Vecta

Oil & Gas Ltd.

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

Well Name:	**Maroon 24-20**
Location:	**SESW Sec 20-T14S-R47W, Cheyenne County, Colorado**
License Number:	**API: 05-017-07718**
Region:	**Wildcat**
Spud Date:	**11/09/12**
Drilling Completed:	**11/19/12**
Surface Coordinates:	**888' FSL & 1499' FWL**
	Lat: 38.810920, Long: -102.698210
Bottom Hole Coordinates:	**Same**
Ground Elevation (ft):	**4242'**
K.B. Elevation (ft):	**4253'**
Logged Interval (ft):	**4100' To: 5445'**
Total Depth (ft):	**5442' LTD**
Formation:	**Morrow, (TD in St. Louis).**
Type of Drilling Fluid:	**LSND, Hydro Resources**

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

OPERATOR

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

GEOLOGIST

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

DSTs

One test (See description column for details)

Comments

1) 8 5/8" csg set @ 434' KB.
2) Contractor: Integrity Drilling Rig #69. Toolpusher: Josh Kliesin, Company Man: Larry Schneider
3) Plugged and abandoned on November 20, 2012.

ROCK TYPES

- ss_fg+
- Carb sh
- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrlst
- Salt
- Shale
- Shcol
- Shgy
- Ss
- Till
- sltst
- anhy1
- chalk

ACCESSORIES

MINERAL

- Pyr
- 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

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

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

- near even
- Ques
- Dead
- vspotty

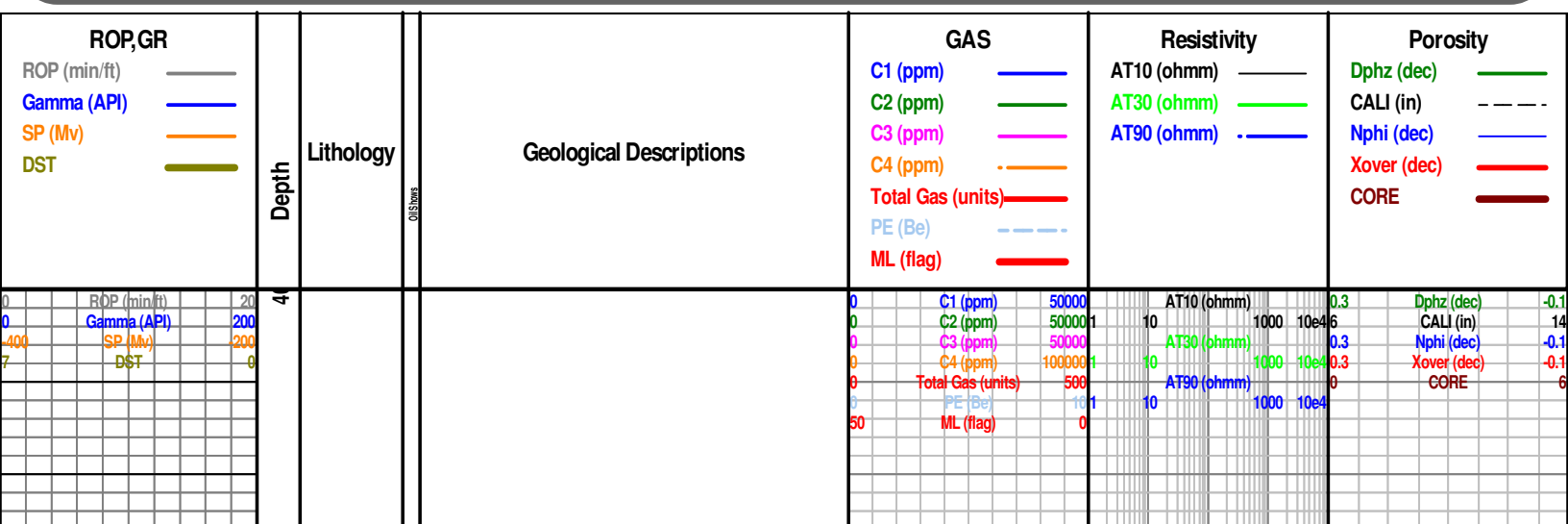
INTERVALS

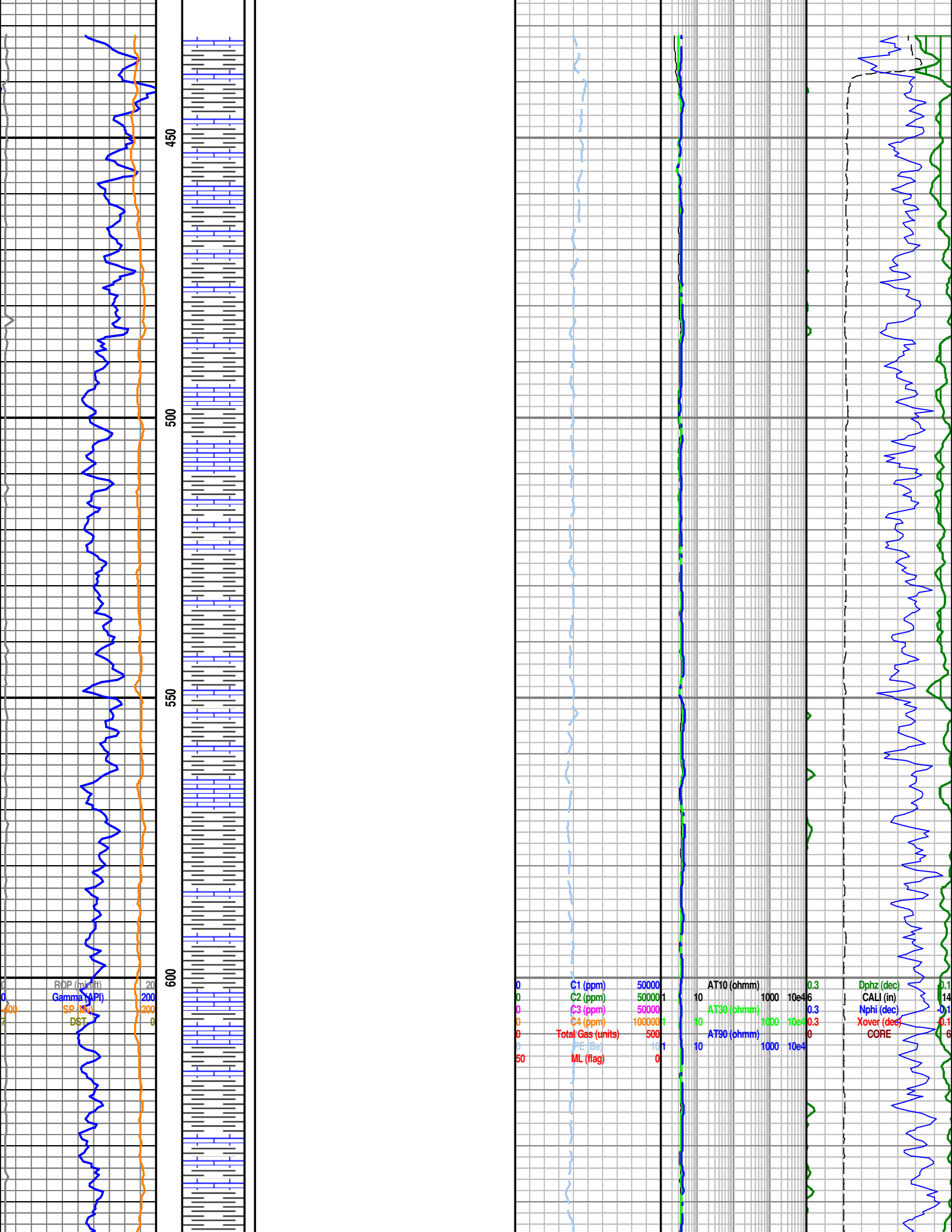
- Core
- Dst
- casing

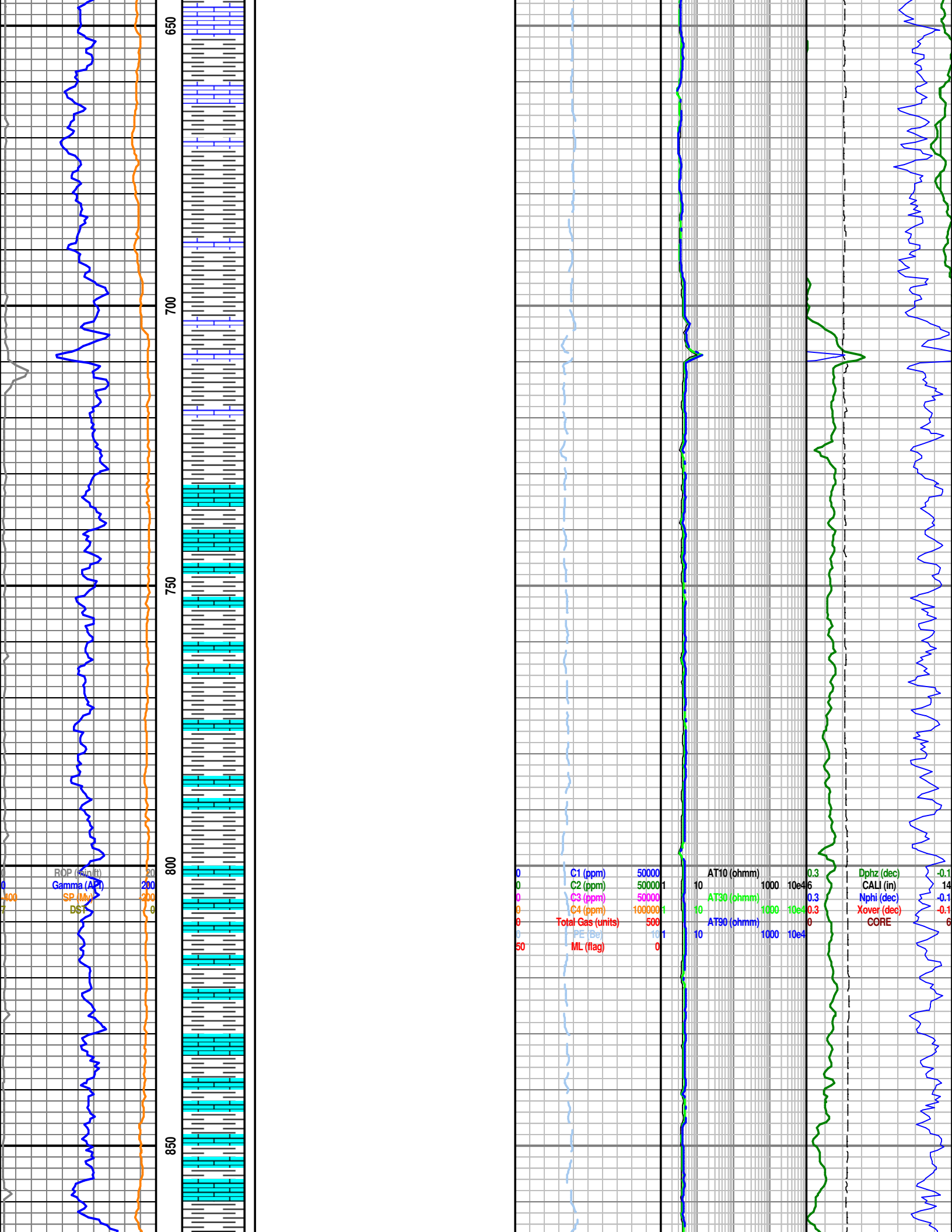
EVENTS

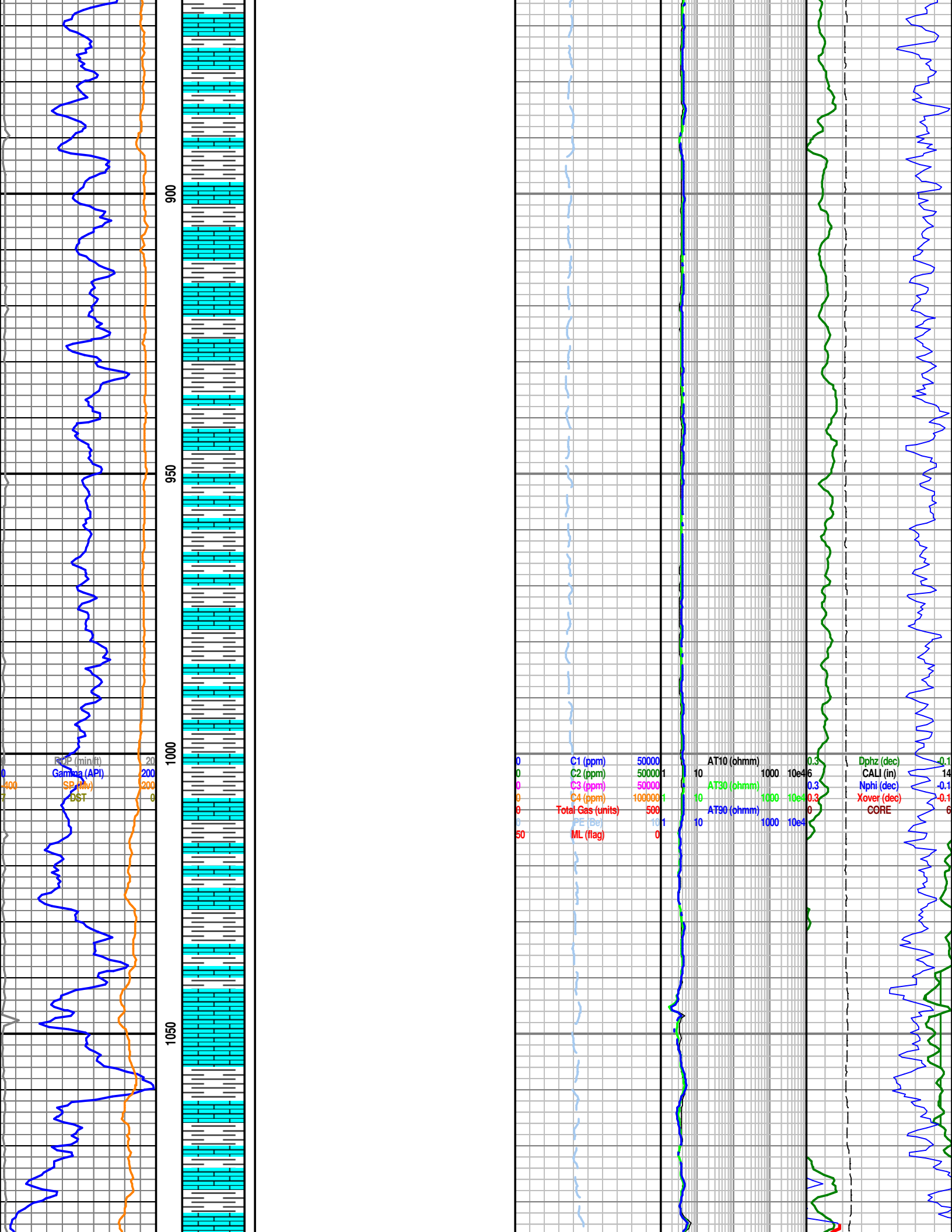
- Rft

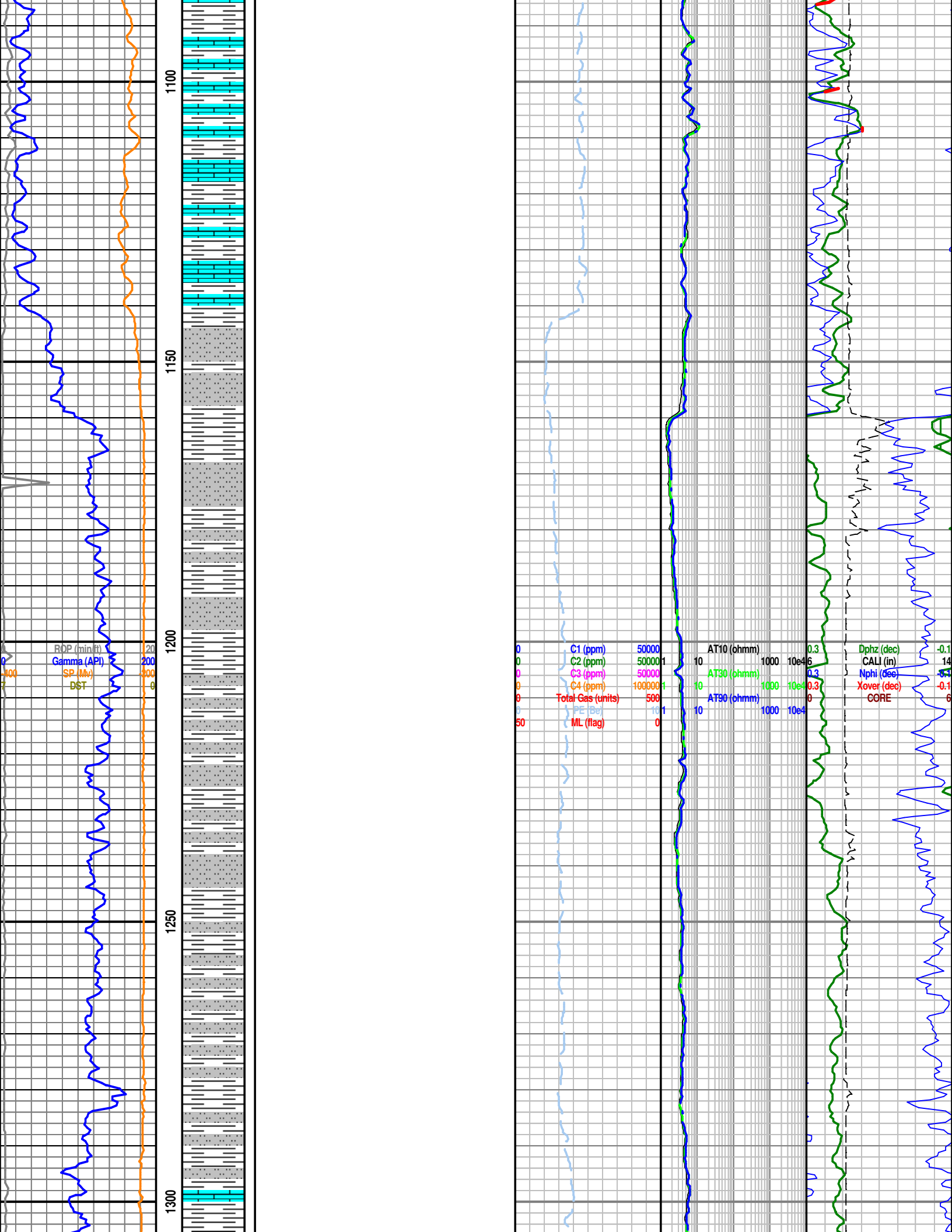
- Sidewall
- New bit
- casingr
- casing
- Survey
- Off bottom
- conn
- perfs
- Survey(red)

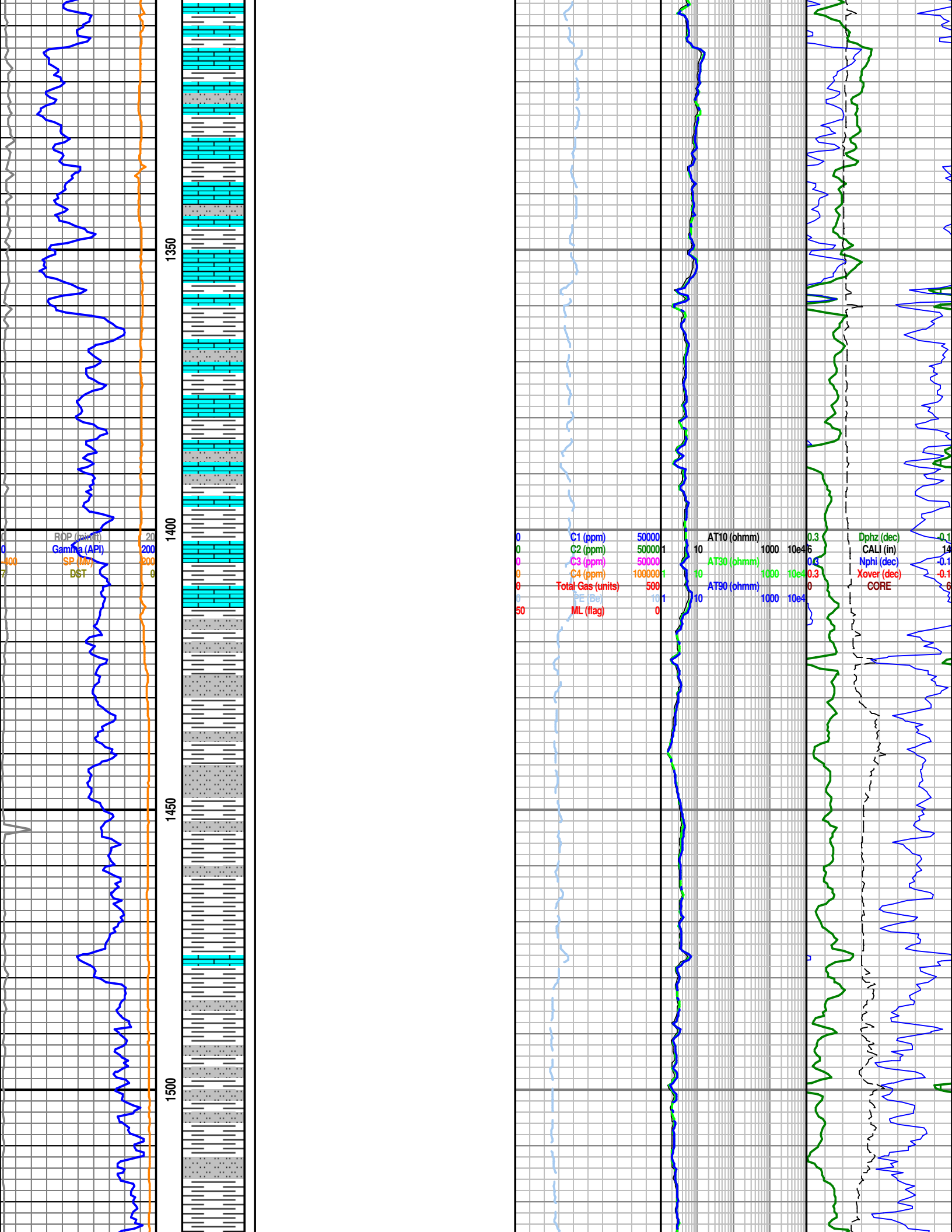


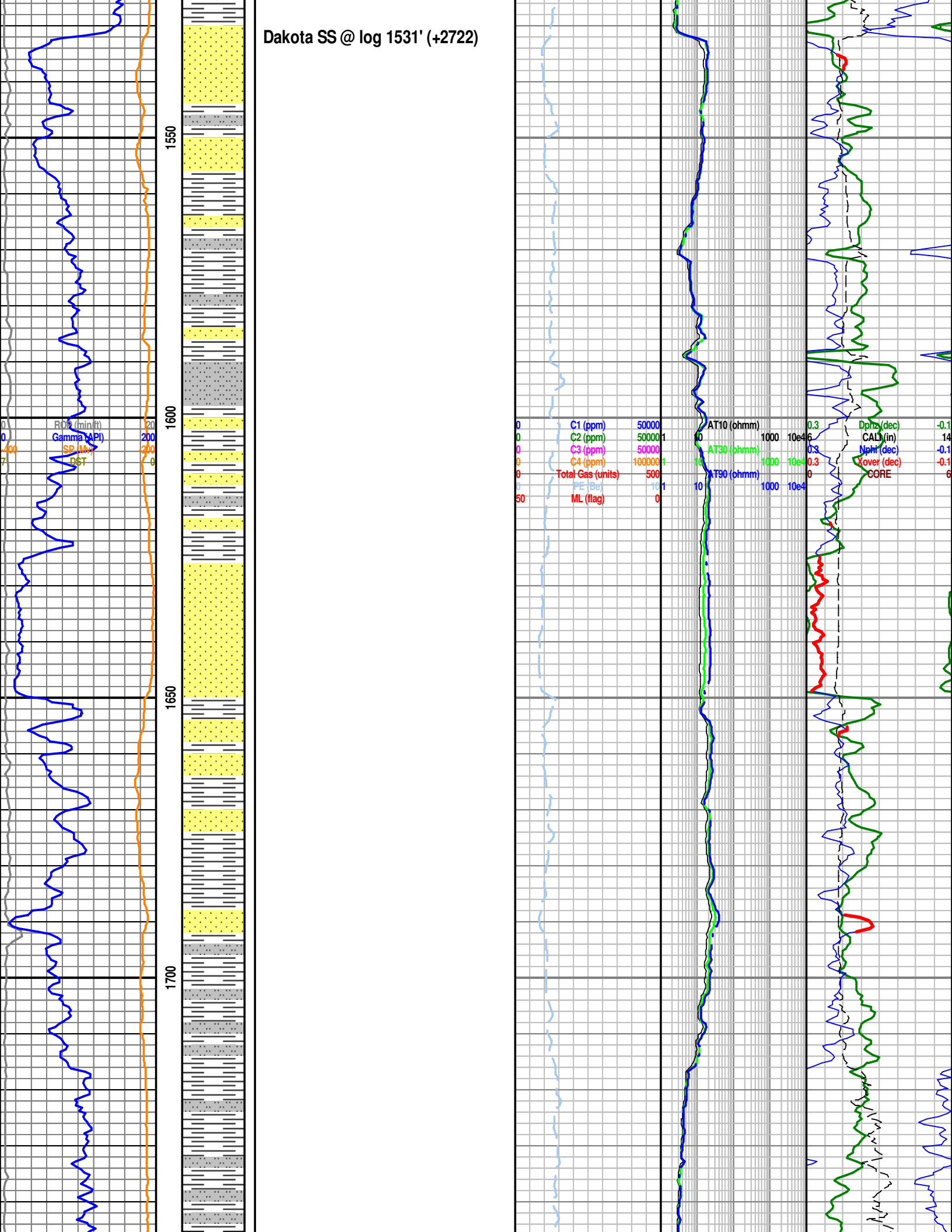

450
500
550
600
ROP (min/ft)
Gamma (API)
SP (MV)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

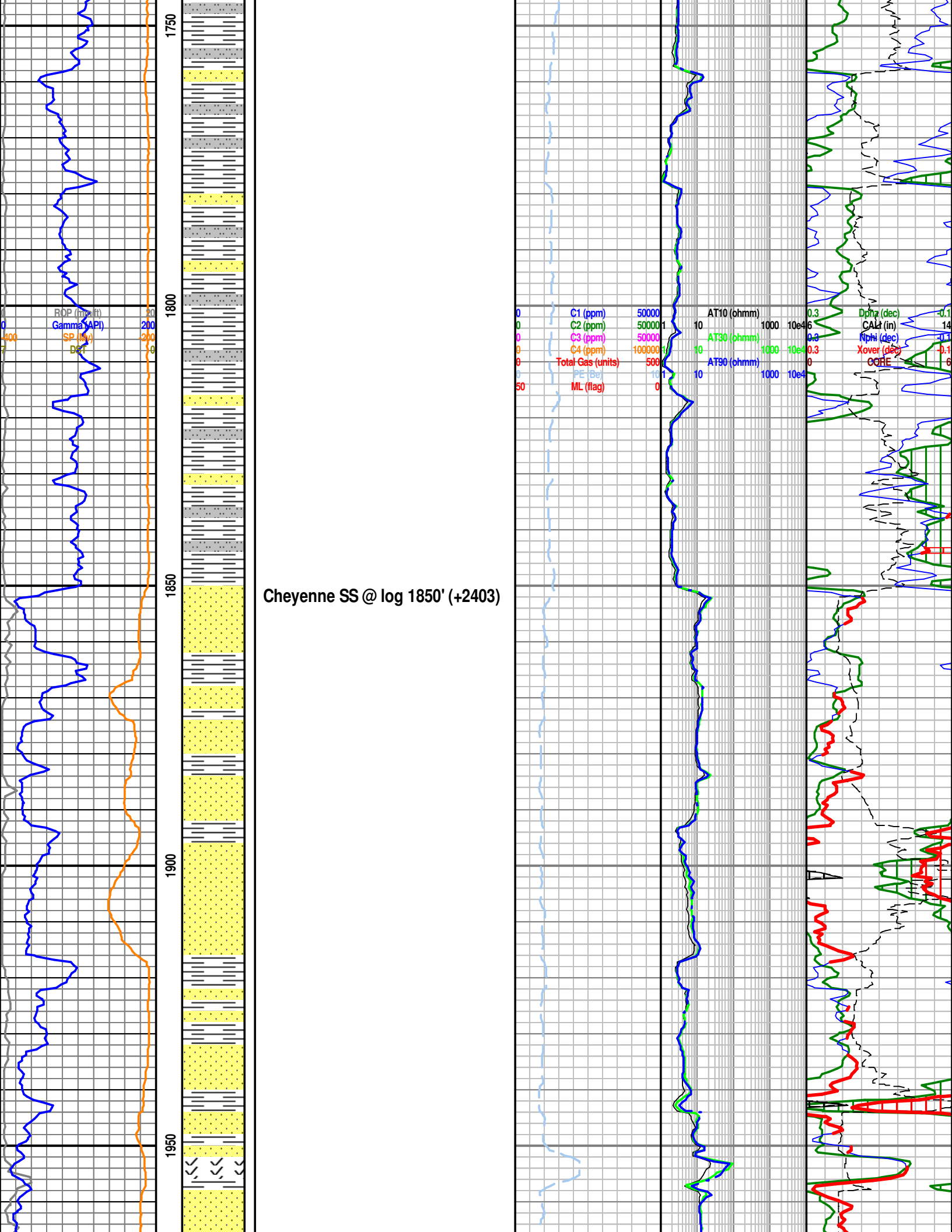

650
700
750
800
850
ROP (min/ft)
Gamma (API)
SP (MV)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

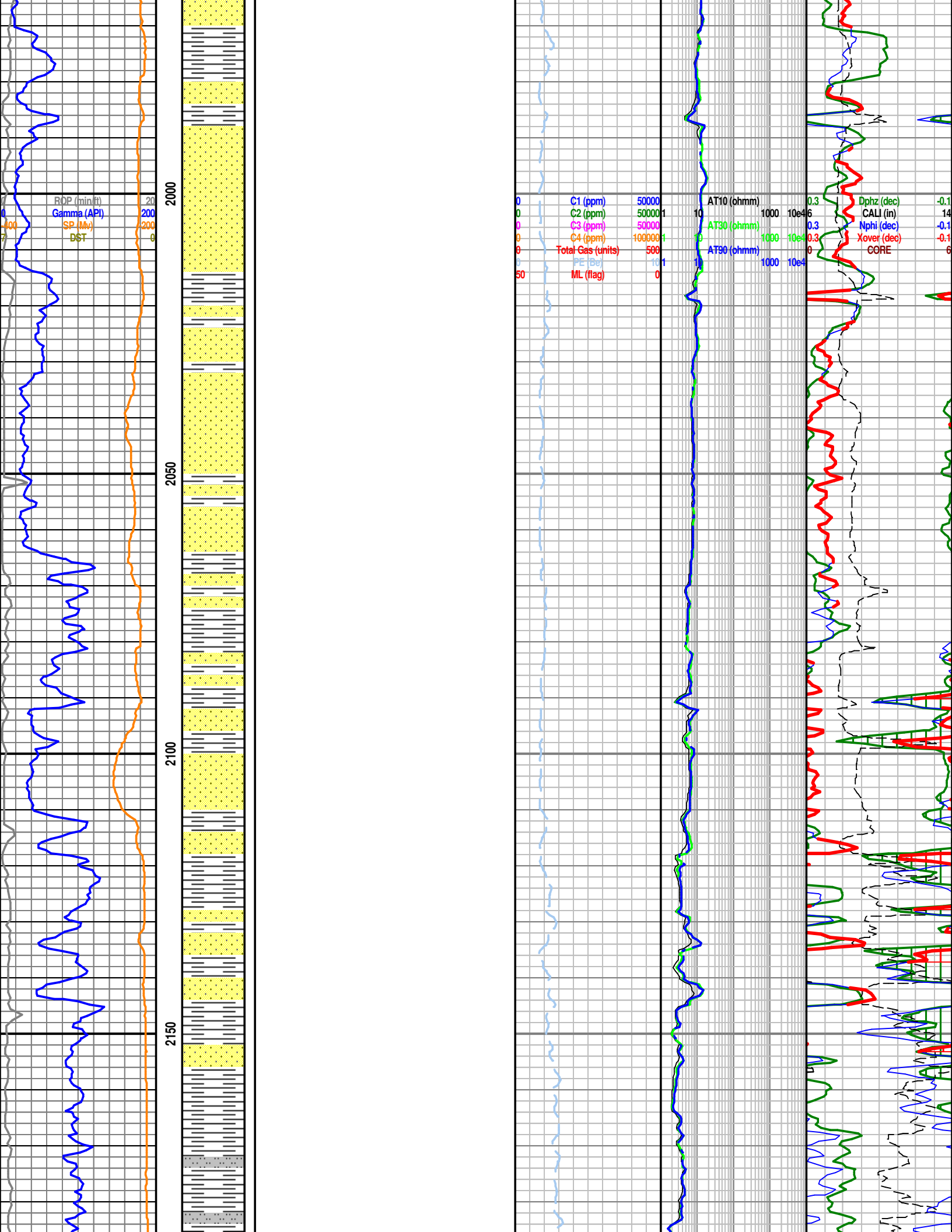

900
950
1000
1050
ROP (min/ft)
Gamma (API)
SP (mv)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

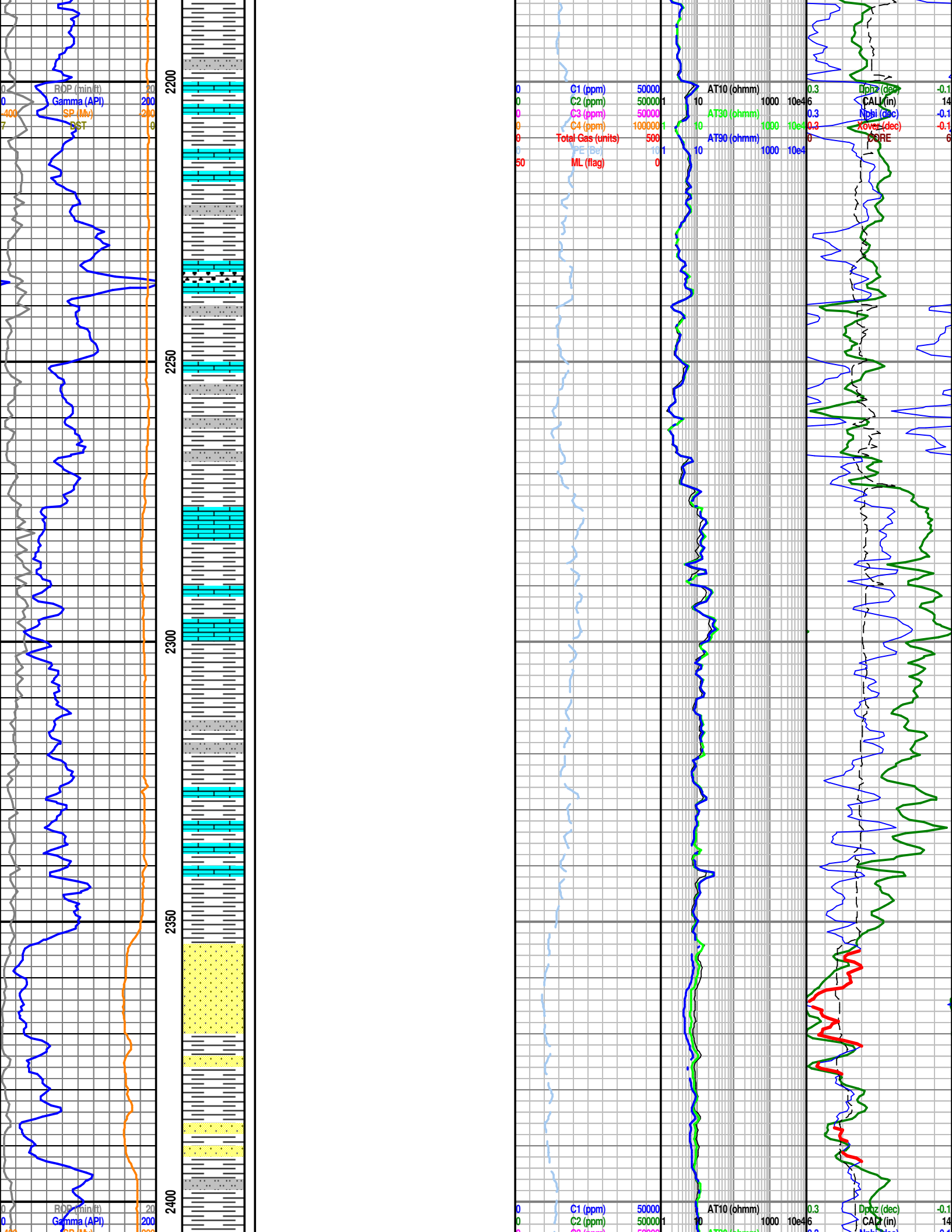

1100
1150
1200
1250
1300
ROP (min/ft)
Gamma (API)
SP (MV)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

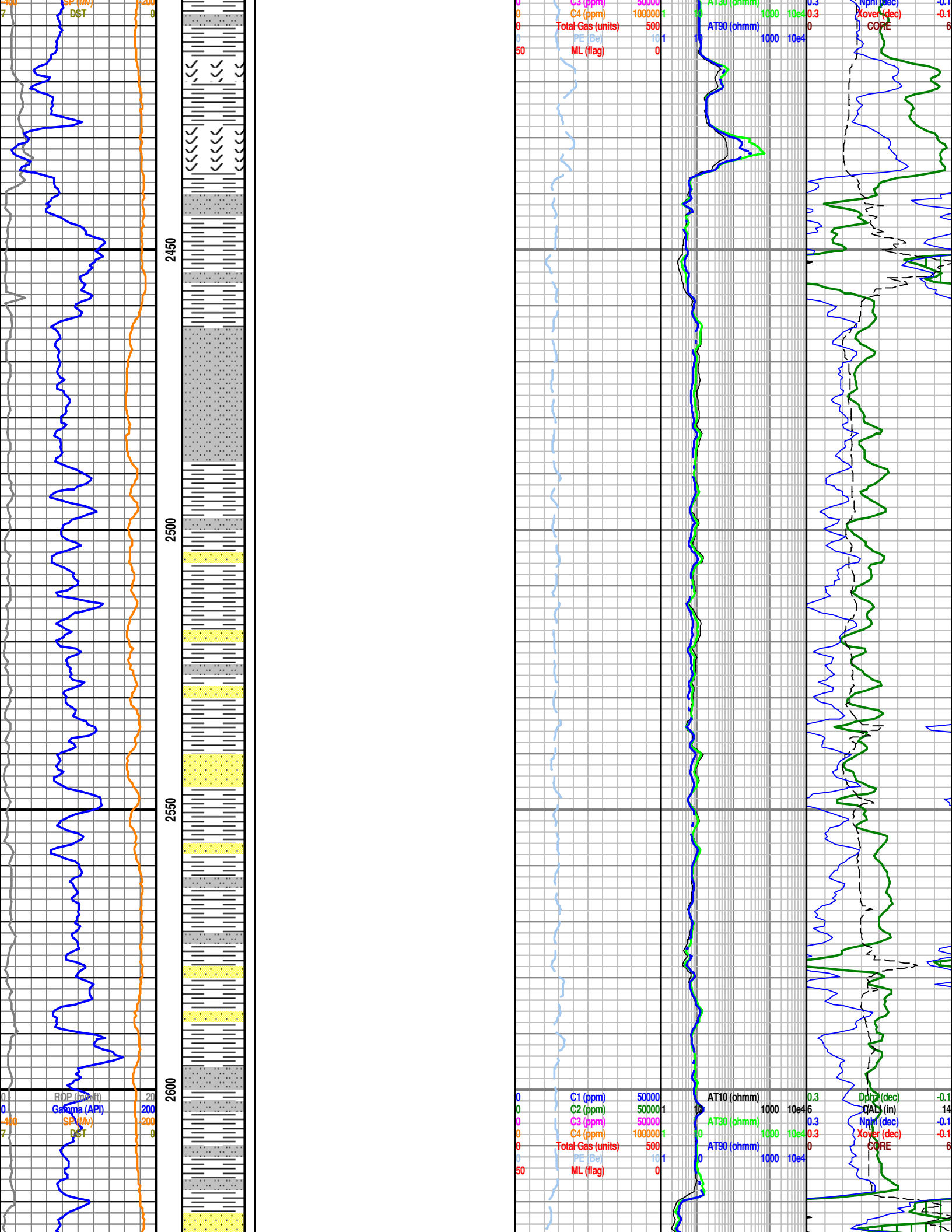

1350
1400
1450
1500
ROP (min/ft)
20
Gamma (API)
0
200
SP (mv)
-100
200
DST
7
0
C1 (ppm)
50000
C2 (ppm)
50000
C3 (ppm)
50000
C4 (ppm)
100000
Total Gas (units)
500
PE (Be)
ML (flag)
50
0
AT10 (ohmm)
0.2
10
1000
10e4
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
0.3
-0.1
CALI (in)
6
14
Nphi (dec)
Xover (dec)
CORE

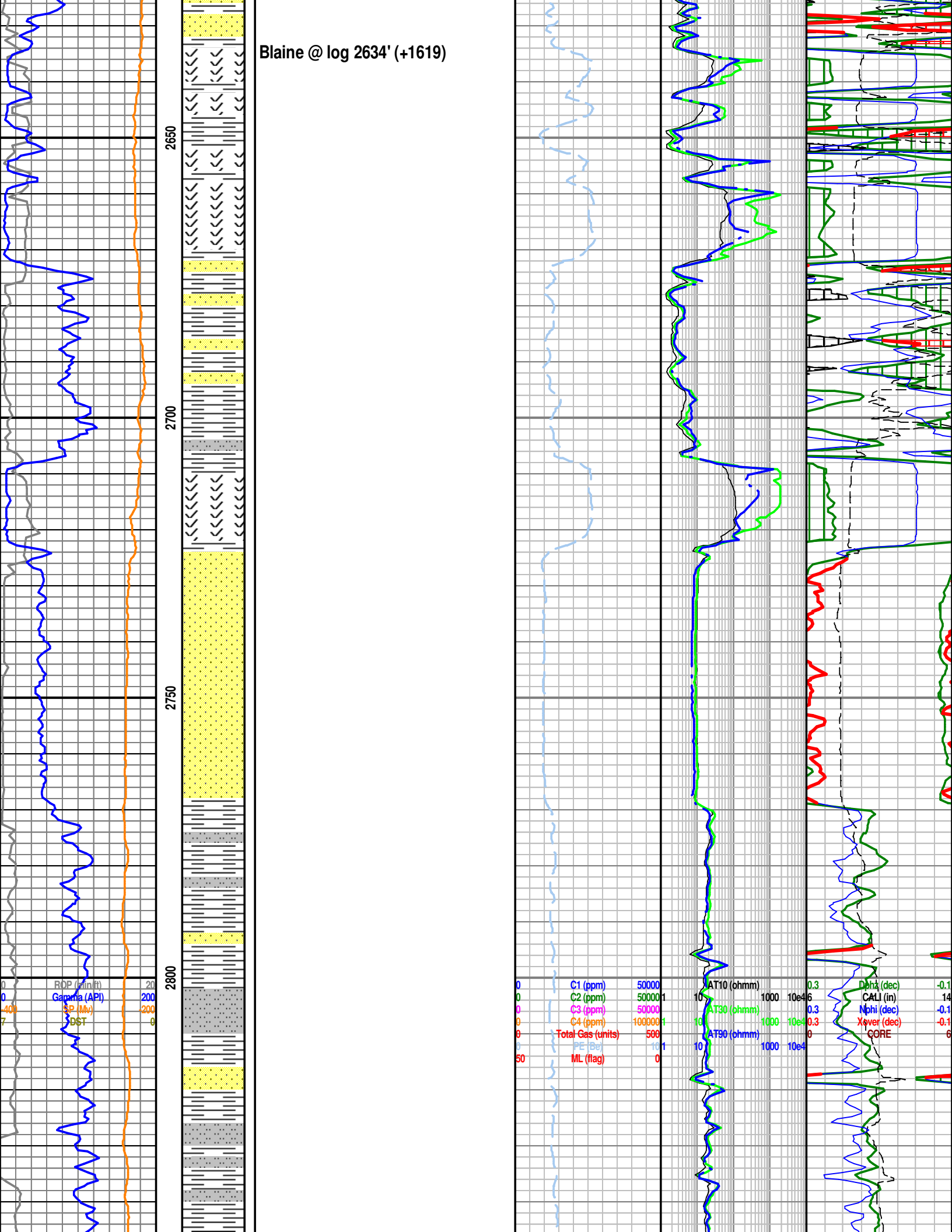

Dakota SS @ log 1531' (+2722)
1550
1600
1650
1700
ROP (min/ft)
Gamma (API)
SP (MV)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

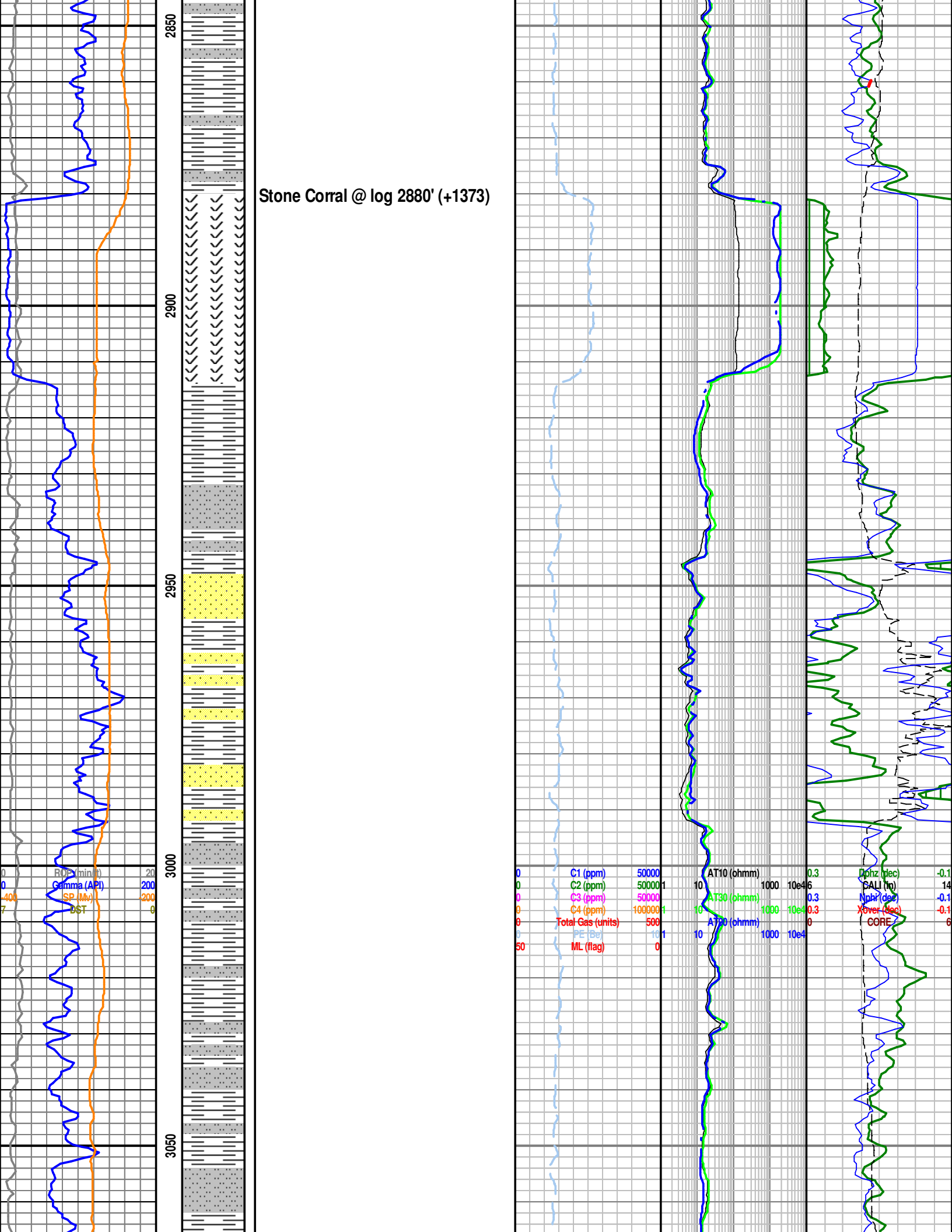

ROP (min/ft)
Gamma (API)
SP (mV)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
1750
1800
1850
1900
1950
Cheyenne SS @ log 1850' (+2403)

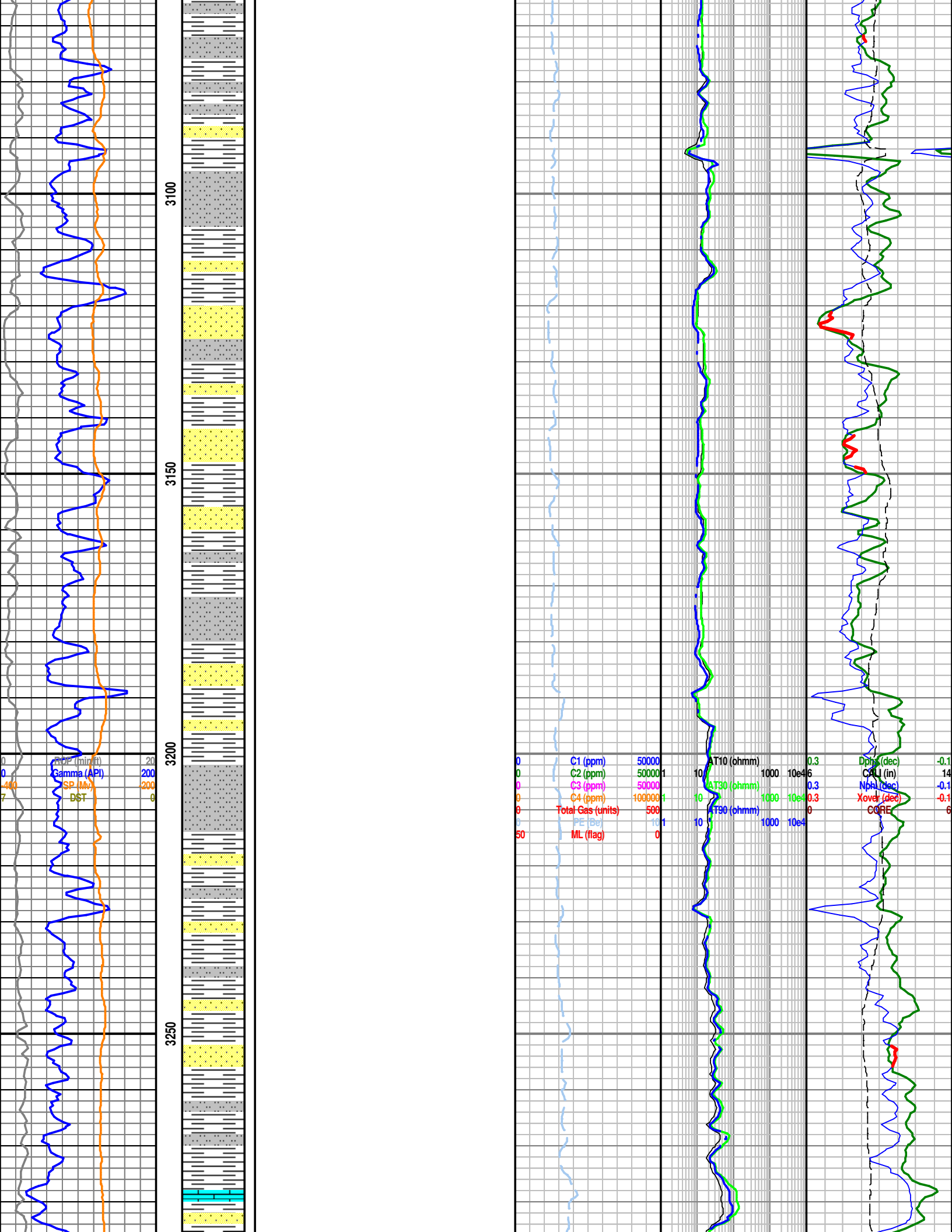

ROP (min/ft)
20
Gamma (API)
0
200
SP (Mv)
-400
-200
DST
7
0
2000
2050
2100
2150
C1 (ppm)
0
50000
C2 (ppm)
0
50000
C3 (ppm)
0
50000
C4 (ppm)
0
100000
Total Gas (units)
0
500
PE (Be)
0
10
ML (flag)
50
0
AT10 (ohmm)
0.3
10
1000
10e4
AT30 (ohmm)
0.3
1000
10e4
AT90 (ohmm)
0.3
1000
10e4
Dphz (dec)
-0.1
CALI (in)
6
14
Nphi (dec)
-0.1
Xover (dec)
-0.1
CORE
6

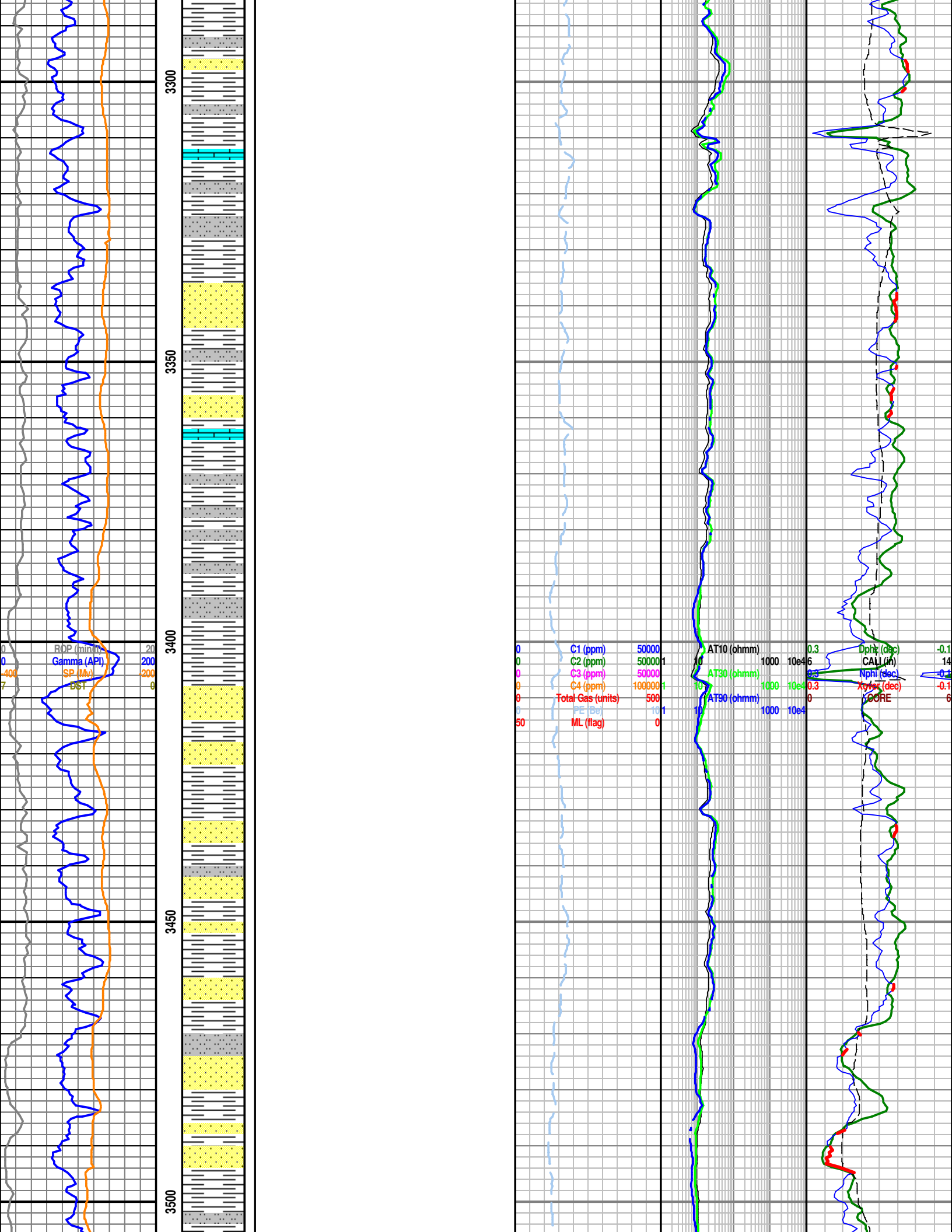

ROP (min/ft)
Gamma (API)
SP (Mv)
BST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dpnz (dec)
CALI (in)
Npbi (dec)
Xover (dec)
CORE
2200
2250
2300
2350
2400

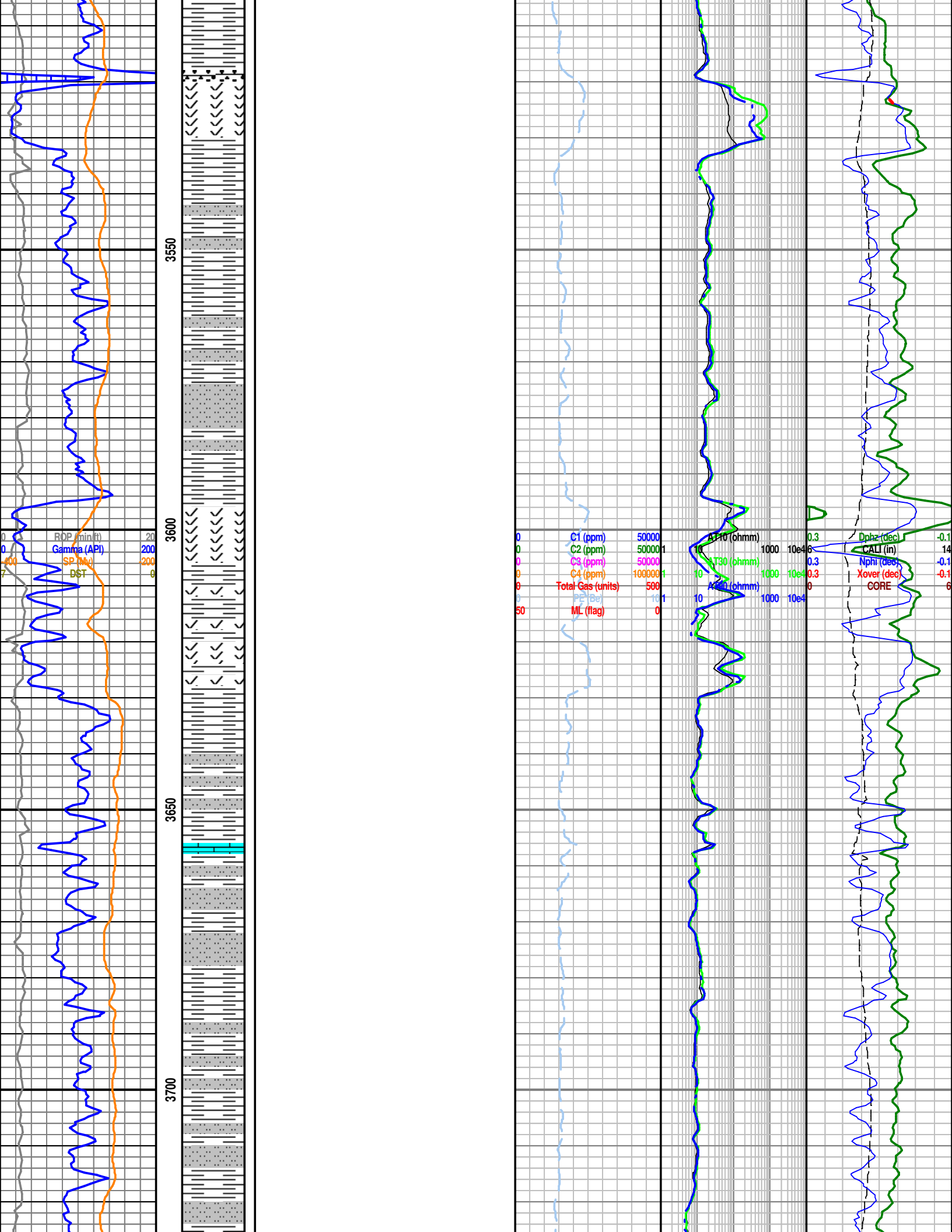

ROP (m/h/ft)
Gamma (API)
SP (Mv)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
Nphi (dec)
Xover (dec)
CAL (in)
CORE
2450
2500
2550
2600

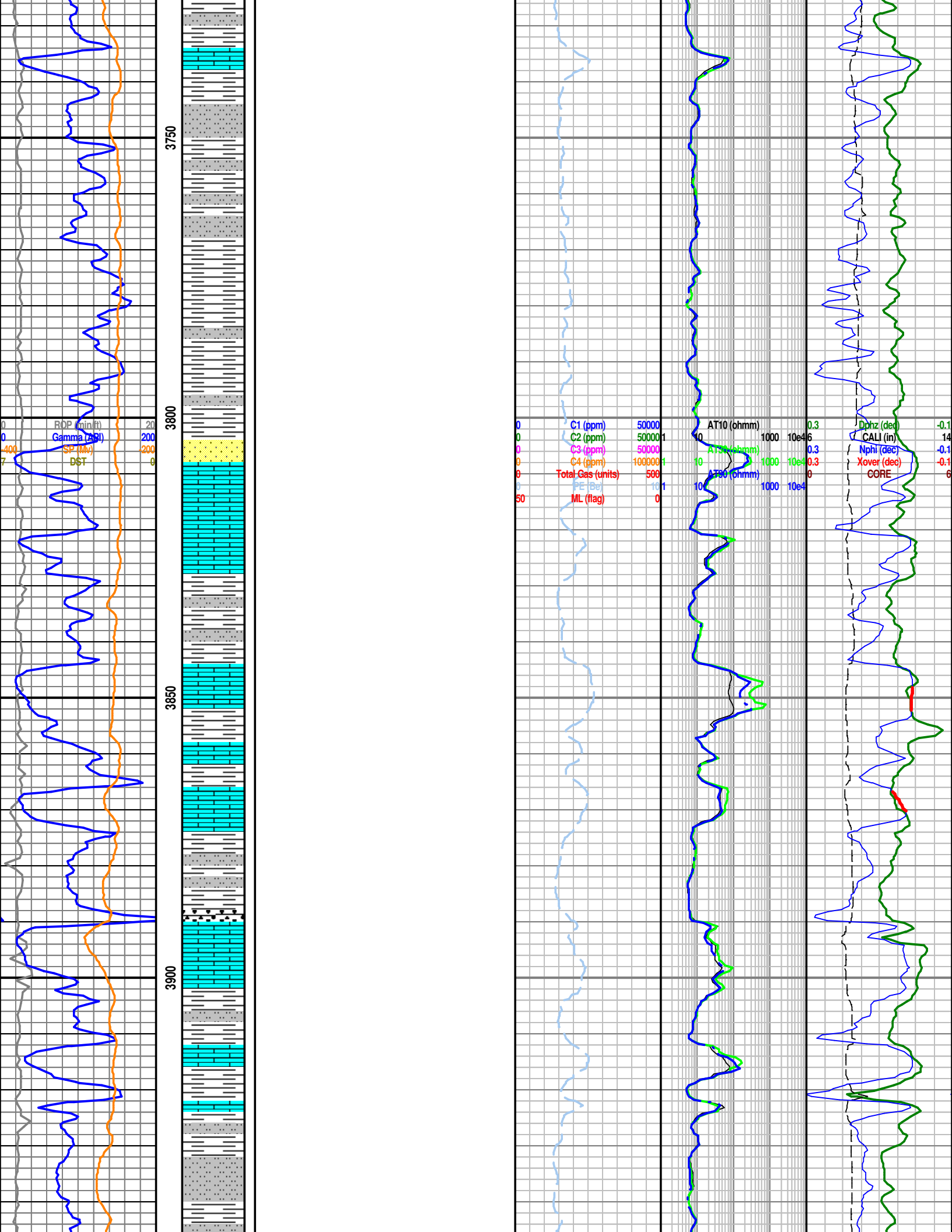

Blaine @ log 2634' (+1619)
2650
2700
2750
2800
ROP (min/ft)
Gamma (API)
SP (Mv)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dpha (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

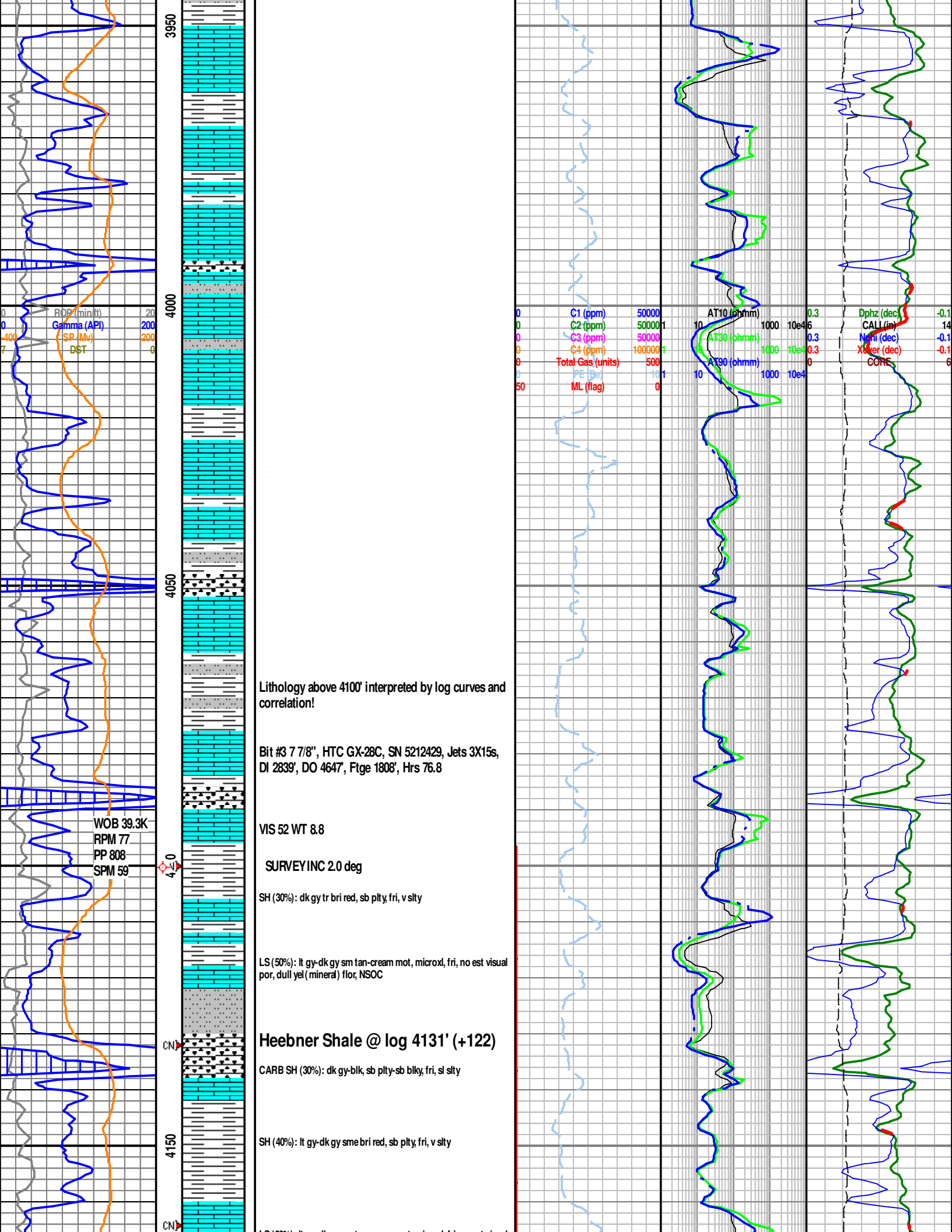

Stone Corral @ log 2880' (+1373)
2850
2900
2950
3000
3050
ROP (min/ft)
Gamma (API)
SP (MV)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

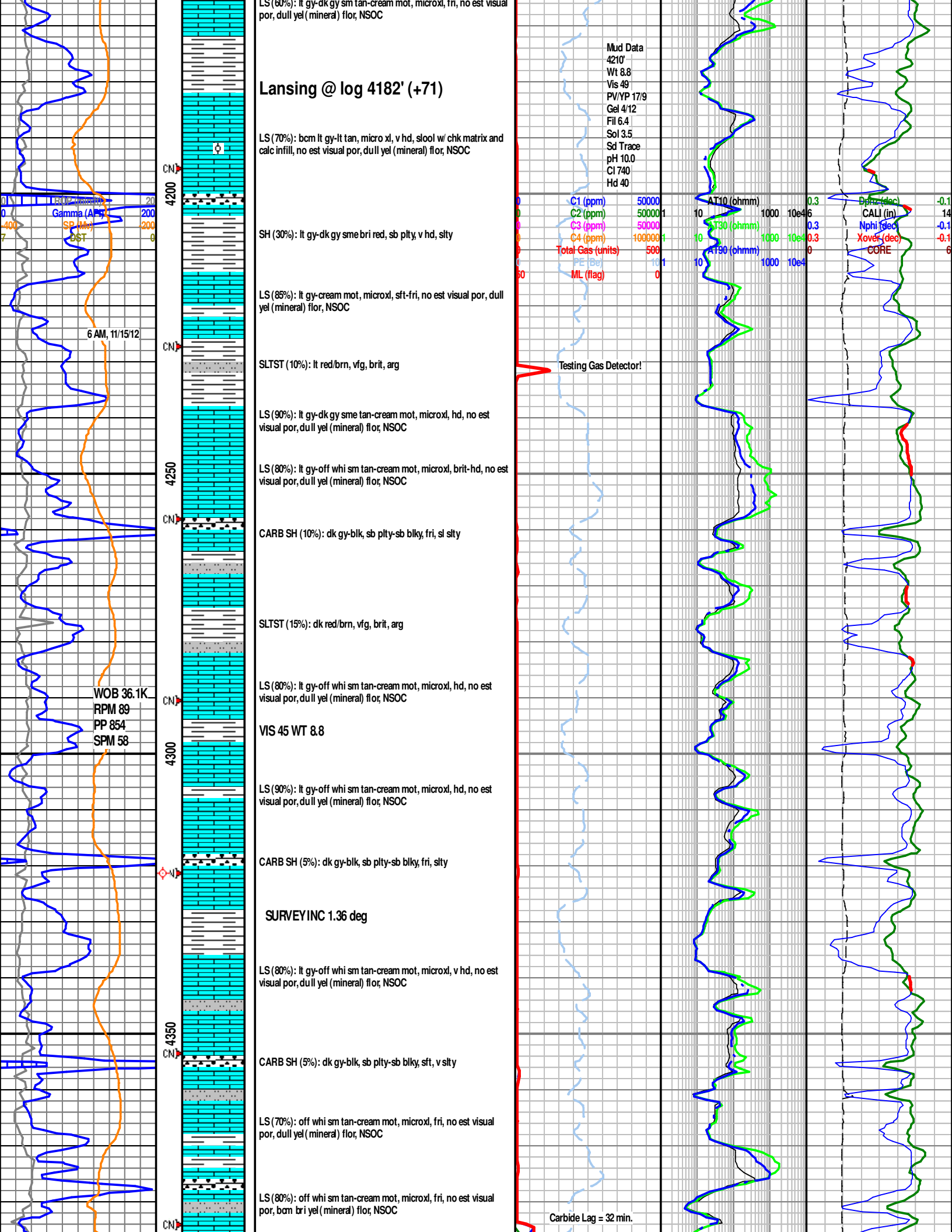

3100
3150
3200
3250
0
ROP (min/ft)
20
0
Gamma (API)
200
-400
SP (Mv)
200
7
DST
0
0
C1 (ppm)
50000
0
C2 (ppm)
50000
0
C3 (ppm)
50000
0
C4 (ppm)
100000
0
Total Gas (units)
500
0
PE (Be)
10
50
ML (flag)
0
1
AT10 (ohmm)
10
1000
10e4
AT30 (ohmm)
10
1000
10e4
AT90 (ohmm)
10
1000
10e4
0.3
Dphs (dec)
-0.1
6
CALI (in)
14
0.3
Nphi (dec)
-0.1
0.3
Xover (dec)
-0.1
0
CORE
6

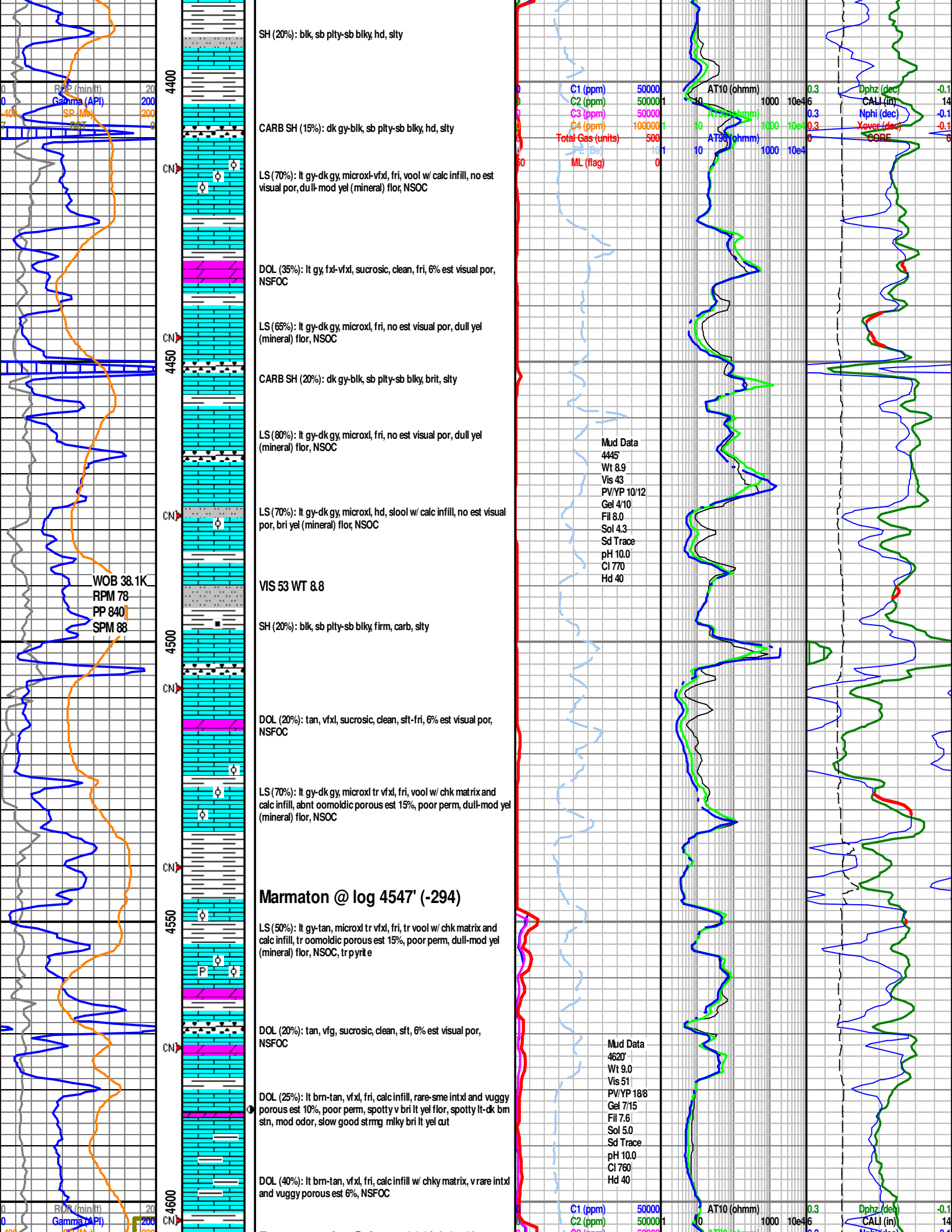

3300
3350
3400
3450
3500
0
ROP (min/m)
20
0
Gamma (API)
200
-400
SP (Mv)
200
7
BIT
0
0
C1 (ppm)
50000
0
C2 (ppm)
50000
1
0
C3 (ppm)
50000
0
C4 (ppm)
100000
1
0
Total Gas (units)
500
0
PE (Be)
10
1
50
ML (flag)
0
0.2
AT10 (ohmm)
2000
0.2
AT30 (ohmm)
2000
0.2
AT90 (ohmm)
2000
0.3
Dphi (dec)
-0.1
6
CALI (in)
14
0.3
Nphi (dec)
-0.1
0.3
Xylex (dec)
-0.1
0
CORE
6

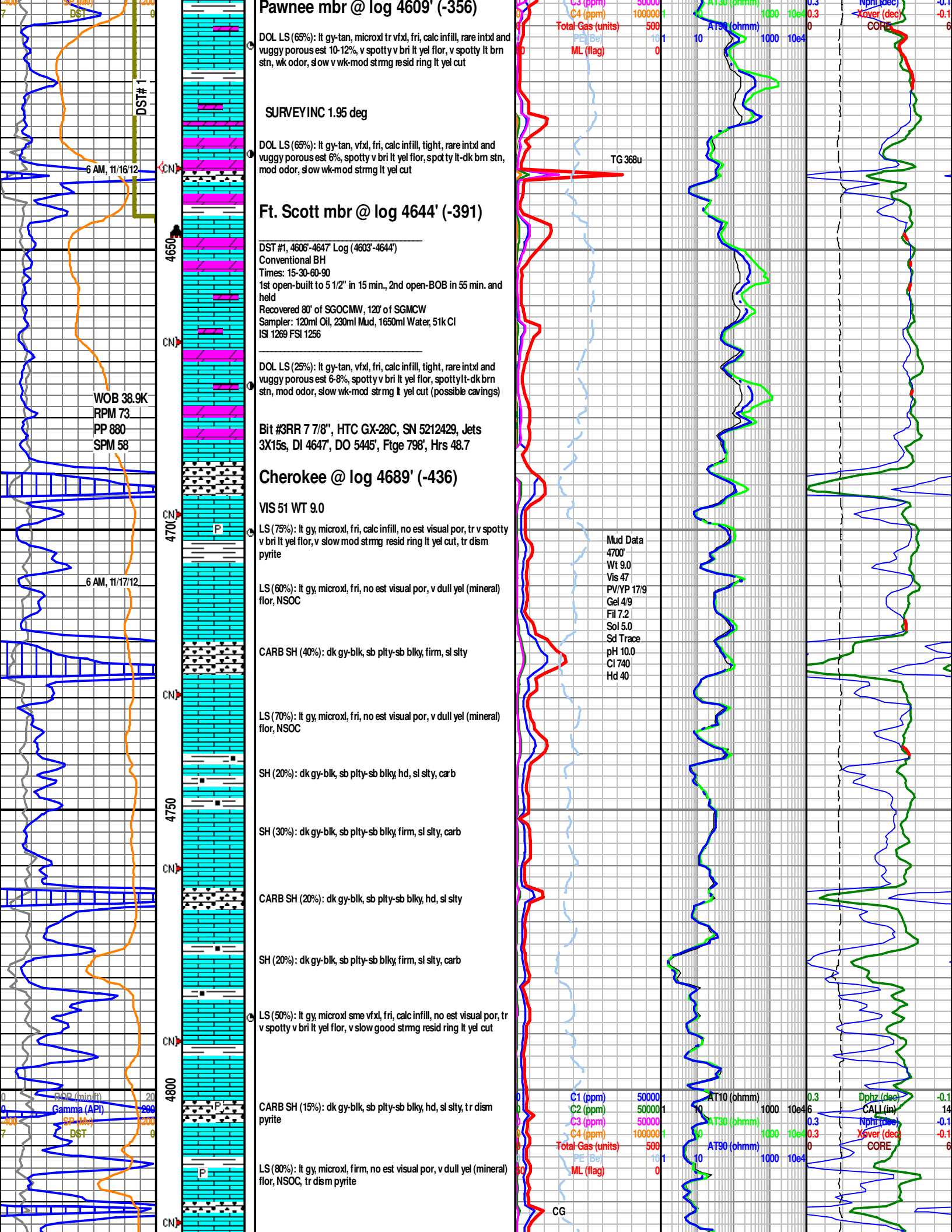

ROP (min/ft)
20
Gamma (API)
0
200
SP (mV)
-400
200
DST
7
0
3550
3600
3650
3700
C1 (ppm)
50000
C2 (ppm)
50000
C3 (ppm)
50000
C4 (ppm)
100000
Total Gas (units)
500
PE (Be)
ML (flag)
50
0
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
0.3
1000
10e4
6
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
-0.1
14
-0.1
-0.1
6

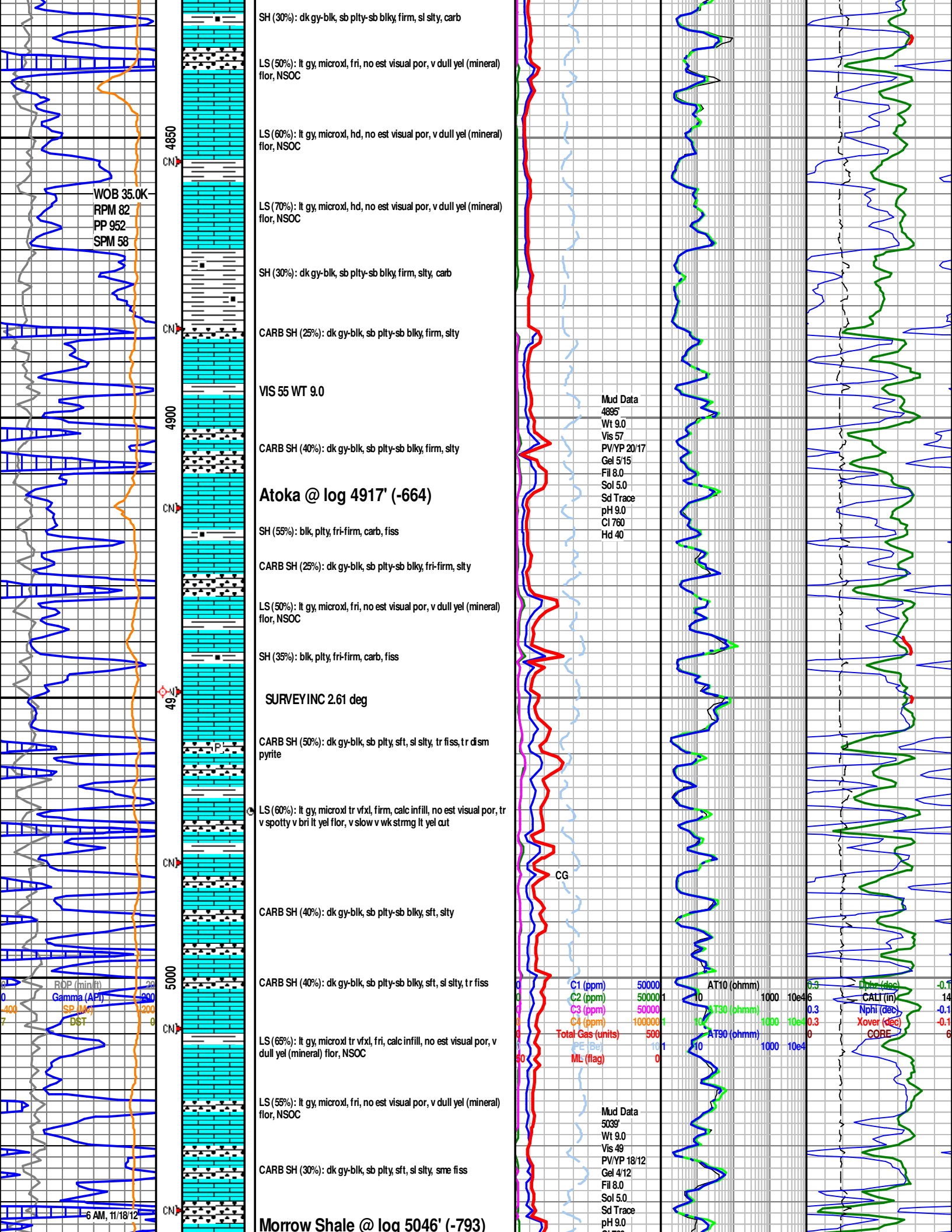

ROP (min/ft)
Gamma (API)
SP (mv)
DST
3750
3800
3850
3900
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

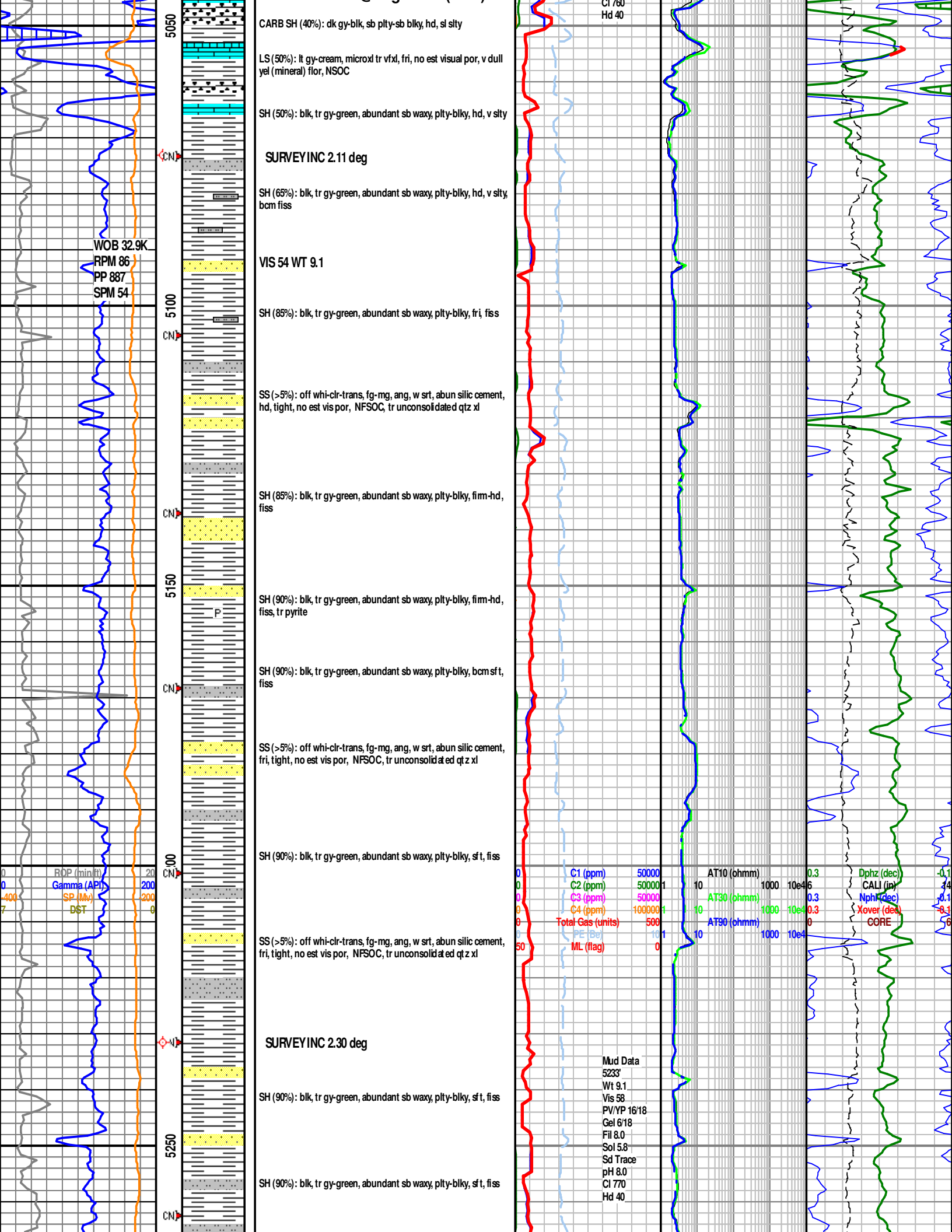

ROP (min/ft)
Gamma (API)
SP (Mv)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xplot (dec)
CORE
3950
4000
4050
4100
4150
WOB 39.3K
RPM 77
PP 808
SPM 59
Lithology above 4100' interpreted by log curves and correlation!
Bit #3 7 7/8", HTC GX-28C, SN 5212429, Jets 3X15s, DI 2839', DO 4647', Ftge 1808', Hrs 76.8
VIS 52 WT 8.8
SURVEY INC 2.0 deg
SH (30%): dk gy tr bri red, sb plty, fri, v slty
LS (50%): lt gy-dk gy sm tan-cream mot, microxl, fri, no est visual por, dull yel (mineral) flor, NSOC
Heebner Shale @ log 4131' (+122)
CARB SH (30%): dk gy-blk, sb plty-sb blky, fri, sl slty
SH (40%): lt gy-dk gy sme bri red, sb plty, fri, v slty

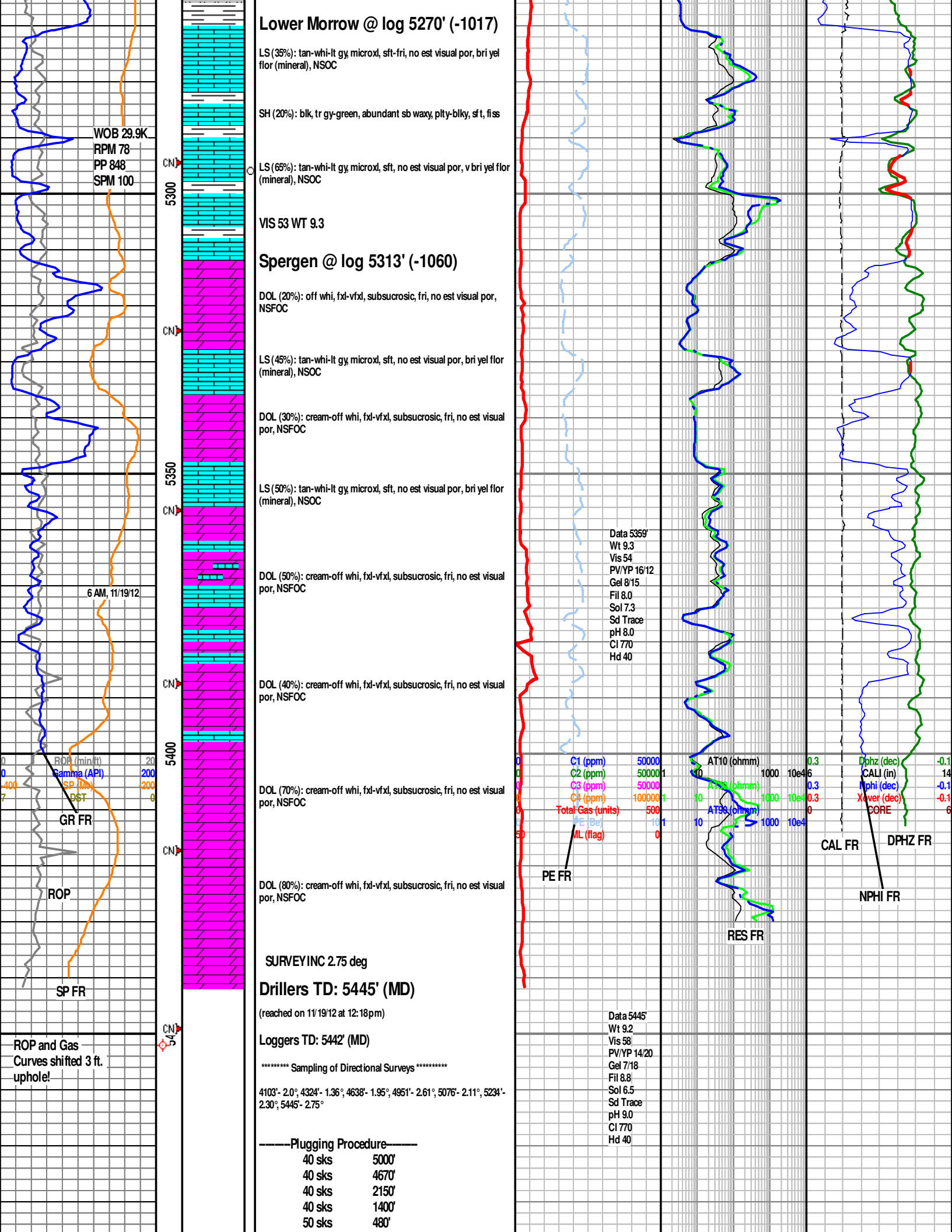

LS (60%): lt gy-dk gy sm tan-cream mot, microxl, fri, no est visual por, dull yel (mineral) flor, NSOC
Lansing @ log 4182' (+71)
LS (70%): bcm lt gy-lt tan, micro xl, v hd, slool w/ chk matrix and calc infill, no est visual por, dull yel (mineral) flor, NSOC
SH (30%): lt gy-dk gy sme bri red, sb plty, v hd, slty
LS (85%): lt gy-cream mot, microxl, sft-fri, no est visual por, dull yel (mineral) flor, NSOC
SLTST (10%): lt red/brn, vfg, brit, arg
LS (90%): lt gy-dk gy sme tan-cream mot, microxl, hd, no est visual por, dull yel (mineral) flor, NSOC
LS (80%): lt gy-off whi sm tan-cream mot, microxl, brit-hd, no est visual por, dull yel (mineral) flor, NSOC
CARB SH (10%): dk gy-blk, sb plty-sb blky, fri, sl slty
SLTST (15%): dk red/brn, vfg, brit, arg
LS (80%): lt gy-off whi sm tan-cream mot, microxl, hd, no est visual por, dull yel (mineral) flor, NSOC
VIS 45 WT 8.8
LS (90%): lt gy-off whi sm tan-cream mot, microxl, hd, no est visual por, dull yel (mineral) flor, NSOC
CARB SH (5%): dk gy-blk, sb plty-sb blky, fri, slty
SURVEY INC 1.36 deg
LS (80%): lt gy-off whi sm tan-cream mot, microxl, v hd, no est visual por, dull yel (mineral) flor, NSOC
CARB SH (5%): dk gy-blk, sb plty-sb blky, sft, v slty
LS (70%): off whi sm tan-cream mot, microxl, fri, no est visual por, dull yel (mineral) flor, NSOC
LS (80%): off whi sm tan-cream mot, microxl, fri, no est visual por, bcm bri yel (mineral) flor, NSOC
Mud Data
4210'
Wt 8.8
Vis 49
PV/YP 17/9
Gel 4/12
Fil 6.4
Sol 3.5
Sd Trace
pH 10.0
Cl 740
Hd 40
Gamma (API)
SP (Mv)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
Testing Gas Detector!
Carbide Lag = 32 min.
6 AM, 11/15/12
WOB 36.1K
RPM 89
PP 854
SPM 58
4200
4250
4300
4350
CN


ROP (min/ft)
Gamma (API)
SP (mv)
BHT
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
ML (flag)
AT10 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
4400
4450
4500
4550
4600
CN
SH (20%): blk, sb plty-sb blky, hd, slty
CARB SH (15%): dk gy-blk, sb plty-sb blky, hd, slty
LS (70%): lt gy-dk gy, microxl-vfxl, fri, vool w/ calc infill, no est visual por, dull-mod yel (mineral) flor, NSOC
DOL (35%): lt gy, fxl-vfxl, sucrosic, clean, fri, 6% est visual por, NSFOC
LS (65%): lt gy-dk gy, microxl, fri, no est visual por, dull yel (mineral) flor, NSOC
CARB SH (20%): dk gy-blk, sb plty-sb blky, brit, slty
LS (80%): lt gy-dk gy, microxl, fri, no est visual por, dull yel (mineral) flor, NSOC
LS (70%): lt gy-dk gy, microxl, hd, slool w/ calc infill, no est visual por, bri yel (mineral) flor, NSOC
Mud Data
4445'
Wt 8.9
Vis 43
PV/YP 10/12
Gel 4/10
Fil 8.0
Sol 4.3
Sd Trace
pH 10.0
Cl 770
Hd 40
WOB 38.1K
RPM 78
PP 840
SPM 88
VIS 53 WT 8.8
SH (20%): blk, sb plty-sb blky, firm, carb, slty
DOL (20%): tan, vfxl, sucrosic, clean, sft-fri, 6% est visual por, NSFOC
LS (70%): lt gy-dk gy, microxl tr vfxl, fri, vool w/ chk matrix and calc infill, abnt oomoldic porous est 15%, poor perm, dull-mod yel (mineral) flor, NSOC
Marmaton @ log 4547' (-294)
LS (50%): lt gy-tan, microxl tr vfxl, fri, tr vool w/ chk matrix and calc infill, tr oomoldic porous est 15%, poor perm, dull-mod yel (mineral) flor, NSOC, tr pyrite
DOL (20%): tan, vfg, sucrosic, clean, sft, 6% est visual por, NSFOC
Mud Data
4620'
Wt 9.0
Vis 51
PV/YP 18/8
Gel 7/15
Fil 7.6
Sol 5.0
Sd Trace
pH 10.0
Cl 760
Hd 40
DOL (25%): lt brn-tan, vfxl, fri, calc infill, rare-sme intxl and vuggy porous est 10%, poor perm, spotty v bri lt yel flor, spotty lt-dk brn stn, mod odor, slow good strmg mlky bri lt yel cut
DOL (40%): lt brn-tan, vfxl, fri, calc infill w/ chky matrix, v rare intxl and vuggy porous est 6%, NSFOC


Pawnee mbr @ log 4609' (-356)
DOL LS (65%): lt gy-tan, microxl tr vfxl, fri, calc infill, rare intxl and vuggy porous est 10-12%, v spotty v bri lt yel flor, v spotty lt brn stn, wk odor, slow v wk-mod strmg resid ring lt yel cut
SURVEY INC 1.95 deg
DOL LS (65%): lt gy-tan, vfxl, fri, calc infill, tight, rare intxl and vuggy porous est 6%, spotty v bri lt yel flor, spotty lt-dk brn stn, mod odor, slow wk-mod strmg lt yel cut
Ft. Scott mbr @ log 4644' (-391)
DST #1, 4606'-4647' Log (4603'-4644')
Conventional BH
Times: 15-30-60-90
1st open-built to 5 1/2" in 15 min., 2nd open-BOB in 55 min. and held
Recovered 80' of SGOCMW, 120' of SGMCW
Sampler: 120ml Oil, 230ml Mud, 1650ml Water, 51k Cl
ISI 1269 FSI 1256
DOL LS (25%): lt gy-tan, vfxl, fri, calc infill, tight, rare intxl and vuggy porous est 6-8%, spotty v bri lt yel flor, spotty lt-dk brn stn, mod odor, slow wk-mod strmg lt yel cut (possible cavings)
Bit #3RR 7 7/8", HTC GX-28C, SN 5212429, Jets 3X15s, DI 4647', DO 5445', Ftge 798', Hrs 48.7
Cherokee @ log 4689' (-436)
VIS 51 WT 9.0
LS (75%): lt gy, microxl, fri, calc infill, no est visual por, tr v spotty v bri lt yel flor, v slow mod strmg resid ring lt yel cut, tr dism pyrite
LS (60%): lt gy, microxl, fri, no est visual por, v dull yel (mineral) flor, NSOC
CARB SH (40%): dk gy-blk, sb plty-sb blky, firm, sl slty
LS (70%): lt gy, microxl, fri, no est visual por, v dull yel (mineral) flor, NSOC
SH (20%): dk gy-blk, sb plty-sb blky, hd, sl slty, carb
SH (30%): dk gy-blk, sb plty-sb blky, firm, sl slty, carb
CARB SH (20%): dk gy-blk, sb plty-sb blky, hd, sl slty
SH (20%): dk gy-blk, sb plty-sb blky, firm, sl slty, carb
LS (50%): lt gy, microxl sme vfxl, fri, calc infill, no est visual por, tr v spotty v bri lt yel flor, v slow good strmg resid ring lt yel cut
CARB SH (15%): dk gy-blk, sb plty-sb blky, hd, sl slty, tr dism pyrite
LS (80%): lt gy, microxl, firm, no est visual por, v dull yel (mineral) flor, NSOC, tr dism pyrite
DST# 1
6 AM, 11/16/12
6 AM, 11/17/12
WOB 38.9K
RPM 73
PP 880
SPM 58
TG 368u
CG
Mud Data
4700'
Wt 9.0
Vis 47
PV/YP 17/9
Gel 4/9
Fil 7.2
Sol 5.0
Sd Trace
pH 10.0
Cl 740
Hd 40
4650
4700
4750
4800
CN
P
DST
ROP (min/ft)
Gamma (API)
SP (Mv)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE


SH (30%): dk gy-blk, sb plty-sb blky, firm, sl slty, carb
LS (50%): lt gy, microxl, fri, no est visual por, v dull yel (mineral) flor, NSOC
LS (60%): lt gy, microxl, hd, no est visual por, v dull yel (mineral) flor, NSOC
LS (70%): lt gy, microxl, hd, no est visual por, v dull yel (mineral) flor, NSOC
SH (30%): dk gy-blk, sb plty-sb blky, firm, slty, carb
CARB SH (25%): dk gy-blk, sb plty-sb blky, firm, slty
VIS 55 WT 9.0
CARB SH (40%): dk gy-blk, sb plty-sb blky, firm, slty
Atoka @ log 4917' (-664)
SH (55%): blk, plty, fri-firm, carb, fiss
CARB SH (25%): dk gy-blk, sb plty-sb blky, fri-firm, slty
LS (50%): lt gy, microxl, fri, no est visual por, v dull yel (mineral) flor, NSOC
SH (35%): blk, plty, fri-firm, carb, fiss
SURVEY INC 2.61 deg
CARB SH (50%): dk gy-blk, sb plty, sft, sl slty, tr fiss, tr dism pyrite
LS (60%): lt gy, microxl tr vfxl, firm, calc infill, no est visual por, tr v spotty v bri lt yel flor, v slow v wk strmg lt yel cut
CARB SH (40%): dk gy-blk, sb plty-sb blky, sft, slty
CARB SH (40%): dk gy-blk, sb plty-sb blky, sft, sl slty, tr fiss
LS (65%): lt gy, microxl tr vfxl, fri, calc infill, no est visual por, v dull yel (mineral) flor, NSOC
LS (55%): lt gy, microxl, fri, no est visual por, v dull yel (mineral) flor, NSOC
CARB SH (30%): dk gy-blk, sb plty, sft, sl slty, sme fiss
Morrow Shale @ log 5046' (-793)
4850
4900
4950
5000
CN
WOB 35.0K
RPM 82
PP 952
SPM 58
P
CG
Mud Data
4895'
Wt 9.0
Vis 57
PV/YP 20/17
Gel 5/15
Fil 8.0
Sol 5.0
Sd Trace
pH 9.0
Cl 760
Hd 40
Mud Data
5039'
Wt 9.0
Vis 49
PV/YP 18/12
Gel 4/12
Fil 8.0
Sol 5.0
Sd Trace
pH 9.0
ROP (min/ft)
Gamma (API)
SP (MV)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
6 AM, 11/18/12


CARB SH (40%): dk gy-blk, sb plty-sb blky, hd, sl slty
LS (50%): lt gy-cream, microxl tr vfxl, fri, no est visual por, v dull yel (mineral) flor, NSOC
SH (50%): blk, tr gy-green, abundant sb waxy, plty-blky, hd, v slty
SURVEY INC 2.11 deg
SH (65%): blk, tr gy-green, abundant sb waxy, plty-blky, hd, v slty, bcm fiss
WOB 32.9K
RPM 86
PP 887
SPM 54
VIS 54 WT 9.1
SH (85%): blk, tr gy-green, abundant sb waxy, plty-blky, fri, fiss
SS (>5%): off whi-clr-trans, fg-mg, ang, w srt, abun silic cement, hd, tight, no est vis por, NFSOC, tr unconsolidated qtz xl
SH (85%): blk, tr gy-green, abundant sb waxy, plty-blky, firm-hd, fiss
SH (90%): blk, tr gy-green, abundant sb waxy, plty-blky, firm-hd, fiss, tr pyrite
SH (90%): blk, tr gy-green, abundant sb waxy, plty-blky, bcm sft, fiss
SS (>5%): off whi-clr-trans, fg-mg, ang, w srt, abun silic cement, fri, tight, no est vis por, NFSOC, tr unconsolidated qtz xl
SH (90%): blk, tr gy-green, abundant sb waxy, plty-blky, sft, fiss
SS (>5%): off whi-clr-trans, fg-mg, ang, w srt, abun silic cement, fri, tight, no est vis por, NFSOC, tr unconsolidated qtz xl
SURVEY INC 2.30 deg
SH (90%): blk, tr gy-green, abundant sb waxy, plty-blky, sft, fiss
SH (90%): blk, tr gy-green, abundant sb waxy, plty-blky, sft, fiss
5050
5100
5150
5200
5250
CN
P
Cl 760
Hd 40
ROP (min/ft)
Gamma (API)
SP (Mv)
DST
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
Mud Data
5233'
Wt 9.1
Vis 58
PV/YP 16/18
Gel 6/18
Fil 8.0
Sol 5.8
Sd Trace
pH 8.0
Cl 770
Hd 40


WOB 29.9K
RPM 78
PP 848
SPM 100
6 AM, 11/19/12
ROP (min/ft)
Gamma (API)
SP (Mv)
DST
GR FR
ROP
SP FR
ROP and Gas Curves shifted 3 ft. uphole!
5300
5350
5400
5445
CN
Lower Morrow @ log 5270' (-1017)
LS (35%): tan-whi-lt gy, microxl, sft-fri, no est visual por, bri yel flor (mineral), NSOC
SH (20%): blk, tr gy-green, abundant sb waxy, plty-blky, sft, fiss
LS (65%): tan-whi-lt gy, microxl, sft, no est visual por, v bri yel flor (mineral), NSOC
VIS 53 WT 9.3
Spergen @ log 5313' (-1060)
DOL (20%): off whi, fxl-vfxl, subsucrosic, fri, no est visual por, NSFOC
LS (45%): tan-whi-lt gy, microxl, sft, no est visual por, bri yel flor (mineral), NSOC
DOL (30%): cream-off whi, fxl-vfxl, subsucrosic, fri, no est visual por, NSFOC
LS (50%): tan-whi-lt gy, microxl, sft, no est visual por, bri yel flor (mineral), NSOC
DOL (50%): cream-off whi, fxl-vfxl, subsucrosic, fri, no est visual por, NSFOC
DOL (40%): cream-off whi, fxl-vfxl, subsucrosic, fri, no est visual por, NSFOC
DOL (70%): cream-off whi, fxl-vfxl, subsucrosic, fri, no est visual por, NSFOC
DOL (80%): cream-off whi, fxl-vfxl, subsucrosic, fri, no est visual por, NSFOC
SURVEY INC 2.75 deg
Drillers TD: 5445' (MD)
(reached on 11/19/12 at 12:18pm)
Loggers TD: 5442' (MD)
********* Sampling of Directional Surveys **********
4103'- 2.0°, 4324'- 1.36°, 4638'- 1.95°, 4951'- 2.61°, 5076'- 2.11°, 5234'- 2.30°, 5445'- 2.75°
--------Plugging Procedure--------
40 sks 5000'
40 sks 4670'
40 sks 2150'
40 sks 1400'
50 sks 480'
Data 5359'
Wt 9.3
Vis 54
PV/YP 16/12
Gel 8/15
Fil 8.0
Sol 7.3
Sd Trace
pH 8.0
Cl 770
Hd 40
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
PE FR
AT10 (ohmm)
AT20 (ohmm)
AT90 (ohmm)
RES FR
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
CAL FR
DPHZ FR
NPHI FR
Data 5445'
Wt 9.2
Vis 58
PV/YP 14/20
Gel 7/18
Fil 8.8
Sol 6.5
Sd Trace
pH 9.0
Cl 770
Hd 40

5500

15 sks surface
10 sks rathole
10 sks mousehole
---
245 sks total

Thank you for using our service!

RYAN SCRIBNER
Goolsby Brothers & Associates
(November 20, 2012)