Vecta

Oil & Gas Ltd.

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

Well Name:	**Snowmass 44-32**
Location:	**SESE Sec 32-T12S-R47W, Cheyenne County, Colorado**
License Number:	**API: 05-017-07725**
Region:	**Wildcat**
Spud Date:	**10/02/12**
Drilling Completed:	**10/20/12**
Surface Coordinates:	**689' FSL & 643' FEL**
	Lat: 38.95554, Long: -102.68881
Bottom Hole Coordinates:	**Same**
Ground Elevation (ft):	**4517'**
K.B. Elevation (ft):	**4528'**
Logged Interval (ft):	**4400' To: 5858'**
Total Depth (ft):	**5852' LTD**
Formation:	**Morrow, (TD in Spergen).**
Type of Drilling Fluid:	**LSND, Hydro Resources**

CORE

Contractor:	**Halliburton, Core Sleeved and Picked Up By Core Lab.**
Core #:	**1**
Formation:	**Morrow Shale**
Core Interval:	**From: 5544'**
Cut:	**62'**
	To: 5606'
Recovered:	**61'**
Bit type:	**Halliburton FC 4643A**
Size:	**4 x 7.875**
Coring Time:	**3.6**

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

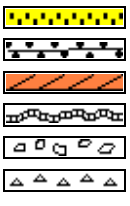
DSTs

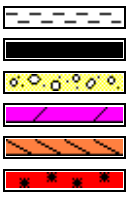
One test (See description column for details)

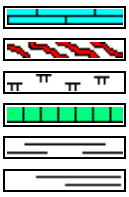
Comments

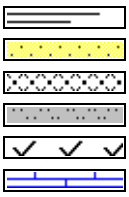
1) 8 5/8" csg set @ 434' KB.
2) Contractor: Integrity Drilling Rig #69. Toolpusher: Josh Kliesin, Company Man: Mark Lipner
3) Plugged and abandoned on October 21, 2012.

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
Moderate
Poor

ROUNDING

Rounded
Subrnd
Subang
Angular

SORTING

Well

OIL SHOWS

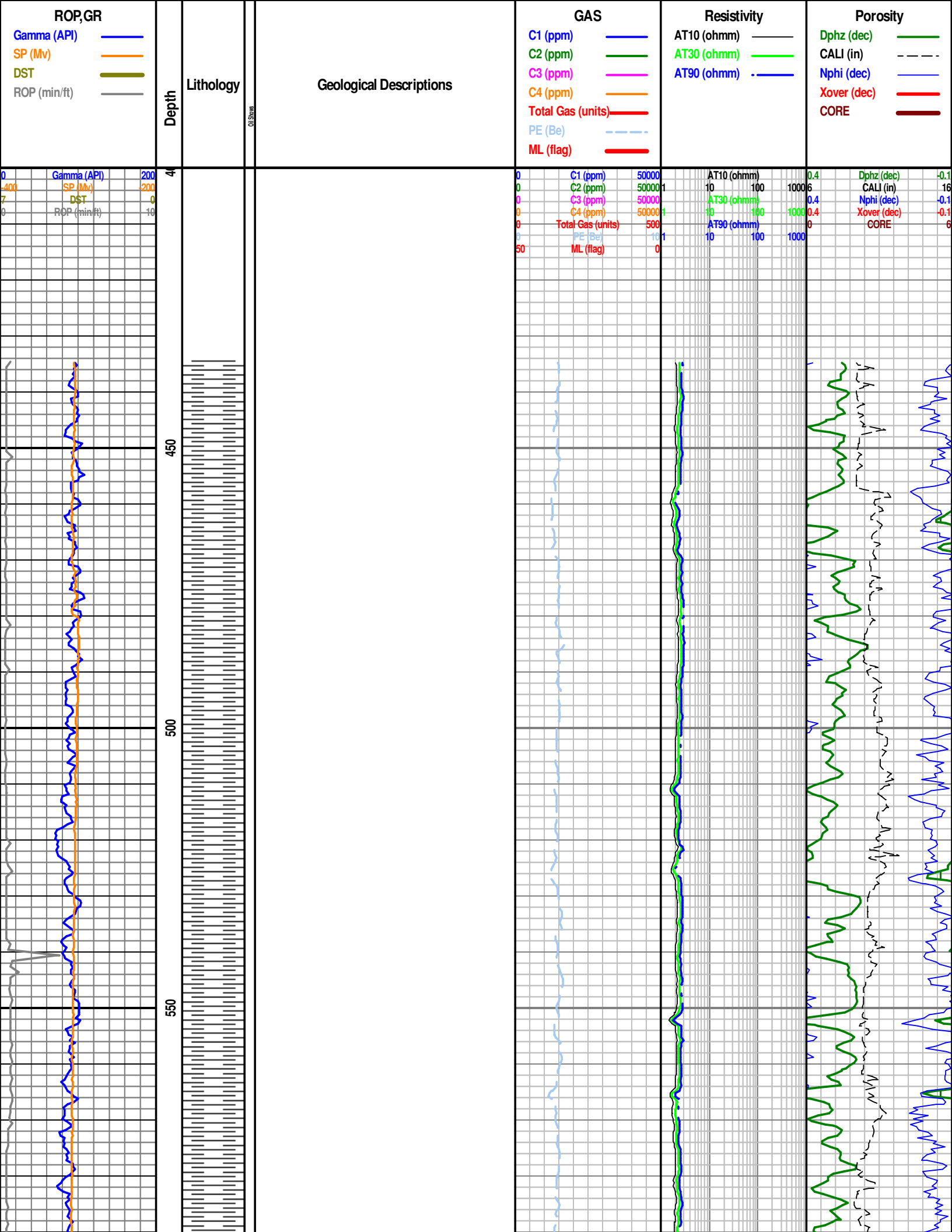
Even
Spotted
near even
Ques
Dead
vspotty

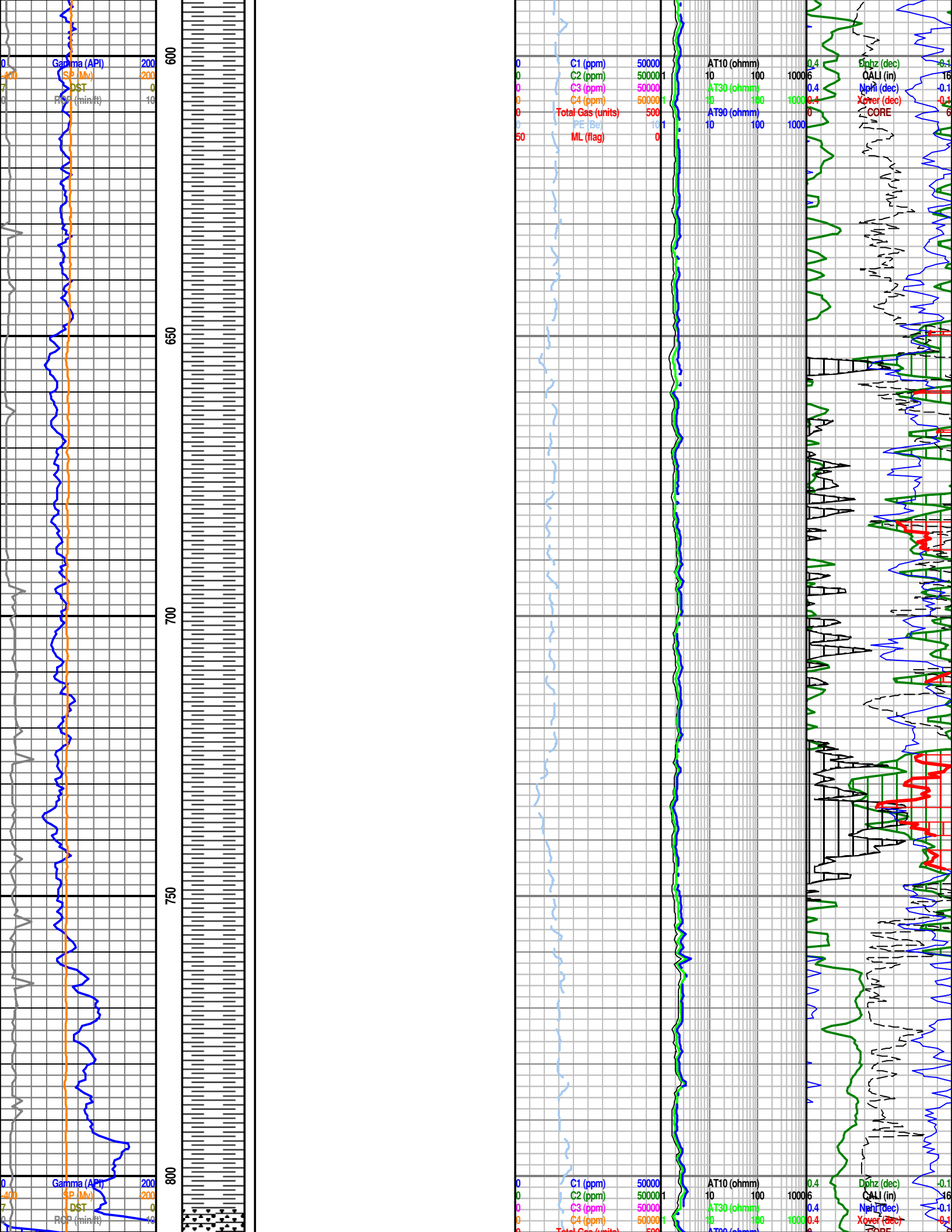
INTERVALS

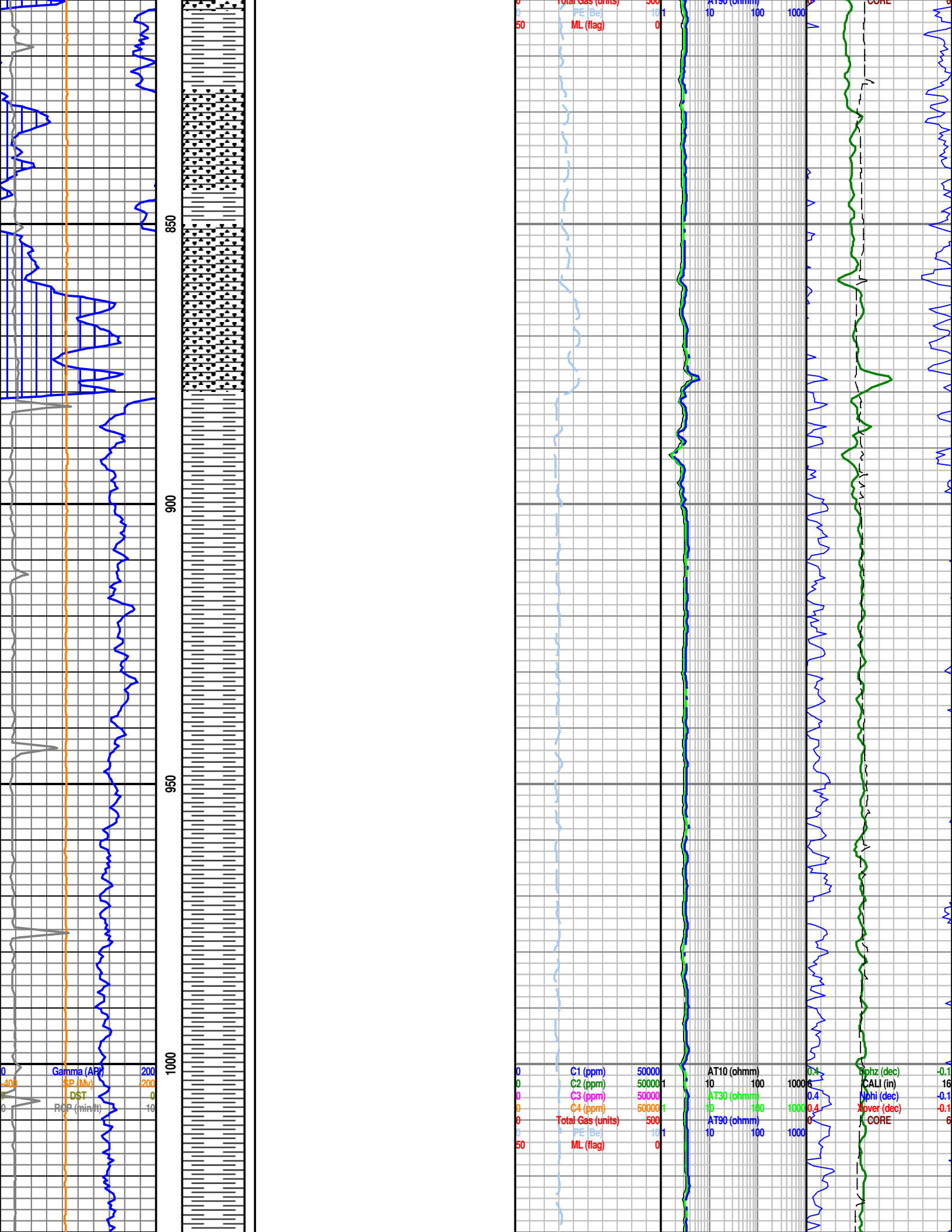
Core
Dst
casing

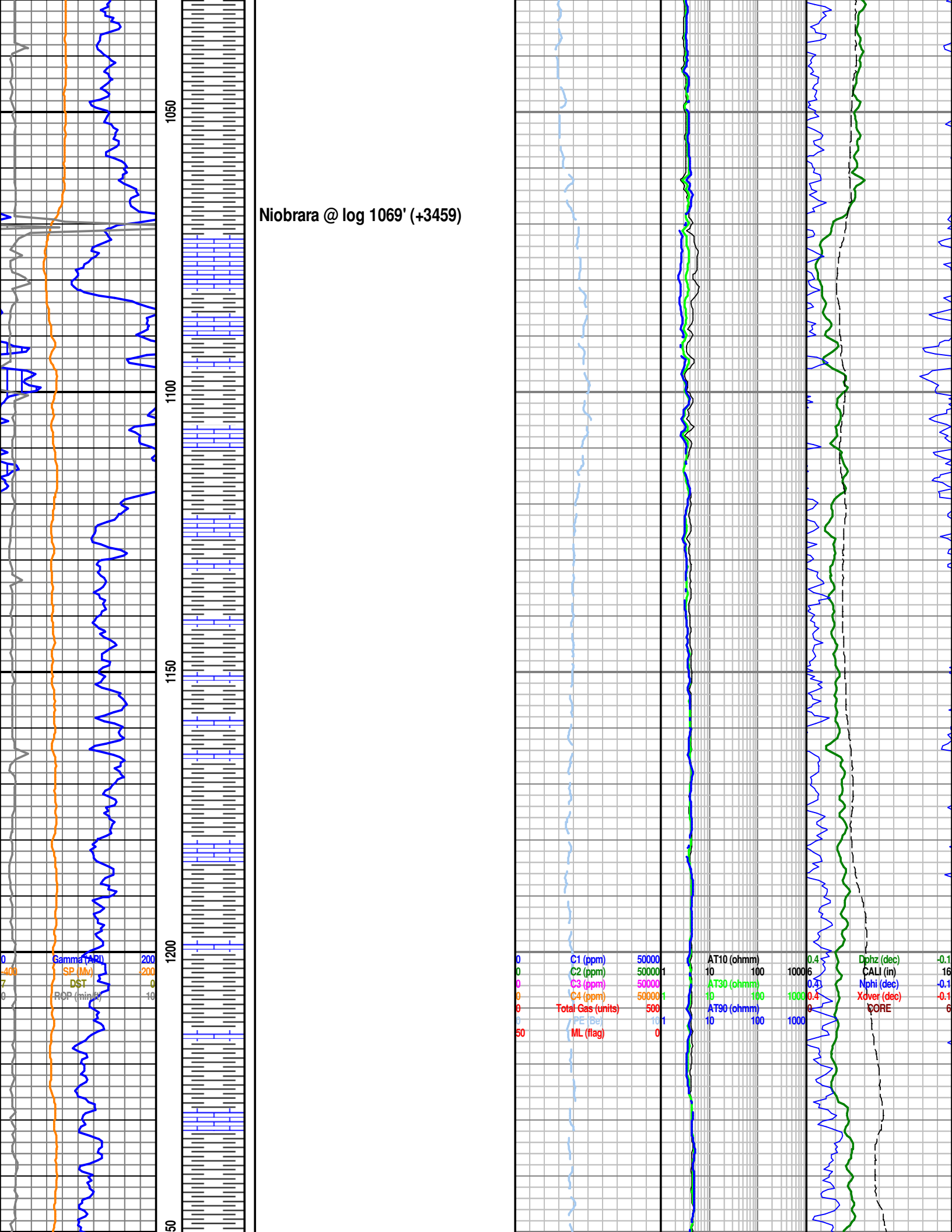
EVENTS

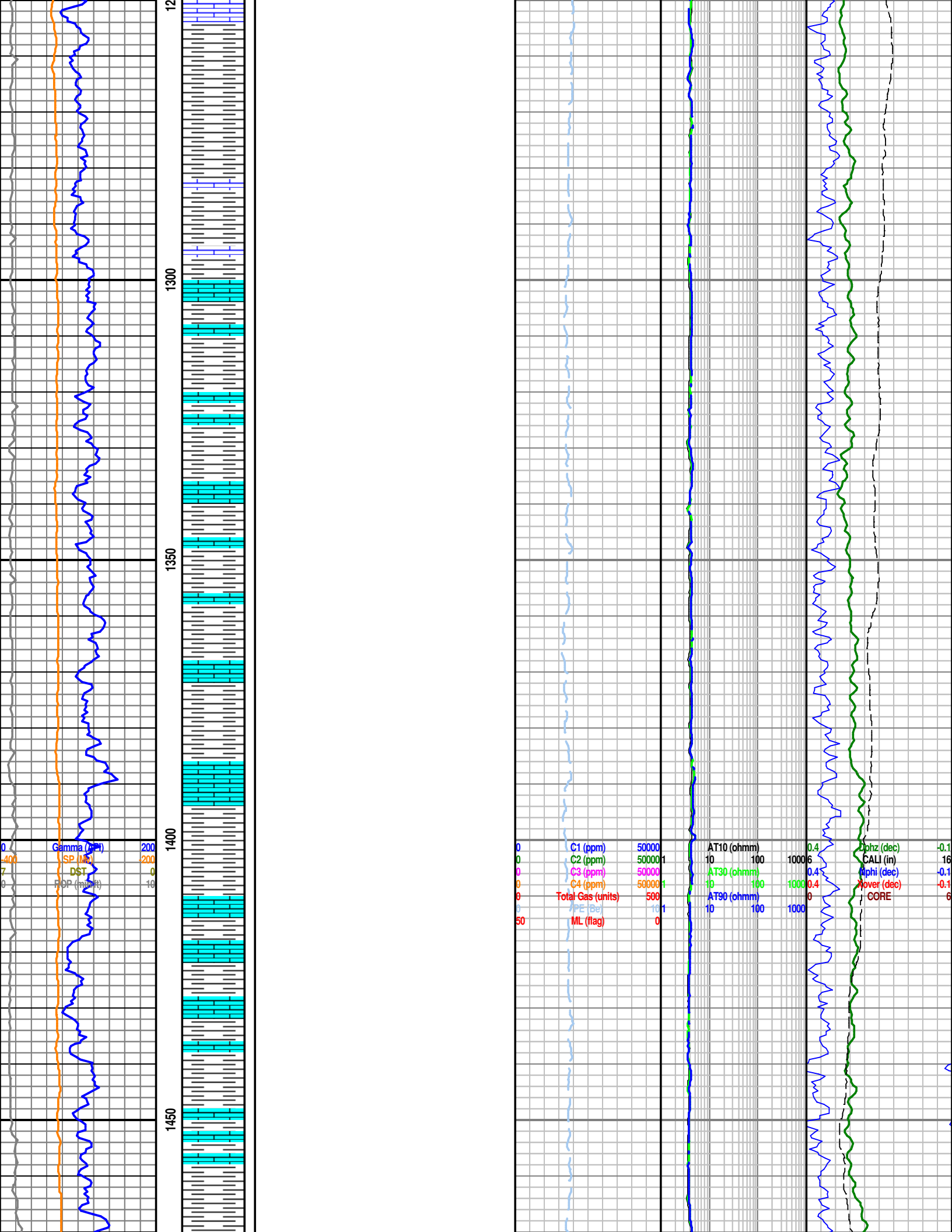
Rft
Sidewall
New bit
casingr
casing
Survey
Off bottom
conn
perfs
Survey(red)

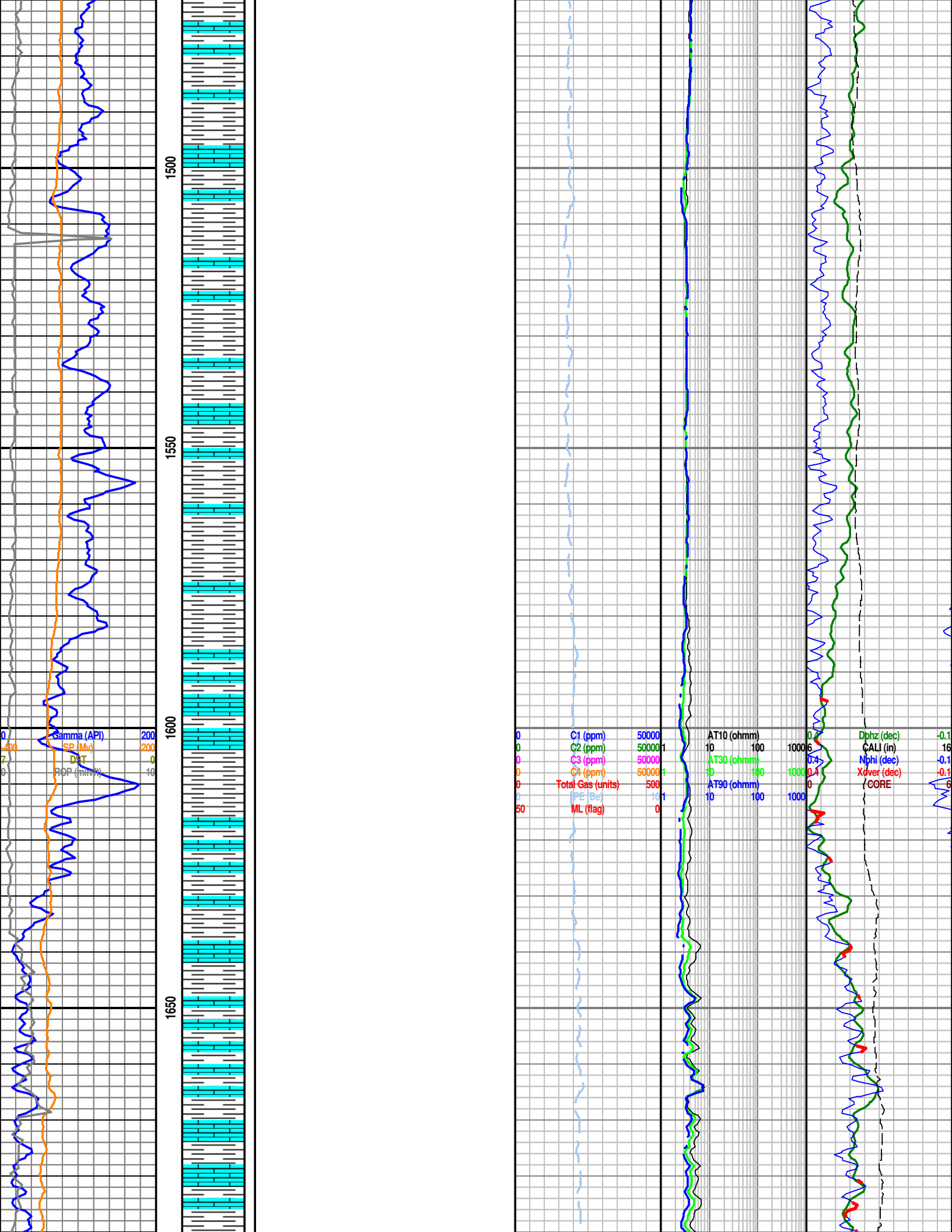

ROP,GR
Gamma (API)
SP (Mv)
DST
ROP (min/ft)
Depth
Lithology
Oil Shows
Geological Descriptions
GAS
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
Resistivity
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Porosity
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
0
Gamma (API)
200
-400
SP (Mv)
200
7
DST
0
0
ROP (min/ft)
10
450
500
550
0
C1 (ppm)
50000
0
C2 (ppm)
50000
0
C3 (ppm)
50000
0
C4 (ppm)
50000
0
Total Gas (units)
500
0
PE (Be)
1
50
ML (flag)
0
AT10 (ohmm)
10
100
1000
AT30 (ohmm)
10
100
1000
AT90 (ohmm)
10
100
1000
0.4
Dphz (dec)
-0.1
6
CALI (in)
16
0.4
Nphi (dec)
-0.1
0.4
Xover (dec)
-0.1
0
CORE
6

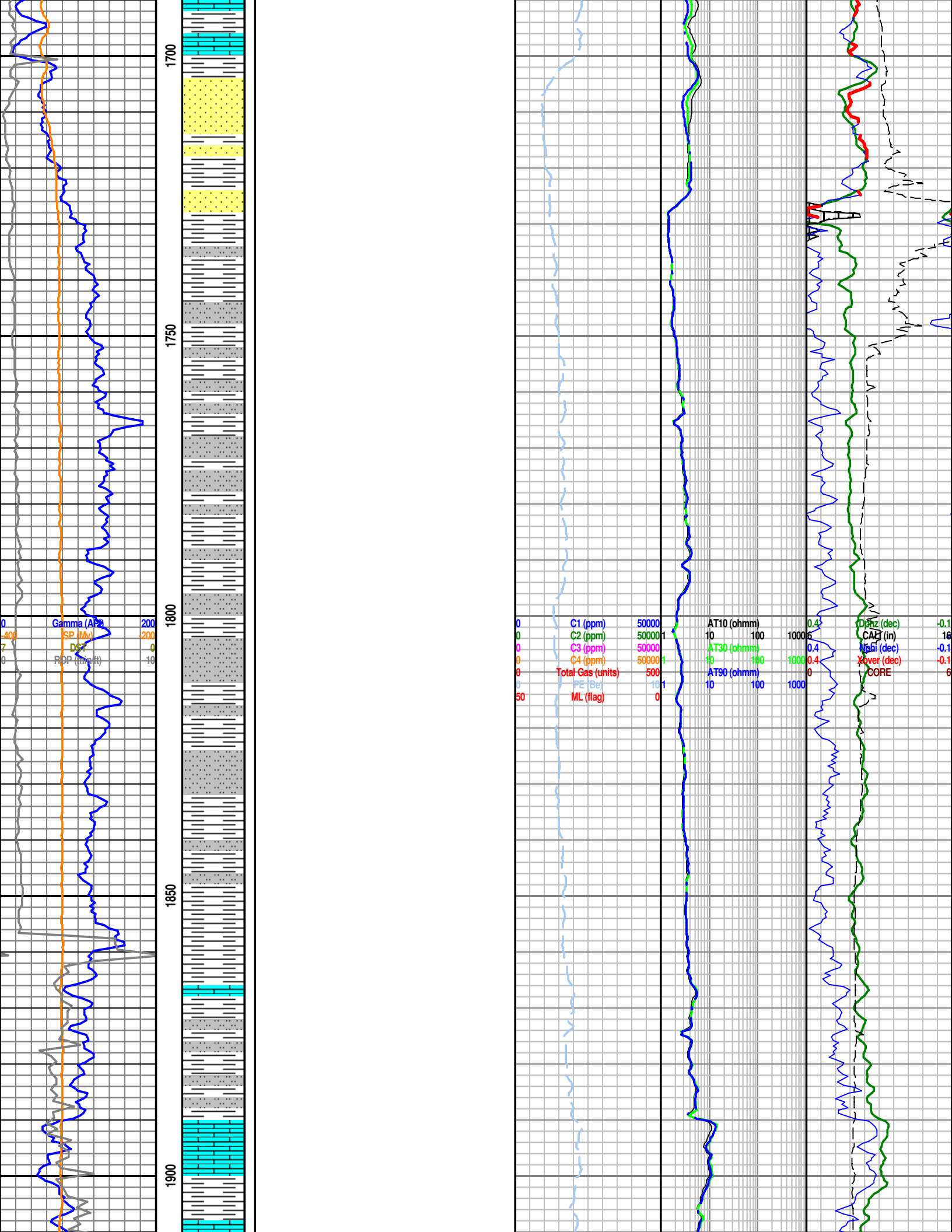

Gamma (API)
SP (Mv)
DST
ROP (min/ft)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
600
650
700
750
800

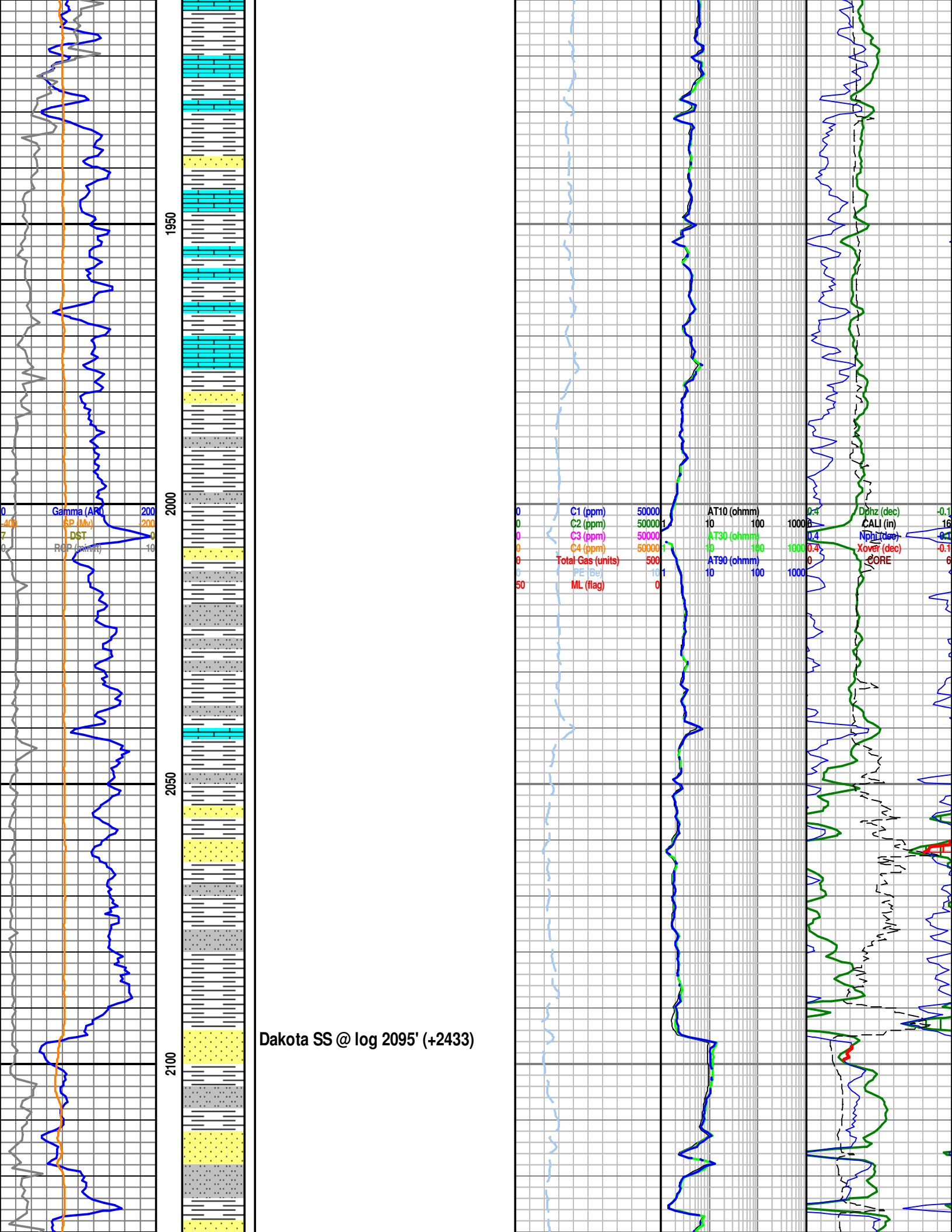

0 Gamma (API) 200
-400 SP (Mv) 200
DST 0
0 ROP (min/ft) 10
850
900
950
1000
0 Total Gas (units) 500
0 PE (Be) 10
50 ML (flag) 0
0 C1 (ppm) 50000
0 C2 (ppm) 50000
0 C3 (ppm) 50000
0 C4 (ppm) 50000
0 Total Gas (units) 500
0 PE (Be) 10
50 ML (flag) 0
0.1 AT10 (ohmm) 1000
10 100 1000
0.1 AT30 (ohmm) 1000
10 100 1000
0.1 AT90 (ohmm) 1000
10 100 1000
0.4 Dphz (dec) -0.1
6 CALI (in) 16
0.4 Nphi (dec) -0.1
0.4 Xover (dec) -0.1
0 CORE 6

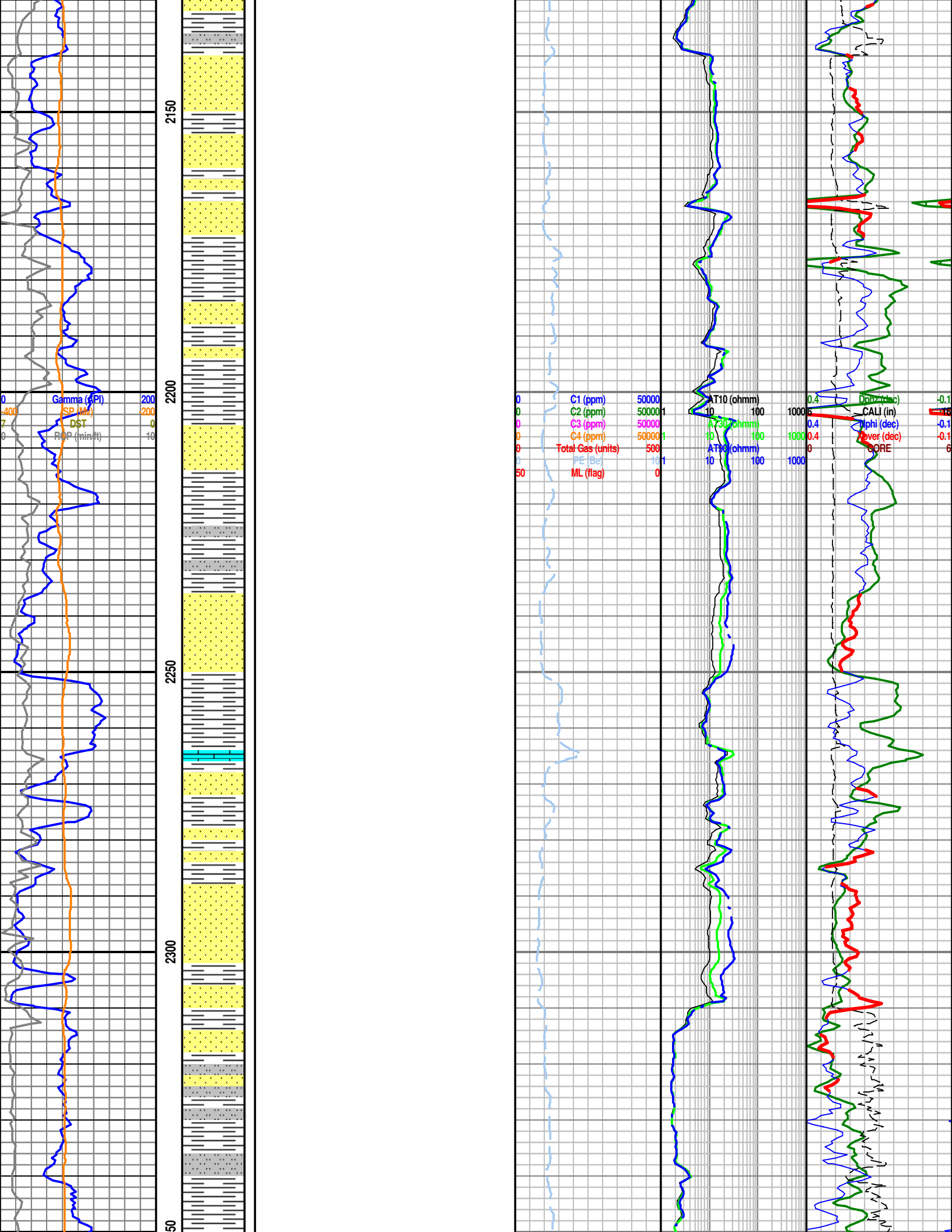

Niobrara @ log 1069' (+3459)
1050
1100
1150
1200
1250
0
Gamma (API)
200
-40
SP (Mv)
200
7
DST
0
0
ROP (min/ft)
10
0
C1 (ppm)
50000
0
C2 (ppm)
50000
1
0
C3 (ppm)
50000
0
C4 (ppm)
50000
1
0
Total Gas (units)
500
0
PE (Be)
10
1
50
ML (flag)
0
AT10 (ohmm)
0.4
10
100
1000
6
AT30 (ohmm)
0.4
10
100
1000
0.4
AT90 (ohmm)
0
10
100
1000
Dphz (dec)
-0.1
CALI (in)
16
Nphi (dec)
-0.1
Xover (dec)
-0.1
CORE
6

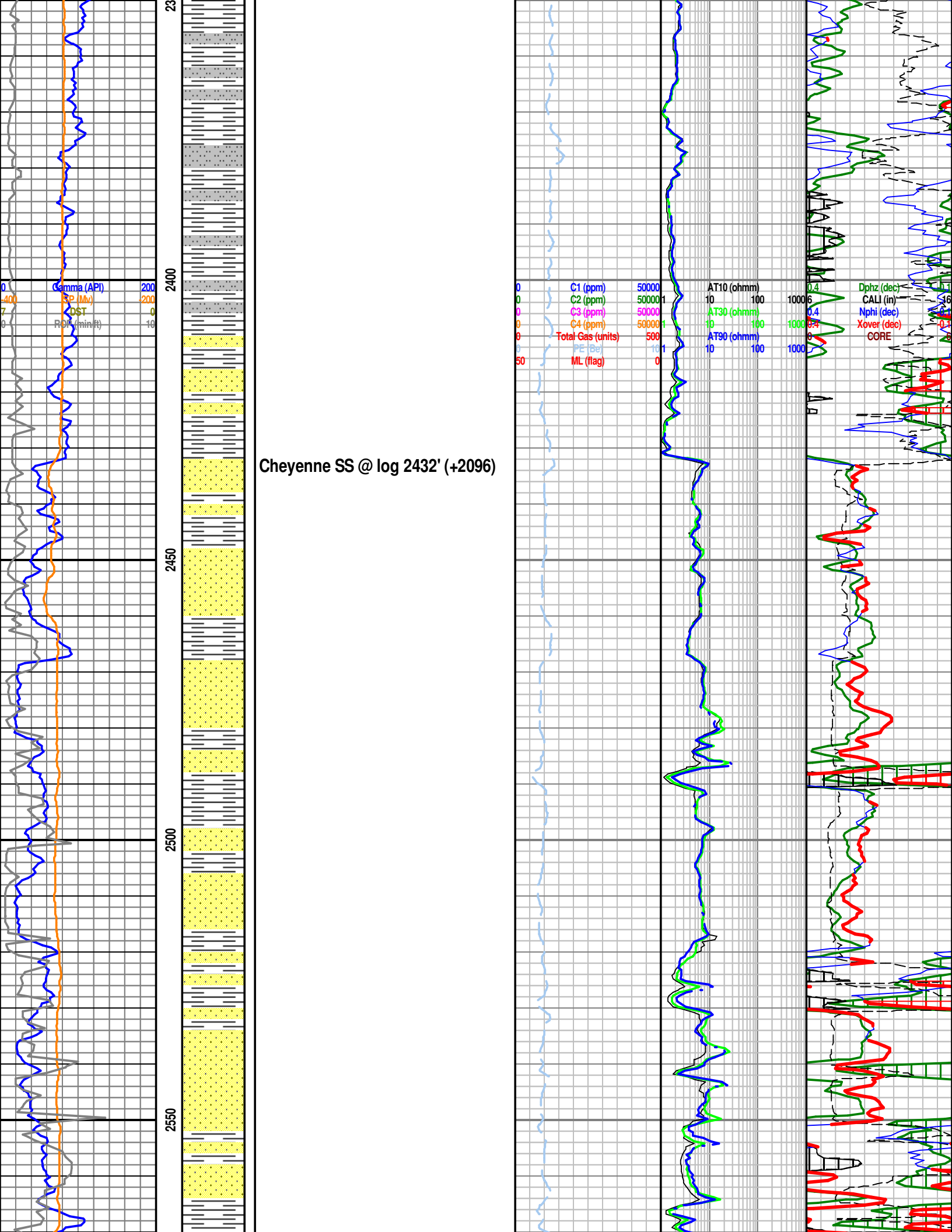

1300
1350
1400
1450
0
Gamma (API)
200
-400
SP (Mv)
200
7
DST
0
0
POP (mcf/d)
10
0
C1 (ppm)
50000
0
C2 (ppm)
50000
1
0
C3 (ppm)
50000
0
C4 (ppm)
50000
1
0
Total Gas (units)
500
0
PE (Be)
10
1
50
ML (flag)
0
AT10 (ohmm)
0.4
10
100
1000
6
AT30 (ohmm)
0.4
10
100
1000
0.4
AT90 (ohmm)
0
10
100
1000
Dphz (dec)
-0.1
CALI (in)
16
Nphi (dec)
-0.1
Nover (dec)
-0.1
CORE
6

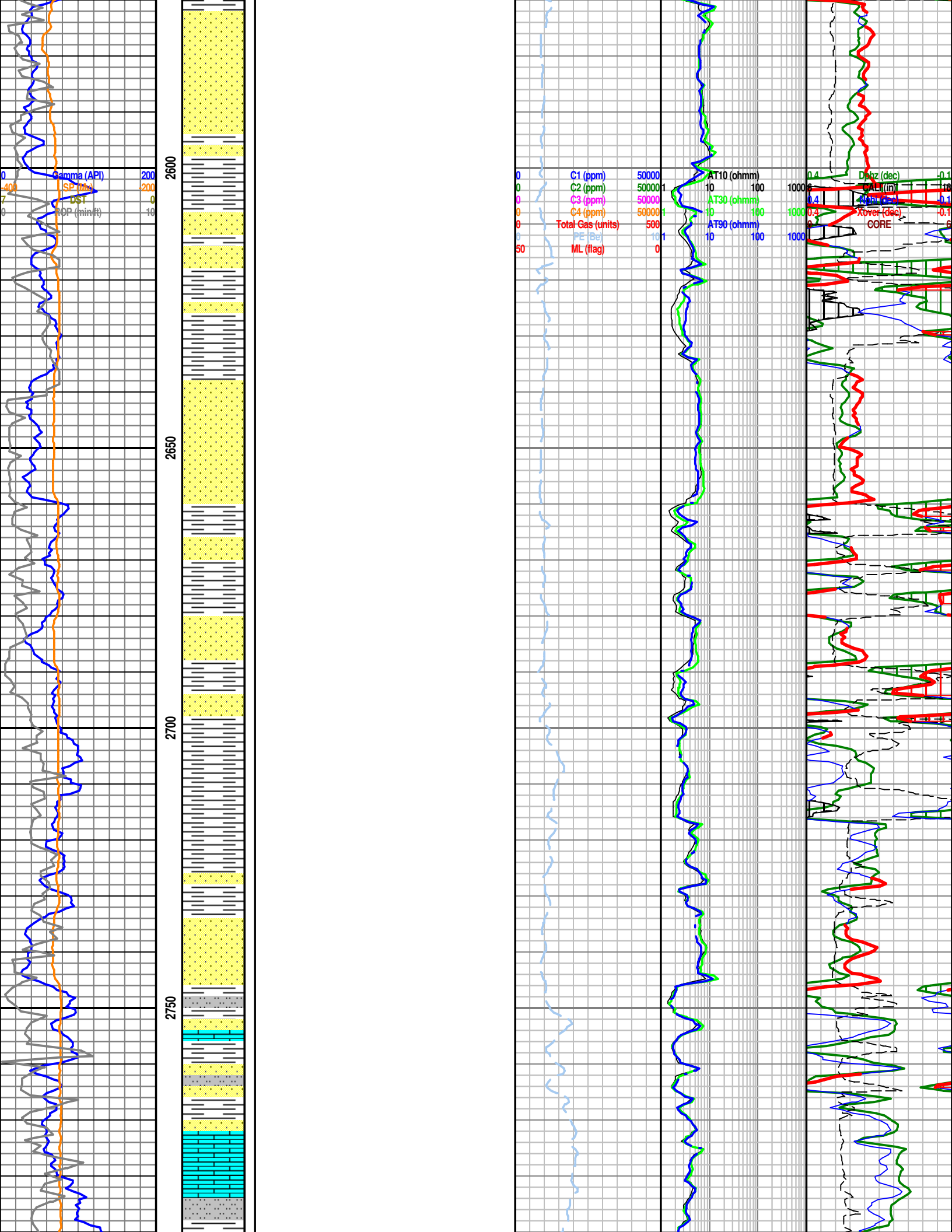

1500
1550
1600
1650
0
Gamma (API)
200
-400
SP (Mv)
200
7
DST
0
0
ROP (min/ft)
10
0
C1 (ppm)
50000
0
C2 (ppm)
500001
0
C3 (ppm)
50000
0
C4 (ppm)
500001
0
Total Gas (units)
500
0
TPE (Be)
10
50
ML (flag)
0
AT10 (ohmm)
0.2
10
100
1000
6
AT30 (ohmm)
0.4
10
100
1000
0.4
AT90 (ohmm)
0
10
100
1000
Dphz (dec)
-0.1
CALI (in)
16
Nphi (dec)
-0.1
Xover (dec)
-0.1
CORE
6

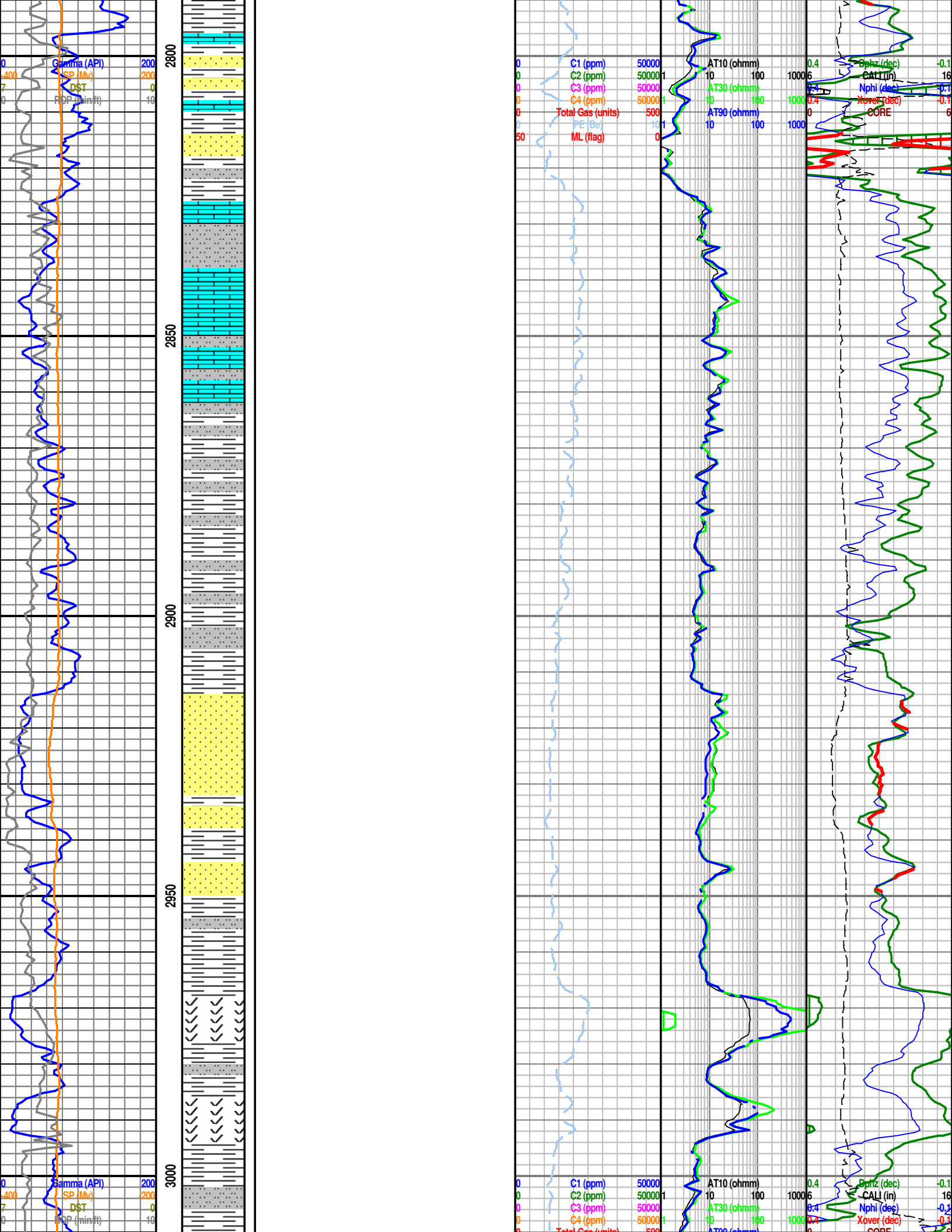

1700
1750
1800
1850
1900
0
Gamma (API)
200
-400
SP (Mv)
200
7
DS7
0
0
ROP (min/ft)
10
0
C1 (ppm)
50000
0
C2 (ppm)
50000
0
C3 (ppm)
50000
0
C4 (ppm)
50000
0
Total Gas (units)
500
0
PE (Be)
10
50
ML (flag)
0
AT10 (ohmm)
10
100
1000
AT30 (ohmm)
10
100
1000
AT90 (ohmm)
10
100
1000
0.4
6
0.4
0.4
0
Dphz (dec)
-0.1
CALI (in)
16
Nphi (dec)
-0.1
Xover (dec)
-0.1
CORE
6

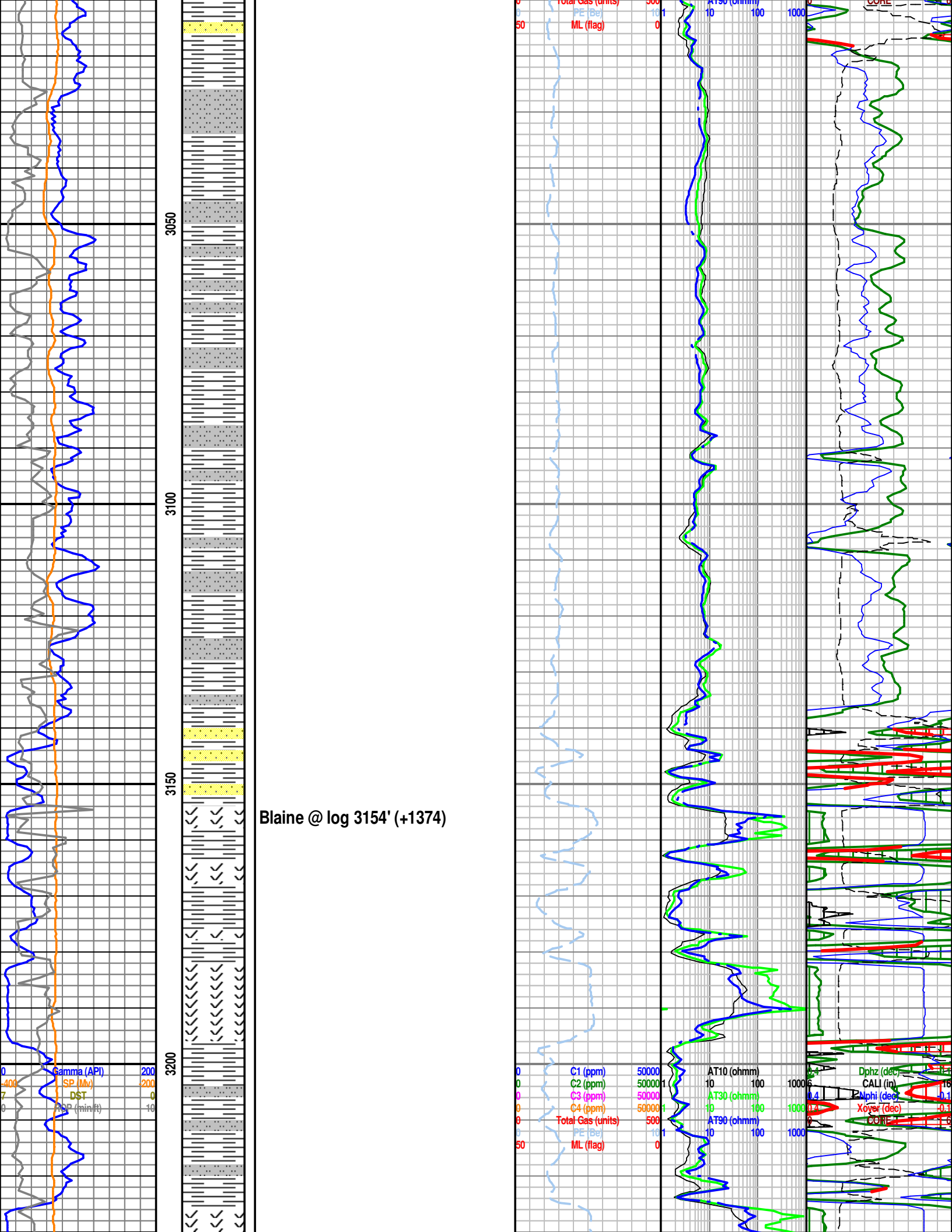

1950
2000
2050
2100
Gamma (API)
SP (Mv)
DST
ROP (min/ft)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
Dakota SS @ log 2095' (+2433)

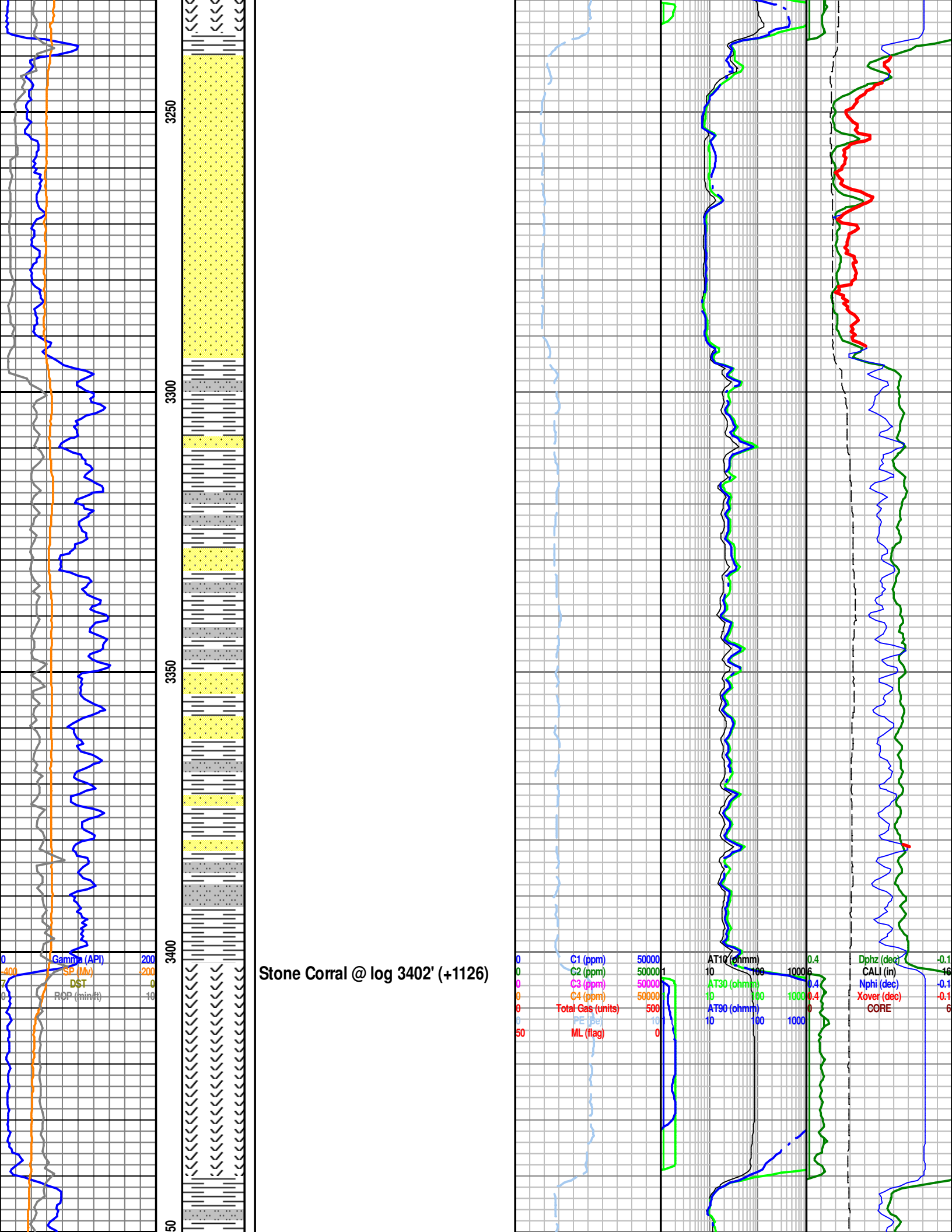

0
Gamma (API)
200
-400
SP (MV)
200
7
DST
0
0
ROP (min/ft)
10
2150
2200
2250
2300
0
C1 (ppm)
50000
0
C2 (ppm)
50000
0
C3 (ppm)
50000
0
C4 (ppm)
50000
0
Total Gas (units)
500
0
PE (Be)
10
50
ML (flag)
0
AT10 (ohmm)
10
100
1000
AT30 (ohmm)
10
100
1000
AT90 (ohmm)
10
100
1000
0.4
Dphi2(dec)
-0.1
6
CALI (in)
16
0.4
Nphi (dec)
-0.1
0.4
Cover (dec)
-0.1
0
CORE
6

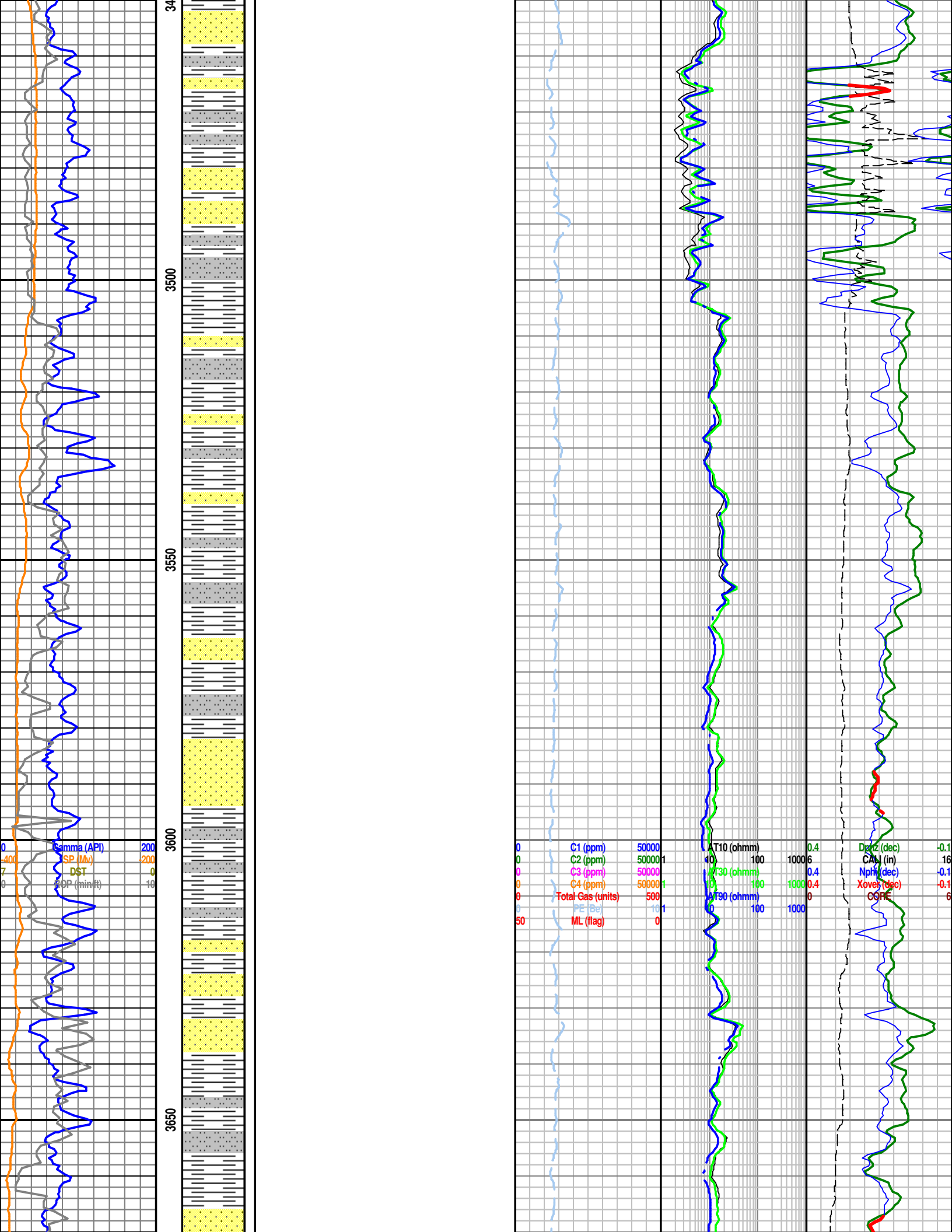

Gamma (API)
SP (Mv)
DST
ROP (min/ft)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
2400
2450
2500
2550
Cheyenne SS @ log 2432' (+2096)

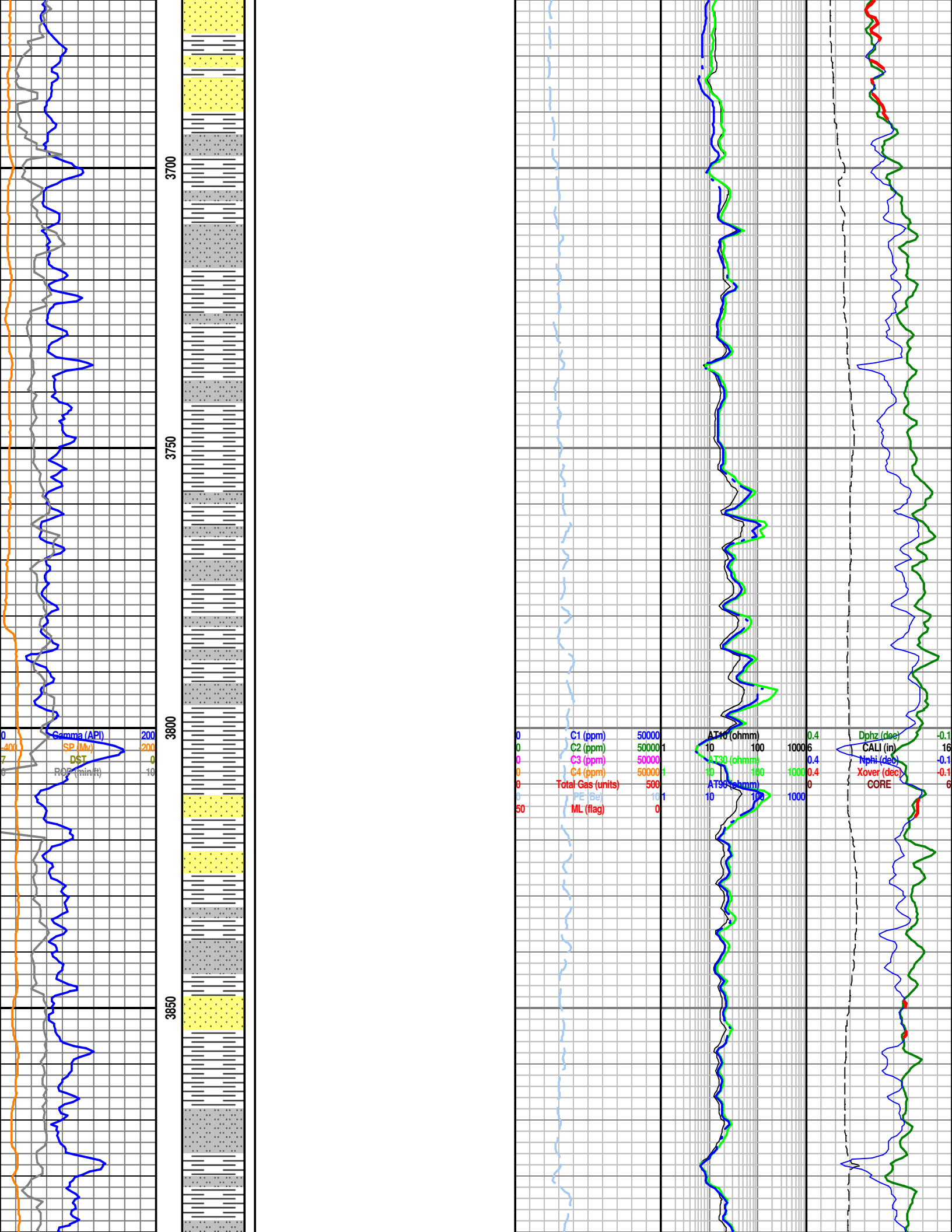

0
Gamma (API)
200
-400
SP (mv)
200
7
DST
0
0
ROP (min/ft)
10
2600
2650
2700
2750
0
C1 (ppm)
50000
0
C2 (ppm)
50000
0
C3 (ppm)
50000
0
C4 (ppm)
50000
0
Total Gas (units)
500
0
PE (Be)
50
ML (flag)
0
1
AT10 (ohmm)
10
100
1000
AT30 (ohmm)
AT90 (ohmm)
0.4
Dphz (dec)
-0.1
6
CALI (in)
16
0.4
NPHI (dec)
-0.1
0.4
Xover (dec)
-0.1
CORE
6

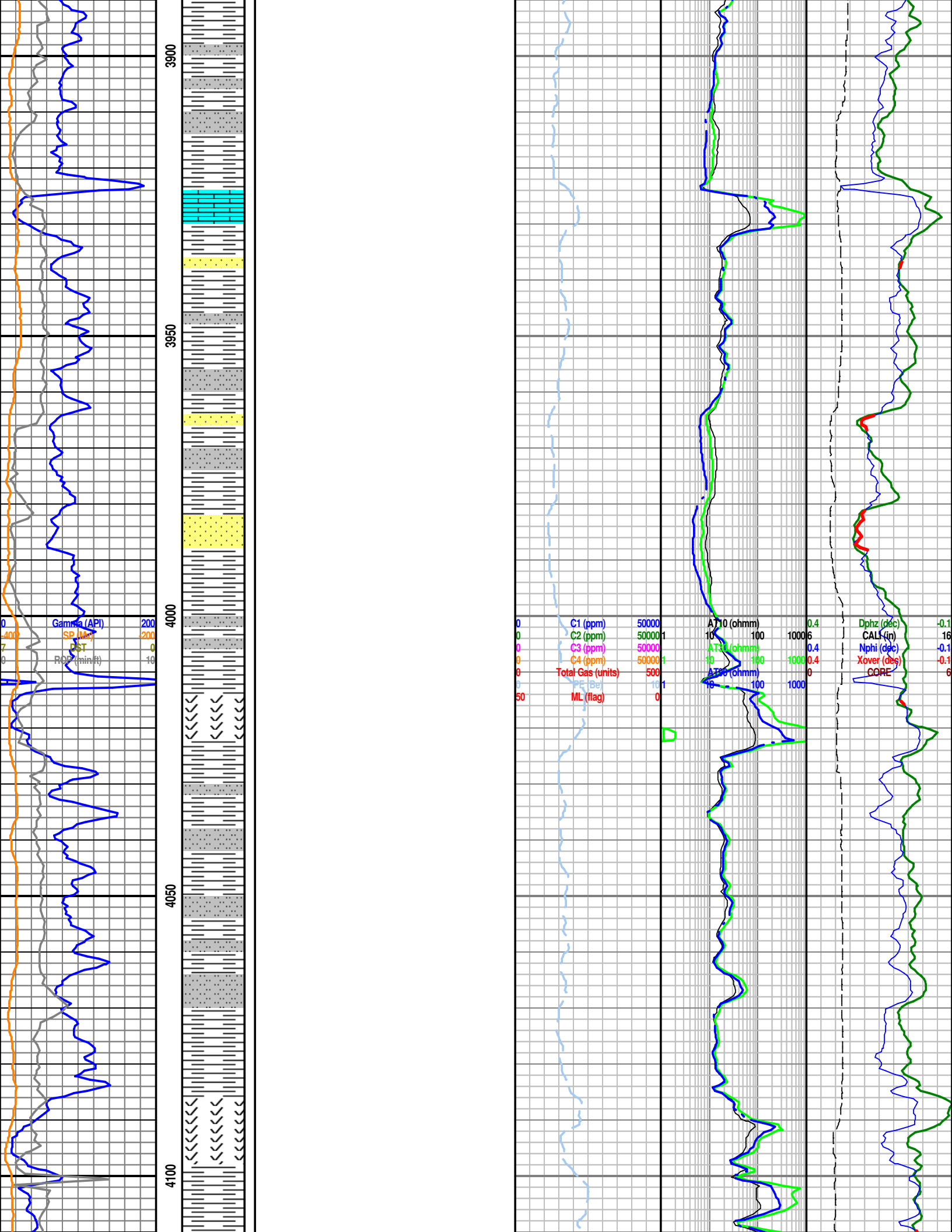

0 Gamma (API) 200
-400 SP (Mv) 200
7 DST 0
0 ROP (min/ft) 10
2800
2850
2900
2950
3000
0 C1 (ppm) 50000
0 C2 (ppm) 50000
0 C3 (ppm) 50000
0 C4 (ppm) 50000
0 Total Gas (units) 500
0 PE (Be) 10
50 ML (flag) 0
AT10 (ohmm) 0.4 Dphz (dec) -0.1
10 100 1000 6 CALI (in) 16
AT30 (ohmm) 0.4 Nphi (dec) -0.1
10 100 1000 0.4 Xover (dec) -0.1
AT90 (ohmm) 0 CORE 6
10 100 1000
1
0 Gamma (API) 200
-400 SP (Mv) 200
7 DST 0
0 ROP (min/ft) 10
0 C1 (ppm) 50000
0 C2 (ppm) 50000
0 C3 (ppm) 50000
0 C4 (ppm) 50000
AT10 (ohmm) 0.4 Dphz (dec) -0.1
10 100 1000 6 CALI (in) 16
AT30 (ohmm) 0.4 Nphi (dec) -0.1
10 100 1000 0.4 Xover (dec) -0.1

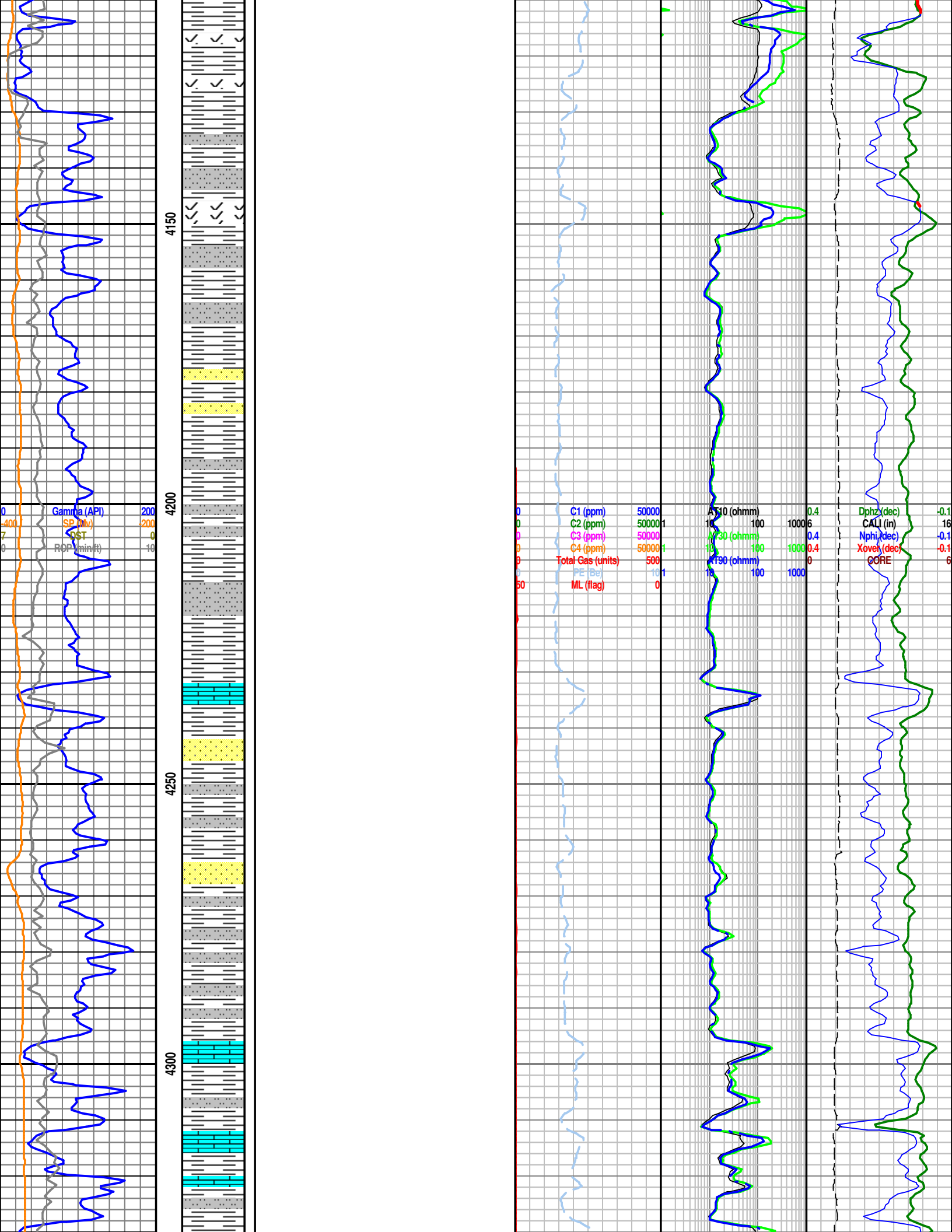

3050
3100
3150
3200
Blaine @ log 3154' (+1374)
0 Gamma (API) 200
-400 SP (Mv) 200
7 DST 0
0 ROP (min/ft) 10
0 Total Gas (units) 500
0 PE (Be) 10
50 ML (flag) 0
0 C1 (ppm) 50000
0 C2 (ppm) 50000
0 C3 (ppm) 50000
0 C4 (ppm) 50000
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
1 10 100 1000
CORE
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
0.4 -0.1

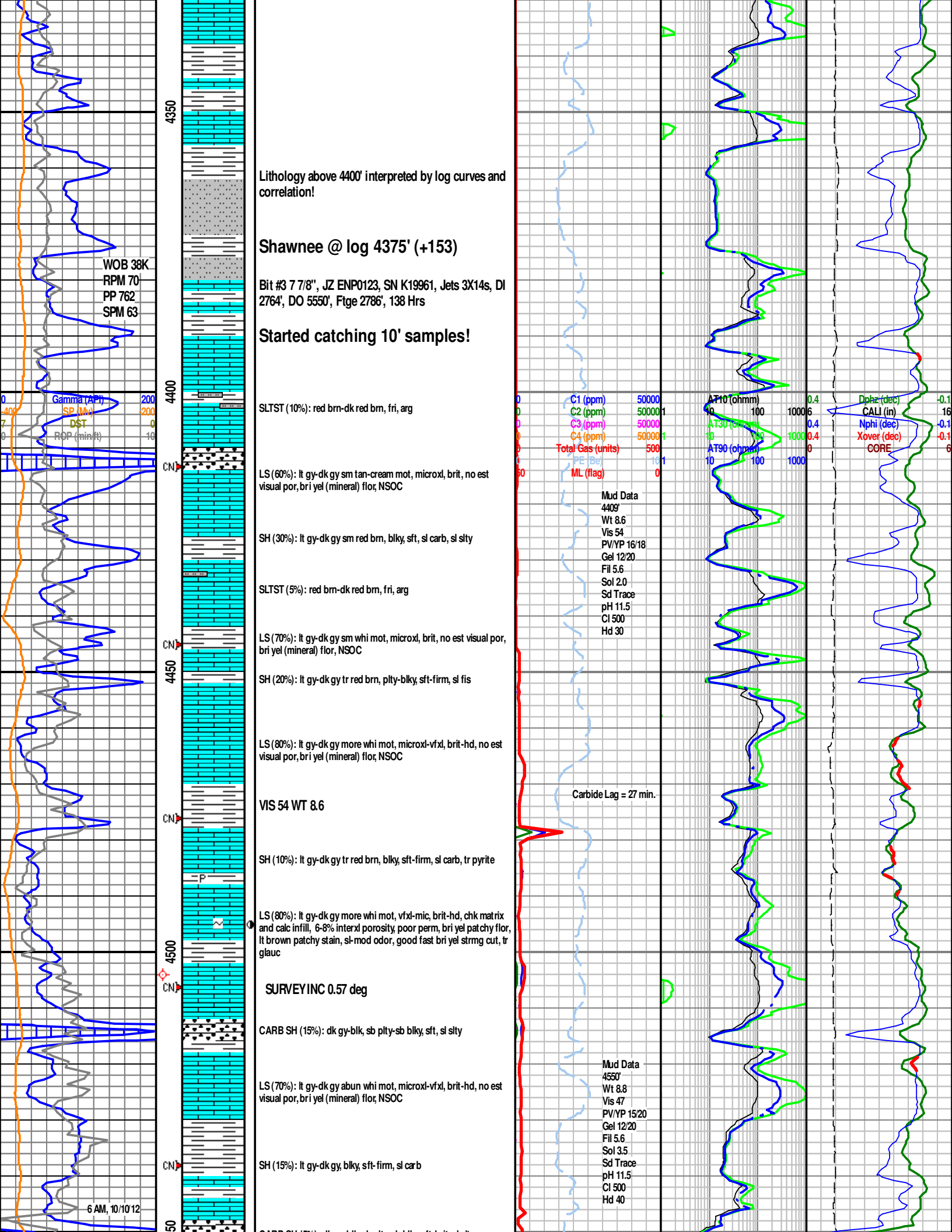

3250
3300
3350
3400
Gamma (API)
SP (Mv)
DST
ROP (min/ft)
Stone Corral @ log 3402' (+1126)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE

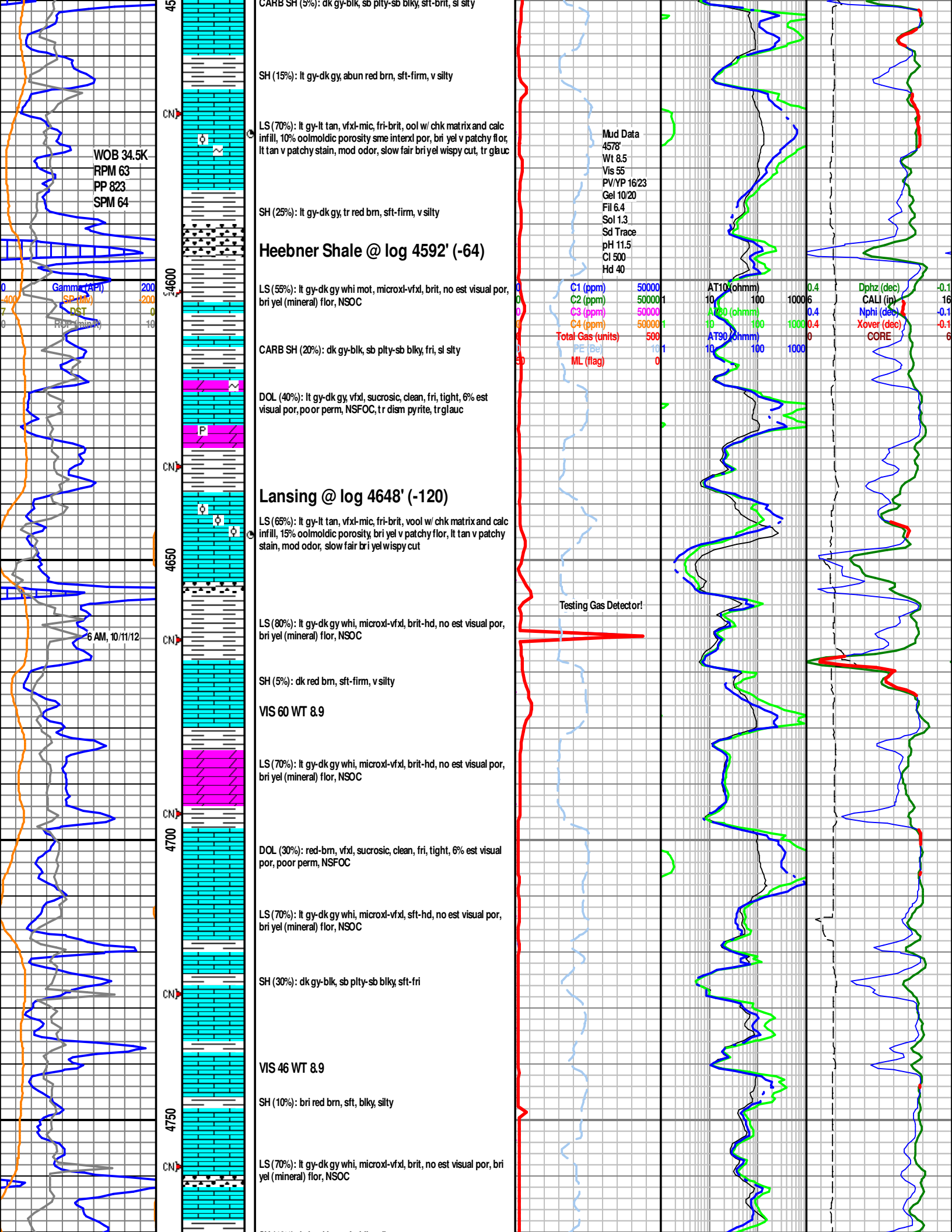

3450
3500
3550
3600
3650
0
Gamma (API)
200
-400
SP (Mv)
200
7
DST
0
0
ROP (min/ft)
10
0
C1 (ppm)
50000
0
C2 (ppm)
50000
1
0
C3 (ppm)
50000
0
C4 (ppm)
50000
1
0
Total Gas (units)
500
0
PE (Be)
10
1
50
ML (flag)
0
AT10 (ohmm)
0.4
40
100
1000
6
AT30 (ohmm)
0.4
40
100
1000
0.4
AT90 (ohmm)
0
0
100
1000
Dphz (dec)
-0.1
CALI (in)
16
Nphi (dec)
-0.1
Xove (dec)
-0.1
CORE
6

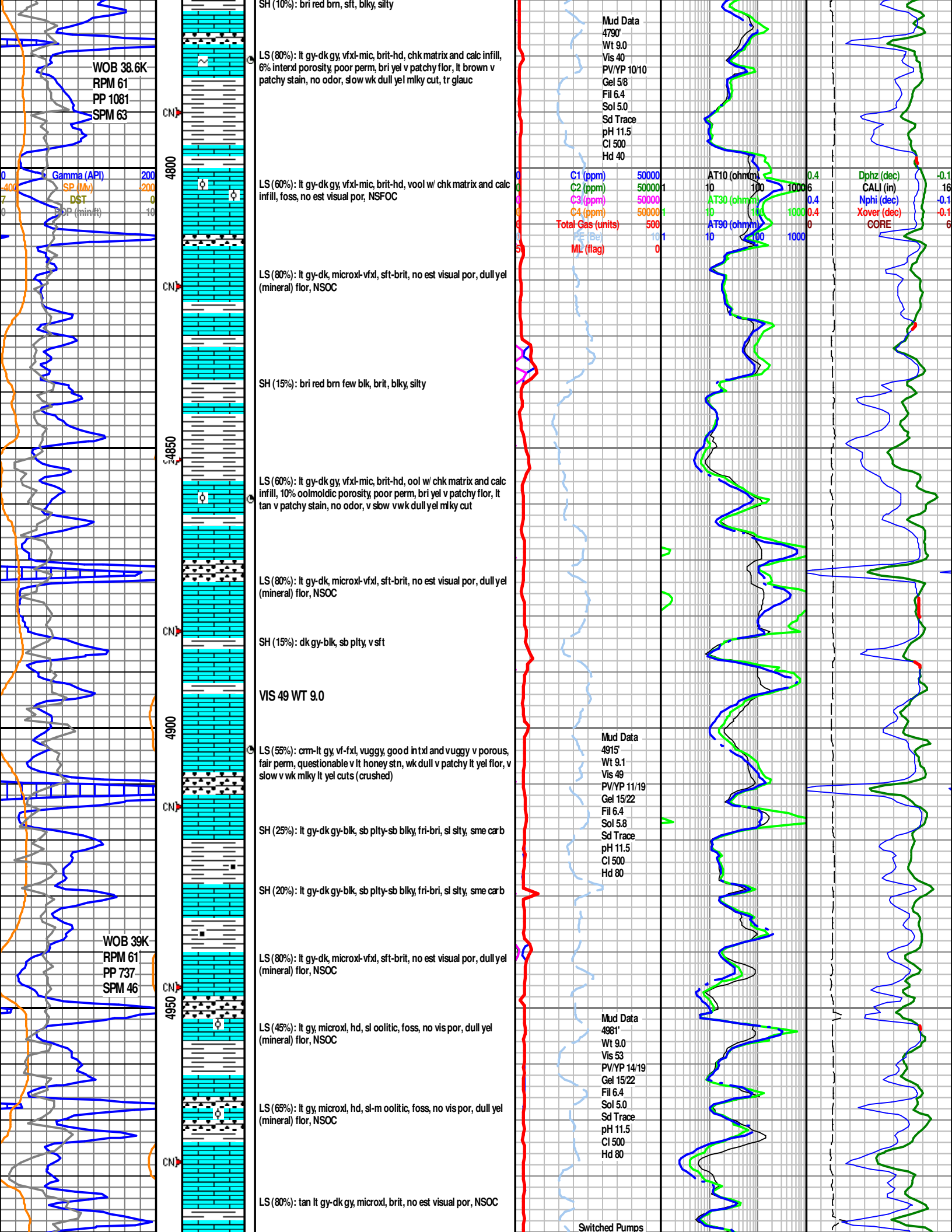

3700
3750
3800
3850
0
Gamma (API)
200
-400
SP (Mv)
200
7
DST
0
8
ROP (min/ft)
10
0
C1 (ppm)
50000
0
C2 (ppm)
500001
0
C3 (ppm)
50000
0
C4 (ppm)
500001
0
Total Gas (units)
500
0
PE (Be)
101
50
ML (flag)
0
AT10 (ohmm)
0.4
10
100
1000
6
AT30 (ohmm)
0.4
10
100
1000
0.4
AT90 (ohmm)
0
10
100
1000
Dphz (dec)
-0.1
CALI (in)
16
Nphi (dec)
-0.1
Xover (dec)
-0.1
CORE
6

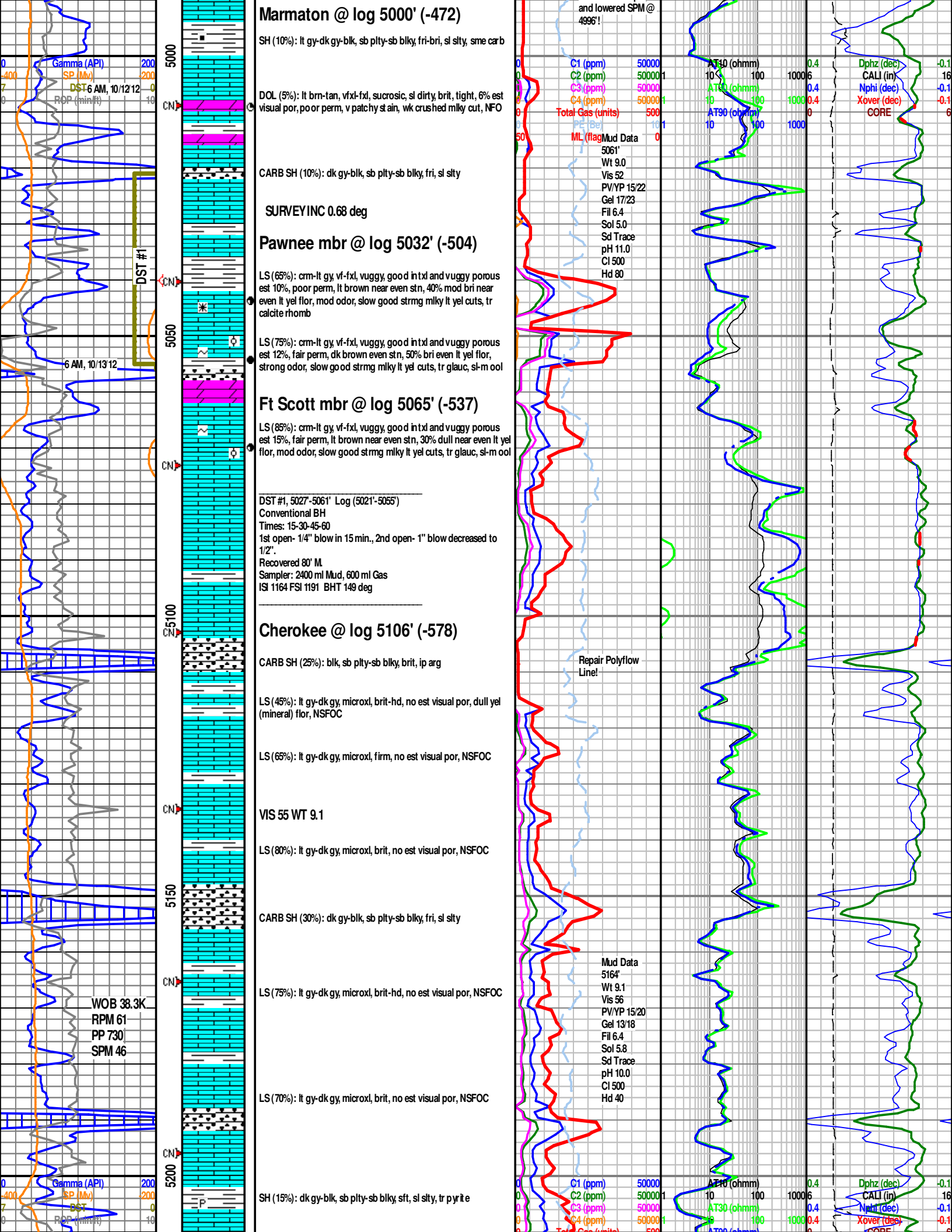

3900
3950
4000
4050
4100
0
Gamma (API)
200
-400
SP (Mv)
200
7
CST
0
0
ROP (min/ft)
10
0
C1 (ppm)
50000
0
C2 (ppm)
500001
0
C3 (ppm)
50000
0
C4 (ppm)
500001
0
Total Gas (units)
500
0
PE (Be)
10
1
50
ML (flag)
0
AT10 (ohmm)
0.4
10
100
1000
6
AT30 (ohmm)
0.4
10
100
1000
0.4
AT90 (ohmm)
0
10
100
1000
Dphz (dec)
-0.1
CALI (in)
16
Nphi (dec)
-0.1
Xover (dec)
-0.1
CORE
6

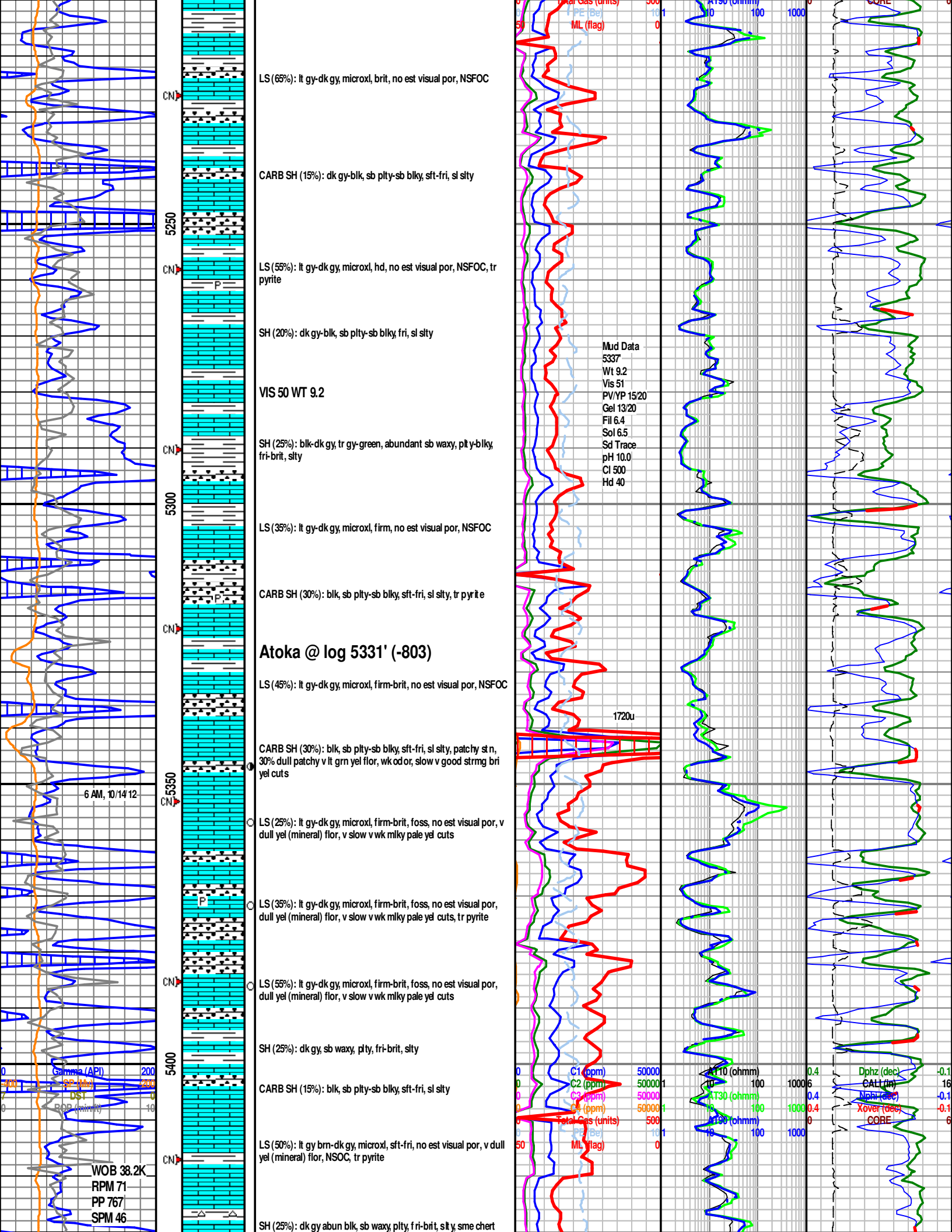

4150
4200
4250
4300
0
Gamma (API)
200
-400
SP (mv)
-200
7
DST
0
0
ROP (min/ft)
10
0
C1 (ppm)
50000
0
C2 (ppm)
50000
0
C3 (ppm)
50000
0
C4 (ppm)
50000
0
Total Gas (units)
500
0
PE (Be)
10
50
ML (flag)
0
AT10 (ohmm)
0.4
10
100
1000
6
AT30 (ohmm)
0.4
100
1000
0.4
AT90 (ohmm)
0
100
1000
Dphz (dec)
-0.1
CALI (in)
16
Nphi (dec)
-0.1
Xover (dec)
-0.1
CORE
6

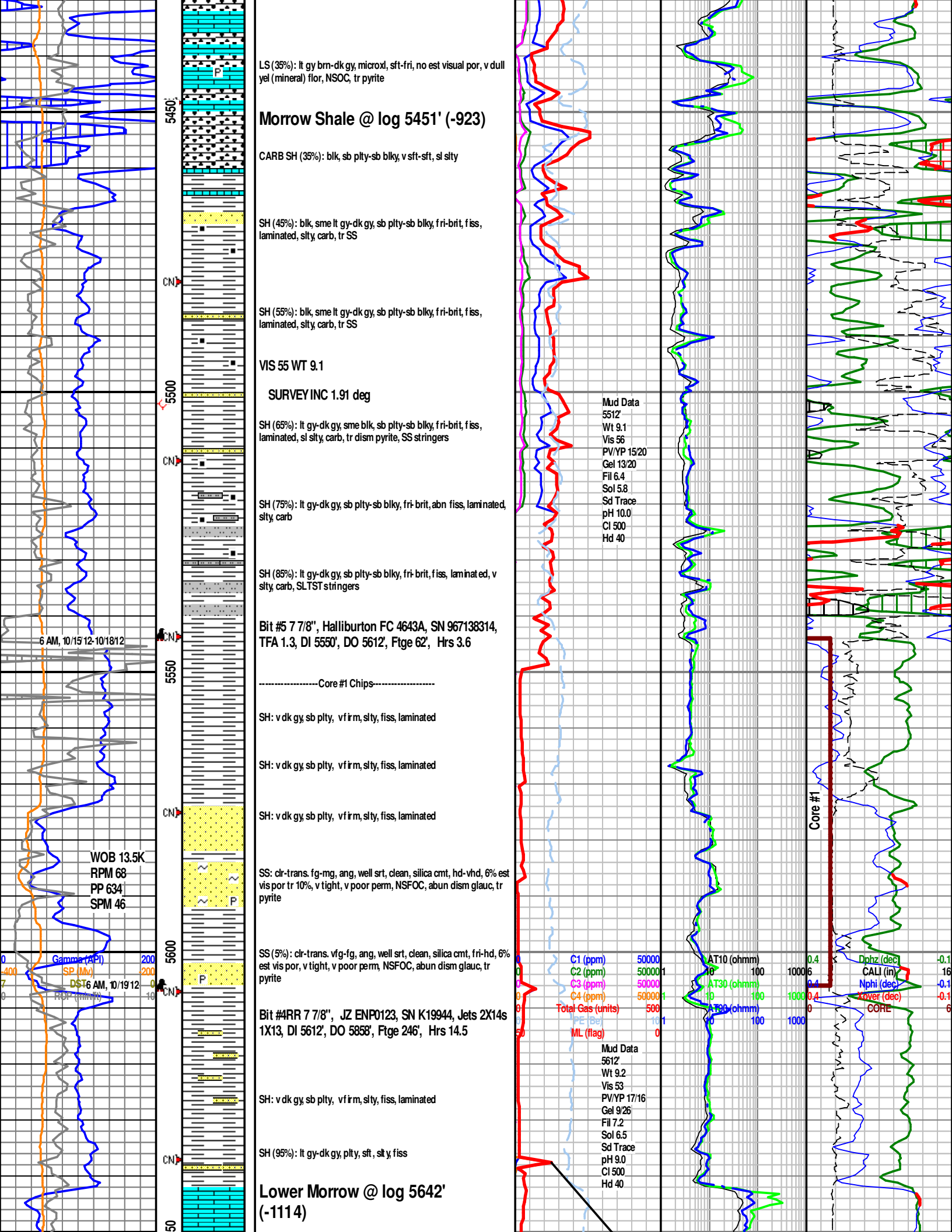

Gamma (API)
SP (Mv)
DST
ROP (min/ft)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
WOB 38K
RPM 70
PP 762
SPM 63
4350
4400
4450
4500
CN
P
Lithology above 4400' interpreted by log curves and correlation!
Shawnee @ log 4375' (+153)
Bit #3 7 7/8", JZ ENP0123, SN K19961, Jets 3X14s, DI 2764', DO 5550', Ftge 2786', 138 Hrs
Started catching 10' samples!
SLTST (10%): red brn-dk red brn, fri, arg
LS (60%): lt gy-dk gy sm tan-cream mot, microxl, brit, no est visual por, bri yel (mineral) flor, NSOC
SH (30%): lt gy-dk gy sm red brn, blky, sft, sl carb, sl slty
SLTST (5%): red brn-dk red brn, fri, arg
LS (70%): lt gy-dk gy sm whi mot, microxl, brit, no est visual por, bri yel (mineral) flor, NSOC
SH (20%): lt gy-dk gy tr red brn, plty-blky, sft-firm, sl fis
LS (80%): lt gy-dk gy more whi mot, microxl-vfxl, brit-hd, no est visual por, bri yel (mineral) flor, NSOC
VIS 54 WT 8.6
SH (10%): lt gy-dk gy tr red brn, blky, sft-firm, sl carb, tr pyrite
LS (80%): lt gy-dk gy more whi mot, vfxl-mic, brit-hd, chk matrix and calc infill, 6-8% interxl porosity, poor perm, bri yel patchy flor, lt brown patchy stain, sl-mod odor, good fast bri yel strmg cut, tr glauc
SURVEY INC 0.57 deg
CARB SH (15%): dk gy-blk, sb plty-sb blky, sft, sl slty
LS (70%): lt gy-dk gy abun whi mot, microxl-vfxl, brit-hd, no est visual por, bri yel (mineral) flor, NSOC
SH (15%): lt gy-dk gy, blky, sft-firm, sl carb
Mud Data
4409'
Wt 8.6
Vis 54
PV/YP 16/18
Gel 12/20
Fil 5.6
Sol 2.0
Sd Trace
pH 11.5
Cl 500
Hd 30
Carbide Lag = 27 min.
Mud Data
4550'
Wt 8.8
Vis 47
PV/YP 15/20
Gel 12/20
Fil 5.6
Sol 3.5
Sd Trace
pH 11.5
Cl 500
Hd 40
6 AM, 10/10/12

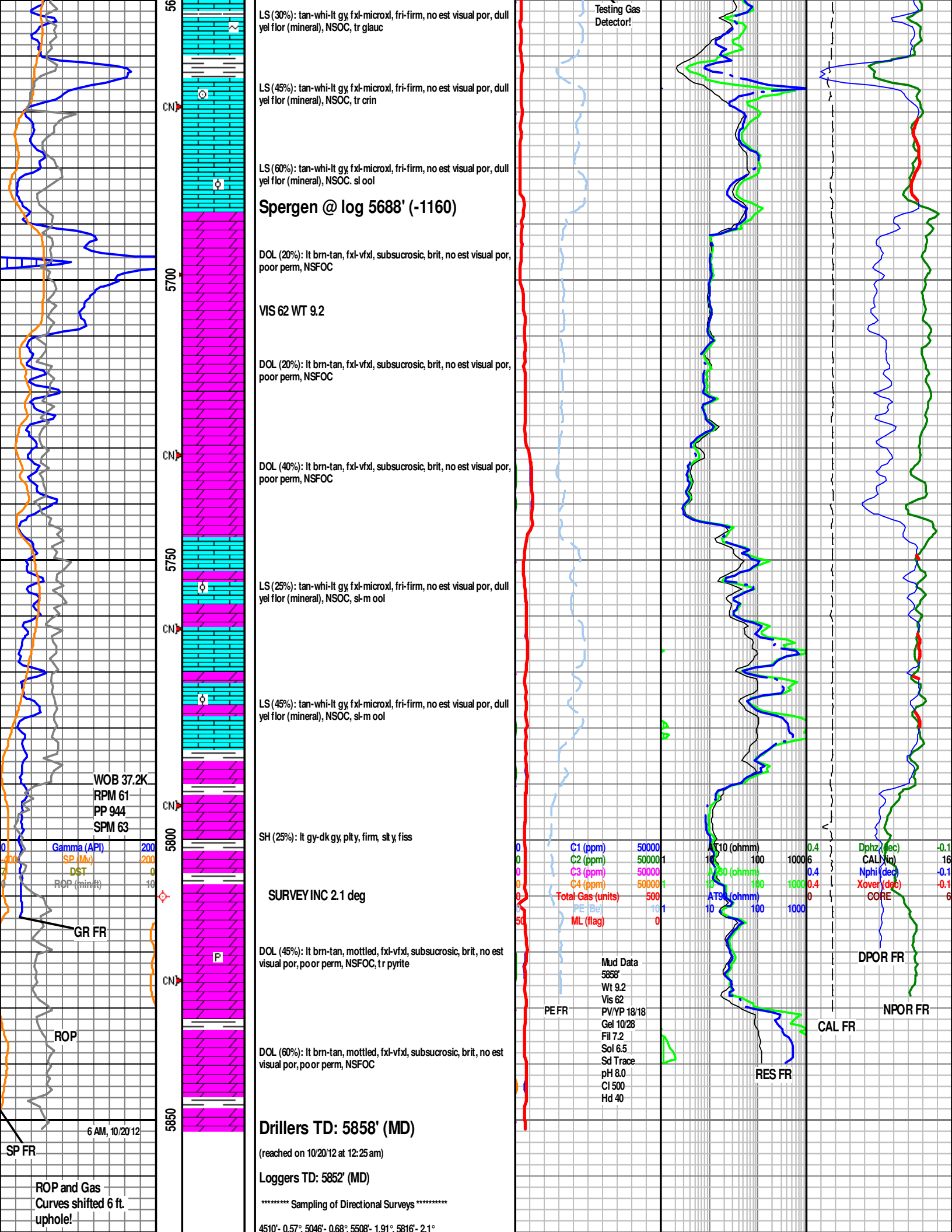

CARB SH (5%): dk gy-blk, sb plty-sb blky, sft-brit, sl silty
SH (15%): lt gy-dk gy, abun red brn, sft-firm, v silty
LS (70%): lt gy-lt tan, vfxl-mic, fri-brit, ool w/ chk matrix and calc infill, 10% oolmoldic porosity sme interxl por, bri yel v patchy flor, lt tan v patchy stain, mod odor, slow fair bri yel wispy cut, tr glauc
SH (25%): lt gy-dk gy, tr red brn, sft-firm, v silty
Heebner Shale @ log 4592' (-64)
LS (55%): lt gy-dk gy whi mot, microxl-vfxl, brit, no est visual por, bri yel (mineral) flor, NSOC
CARB SH (20%): dk gy-blk, sb plty-sb blky, fri, sl slty
DOL (40%): lt gy-dk gy, vfxl, sucrosic, clean, fri, tight, 6% est visual por, poor perm, NSFOC, tr dism pyrite, tr glauc
Lansing @ log 4648' (-120)
LS (65%): lt gy-lt tan, vfxl-mic, fri-brit, vool w/ chk matrix and calc infill, 15% oolmoldic porosity, bri yel v patchy flor, lt tan v patchy stain, mod odor, slow fair bri yel wispy cut
LS (80%): lt gy-dk gy whi, microxl-vfxl, brit-hd, no est visual por, bri yel (mineral) flor, NSOC
SH (5%): dk red brn, sft-firm, v silty
VIS 60 WT 8.9
LS (70%): lt gy-dk gy whi, microxl-vfxl, brit-hd, no est visual por, bri yel (mineral) flor, NSOC
DOL (30%): red-brn, vfxl, sucrosic, clean, fri, tight, 6% est visual por, poor perm, NSFOC
LS (70%): lt gy-dk gy whi, microxl-vfxl, sft-hd, no est visual por, bri yel (mineral) flor, NSOC
SH (30%): dk gy-blk, sb plty-sb blky, sft-fri
VIS 46 WT 8.9
SH (10%): bri red brn, sft, blky, silty
LS (70%): lt gy-dk gy whi, microxl-vfxl, brit, no est visual por, bri yel (mineral) flor, NSOC
WOB 34.5K
RPM 63
PP 823
SPM 64
6 AM, 10/11/12
Mud Data
4578'
Wt 8.5
Vis 55
PV/YP 16/23
Gel 10/20
Fil 6.4
Sol 1.3
Sd Trace
pH 11.5
Cl 500
Hd 40
Testing Gas Detector!
Gamma (API)
SP (mv)
DST
ROP (min/ft)
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
4600
4650
4700
4750
CN


WOB 38.6K
RPM 61
PP 1081
SPM 63
Gamma (API) 0 200
SP (Mv) -400 200
DST 7 0
ROP (min/ft) 0 10
4800
4850
4900
4950
CN
SH (10%): bri red brn, sft, blky, silty
LS (80%): lt gy-dk gy, vfxl-mic, brit-hd, chk matrix and calc infill, 6% interxl porosity, poor perm, bri yel v patchy flor, lt brown v patchy stain, no odor, slow wk dull yel mlky cut, tr glauc
LS (60%): lt gy-dk gy, vfxl-mic, brit-hd, vool w/ chk matrix and calc infill, foss, no est visual por, NSFOC
LS (80%): lt gy-dk, microxl-vfxl, sft-brit, no est visual por, dull yel (mineral) flor, NSOC
SH (15%): bri red brn few blk, brit, blky, silty
LS (60%): lt gy-dk gy, vfxl-mic, brit-hd, ool w/ chk matrix and calc infill, 10% oolmoldic porosity, poor perm, bri yel v patchy flor, lt tan v patchy stain, no odor, v slow vwk dull yel mlky cut
LS (80%): lt gy-dk, microxl-vfxl, sft-brit, no est visual por, dull yel (mineral) flor, NSOC
SH (15%): dk gy-blk, sb plty, v sft
VIS 49 WT 9.0
LS (55%): crm-lt gy, vf-fxl, vuggy, good intxl and vuggy v porous, fair perm, questionable v lt honey stn, wk dull v patchy lt yel flor, v slow v wk mlky lt yel cuts (crushed)
SH (25%): lt gy-dk gy-blk, sb plty-sb blky, fri-bri, sl slty, sme carb
SH (20%): lt gy-dk gy-blk, sb plty-sb blky, fri-bri, sl slty, sme carb
LS (80%): lt gy-dk, microxl-vfxl, sft-brit, no est visual por, dull yel (mineral) flor, NSOC
WOB 39K
RPM 61
PP 737
SPM 46
LS (45%): lt gy, microxl, hd, sl oolitic, foss, no vis por, dull yel (mineral) flor, NSOC
LS (65%): lt gy, microxl, hd, sl-m oolitic, foss, no vis por, dull yel (mineral) flor, NSOC
LS (80%): tan lt gy-dk gy, microxl, brit, no est visual por, NSOC
Mud Data
4790'
Wt 9.0
Vis 40
PV/YP 10/10
Gel 5/8
Fil 6.4
Sol 5.0
Sd Trace
pH 11.5
Cl 500
Hd 40
Mud Data
4915'
Wt 9.1
Vis 49
PV/YP 11/19
Gel 15/22
Fil 6.4
Sol 5.8
Sd Trace
pH 11.5
Cl 500
Hd 80
Mud Data
4981'
Wt 9.0
Vis 53
PV/YP 14/19
Gel 15/22
Fil 6.4
Sol 5.0
Sd Trace
pH 11.5
Cl 500
Hd 80
C1 (ppm) 0 50000
C2 (ppm) 0 50000
C3 (ppm) 0 50000
C4 (ppm) 0 50000
Total Gas (units) 0 500
ML (flag) 0 1
AT10 (ohmm) 0.4 10 100 1000 6
AT30 (ohmm) 0.4
AT90 (ohmm) 0.4 10 100 1000 0
Dphz (dec) -0.1
CALI (in) 16
Nphi (dec) -0.1
Xover (dec) -0.1
CORE 6
Switched Pumps


Marmaton @ log 5000' (-472)
SH (10%): lt gy-dk gy-blk, sb plty-sb blky, fri-bri, sl slty, sme carb
DOL (5%): lt brn-tan, vfxl-fxl, sucrosic, sl dirty, brit, tight, 6% est visual por, poor perm, v patchy stain, wk crushed mlky cut, NFO
CARB SH (10%): dk gy-blk, sb plty-sb blky, fri, sl slty
SURVEY INC 0.68 deg
Pawnee mbr @ log 5032' (-504)
LS (65%): crm-lt gy, vf-fxl, vuggy, good intxl and vuggy porous est 10%, poor perm, lt brown near even stn, 40% mod bri near even lt yel flor, mod odor, slow good strmg mlky lt yel cuts, tr calcite rhomb
LS (75%): crm-lt gy, vf-fxl, vuggy, good intxl and vuggy porous est 12%, fair perm, dk brown even stn, 50% bri even lt yel flor, strong odor, slow good strmg mlky lt yel cuts, tr glauc, sl-m ool
Ft Scott mbr @ log 5065' (-537)
LS (85%): crm-lt gy, vf-fxl, vuggy, good intxl and vuggy porous est 15%, fair perm, lt brown near even stn, 30% dull near even lt yel flor, mod odor, slow good strmg mlky lt yel cuts, tr glauc, sl-m ool
DST #1, 5027'-5061' Log (5021'-5055')
Conventional BH
Times: 15-30-45-60
1st open- 1/4" blow in 15 min., 2nd open- 1" blow decreased to 1/2".
Recovered 80' M.
Sampler: 2400 ml Mud, 600 ml Gas
ISI 1164 FSI 1191 BHT 149 deg
Cherokee @ log 5106' (-578)
CARB SH (25%): blk, sb plty-sb blky, brit, ip arg
LS (45%): lt gy-dk gy, microxl, brit-hd, no est visual por, dull yel (mineral) flor, NSFOC
LS (65%): lt gy-dk gy, microxl, firm, no est visual por, NSFOC
VIS 55 WT 9.1
LS (80%): lt gy-dk gy, microxl, brit, no est visual por, NSFOC
CARB SH (30%): dk gy-blk, sb plty-sb blky, fri, sl slty
LS (75%): lt gy-dk gy, microxl, brit-hd, no est visual por, NSFOC
LS (70%): lt gy-dk gy, microxl, brit, no est visual por, NSFOC
SH (15%): dk gy-blk, sb plty-sb blky, sft, sl slty, tr pyrite
and lowered SPM @ 4996'!
Repair Polyflow Line!
Mud Data
5061'
Wt 9.0
Vis 52
PV/YP 15/22
Gel 17/23
Fil 6.4
Sol 5.0
Sd Trace
pH 11.0
Cl 500
Hd 80
Mud Data
5164'
Wt 9.1
Vis 56
PV/YP 15/20
Gel 13/18
Fil 6.4
Sol 5.8
Sd Trace
pH 10.0
Cl 500
Hd 40
WOB 38.3K
RPM 61
PP 730
SPM 46
DST #1
6 AM, 10/12/12
6 AM, 10/13/12
Gamma (API)
SP (Mv)
DST
ROP (min/ft)
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
5000
5050
5100
5150
5200
CN
P


LS (65%): lt gy-dk gy, microxl, brit, no est visual por, NSFOC
CARB SH (15%): dk gy-blk, sb plty-sb blky, sft-fri, sl slty
LS (55%): lt gy-dk gy, microxl, hd, no est visual por, NSFOC, tr pyrite
SH (20%): dk gy-blk, sb plty-sb blky, fri, sl slty
VIS 50 WT 9.2
SH (25%): blk-dk gy, tr gy-green, abundant sb waxy, plty-blky, fri-brit, slty
LS (35%): lt gy-dk gy, microxl, firm, no est visual por, NSFOC
CARB SH (30%): blk, sb plty-sb blky, sft-fri, sl slty, tr pyrite
Atoka @ log 5331' (-803)
LS (45%): lt gy-dk gy, microxl, firm-brit, no est visual por, NSFOC
CARB SH (30%): blk, sb plty-sb blky, sft-fri, sl slty, patchy stn, 30% dull patchy v lt grn yel flor, wk odor, slow v good strmg bri yel cuts
LS (25%): lt gy-dk gy, microxl, firm-brit, foss, no est visual por, v dull yel (mineral) flor, v slow v wk mlky pale yel cuts
LS (35%): lt gy-dk gy, microxl, firm-brit, foss, no est visual por, dull yel (mineral) flor, v slow v wk mlky pale yel cuts, tr pyrite
LS (55%): lt gy-dk gy, microxl, firm-brit, foss, no est visual por, dull yel (mineral) flor, v slow v wk mlky pale yel cuts
SH (25%): dk gy, sb waxy, plty, fri-brit, slty
CARB SH (15%): blk, sb plty-sb blky, sft-fri, sl slty
LS (50%): lt gy brn-dk gy, microxl, sft-fri, no est visual por, v dull yel (mineral) flor, NSOC, tr pyrite
SH (25%): dk gy abun blk, sb waxy, plty, fri-brit, slty, sme chert
Mud Data
5337'
Wt 9.2
Vis 51
PV/YP 15/20
Gel 13/20
Fil 6.4
Sol 6.5
Sd Trace
pH 10.0
Cl 500
Hd 40
1720u
6 AM, 10/14/12
WOB 38.2K
RPM 71
PP 767
SPM 46
5250
5300
5350
5400
CN
P
Gamma (API)
DST
ROP (min/ft)
Total Gas (units)
ML (flag)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
CORE
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)


LS (35%): lt gy brn-dk gy, microxl, sft-fri, no est visual por, v dull yel (mineral) flor, NSOC, tr pyrite
Morrow Shale @ log 5451' (-923)
CARB SH (35%): blk, sb plty-sb blky, v sft-sft, sl slty
SH (45%): blk, sme lt gy-dk gy, sb plty-sb blky, fri-brit, fiss, laminated, slty, carb, tr SS
SH (55%): blk, sme lt gy-dk gy, sb plty-sb blky, fri-brit, fiss, laminated, slty, carb, tr SS
VIS 55 WT 9.1
SURVEY INC 1.91 deg
SH (65%): lt gy-dk gy, sme blk, sb plty-sb blky, fri-brit, fiss, laminated, sl slty, carb, tr dism pyrite, SS stringers
SH (75%): lt gy-dk gy, sb plty-sb blky, fri-brit, abn fiss, laminated, slty, carb
SH (85%): lt gy-dk gy, sb plty-sb blky, fri-brit, fiss, laminated, v slty, carb, SLTST stringers
Bit #5 7 7/8", Halliburton FC 4643A, SN 967138314, TFA 1.3, DI 5550', DO 5612', Ftge 62', Hrs 3.6
----------Core #1 Chips----------
SH: v dk gy, sb plty, vf irm, slty, fiss, laminated
SH: v dk gy, sb plty, vf irm, slty, fiss, laminated
SH: v dk gy, sb plty, vf irm, slty, fiss, laminated
SS: clr-trans. fg-mg, ang, well srt, clean, silica cmt, hd-vhd, 6% est vis por tr 10%, v tight, v poor perm, NSFOC, abun dism glauc, tr pyrite
SS (5%): clr-trans. vfg-fg, ang, well srt, clean, silica cmt, fri-hd, 6% est vis por, v tight, v poor perm, NSFOC, abun dism glauc, tr pyrite
Bit #4RR 7 7/8", JZ ENP0123, SN K19944, Jets 2X14s 1X13, DI 5612', DO 5858', Ftge 246', Hrs 14.5
SH: v dk gy, sb plty, vf irm, slty, fiss, laminated
SH (95%): lt gy-dk gy, plty, sft, slty, fiss
Lower Morrow @ log 5642' (-1114)
5450'
5500
5550
5600
CN
6 AM, 10/15/12-10/18/12
WOB 13.5K
RPM 68
PP 634
SPM 46
Gamma (API)
SP (Mv)
DST
6 AM, 10/19/12
ROP (min/ft)
Mud Data
5512'
Wt 9.1
Vis 56
PV/YP 15/20
Gel 13/20
Fil 6.4
Sol 5.8
Sd Trace
pH 10.0
Cl 500
Hd 40
Mud Data
5612'
Wt 9.2
Vis 53
PV/YP 17/16
Gel 9/26
Fil 7.2
Sol 6.5
Sd Trace
pH 9.0
Cl 500
Hd 40
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)
Rdver (dec)
CORE
Core #1


LS (30%): tan-whi-lt gy, fxl-microxl, fri-firm, no est visual por, dull yel flor (mineral), NSOC, tr glauc
LS (45%): tan-whi-lt gy, fxl-microxl, fri-firm, no est visual por, dull yel flor (mineral), NSOC, tr crin
LS (60%): tan-whi-lt gy, fxl-microxl, fri-firm, no est visual por, dull yel flor (mineral), NSOC. sl ool
Spergen @ log 5688' (-1160)
DOL (20%): lt brn-tan, fxl-vfxl, subsucrosic, brit, no est visual por, poor perm, NSFOC
VIS 62 WT 9.2
DOL (20%): lt brn-tan, fxl-vfxl, subsucrosic, brit, no est visual por, poor perm, NSFOC
DOL (40%): lt brn-tan, fxl-vfxl, subsucrosic, brit, no est visual por, poor perm, NSFOC
LS (25%): tan-whi-lt gy, fxl-microxl, fri-firm, no est visual por, dull yel flor (mineral), NSOC, sl-m ool
LS (45%): tan-whi-lt gy, fxl-microxl, fri-firm, no est visual por, dull yel flor (mineral), NSOC, sl-m ool
SH (25%): lt gy-dk gy, plty, firm, slty, fiss
SURVEY INC 2.1 deg
DOL (45%): lt brn-tan, mottled, fxl-vfxl, subsucrosic, brit, no est visual por, poor perm, NSFOC, tr pyrite
DOL (60%): lt brn-tan, mottled, fxl-vfxl, subsucrosic, brit, no est visual por, poor perm, NSFOC
Drillers TD: 5858' (MD)
(reached on 10/20/12 at 12:25 am)
Loggers TD: 5852' (MD)
******** Sampling of Directional Surveys **********
4510'- 0.57°, 5046'- 0.68°, 5508'- 1.91°, 5816'- 2.1°
Testing Gas Detector!
CN
P
5700
5750
5800
5850
WOB 37.2K
RPM 61
PP 944
SPM 63
Gamma (API)
SP (Mv)
DST
ROP (min/ft)
GR FR
ROP
SP FR
6 AM, 10/20/12
ROP and Gas Curves shifted 6 ft. uphole!
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
Total Gas (units)
PE (Be)
ML (flag)
PE FR
Mud Data
5858'
Wt 9.2
Vis 62
PV/YP 18/18
Gel 10/28
Fil 7.2
Sol 6.5
Sd Trace
pH 8.0
Cl 500
Hd 40
AT10 (ohmm)
AT30 (ohmm)
AT90 (ohmm)
RES FR
Dphz (dec)
CALI (in)
Nphi (dec)
Xover (dec)
CORE
CAL FR
DPOR FR
NPOR FR

5900

--------Plugging Procedure--------

40 sks	5000'
40 sks	2700'
40 sks	2000'
50 sks	480'
15 sks	surface
10 sks	rathole
10 sks	mousehole
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290 sks	total

Thank you for using our service!

RYAN SCRIBNER
Goolsby Brothers & Associates
(October 21, 2012)