

Décollement
Consulting
Inc.



Scale: 5" / 100'
Measured Depth Log

Well Name Wetco Farms A-4-9MRLC

Location NWNW Sec. 4 T4N R63W

State Colorado

Country USA

API Number 05-123-39024

County Weld

Rig Number Cade 22

Field D.J. Basin

Spud Date 4/4/2014

Drilling Completed 4/14/2014

Surface Coordinates 274 FNL x 170 FWL

Ground Elevation 4568.9'

K.B. Elevation 4586'

Logged Interval 6000' To 13852'

Total Depth 13852'

Formation Codell

Type of Drilling Fluid WBM

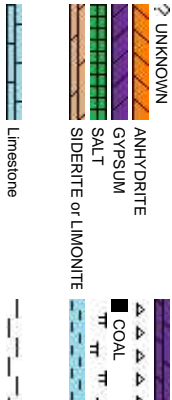
Company Bonanza Creek Energy

Address 410 17th Street, Suite 1100
Denver, CO 80202

Name Leo Carrasco/Chris Irwin

Company Décollement Consulting

Address 13300 Braun Road
Golden, CO 80401



Operator

500

Geologist

Inc.

Rock Types

DOLOMITE

CHERT

MARLSTONE

CLAYSTONE

SHALE

SHALE GRAY

SHALE COLORED

SILTSTONE

SANDSTONE

CONGLOMERATE

TILL

BENTONITE

TUFF

IGNEOUS

METAMORPHIC

BRECCIA

Chalk

Accessories

F FOSSIL

GASTROROPD

ARGILLACEOUS

ARGILLITE GRAIN

GLAUCONITE

GYPSEFEROUS

ALGAE

AMPHIPORA

BELEMNITE

BIOCLASTIC

BRACHIOPOD

BRYOZOA

CEPHALOPOD

CORAL

CRINOID

ECHINOID

OOLITE

OSTRACOD

PELECYPD

PELLET

PISOLITE

PLANT REMAINS

PLANT SPORES

SCAPHOPOD

STROMATOPOROID

FERRUGINOUS PELLETT

FERRUGINOUS

SILTY

TUFFACEOUS

B BENTONITE

BITUMENOUS SUBSTANCE

BRECCIA FRAGMENTS

CALCAREOUS

CARBONACEOUS FLAKES

CHTDK

CHTLT

COAL - THIN BEDS

DOLOMITIC

FELDSPAR

HEAVY MINERAL

KAOLIN

MARLSTONE

MINERAL CRYSTALS

NOODULES

PHOSPHATE PELLETT

PYRITE

SALT CAST

SANDY

SILICEOUS

ANHYDRITE STRINGER

BENTONITE STRINGER

COAL STRINGER

DOLOMITE STRINGER

GYPSUM STRINGER

LIMESTONE STRINGER

MARLSTONE (CALC) STRG

MARLSTONE (DOL) STRG

SANDSTONE STRINGER

SHALE STRINGER

SILTSTONE STRINGER

Other Symbols

O ORGANIC

P PINPOINT

D DEAD

EVEN

QUESTIONABLE

SPOTTED STAINING

GAS SHOW

MIN DEPTH

NORMAL FAULT

OIL SHOW

OVERTURNED STRATA

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

SLIDE

SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

LITHOGRAPHIC

Porosity

E EARTHY

F FENESTRAL

F FRACTURE

INTERCRYSTALLINE

INTEROOLITIC

MOULDIC

Engineering

BIT

CONNECTION (LEFT)

CONNECTION (RIGHT)

CONNECTION GAS

CORE - LOST

CORE - RECOVERED

DST INTERVAL

FAULT

FORMATION TOP

Textures

B3 BOUNDSTONE

C CHALKY

CX CRYPTOXLN

E EARTHY

FX FINELYXLN

G3 GRAINSTONE

L LITHOGRAPHIC

Sorting

M MODERATE

P POOR

W WELL

Chalk

Oil Show

ORGANIC

PINPOINT

DEAD

EVEN

QUESTIONABLE

SPOTTED STAINING

Other Symbols

GAS SHOW

MIN DEPTH

NORMAL FAULT

OIL SHOW

OVERTURNED STRATA

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

SLIDE

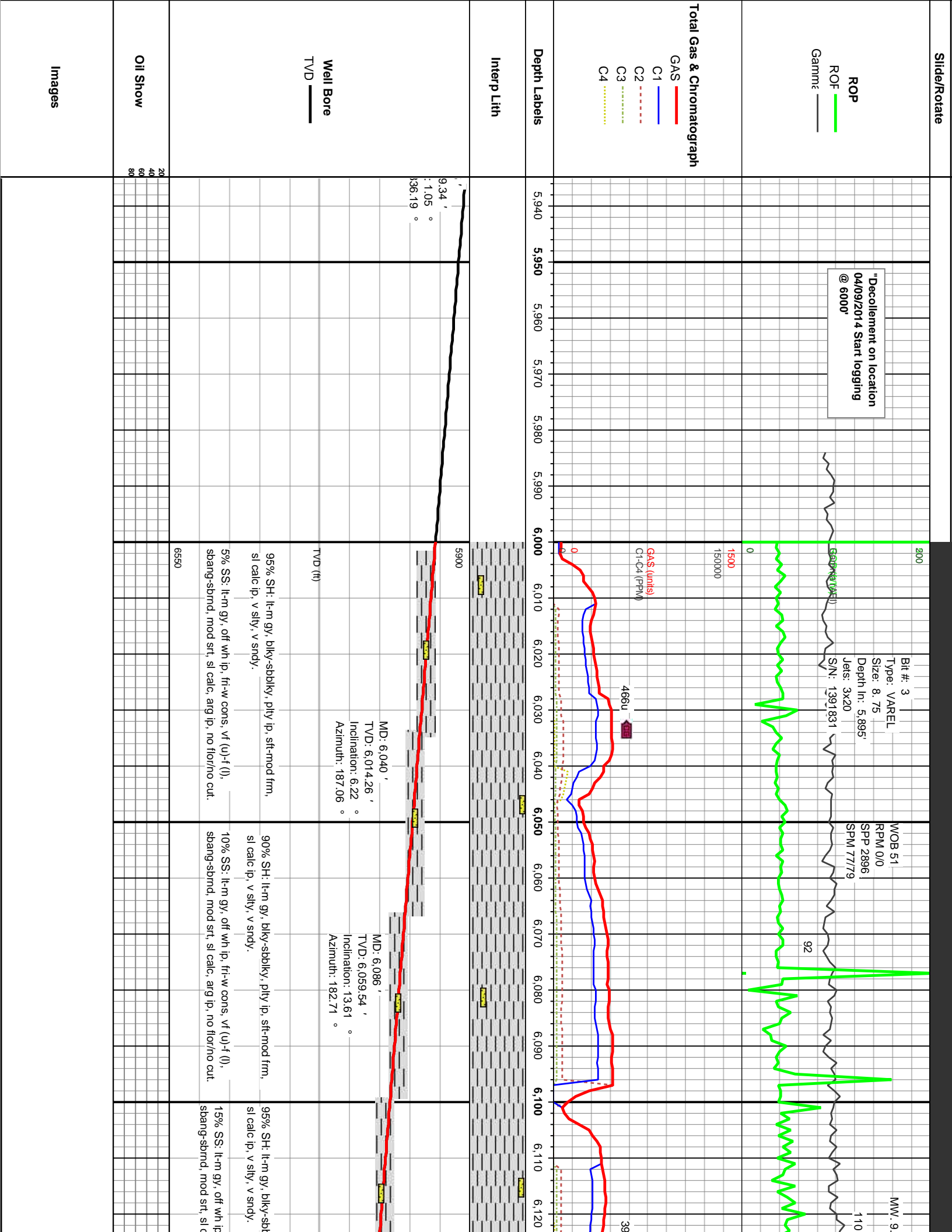
SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

LITHOGRAPHIC



SHARON SPRINGS" @ 6143' TVD 6174' MD

250

1 VIS.38

NOTE SCALE CHANGE GAMMA

107

Gamma (API)

106

155

146

Gamma (API)

213

WOB 36

RPM 0/15

SPP 3841

SPM 92/93

129

209

158

125

109

106

NIORRARA "A" Chalk @ 6230' TVD, 6274' MD

NIORRARA "A" Marl @

208

208

106

FAULT

NOTE SCALE CHANGE GAS

Gas (units)
C1-C4 (PPM)

1174u

2018u



MD: 6,134 '

TVD: 6,105.4 '

Inclination: 20.53 °

Azimuth: 185.29 °

MD: 6,182 '

TVD: 6,149.47 '

Inclination: 26.06 °

Azimuth: 182.41 °

MD: 6,230 '

TVD: 6,192.02 '

Inclination: 2.910 °

Azimuth: 179.15 °

MD: 6,277 '

TVD: 6,232.03 '

Inclination: 34.13 °

Azimuth: 177.49 °

MD: 6,325 '

TVD: 6,270.71 '

Inclination: 38.45 °

Azimuth: 175 °

100% SH: m-dk gy, blk-y-sbdky -ply ip, wxy ip,

sl carb ip, tr SS, pale yel flr ip, slow wh cut.

100% SH: m-dk gy, blk-y-sbdky -ply ip, wxy ip,

sl carb ip, tr SS, pale yel flr ip, slow wh cut.

90% CHKL: lt-md gy, off wh, sft-mod frm, blk-y-sbdky,

calc, wxy ip, no flr, wh cut, bl res ring, hvy tr-Mrl

100% MRL: m-dk gy, sft-frm, sbdky, occ specs,

v calc, tr Chalk, tr-fos, no flr, diffuse wh cuts.

100% SH: m-dk gy, blk-y-sbdky -ply ip, wxy ip,

sl carb ip, tr SS, pale yel flr ip, slow wh cut.

100% SH: m-dk gy, blk-y-sbdky -ply ip, wxy ip,

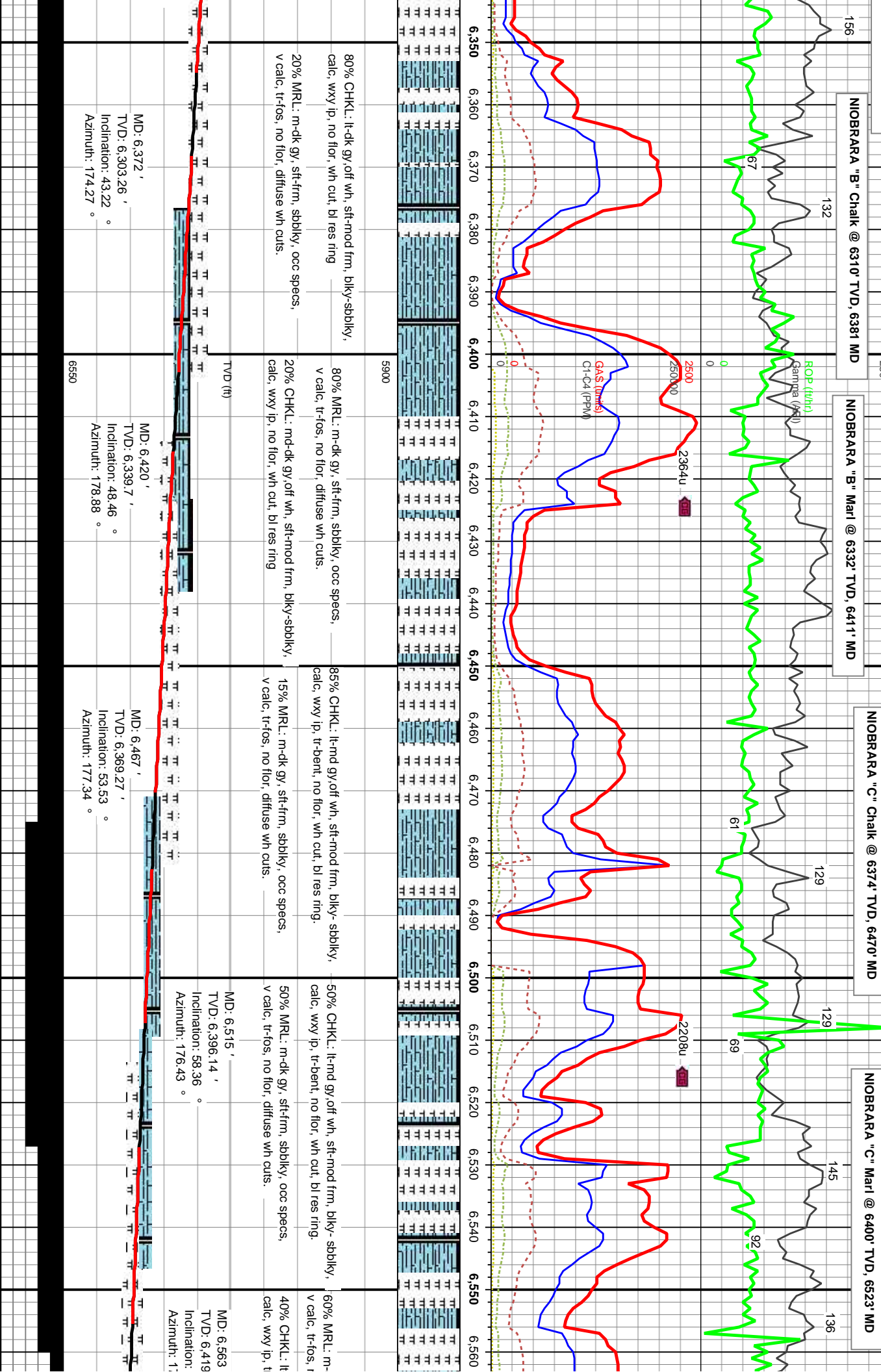
sl carb ip, tr SS, pale yel flr ip, slow wh cut.

90% CHKL: lt-md gy, off wh, sft-mod frm, blk-y-sbdky,

calc, wxy ip, no flr, wh cut, bl res ring, hvy tr-Mrl

100% MRL: m-dk gy, sft-frm, sbdky, occ specs,

v calc, tr Chalk, tr-fos, no flr, diffuse wh cuts.

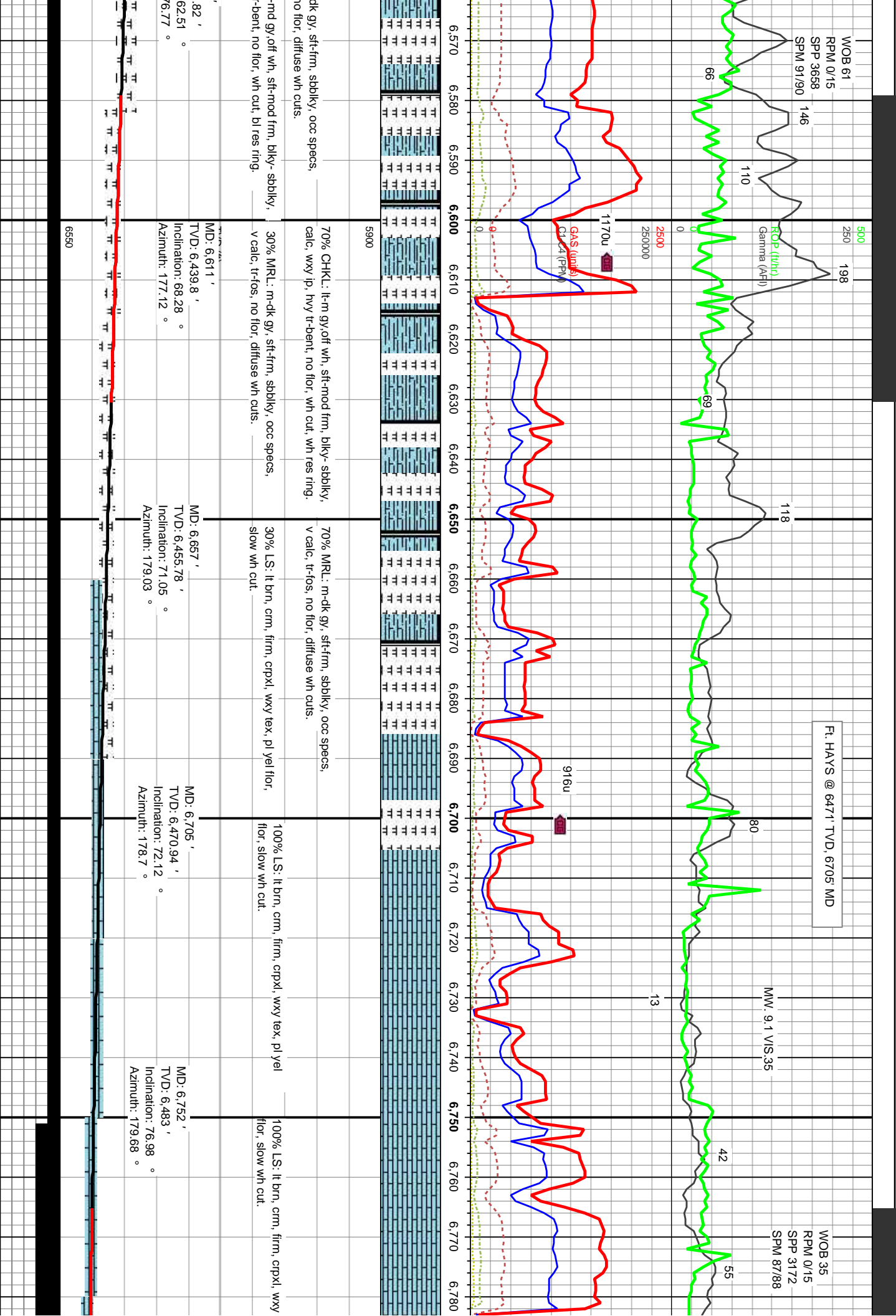


NOBRARA "B" Chalk @ 6310' TVD, 6381 MD

NOBRARA "B" Marl @ 6332' TVD, 6411' MD

NOBRARA "C" Chalk @ 6374' TVD, 6470' MD

NOBRARA "C" Marl @ 6400' TVD, 6523' MD



500
250

CODELL @ 6495' TVD 6820' MD

ROP (ft/hr)
Gamma (API)

84

87

64

121

82

Landing TD @ 6910 04/10/2014
08:45 hrs.

MWD @ 6921' 04/12/2014

Bit #: 4
Type: VAREL
Size: 6.125
Depth In: 6910"
Jets: 3x20
S/N: 4006016

Resume Drilling 04/11/2014
23:10 hrs.

NOTE SCALE

2500 17
250000

Gas Scale Change

3000
300000

2487u

1000
100000

NOTE SCALE CHANGE GAS
GOING THROUGH GAS BUSTER

NOTE SCALE CH-

978u
GAS (units)
C1-C4 (PPM)

GAS (units)
C1-C4 (PPM)

GAS (units)
C1-C4 (PPM)

682u

GAS (units)
C1-C4 (PPM)

6.790 6.800 6.810 6.820 6.830 6.840 6.850 6.860 6.870 6.880 6.890 6.900 6.910 6.920 6.930 6.940 6.950 6.960 6.970 6.980 6.990 7.000

5900

60% LS: lt brn, crm, firm, crpxl, wxy tex, pl yel flor,
slow wh cut.

100% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbnd-rnd, shang ip,
mod fir, arg, sl calc, lt brn/yel flor, slow wh/bl cuts, wh
res ring.

40% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbnd-rnd, suang ip,
mod fir, arg, sl calc, lt brn/yel flor, slow wh/bl cuts, wh
res ring.

TVD (ft)

MD: 6.802 '
TVD: 6.492.83 '
Inclination: 81.41 °
Azimuth: 179.57 °

MD: 6.848 '
TVD: 6.497.92 '
Inclination: 85.68 °
Azimuth: 180.05 °

MD: 6.869 '
TVD: 6.499.41 '
Inclination: 86.2 °
Azimuth: 180.06 °

80% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbnd-rnd,
fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow
wh/bl cuts, wh res ring.

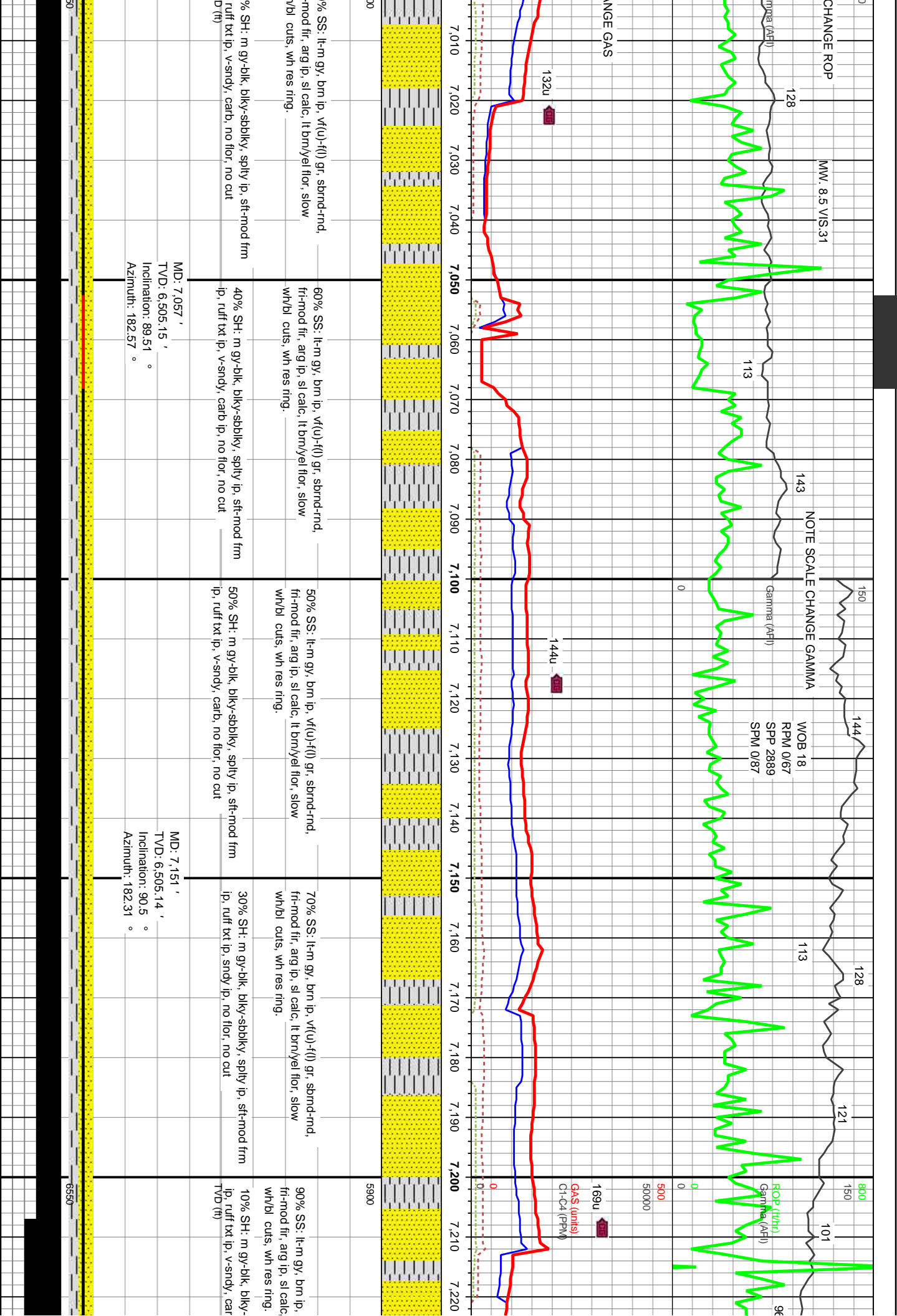
20% SH: m gy-blk, blk-y-sbbkly, splty ip, sti-mod frm
ip, ruff txt ip, v-sndy, carb ip, no flor, no cut

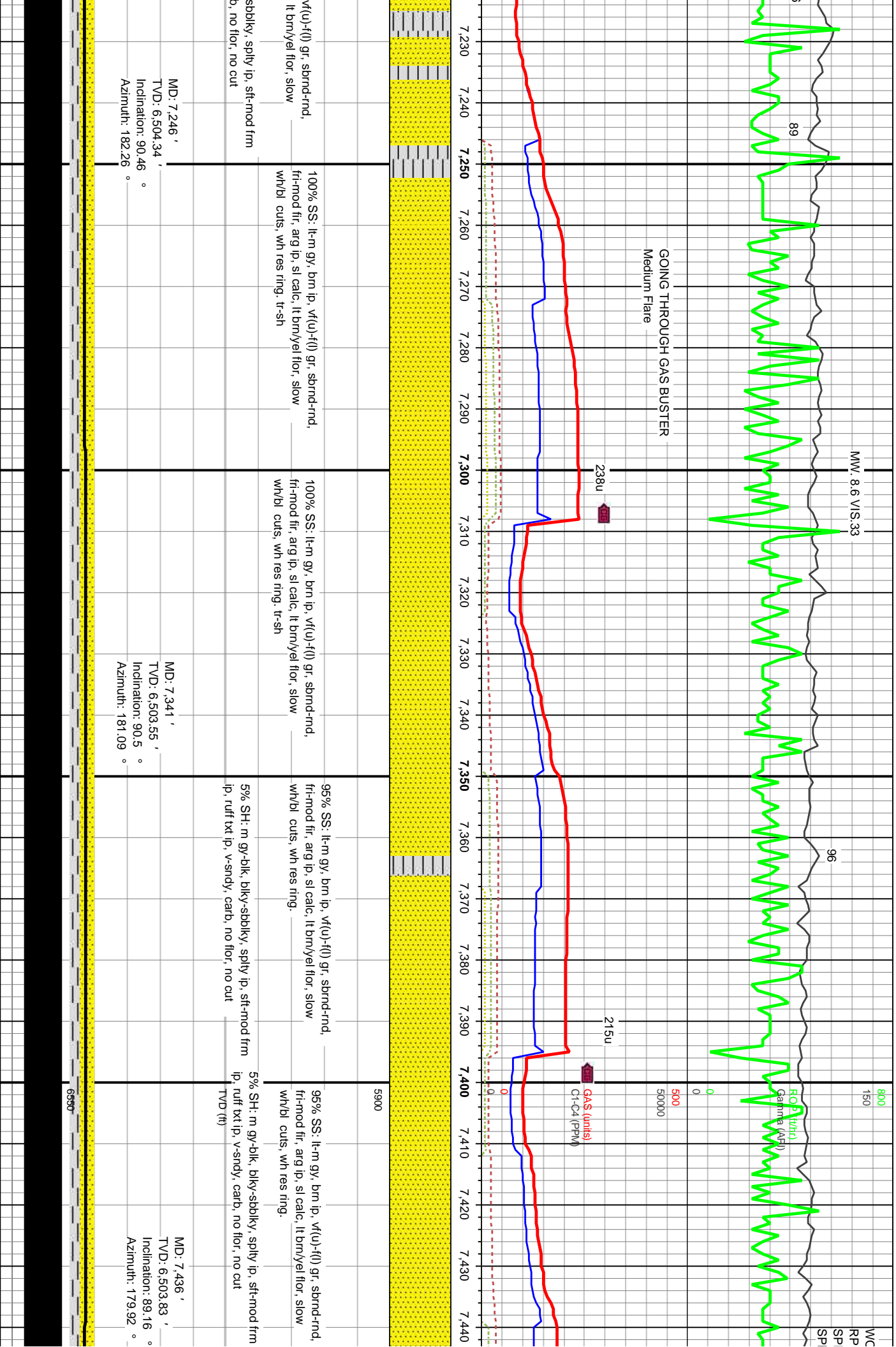
100% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbnd-rnd,
fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow
wh/bl cuts, wh res ring, tr-sh

MD: 6.962 '
TVD: 6.503.61 '
Inclination: 88.63 °
Azimuth: 182.59 °

6550

6550



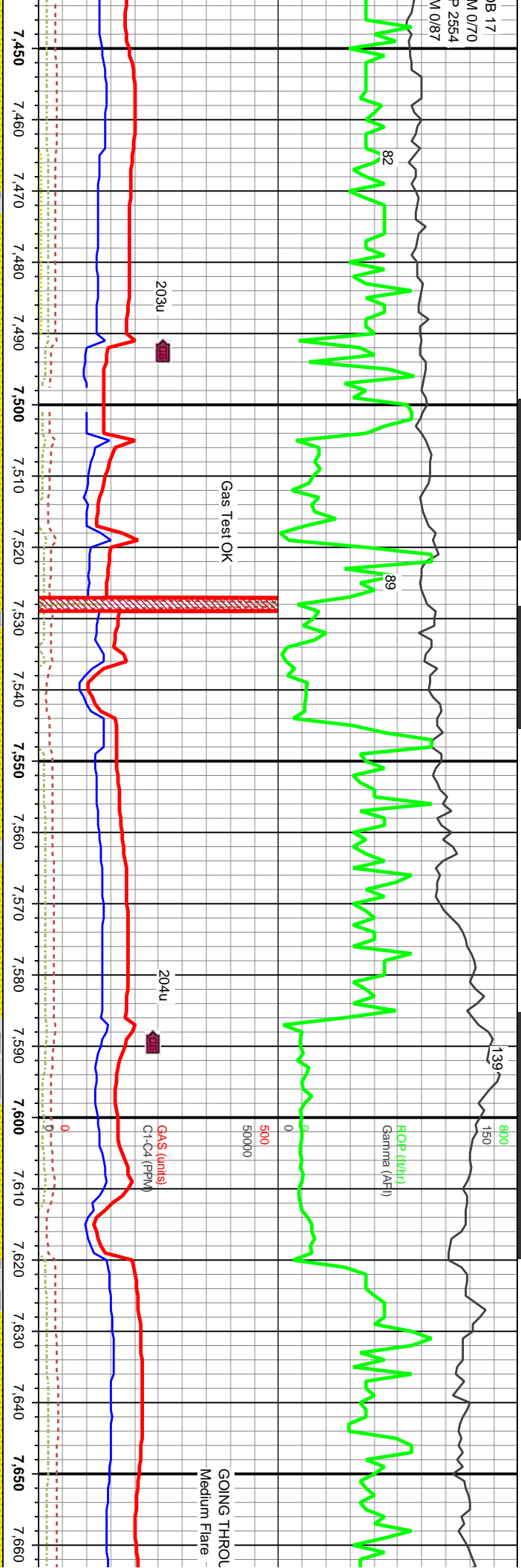


MD: 7,246 '
TVD: 6,504.34 '
Inclination: 90.46 °
Azimuth: 182.26 °

MD: 7,341 '
TVD: 6,503.55 '
Inclination: 90.5 °
Azimuth: 181.09 °

MD: 7,436 '
TVD: 6,503.83 '
Inclination: 89.16 °
Azimuth: 179.92 °

B 17
M 070
P 2554
M 087



100% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbmd-rnd, fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow wh/bl cuts, wh res ring.

90% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbmd-rnd, fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow wh/bl cuts, wh res ring.

10% SH: m gy-blk, blk-y-sbdky, sply ip, sft-mod frm ip, v-sndy, no flor, no cut.

80% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbmd-rnd, fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow wh/bl cuts, wh res ring.

20% SH: m gy-blk, blk-y-sbdky, sply ip, sft-mod frm ip, v-sndy, no flor, no cut.

85% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbmd-rnd, fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow wh/bl cuts, wh res ring.

15% SH: m gy-blk, blk-y-sbdky, sply ip, sft-mod frm ip, v-sndy, no flor, no cut.

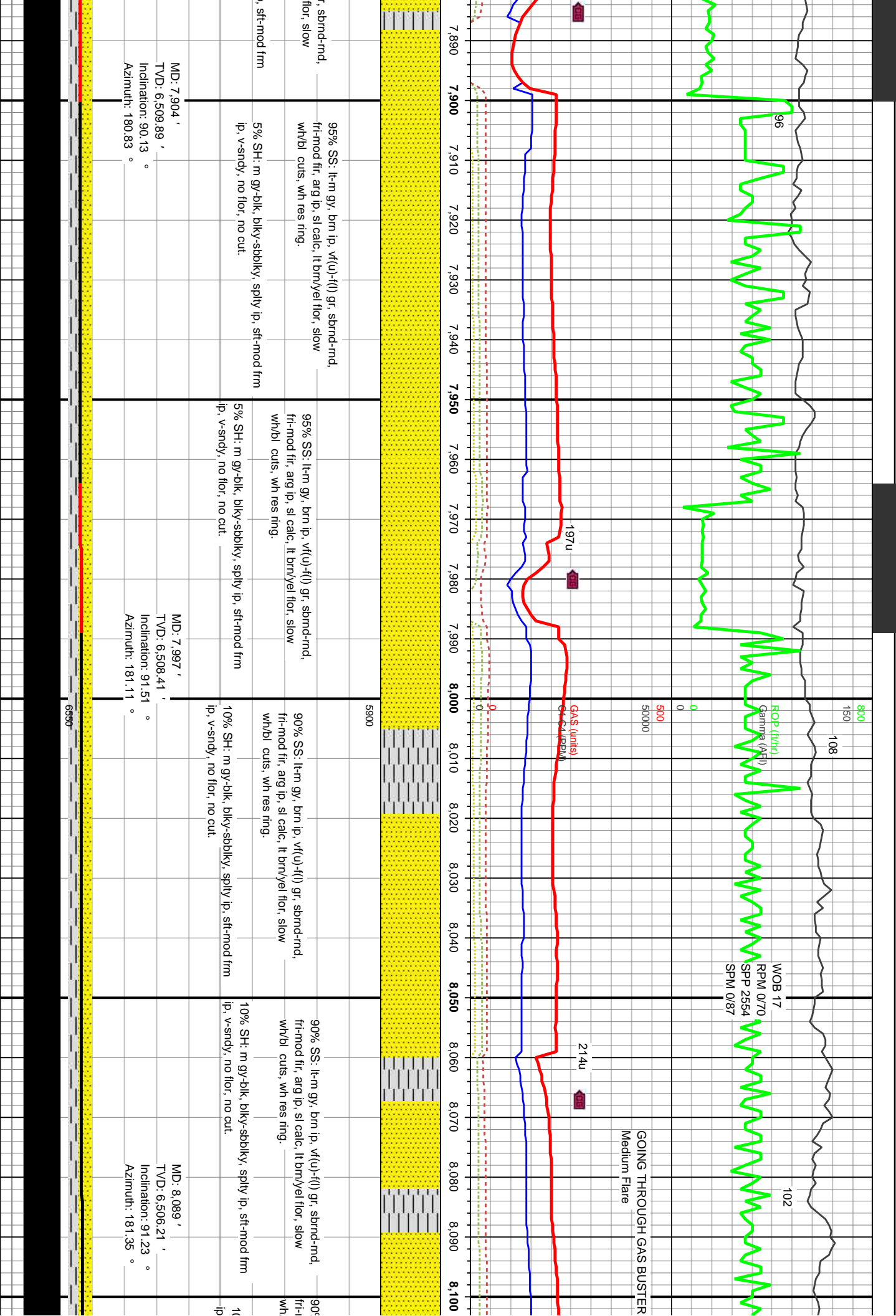
90% SS: lt-m gy, brn ip, vf(u)-f(l) gr, sbmd-rnd, fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow wh/bl cuts, wh res ring.

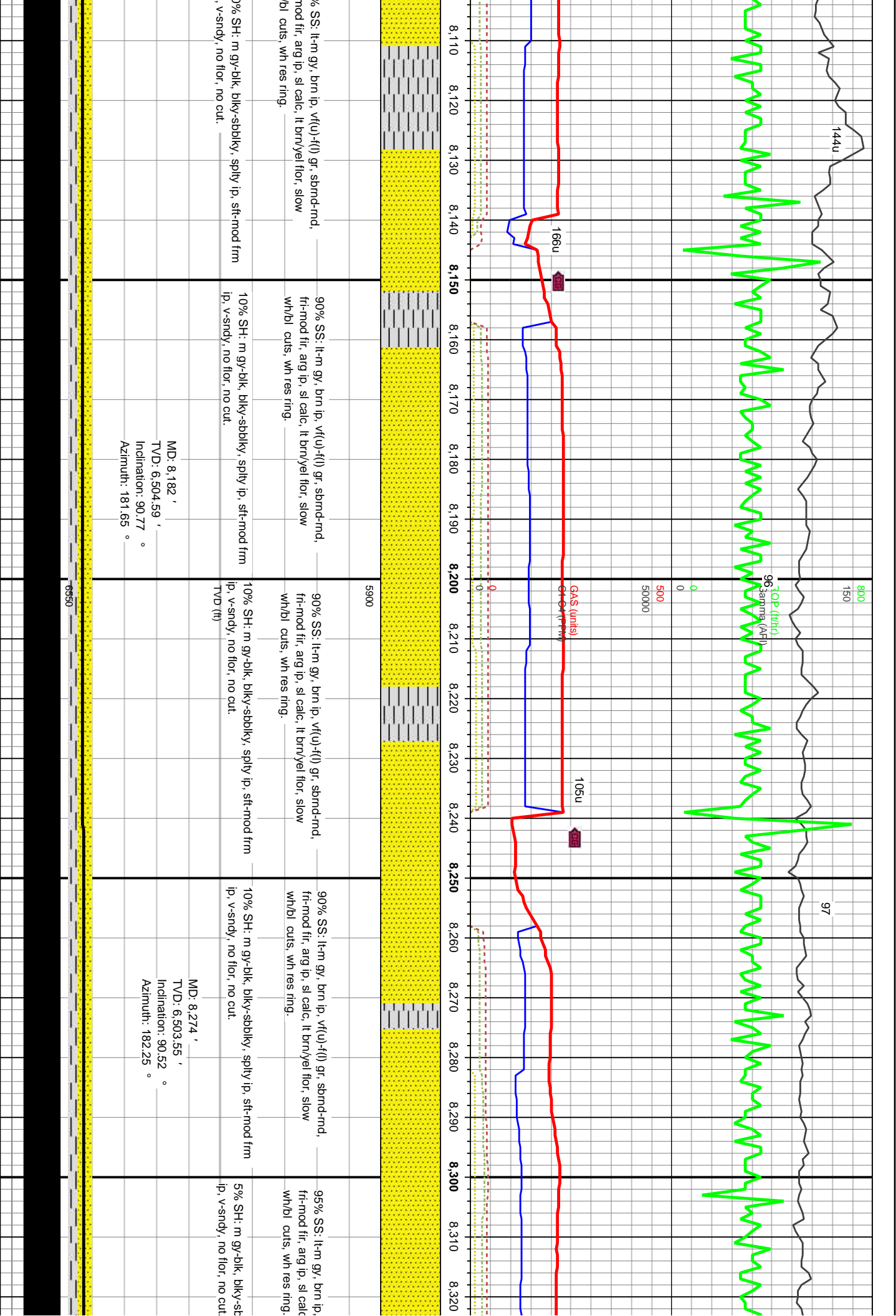
10% SH: m gy-blk, blk-y-sbdky, sply ip, sft-mod frm ip, v-sndy, no flor, no cut.

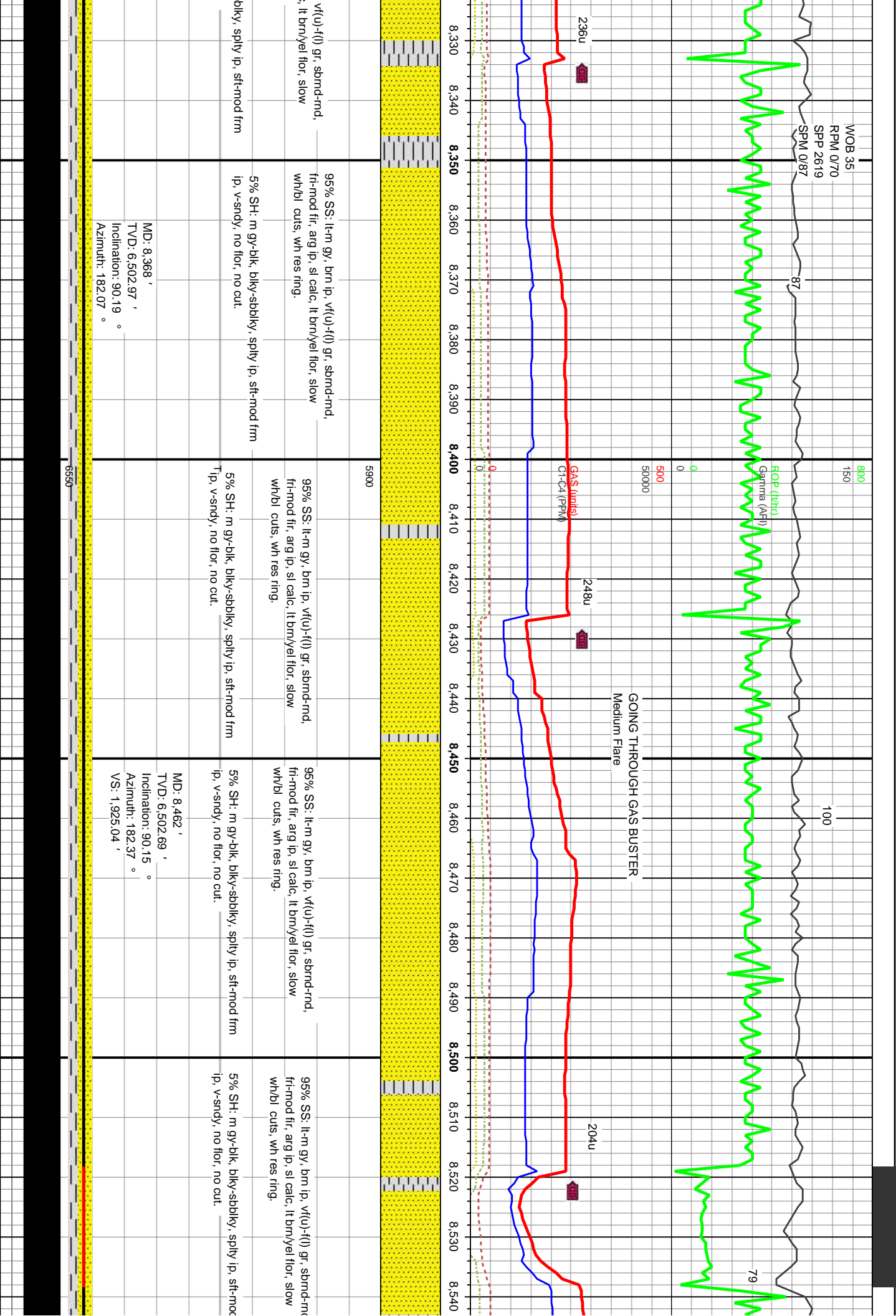
MD: 7,531 '
TVD: 6,506.14 '
Inclination: 88.06 °
Azimuth: 180.07 °

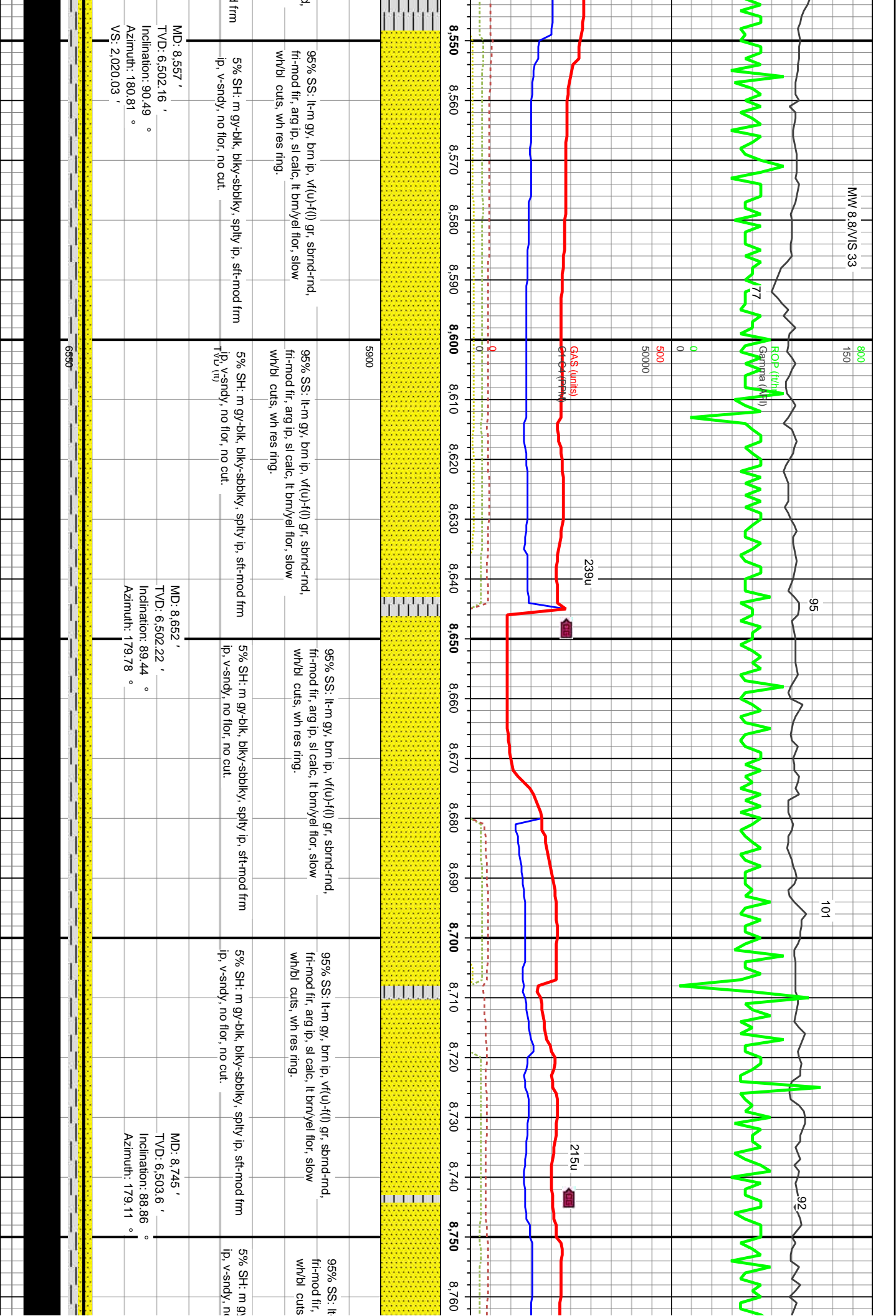
MD: 7,626 '
TVD: 6,508.79 '
Inclination: 88.74 °
Azimuth: 179.9 °

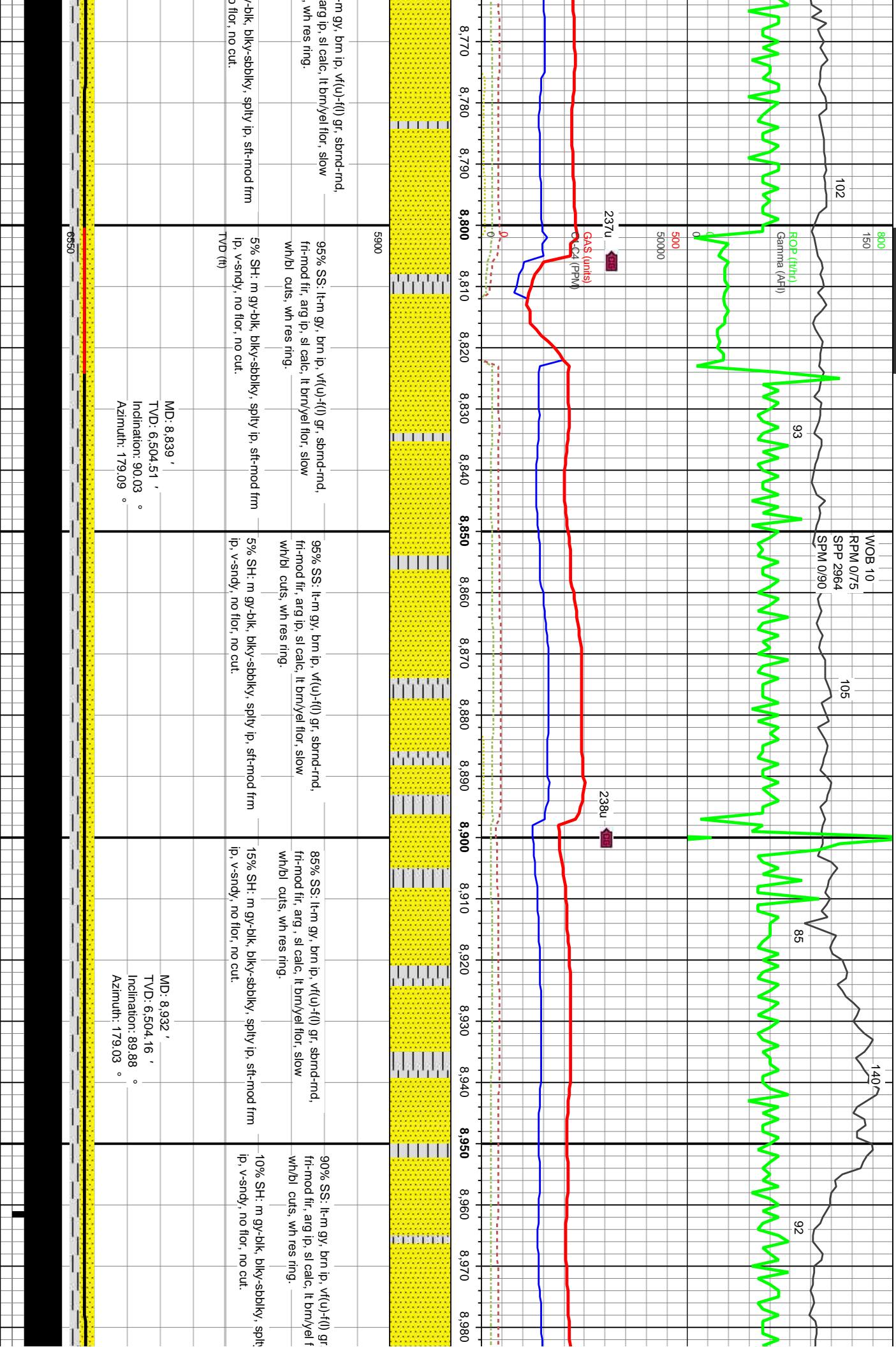
0550

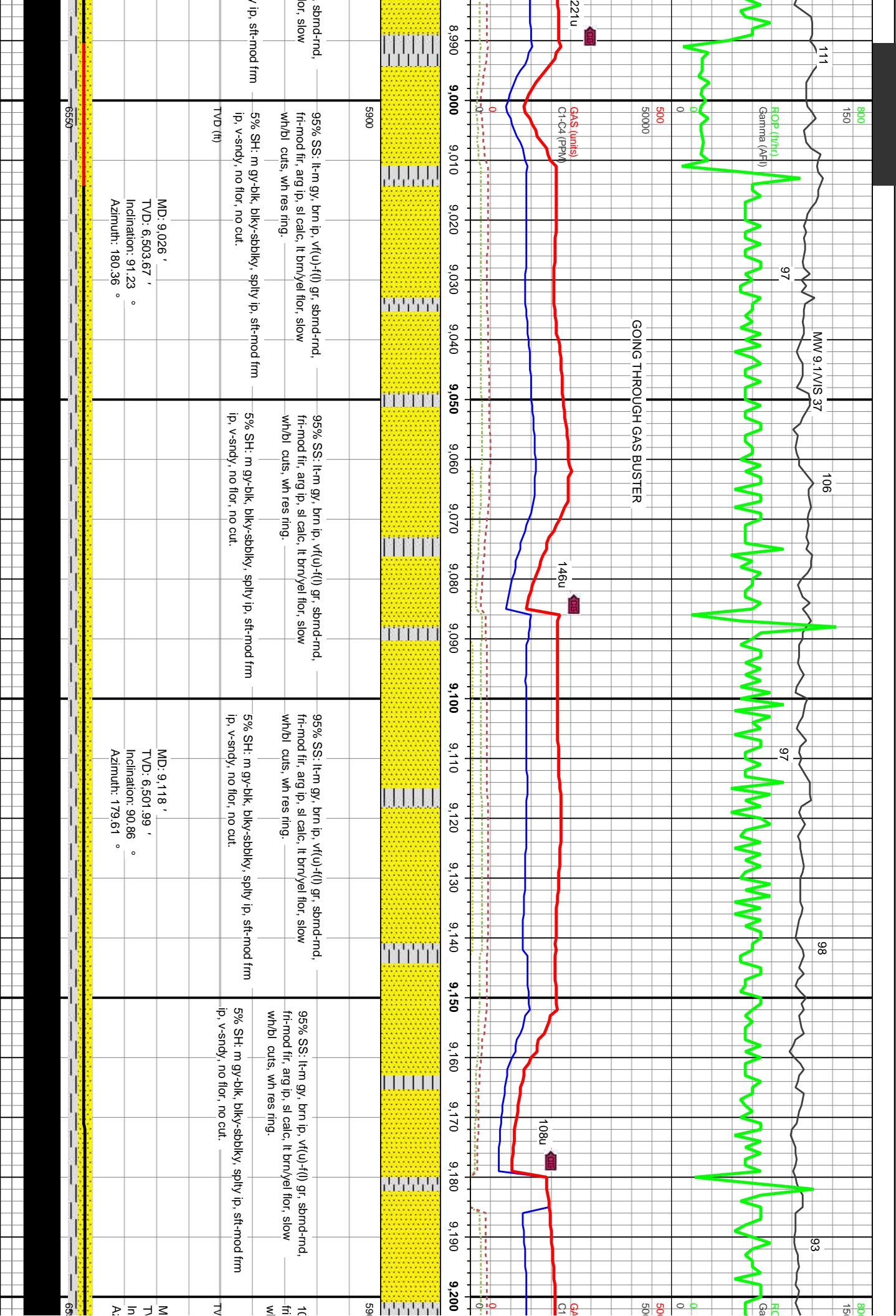


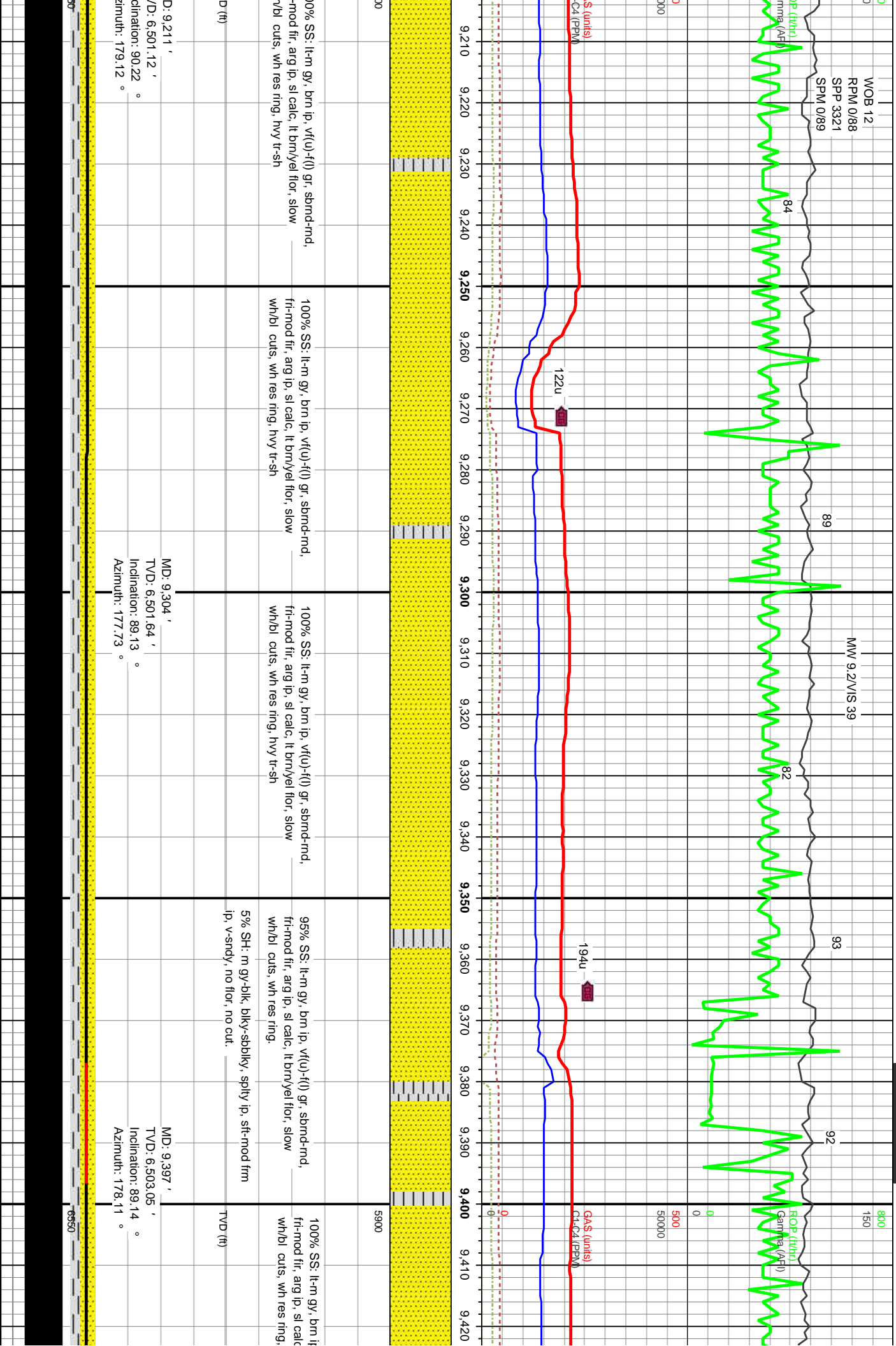


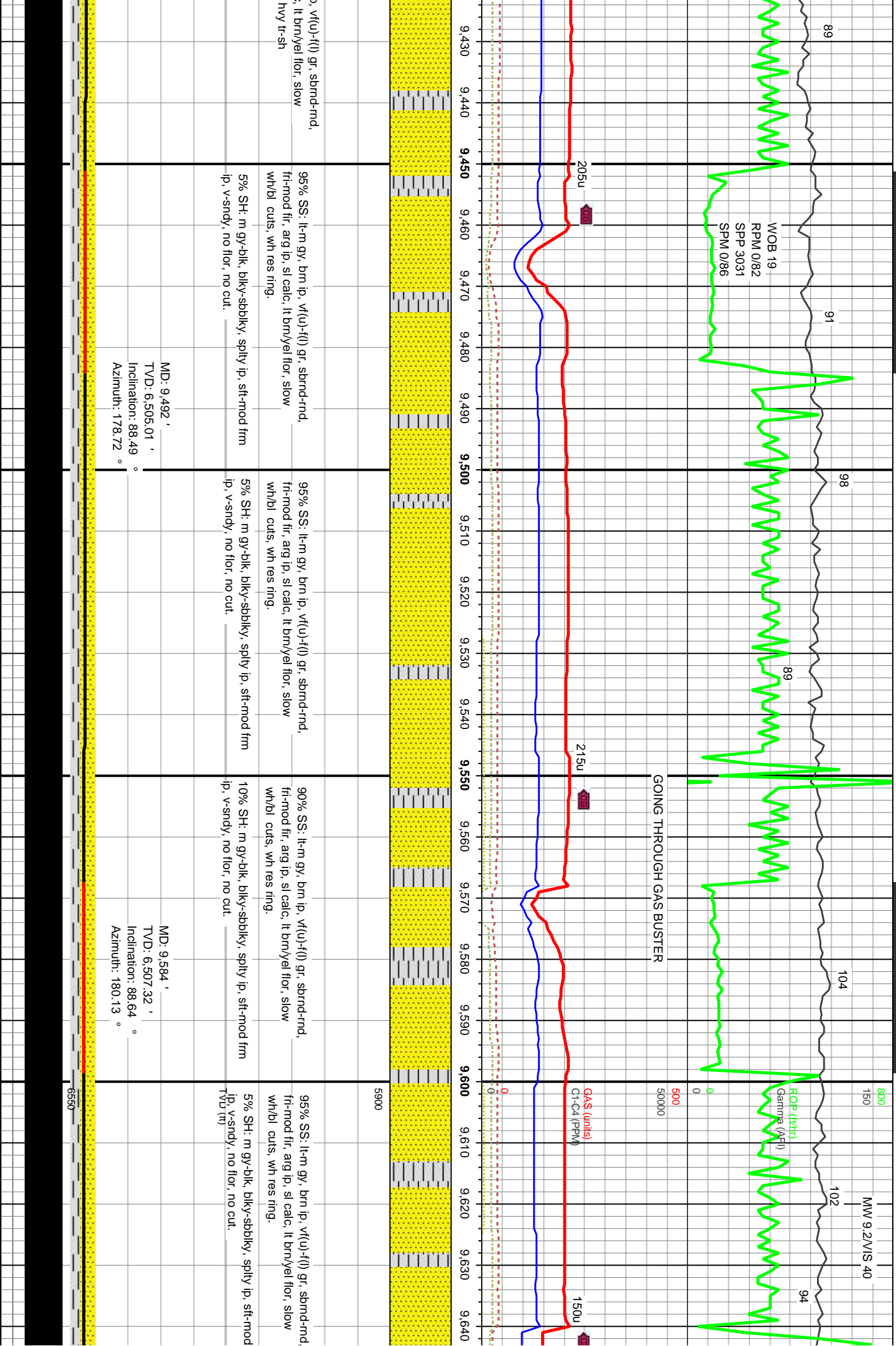


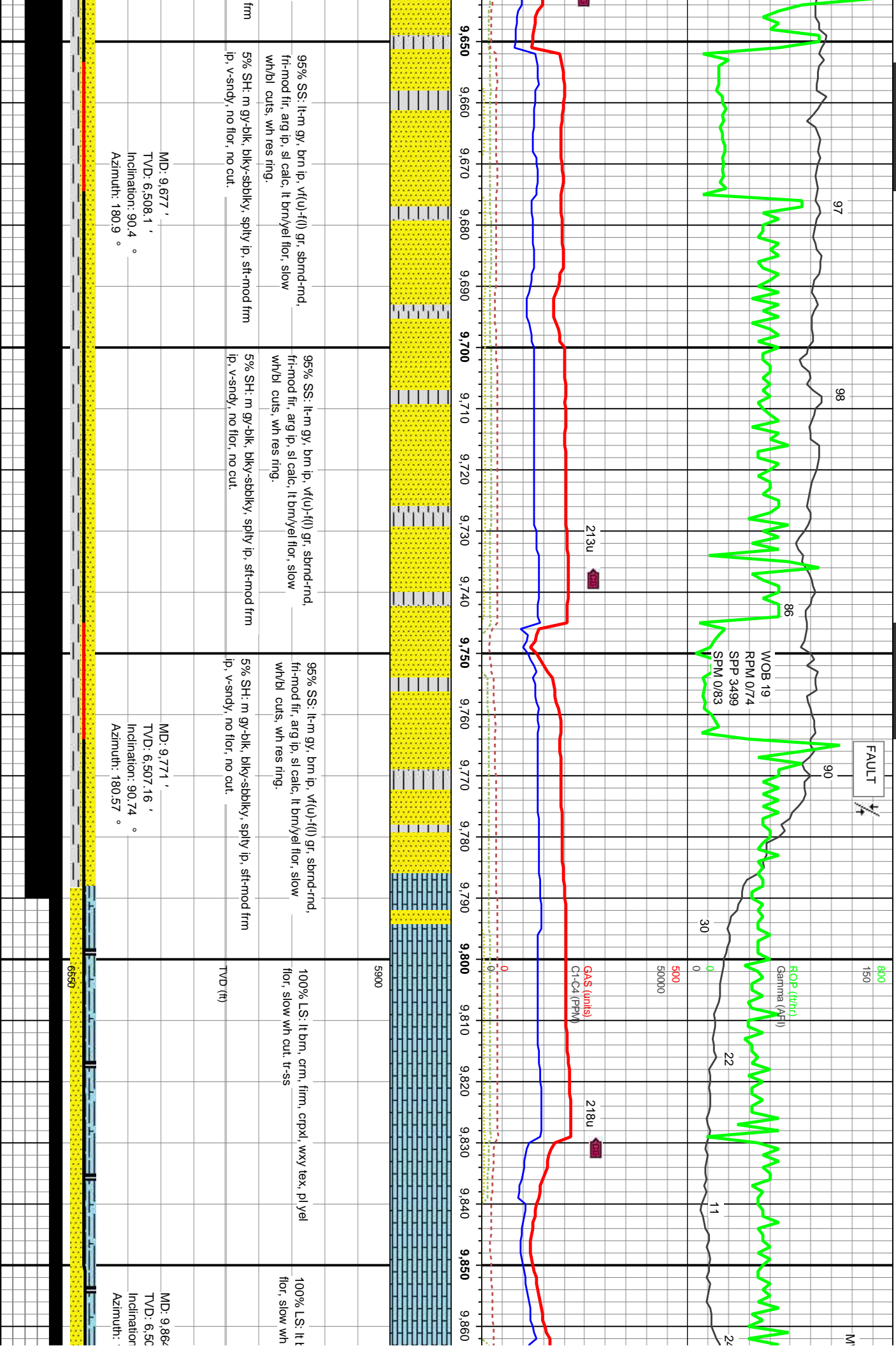


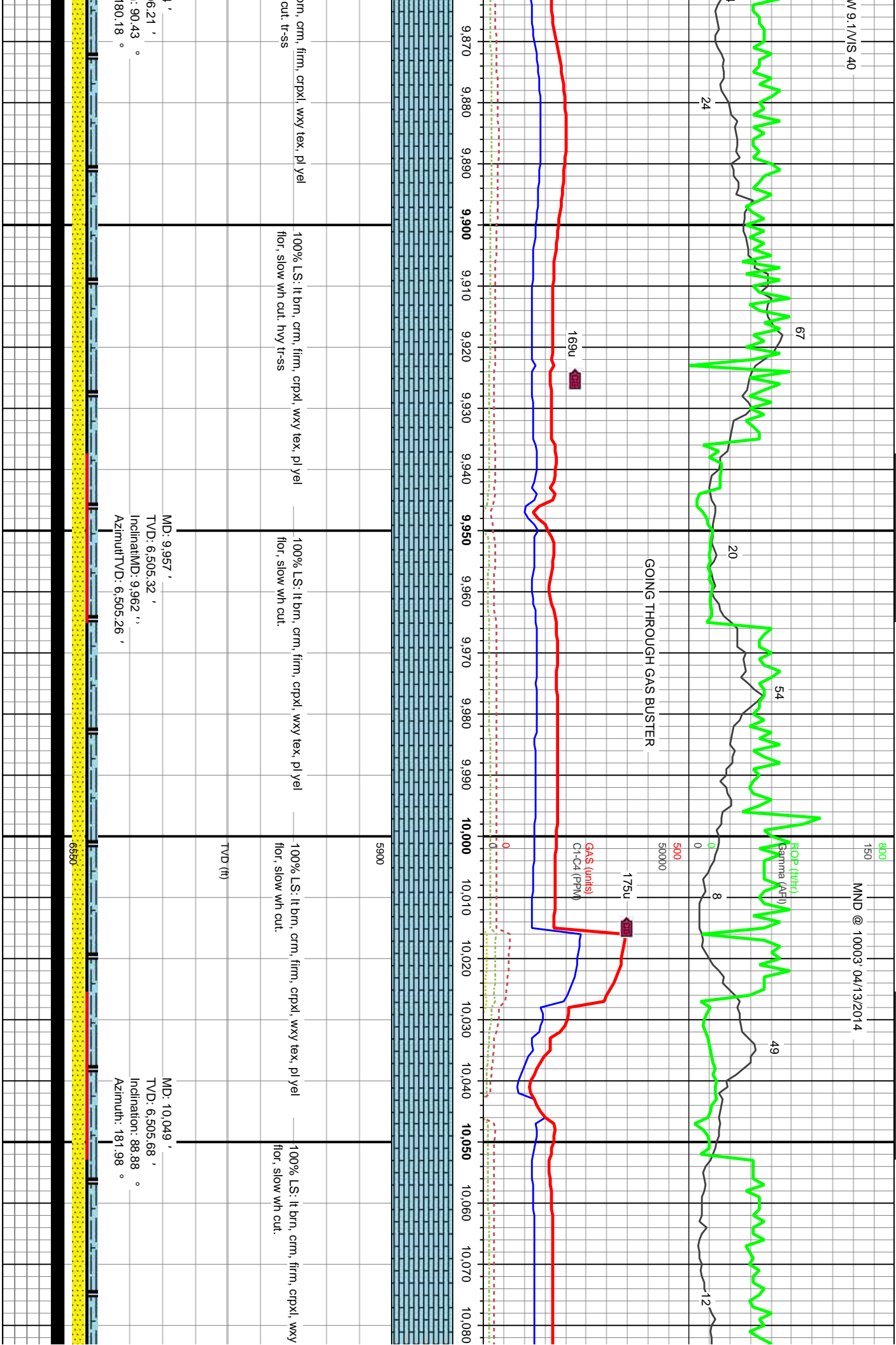


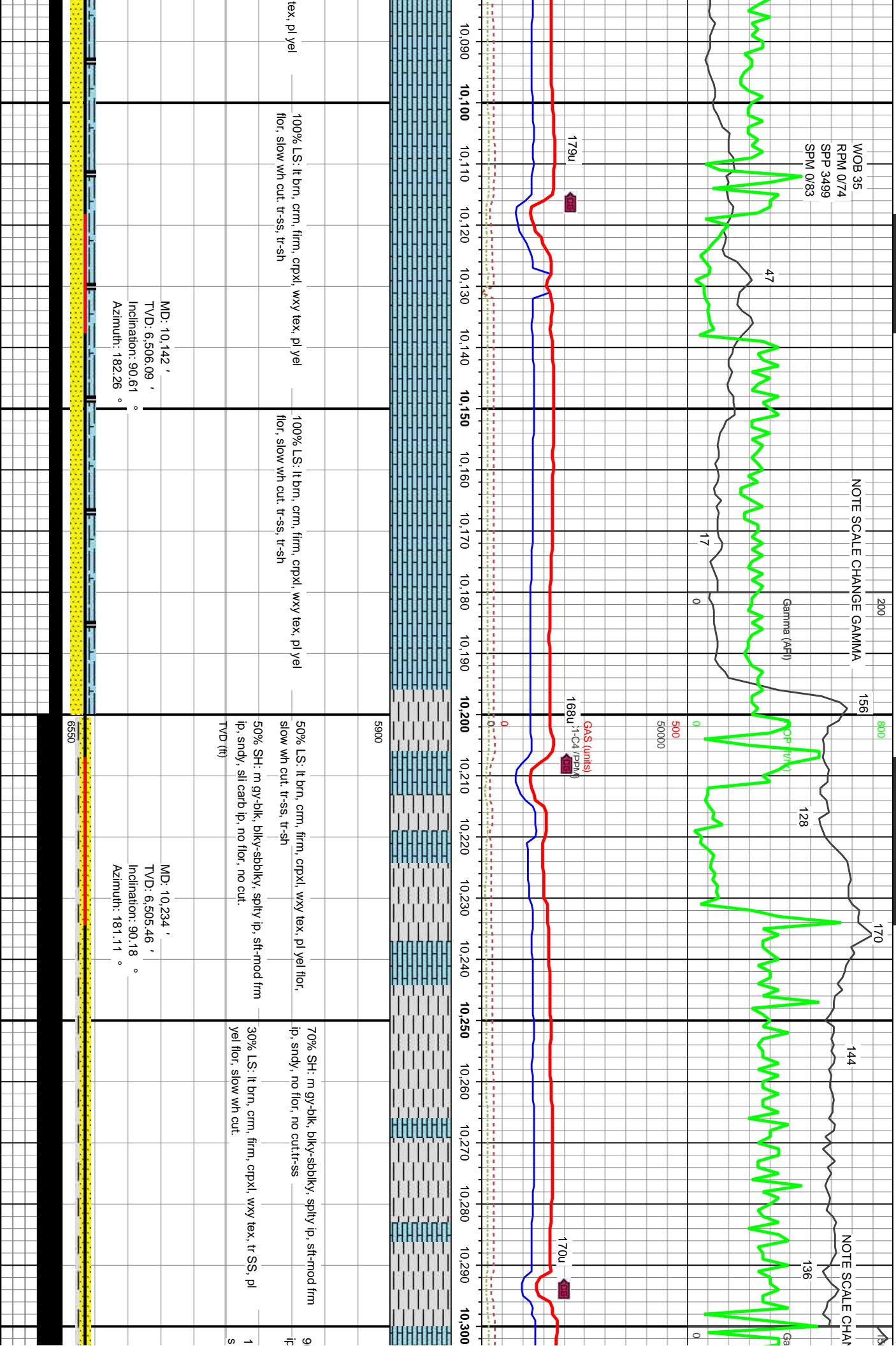


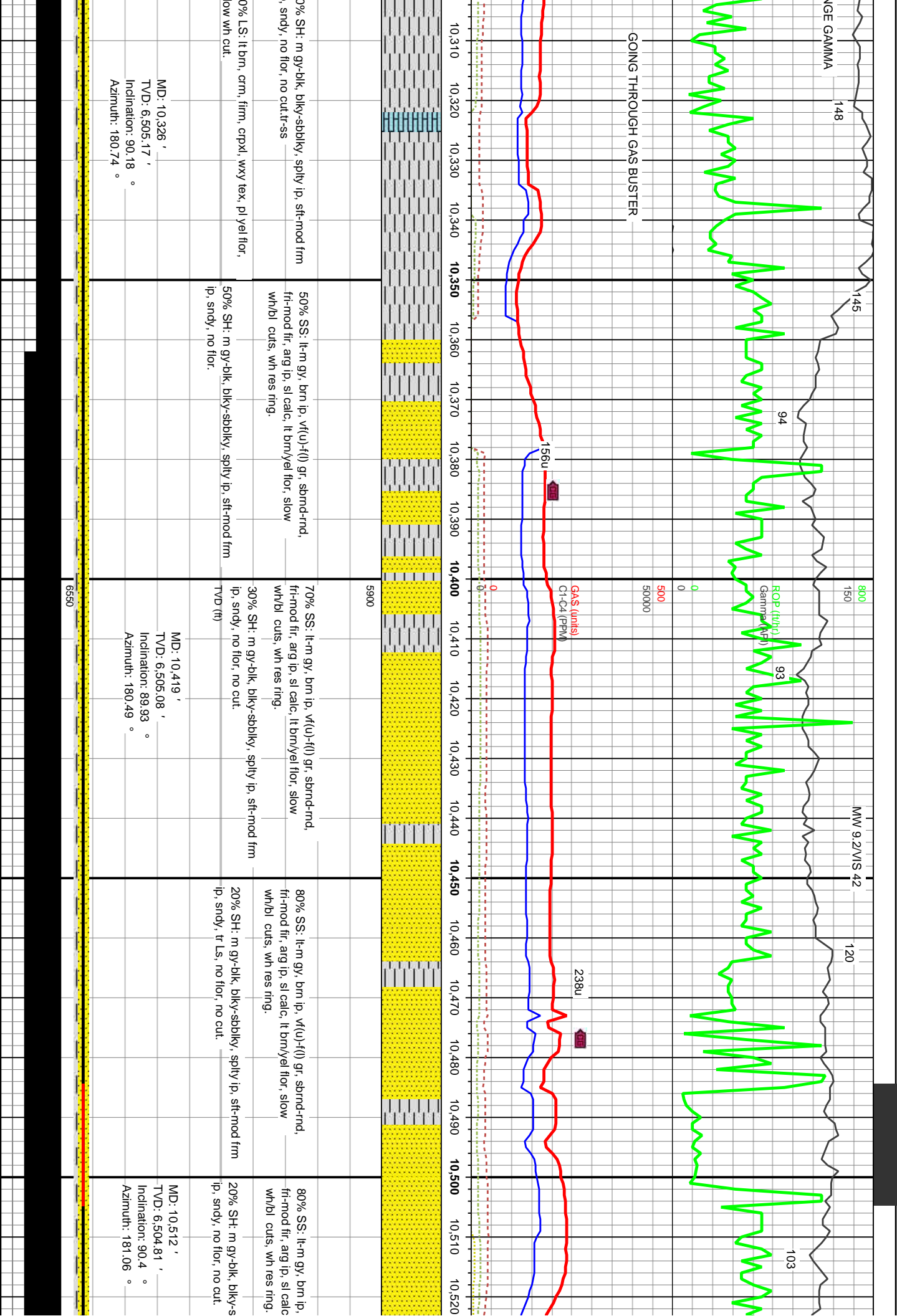


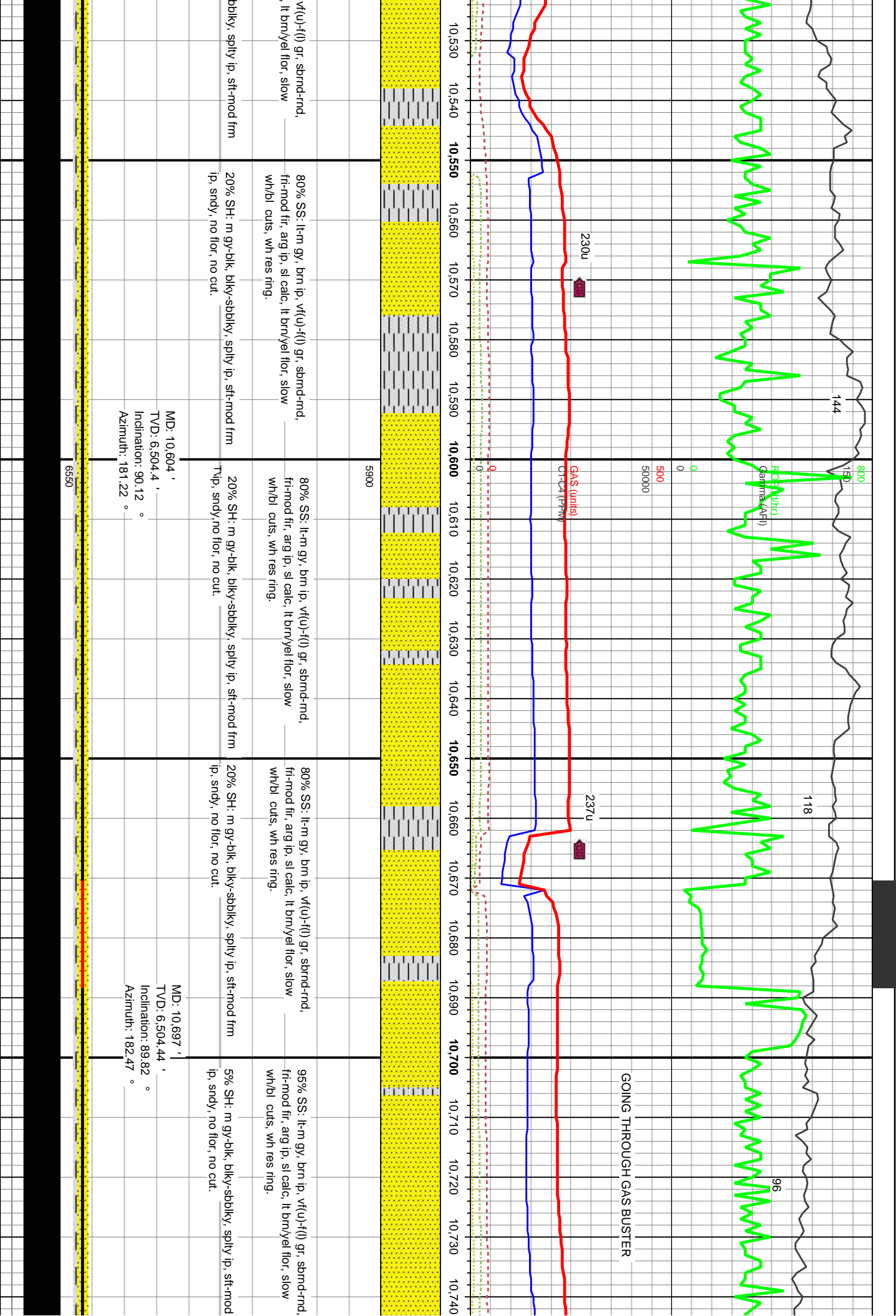


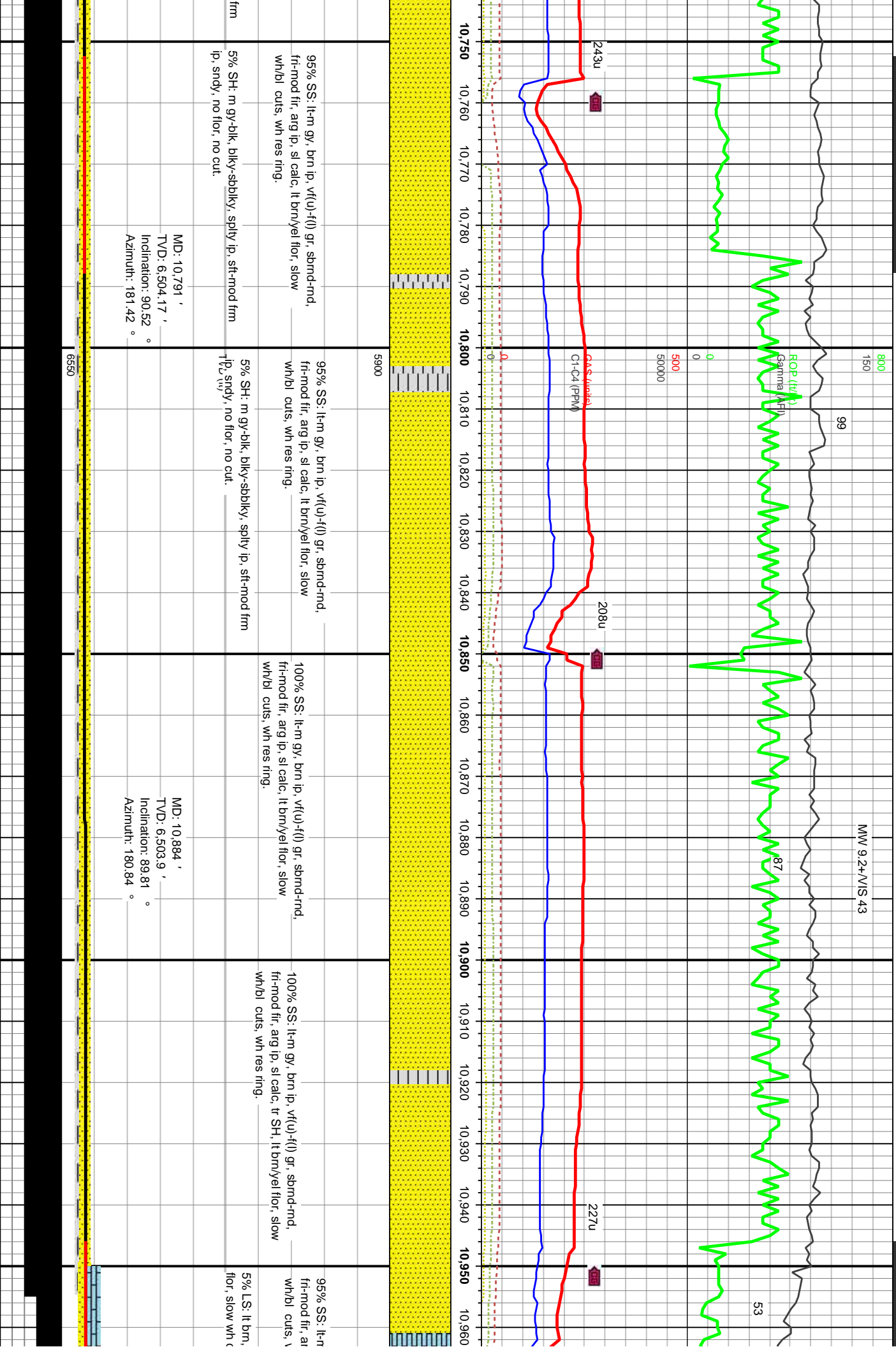


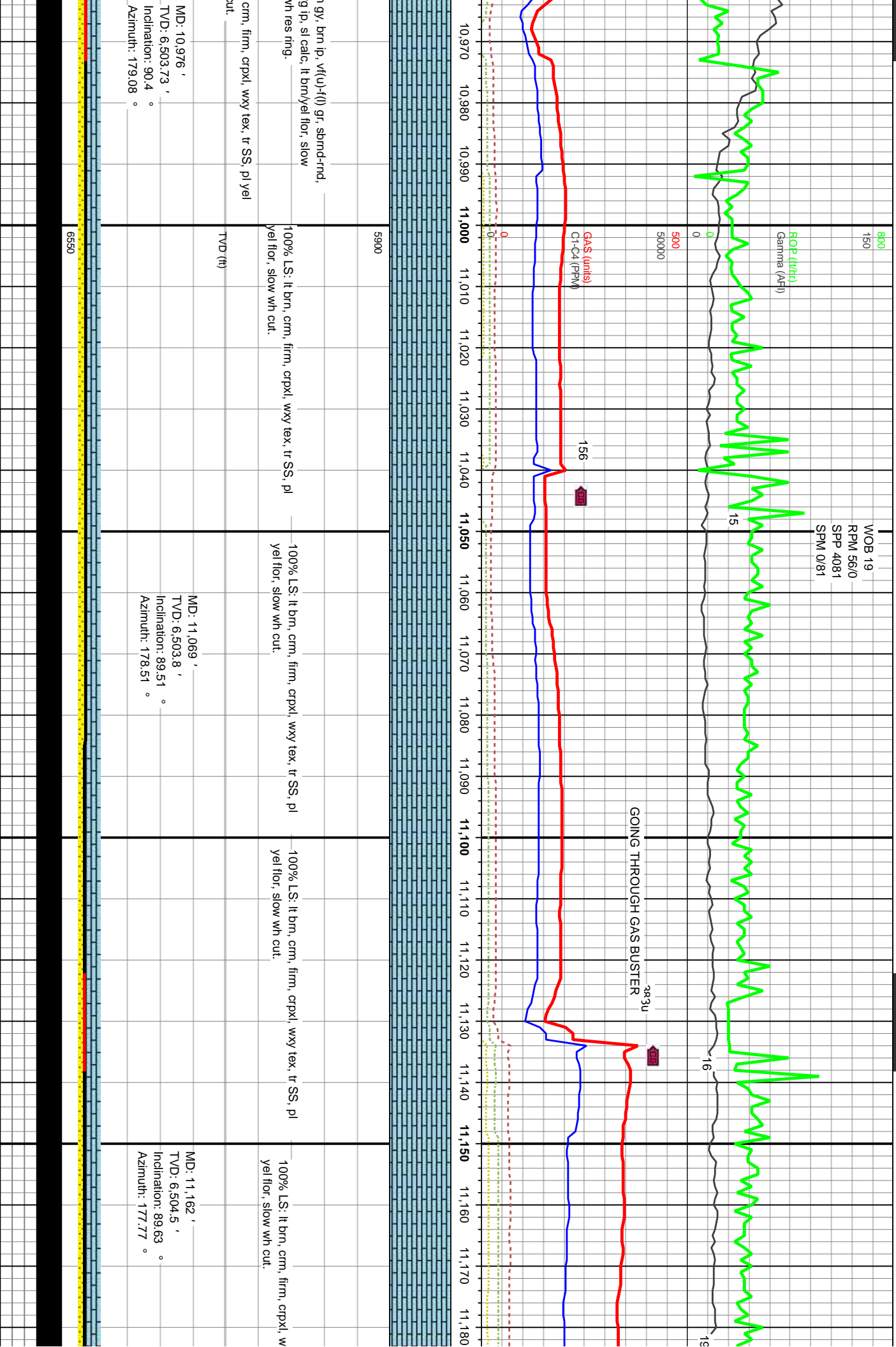


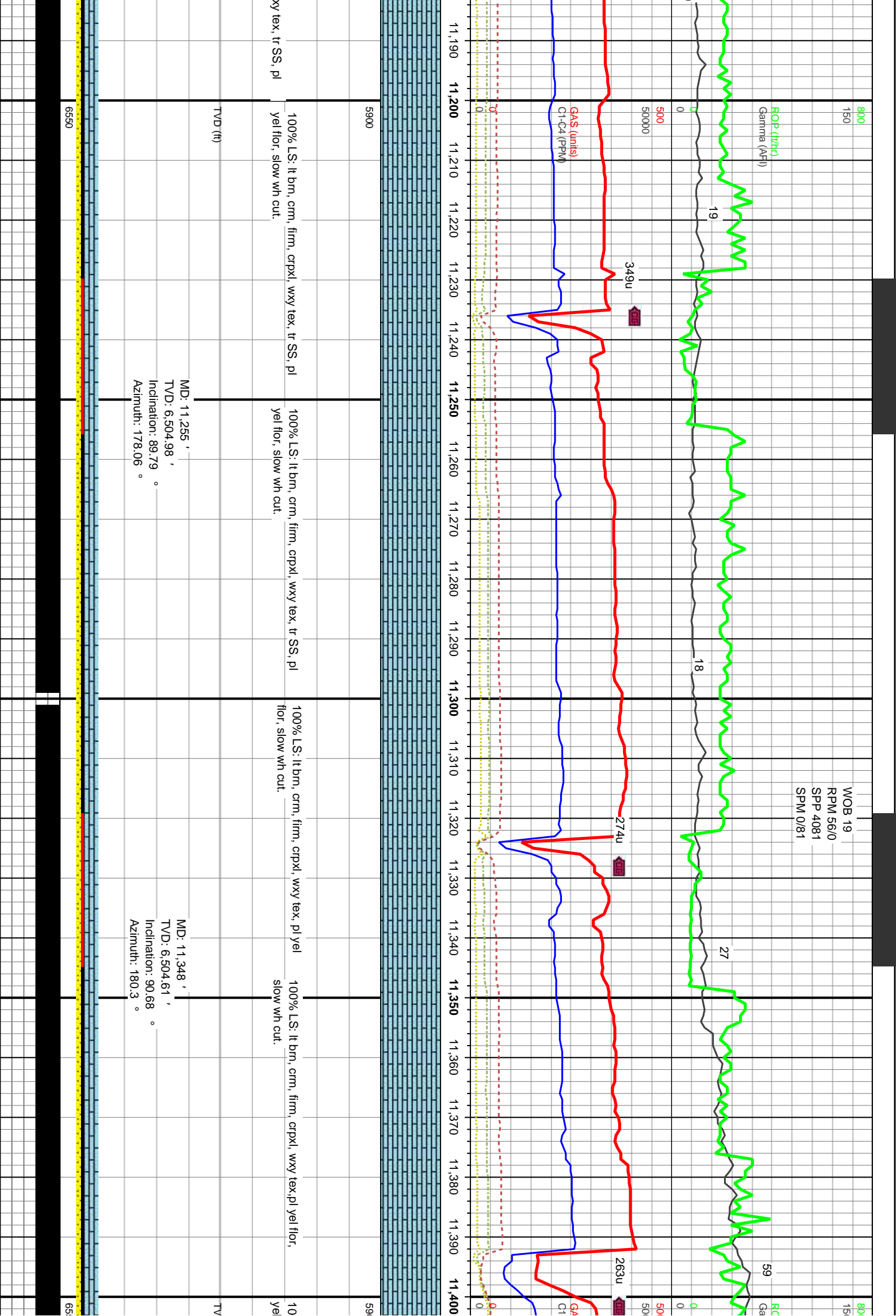


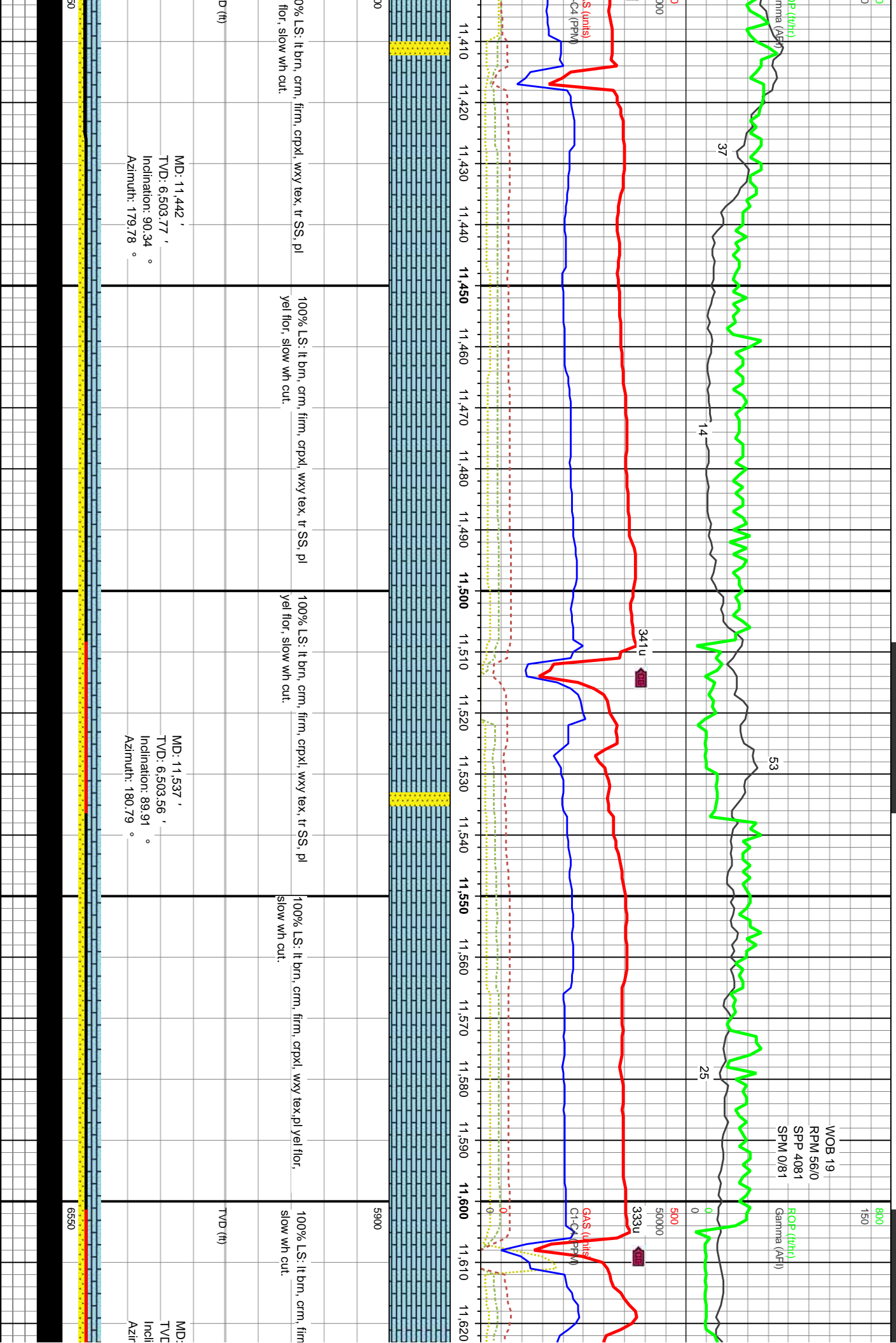












MMW 9.2/VIS 39

WOB
RPM
SPM

ROP (ft/hr)
Gamma (API)

21 23 29 22 25

369u

367u

GAS (units)
C1-C4 (PPM)

GOING THROUGH

11,630 11,640 11,650 11,660 11,670 11,680 11,690 11,700 11,710 11,720 11,730 11,740 11,750 11,760 11,770 11,780 11,790 11,800 11,810 11,820 11,830 11,840

5900

100% LS: lt brn, crm, firm, crpxl, wxy tex,pl yel flor, slow wh cut.

100% LS: lt brn, crm, firm, crpxl, wxy tex,pl yel flor, slow wh cut.

100% LS: lt brn, crm, firm, crpxl, wxy tex,pl yel flor, slow wh cut.

100% LS: lt brn, crm, firm, crpxl, wxy tex,pl yel flor, slow wh cut.

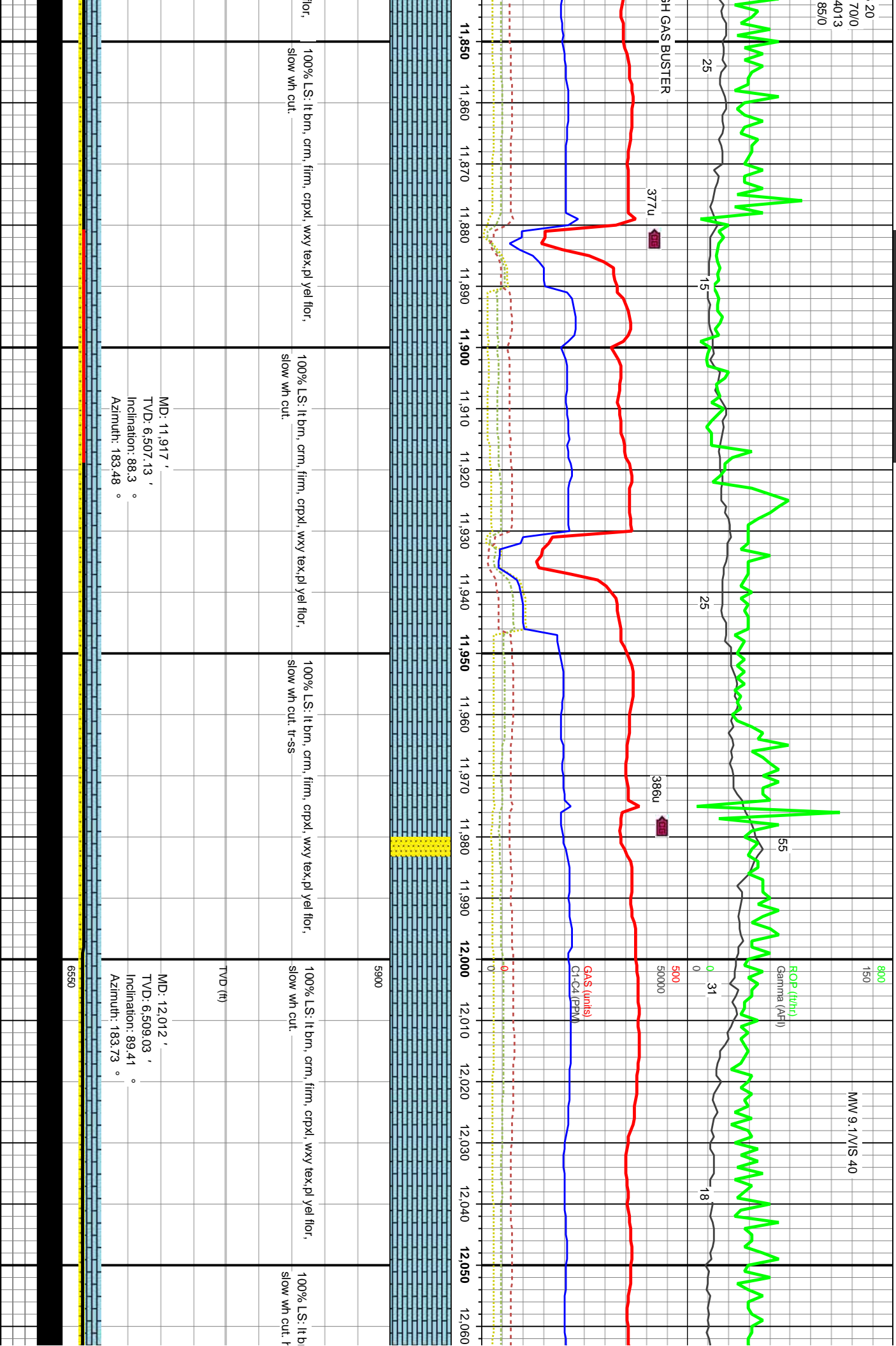
TVD (ft)

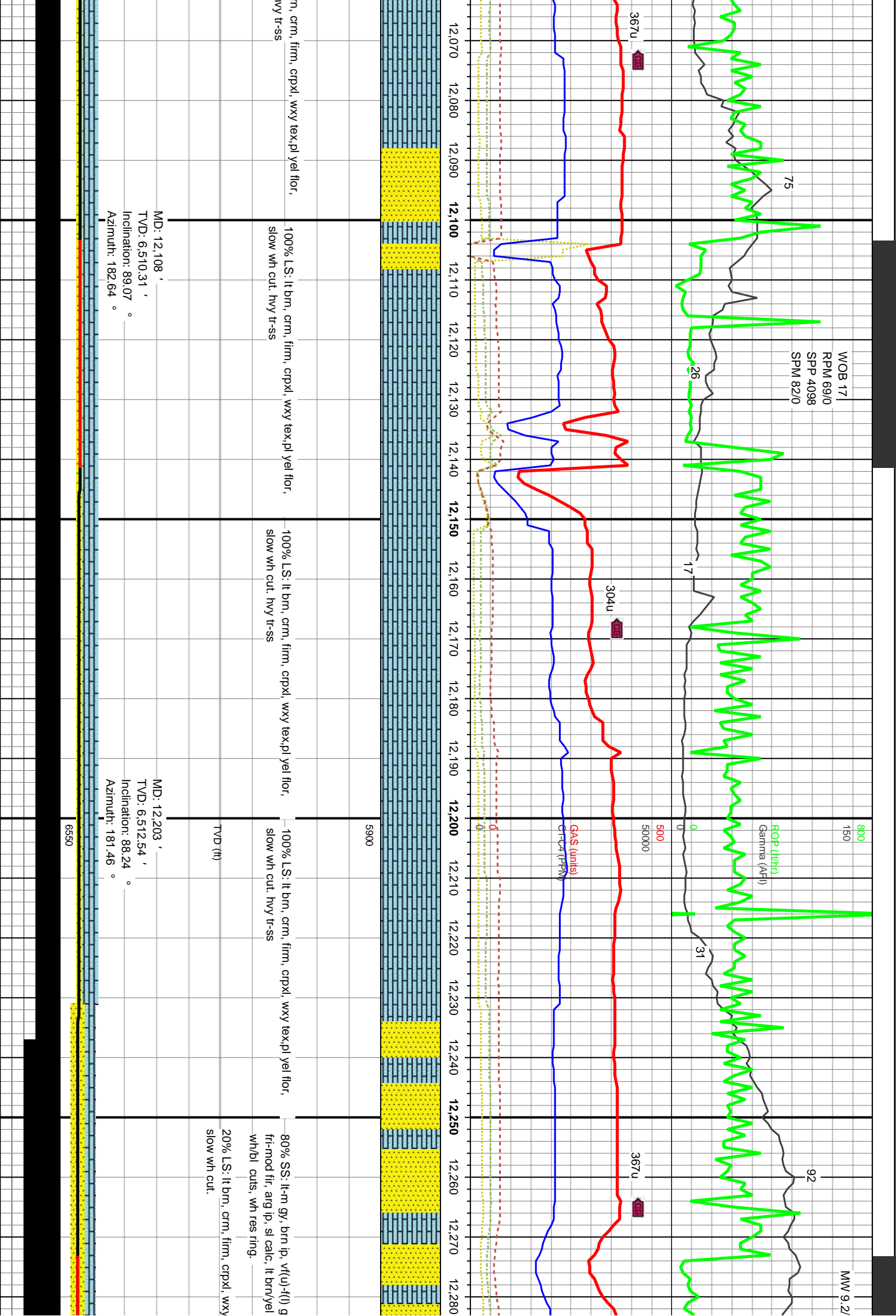
11,632 '
6,503.74 '
ation: 89.88 °
outh: 181.33 °

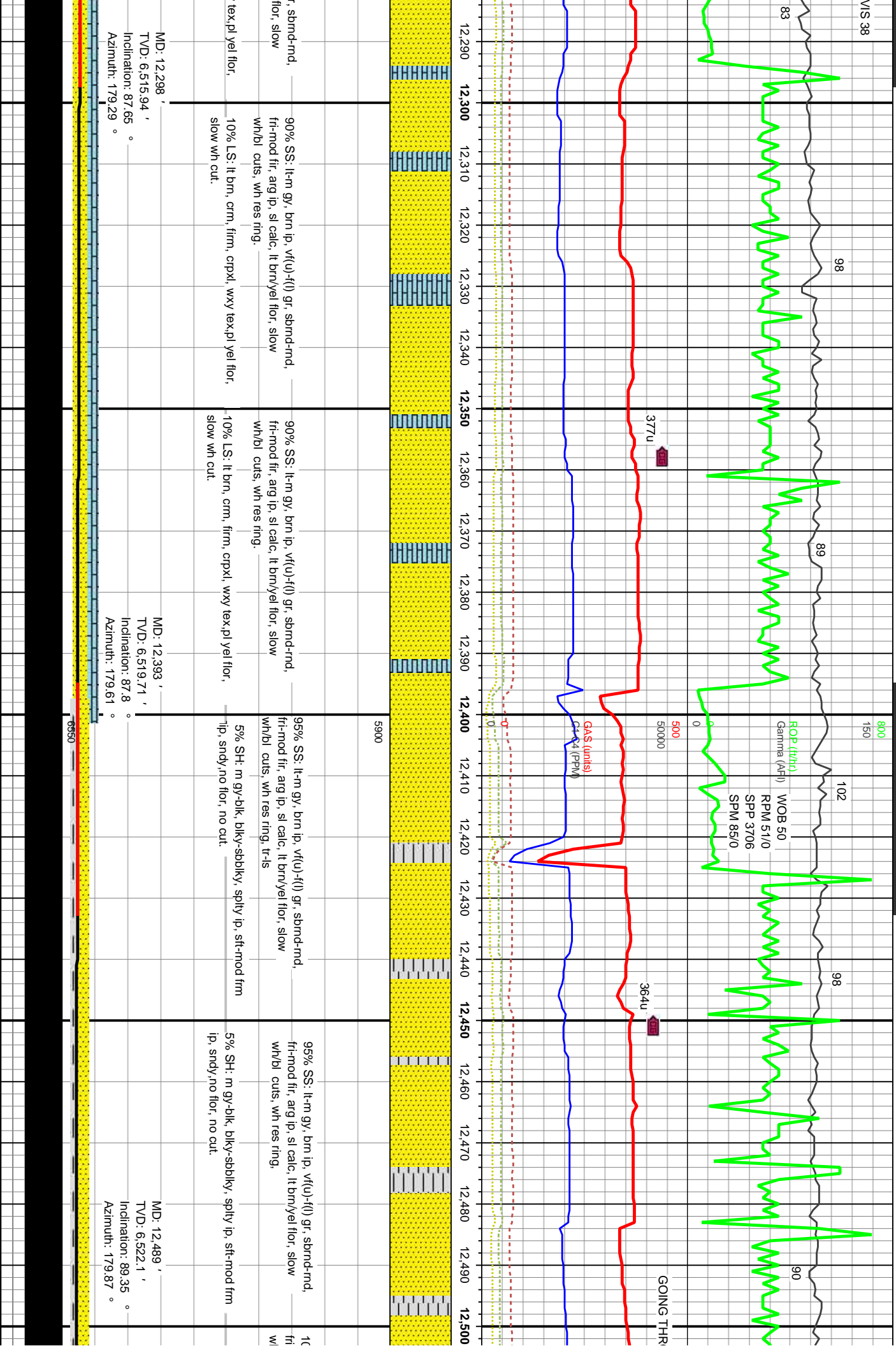
MD: 11,727 '
TVD: 6,505.37 '
Inclination: 88.15 °
Azimuth: 182.26 °

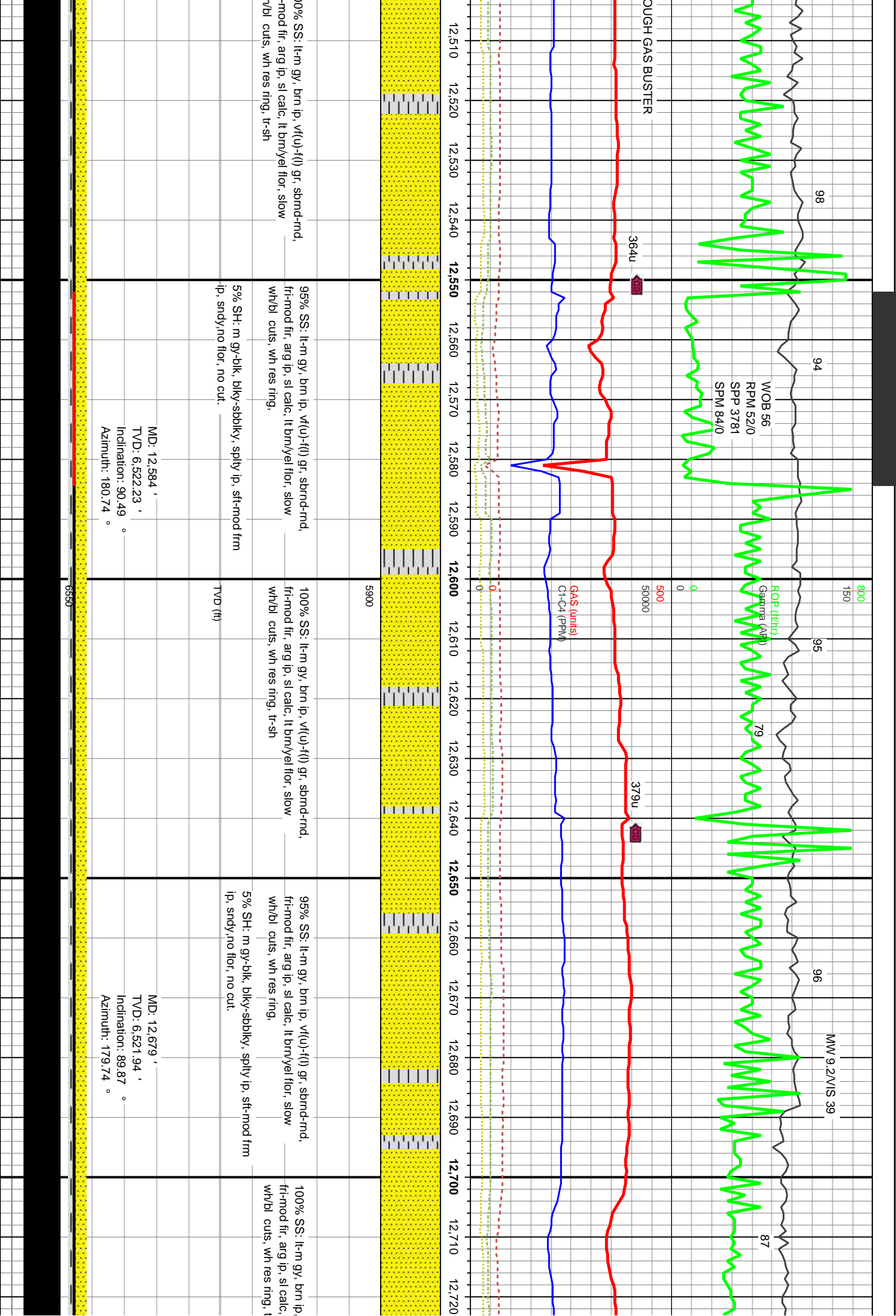
MD: 11,822 '
TVD: 6,506.31 '
Inclination: 90.71 °
Azimuth: 182.62 °

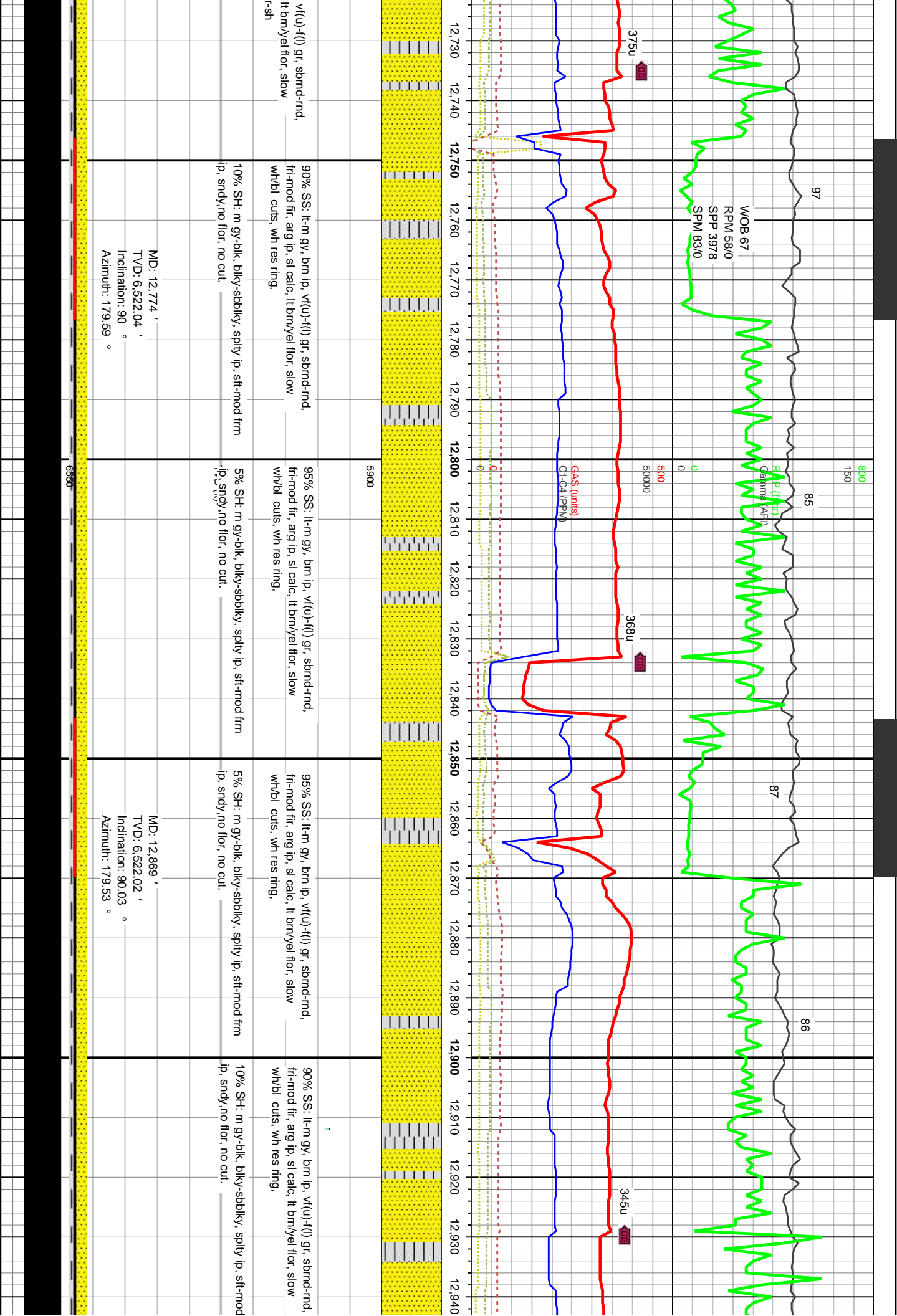
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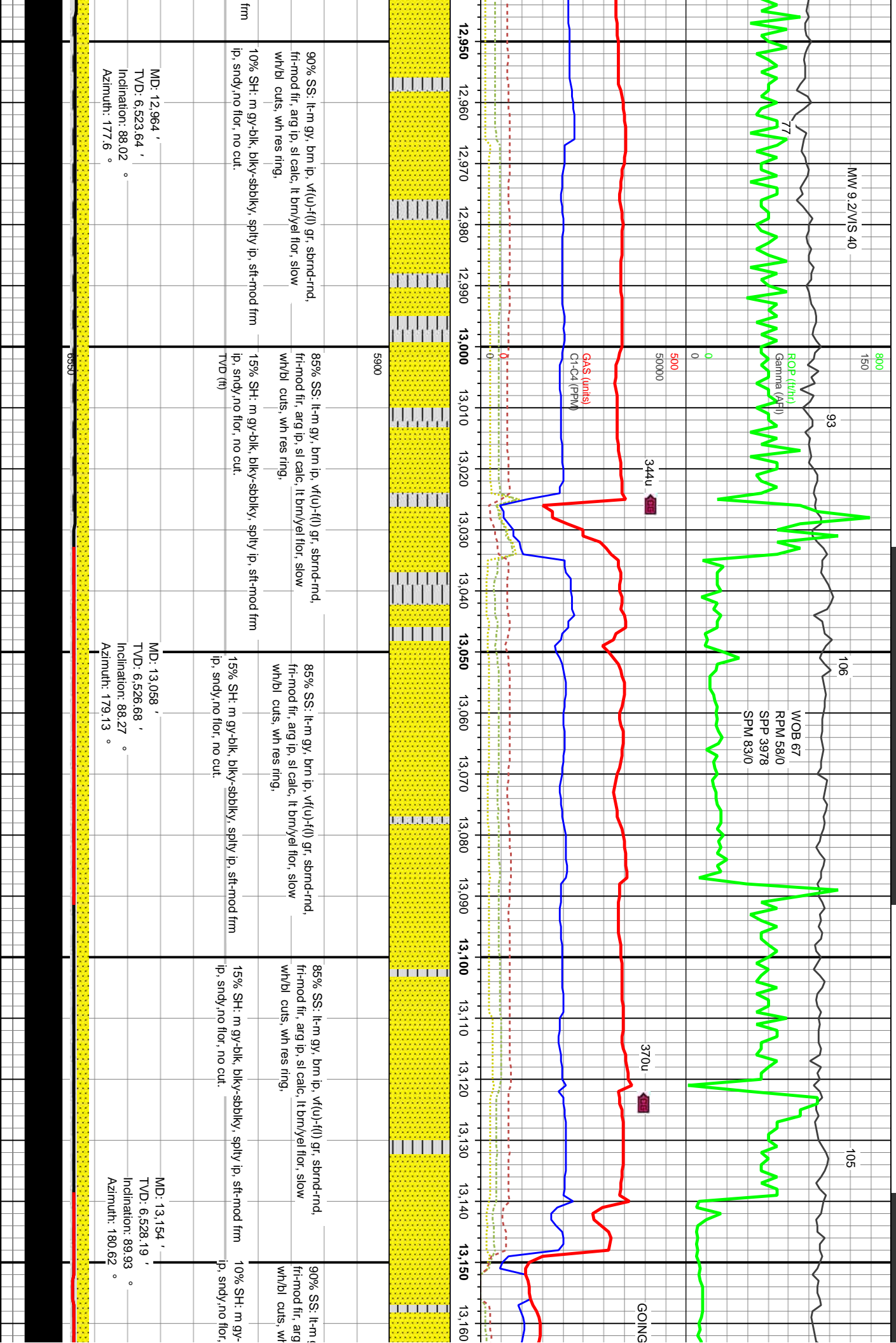


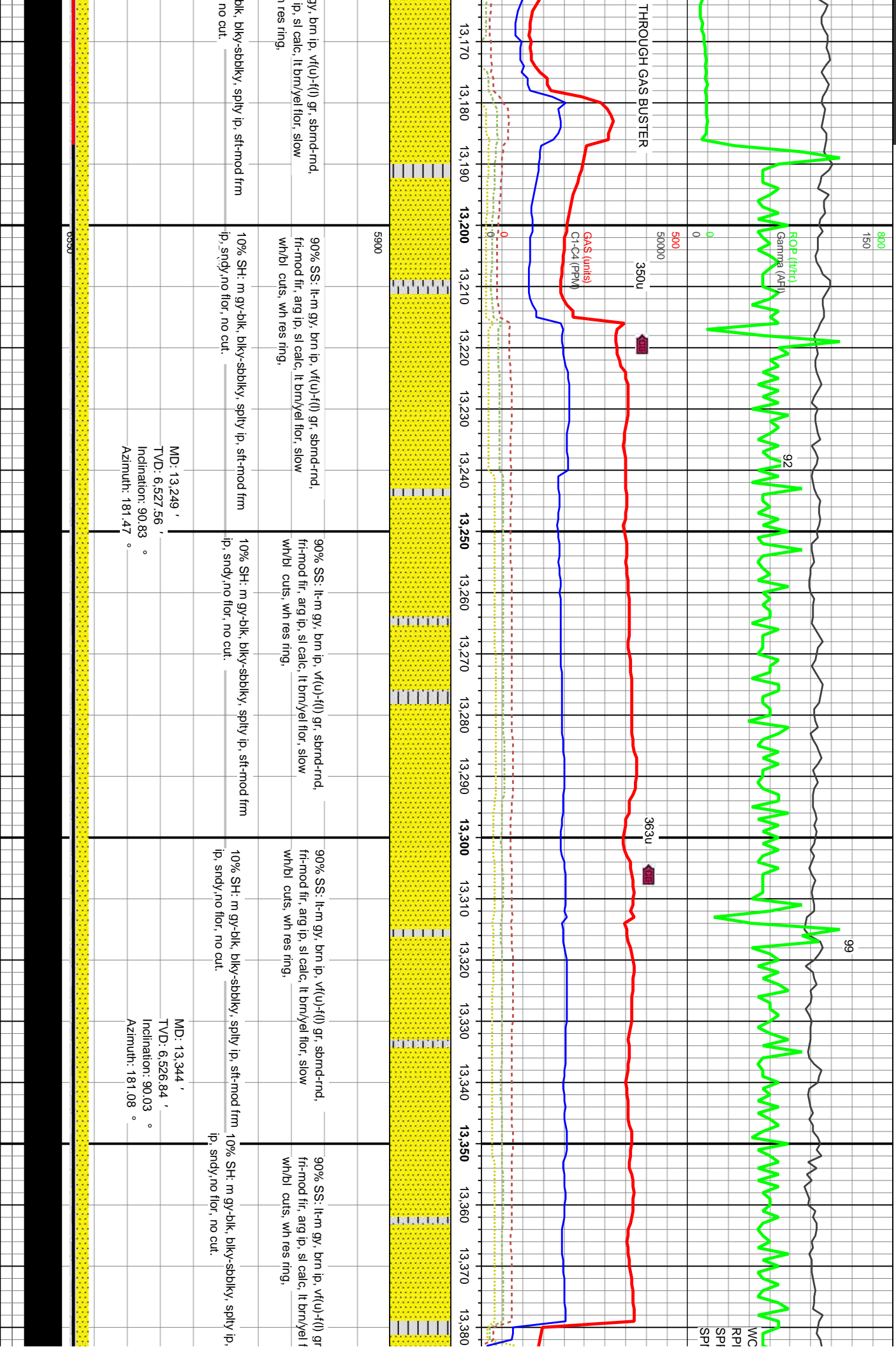


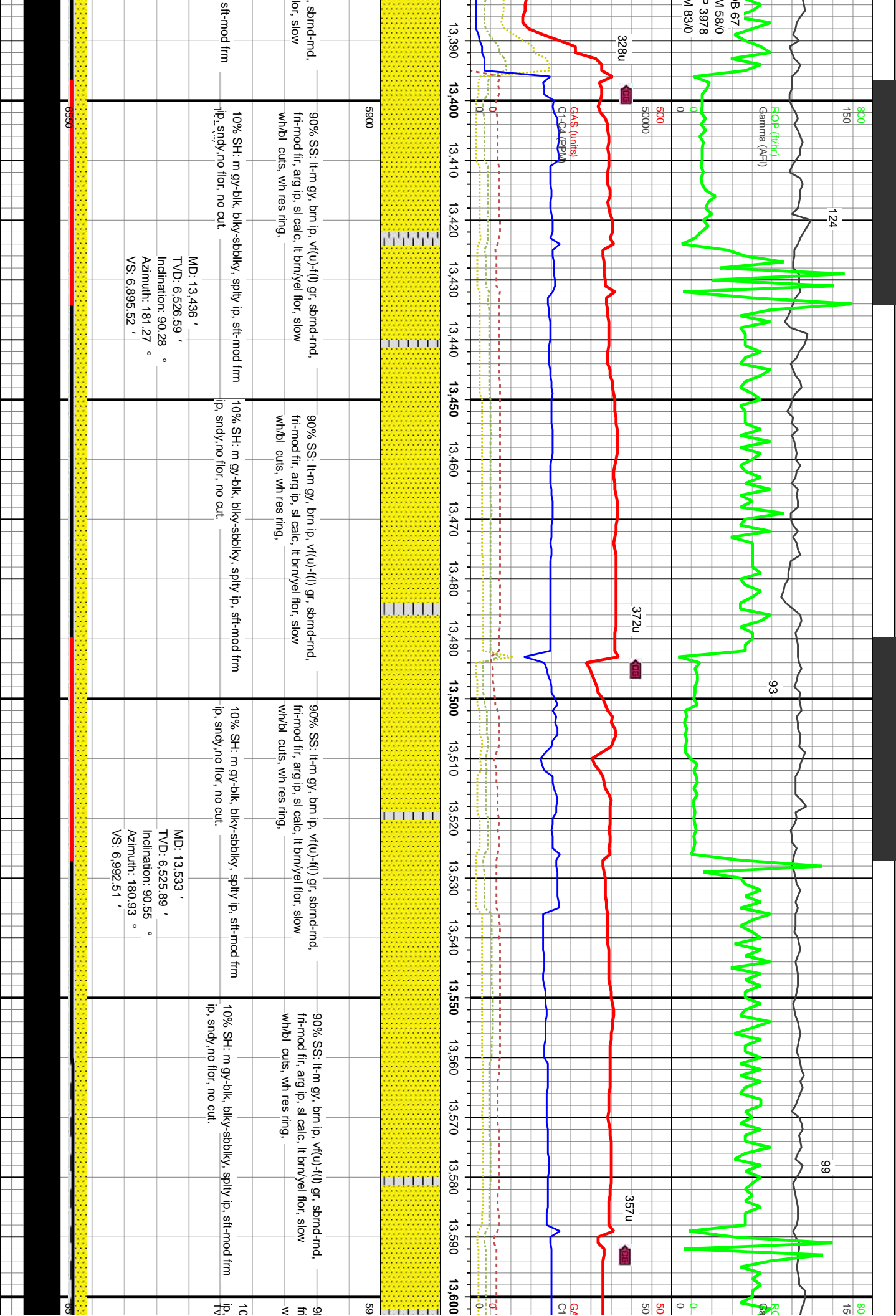












800
150
124
93
99

ROP (ft/hr)
Gamma (API)

B 67
M 58/0
3978
M 83/0

0
500
50000

328u
372u
357u

GAS (units)
C1, C4 (ppm)

13,390 13,400 13,410 13,420 13,430 13,440 13,450 13,460 13,470 13,480 13,490 13,500 13,510 13,520 13,530 13,540 13,550 13,560 13,570 13,580 13,590 13,600

5900

90% SS: lt-m gy, brn ip, v(f(u)-f(l)) gr, sbnd-rnd, fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow wh/bl cuts, wh res ring.

10% SH: m gy-blk, blk-y-sbbkly, splty ip, sft-mod frm ip, sndy, no flor, no cut.

MD: 13,436 '
TVD: 6,526.59 '
Inclination: 90.28 °
Azimuth: 181.27 °
VS: 6,895.52 '

90% SS: lt-m gy, brn ip, v(f(u)-f(l)) gr, sbnd-rnd, fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow wh/bl cuts, wh res ring.

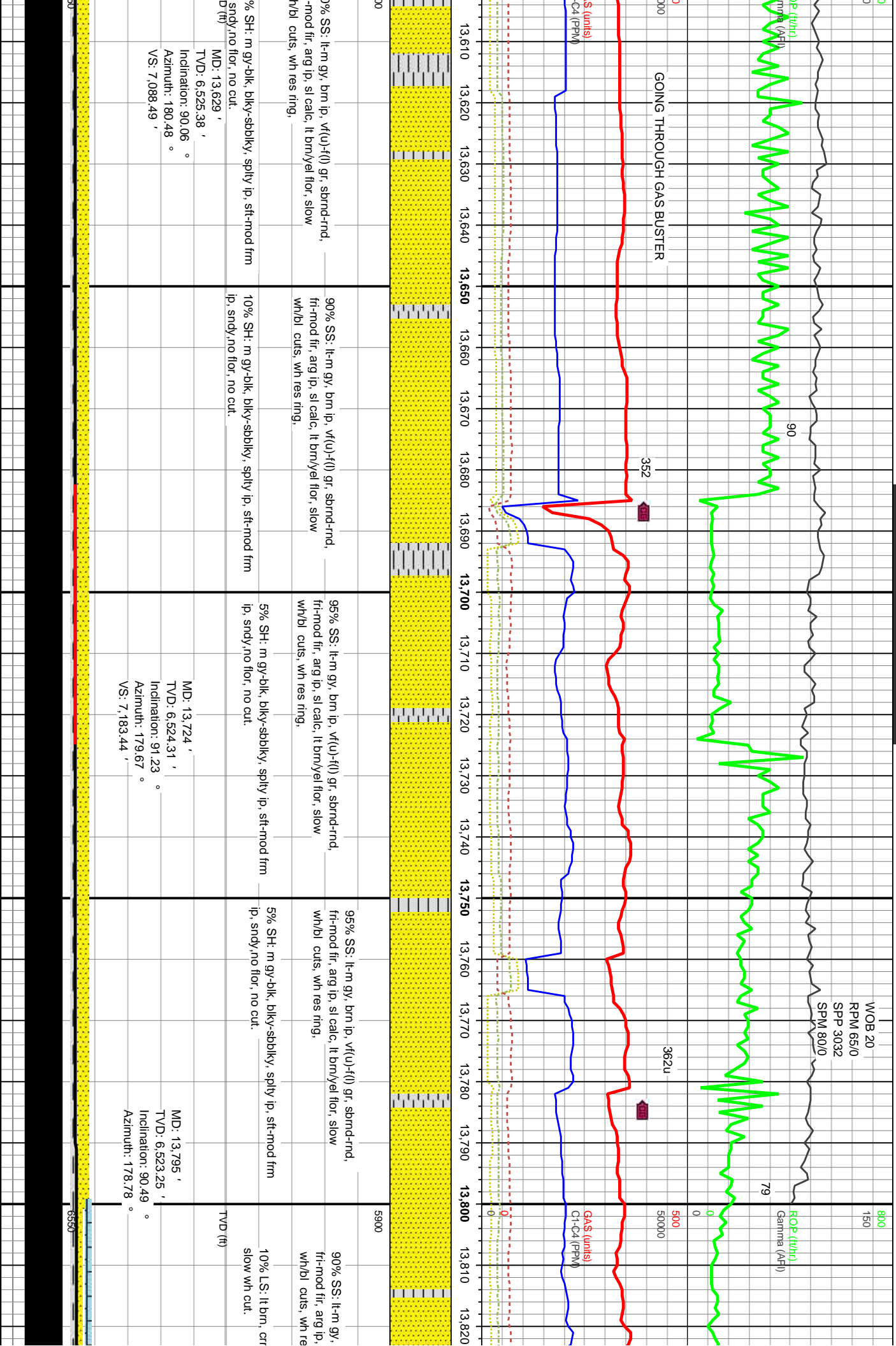
10% SH: m gy-blk, blk-y-sbbkly, splty ip, sft-mod frm ip, sndy, no flor, no cut.

MD: 13,533 '
TVD: 6,525.89 '
Inclination: 90.55 °
Azimuth: 180.93 °
VS: 6,992.51 '

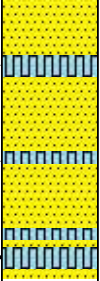
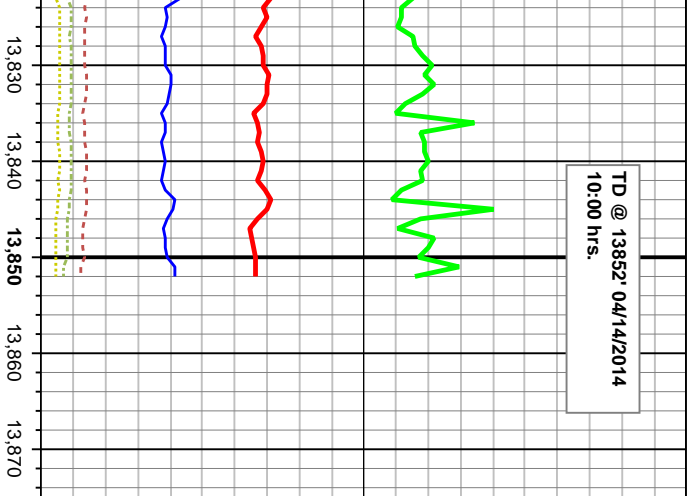
90% SS: lt-m gy, brn ip, v(f(u)-f(l)) gr, sbnd-rnd, fri-mod fir, arg ip, sl calc, lt brn/yel flor, slow wh/bl cuts, wh res ring.

10% SH: m gy-blk, blk-y-sbbkly, splty ip, sft-mod frm ip, sndy, no flor, no cut.

6350



TD @ 13852' 04/14/2014
10:00 hrs.



brn ip, v(f(u)-f(l)) gr, sbmd-rnd,
sl calc, lt brn/yel flor, slow
s ring,

n, firm, cppl, wxy tex, pl yel flor,

Bit Projection

MD: 13,852 '
TVD: 6,523.25 '
Inclination: 90.49 °
Azimuth: 178.78 °

