Time Off Bottom: 21:12 02/07

## Gas Volume Report

| 1st Open | | | |
|---|---|---|---|
| **Time** | **Orifice** | **PSI** | **MCF/D** |

| 2nd Open | | | |
|---|---|---|---|
| **Time** | **Orifice** | **PSI** | **MCF/D** |

ONSITE GEOLOGICAL LABORATORIES
EARTH - TECH

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

| | |
|---|---|
| **Well Name:** | **DAMME # 8-21** |
| **Well Id:** | |
| **Location:** | **Sec 21 T22S, R33W, Finney County, Kansas** |
| **License Number:** | **15-055-22531** |
| **Region:** | |
| **Spud Date:** | **Jan 27, 2020** |
| **Drilling Completed:** | **Feb 8, 2020** |
| **Surface Coordinates:** | **1780' FSL & 335' FWL** |
| **Bottom Hole Coordinates:** | |
| **Ground Elevation (ft):** | **2896'** |
| **K.B. Elevation (ft):** | **2908'** |
| **Logged Interval (ft):** | **3600' To: 4900'** |
| **Total Depth (ft):** | **4900'** |
| **Formation:** | **Lansing, Marmaton, Miss.** |
| **Type of Drilling Fluid:** | **Natural Chemical** |



## OPERATOR

**Company:** Berexco, Inc.
**Address:** 2020 N. Bramblewood Street
Wichita, Kansas 67206
Co. Rep. Brett Blazer

## GEOLOGIST

**Name:** Edwin H, Grieves/ Tim Hedrick/Aaron Suelter
**Company:** Grieves & Co.
**Address:** PO Box 3125
Edmond, Okla 73083-3125
405-926-8027

# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

**Operation:**
Uploading recovery & pressures

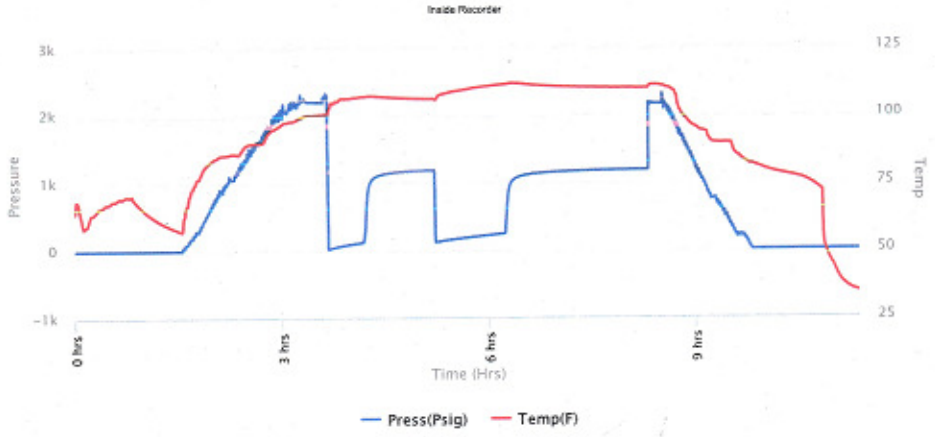
**DATE**
February
**06**
2020

**DST #1** **Formation: Morrow Sd.** **Test Interval: 4650 - 4720'** **Total Depth: 4720'**

Time On: 10:25 02/06 Time Off: 21:55 02/06
Time On Bottom: 13:58 02/06 Time Off Bottom: 18:28 02/06

Electronic Volume Estimate:
1755'

| 1st Open | 1st Close | 2nd Open | 2nd Close |
|---|---|---|---|
| Minutes: 30 | Minutes: 60 | Minutes: 60 | Minutes: 120 |
| Current Reading: | Current Reading: | Current Reading: | Current Reading: |
| 42.2" at 30 min | 0" at 60 min | 89.4" at 60 min | 26.1" at 120 min |
| Max Reading: 42.2" | Max Reading: 0" | Max Reading: 89.4" | Max Reading: 26.1" |



# Company: Berexco, LLC
# Lease: Damme #8-21

SEC: 21 TWN: 22S RNG: 33W
County: FINNEY
State: Kansas
Drilling Contractor: Beredco, LLC - Rig 1
Elevation: 2896 EGL
Field Name: Damme
Pool: Infield
Job Number: 440
API #: 15-055-22531-00-00

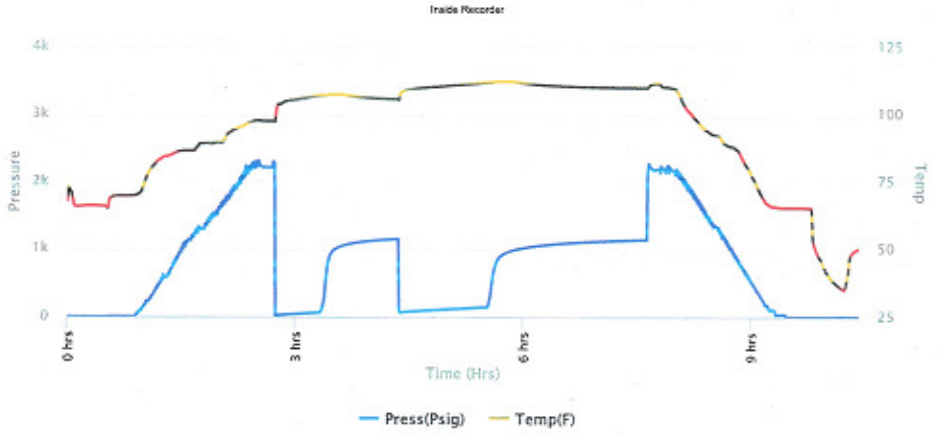
**Operation:**
Uploading recovery & pressures

**DATE**
February
**07**
2020

**DST #2** **Formation: Morrow Sdst** **Test Interval: 4721 - 4740'** **Total Depth: 4740'**

Time On: 13:48 02/07 Time Off: 23:57 02/07
Time On Bottom: 16:27 02/07 Time Off Bottom: 21:12 02/07

| Electronic Volume Estimate: | 1st Open | 1st Close | 2nd Open | 2nd Close |
|---|---|---|---|---|
| | Minutes: 35 | Minutes: 60 | Minutes: 65 | Minutes: 120 |
| | Current Reading: | Current Reading: | Current Reading: | Current Reading: |
| 2358' | 65.5" at 35 min | 3.4" at 60 min | 134.6" at 65 min | 9.7" at 120 min |
| | Max Reading: 65.5" | Max Reading: 3.4" | Max Reading: 134.6" | Max Reading: 9.7" |



## FORMATION TOPS

| | SAMPLE | LOG TOPS |
|---|---|---|
| HEEBNER | | |
| BS. HEEBNER | 3816' -908' | 3813' -905 |
| TORONTO | 3827' -919' | |
| LANSING | 3854' -946' | 3852' -944 |
| KANSAS CITY "A' | 4193' -1285' | 4191' -1283' |
| BKC | 4330' -1422' | 4328' -1420' |
| MARMATON | 4349' -1441' | 4351' -1443' |
| PAWNEE | 4429' -1521' | 4426' -1518' |
| FT. SCOTT | 4454' -1546' | 4453' -1518' |
| CHEROKEE | 4474' -1566' | 4476' -1568' |
| ATOKA | | |
| MORROW FM. | 4668' -1760' | 4668' -1760' |
| MID MORROW | | |
| ST. GEN. | | |
| ST. LOUIS | 4736' -1828' | 4736' -1828' |
| ST.LOUIS "C" | | |
| RTD | 4900' - | |

## 7 AM DEPTHS

1 3100' 12:45PM 2-2-20
2 3630' 2/3/20
3 4279' 2/4/20
4 4538' 2/5/20
5 4720' 2/6/20
6 4735' 2/7/20
7 4743' 2/8/20
8 4900' TD 2/9/20

## CIRC. POINTS

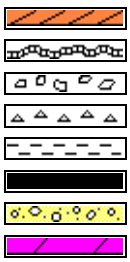
4322'
4400'
4441'
4480'
4666'
4690'
4705'
4720'
4735'
4740'
4766'
4795'
4900' TD

| DATE | DEPTH | WT | VIS | PV | YP | GS | P H | CAKE | CHLOR | CALCIUM | LCM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Feb | 3190 | 9.3 | 38 | N/A | N/A | N/A | 7 | N/A | 18000 | HVY | 2 |
| 3-Feb | 3692 | 8.8 | 65 | 17 | 20 | 2/5 | 11 | 1 | 1400 | 20 | 2 |
| 4-Feb | 4322 | 9.1 | 44 | 12 | 13 | 10/31 | 10.5 | 1 | 2500 | 10 | 2 |
| 5-Feb | 4602 | 9.2 | 45 | 13 | 14 | 13/36 | 10.5 | 1 | 3000 | 20 | 4 |
| 6-Feb | 4720 | 9.1 | 51 | 15 | 17 | 15/43 | 10 | 1 | 1800 | 20 | 4 |
| 7-Feb | 4740 | 9 | 59 | 18 | 17 | 17/56 | 11 | 1 | 2900 | 20 | 2 |
| 8-Feb | 4766 | 9 | 70 | 22 | 24 | 18/59 | 10.5 | 1 | 3000 | 20 | 10 |

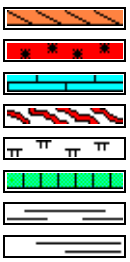
## DEV. SURVEYS

1 706' 1 DEG
2 1426' 1 DEG
3 1803' 3/4 DEG
4 2716' 1 1/2 DEG
5 3720' 1 DEG
6 4720' 1/2 DEG
7 4900' 1/2 DEG TD

## 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
Sltysh
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
- Slty

### 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
- Wackest

## OTHER SYMBOLS

### POROSITY TYPE
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

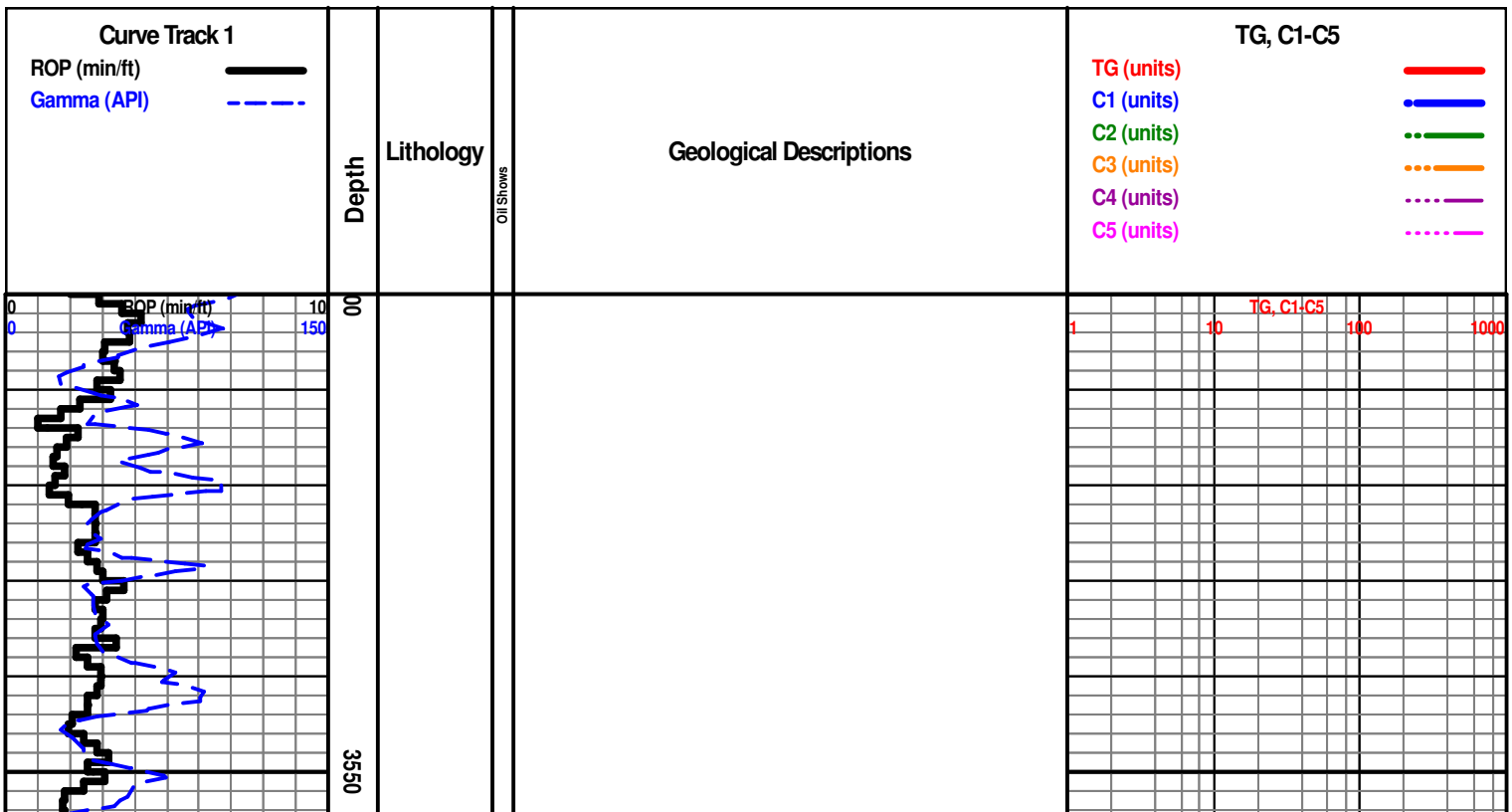
### SORTING
- Well
- Moderate
- Poor

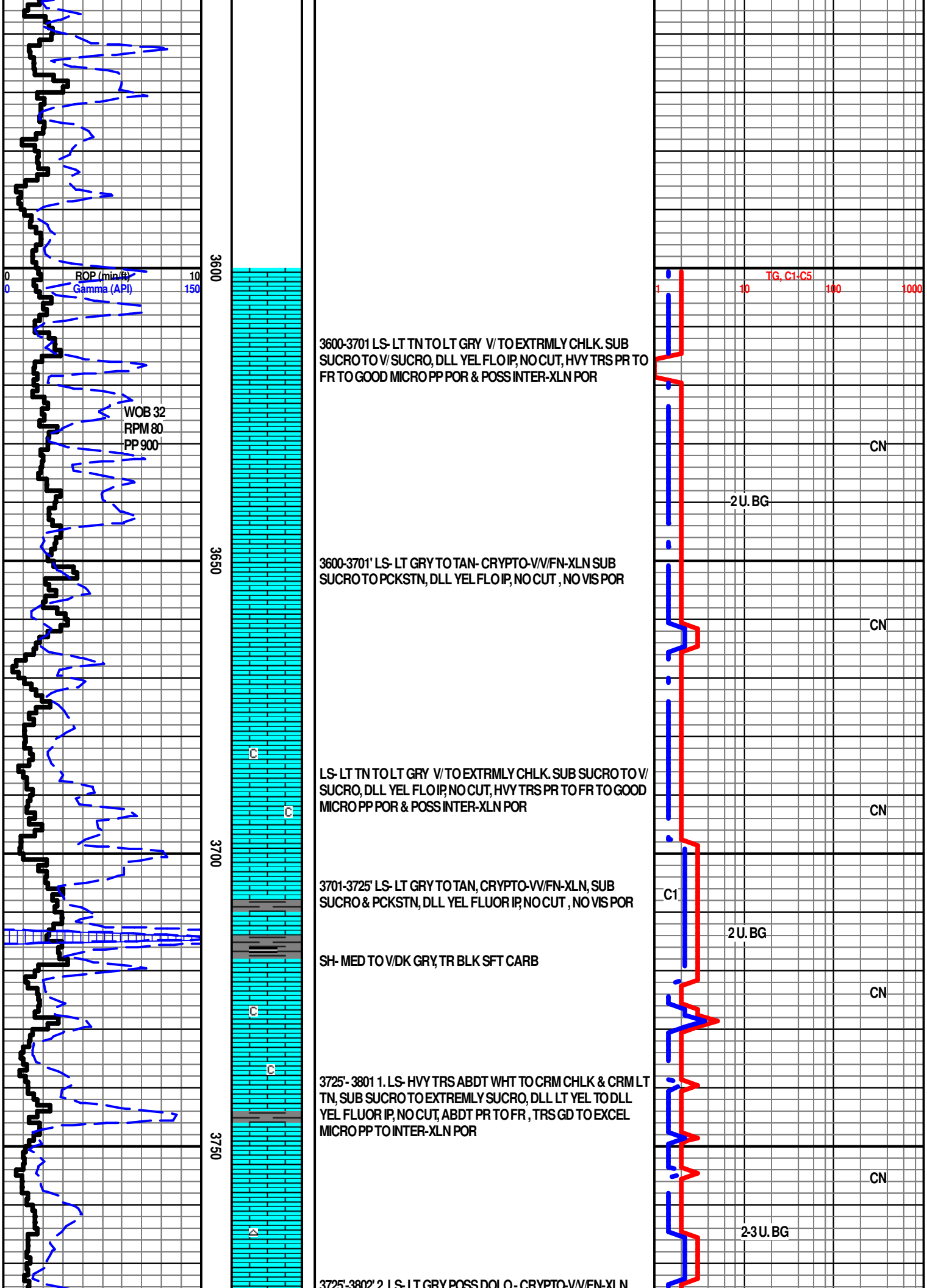
### ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

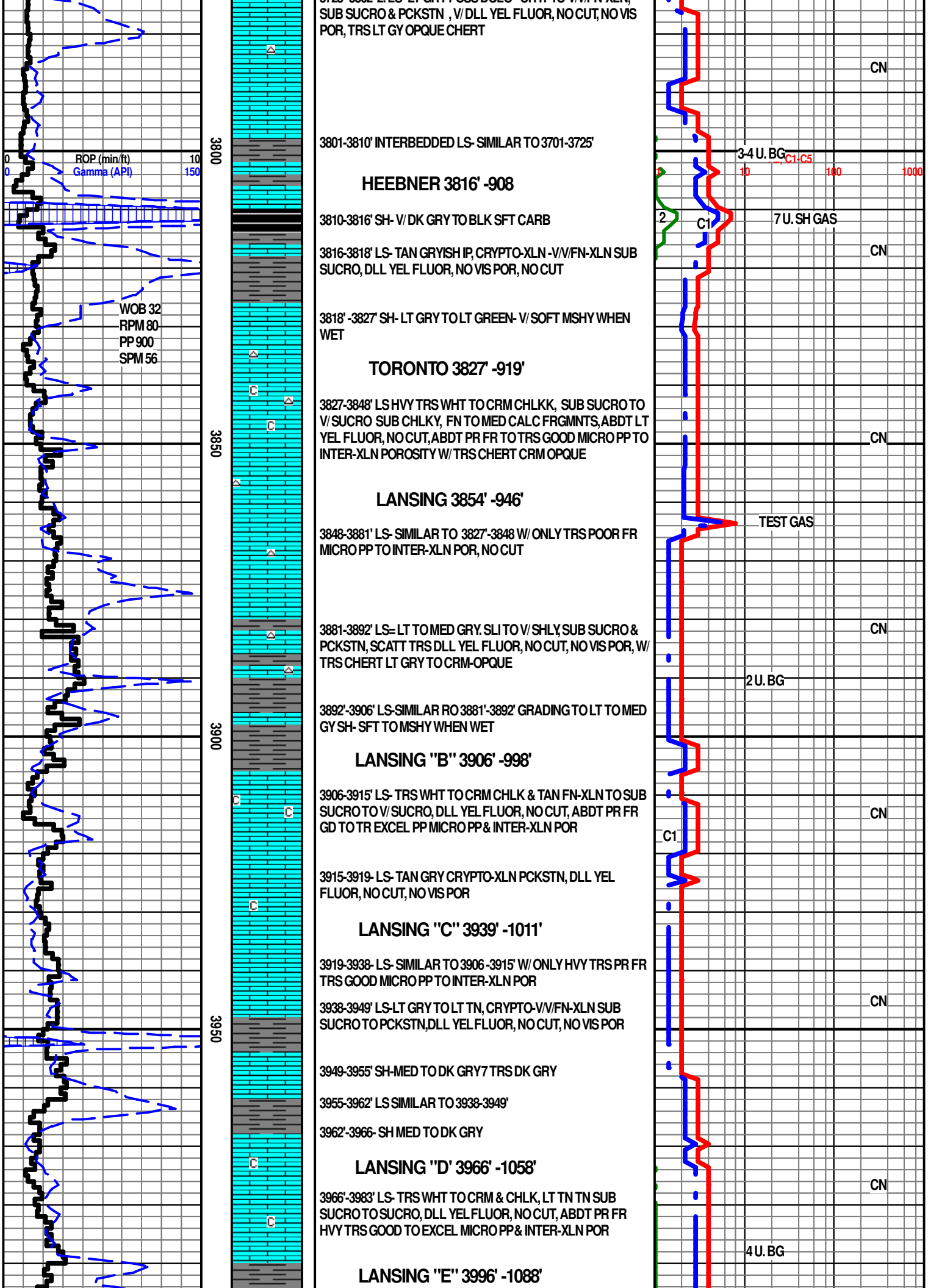
### OIL SHOWS
- Even
- Spotted
- Ques
- Dead
- Gas show

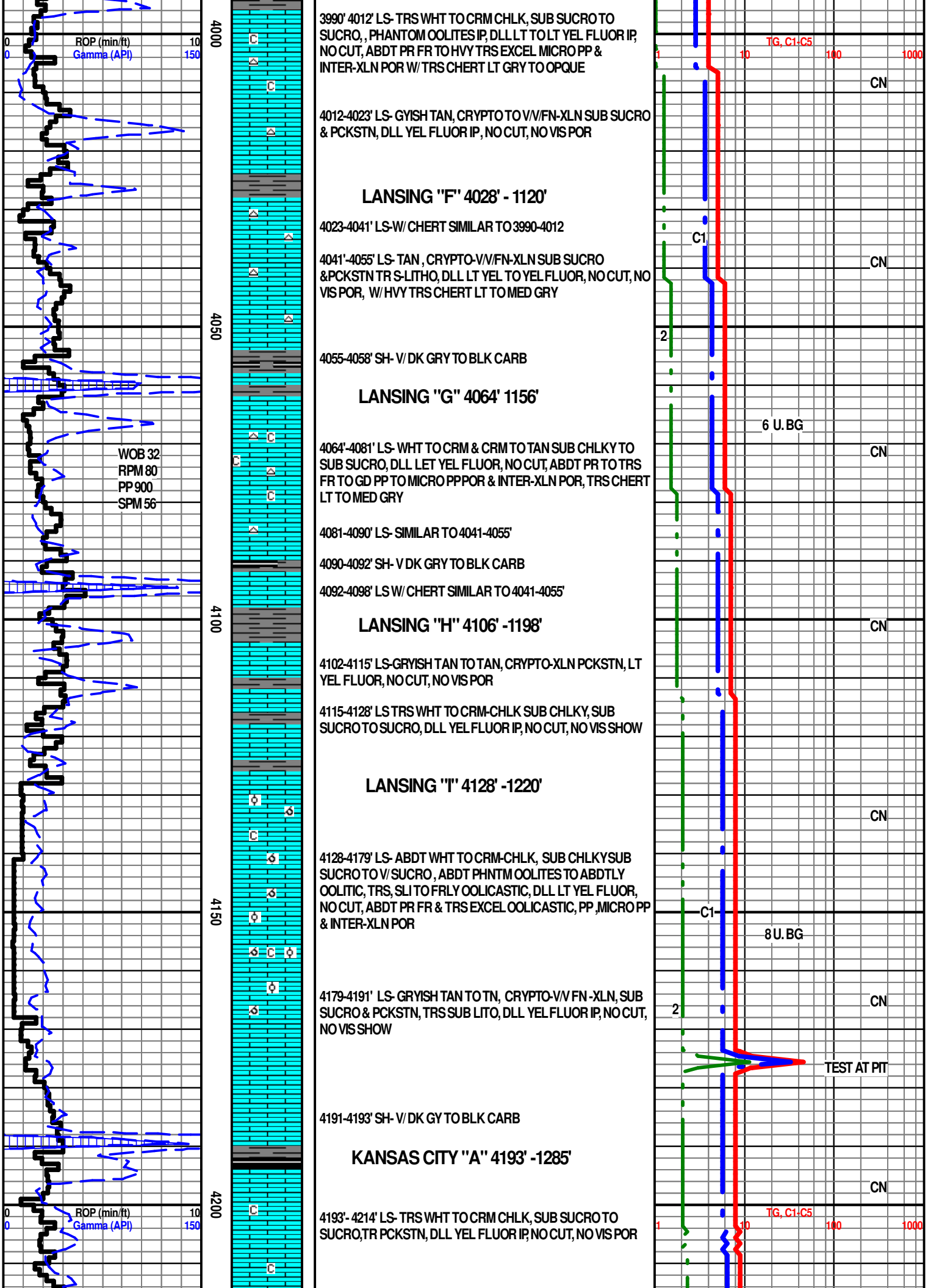
### INTERVALS
- Core
- Dst
- Dst

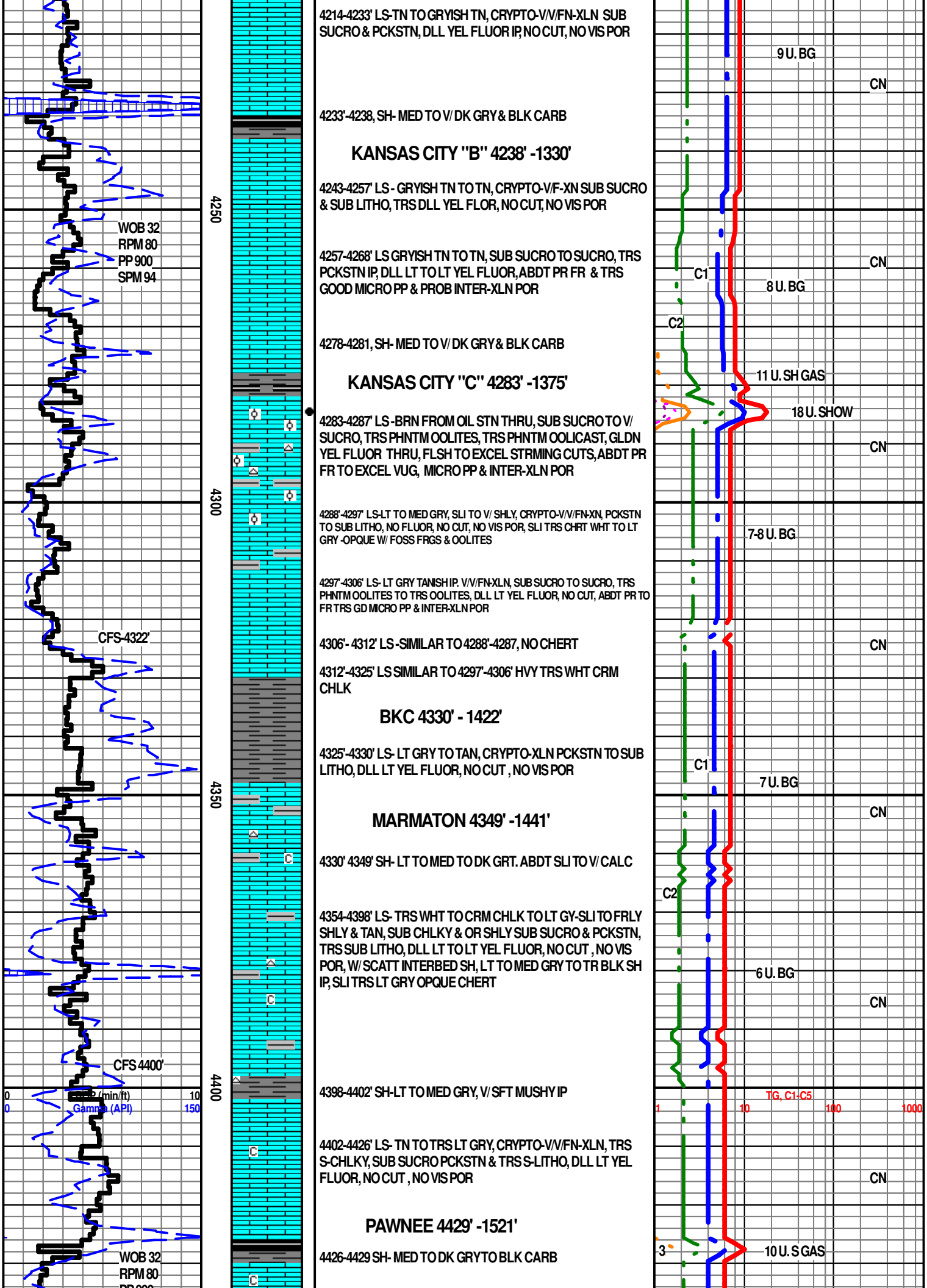
### EVENTS
- Rft
- Sidewall

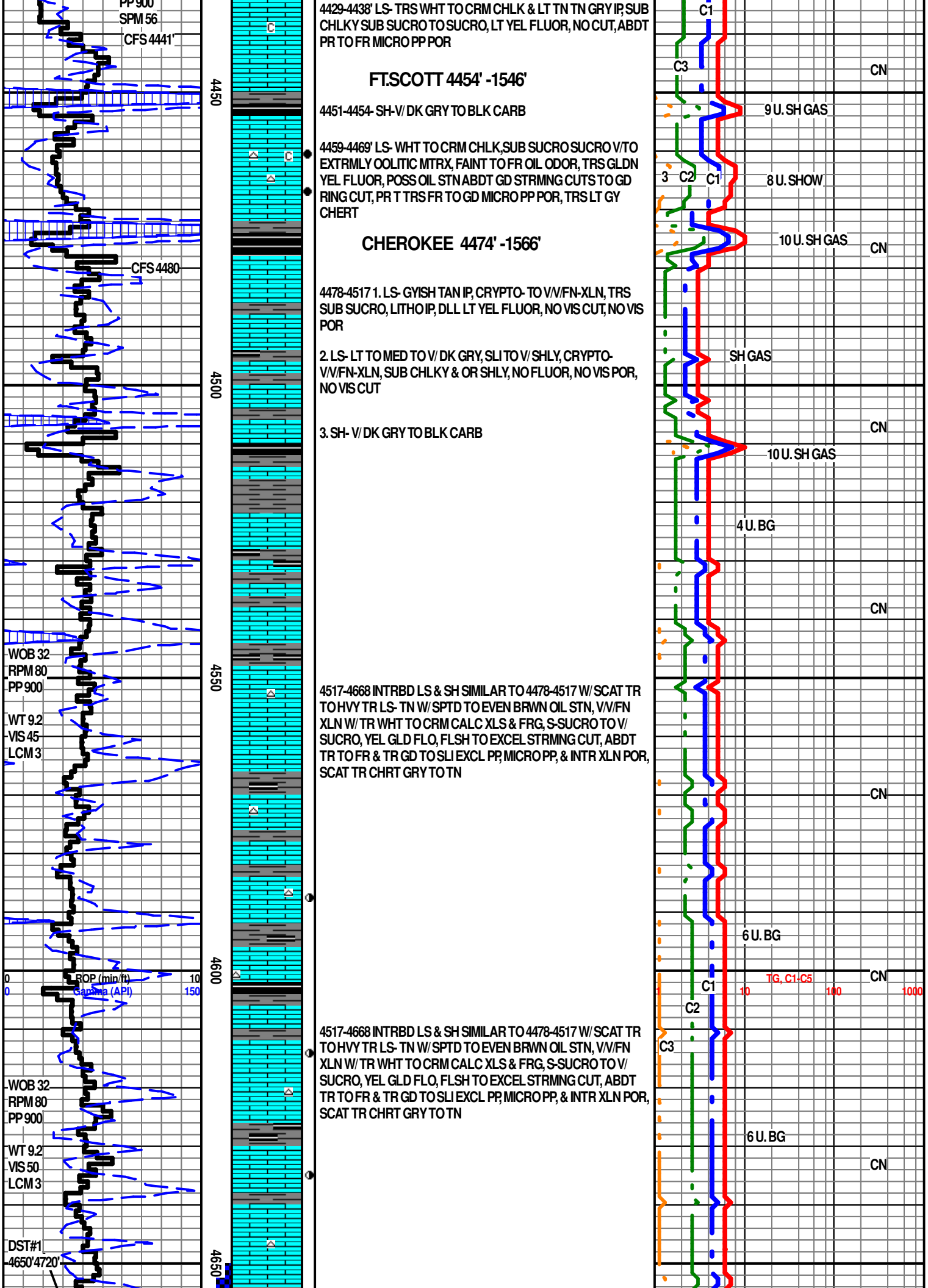


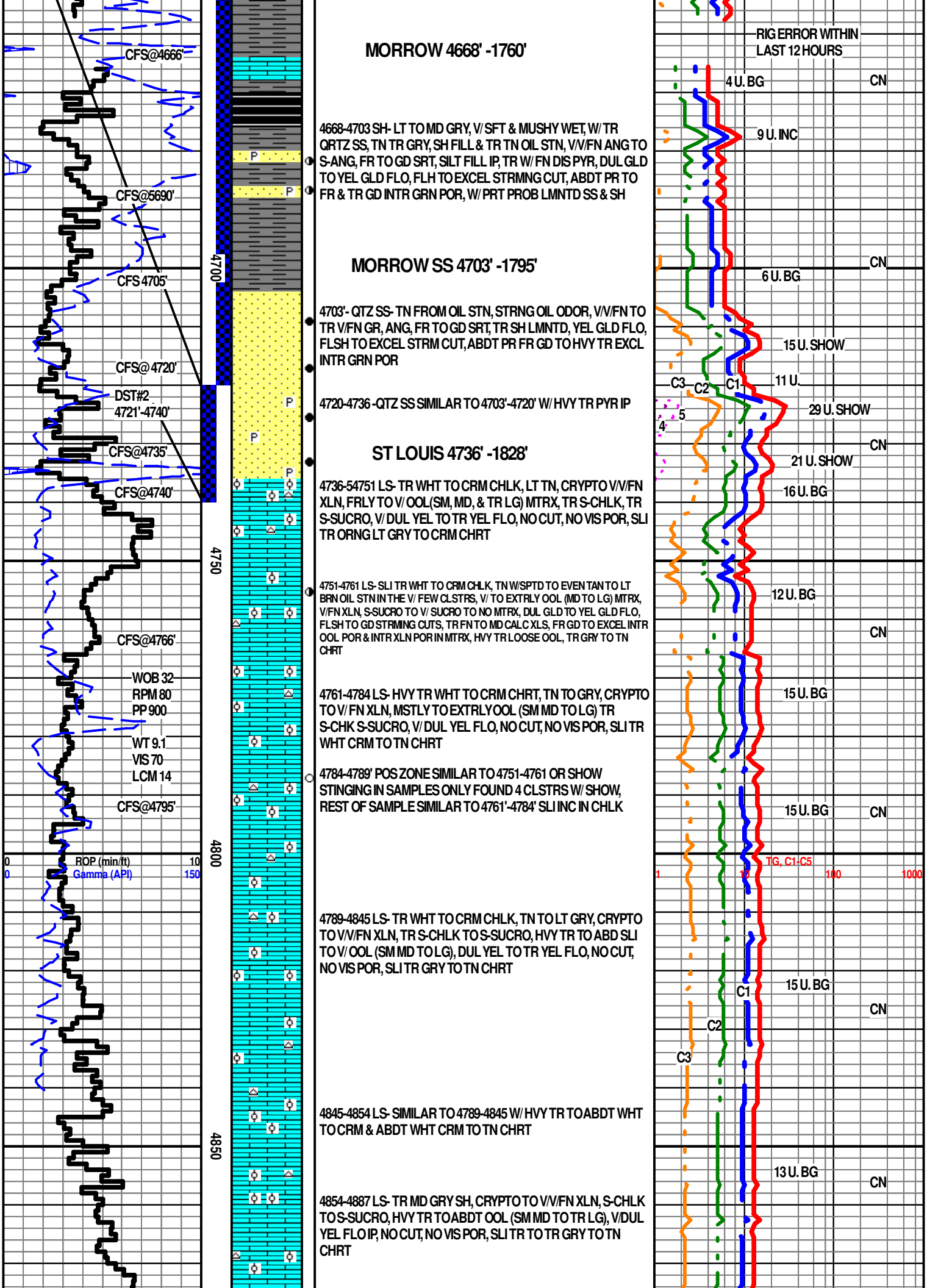

0
ROP (min/ft)
10
0
Gamma (API)
150
WOB 32
RPM 80
PP 900
3600
3650
3700
3750
TG, C1-C5
1
10
100
1000
3600-3701 LS- LT TN TO LT GRY V/ TO EXTRMLY CHLK. SUB SUCRO TO V/ SUCRO, DLL YEL FLO IP, NO CUT, HVY TRS PR TO FR TO GOOD MICRO PP POR & POSS INTER-XLN POR
CN
2 U. BG
3600-3701' LS- LT GRY TO TAN- CRYPTO-V/V/FN-XLN SUB SUCRO TO PCKSTN, DLL YEL FLO IP, NO CUT , NO VIS POR
CN
C
C
LS- LT TN TO LT GRY V/ TO EXTRMLY CHLK. SUB SUCRO TO V/ SUCRO, DLL YEL FLO IP, NO CUT, HVY TRS PR TO FR TO GOOD MICRO PP POR & POSS INTER-XLN POR
CN
3701-3725' LS- LT GRY TO TAN, CRYPTO-VV/FN-XLN, SUB SUCRO & PCKSTN, DLL YEL FLUOR IP, NO CUT , NO VIS POR
C1
2 U. BG
SH- MED TO V/DK GRY, TR BLK SFT CARB
CN
C
C
3725'- 3801 1. LS- HVY TRS ABDT WHT TO CRM CHLK & CRM LT TN, SUB SUCRO TO EXTREMLY SUCRO, DLL LT YEL TO DLL YEL FLUOR IP, NO CUT, ABDT PR TO FR , TRS GD TO EXCEL MICRO PP TO INTER-XLN POR
CN
2-3 U. BG
3725'-3802' 2 LS- LT GRY POSS DOLO - CRYPTO-V/V/FN-XLN

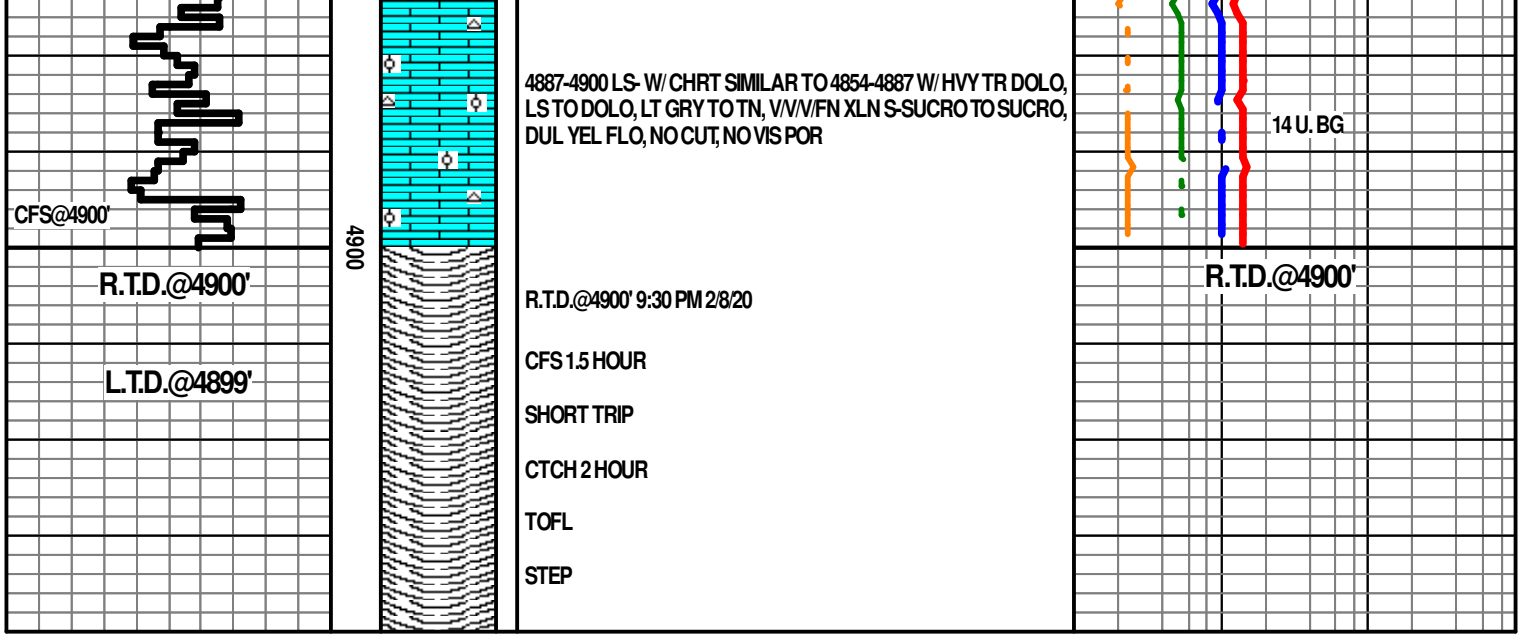

0
ROP (min/ft)
10
0
Gamma (API)
150
WOB 32
RPM 80
PP 900
SPM 56
3800
3850
3900
3950
SUB SUCRO & PCKSTN , V/ DLL YEL FLUOR, NO CUT, NO VIS POR, TRS LT GY OPQUE CHERT
3801-3810' INTERBEDDED LS- SIMILAR TO 3701-3725'
HEEBNER 3816' -908
3810-3816' SH- V/ DK GRY TO BLK SFT CARB
3816-3818' LS- TAN GRYISH IP, CRYPTO-XLN -V/V/FN-XLN SUB SUCRO, DLL YEL FLUOR, NO VIS POR, NO CUT
3818' -3827' SH- LT GRY TO LT GREEN- V/ SOFT MSHY WHEN WET
TORONTO 3827' -919'
3827-3848' LS HVY TRS WHT TO CRM CHLKK, SUB SUCRO TO V/ SUCRO SUB CHLKY, FN TO MED CALC FRGMNTS, ABDT LT YEL FLUOR, NO CUT, ABDT PR FR TO TRS GOOD MICRO PP TO INTER-XLN POROSITY W/ TRS CHERT CRM OPQUE
LANSING 3854' -946'
3848-3881' LS- SIMILAR TO 3827'-3848 W/ ONLY TRS POOR FR MICRO PP TO INTER-XLN POR, NO CUT
3881-3892' LS= LT TO MED GRY. SLI TO V/ SHLY, SUB SUCRO & PCKSTN, SCATT TRS DLL YEL FLUOR, NO CUT, NO VIS POR, W/ TRS CHERT LT GRY TO CRM-OPQUE
3892'-3906' LS-SIMILAR RO 3881'-3892' GRADING TO LT TO MED GY SH- SFT TO MSHY WHEN WET
LANSING "B" 3906' -998'
3906-3915' LS- TRS WHT TO CRM CHLK & TAN FN-XLN TO SUB SUCRO TO V/ SUCRO, DLL YEL FLUOR, NO CUT, ABDT PR FR GD TO TR EXCEL PP MICRO PP & INTER-XLN POR
3915-3919- LS- TAN GRY CRYPTO-XLN PCKSTN, DLL YEL FLUOR, NO CUT, NO VIS POR
LANSING "C" 3939' -1011'
3919-3938- LS- SIMILAR TO 3906 -3915' W/ ONLY HVY TRS PR FR TRS GOOD MICRO PP TO INTER-XLN POR
3938-3949' LS-LT GRY TO LT TN, CRYPTO-V/V/FN-XLN SUB SUCRO TO PCKSTN,DLL YEL FLUOR, NO CUT, NO VIS POR
3949-3955' SH-MED TO DK GRY7 TRS DK GRY
3955-3962' LS SIMILAR TO 3938-3949'
3962'-3966- SH MED TO DK GRY
LANSING "D' 3966' -1058'
3966'-3983' LS- TRS WHT TO CRM & CHLK, LT TN TN SUB SUCRO TO SUCRO, DLL YEL FLUOR, NO CUT, ABDT PR FR HVY TRS GOOD TO EXCEL MICRO PP & INTER-XLN POR
LANSING "E" 3996' -1088'
C
3-4 U. BG
C1-C5
10
100
1000
2
C1
7 U. SH GAS
CN
TEST GAS
2 U. BG
4 U. BG


0
ROP (min/ft)
10
0
Gamma (API)
150
4000
4050
4100
4150
4200
WOB 32
RPM 80
PP 900
SPM 56
3990' 4012' LS- TRS WHT TO CRM CHLK, SUB SUCRO TO SUCRO, , PHANTOM OOLITES IP, DLL LT TO LT YEL FLUOR IP, NO CUT, ABDT PR FR TO HVY TRS EXCEL MICRO PP & INTER-XLN POR W/ TRS CHERT LT GRY TO OPQUE
4012-4023' LS- GYISH TAN, CRYPTO TO V/V/FN-XLN SUB SUCRO & PCKSTN, DLL YEL FLUOR IP, NO CUT, NO VIS POR
LANSING "F" 4028' - 1120'
4023-4041' LS-W/ CHERT SIMILAR TO 3990-4012
4041'-4055' LS- TAN , CRYPTO-V/V/FN-XLN SUB SUCRO &PCKSTN TR S-LITHO, DLL LT YEL TO YEL FLUOR, NO CUT, NO VIS POR, W/ HVY TRS CHERT LT TO MED GRY
4055-4058' SH- V/ DK GRY TO BLK CARB
LANSING "G" 4064' 1156'
4064'-4081' LS- WHT TO CRM & CRM TO TAN SUB CHLKY TO SUB SUCRO, DLL LET YEL FLUOR, NO CUT, ABDT PR TO TRS FR TO GD PP TO MICRO PPPOR & INTER-XLN POR, TRS CHERT LT TO MED GRY
4081-4090' LS- SIMILAR TO 4041-4055'
4090-4092' SH- V DK GRY TO BLK CARB
4092-4098' LS W/ CHERT SIMILAR TO 4041-4055'
LANSING "H" 4106' -1198'
4102-4115' LS-GRYISH TAN TO TAN, CRYPTO-XLN PCKSTN, LT YEL FLUOR, NO CUT, NO VIS POR
4115-4128' LS TRS WHT TO CRM-CHLK SUB CHLKY, SUB SUCRO TO SUCRO, DLL YEL FLUOR IP, NO CUT, NO VIS SHOW
LANSING "I" 4128' -1220'
4128-4179' LS- ABDT WHT TO CRM-CHLK, SUB CHLKY SUB SUCRO TO V/ SUCRO , ABDT PHNTM OOLITES TO ABDTLY OOLITIC, TRS, SLI TO FRLY OOLICASTIC, DLL LT YEL FLUOR, NO CUT, ABDT PR FR & TRS EXCEL OOLICASTIC, PP ,MICRO PP & INTER-XLN POR
4179-4191' LS- GRYISH TAN TO TN, CRYPTO-V/V FN -XLN, SUB SUCRO & PCKSTN, TRS SUB LITO, DLL YEL FLUOR IP, NO CUT, NO VIS SHOW
4191-4193' SH- V/ DK GY TO BLK CARB
KANSAS CITY "A" 4193' -1285'
4193'- 4214' LS- TRS WHT TO CRM CHLK, SUB SUCRO TO SUCRO,TR PCKSTN, DLL YEL FLUOR IP, NO CUT, NO VIS POR
TG, C1-C5
1
10
100
1000
CN
C1
2
6 U. BG
8 U. BG
TEST AT PIT


4214-4233' LS-TN TO GRYISH TN, CRYPTO-V/V/FN-XLN SUB SUCRO & PCKSTN, DLL YEL FLUOR IP, NO CUT, NO VIS POR
9 U. BG
CN
4233'-4238, SH- MED TO V/ DK GRY & BLK CARB
KANSAS CITY "B" 4238' -1330'
4243-4257' LS - GRYISH TN TO TN, CRYPTO-V/F-XN SUB SUCRO & SUB LITHO, TRS DLL YEL FLOR, NO CUT, NO VIS POR
4250
WOB 32
RPM 80
PP 900
SPM 94
4257-4268' LS GRYISH TN TO TN, SUB SUCRO TO SUCRO, TRS PCKSTN IP, DLL LT TO LT YEL FLUOR, ABDT PR FR & TRS GOOD MICRO PP & PROB INTER-XLN POR
CN
C1
8 U. BG
C2
4278-4281, SH- MED TO V/ DK GRY & BLK CARB
KANSAS CITY "C" 4283' -1375'
11 U. SH GAS
18 U. SHOW
4283-4287' LS -BRN FROM OIL STN THRU, SUB SUCRO TO V/ SUCRO, TRS PHNTM OOLITES, TRS PHNTM OOLICAST, GLDN YEL FLUOR THRU, FLSH TO EXCEL STRMING CUTS, ABDT PR FR TO EXCEL VUG, MICRO PP & INTER-XLN POR
CN
4288'-4297' LS-LT TO MED GRY, SLI TO V/ SHLY, CRYPTO-V/V/FN-XN, PCKSTN TO SUB LITHO, NO FLUOR, NO CUT, NO VIS POR, SLI TRS CHRT WHT TO LT GRY -OPQUE W/ FOSS FRGS & OOLITES
4300
7-8 U. BG
4297'-4306' LS- LT GRY TANISH IP. V/V/FN-XLN, SUB SUCRO TO SUCRO, TRS PHNTM OOLITES TO TRS OOLITES, DLL LT YEL FLUOR, NO CUT, ABDT PR TO FR TRS GD MICRO PP & INTER-XLN POR
CFS-4322'
4306'- 4312' LS -SIMILAR TO 4288'-4287, NO CHERT
CN
4312'-4325' LS SIMILAR TO 4297'-4306' HVY TRS WHT CRM CHLK
BKC 4330' - 1422'
4325'-4330' LS- LT GRY TO TAN, CRYPTO-XLN PCKSTN TO SUB LITHO, DLL LT YEL FLUOR, NO CUT , NO VIS POR
C1
7 U. BG
4350
MARMATON 4349' -1441'
CN
4330' 4349' SH- LT TO MED TO DK GRT. ABDT SLI TO V/ CALC
C2
4354-4398' LS- TRS WHT TO CRM CHLK TO LT GY-SLI TO FRLY SHLY & TAN, SUB CHLKY & OR SHLY SUB SUCRO & PCKSTN, TRS SUB LITHO, DLL LT TO LT YEL FLUOR, NO CUT , NO VIS POR, W/ SCATT INTERBED SH, LT TO MED GRY TO TR BLK SH IP, SLI TRS LT GRY OPQUE CHERT
6 U. BG
CN
CFS 4400'
4400
0
ROP (min/ft)
10
0
Gamma (API)
150
4398-4402' SH-LT TO MED GRY, V/ SFT MUSHY IP
TG, C1-C5
1
10
100
1000
4402-4426' LS- TN TO TRS LT GRY, CRYPTO-V/V/FN-XLN, TRS S-CHLKY, SUB SUCRO PCKSTN & TRS S-LITHO, DLL LT YEL FLUOR, NO CUT , NO VIS POR
CN
PAWNEE 4429' -1521'
3
10 U. S GAS
4426-4429 SH- MED TO DK GRY TO BLK CARB
WOB 32
RPM 80


PP 900
SPM 56
CFS 4441'
CFS 4480
WOB 32
RPM 80
PP 900
WT 9.2
VIS 45
LCM 3
WOB 32
RPM 80
PP 900
WT 9.2
VIS 50
LCM 3
DST#1
4650'4720'
0
ROP (min/ft)
10
0
Gamma (API)
150
4450
4500
4550
4600
4650
4429-4438' LS- TRS WHT TO CRM CHLK & LT TN TN GRY IP, SUB CHLKY SUB SUCRO TO SUCRO, LT YEL FLUOR, NO CUT, ABDT PR TO FR MICRO PP POR
FT.SCOTT 4454' -1546'
4451-4454- SH-V/ DK GRY TO BLK CARB
4459-4469' LS- WHT TO CRM CHLK,SUB SUCRO SUCRO V/TO EXTRMLY OOLITIC MTRX, FAINT TO FR OIL ODOR, TRS GLDN YEL FLUOR, POSS OIL STN ABDT GD STRMNG CUTS TO GD RING CUT, PR T TRS FR TO GD MICRO PP POR, TRS LT GY CHERT
CHEROKEE 4474' -1566'
4478-4517 1. LS- GYISH TAN IP, CRYPTO- TO V/V/FN-XLN, TRS SUB SUCRO, LITHO IP, DLL LT YEL FLUOR, NO VIS CUT, NO VIS POR
2. LS- LT TO MED TO V/ DK GRY, SLI TO V/ SHLY, CRYPTO- V/V/FN-XLN, SUB CHLKY & OR SHLY, NO FLUOR, NO VIS POR, NO VIS CUT
3. SH- V/ DK GRY TO BLK CARB
4517-4668 INTRBD LS & SH SIMILAR TO 4478-4517 W/ SCAT TR TO HVY TR LS- TN W/ SPTD TO EVEN BRWN OIL STN, V/V/FN XLN W/ TR WHT TO CRM CALC XLS & FRG, S-SUCRO TO V/ SUCRO, YEL GLD FLO, FLSH TO EXCEL STRMNG CUT, ABDT TR TO FR & TR GD TO SLI EXCL PP, MICRO PP, & INTR XLN POR, SCAT TR CHRT GRY TO TN
4517-4668 INTRBD LS & SH SIMILAR TO 4478-4517 W/ SCAT TR TO HVY TR LS- TN W/ SPTD TO EVEN BRWN OIL STN, V/V/FN XLN W/ TR WHT TO CRM CALC XLS & FRG, S-SUCRO TO V/ SUCRO, YEL GLD FLO, FLSH TO EXCEL STRMNG CUT, ABDT TR TO FR & TR GD TO SLI EXCL PP, MICRO PP, & INTR XLN POR, SCAT TR CHRT GRY TO TN
C1
C3
CN
9 U. SH GAS
3
C2
C1
8 U. SHOW
10 U. SH GAS
CN
SH GAS
CN
10 U. SH GAS
4 U. BG
CN
CN
6 U. BG
TG, C1-C5
CN
10
100
1000
C1
C2
C3
6 U. BG
CN


CFS@4666'
CFS@5690'
CFS 4705'
CFS@ 4720'
DST#2
4721'-4740'
CFS@4735'
CFS@4740'
CFS@4766'
WOB 32
RPM 80
PP 900
WT 9.1
VIS 70
LCM 14
CFS@4795'
0
ROP (min/ft)
10
0
Gamma (API)
150
4700
4750
4800
4850
P
MORROW 4668' -1760'
4668-4703 SH- LT TO MD GRY, V/ SFT & MUSHY WET, W/ TR QRTZ SS, TN TR GRY, SH FILL & TR TN OIL STN, V/V/FN ANG TO S-ANG, FR TO GD SRT, SILT FILL IP, TR W/ FN DIS PYR, DUL GLD TO YEL GLD FLO, FLH TO EXCEL STRMNG CUT, ABDT PR TO FR & TR GD INTR GRN POR, W/ PRT PROB LMNTD SS & SH
MORROW SS 4703' -1795'
4703'- QTZ SS- TN FROM OIL STN, STRNG OIL ODOR, V/V/FN TO TR V/FN GR, ANG, FR TO GD SRT, TR SH LMNTD, YEL GLD FLO, FLSH TO EXCEL STRM CUT, ABDT PR FR GD TO HVY TR EXCL INTR GRN POR
4720-4736 -QTZ SS SIMILAR TO 4703'-4720' W/ HVY TR PYR IP
ST LOUIS 4736' -1828'
4736-54751 LS- TR WHT TO CRM CHLK, LT TN, CRYPTO V/V/FN XLN, FRLY TO V/ OOL(SM, MD, & TR LG) MTRX, TR S-CHLK, TR S-SUCRO, V/ DUL YEL TO TR YEL FLO, NO CUT, NO VIS POR, SLI TR ORNG LT GRY TO CRM CHRT
4751-4761 LS- SLI TR WHT TO CRM CHLK, TN W/SPTD TO EVEN TAN TO LT BRN OIL STN IN THE V/ FEW CLSTRS, V/ TO EXTRLY OOL (MD TO LG) MTRX, V/FN XLN, S-SUCRO TO V/ SUCRO TO NO MTRX, DUL GLD TO YEL GLD FLO, FLSH TO GD STRMNG CUTS, TR FN TO MD CALC XLS, FR GD TO EXCEL INTR OOL POR & INTR XLN POR IN MTRX, HVY TR LOOSE OOL, TR GRY TO TN CHRT
4761-4784 LS- HVY TR WHT TO CRM CHRT, TN TO GRY, CRYPTO TO V/ FN XLN, MSTLY TO EXTRLY OOL (SM MD TO LG) TR S-CHK S-SUCRO, V/ DUL YEL FLO, NO CUT, NO VIS POR, SLI TR WHT CRM TO TN CHRT
4784-4789' POS ZONE SIMILAR TO 4751-4761 OR SHOW STINGING IN SAMPLES ONLY FOUND 4 CLSTRS W/ SHOW, REST OF SAMPLE SIMILAR TO 4761'-4784' SLI INC IN CHLK
4789-4845 LS- TR WHT TO CRM CHLK, TN TO LT GRY, CRYPTO TO V/V/FN XLN, TR S-CHLK TO S-SUCRO, HVY TR TO ABD SLI TO V/ OOL (SM MD TO LG), DUL YEL TO TR YEL FLO, NO CUT, NO VIS POR, SLI TR GRY TO TN CHRT
4845-4854 LS- SIMILAR TO 4789-4845 W/ HVY TR TO ABDT WHT TO CRM & ABDT WHT CRM TO TN CHRT
4854-4887 LS- TR MD GRY SH, CRYPTO TO V/V/FN XLN, S-CHLK TO S-SUCRO, HVY TR TO ABDT OOL (SM MD TO TR LG), V/DUL YEL FLO IP, NO CUT, NO VIS POR, SLI TR TO TR GRY TO TN CHRT
RIG ERROR WITHIN LAST 12 HOURS
4 U. BG
CN
9 U. INC
CN
6 U. BG
15 U. SHOW
C3
C2
C1
11 U.
5
4
29 U. SHOW
CN
21 U. SHOW
16 U. BG
12 U. BG
CN
15 U. BG
15 U. BG
CN
TG, C1-C5
1
10
100
1000
C1
C2
C3
15 U. BG
CN
13 U. BG
CN


CFS@4900'
R.T.D.@4900'
L.T.D.@4899'
4900
4887-4900 LS- W/ CHRT SIMILAR TO 4854-4887 W/ HVY TR DOLO, LS TO DOLO, LT GRY TO TN, V/V/V/FN XLN S-SUCRO TO SUCRO, DUL YEL FLO, NO CUT, NO VIS POR
R.T.D.@4900' 9:30 PM 2/8/20
CFS 1.5 HOUR
SHORT TRIP
CTCH 2 HOUR
TOFL
STEP
14 U. BG
R.T.D.@4900'