



**Oil & Gas Ltd.**

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

Well Name: Little Bear 44-28  
Location: SE/SE Section 28 T13S R46W Cheyenne Co., CO  
License Number: API: 05-017-07712  
Spud Date: March 28, 2012  
Surface Coordinates: 1032' FSL & 827' FEL SE/SE Section 28 T13S R46W  
Latitude 38.97516, Longitude -102.52924 (US NAD 83)  
Bottom Hole Coordinates: Same.  
Ground Elevation (ft): 4413' K.B. Elevation (ft): 4424'  
Logged Interval (ft): 4400' To: 5692' Total Depth (ft): 5692' (LTD- 5689')  
Formation: Morrow, (TD in Spergen).  
Type of Drilling Fluid: LSND, Hydro Resources.  
Region: Wildcat  
Drilling Completed: April 10, 2012  
Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

#### OPERATOR

Company: Vecta Oil & Gas Ltd  
Address: 575 Union Blvd, Suite 208  
Lakewood, CO 80228  
Tel. (303) 945-2860

#### GEOLOGIST

Name: Mike Dodge  
Company: Goolsby Brothers and Associates  
Address: 575 Union Blvd., Suite 208  
Lakewood, CO 80228

#### Electric Logs

Open Hole Logs By: Schlumberger (Ft Morgan).  
Program: AIT: TD-Base of S.C.  
LDT/CNL/ML: TD-Base of S.C.  
Sonic Scanner: TD-Base of S.C.

#### Casing

8 5/8" 24# J-55, LT&C set @ 453'.  
5.5" 15.5# J-55 Prod. Casing run to TD.

## Comments

1) Contractor- Integrity Drilling, Rig #69. ToolPusher: Bob Kleisen

Pumps: #1 TSM-500 6" x 16" (0.1438 Bbl./Stk)

#2 Oilwell, P-214 6" x 14"

2) Company Geologist: Dave Bowen.

Company Man: Gary Doke.

3) Coring Service: NOV

Technician- Brian Bentley.

Bit: 7 7/8" x 4" NOV CCPX 713 (SN 124321).

Core #1 5412-5460' (Morrow) (' Logs). Cut 48' in 4 Hrs. Recovered- 47.55' (99%).

Core Handling, Pick Up & Lab Work: Core Labs.

4) Drill Stem Testing: Trilobite Testing Inc., Mike Roberts.

DST#1: 5550-5622' (Spergen), Straddle Test (Ran After Logs), Packer Failure.

Mud Column Dropped after 5 sec., Tried to ReSet 3 times.

DST#2: 5545-5622' (Spergen) - Straddle Test.

Times: 30-30-60-90. IF: Open w/ Strong Blow, BOB in 1 min., Remained. ISI: No Blowback. FF: Built to 3 1/2" in 3 min., Remained Steady. FSI: No Blowback.

Pressures: IH 2787.7, FH 2662.5, IF 435-459, FF 2279, ISI 565-491, FSI 2308.

Pipe Recovery: 1118' Drilling Mud

Sampler: Plugged w/ LCM.

DST#3: 5545-5595' (Spergen), Straddle Test (Ran After Logs), Packer Failure.

Mud Column Dropped after 30 sec., Tried to ReSet 3 times.

5) Gas Detector from Terra Services: MSI Redbox Total Gas Detector w/ Chromatograph (#173).

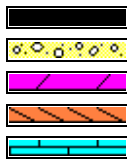
6) All data (ROP, Lithology) has been adjusted up 4' to correlate to Electric Logs.

7) As of 4/13/12, Production Casing was scheduled to be run to TD, to further evaluate the Spergen and Morrow.

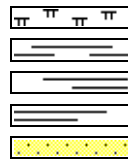
## ROCK TYPES



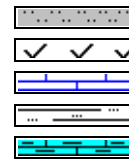
ss\_fg+  
Carb sh  
Bent  
Cht  
Clyst



Coal  
Congl  
Dol  
Gyp  
Ls



Mrlst  
Shale  
Sh (col)  
Sh (gy)  
Ss



Slst  
Anhy  
Chalk  
Slty sh  
Arg ls

## ACCESSORIES

### MINERAL

Pyr  
 Anhy  
 Arggrn  
 Arg  
 Bent  
 Bit  
 Brecfrag  
 Calc  
 Carb  
 Chtdk  
 Chtlit  
 Dol  
 Feldspar  
 Ferrpel  
 Ferr  
 Glau  
 Gyp  
 Hvymin  
 Kaol

Marl  
 Minxl  
 Nodule  
 Phos  
 Pyr  
 Salt  
 Sandy  
 Silt  
 Sil  
 Sulphur  
 Tuff

### FOSSIL

Algae  
 Amph  
 Belm  
 Bioclst  
 Brach  
 Bryozoa  
 Cephal

Coral  
 Crin  
 Echin  
 Fish  
 Foram  
 Fossil  
 Gastro  
 Oolite  
 Ostra  
 Pelec  
 Pellet  
 Pisolite  
 Plant  
 Strom

### STRINGER

Anhy  
 Arg  
 Bent  
 Coal

Dol  
 Gyp  
 Ls  
 Mrst  
 Sltstrg  
 Ssstrg  
 Chalk strg

### TEXTURE

Boundst  
 Chalky  
 Cryxln  
 Earthy  
 Finexln  
 Grainst  
 Lithogr  
 Microxln  
 Mudst  
 Packst  
 Wackest

## OTHER SYMBOLS

### POROSITY TYPE

Earthy  
 Fenest  
 Fracture  
 Inter  
 Moldic  
 Organic  
 Pinpoint  
 Vuggy

Moderate  
 Poor

### ROUNDING

Rounded  
 Subrnd  
 Subang  
 Angular

### OIL SHOWS

Even  
 Spotted

near even  
 Ques  
 Dead  
 vspotty

### INTERVALS

Core  
 Dst  
 casing

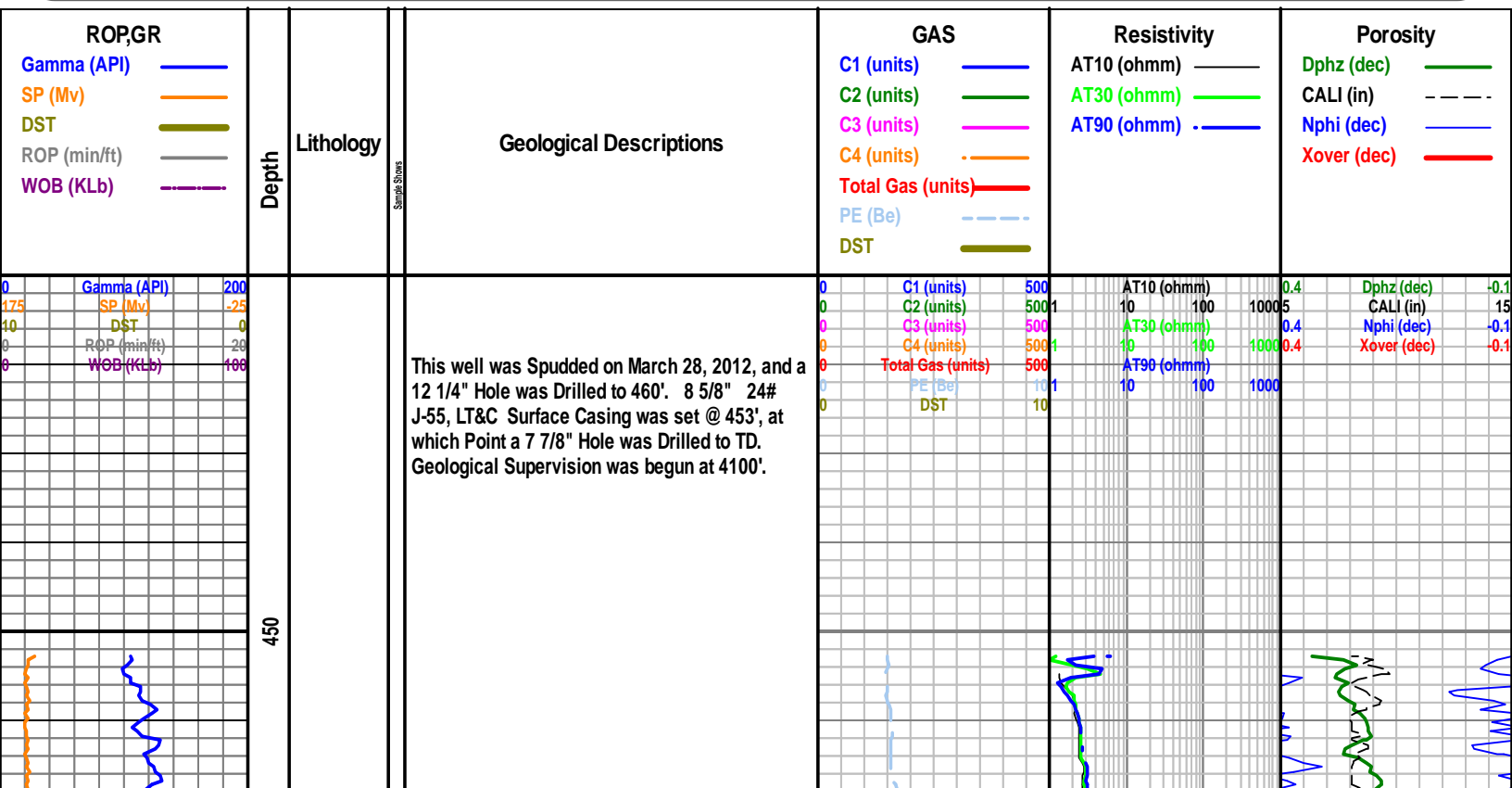
Sidewall  
 New bit  
 casingr  
 casing  
 Survey  
 Off bottom  
 conn  
 perfs  
 Survey(red)

### SORTING

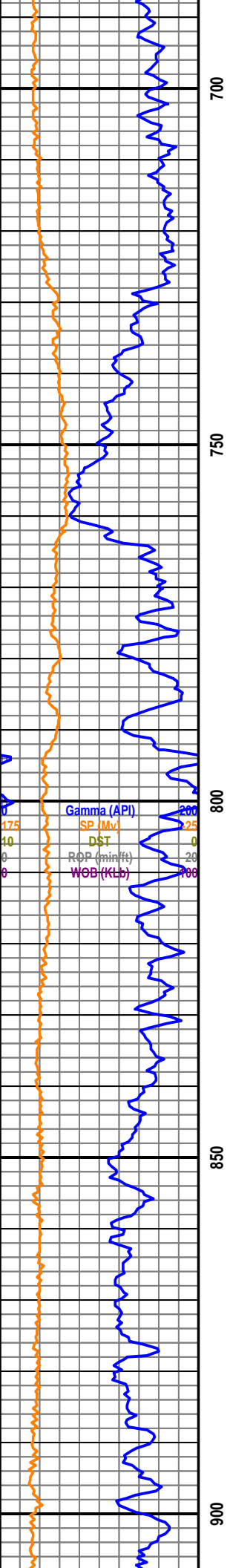
Well

### EVENTS

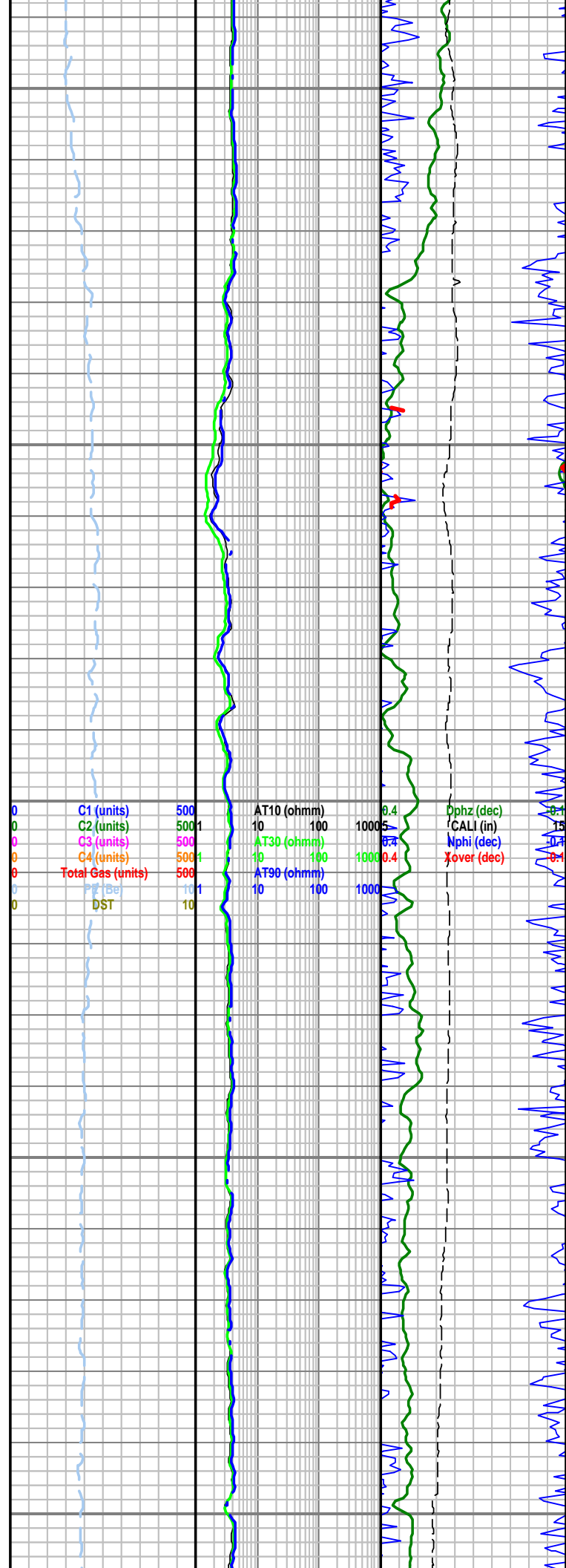
Rft

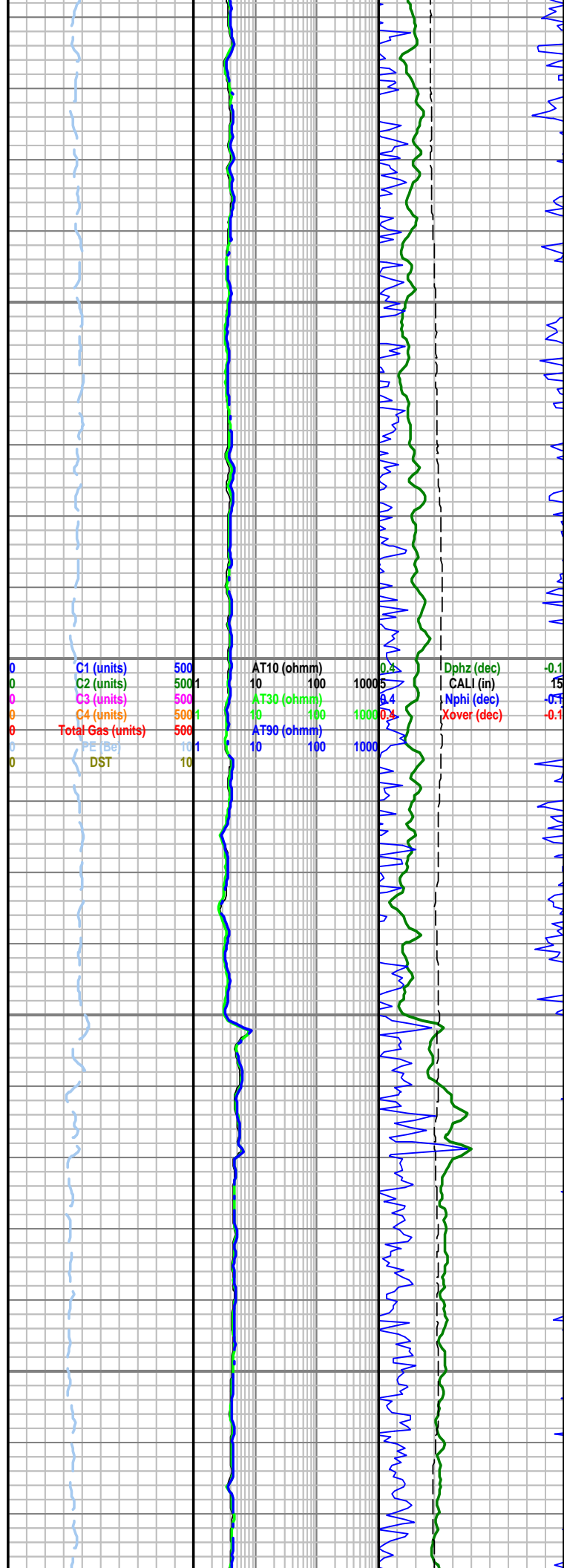
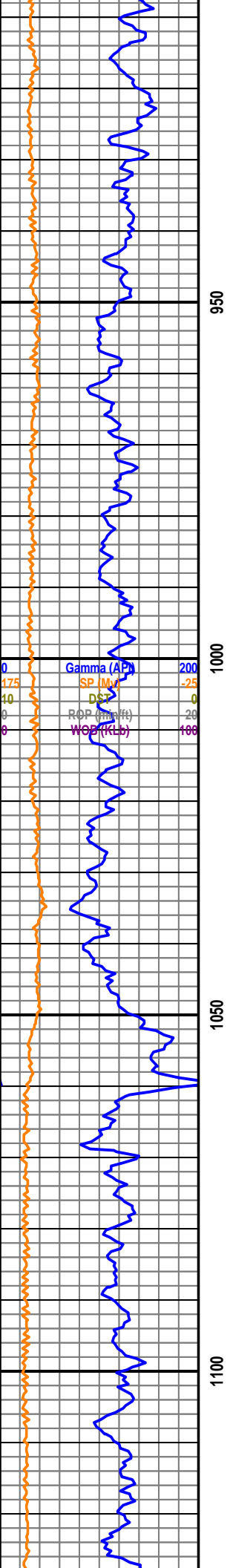


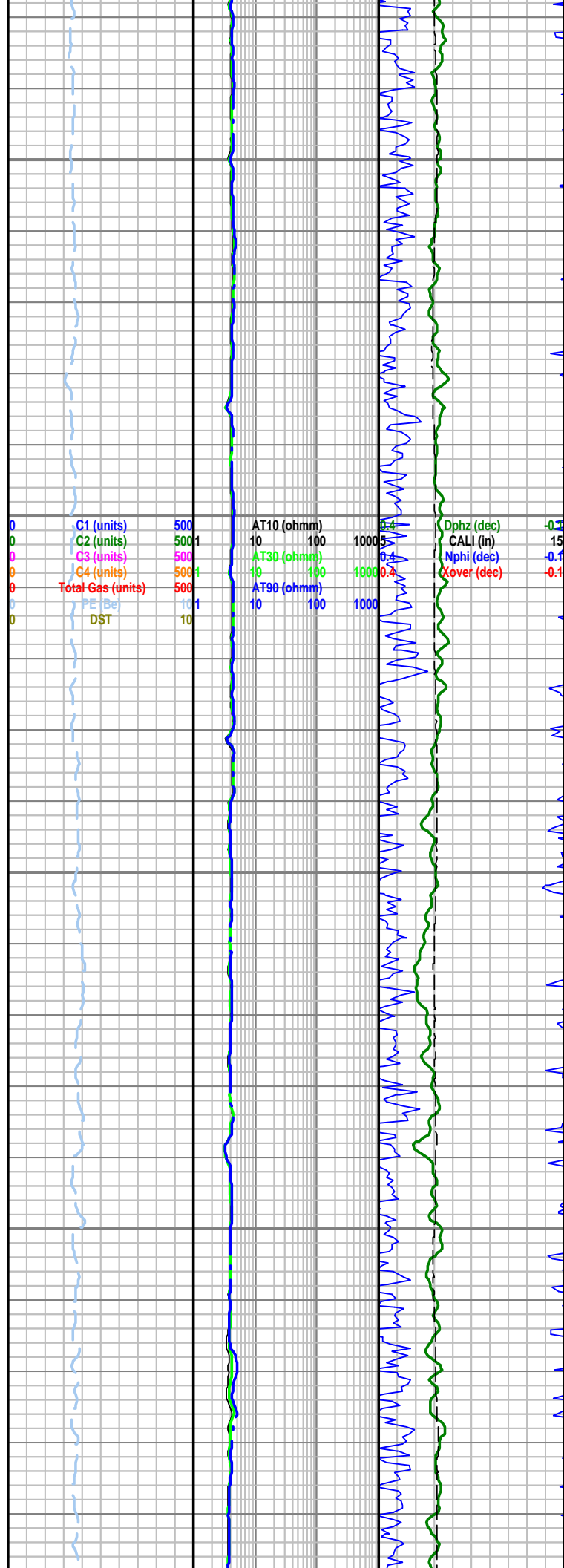
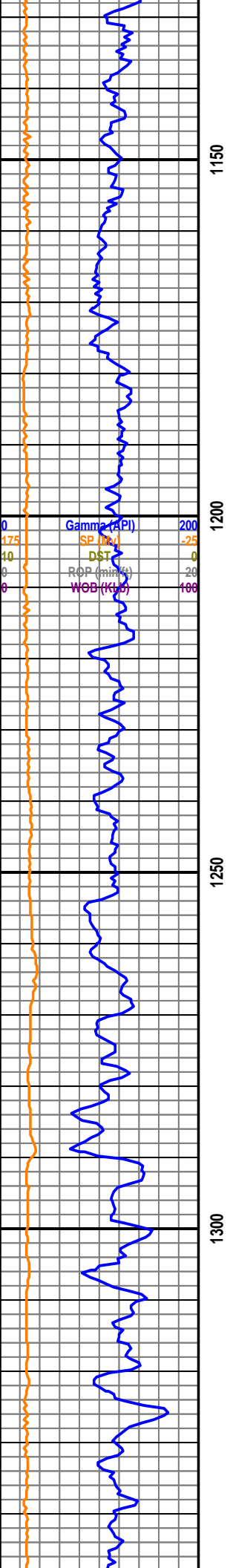


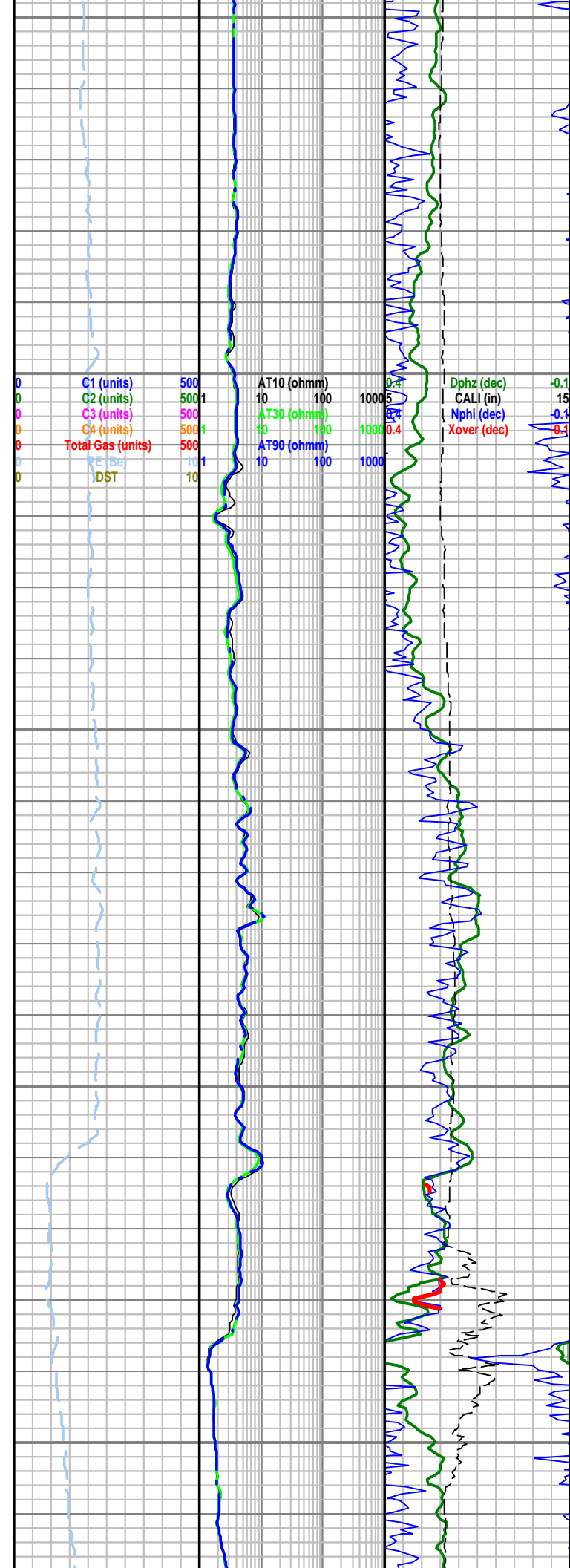
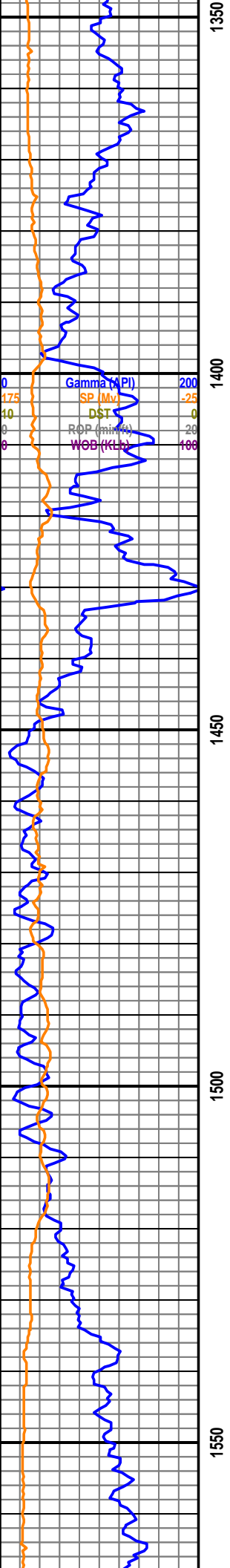


NIOBRARA - 728' (+3696)

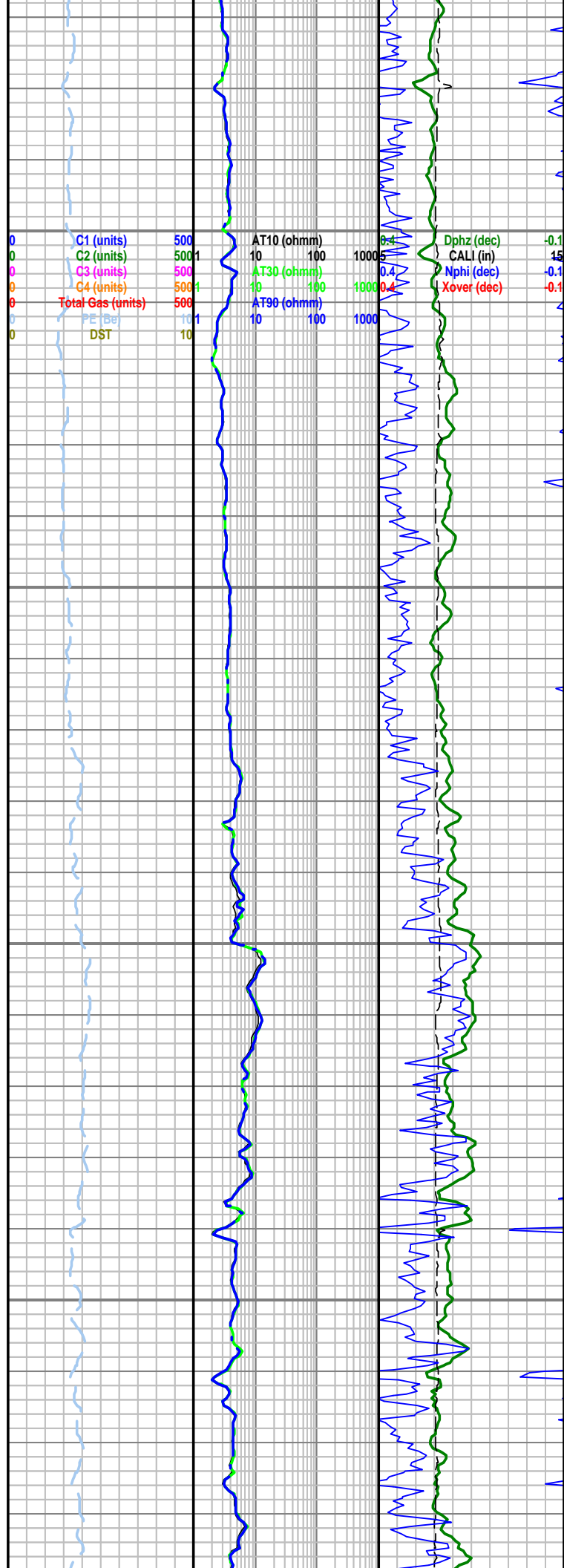
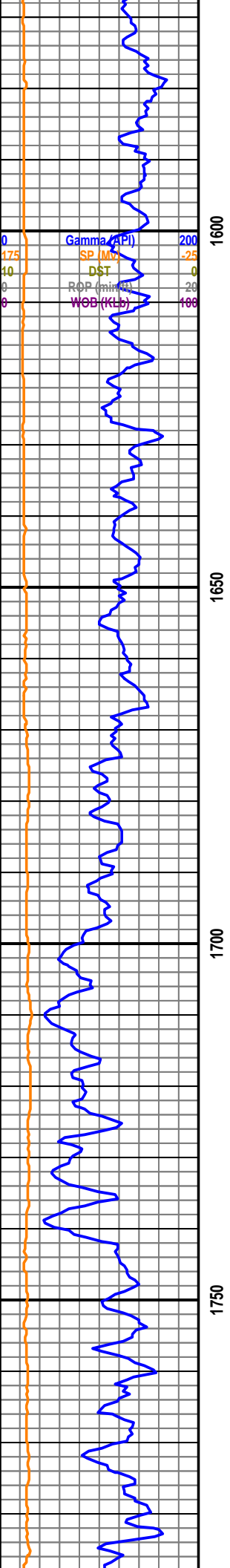




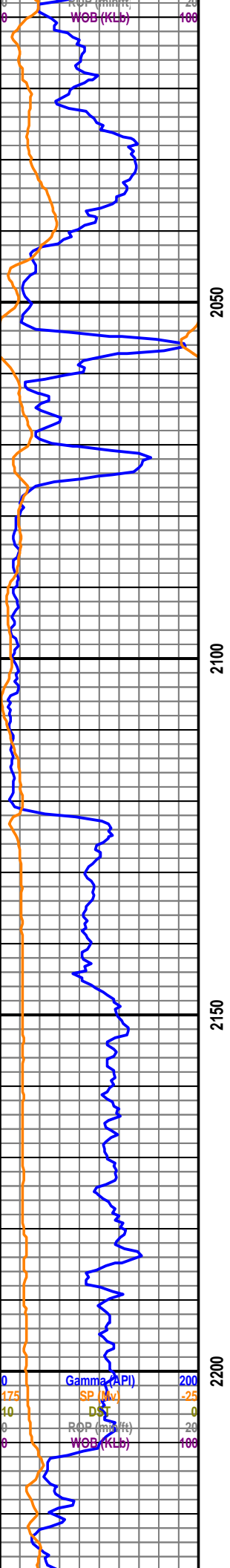




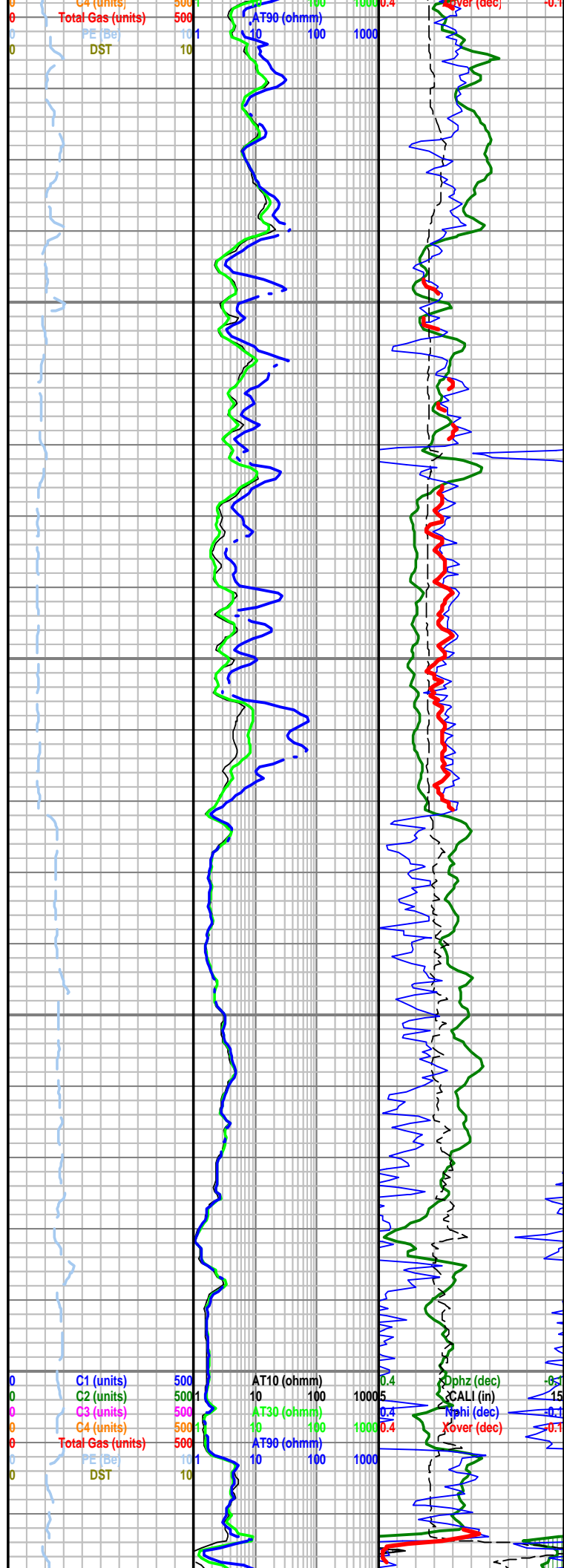


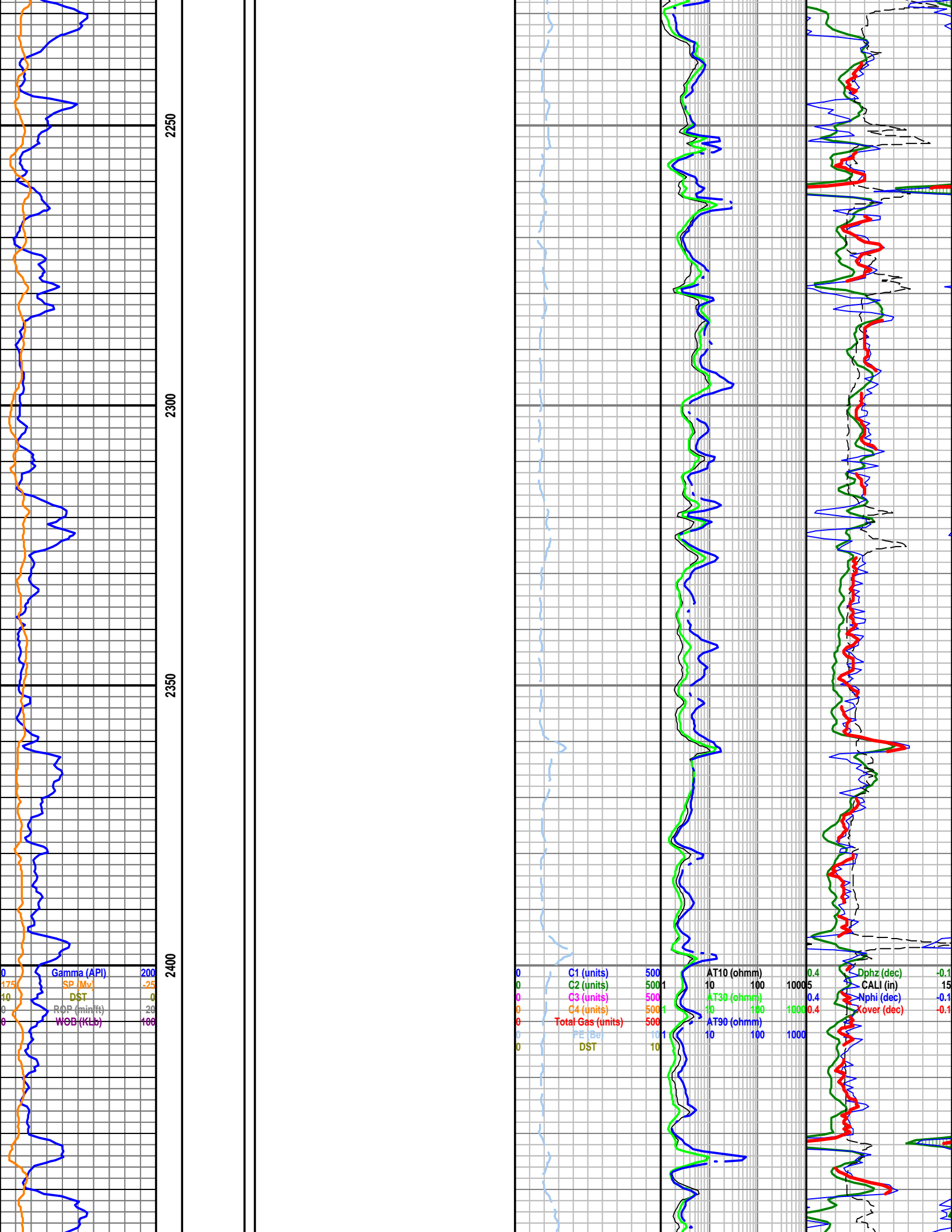


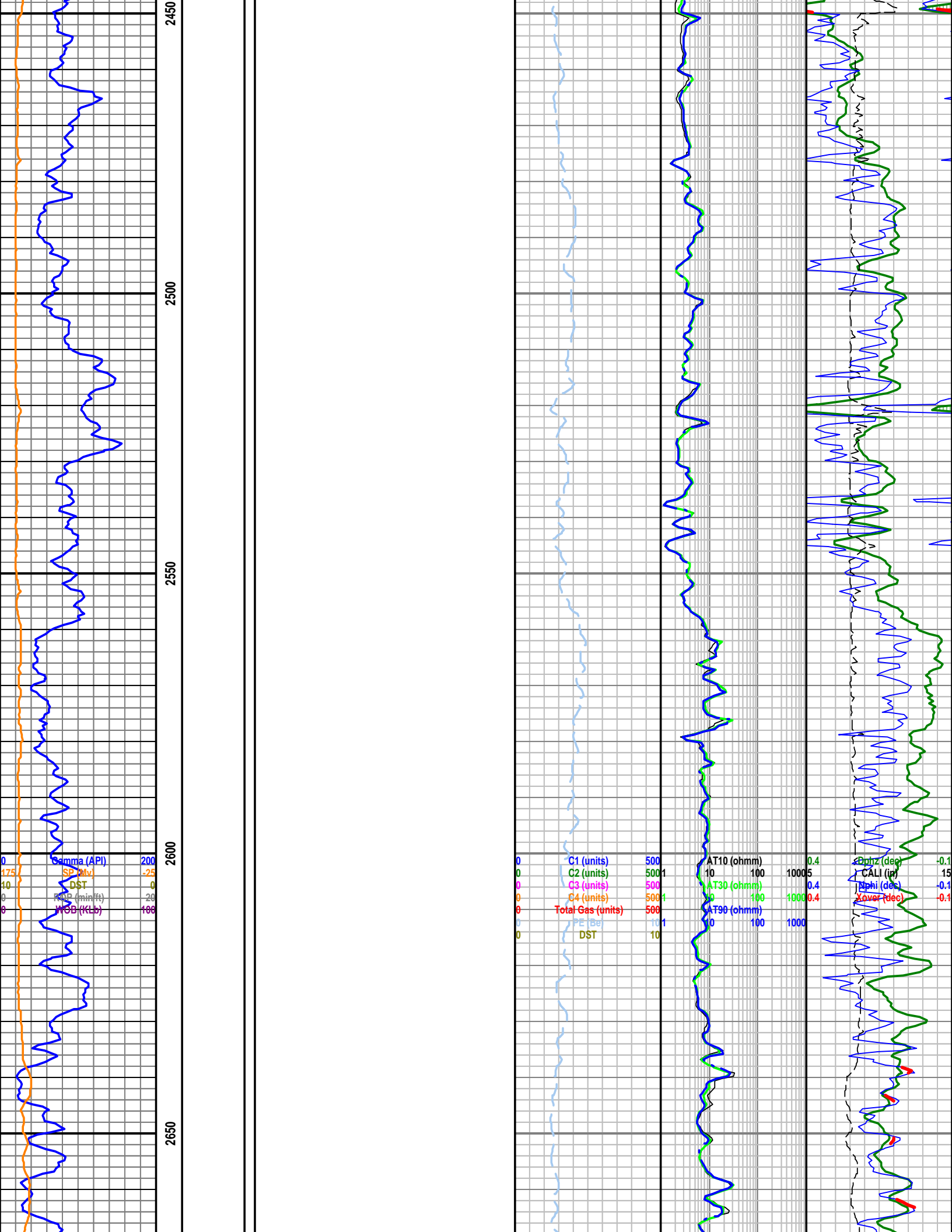


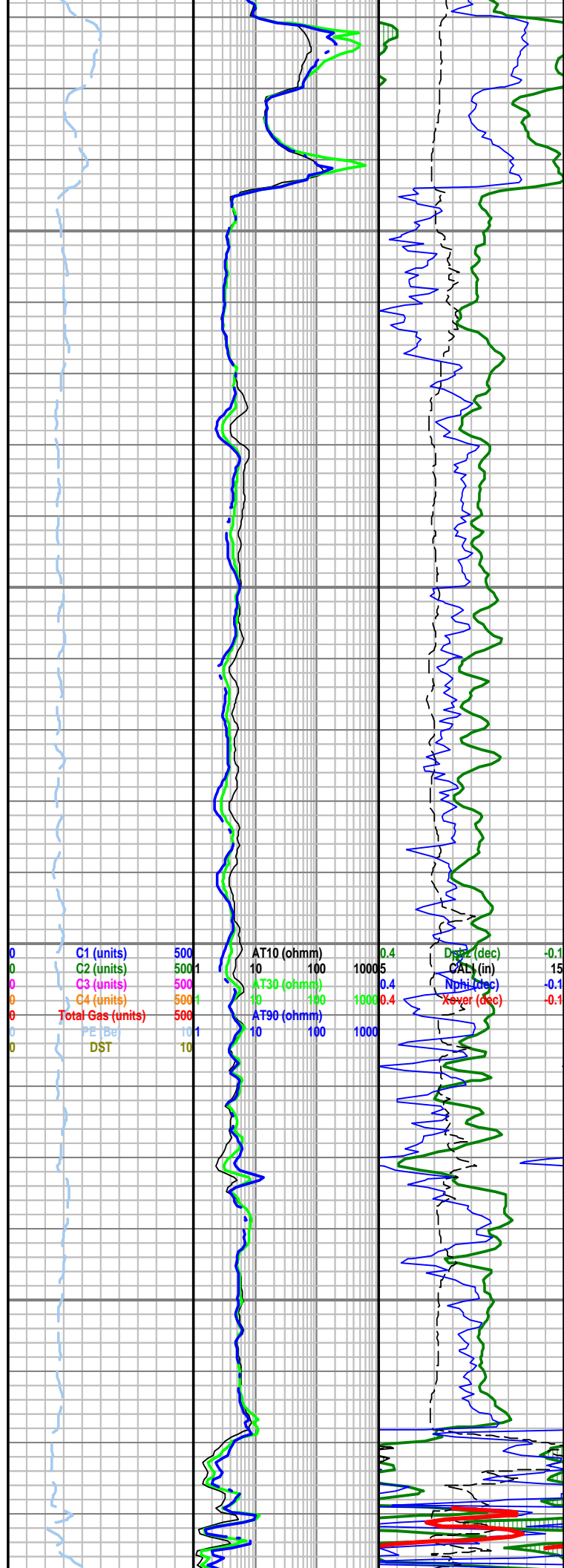
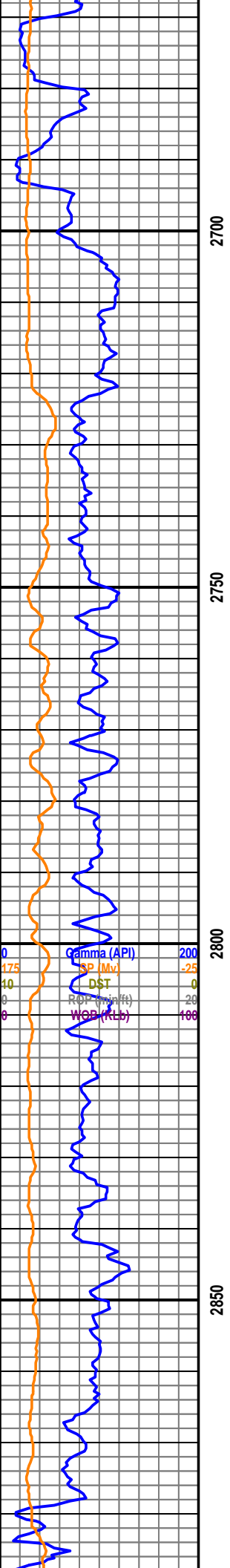


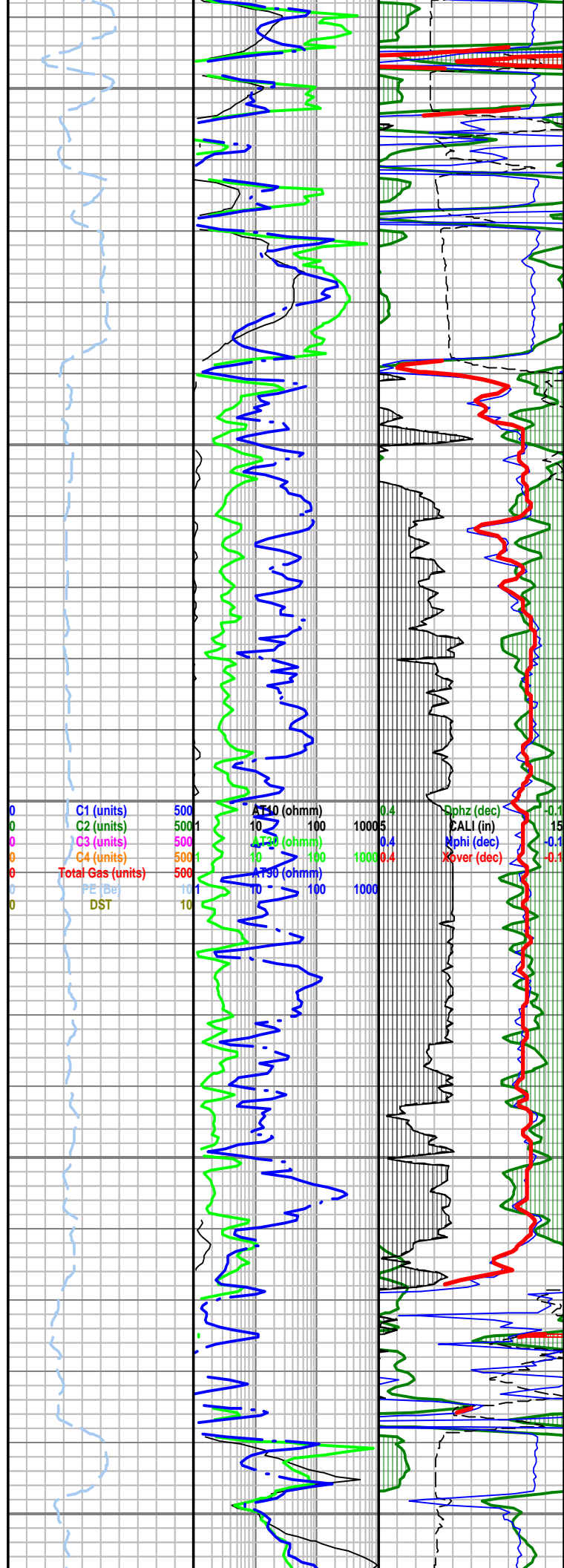
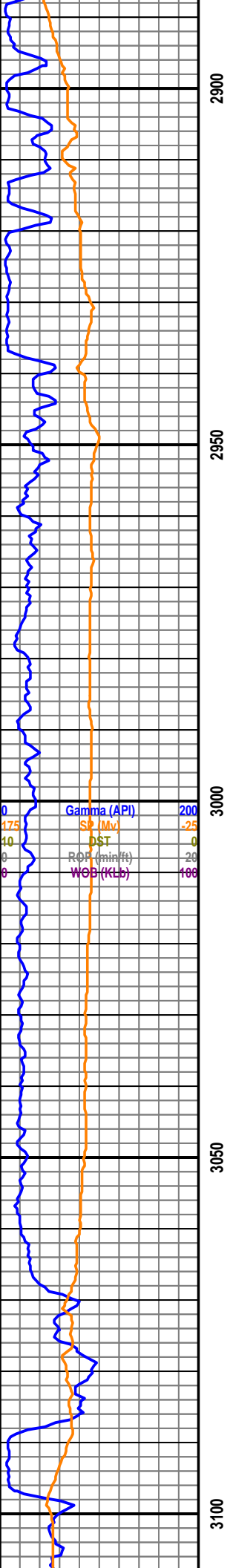
CHEYENNE SS - 2211' (+2213)



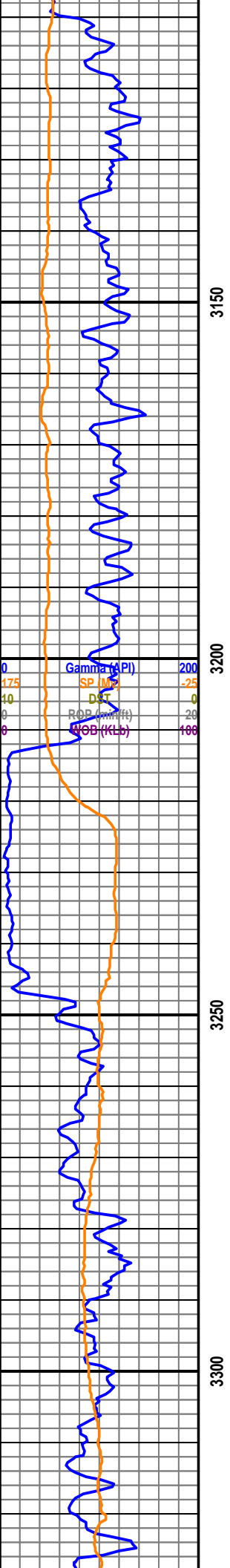




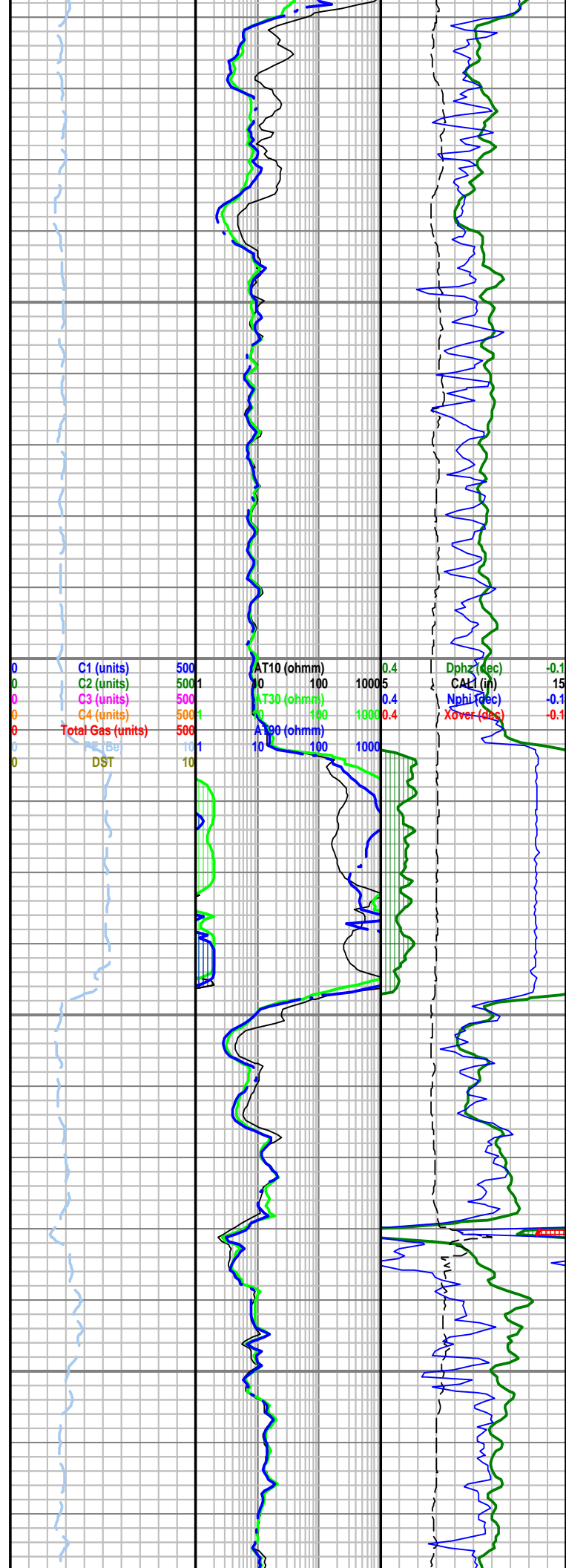




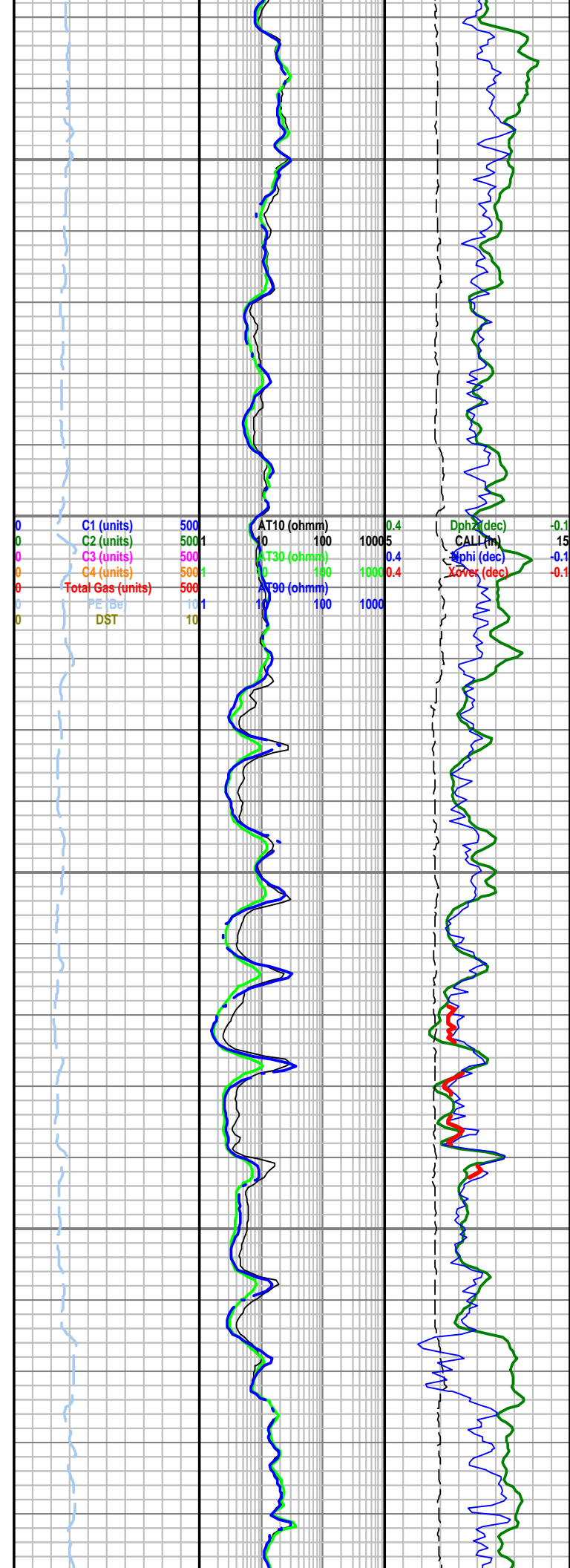
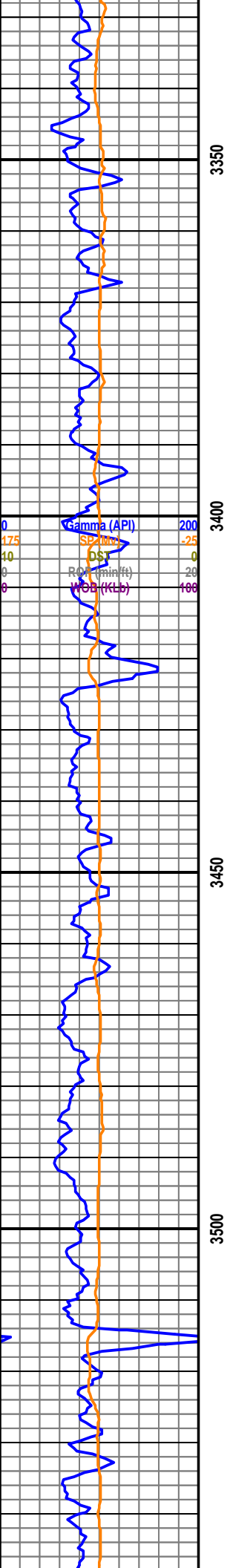


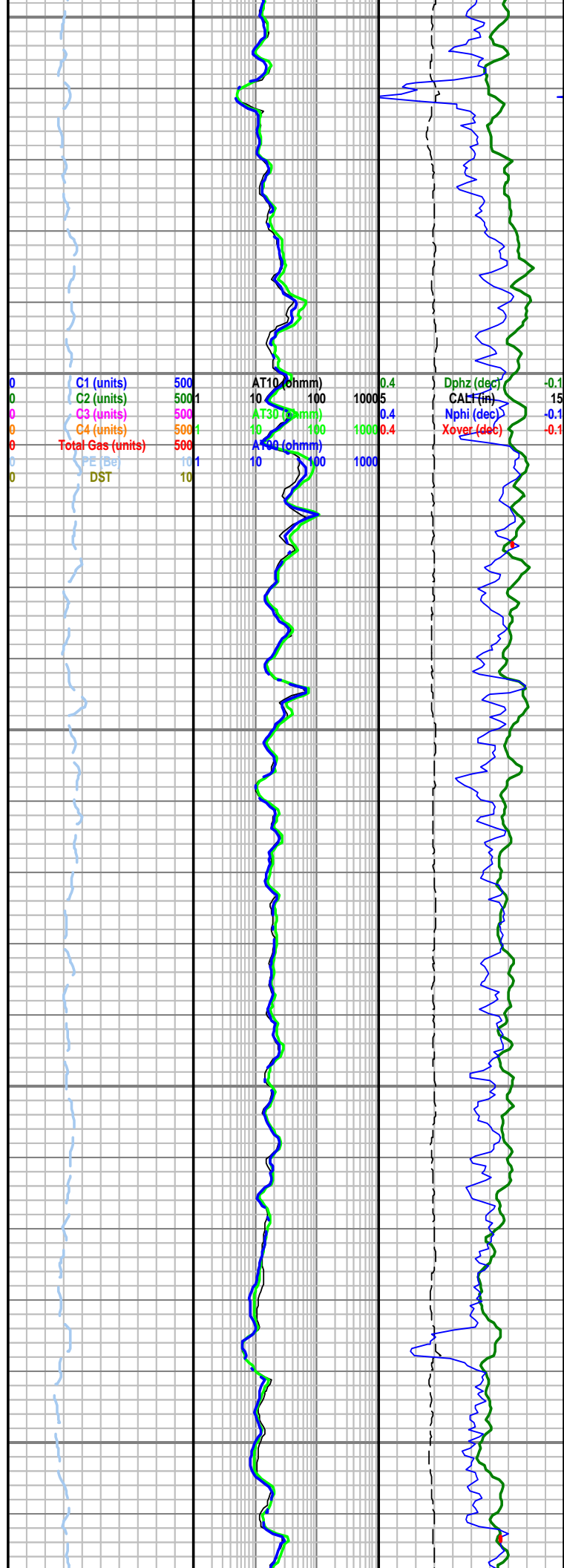
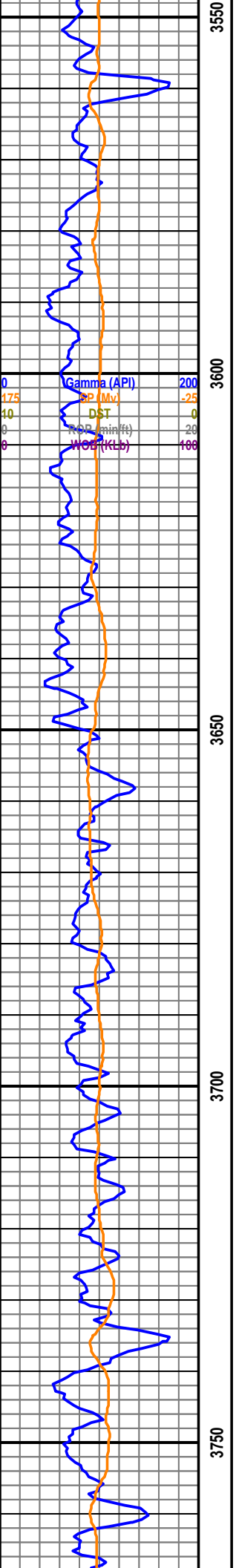


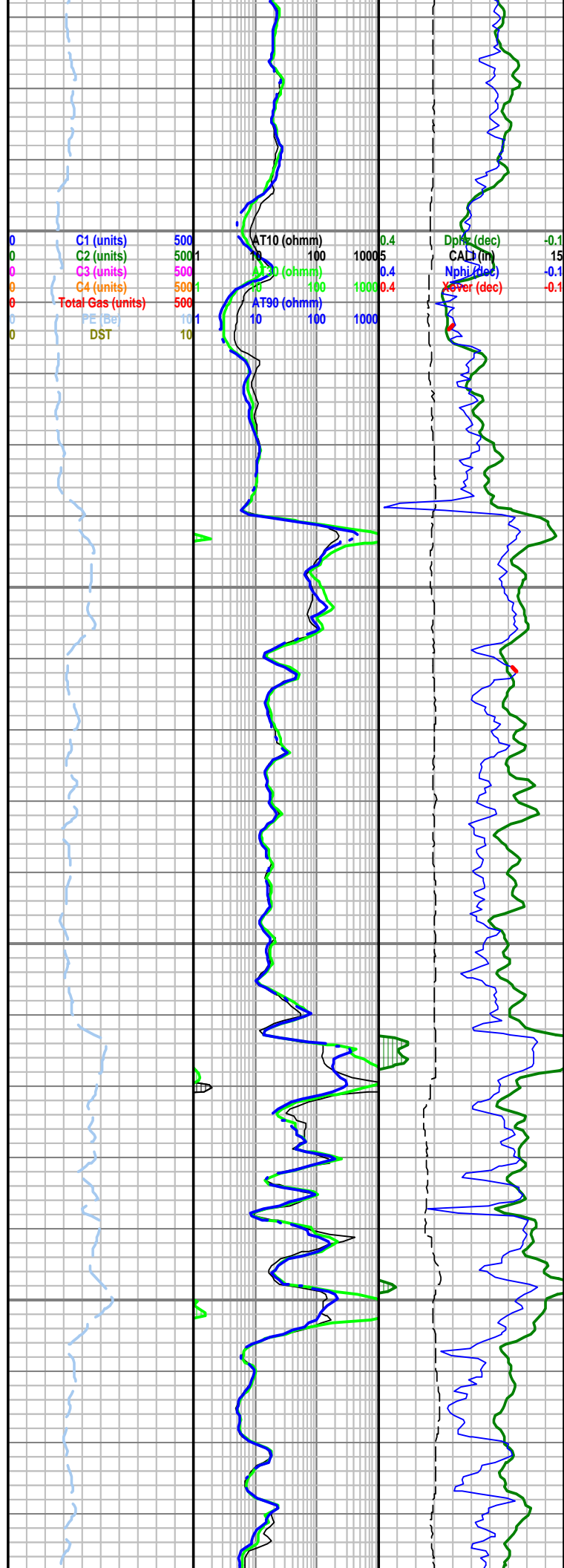
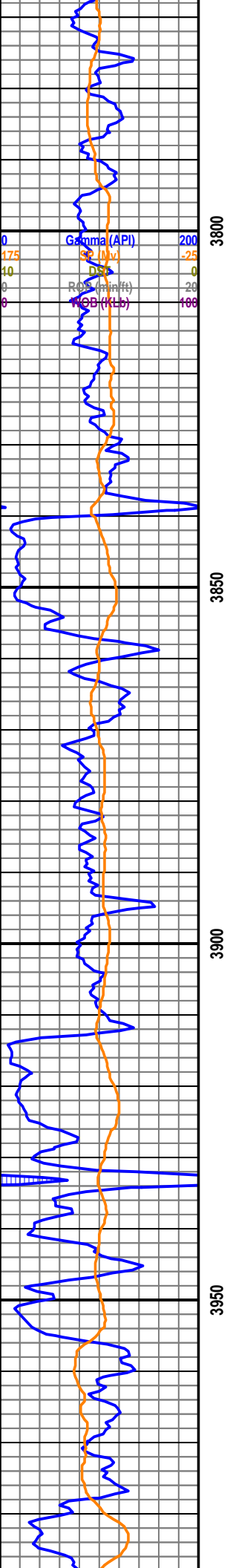
**STONE CORRAL - 3212' (+1212)**

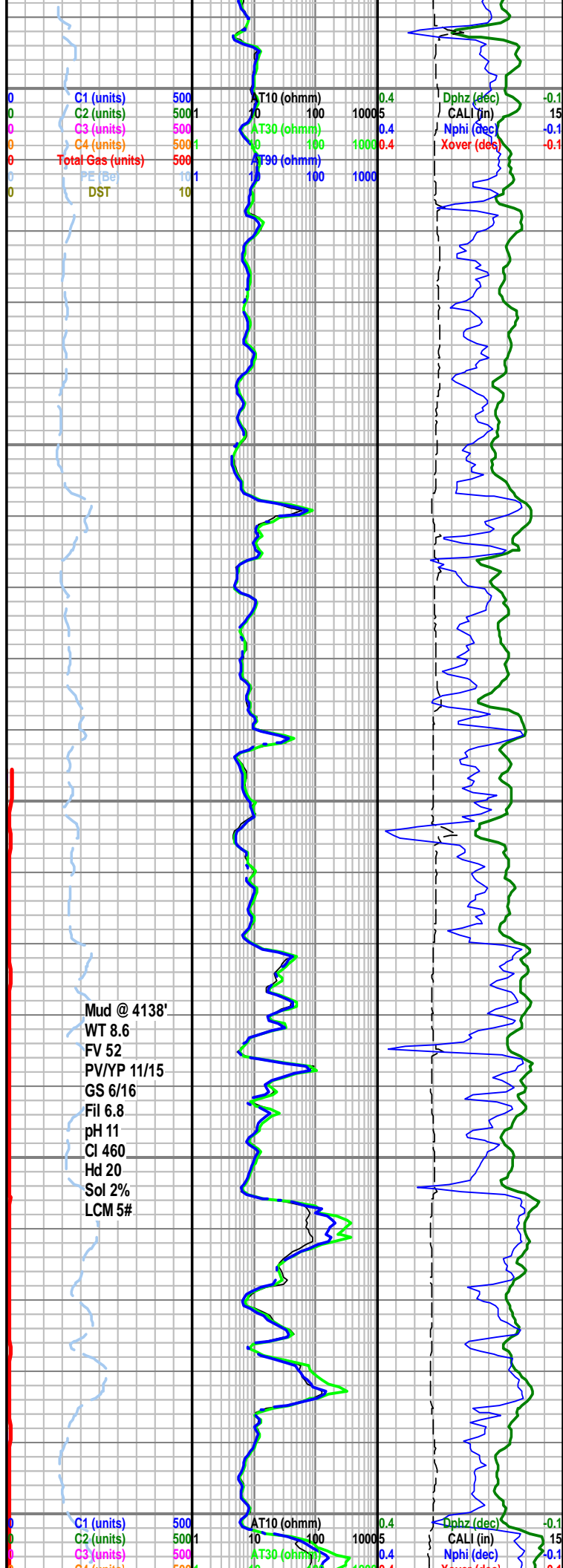


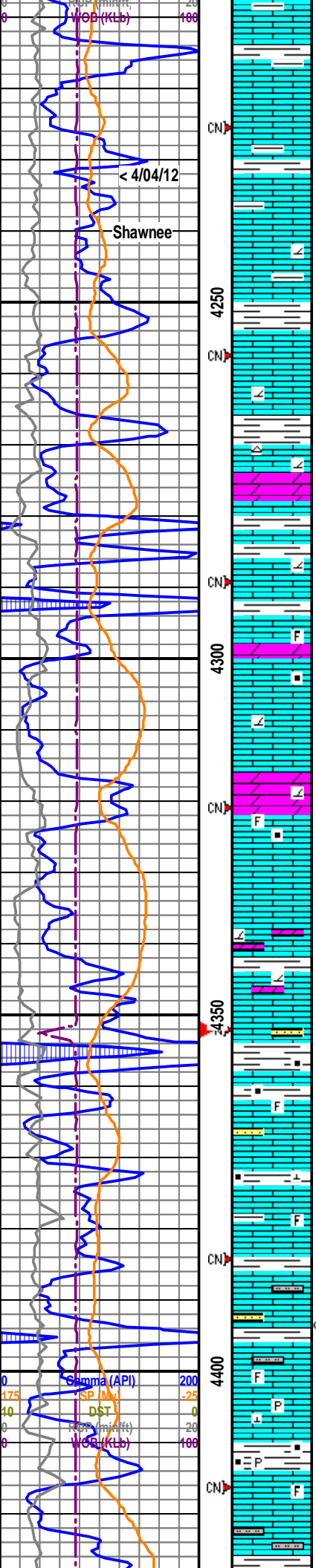












SH (65%) lt-mgy crm tan, frm, pred dns crp-mic xln, occ grny, rr sl dolc mic sucr, sbchky ip, no vis-vp por, NSOC w/ fnt-mod yel mnrl flor.

SH (35%) pred rdbn brn, frm-sft, blkly, sl slty, calc, occ m-dk-v dkgy, frm, sbplty-splty, sl-non calc, carb ip.

**SHAWNEE - 4255' (+169)**

LS (70%) tan crm ltgy, frm, dns crp-mic xln, grny ip, tr dolc, tr xln Calc/trnsl Cht, no vis por, NSOC w/ mod-fnt yel mnrl flor.

SH (30%).

LS (55%) as above, grny dolc ip, occ m-dkgy Sh ptgs.

DOL (25%) crm tan ltgy, frm-v frm, mic sucr, no vis-vp por (est <8%), NSOC w/ yel mnrl flor.

SH (20%) m-dk-v dkgy, rdbn brn, frm, blkly-sbplty-ireg, calc, sl carb ip.

LS (55%) ltgy tan crm ltbrn, frm-vfrm, mic-crpf xln, grny-mic sucr ip, dolc ip, sbchky ip, occ indist foss, no vis-vp por, NSOC w/ fnt-mod yel mnrl flor.

DOL (30%) ltbrn crm ltgy offwh, frm-fri-v frm, mic-vf sucr, sl-mod calc ip, vp-p-no vis por (<10%), NSOC w/ mod-fnt yel mnrl flor.

SH (15%) dk-m-v dkgy, frm-sft-v frm, sbblky, calc, carb ip, slty ip, foss ip.

LS (75%) crm ltbrn, frm-fri-v frm, mic-vf-crpf xln, pred grny-mic sucr, dolc ip, sbchky, occ xln Calc, occ indist foss, no vis-vp por, NSOC w/ fnt-mod yel mnrl flor.

DOL (15%) as above.

SH (10%) m-dkgy rdbn gngy.

Poor Sample Due to Lost Returns.

LS (75%) crm offwh ltgy, occ mgy, frm-v frm, mic-vf xln, grny-mic sucr, sl dolc ip, occ xln Calc, tr foss, tr m-ltgy vf-f gr Ss strgs, vp-no vis por, NSOC w/ occ fnt-mod yel mnrl flor.

SH (25%) m-dk-v dkgy, frm, sbblky-splty, calc, slty ip, carb ip.

**Partial Mud Returns @ 4356', Pull 10 Stds. & Mix LCM.**

SH (40%) dk-v dk-mgy, frm-v frm, sbplty-sbblky, sl slty-rthy txt, sl-mod calc, carb ip, occ mic Pyr.

LS (60%) crm lt-mbrn lt-mgy, gen as above, indist foss ip, sdy ip / tr vf-f gr Ss strgs, arg ip / tr mic Pyr.

LS (70%) lt-mgy crm ltbrn, frm, mic-crpf xln, dns, sbchky, slty-sdy ip, arg ip, occ sl foss, pred NSOC w/ occ fnt-mod yel mnrl flor, rr spty brn stn, fnt spty yel flor, p cldy yel cut.

SLTST/SS (20%) ltgy offwh, fri-frm, Slst & slty vf gr Ss, calc, no vis por, NSOFC.

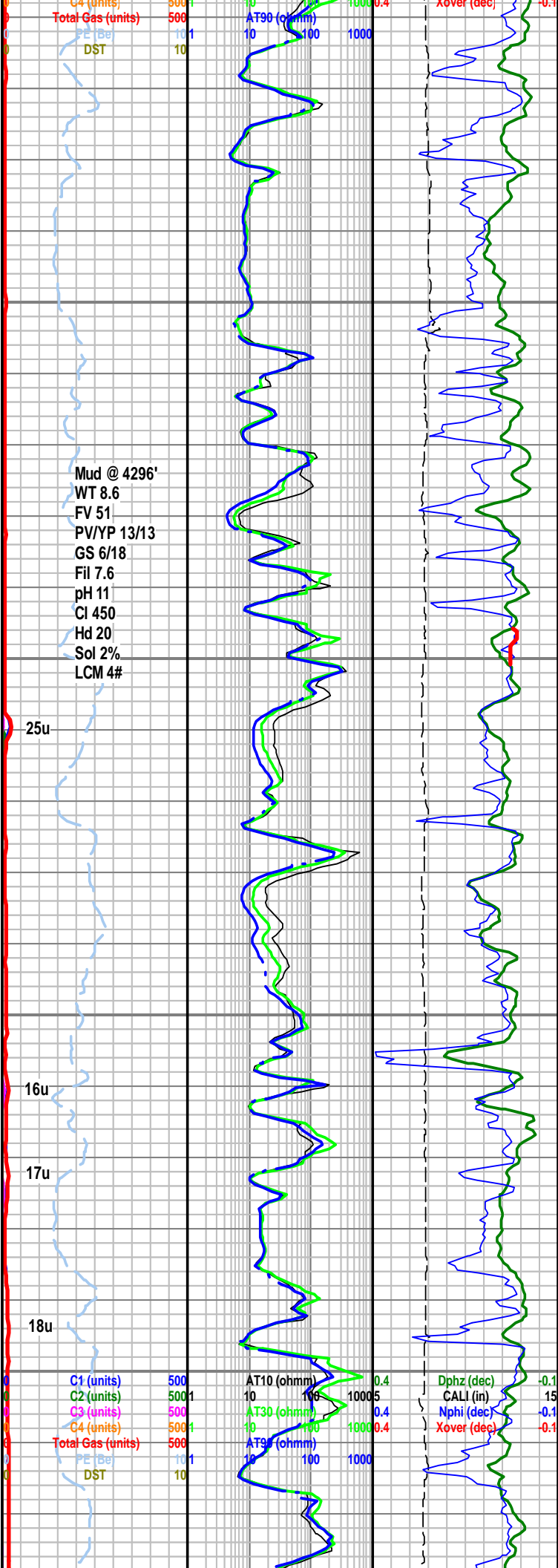
SH (10%).

LS (80%) ltbrn tan crm, lt-m gy, sl mott ip, frm-hd, pred dns crp-mic xln, tr vf xln, sl dolc ip, chky ip, occ slty / tr Sl/vf gr Ss strgs, indist foss ip, tr mic Pyr, no vis por, NSOC w/ occ fnt yel mnrl flor.

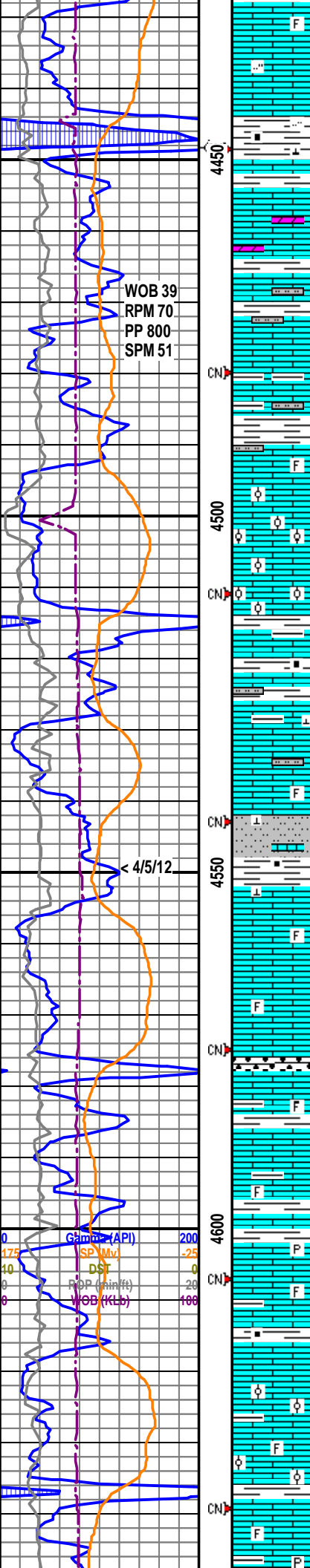
DOL (10%) ltbrn ltgy, v frm, dns grny-mic sucr, no vis por, NSOFC. SH (10%) m-dkgy, calc, carb ip.

LS (65%) ltbrn crm tan, lt-mgy, gen as above, vf xln ip, incr slty, SLTST (20%) lt-mgy, fri-frm, calc, tr mic Pyr, NSOFC. SH (15%) m-dkgy, frm, sbplty-blky-plty, sl slty ip, sl carb ip.

LS (90%) crm ltbrn wh, frm, dns, crp-mic xln, sbchky-chky, sl slty







ip, sl foss por, NSOC w/ occ int yel mnrl flr. SH (10%).

LS (100%) bcmg incr mic xln, tr vf xln, slty-grny txt.

Survey @ 4452' - 1.03°

SH (50%) v dkgy, dk-mgy, frm-brit, sbply-sbblky, calc, rthy-sl slty txt, sl-mod-v carb, tr mic Pyr.

LS (40%) ltbrn crm tan mbrn wh, frm, mic-vf xln, grny, dolc ip, foss ip, no vis por, NSOC w/ occ v fnt-fnt yel mnrl flr. DOL (10%) crm ltbrn, frm, mic sucr, no vis por, NSOFC.

LS (90%) ltgy offwh ltbrn, frm, mic xln, slty txt, dns, sbchky, dolc ip / occ ltbrn ltgy mic sucr Dol, no vis por, NSOFC. SH (10%).

LS (55%) as above, occ rdbn mgy, v slty ip, arg ip.

SLTST (20%) lt-mgy rdbn, frm, calc-dolic, NSOFC.

SH (25%) m-dkgy rdbn brn, frm, sl calc-dolic, slty, sl carb ip.

LS (90%) pred crm, frm, mic-crpxln, dns, sbchky, grny ip, sl foss, occ m-dkgy Sh ptgs, occ slty as above, no vis por. SH (10%).

LS (75%) as above, occ rdbn brn v slty.

SH (25%) rdbn brn mgy, fri-frm, blk, calc, slty grdg-calc Slst ip.

**LANSING / K.C. - 4493' (-69)**

LS (90%) crm ltbrn offwh, frm-v frm, mic-vf xln, 2-1 mm ool ip, mold ip / tt spar-grny mic xln mtx, chky ip, no vis intxln por, vp intool por (<8%), occ p-fr mold por (8-15%), NSOC w/ occ yel mnrl flr. SH (10%).

LS (70%) as above w/ lt-mgy gybrn dns slty arg, sl foss ip.

SLTST (10%) lt-mgy offwh, fri-frm, v calc, NSOFC. SH (20%) dk-m-v dkgy, frm, sbblky-pty, rthy txt, sl-mod calc, sl-mod carb ip.

LS (50%) crm tan lt-mbrn wh, frm, mic-crpxln, dns, chky, grny ip, sl foss, no vis por, NSOC w/ occ yel mnrl flr. SH (50%) brn rdbn dk-m gy, frm, blk-sbply-sply, rthy-slty txt, calc, carb ip.

LS (85%) crm tan, frm, mic xln, dns, sl-mod chky, grny ip, sl foss, no vis por, NSOC w/ occ yel mnrl flr. SH (15%).

SH/SLTST (50%) brn rdbn mgy, frm, calc. LS (30%). SH (20%) m-dkgy, frm, sbply-sbblky, rthy-sl slty txt, calc, carb ip.

LS (80%) crm ltgy ltbrn, frm-hd, crp-mic xln, dns, chky ip, sl foss ip, no vis por, NSOC w/ occ yel mnrl flr. SH (20%).

LS (70%) as above. SH (30%) dk-mgy blk, frm-brit, sbply-sbblky-sply, calc, carb ip, sl slty ip.

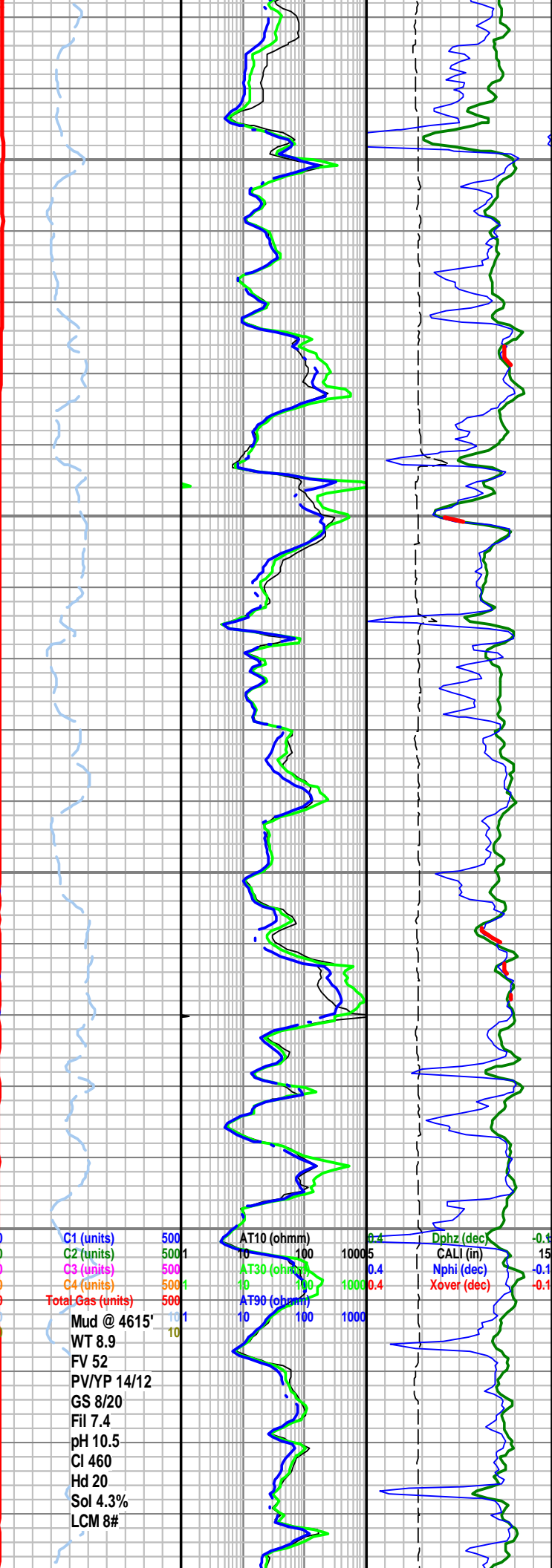
LS (80%) ltbrn crm ltgy, frm, mic-vf xln, grny ip, frag ip, indist foss, occ slt strgs & Sh ptgs, no vis-vp por (<8%), NSOC w/ occ yel mnrl flr.

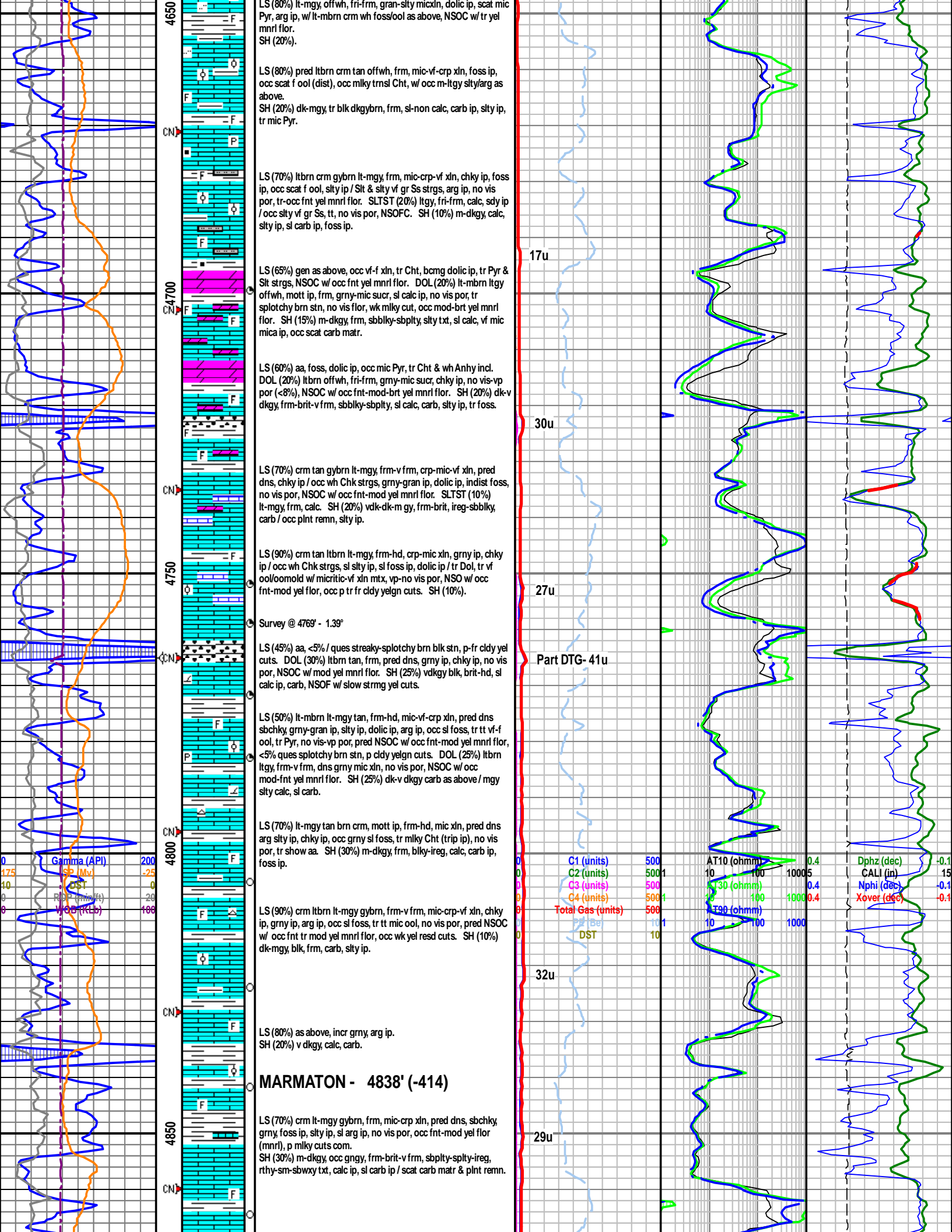
SH (20%) m-dk gy, tr blk, frm, sbblky-sbply, rthy txt, calc-sl calc, slty ip, carb ip, tr mic/dism Pyr.

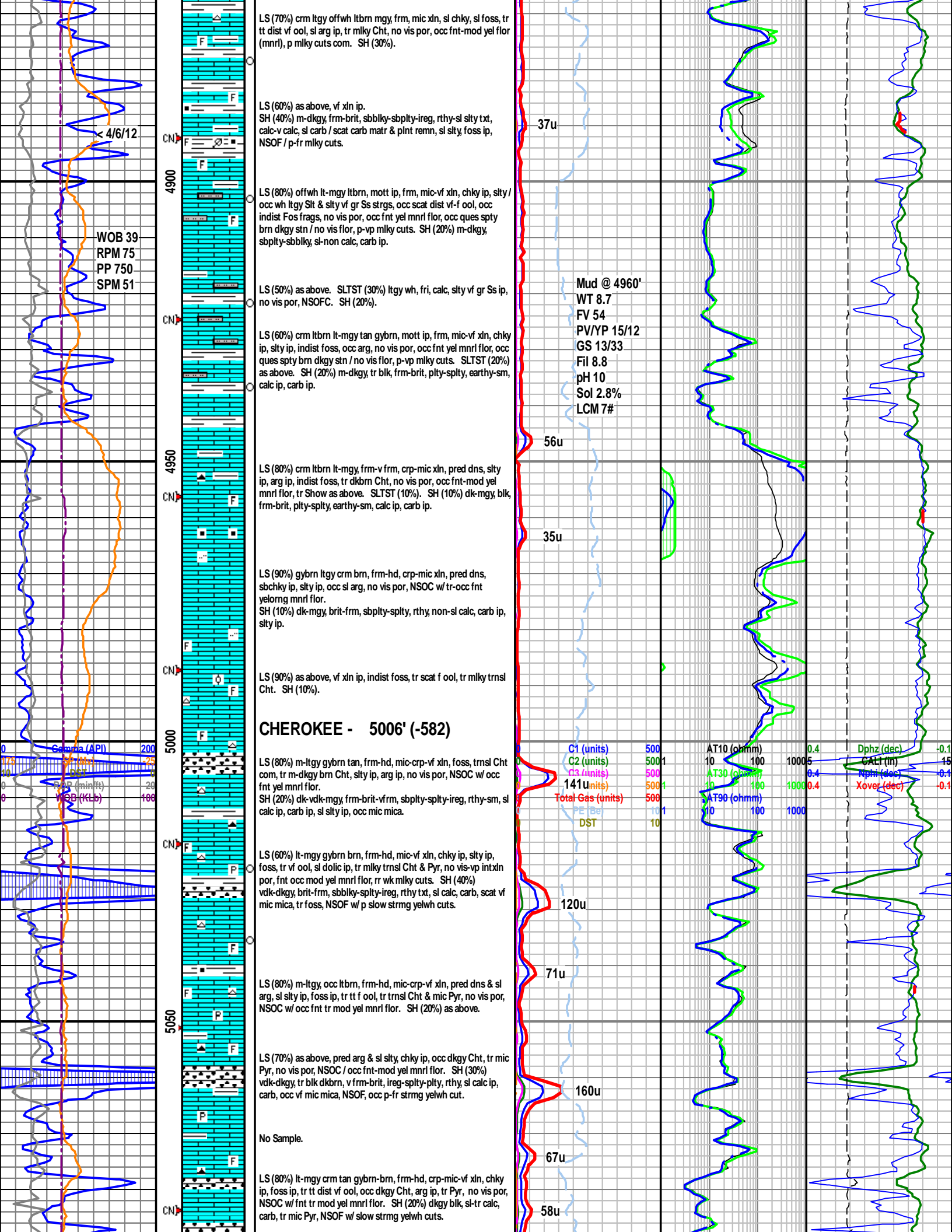
No Sample.

LS (80%) gybrn lt-mbrn lt-mgy, frm, mic-crpxln, chky ip, indist foss ip, occ tt. 2-1 mm ool, arg ip, grny ip, no vis-vp por, NSOC w/ occ yel mnrl flr.

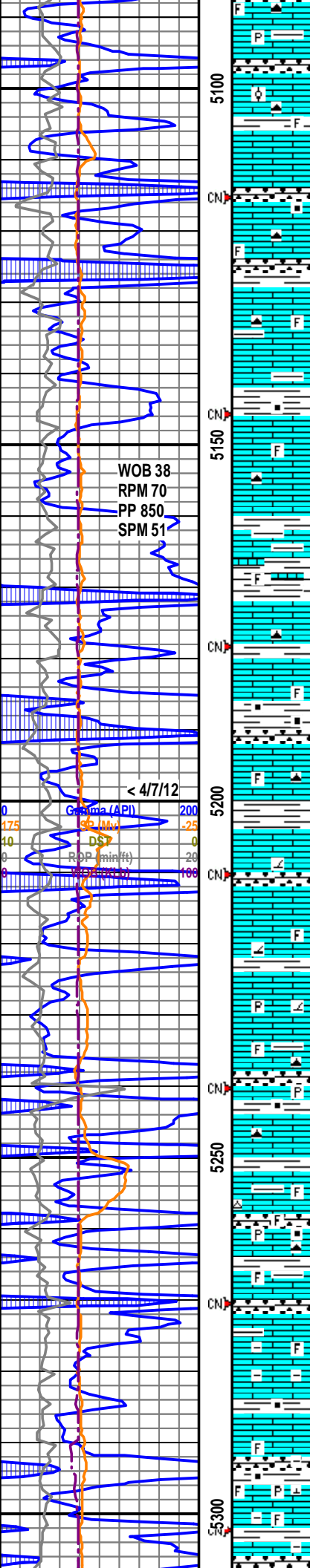
SH (20%) vdk-dk-m gy, frm-brit, sbply-sbblky-pty, sl calc, carb ip.











LS (65%) ltgy tan gybrn, frm-v frm-hd, mic-crpf-xln, pred dns, sl chky ip, arg ip, grny-sity ip, occ indist foss, tr scat f ool, tr-occ dkgy Cht, no vis por, pred NSOC / occ fnt yel mnrl flr, occ wk mlky cuts.  
SH (35%) v dk-dkgy blk, brit, ireg-sbplty-flky, sm-rthy txt, calc, carb, occ scat mic mica, sity ip, tr foss, NSOF, p-fr wh cuts.

LS (65%) lt-mgy gybrn tan wh brn, frm-v frm, mic-crpf-xln, pred dns, chky ip, arg ip, occ sity, occ foss, occ dk-vdkgy Cht, tr xln Calc, no vis por, pred NSOC / occ fnt yel mnrl flr, occ v wk mlky cuts. SH (35%) v dkgy-blk, occ mgy, frm-brit-v frm-sft, ireg-sbblky-splty-flky, rthy-sm-sl sity txt, calc-v calc, carb, sity ip, tr foss, tr dism Pyr, NSOF / p-fr wh cuts.

### ATOKA - 5160' (-736)

LS (50%) lt-m-dkgy dkbrn offwh, frm, mic-vf-crpf-xln, gry-sity ip, dns ip, occ sbchky, frag ip / scat Fos frags, tr dkgy dkbrn Cht, no vis por, NSO, tr-occ fnt yel mnrl flr, occ v wk mlky cuts. SH (50%) dk-vdk-m gy, frm-sl sft, plty-splty-sbplty, sm-rthy txt, calc ip, pred carb, sl sity ip, tr v calc foss, NSOF / p cuts.

SH (60%) v dkgy-blk, frm-sft, sbplty-plty-splty, rthy, calc, carb, NSOF / fr cuts. LS (40%) as above.

SH (50%) dk-v dkgy, blk, brit-frm, sbplty-plty-splty, sl-non-mod calc, rthy-sm txt, carb, NSOF w/ p-fr wh cuts. LS (50%) m-lt-dkgy gybrn-ltbrn wh, mott ip, mic-vf-xln, dns sbchky arg ip, grny sl foss ip / tr xln Calc, tr dkgy dkbrn Cht, no vis-vp intxln por, pred NSOC w/ occ fnt yel mnrl flr, occ wk mlky cuts.

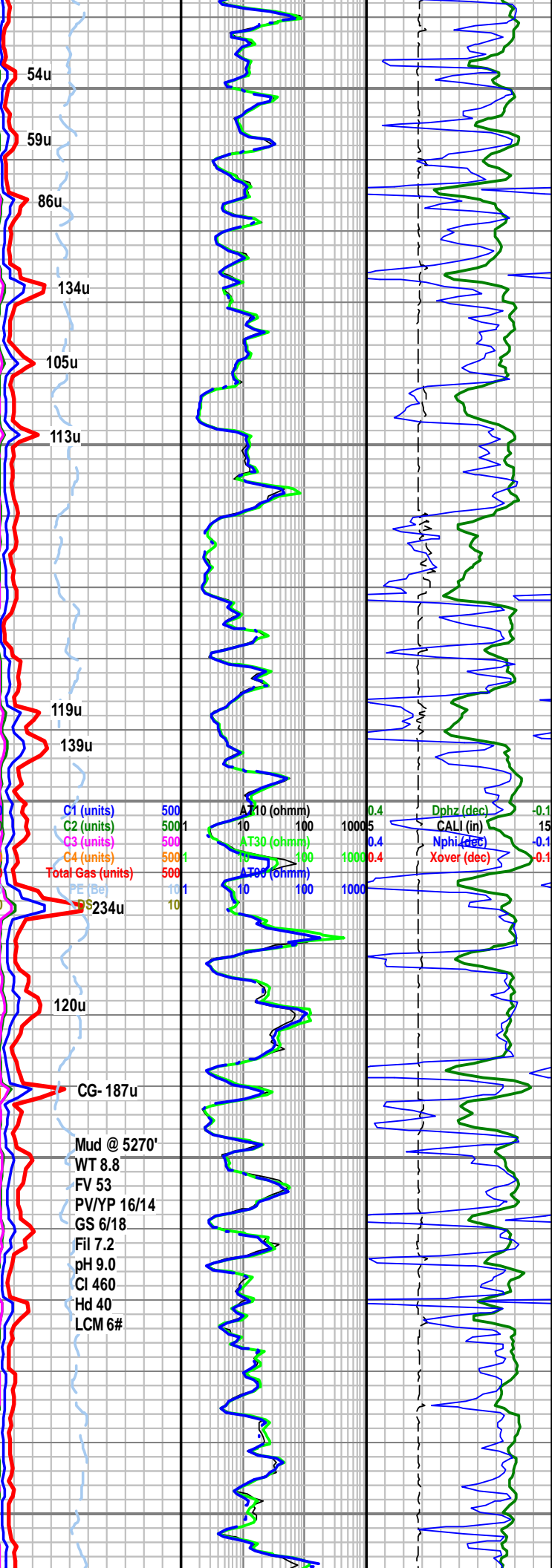
LS (60%) lt-mgy, offwh crm gybrn brn dkgy, mott ip, frm, mic-vf-crpf-xln, grny dolc ip (occ sl calc grny-mic suc Dol), sbchky ip, tr Fos frags & mic Pyr, no vis por, pred NSOC w/ occ fnt-mod yel mnrl flr, occ wk mlky cuts. SH (40%) dk-v dkgy, tr blk, brit, splty-plty-sbplty, rthy-sm txt, calc-sl calc, mod-sl carb, occ scat mic mica, tr mic Pyr, NSOF / p tr fr cuts.

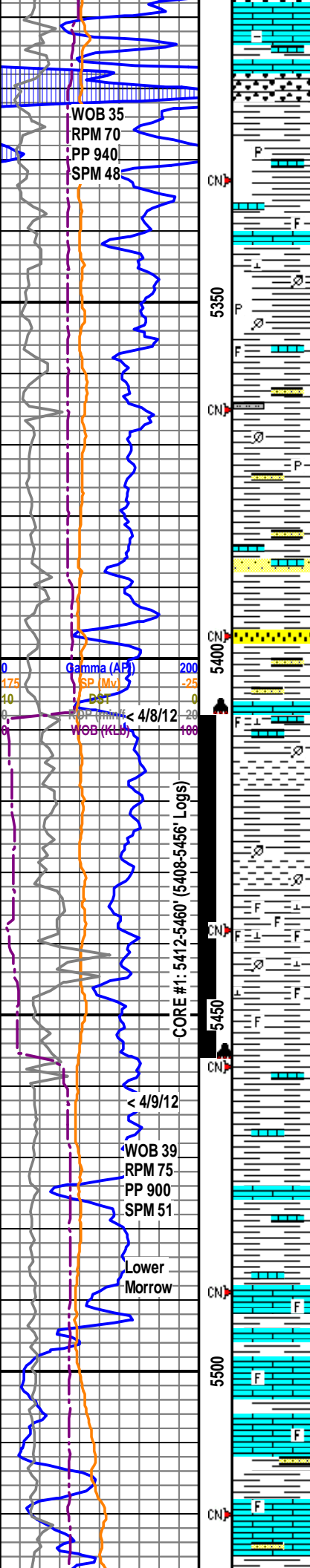
LS (65%) m-lt-dkgy gybrn crm wh, mott, frm-hd, mic-vf-crpf-xln, dns arg ip, grny dolc ip / tr sl calc Dol, frag ip, occ sl-mod foss, tr dkbrn Cht & clr xln Calc, no vis por, pred NSOC w/ occ fnt yel mnrl flr, occ v wk mlky cuts. SH (35%) dk-vdkgy, brit-v frm, splty-plty-sbblky, sl-non calc, carb ip, foss ip, NSOF w/ p tr fr cuts.

LS (70%) crm wh lt-m-dkgy lt-mbrn, mott ip, frm, mic xln, chky ip, foss, arg ip, occ tcnsl brn dkgy Cht, no vis por, pred NSOC w/ tr fnt yel mnrl flr, tr-occ v wk mlky cuts. SH (30%) v dk-dkgy, tr brn, brit-frm, splty-plty-blky, rthy-sm txt, calc ip, carb, foss ip, occ mid/dism Pyr, NSOF w/ p cuts.

LS (70%) lt-m-dkgy, gybrn ltbrn crm tan wh, mott ip, frm-hd, pred dns sbchky-grny mic-crpf-xln, arg ip, occ sl foss, no vis por, NSO, tr fnt yel mnrl flr, tr v wk mlky cuts. SH (30%) v dkgy, brit, sbplty-splty-plty, rthy-sm txt, sl-mod-v calc, carb ip, carb ip, mic mica ip, tr foss, tr mic Pyr, NSOF w/ p cuts.

LS (75%) lt-m-dkgy offwh m-dk-ltbrn, mott ip, frm-hd, dns grny mic-crpf-xln, chky ip, foss, sity ip, tr sdy, tr xln Calc & mic Pyr, no vis por, occ fnt yel mnrl flr, rr splotchy brn stn, v fnt gld flr, v wk mlky cuts. SH (25%) v dk-dkgy blk, brit, blk- splty-plty, sm-rthy, sl-v calc, carb ip, mic mica ip, tr foss, NSOF w/ p cuts.





## MORROW - 5318' (-894)

LS (60%) m-lt-dkgy, offwh tan brn, hd-frm, crp-mic xln, pred dns sbchky arg, foss ip, occ mic Pyr, no vis por, NSOC w/ tr fnt yel mnrl flr. SH (40%) m-dk-v dkgy, frm-brit-v frm, irreg-splyt-sbblky, rthy, calc, occ Ls strgs & Fos frags.

SH (60%) dk-vdk-mgy as above w/ gn lt-mgy wh, sft, sbwxy, non calc, occ blk carb stks & ptgs, tr mic Pyr. LS (40%) as above, pred arg, slty-sdy ip, tr mic Pyr.

SH (60%) dk-mgy, frm-brit, plty-splyt-sbplyt, rthy, calc, occ mic Pyr, tr foss / gn mgy brn sbwxy aa. LS (40%).

SH (80%) mgy silv tan gn-gngy, sft-frm, sbplyt, sbwxy-sl slty, non calc, occ plnt remn, tr mic Pyr. LS (20%) tan brn crm, mic-crp-vf xln, arg ip, foss ip.

SH (78%) bcmg pred dk-mgy, plty-sbplyt, sl-non calc, mic mica ip, tr Slt/Ss strgs. SLTST/SS (2%) m-lt-dkgy gybrn, fri-frm, Sltst & vf gr Ss, sbang-sbrnd, mod srt, calc, cly fld, Sh ptgs, tr glau & Pyr, no vis por, NSOFC. LS (20%).

SH (88%) m-dkgy, frm-sl sft, plty, sm-rthy, non-tr calc, sl sly ip, mic mica ip, occ plnt remn, tr ic Pyr. SS/SLTST Strgs (1%) aa, tr tt pyric vf-f gr, NSOFC. LS (10%) pred crm dns sbchky.

SH (85%) as above. LS (15%) crm gybrn, frm, mic xln, dns sbchky, sl slty ip, tr foss, no vis por, NSOC w/ tr yel mnrl flr. SS (Tr).

SH (95%) m-dkgy, plty-splyt, sl-non calc, sl-v slty ip, occ Pyr & plnt remn/carb matr. SS (Tr) pred slty vf-f gr / occ lse uF-Lm grs, ang-sbrnd, p-mod srt, Calc cmt, occ Pyr & gn cly mnrls, tt, no vis por, occ ques brn stn, no vis flr, v wk mlky cuts. LS (5%).

SS (10%) offwh ltgy trnsl, v frm-fri, U vf-L c gr, ang-sbrnd, p-mod srt, Calc/Sil cmt / sec Qtz ovgh, platy ip, tt, no vis por, no vis stn or flr, occ v wk cldy yelgn cuts.

Circ., Short Trip, Circ. TOH for Core #1 @ 5412'. Bit#3 Cut 4952' in 132.25 Hrs. Bit #4: 7 7/8" x 4" NOV CCPX 713. Cut 47.55', Rec. 99%. See Bottom of Log for Detailed Core Description.

LS dkgy, frm, crp-mic xln, slty-sdy, v arg grdg-lmy slty-sdy Sh, foss, mic/dism Pyr, no vis por, NSO, v fnt yel flr, occ wk mlky cuts.

SH dkgy, brit, fiss, sbwxy-sl slty txt, non calc, scat plnt remn/mic mica/dism & mic Pyr, NSOF w/ wk mlky cuts. CLYST brngy, frm-v frm, mass, non calc, v slty grdg-Sltst ip, scat vf-m sd grs & brn pelt, tr blk carb matr/plnt remn.

SH dkgy, brit, fiss, sm-sl v slty txt, non calc, vf mic mica, unif. SH dkgy, v frm-hd, sbfiss-fiss, rthy-slty txt, scat mic mica/plnt remn. SH/CLYST dk-mdkgy, frm, mass-sbfiss, sbwxy, calc Fos frags(Oyster Shells?), occ mica, rr Pyr.

SH dkgy, brit-vfrm, fiss, rthy-slty txt, sl calc, occ Slt ptgs, incr carb matr / occ plnt remn, NSOF / occ wk-fr mlky cuts.

SH vdkgy, hd, mass-sbfiss, rthy, slty-sdy ip, calc, scat Fos frags, NSOF / wk-fr mlky cuts.

SH v dkgy, frm, sbfiss-irreg, sbwxy-irreg, calc, Fos Shell frags/impres com, sl-mod carb, NSOF / wk-fr mlky cuts.

SH dkgy, hd, mass, sbfiss, sm, non calc.

NB#5 7 7/8" STC FH124Y (Jets 1x13, 2x14) in @ 5460'

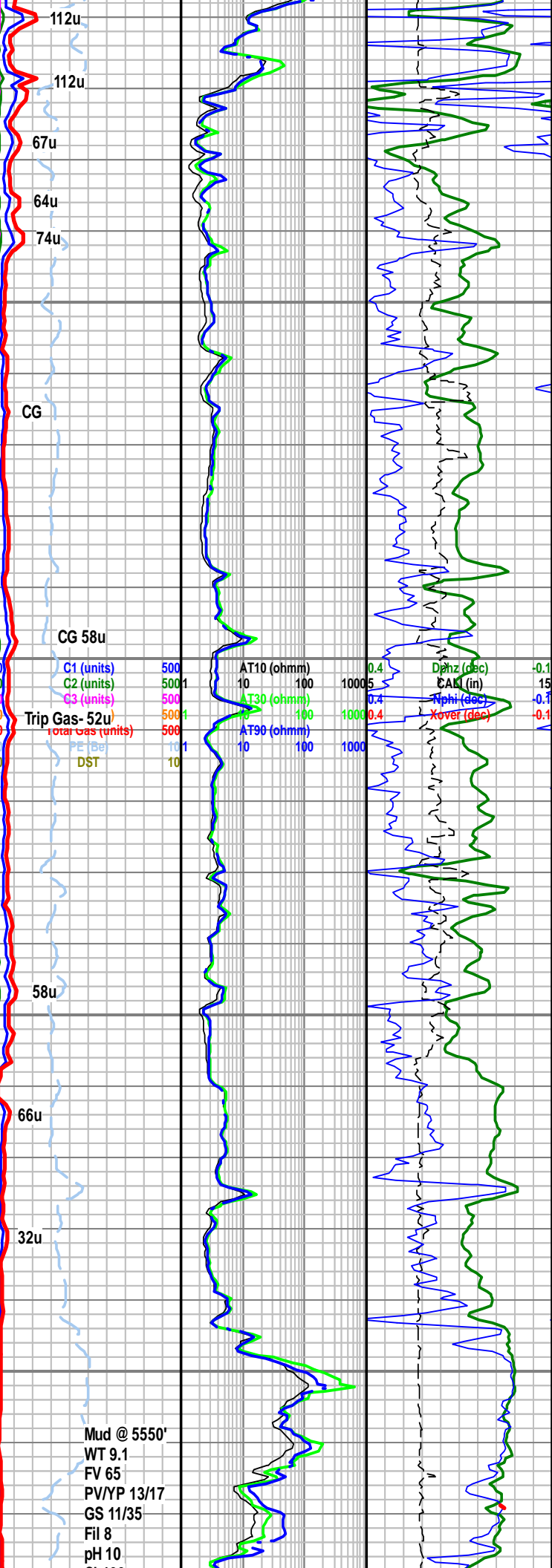
SH (70%) dk-vdk-mgy, frm, plty-splyt-sbplyt, rthy-sm, non-sl calc, sl carb ip / occ gngy, sft-frm, sbwxy-rthy, calc-sl calc. LS (30%) crm offwh ltbrn, frm, mic xln, sbchky, grny txt, foss ip, no vis por, NSOC w/ yel mnrl flr.

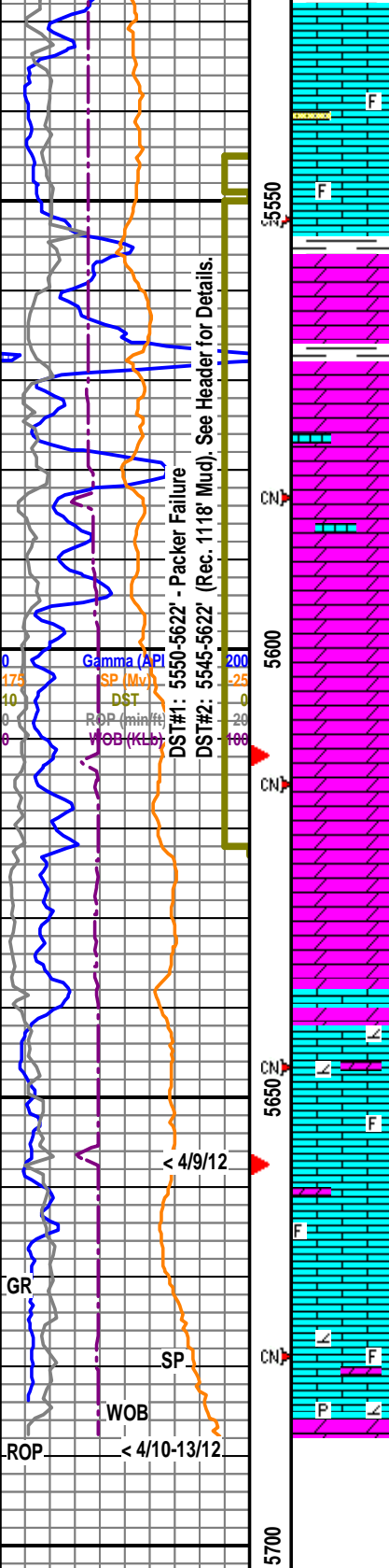
LS (60%) offwh lt-mbrn mgy, frm, mic-crp-vf xln, chky ip, foss, occ xln Calc, NSOC w/ yel mnrl flr. SH (40%) as above.

## ST. LOUIS - 5530' (-1106)

LS (50%) crm tan offwh, lt-mbrn, frm, mic-vf xln, sbchky-chky, foss ip, occ arg, tr f-c Qtz sd grs & brn trnsl Cht frags, no vis por, occ yel mnrl flr, tr wk mlky cuts. SLTST/SS (10%) ltgy wh, frm-fri, Lv-L f gr, sbang-sbrnd, mod w srt, Silic, no vis por, NSOFC. SH (40%) dk-mgy / gn, frm, blkpy-plty, sbchky, sl dolc, sl slty ip.

LS (50%) crm tan wh lt-mbrn, frm-vfrm, mic-vf xln, sbchky-chky





LS (30%) chrt tan w/lt-mbrn; frn-vfrn; mic-vf xln; sbchky-chky, foss ip, slty arg ip, tr-occ xln Calc, no vis-vp por, mod-fnt-brt yel mnrl flr, fr mlky cuts. SS/SLTST (10%) as above, occ u vf-U f gr. SH (40%).

LS (65%) offwh ltgy tan, frm-vfrn, vf-mic xln, chky, grny-gran ip, foss ip, slty-sdy ip / tr vf gr Ss strgs, tr Pyr & trnsi Cht, no vis-vp por (tr <10%), occ fnt-mod yel mnrl flr, occ wk mlky cuts. SH (35%) dkgy / occ mgy, frm, sbwxy-sbchky, non calc, scat plnt remn & Pyr.

### SPERGEN - 5555' (-1131)

DOL (30%) lt-mbrn, frm-sl fri, grny-micsucr mic-vf xln, sl calc ip, occ scat f vugs, no vis-p-fr vis por (<10%, tr to 12%), p vis perm, even brn stn com, fnt yelgld flr, p-fr slow strmg yel cuts, mod resd ring (5 Hrs. later cuts decr-fr mlky cuts). LS (40%) as above, grny dolc ip. SH (30%).

DOL (25%) m-lt-dkbrn, ltgy, frm-fri, gen as above, pred dns grny, tr mic-vf sucr, tr xln Calc & f vugs, pred vp vis por (tr 8-10%), brn stn com / fnt tr mod yelgld flr, slow strmg yel cuts, mod yel resd ring (5 hrs. later fr-gd strmg yel cuts, mod-brt resd ring). LS (25%) lt-mgy gybrn brn, frm, mic-cr-p-vf xln, pred dns, sl arg, foss ip, dolc ip, occ fnt-mod yel mnrl flr, occ v wk mlky cuts. SH (50%).

DOL (20%) as above, occ hvy brn stn (spty ip), no vis-fnt-mod yelgld flr (mod yel in xln Calc), slow strmg-fr cldy yel cuts (5 hrs. later p-fr-gd strmg yel cuts, mod-brt yel resd ring). LS (20%). SH (60%).

No Samples- Lost Circulation at 5616'.

### Lost Circ. @ 5616', Pull 20 Stds., Mix Mud/LCM, Stage in, Circ., LCM +20#

Poor Samples Due to Lost Circulation  
DOL (30%) ltbrn ltgy brn, fri-frm-v frn, vf-mic xln, gran ip, dns ip, vp-p-fr vis por (<12%), occ brn stn, fnt-mod yelgld flr, wk cldy yel cuts. LS (30%).  
SH (40%) m-dkgy gngy gybrn.

DOL (30%) as above, occ lt-mgy, frm, pred dns, grny-sbwxy ip, mic sucr ip, no vis-vp-p vis por, occ brn stn, fnt-mod yelgld flr, wk cldy yel cuts.  
LS (30%) crm ltbrn wh, frm, pred dns crp-mic xln, grny vf xl ip, dolc ip, chky ip, sl foss ip, no vis-vp por, NSOC w/ occ fnt-mod yel mnrl flr. SH (40%).

### Pull 5 Std. & Mix Mud/LCM @ 5661', Drill Ahead With Partial Returns.

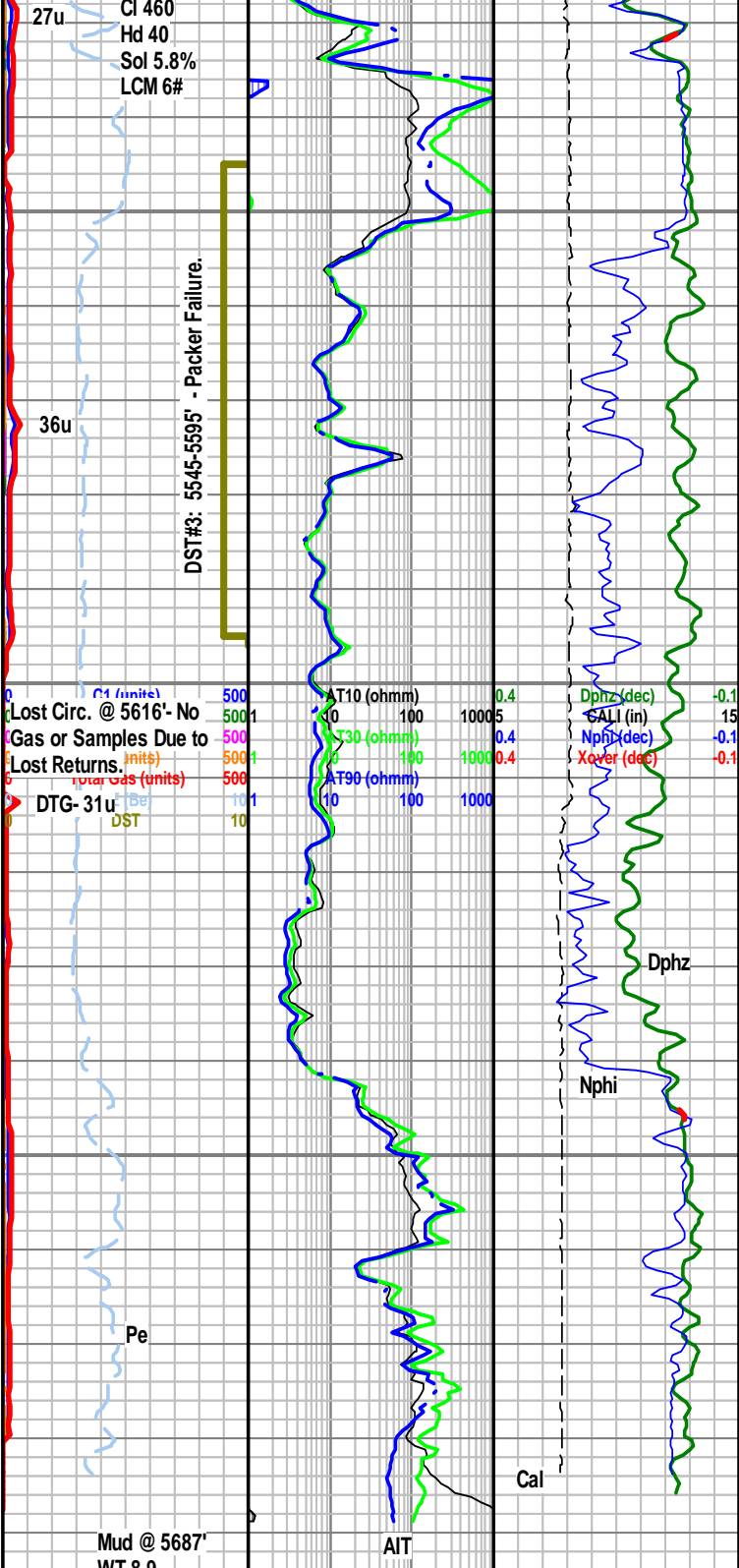
DOL (30%) lt-mbrn lt-mgy, frm-sl fri-v frn, mic xln, grny-mic sucr, pred dns, sl arg ip, no vis-vp por, occ fnt yelgld flr / p cldy-p v slow strmg yel cuts.  
LS (30%) crm gybrn lt-mgy, frm, dns crp-mc xln, sbchky ip, arg ip, occ dolc, tr foss, tr xln Calc, no vis por, NSOC / occ fnt-mod yel mnrl flr. SH (40%) dk-vdk-m gy, gybrn, frm, calc ip.

LS (40%) lt-mgy, gybrn-brn, crm, mott ip, frm, pred dns crp-mic xln, tr vf xln, sbchky ip, arg ip, occ sl foss, tr xln Calc & Pyr, no vis por, pred NSOC w/ occ fnt-mod yel mnrl flr, occ wk mlky cuts.  
DOL (30%) lt-mgy gybrn brn, gen as above, tr mic Pyr. SH (30%).

Reached TD of 5693' at 05:30 4/10/12. Circ. 15 min. and TOH for Logs (Didn't Circ. BU due to Low Mud Volume), Log w/ Schlumberger. Ran DST's #1 (5550-5622' Packer Failure), #2 (5545-5622' Rec. 1118' Mud), #3 (5545-5595' Packer Failure) After Logs.

Drillers TD: 5692'  
Loggers TD: 5689'

Formation Log Tops:  
Niobrara- 728' (+3696)  
Dakota SS- 1898' (+2526)  
Cheyenne SS- 2211' (+2213)





5950	5850	5750
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0	C1 (units)	500	AT10 (ohmm)	0.4	Dphz (dec)	-0.1
0	C2 (units)	500	10 100	1000	CALL (in)	15
0	C3 (units)	500	AT30 (ohmm)	0.4	Nphi (dec)	-0.1
0	C4 (units)	500	10 100	1000	Xover (dec)	-0.1
0	Total Gas (units)	500	AT90 (ohmm)			
0	PC (Be)	10	10 100	1000		
0	DST	10				

5460' SH as above, v unif lith.

**Goolsby Brothers &**

