Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1138756

Form ACO-1
August 2013
**Form must be Typed**
**Form must be Signed**
**All blanks must be Filled**

# WELL COMPLETION FORM
## WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34622
Name: Chisholm Partners II, LLC
Address 1: 1160 EUGENIA PL
Address 2: SUITE 100
City: CARPINTERIA State: CA Zip: 93013 + ____
Contact Person: Richard McKee
Phone: ( 620 ) 968-7741
CONTRACTOR: License # 33350
Name: Southwind Drilling, Inc.
Wellsite Geologist: Justin Carter
Purchaser:

Designate Type of Completion:

☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☑ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ 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 ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

02/09/2013 — Spud Date or Recompletion Date
02/17/2013 — Date Reached TD
02/17/2013 — Completion Date or Recompletion Date

API No. 15 - 15-041-20138-00-00
Spot Description:
__ - __ - NW - SW Sec. 21 Twp. 11 S. R. 1 ☑ East ☐ West
1980 Feet from ☐ North / ☑ South Line of Section
660 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: Dickinson
Lease Name: Wolf Well #: 1-21
Field Name:
Producing Formation: Maquoketa
Elevation: Ground: 1316 Kelly Bushing: 10
Total Vertical Depth: 3390 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 224 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: 800 ppm Fluid volume: 400 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: 05/29/2013
☑ **Confidential Release Date:** 05/29/2015
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
**ALT** ☑ I ☐ II ☐ III **Approved by:** NAOMI JAMES **Date:** 05/30/2013

1138756

Operator Name: Chisholm Partners II, LLC Lease Name: Wolf Well #: 1-21

Sec. 21 Twp. 11 S. R. 1 ☑ East ☐ West County: Dickinson

**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 ☐ Yes ☑ No
*(Attach Additional Sheets)*

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Attached

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

Name: Attached Top: Attached Datum: Attached

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 | 8.6250 | 23 | 224 | Common | 150 | 3% CC, 2% Gel |
| | | | | | | | |
| | | | | | | | |

ADDITIONAL CEMENTING / SQUEEZE RECORD

| Purpose: | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
|---|---|---|---|---|
| ___ Perforate<br>___ Protect Casing<br>___ Plug Back TD<br>___ Plug Off Zone | - | | | |
| | - | | | |

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 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)*

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)* | Depth |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 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: ☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)* _____

PRODUCTION INTERVAL:

**Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202**

| | |
|---|---|
| Form | ACO1 - Well Completion |
| Operator | Chisholm Partners II, LLC |
| Well Name | Wolf 1-21 |
| Doc ID | 1138756 |

All Electric Logs Run

| |
|---|
| Microresistivity |
| Dual Induction |
| Borehole Compensated Sonic Log |
| Dual Compensated Porosity Log |

| | |
|---|---|
| Form | ACO1 - Well Completion |
| Operator | Chisholm Partners II, LLC |
| Well Name | Wolf 1-21 |
| Doc ID | 1138756 |

Tops

| Name | Top | Datum |
|---|---|---|
| Hebner | 1735 | -416 |
| Toronto | 1751 | -432 |
| Douglas | 1766 | -447 |
| Brown Lime | 1856 | -537 |
| Lansing | 1874 | -555 |
| Base K.C. | 2224 | -905 |
| Mississippian | 2492 | -1173 |
| Kinderhook SH | 2635 | -1316 |
| Hunton | 3829 | -1510 |
| MAQUOKETA SH | 3035 | -1716 |
| Maquoketa Dolomite | 3124 | -1805 |
| Simpson | 3261 | -1942 |
| Arbuckle | 3334 | -2015 |

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

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



May 15, 2013

Claire Keneally
Chisholm Partners II, LLC
1160 EUGENIA PL
SUITE 100
CARPINTERIA, CA 93013

Re: ACO1
API 15-041-20138-00-00
Wolf 1-21
SW/4 Sec.21-11S-01E
Dickinson County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Claire Keneally

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 6433

Cell 785-324-1041

~~Dickinson~~ Dickinson

| Date | Sec. | Twp. | Range | County | State | On Location | Finish |
|---|---|---|---|---|---|---|---|
| 2-10-13 | 21 | 11 | 1 | ~~Dickinson~~ | KS | 5:30Am | 10:45Am |

Location Solomon 7N hy 18 1E 3/4 N Finch

Lease Wolf Well No. 1-21 Owner

Contractor Southwind 1

Type Job Surface

Hole Size 12¼ T.D. 224

Csg. 8⅝ Depth 222.70

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint 34

Meas Line Displace 12¾ BBL

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Cha. To Chisholm partners II LLC

Stree

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 150 Class A 2% Gel

**EQUIPMENT**

| | | | |
|---|---|---|---|
| Pumptrk 5 | No. | Cementer | Scott |
| | | Helper | |
| Bulktrk 1 | No. | Driver | Brett |
| | | Driver | |
| Bulktrk pu | No. | Driver | Doug |
| | | Driver | |

**JOB SERVICES & REMARKS**

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Cement did Circulate

| | |
|---|---|
| Common | 150 |
| Poz. Mix | |
| Gel. | 3 |
| Calcium | 5 |
| Hulls | |
| Salt | |
| Flowseal | |
| Kol-Seal | |
| Mud CLR 48 | |
| CFL-117 or CD110 CAF 38 | |
| Sand | |
| Handling | 158 |
| Mileage | |

**FLOAT EQUIPMENT**

| | |
|---|---|
| Guide Shoe | |
| Centralizer | |
| Baskets | |
| AFU Inserts | |
| Float Shoe | |
| Latch Down | |
| Pumptrk Charge | Surface |
| Mileage | 95 |
| Tax | |
| Discount | |
| Total Charge | |

X Signature Doug

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 6414

| Date | Sec. | Twp. | Range | County | State | On Location | Finish |
|---|---|---|---|---|---|---|---|
| 2-16-13 | 21 | 11 | 1 | DICKINSON | KANSAS | | 11:00 PM |

Location SOLOMON-7N-2E-3½ N E/INTO

Lease WOLF Well No. #1-21

Owner CHISHOLM PARTNERS

Contractor S.W.D #1

Type Job P.T.A

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 7⅞" T.D. 3,390

Csg. 4½" Depth

Charge To CHISHOLM PARTNERS

Street 1160 EUGENIA PL

Tbg. Size Depth

City CARPINTERIA State CA, 93013

Tool Depth

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. Shoe Joint

Cement Amount Ordered 130 60/40 POZ 4% GEL - ¼ FLO

Meas Line Displace

**EQUIPMENT**

Pumptrk #15 No. Cementer Helper NICK W.

Bulktrk #1 No. Driver Driver LONNIE M.

Bulktrk P/U No. Driver Driver CHUCK A.

**JOB SERVICES & REMARKS**

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

| | |
|---|---|
| 1ST @ 3314 | 35 SKS |
| 2ND @ 272 | 35 SKS |
| 3RD @ 60 | 25 SKS |
| RAT HOLE | 20 SKS |
| MOUSE HOLE | 15 SKS |
| | 135 SKS |

| | |
|---|---|
| Common | 78 |
| Poz. Mix | 52 |
| Gel. | 5 |
| Calcium | |
| Hulls | |
| Salt | |
| Flowseal | 32# |
| Kol-Seal | |
| Mud CLR 48 | |
| CFL-117 or CD110 CAF 38 | |
| Sand | |
| Handling | 135 |
| Mileage | |

**FLOAT EQUIPMENT**

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

~~1-8⅝ CEMENT PLUG~~

Pumptrk Charge plug

Mileage 95 plug

Tax

Discount

Total Charge

X Signature Perry Thomas

# JUSTIN D. CARTER
## CONSULTING GEOLOGIST

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

| | | | |
|---|---|---|---|
| **Well Name:** | **WOLF 1-21** | | |
| **Location:** | **C, NW, SW Sec. 21 - 11S - 1E Dickinson Co, KS** | | |
| **License Number:** | **15-041-20138-0000** | **Region:** | **Wildcat** |
| **Spud Date:** | **02/09/13** | **Drilling Completed:** | **02/16/13** |
| **Surface Coordinates:** | **1980' FSL & 660' FWL** | | |
| **Bottom Hole Coordinates:** | **224' - 3/4 DEG, 3390' - 1/2 DEG** | | |
| **Ground Elevation (ft):** | **1309'** | **K.B. Elevation (ft):** | **1319'** |
| **Logged Interval (ft):** | **1700' To: 3390'** | **Total Depth (ft):** | **3390'** |
| **Formation:** | **MAQUOKETA** | | |
| **Type of Drilling Fluid:** | **Chemical Mud** | | |



### OPERATOR

**Company:** CHISOLM PARTNERS II, LLC
**Address:** 1160 Eugenia Pl., Suite 100
Carpinteria, CA 93013
Co. Geo.: Mr. John Horne

### GEOLOGIST

**Name:** Justin D. Carter
**Company:**
**Address:** 5945 Westridge Dr.
Great Bend, KS 67530
Home: 620-603-6399, Cell: 620-655-1187

### Comments

**Drilling Contractor: Southwind Drilling, Inc. Rig #1**
**Tool Pusher: Derby Keever**

**8 5/8" surface casing set at 224'**

**Mud: Andy's Mud**
**Engineer: Ken Rupp**

**Gas Detector: Earth Tech OGL, Inc.**

**Open-Hole Loggers: Pioneer Wireline**

## 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

### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

### 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

### 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

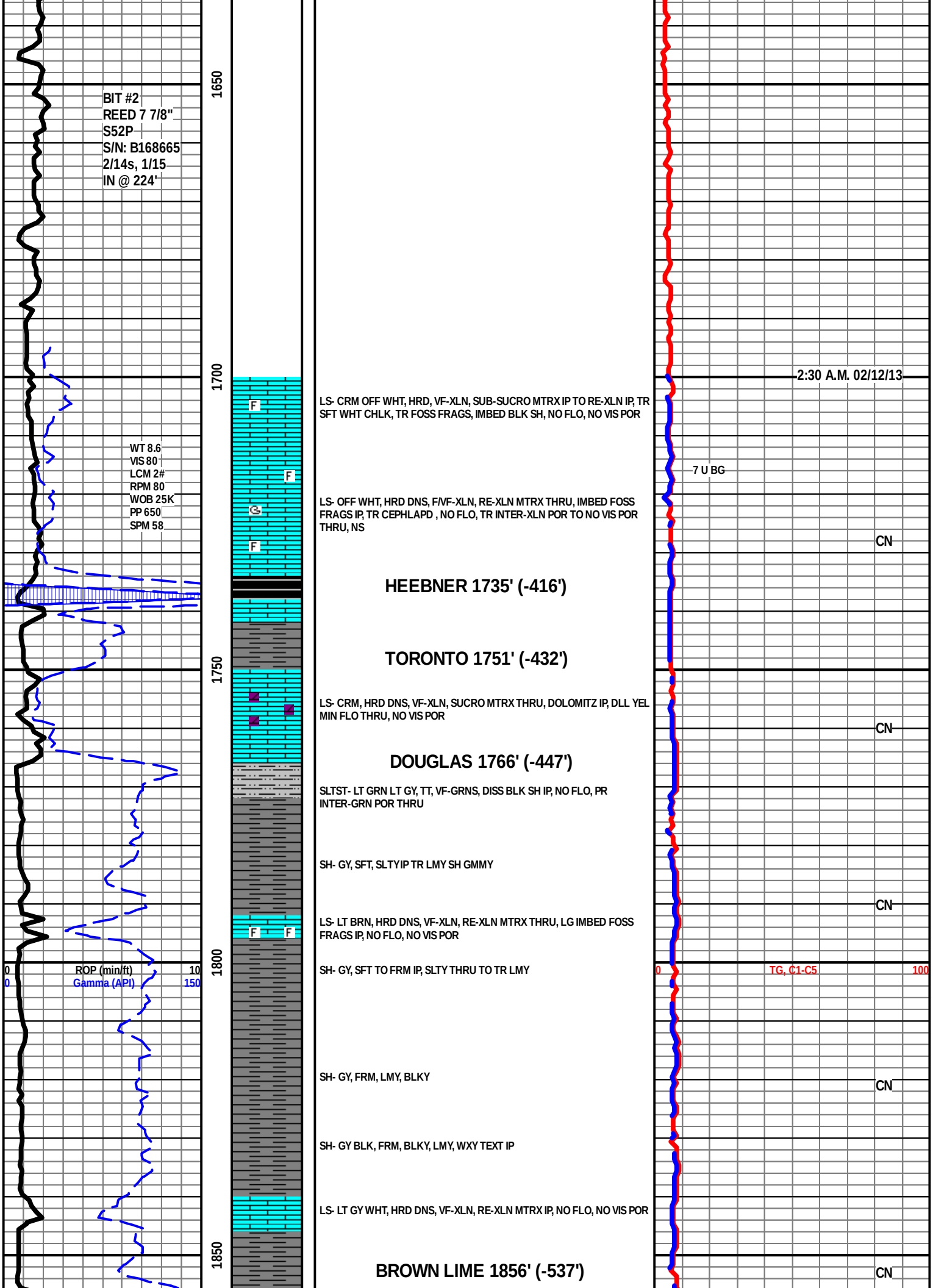
### INTERVALS

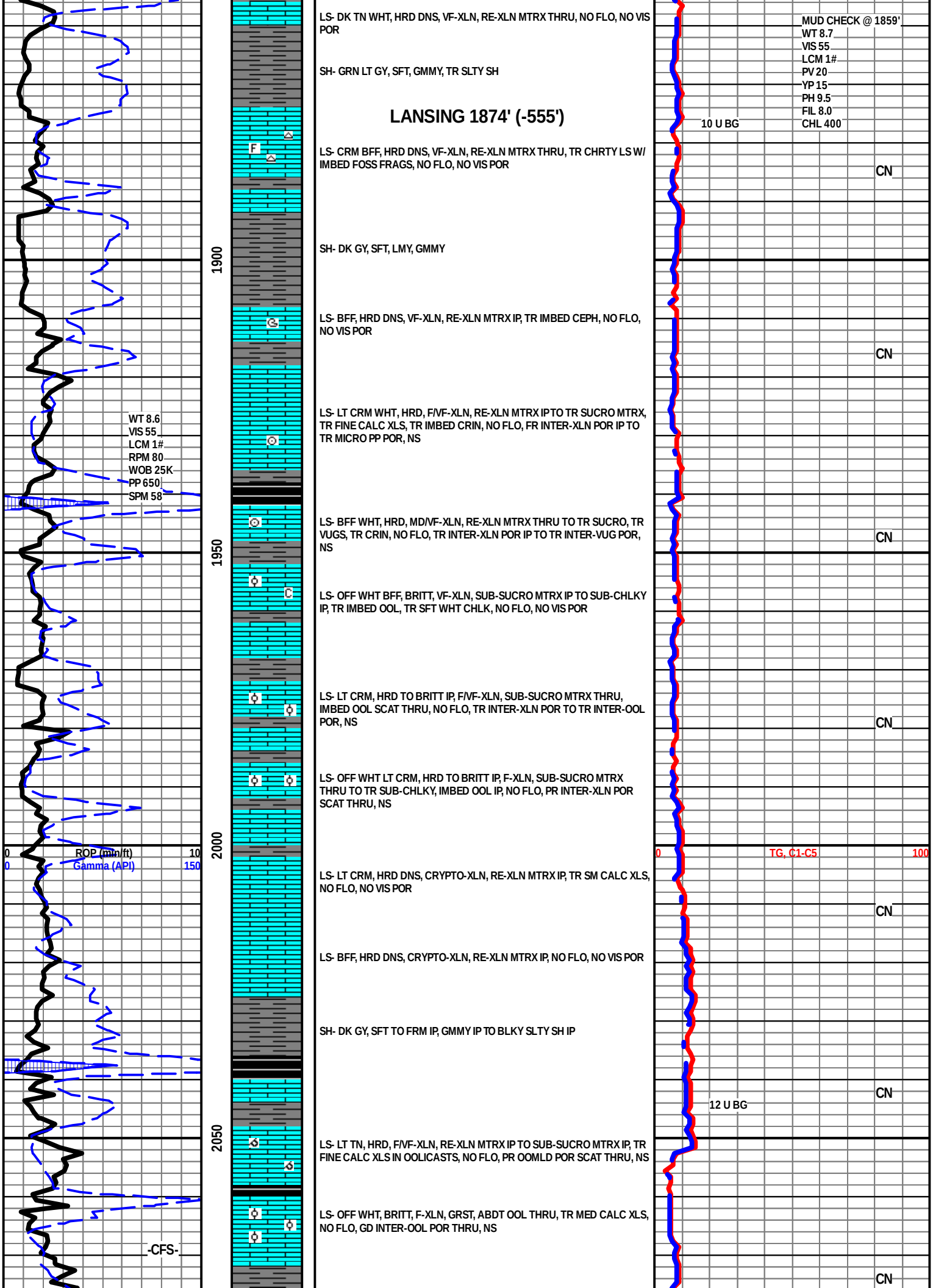
- Core
- Dst
- Dst

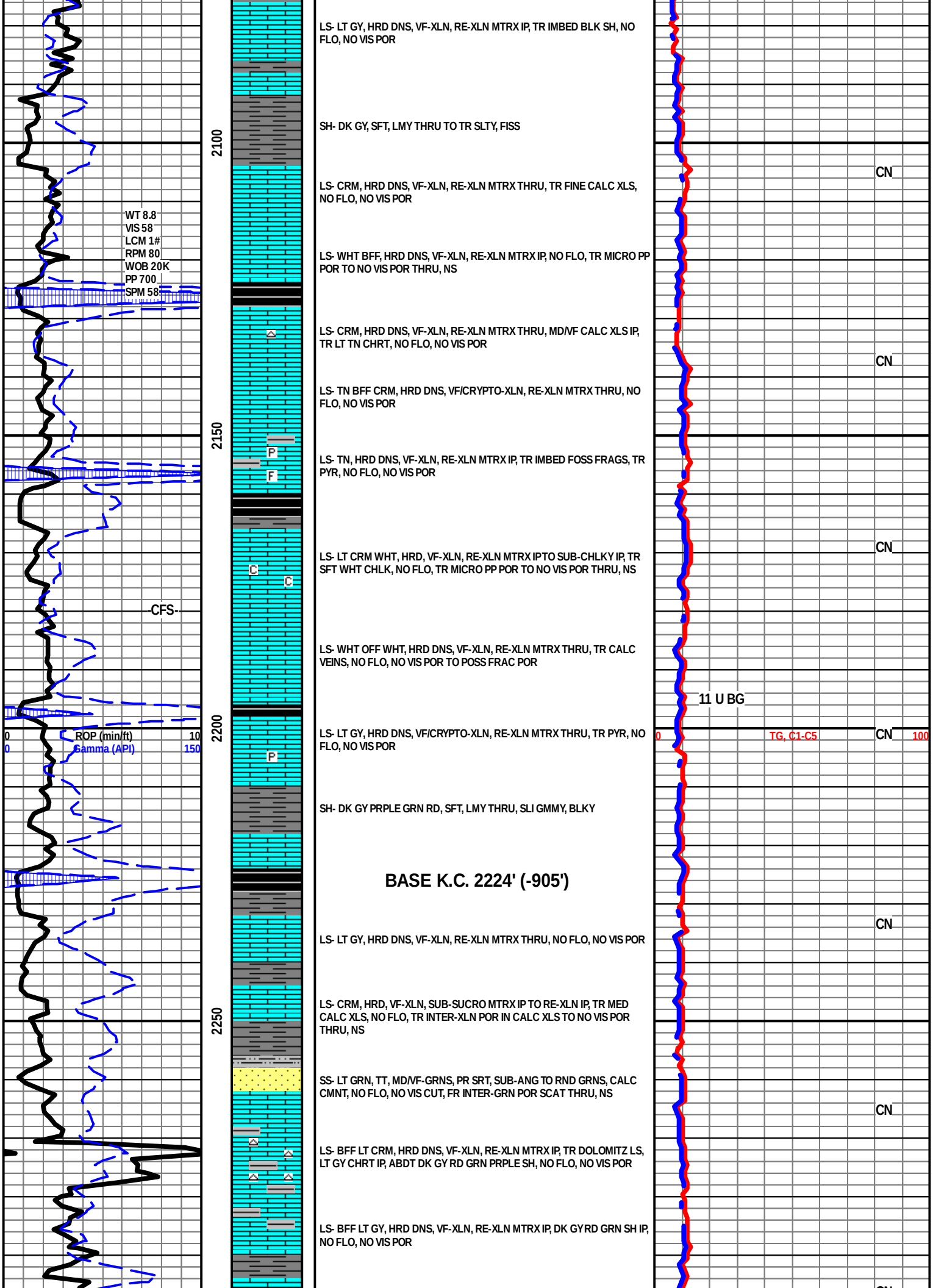
### OIL SHOWS

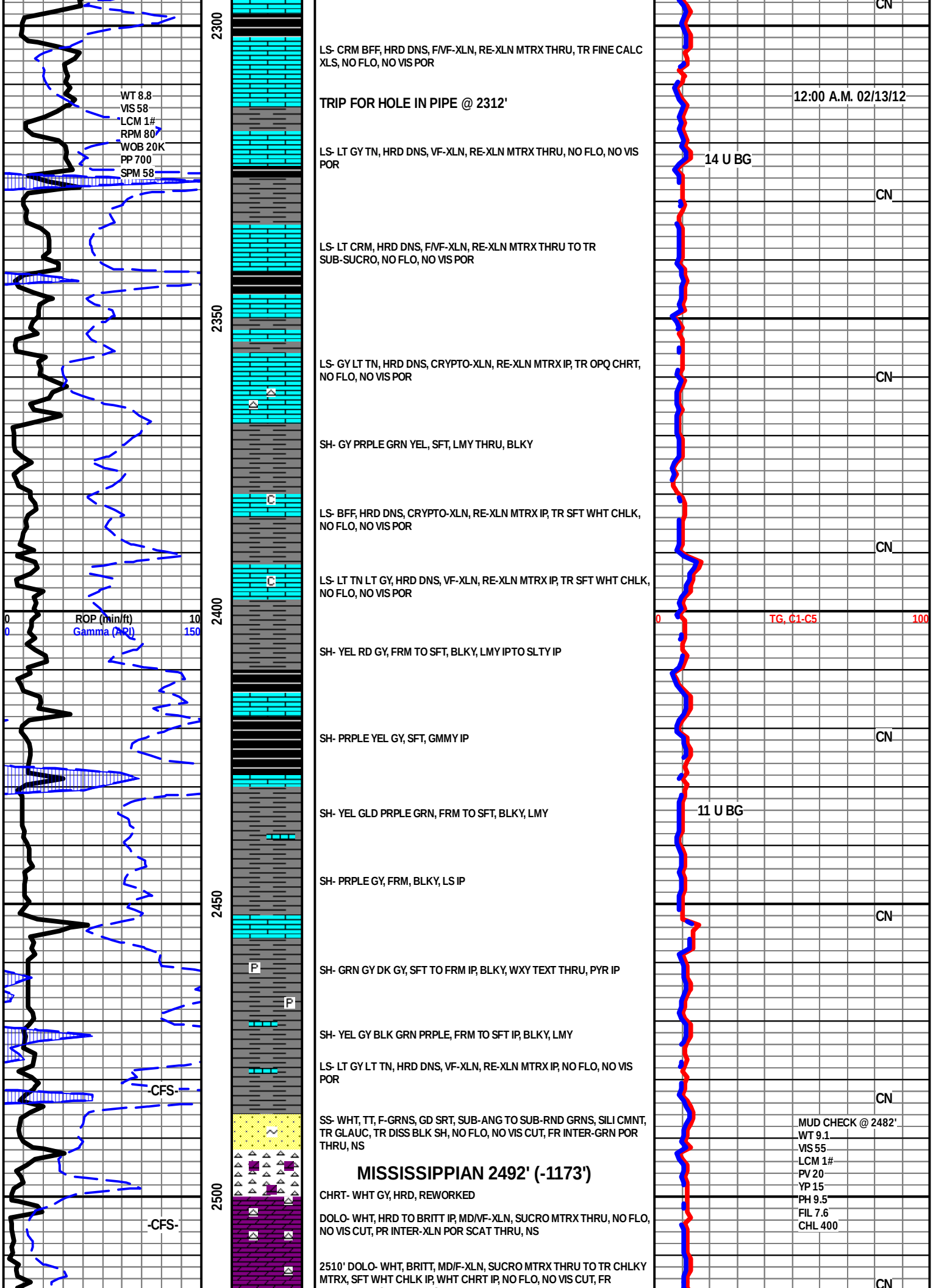
- Even
- Spotted
- Ques
- Dead
- Gas show

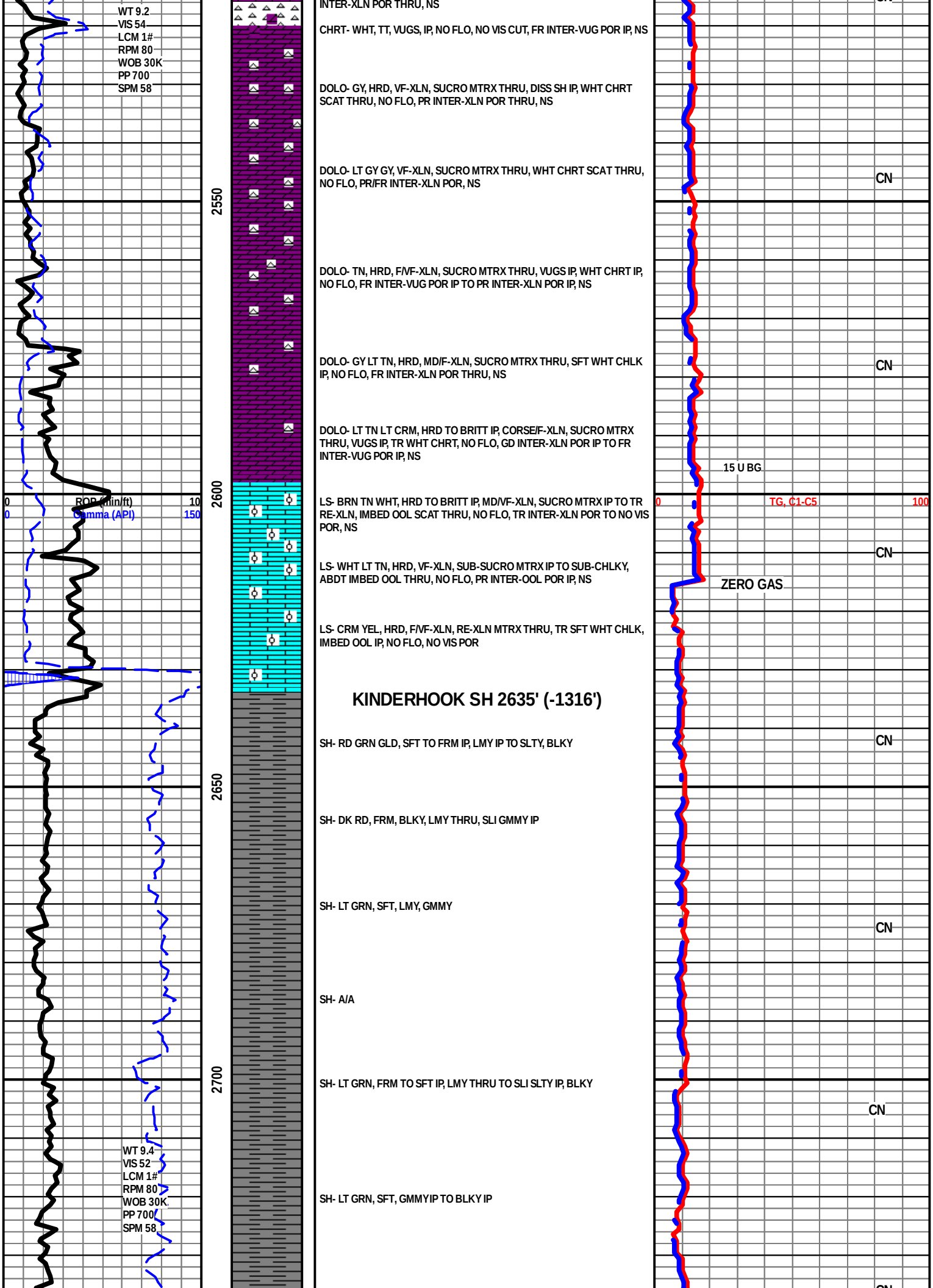
| Curve Track 1 | Depth | Lithology | Oil Shows | Geological Descriptions | TG, C1-C5 |
|---|---|---|---|---|---|
| ROP (min/ft)<br>Gamma (API) | | | | | TG (units)<br>C1 (units)<br>C2 (units)<br>C3 (units)<br>C4 (units)<br>C5 (units) |
| 0 ROP (min/ft) 10<br>0 Gamma (API) 150 | 16 | | | GEOLOGIST ON LOCATION 9 P.M. 02/11/13 | 0 TG, C1-C5 100 |

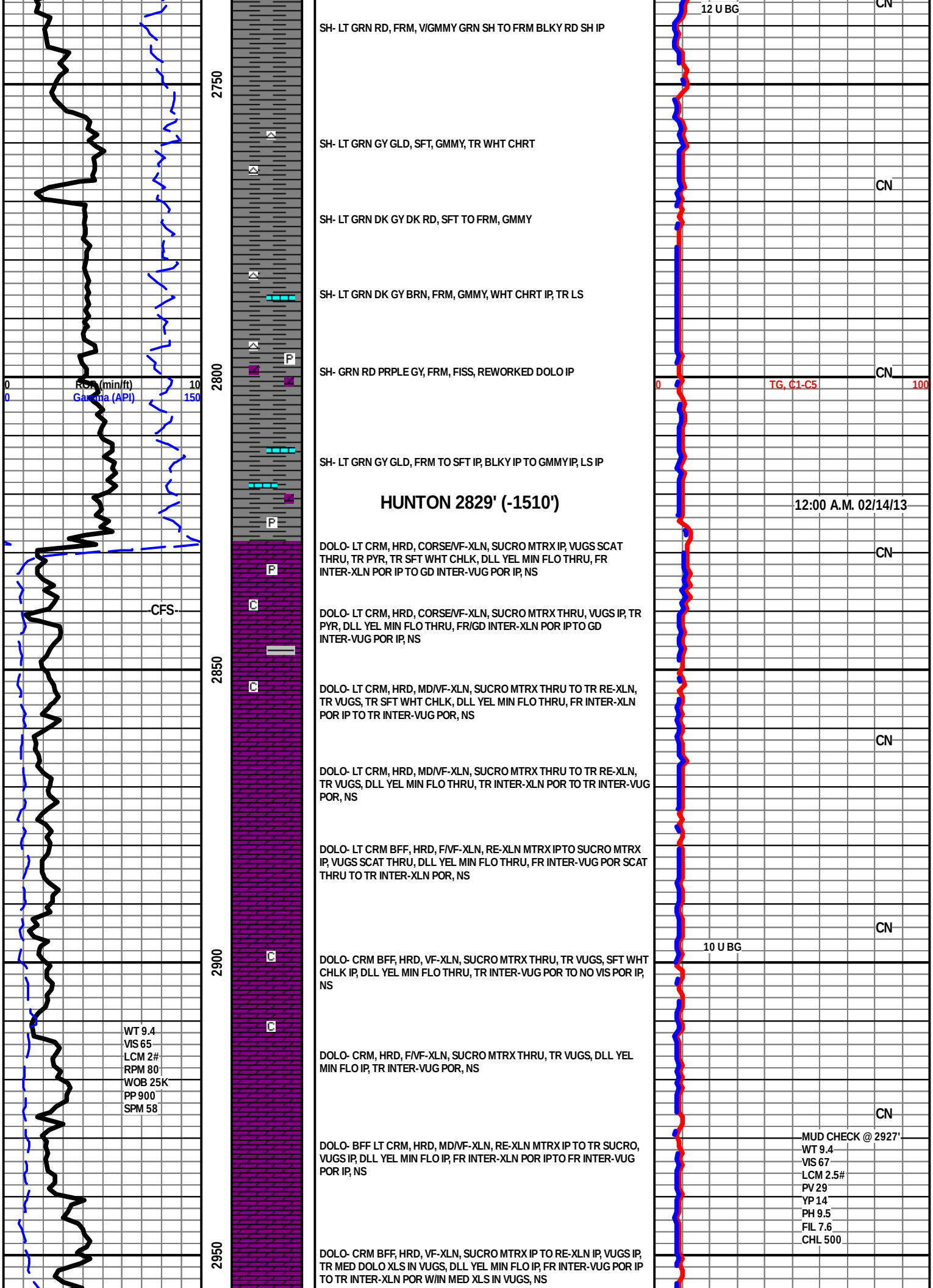

BIT #2
REED 7 7/8"
S52P
S/N: B168665
2/14s, 1/15
IN @ 224'
WT 8.6
VIS 80
LCM 2#
RPM 80
WOB 25K
PP 650
SPM 58
1650
1700
1750
1800
1850
0
ROP (min/ft)
10
0
Gamma (API)
150
LS- CRM OFF WHT, HRD, VF-XLN, SUB-SUCRO MTRX IP TO RE-XLN IP, TR SFT WHT CHLK, TR FOSS FRAGS, IMBED BLK SH, NO FLO, NO VIS POR
2:30 A.M. 02/12/13
7 U BG
LS- OFF WHT, HRD DNS, F/VF-XLN, RE-XLN MTRX THRU, IMBED FOSS FRAGS IP, TR CEPHLAPD , NO FLO, TR INTER-XLN POR TO NO VIS POR THRU, NS
CN
HEEBNER 1735' (-416')
TORONTO 1751' (-432')
LS- CRM, HRD DNS, VF-XLN, SUCRO MTRX THRU, DOLOMITZ IP, DLL YEL MIN FLO THRU, NO VIS POR
CN
DOUGLAS 1766' (-447')
SLTST- LT GRN LT GY, TT, VF-GRNS, DISS BLK SH IP, NO FLO, PR INTER-GRN POR THRU
SH- GY, SFT, SLTYIP TR LMY SH GMMY
CN
LS- LT BRN, HRD DNS, VF-XLN, RE-XLN MTRX THRU, LG IMBED FOSS FRAGS IP, NO FLO, NO VIS POR
SH- GY, SFT TO FRM IP, SLTY THRU TO TR LMY
0
TG, C1-C5
100
SH- GY, FRM, LMY, BLKY
CN
SH- GY BLK, FRM, BLKY, LMY, WXY TEXT IP
LS- LT GY WHT, HRD DNS, VF-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR
BROWN LIME 1856' (-537')
CN


LS- DK TN WHT, HRD DNS, VF-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR
SH- GRN LT GY, SFT, GMMY, TR SLTY SH
LANSING 1874' (-555')
LS- CRM BFF, HRD DNS, VF-XLN, RE-XLN MTRX THRU, TR CHRTY LS W/ IMBED FOSS FRAGS, NO FLO, NO VIS POR
SH- DK GY, SFT, LMY, GMMY
LS- BFF, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR IMBED CEPH, NO FLO, NO VIS POR
LS- LT CRM WHT, HRD, F/VF-XLN, RE-XLN MTRX IP TO TR SUCRO MTRX, TR FINE CALC XLS, TR IMBED CRIN, NO FLO, FR INTER-XLN POR IP TO TR MICRO PP POR, NS
LS- BFF WHT, HRD, MD/VF-XLN, RE-XLN MTRX THRU TO TR SUCRO, TR VUGS, TR CRIN, NO FLO, TR INTER-XLN POR IP TO TR INTER-VUG POR, NS
LS- OFF WHT BFF, BRITT, VF-XLN, SUB-SUCRO MTRX IP TO SUB-CHLKY IP, TR IMBED OOL, TR SFT WHT CHLK, NO FLO, NO VIS POR
LS- LT CRM, HRD TO BRITT IP, F/VF-XLN, SUB-SUCRO MTRX THRU, IMBED OOL SCAT THRU, NO FLO, TR INTER-XLN POR TO TR INTER-OOL POR, NS
LS- OFF WHT LT CRM, HRD TO BRITT IP, F-XLN, SUB-SUCRO MTRX THRU TO TR SUB-CHLKY, IMBED OOL IP, NO FLO, PR INTER-XLN POR SCAT THRU, NS
LS- LT CRM, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, TR SM CALC XLS, NO FLO, NO VIS POR
LS- BFF, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR
SH- DK GY, SFT TO FRM IP, GMMY IP TO BLKY SLTY SH IP
LS- LT TN, HRD, F/VF-XLN, RE-XLN MTRX IP TO SUB-SUCRO MTRX IP, TR FINE CALC XLS IN OOLICASTS, NO FLO, PR OOMLD POR SCAT THRU, NS
LS- OFF WHT, BRITT, F-XLN, GRST, ABDT OOL THRU, TR MED CALC XLS, NO FLO, GD INTER-OOL POR THRU, NS
MUD CHECK @ 1859'
WT 8.7
VIS 55
LCM 1#
PV 20
YP 15
PH 9.5
FIL 8.0
CHL 400
10 U BG
12 U BG
WT 8.6
VIS 55
LCM 1#
RPM 80
WOB 25K
PP 650
SPM 58
1900
1950
2000
2050
F
C
CN
0
ROP (min/ft)
10
0
Gamma (API)
150
0
TG, C1-C5
100
-CFS-


WT 8.8
VIS 58
LCM 1#
RPM 80
WOB 20K
PP 700
SPM 58
CFS
0
ROP (min/ft)
10
0
Gamma (API)
150
2100
2150
2200
2250
P
F
C
C
P
LS- LT GY, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR IMBED BLK SH, NO FLO, NO VIS POR
SH- DK GY, SFT, LMY THRU TO TR SLTY, FISS
LS- CRM, HRD DNS, VF-XLN, RE-XLN MTRX THRU, TR FINE CALC XLS, NO FLO, NO VIS POR
LS- WHT BFF, HRD DNS, VF-XLN, RE-XLN MTRX IP, NO FLO, TR MICRO PP POR TO NO VIS POR THRU, NS
LS- CRM, HRD DNS, VF-XLN, RE-XLN MTRX THRU, MD/VF CALC XLS IP, TR LT TN CHRT, NO FLO, NO VIS POR
LS- TN BFF CRM, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR
LS- TN, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR IMBED FOSS FRAGS, TR PYR, NO FLO, NO VIS POR
LS- LT CRM WHT, HRD, VF-XLN, RE-XLN MTRX IPTO SUB-CHLKY IP, TR SFT WHT CHLK, NO FLO, TR MICRO PP POR TO NO VIS POR THRU, NS
LS- WHT OFF WHT, HRD DNS, VF-XLN, RE-XLN MTRX THRU, TR CALC VEINS, NO FLO, NO VIS POR TO POSS FRAC POR
LS- LT GY, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX THRU, TR PYR, NO FLO, NO VIS POR
SH- DK GY PRPLE GRN RD, SFT, LMY THRU, SLI GMMY, BLKY
BASE K.C. 2224' (-905')
LS- LT GY, HRD DNS, VF-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR
LS- CRM, HRD, VF-XLN, SUB-SUCRO MTRX IP TO RE-XLN IP, TR MED CALC XLS, NO FLO, TR INTER-XLN POR IN CALC XLS TO NO VIS POR THRU, NS
SS- LT GRN, TT, MD/VF-GRNS, PR SRT, SUB-ANG TO RND GRNS, CALC CMNT, NO FLO, NO VIS CUT, FR INTER-GRN POR SCAT THRU, NS
LS- BFF LT CRM, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR DOLOMITZ LS, LT GY CHRT IP, ABDT DK GY RD GRN PRPLE SH, NO FLO, NO VIS POR
LS- BFF LT GY, HRD DNS, VF-XLN, RE-XLN MTRX IP, DK GYRD GRN SH IP, NO FLO, NO VIS POR
11 U BG
0
TG, C1-C5
100
CN
CN
CN
CN
CN
CN
CN


WT 8.8
VIS 58
LCM 1#
RPM 80
WOB 20K
PP 700
SPM 58
2300
2350
2400
2450
2500
0
ROP (min/ft)
10
0
Gamma (API)
150
LS- CRM BFF, HRD DNS, F/VF-XLN, RE-XLN MTRX THRU, TR FINE CALC XLS, NO FLO, NO VIS POR
TRIP FOR HOLE IN PIPE @ 2312'
12:00 A.M. 02/13/12
LS- LT GY TN, HRD DNS, VF-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR
14 U BG
CN
LS- LT CRM, HRD DNS, F/VF-XLN, RE-XLN MTRX THRU TO TR SUB-SUCRO, NO FLO, NO VIS POR
LS- GY LT TN, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, TR OPQ CHRT, NO FLO, NO VIS POR
SH- GY PRPLE GRN YEL, SFT, LMY THRU, BLKY
C
LS- BFF, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, TR SFT WHT CHLK, NO FLO, NO VIS POR
LS- LT TN LT GY, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR SFT WHT CHLK, NO FLO, NO VIS POR
0
TG, C1-C5
100
SH- YEL RD GY, FRM TO SFT, BLKY, LMY IPTO SLTY IP
SH- PRPLE YEL GY, SFT, GMMY IP
SH- YEL GLD PRPLE GRN, FRM TO SFT, BLKY, LMY
11 U BG
SH- PRPLE GY, FRM, BLKY, LS IP
P
SH- GRN GY DK GY, SFT TO FRM IP, BLKY, WXY TEXT THRU, PYR IP
SH- YEL GY BLK GRN PRPLE, FRM TO SFT IP, BLKY, LMY
LS- LT GY LT TN, HRD DNS, VF-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR
-CFS-
SS- WHT, TT, F-GRNS, GD SRT, SUB-ANG TO SUB-RND GRNS, SILI CMNT, TR GLAUC, TR DISS BLK SH, NO FLO, NO VIS CUT, FR INTER-GRN POR THRU, NS
MUD CHECK @ 2482'
WT 9.1
VIS 55
LCM 1#
PV 20
YP 15
PH 9.5
FIL 7.6
CHL 400
MISSISSIPPIAN 2492' (-1173')
CHRT- WHT GY, HRD, REWORKED
DOLO- WHT, HRD TO BRITT IP, MD/VF-XLN, SUCRO MTRX THRU, NO FLO, NO VIS CUT, PR INTER-XLN POR SCAT THRU, NS
-CFS-
2510' DOLO- WHT, BRITT, MD/F-XLN, SUCRO MTRX THRU TO TR CHLKY MTRX, SFT WHT CHLK IP, WHT CHRT IP, NO FLO, NO VIS CUT, FR


WT 9.2
VIS 54
LCM 1#
RPM 80
WOB 30K
PP 700
SPM 58
INTER-XLN POR THRU, NS
CHRT- WHT, TT, VUGS, IP, NO FLO, NO VIS CUT, FR INTER-VUG POR IP, NS
DOLO- GY, HRD, VF-XLN, SUCRO MTRX THRU, DISS SH IP, WHT CHRT SCAT THRU, NO FLO, PR INTER-XLN POR THRU, NS
DOLO- LT GY GY, VF-XLN, SUCRO MTRX THRU, WHT CHRT SCAT THRU, NO FLO, PR/FR INTER-XLN POR, NS
CN
2550
DOLO- TN, HRD, F/VF-XLN, SUCRO MTRX THRU, VUGS IP, WHT CHRT IP, NO FLO, FR INTER-VUG POR IP TO PR INTER-XLN POR IP, NS
DOLO- GY LT TN, HRD, MD/F-XLN, SUCRO MTRX THRU, SFT WHT CHLK IP, NO FLO, FR INTER-XLN POR THRU, NS
CN
DOLO- LT TN LT CRM, HRD TO BRITT IP, CORSE/F-XLN, SUCRO MTRX THRU, VUGS IP, TR WHT CHRT, NO FLO, GD INTER-XLN POR IP TO FR INTER-VUG POR IP, NS
15 U BG
0
ROP (min/ft)
10
0
Gamma (API)
150
2600
LS- BRN TN WHT, HRD TO BRITT IP, MD/VF-XLN, SUCRO MTRX IP TO TR RE-XLN, IMBED OOL SCAT THRU, NO FLO, TR INTER-XLN POR TO NO VIS POR, NS
0
TG, C1-C5
100
CN
LS- WHT LT TN, HRD, VF-XLN, SUB-SUCRO MTRX IP TO SUB-CHLKY, ABDT IMBED OOL THRU, NO FLO, PR INTER-OOL POR IP, NS
ZERO GAS
LS- CRM YEL, HRD, F/VF-XLN, RE-XLN MTRX THRU, TR SFT WHT CHLK, IMBED OOL IP, NO FLO, NO VIS POR
KINDERHOOK SH 2635' (-1316')
SH- RD GRN GLD, SFT TO FRM IP, LMY IP TO SLTY, BLKY
CN
2650
SH- DK RD, FRM, BLKY, LMY THRU, SLI GMMY IP
SH- LT GRN, SFT, LMY, GMMY
CN
SH- A/A
2700
SH- LT GRN, FRM TO SFT IP, LMY THRU TO SLI SLTY IP, BLKY
CN
WT 9.4
VIS 52
LCM 1#
RPM 80
WOB 30K
PP 700
SPM 58
SH- LT GRN, SFT, GMMY IP TO BLKY IP
CN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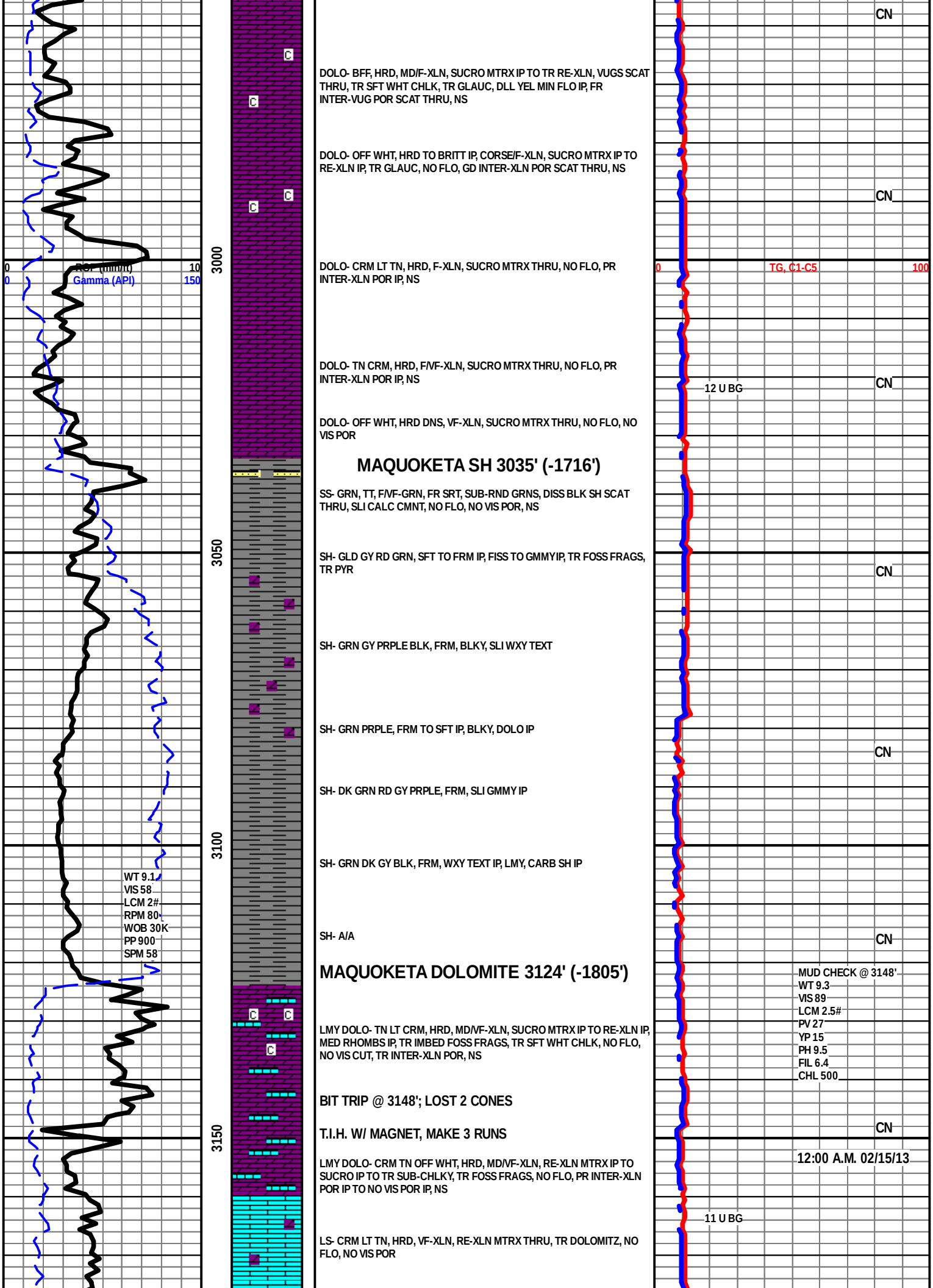
ROP (min/ft)
10
0
Gamma (API)
150
CFS
WT 9.4
VIS 65
LCM 2#
RPM 80
WOB 25K
PP 900
SPM 58
2750
2800
2850
2900
2950
SH- LT GRN RD, FRM, V/GMMY GRN SH TO FRM BLKY RD SH IP
SH- LT GRN GY GLD, SFT, GMMY, TR WHT CHRT
SH- LT GRN DK GY DK RD, SFT TO FRM, GMMY
SH- LT GRN DK GY BRN, FRM, GMMY, WHT CHRT IP, TR LS
SH- GRN RD PRPLE GY, FRM, FISS, REWORKED DOLO IP
SH- LT GRN GY GLD, FRM TO SFT IP, BLKY IP TO GMMY IP, LS IP
HUNTON 2829' (-1510')
DOLO- LT CRM, HRD, CORSE/VF-XLN, SUCRO MTRX IP, VUGS SCAT THRU, TR PYR, TR SFT WHT CHLK, DLL YEL MIN FLO THRU, FR INTER-XLN POR IP TO GD INTER-VUG POR IP, NS
DOLO- LT CRM, HRD, CORSE/VF-XLN, SUCRO MTRX THRU, VUGS IP, TR PYR, DLL YEL MIN FLO THRU, FR/GD INTER-XLN POR IP TO GD INTER-VUG POR IP, NS
DOLO- LT CRM, HRD, MD/VF-XLN, SUCRO MTRX THRU TO TR RE-XLN, TR VUGS, TR SFT WHT CHLK, DLL YEL MIN FLO THRU, FR INTER-XLN POR IP TO TR INTER-VUG POR, NS
DOLO- LT CRM, HRD, MD/VF-XLN, SUCRO MTRX THRU TO TR RE-XLN, TR VUGS, DLL YEL MIN FLO THRU, TR INTER-XLN POR TO TR INTER-VUG POR, NS
DOLO- LT CRM BFF, HRD, F/VF-XLN, RE-XLN MTRX IP TO SUCRO MTRX IP, VUGS SCAT THRU, DLL YEL MIN FLO THRU, FR INTER-VUG POR SCAT THRU TO TR INTER-XLN POR, NS
DOLO- CRM BFF, HRD, VF-XLN, SUCRO MTRX THRU, TR VUGS, SFT WHT CHLK IP, DLL YEL MIN FLO THRU, TR INTER-VUG POR TO NO VIS POR IP, NS
DOLO- CRM, HRD, F/VF-XLN, SUCRO MTRX THRU, TR VUGS, DLL YEL MIN FLO IP, TR INTER-VUG POR, NS
DOLO- BFF LT CRM, HRD, MD/VF-XLN, RE-XLN MTRX IP TO TR SUCRO, VUGS IP, DLL YEL MIN FLO IP, FR INTER-XLN POR IP TO FR INTER-VUG POR IP, NS
DOLO- CRM BFF, HRD, VF-XLN, SUCRO MTRX IP TO RE-XLN IP, VUGS IP, TR MED DOLO XLS IN VUGS, DLL YEL MIN FLO IP, FR INTER-VUG POR IP TO TR INTER-XLN POR W/IN MED XLS IN VUGS, NS
12 U BG
CN
0
TG, C1-C5
100
12:00 A.M. 02/14/13
10 U BG
MUD CHECK @ 2927'
WT 9.4
VIS 67
LCM 2.5#
PV 29
YP 14
PH 9.5
FIL 7.6
CHL 500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ROP (min/ft)
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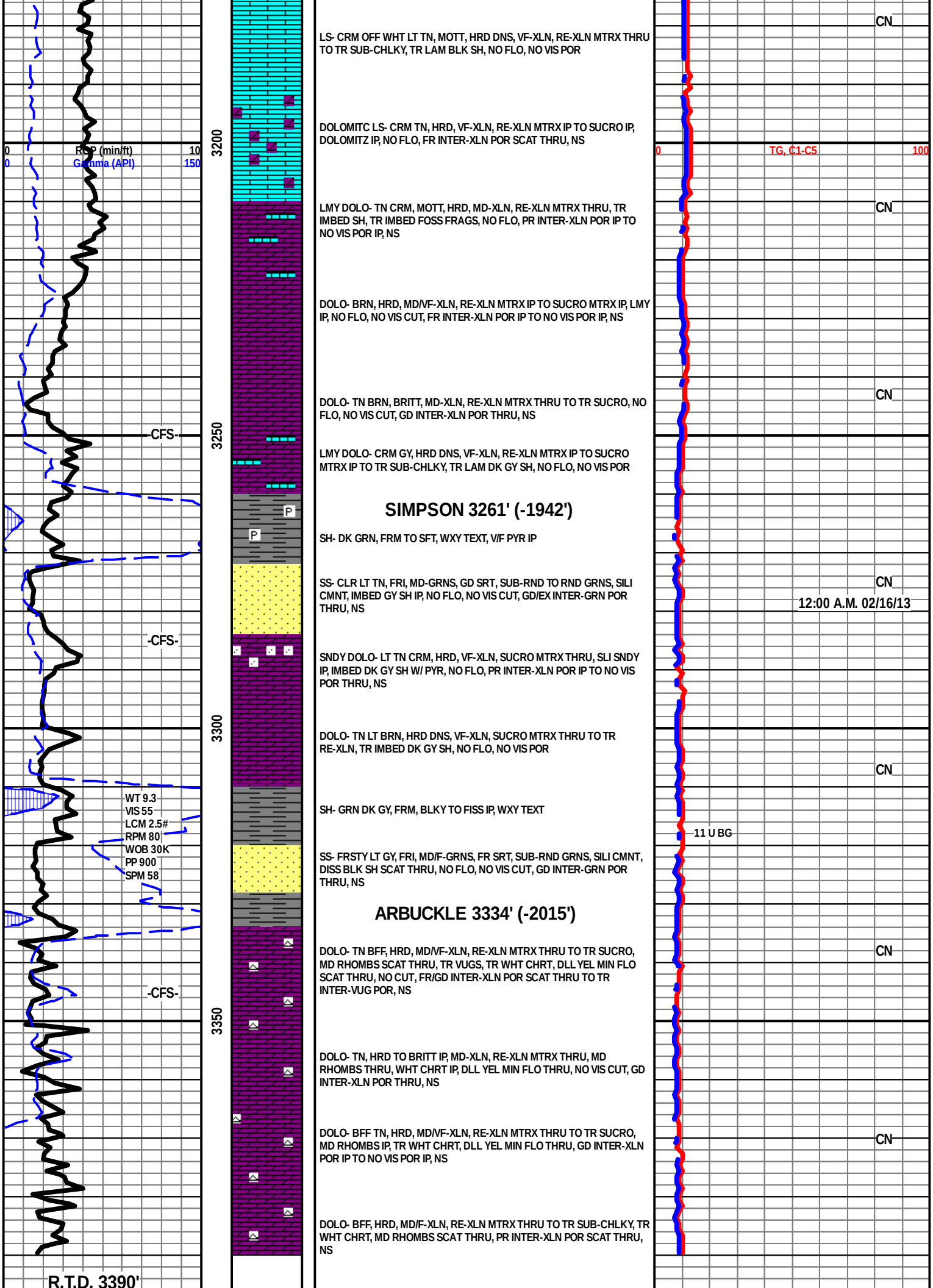
Gamma (API)
150
3000
3050
3100
3150
WT 9.1
VIS 58
LCM 2#
RPM 80
WOB 30K
PP 900
SPM 58
DOLO- BFF, HRD, MD/F-XLN, SUCRO MTRX IP TO TR RE-XLN, VUGS SCAT THRU, TR SFT WHT CHLK, TR GLAUC, DLL YEL MIN FLO IP, FR INTER-VUG POR SCAT THRU, NS
DOLO- OFF WHT, HRD TO BRITT IP, CORSE/F-XLN, SUCRO MTRX IP TO RE-XLN IP, TR GLAUC, NO FLO, GD INTER-XLN POR SCAT THRU, NS
DOLO- CRM LT TN, HRD, F-XLN, SUCRO MTRX THRU, NO FLO, PR INTER-XLN POR IP, NS
DOLO- TN CRM, HRD, F/VF-XLN, SUCRO MTRX THRU, NO FLO, PR INTER-XLN POR IP, NS
DOLO- OFF WHT, HRD DNS, VF-XLN, SUCRO MTRX THRU, NO FLO, NO VIS POR
MAQUOKETA SH 3035' (-1716')
SS- GRN, TT, F/VF-GRN, FR SRT, SUB-RND GRNS, DISS BLK SH SCAT THRU, SLI CALC CMNT, NO FLO, NO VIS POR, NS
SH- GLD GY RD GRN, SFT TO FRM IP, FISS TO GMMY IP, TR FOSS FRAGS, TR PYR
SH- GRN GY PRPLE BLK, FRM, BLKY, SLI WXY TEXT
SH- GRN PRPLE, FRM TO SFT IP, BLKY, DOLO IP
SH- DK GRN RD GY PRPLE, FRM, SLI GMMY IP
SH- GRN DK GY BLK, FRM, WXY TEXT IP, LMY, CARB SH IP
SH- A/A
MAQUOKETA DOLOMITE 3124' (-1805')
LMY DOLO- TN LT CRM, HRD, MD/VF-XLN, SUCRO MTRX IP TO RE-XLN IP, MED RHOMBS IP, TR IMBED FOSS FRAGS, TR SFT WHT CHLK, NO FLO, NO VIS CUT, TR INTER-XLN POR, NS
BIT TRIP @ 3148'; LOST 2 CONES
T.I.H. W/ MAGNET, MAKE 3 RUNS
LMY DOLO- CRM TN OFF WHT, HRD, MD/VF-XLN, RE-XLN MTRX IP TO SUCRO IP TO TR SUB-CHLKY, TR FOSS FRAGS, NO FLO, PR INTER-XLN POR IP TO NO VIS POR IP, NS
LS- CRM LT TN, HRD, VF-XLN, RE-XLN MTRX THRU, TR DOLOMITZ, NO FLO, NO VIS POR
0
TG, C1-C5
100
12 U BG
11 U BG
CN
MUD CHECK @ 3148'
WT 9.3
VIS 89
LCM 2.5#
PV 27
YP 15
PH 9.5
FIL 6.4
CHL 500
12:00 A.M. 02/15/13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ROP (min/ft)
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Gamma (API)
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3200
3250
3300
3350
-CFS-
-CFS-
-CFS-
WT 9.3
VIS 55
LCM 2.5#
RPM 80
WOB 30K
PP 900
SPM 58
P
P
R.T.D. 3390'
LS- CRM OFF WHT LT TN, MOTT, HRD DNS, VF-XLN, RE-XLN MTRX THRU TO TR SUB-CHLKY, TR LAM BLK SH, NO FLO, NO VIS POR
DOLOMITC LS- CRM TN, HRD, VF-XLN, RE-XLN MTRX IP TO SUCRO IP, DOLOMITZ IP, NO FLO, FR INTER-XLN POR SCAT THRU, NS
LMY DOLO- TN CRM, MOTT, HRD, MD-XLN, RE-XLN MTRX THRU, TR IMBED SH, TR IMBED FOSS FRAGS, NO FLO, PR INTER-XLN POR IP TO NO VIS POR IP, NS
DOLO- BRN, HRD, MD/VF-XLN, RE-XLN MTRX IP TO SUCRO MTRX IP, LMY IP, NO FLO, NO VIS CUT, FR INTER-XLN POR IP TO NO VIS POR IP, NS
DOLO- TN BRN, BRITT, MD-XLN, RE-XLN MTRX THRU TO TR SUCRO, NO FLO, NO VIS CUT, GD INTER-XLN POR THRU, NS
LMY DOLO- CRM GY, HRD DNS, VF-XLN, RE-XLN MTRX IP TO SUCRO MTRX IP TO TR SUB-CHLKY, TR LAM DK GY SH, NO FLO, NO VIS POR
SIMPSON 3261' (-1942')
SH- DK GRN, FRM TO SFT, WXY TEXT, V/F PYR IP
SS- CLR LT TN, FRI, MD-GRNS, GD SRT, SUB-RND TO RND GRNS, SILI CMNT, IMBED GY SH IP, NO FLO, NO VIS CUT, GD/EX INTER-GRN POR THRU, NS
SNDY DOLO- LT TN CRM, HRD, VF-XLN, SUCRO MTRX THRU, SLI SNDY IP, IMBED DK GY SH W/ PYR, NO FLO, PR INTER-XLN POR IP TO NO VIS POR THRU, NS
DOLO- TN LT BRN, HRD DNS, VF-XLN, SUCRO MTRX THRU TO TR RE-XLN, TR IMBED DK GY SH, NO FLO, NO VIS POR
SH- GRN DK GY, FRM, BLKY TO FISS IP, WXY TEXT
SS- FRSTY LT GY, FRI, MD/F-GRNS, FR SRT, SUB-RND GRNS, SILI CMNT, DISS BLK SH SCAT THRU, NO FLO, NO VIS CUT, GD INTER-GRN POR THRU, NS
ARBUCKLE 3334' (-2015')
DOLO- TN BFF, HRD, MD/VF-XLN, RE-XLN MTRX THRU TO TR SUCRO, MD RHOMBS SCAT THRU, TR VUGS, TR WHT CHRT, DLL YEL MIN FLO SCAT THRU, NO CUT, FR/GD INTER-XLN POR SCAT THRU TO TR INTER-VUG POR, NS
DOLO- TN, HRD TO BRITT IP, MD-XLN, RE-XLN MTRX THRU, MD RHOMBS THRU, WHT CHRT IP, DLL YEL MIN FLO THRU, NO VIS CUT, GD INTER-XLN POR THRU, NS
DOLO- BFF TN, HRD, MD/VF-XLN, RE-XLN MTRX THRU TO TR SUCRO, MD RHOMBS IP, TR WHT CHRT, DLL YEL MIN FLO THRU, GD INTER-XLN POR IP TO NO VIS POR IP, NS
DOLO- BFF, HRD, MD/F-XLN, RE-XLN MTRX THRU TO TR SUB-CHLKY, TR WHT CHRT, MD RHOMBS SCAT THRU, PR INTER-XLN POR SCAT THRU, NS
0
TG, C1-C5
100
CN
CN
CN
CN
CN
CN
12:00 A.M. 02/16/13
11 U BG

| | | | | | |
|---|---|---|---|---|---|
| 0 | ROP (min/ft) | 10 | 3400 | TD @ 6:30 A.M. 02/16/13 | 0 TG, C1-C5 100 |
| 0 | Gamma (API) | 150 | | CTCH 1 1/2 HR. | |
| | L.T.D. 3391' | | | SHORT TRIP 11 STANDS | |
| | | | | CTCH 1 HR. | |
| | | | | T.O.H. FOR LOGS | |