

Décollement
Consulting
Inc.



Scale: 5" / 100'
Measured Depth Log

Well Name State North Platte 11-14-26HC

Location NWNW Sec 26 T5N R63W

State Colorado

Country USA

API Number 05-123-38266-00

County Weld

Rig Number Ensign 136

Field DJ. Basin

Spud Date 10/13/2013

Drilling Completed 10/20/2013

Surface Coordinates 377 FNL X 956 FWL

Ground Elevation 4566'

K.B. Elevation 4578'

Logged Interval 5800'

To 11015'

Total Depth 11015'

Formation Codell

Type of Drilling Fluid WBM

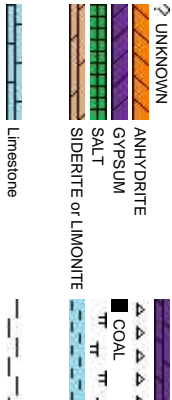
Company Bonanza Creek Energy

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

GASTROPD

ALGAE

AMPHIPORA

BELLENITE

BIOLCLASTIC

BRACHIOPOD

BRYOZOA

CEPHALOPD

CORAL

CRINOID

ECHINOID

FISH

FORAMINIFERA

- ARGILLACEOUS

/ ARGILLITE GRAIN

B BENTONITE

BITUMENOUS SUBSTANCE

BRECCIA FRAGMENTS

1 CALCAREOUS

■ CARBONACEOUS FLAKES

▲ CHERT

▲ CHERT

— COAL - THIN BEDS

▲ DOLOMITIC

+ FELDSPAR

● FERRUGINOUS PELLET

▲ FERRUGINOUS

▽ GLAUCONITE

▨ GYPSIFEROUS

† HEAVY MINERAL

† KAOLIN

† MARLSTONE

✱ MINERAL CRYSTALS

● NODULES

● PHOSPHATE PELLET

† PYRITE

⦿ SALT CAST

⋮ SANDY

▲ SILTY

▽ TUFFACEOUS

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

Q ORGANIC

P PINPOINT

D DEAD

EVEN

Q QUESTIONABLE

SPOTTED STAINING

GAS SHOW

P PINPOINT

▽ VUGGY

Engineering

BIT

CONNECTION (LEFT)

CONNECTION (RIGHT)

CONNECTION GAS

CORE - LOST

CORE - RECOVERED

DST INTERVAL

FAULT

FORMATION TOP

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

L LITHOGRAPHIC

MX MICROXLN

MMS MUDSTONE

▲ ANGULAR

NORMAL FAULT

OIL SHOW

OVERTURNED STRATA

a SUBANG

r SUBRND

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

SLIDE

SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

L LITHOGRAPHIC

BBS BOUNDSTONE

P POOR

C CHALKY

CX CRYPTOXLN

E EARTHY

FX FINELYXLN

BS GRAINSTONE

L LITHOGRAPHIC

M MODERATE

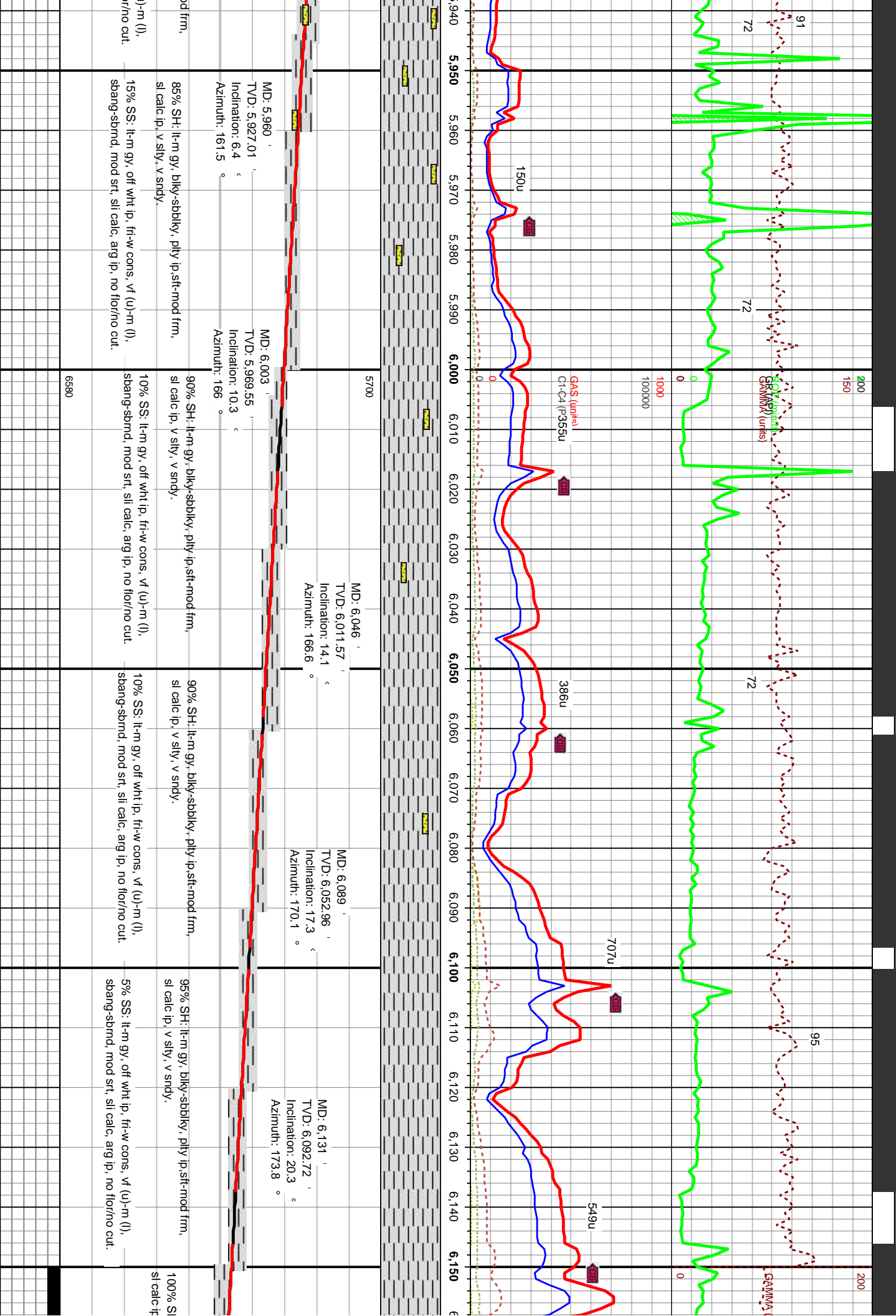
P POOR

W WELL

Chalk

Rounding

Slide/Rotate			
<div><div>ROP</div><div>ROP</div><div>GAMMA</div><div>GR</div></div>		<div><div>Decollement on location</div><div>10/15/2013 Start logging @</div><div>5800'</div></div>	
		<div><div>Bit #: 2</div><div>Type: MP516</div><div>Size: 8.75</div><div>Depth In: 484</div><div>Jets: 7X14</div><div>S/N: 4918F</div></div>	
		<div><div>MW: 95 VIS 40</div><div>MW: 9.2 VIS:35</div><div>NOTE SCALE CHANGE ROP</div><div>WOB 9</div><div>RPM 0/33</div><div>SPR 2997</div><div>SPM 102/100</div></div>	
Total Gas & Chromatograph			
<div><div>GAS</div><div>C1</div><div>C2</div><div>C3</div><div>C4</div></div>		<div><div>GAS (units)</div><div>C1-C4 (PPM)</div><div>GAS SCALE CHANGE</div></div>	
Depth Labels			
Interp Lith			
		<div><div>MD: 5,832</div><div>TVD: 5,799.2</div><div>Inclination: 0.4</div><div>Azimuth: 141.4</div></div>	
Well Bore			
TVD			
70% SH: lt-m gy, blk-y-sbbkly, ply ip, sft-mud frm, sl calc ip, v slty, v sndy.		85% SH: lt-m gy, blk-y-sbbkly, ply ip, sft-mud frm, sl calc ip, v slty, v sndy.	
30% SS: lt-m gy, off wht ip, fri-w cons, vf (u)-m (l), sbang-sbrnd, mod srt, sli calc, arg ip, no flwr/no cut.		15% SS: lt-m gy, off wht ip, fri-w cons, vf (u)-m (l), sbang-sbrnd, mod srt, sli calc, arg ip, no flwr/no cut.	
6580			
Oil Show			
Images			



SHARON SPRINGS
@6150' TVD, 6193' MD
5 200
MD 200

141

193

NIOBRARA "A" chalk
@6280' TVD, 6347' MD

NIOBRARA "A"
@6295' TVD,

ROE (mN/t)
GAMMA (units)
GR (API)

GAS SCALE CHANGE
500000

GAS (units)
C1-C4 (PPM)

474u

1228u

2270u

2683u

3293u

6.160 6.170 6.180 6.190 6.200 6.210 6.220 6.230 6.240 6.250 6.260 6.270 6.280 6.290 6.300 6.310 6.320 6.330 6.340 6.350 6.360 6.370

5700

MD: 6.174
TVD: 6.132.58
Inclination: 23.7 °
Azimuth: 176.1 °

MD: 6.217
TVD: 6.171.4
Inclination: 27.2 °
Azimuth: 178.2 °

MD: 6.260
TVD: 6.209.01
Inclination: 30.8 °
Azimuth: 182.9 °

MD: 6.302
TVD: 6.244.17
Inclination: 35.5 °
Azimuth: 187.3 °

MD: 6.345
TVD: 6.278.02
Inclination: 40.6 °
Azimuth: 186.4 °

It-m gy, blk-y-sbdky, pily ip, sft-mod frm,
v stly, sl sndy.

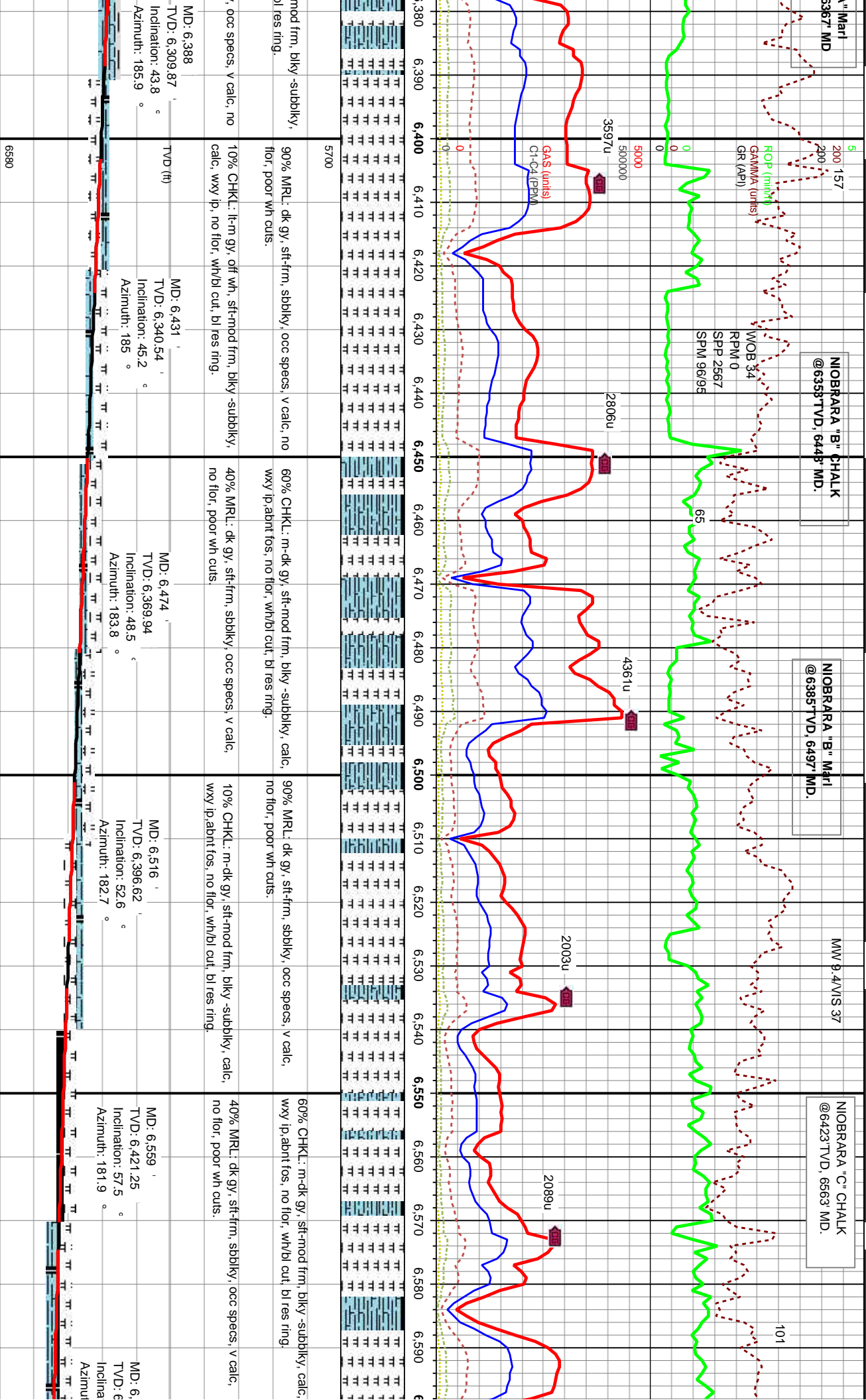
90% SH: m gy, blk-y-sbdky -pily ip, wxy ip, sl carb ip,
pale yel flor ip, slw wht cut.

10% SH: It-m gy, blk-y-sbdky, pily ip, sft-mod frm,
sl calc ip, v stly, sl sndy.

6580

80% CHKL: It-m gy, off wh, sft-
calc, wxy ip, no flor, wh/bl cut, t

20% MRL: dk gy, sft-frm, sbdky
flor, poor wh cuts.



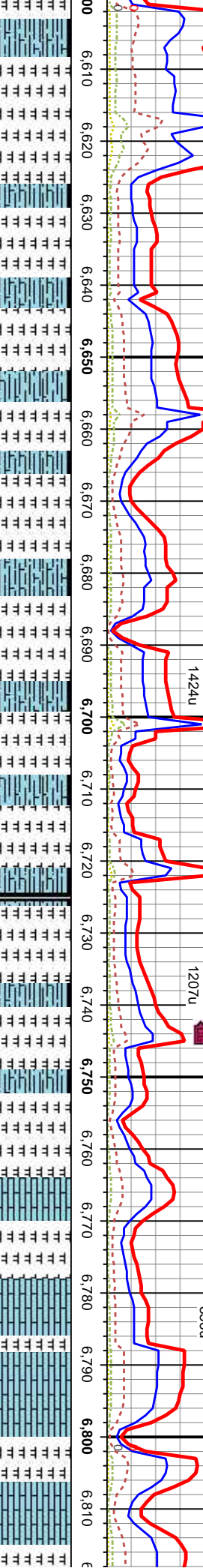
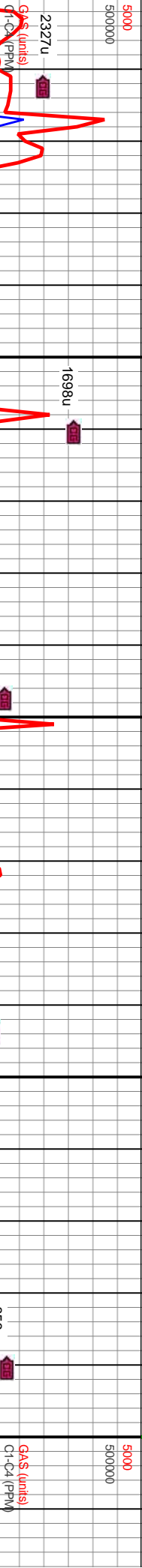
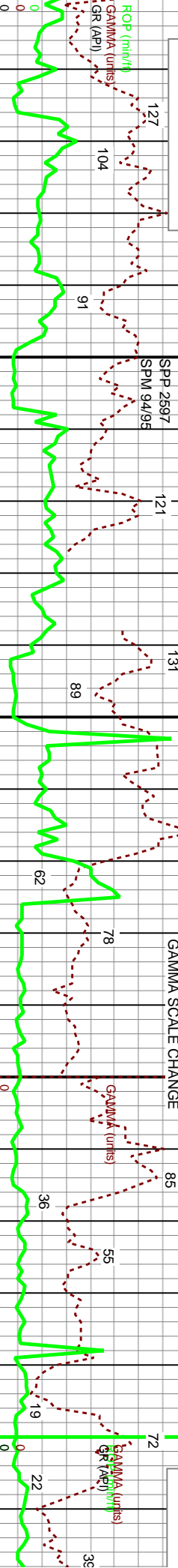
5 200
NIOBRARA "C" Marl
@6448TVD, 6616 MD.

MOB 37
RPM 0
SPM 2597
SPM 94/95

125
GAMMA SCALE CHANGE

MW 9.7V/S 39

5 200
FORT HAYS
@6509TVD 6



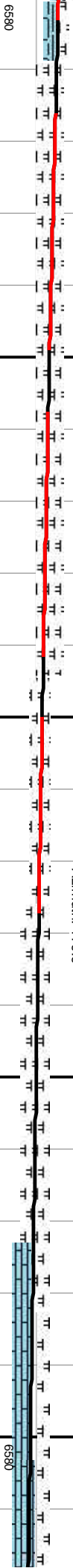
5700
80% MRL: dk gy, sft frm, sbbkly, occ specs, v calc, no flor, poor wh cuts.
70% MRL: dk gy, sft frm, sbbkly, occ specs, v calc, no flor, poor wh cuts.
90% MRL: dk gy, sft frm, sbbkly, occ specs, v calc, no flor, poor wh cut, tr-is

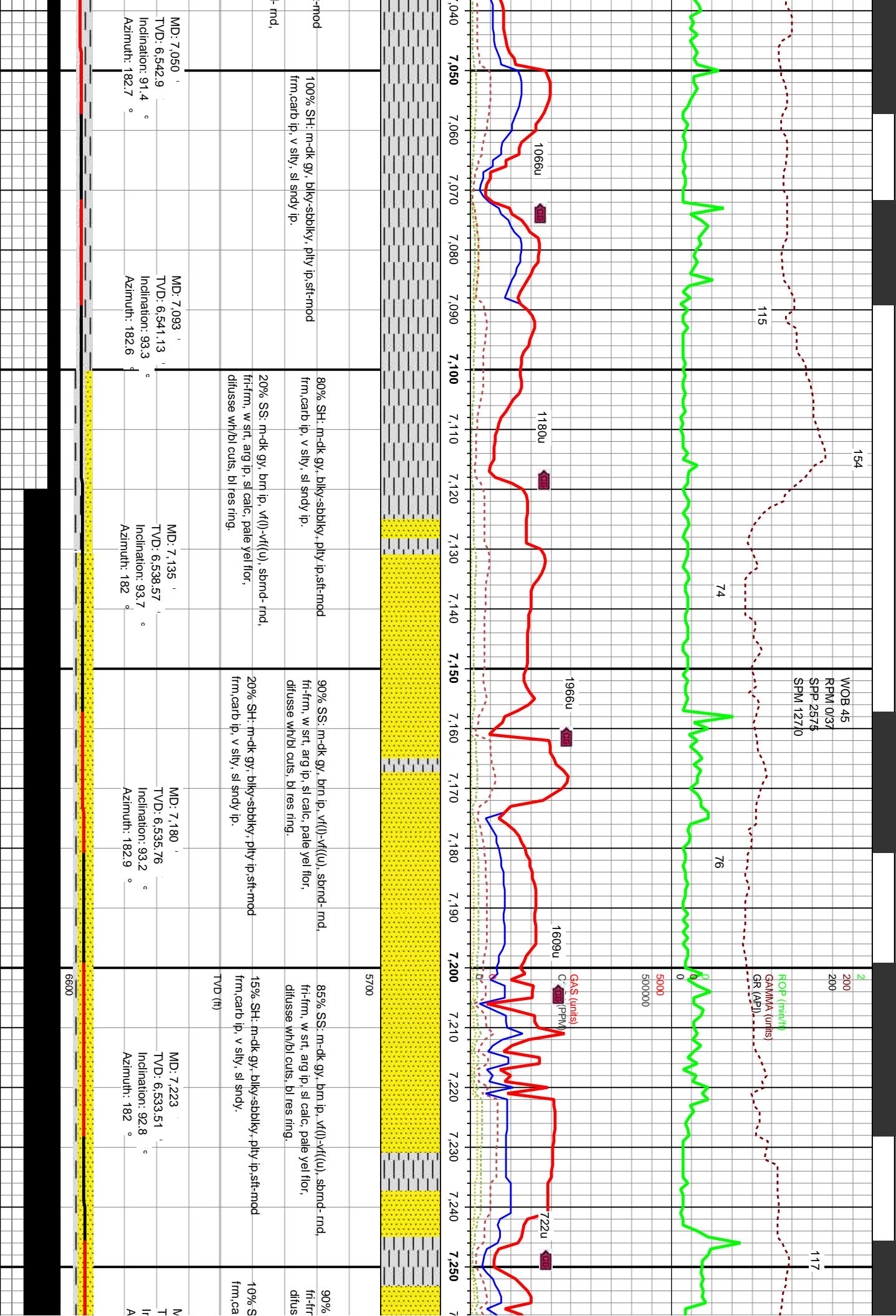
20% CHKL: m-dk gy, sft-mod frm, blkly -subbkly, calc, wxy ip, abnt fos, no flor, wh/bl cut, bl res ring.
30% CHKL: m-dk gy, sft-mod frm, blkly -subbkly, calc, wxy ip, abnt fos, no flor, wh/bl cut, bl res ring.
10% CHKL: m-dk gy, sft-mod frm, blkly -subbkly, calc, wxy ip, abnt fos, no flor, wh/bl cut, bl res ring.

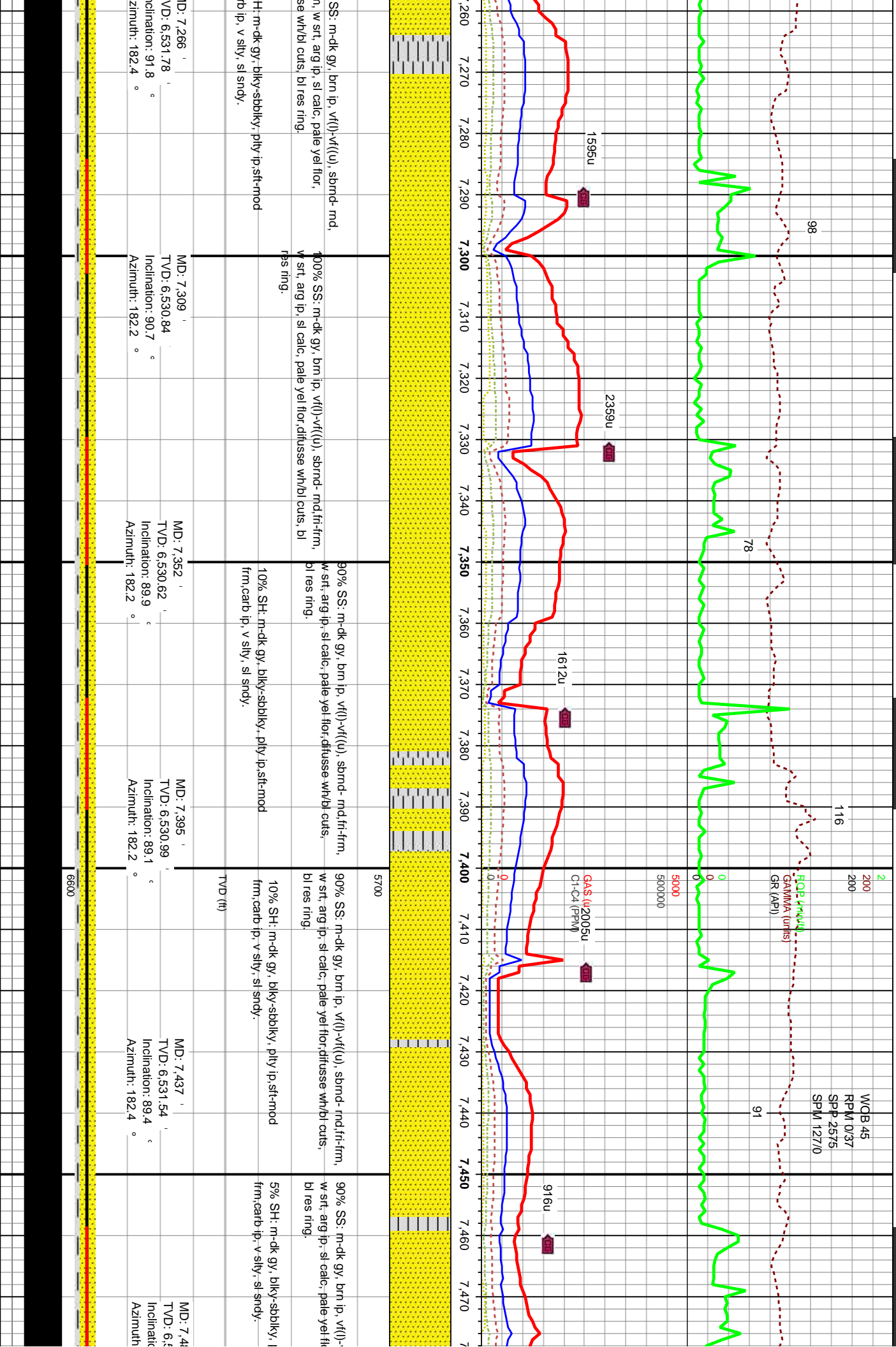
20% CHKL: m-dk gy, sft-mod frm, blkly -subbkly, calc, wxy ip, abnt fos, no flor, wh/bl cut, bl res ring.
30% LS: lt brn-cr, off wht, crx ln, wxy tx, pl yel flor, slw blm cut, tr-chk

10% MRL: dk gy, no flor, poor wh cut, pl yel flor, slw blr

MD: 6.645
TVD: 6.460.91
Inclination: 67.3
Azimuth: 179.6
MD: 6.687
TVD: 6.475.58
Inclination: 71.8
Azimuth: 178.9
MD: 6.730
TVD: 6.487.98
Inclination: 74.7
Azimuth: 179.9
MD: 6.773
TVD: 6.499.32
Inclination: 74.7
Azimuth: 180.1







SS: m-dk gy, brn ip, v(l)-v(l(u), sbnd- md, w srt, arg ip, sl calc, pale yel flr, difusse wh/bl cuts, bl res ring.

H: m-dk gy, blk-y-sbdky, pty ip, sft-mod, v ip, v slty, sl sndy.

90% SS: m-dk gy, brn ip, v(l)-v(l(u), sbnd- md, frn-frm, w srt, arg ip, sl calc, pale yel flr, difusse wh/bl cuts, bl res ring.

90% SS: m-dk gy, brn ip, v(l)-v(l(u), sbnd- md, frn-frm, w srt, arg ip, sl calc, pale yel flr, difusse wh/bl cuts, bl res ring.

10% SH: m-dk gy, blk-y-sbdky, pty ip, sft-mod, frn, carb ip, v slty, sl sndy.

10% SH: m-dk gy, blk-y-sbdky, pty ip, sft-mod, frn, carb ip, v slty, sl sndy.

90% SS: m-dk gy, brn ip, v(l)-v(l(u), sbnd- md, frn-frm, w srt, arg ip, sl calc, pale yel flr, difusse wh/bl cuts, bl res ring.

90% SS: m-dk gy, brn ip, v(l)-v(l(u), sbnd- md, frn-frm, w srt, arg ip, sl calc, pale yel flr, difusse wh/bl cuts, bl res ring.

5% SH: m-dk gy, blk-y-sbdky, l frn, carb ip, v slty, sl sndy.

ID: 7.266
VD: 6.531.78
Inclination: 91.8
Azimuth: 182.4

MD: 7.309
TVD: 6.530.84
Inclination: 90.7
Azimuth: 182.2

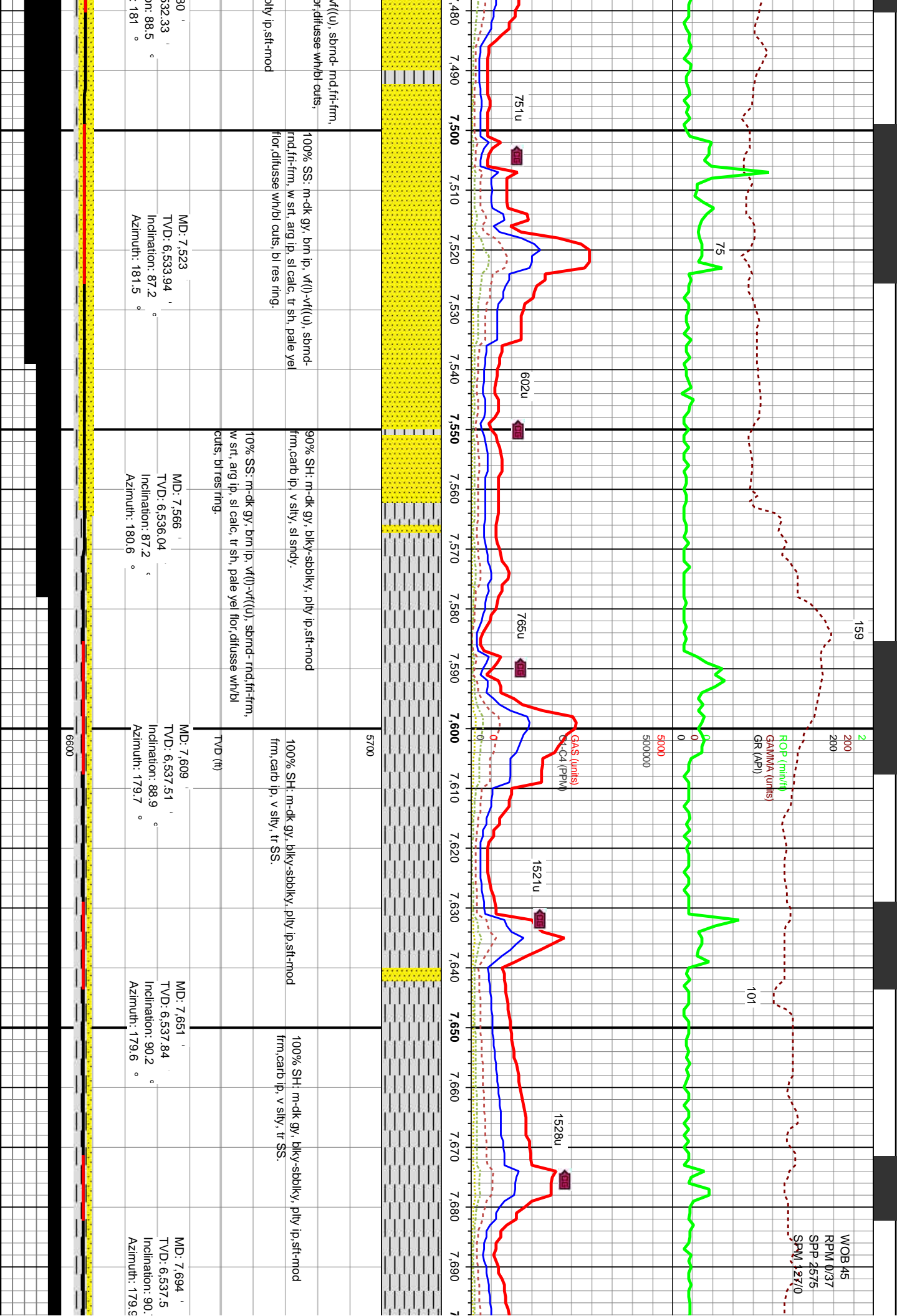
MD: 7.352
TVD: 6.530.62
Inclination: 89.9
Azimuth: 182.2

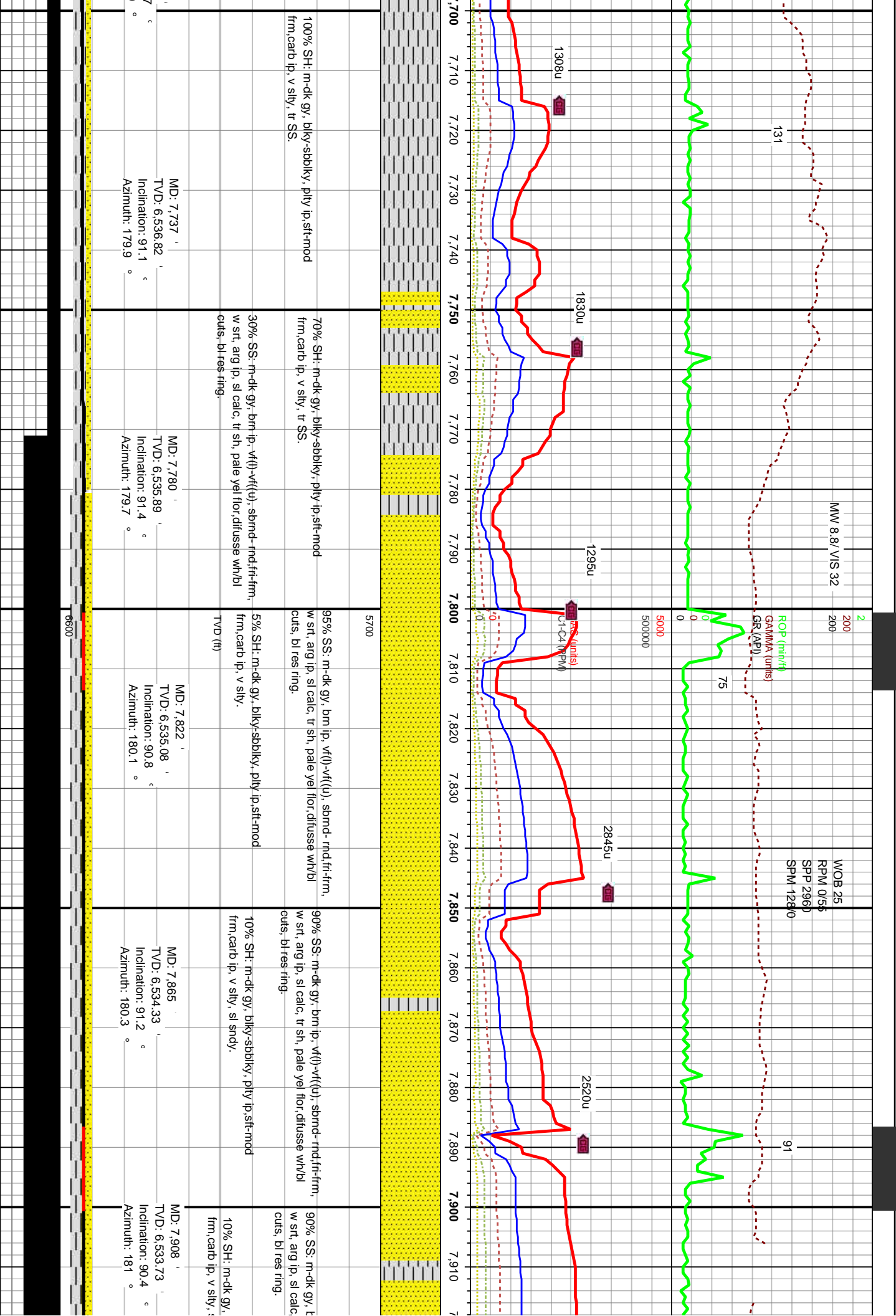
MD: 7.395
TVD: 6.530.99
Inclination: 89.1
Azimuth: 182.2

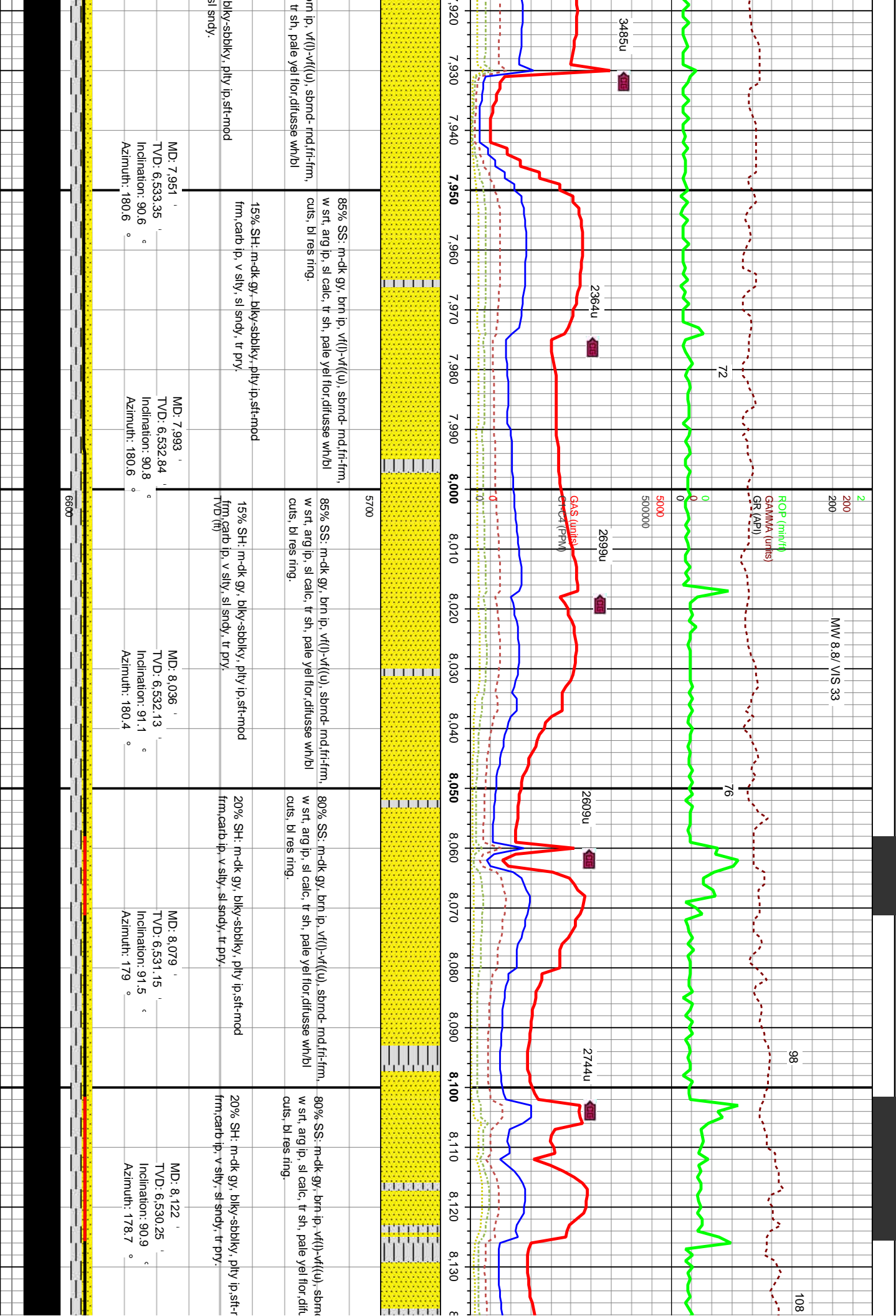
MD: 7.437
TVD: 6.531.54
Inclination: 89.4
Azimuth: 182.4

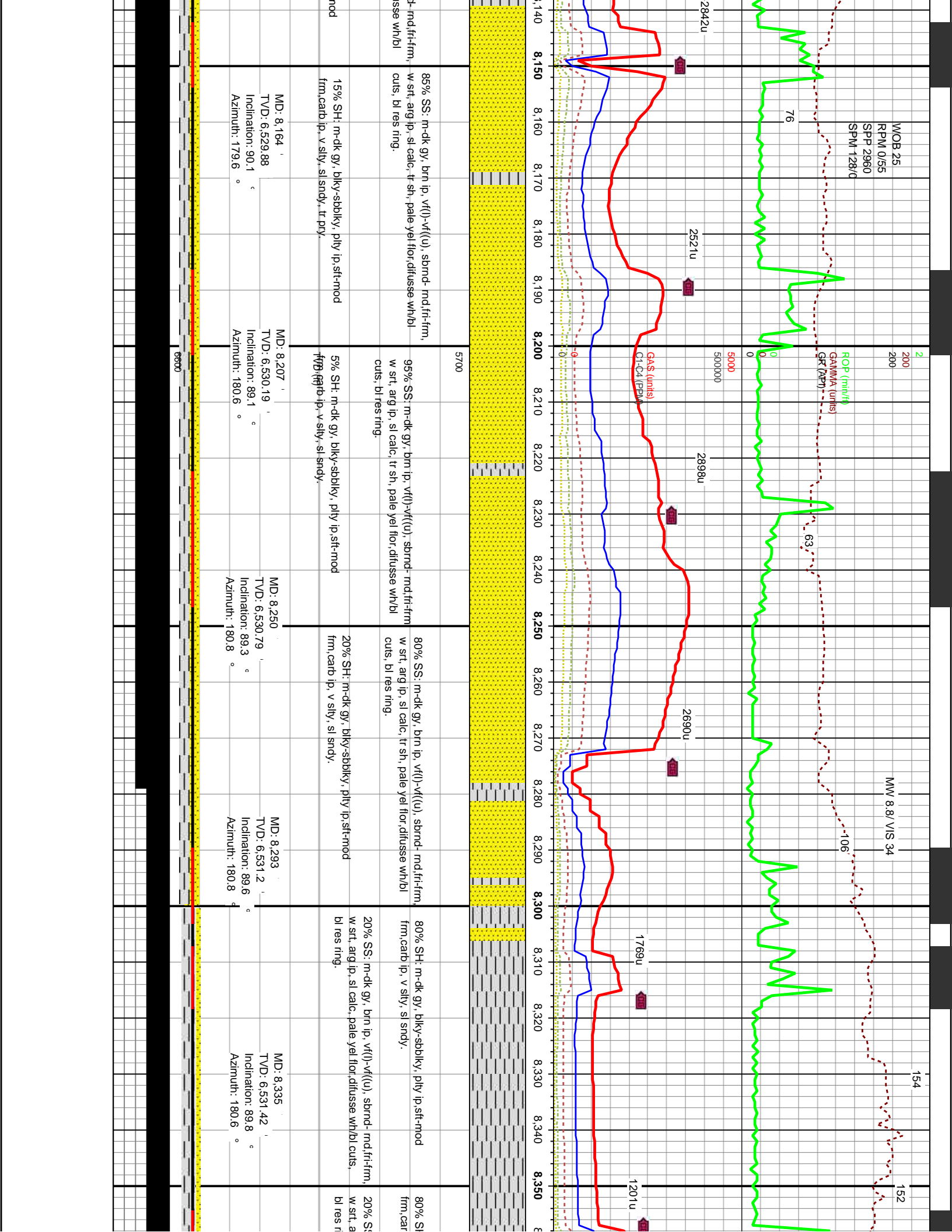
MD: 7.470
TVD: 6.531.78
Inclination: 89.4
Azimuth: 182.4

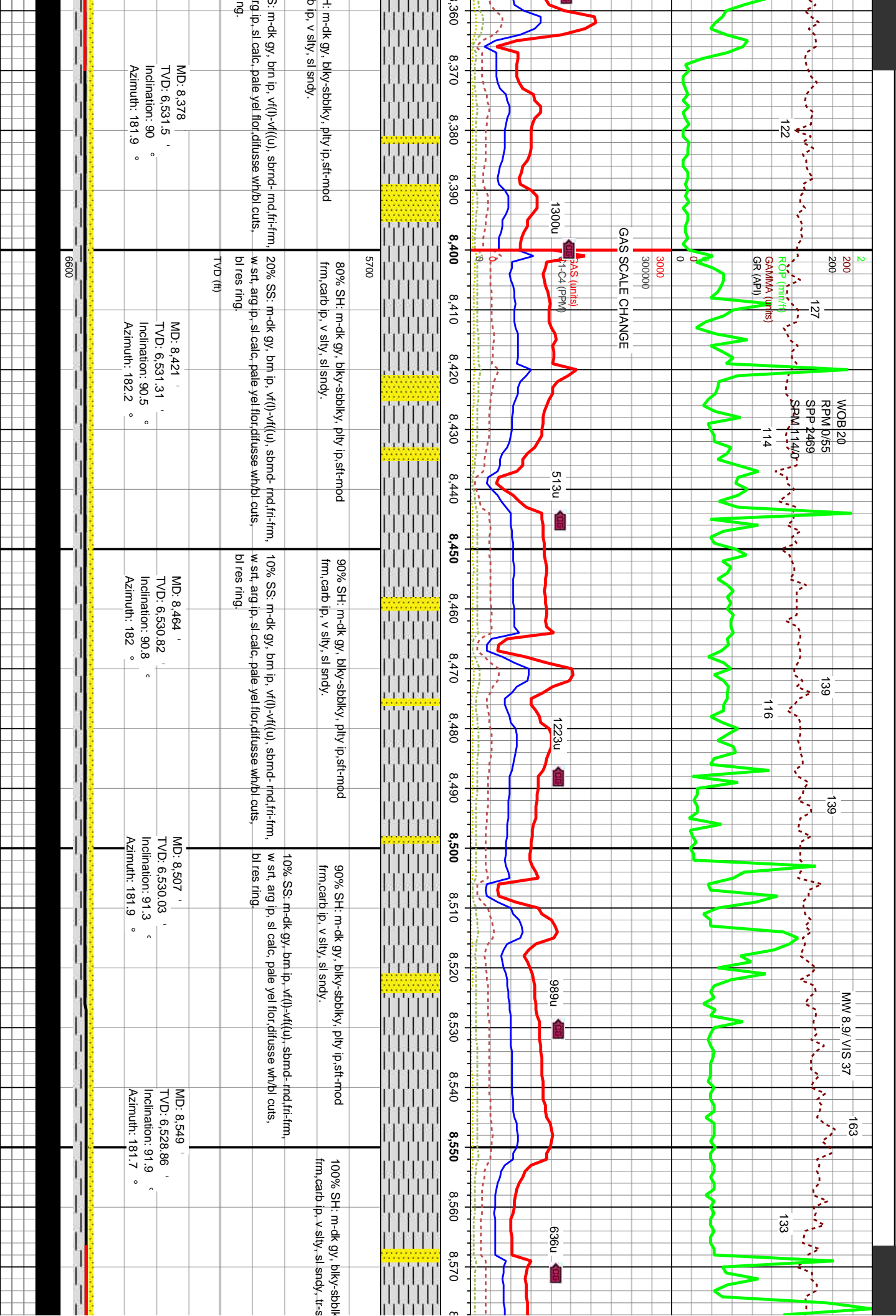
6600

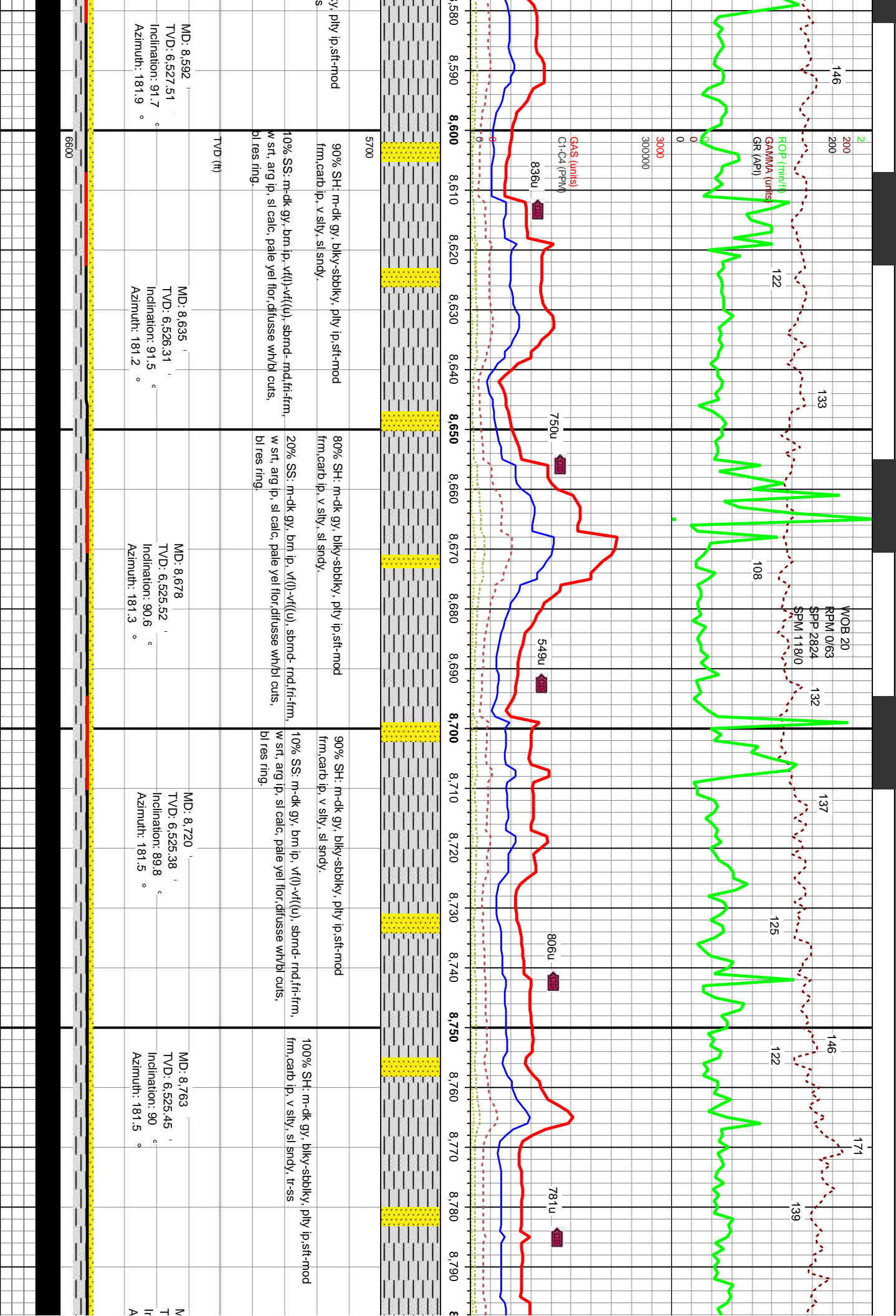


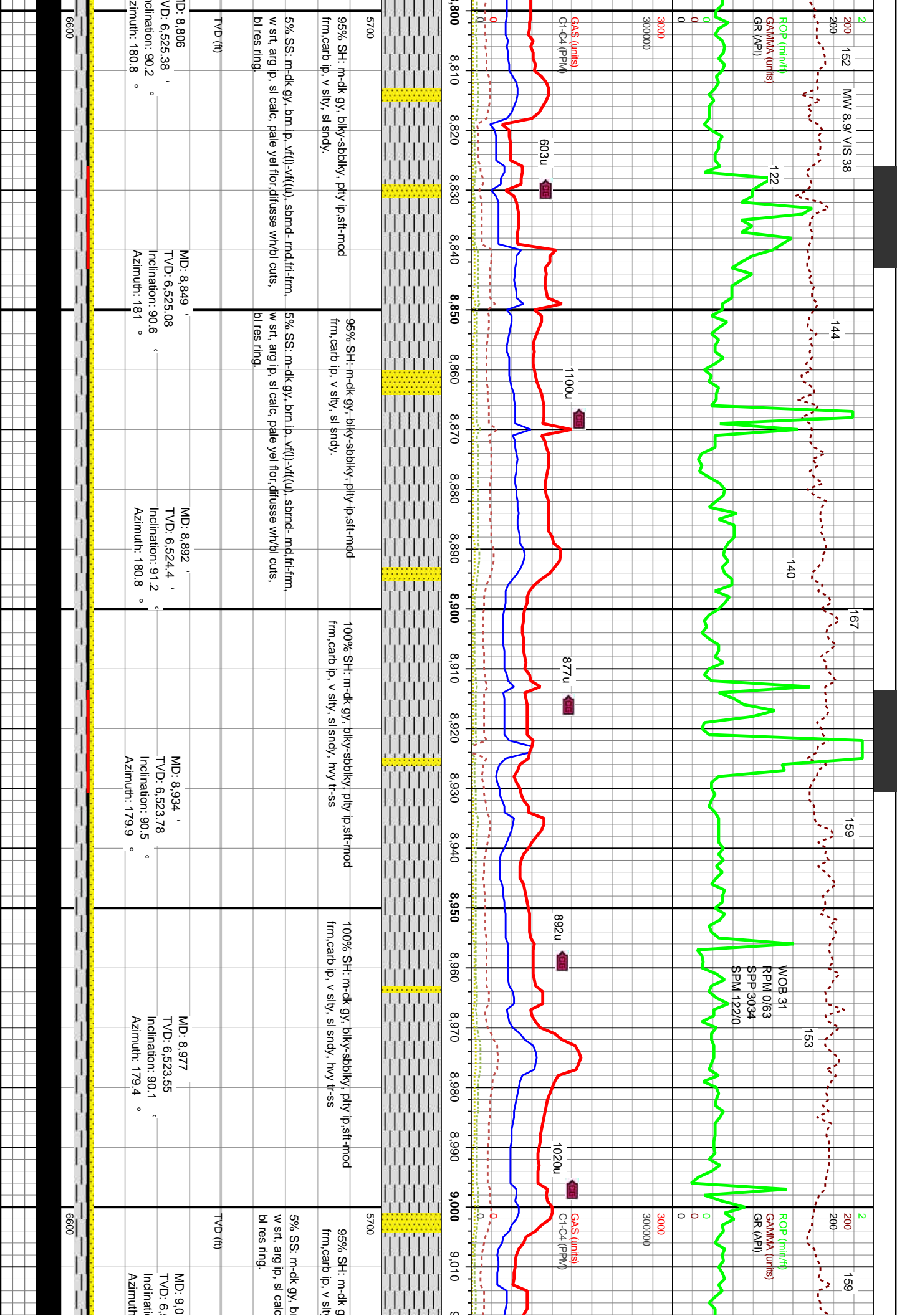


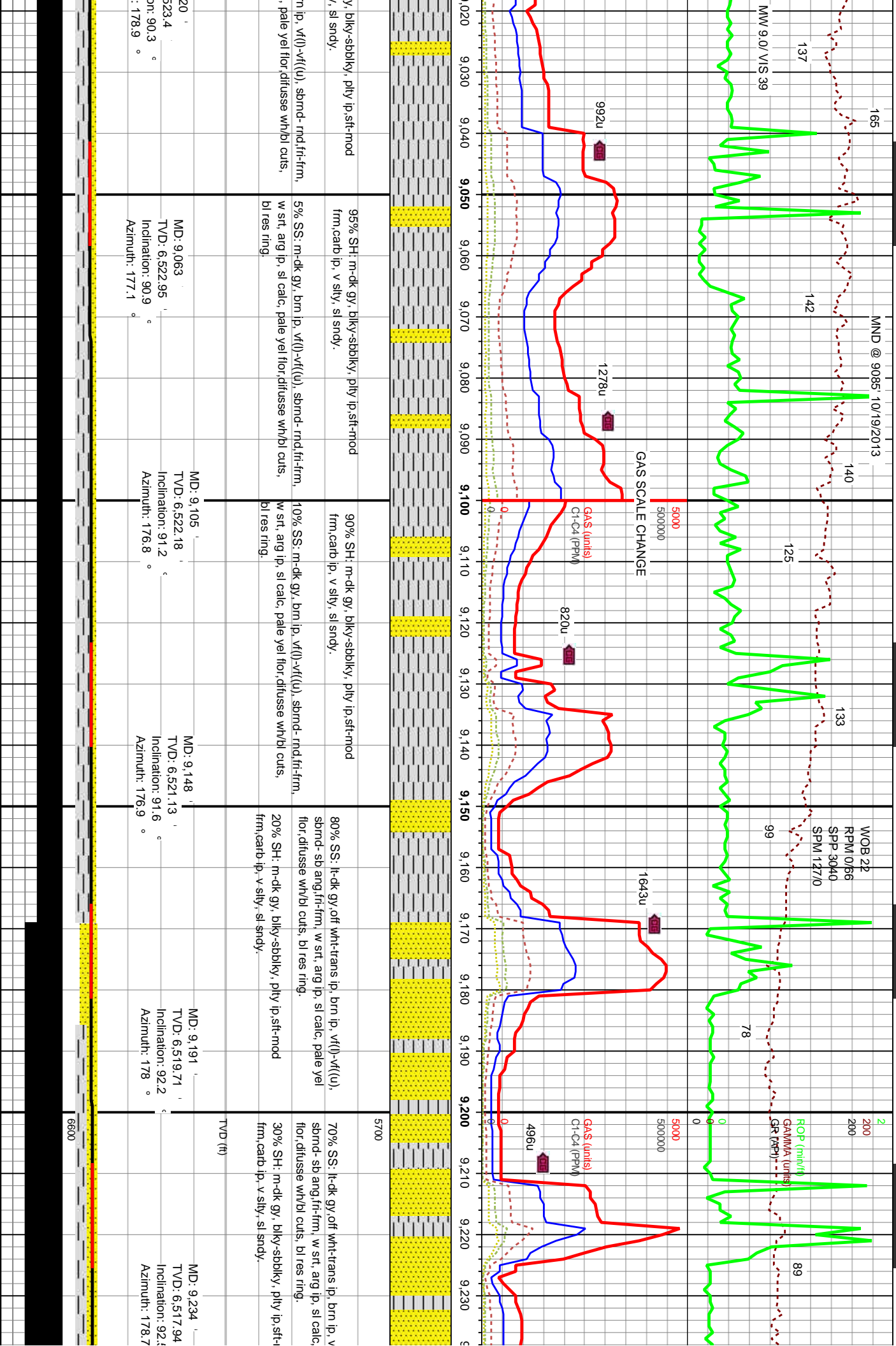


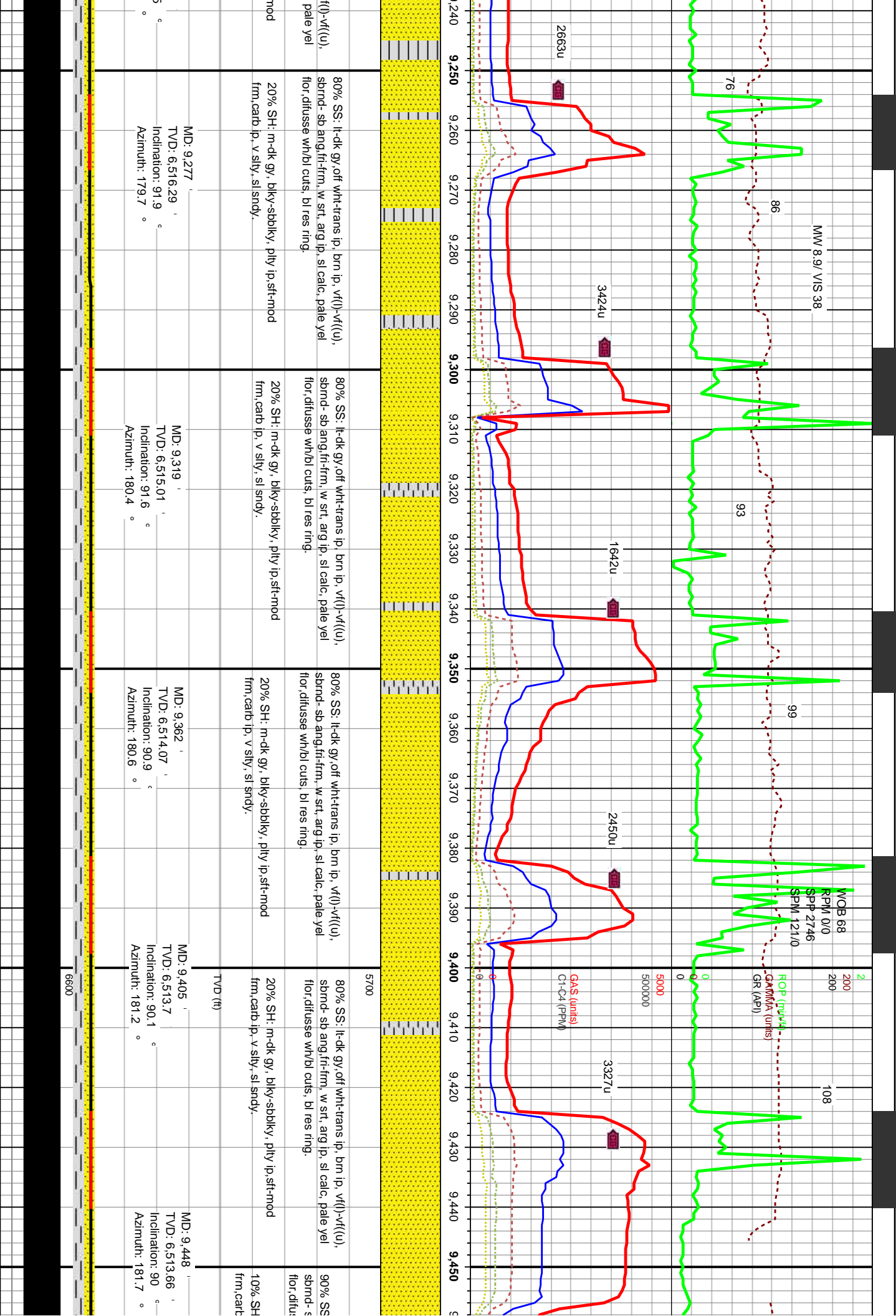


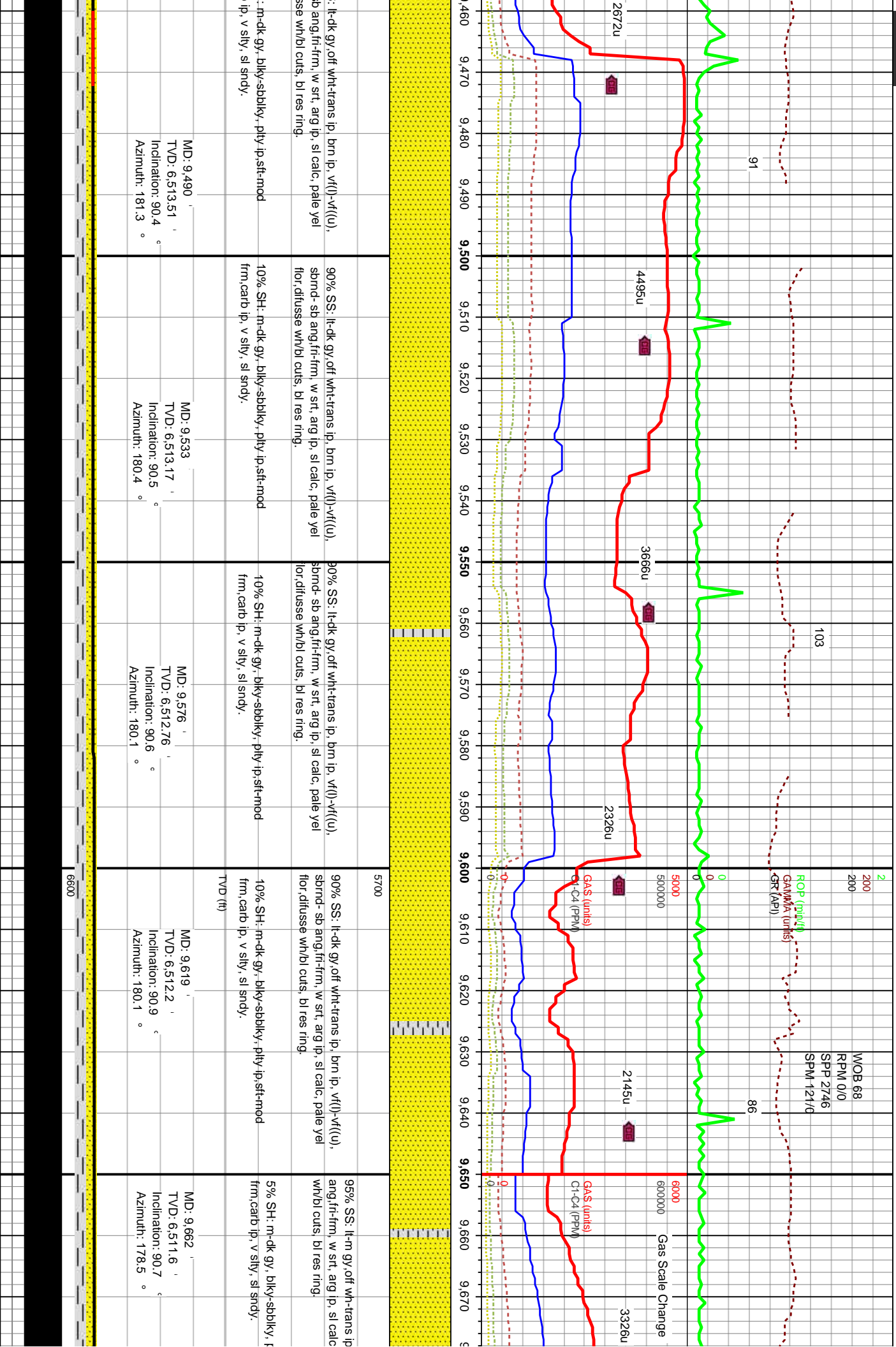


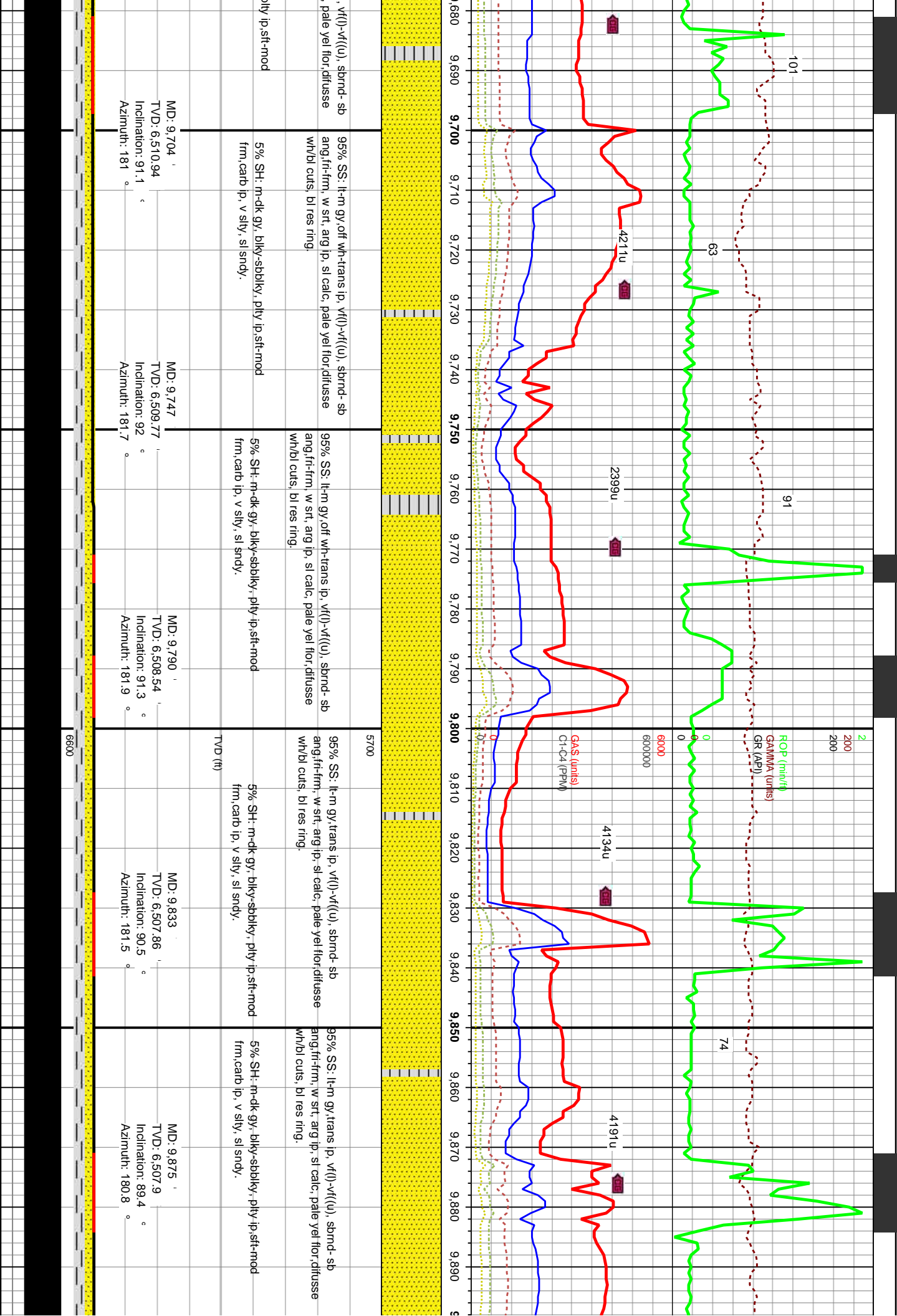


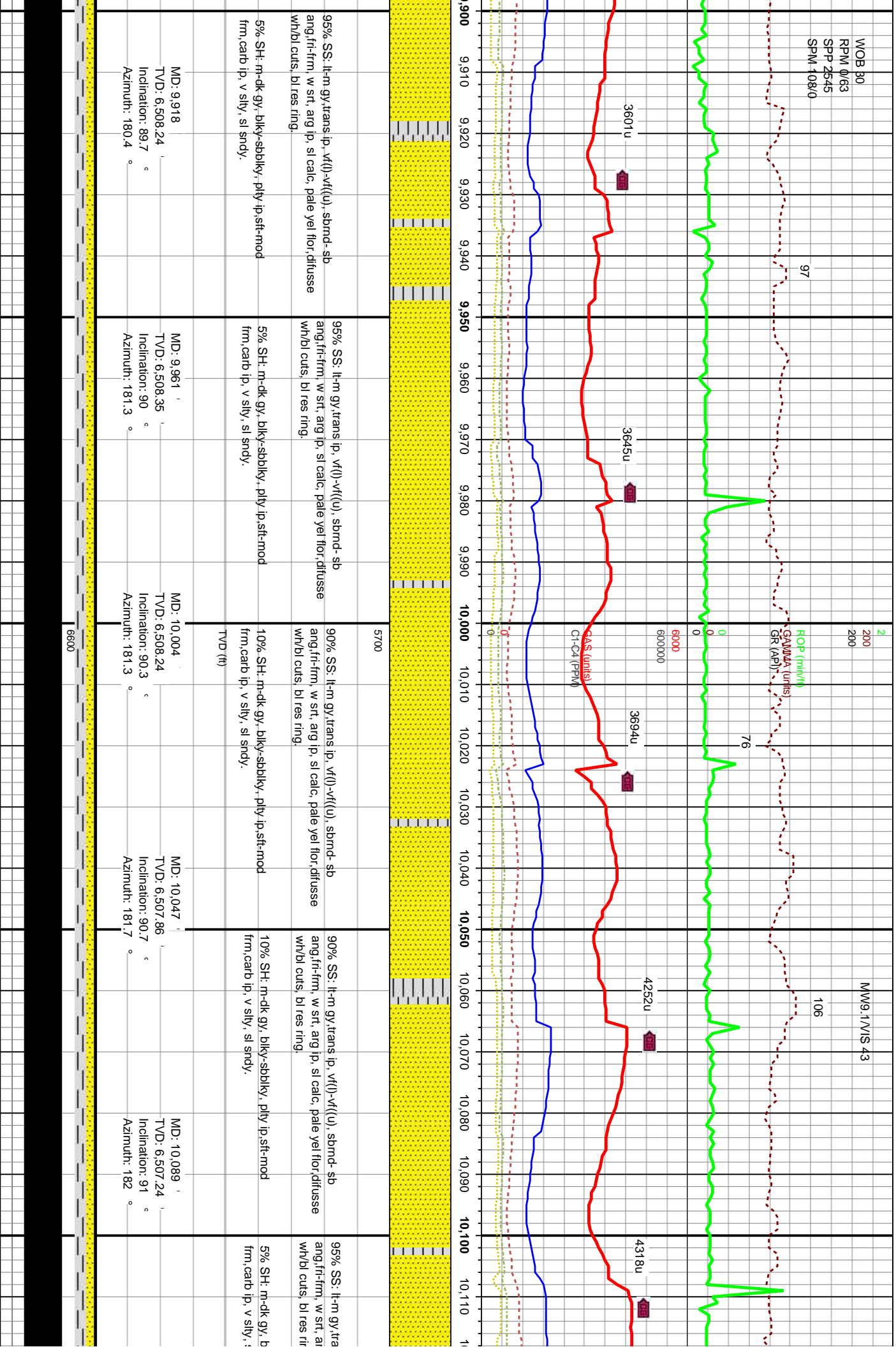


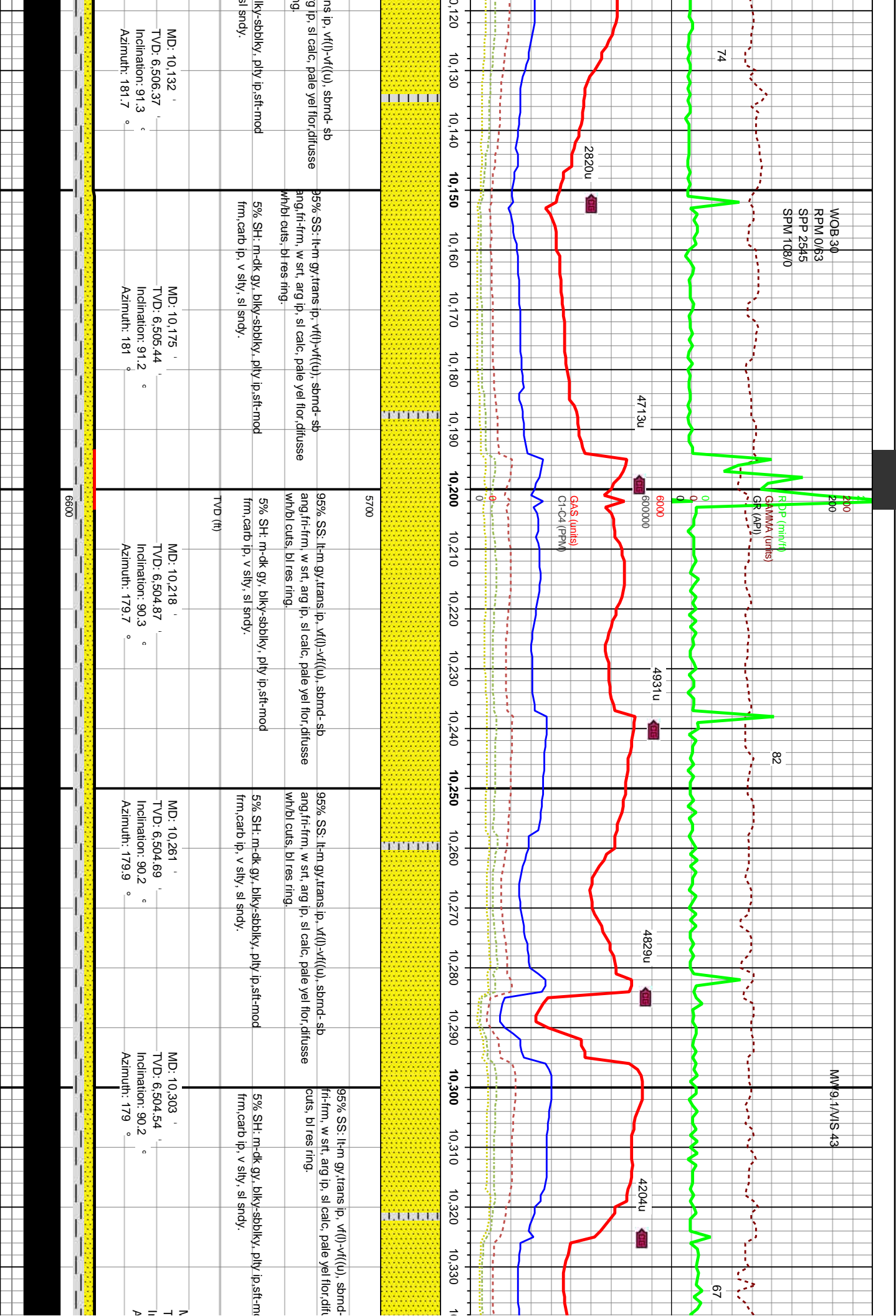


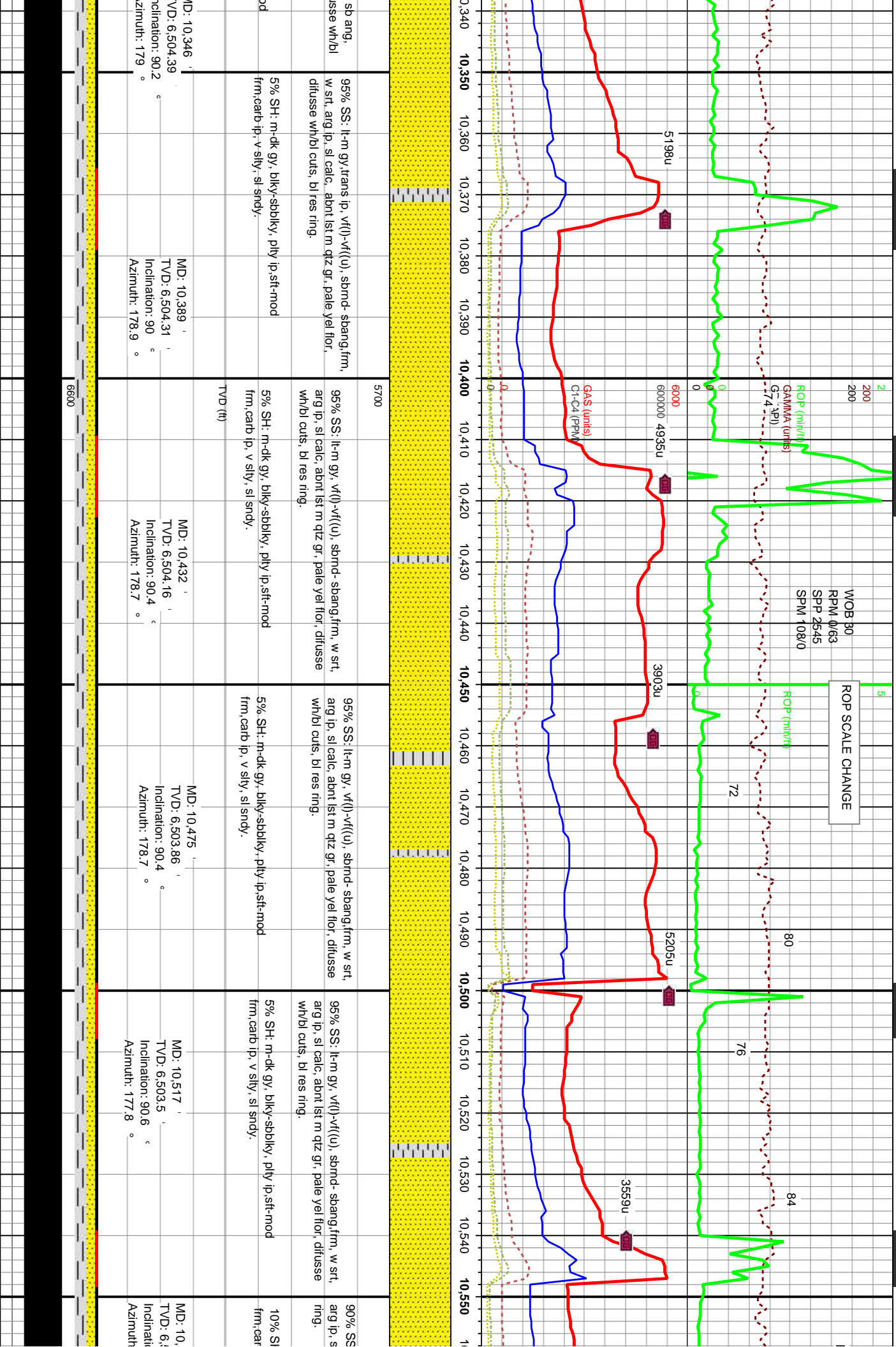












MW 9.2/VIS 40

5
200
200

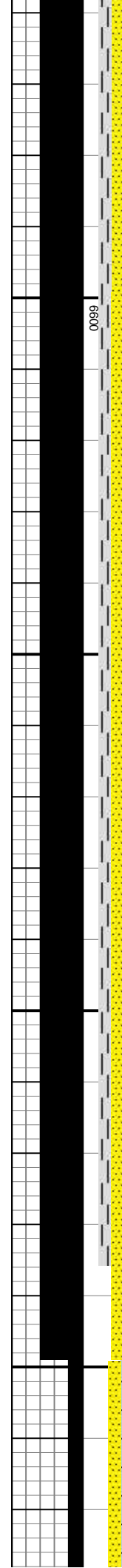
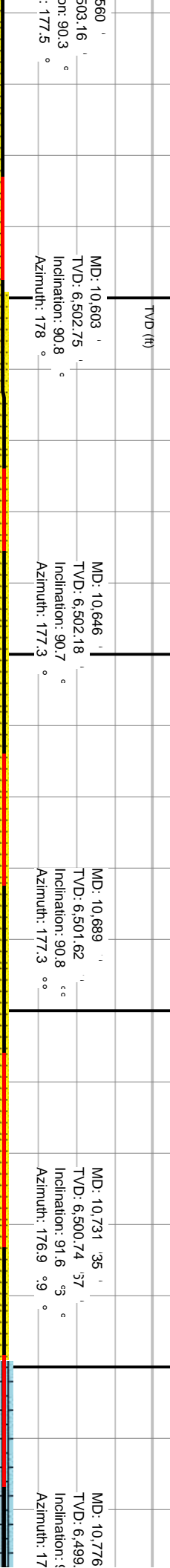
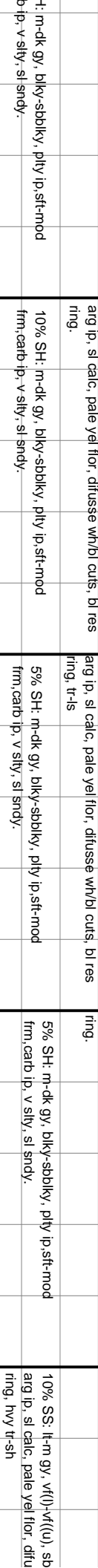
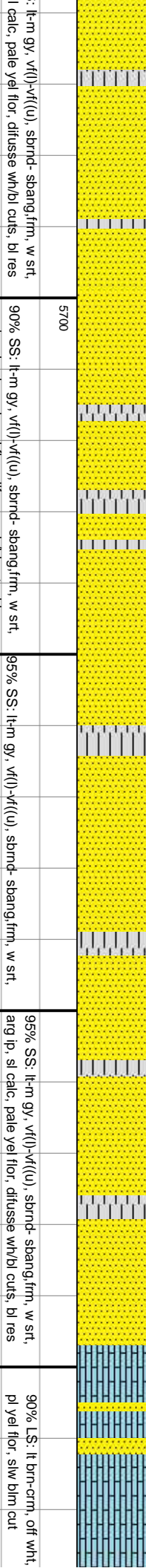
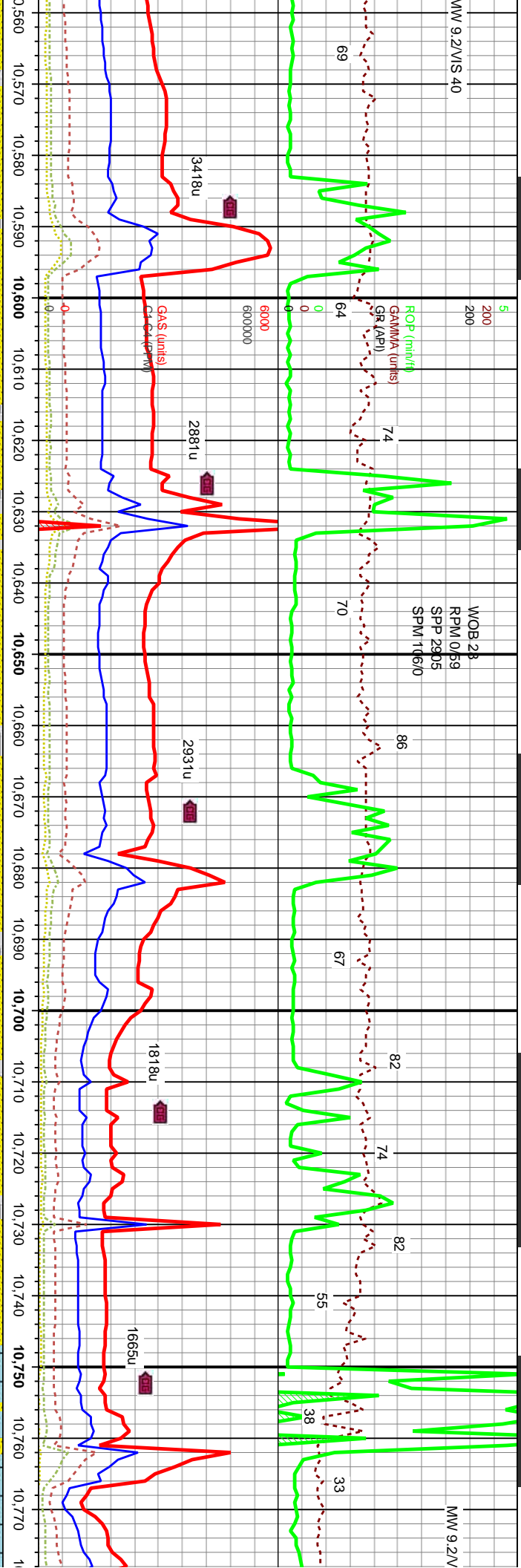
ROP (m/h)

GAMMA (units)

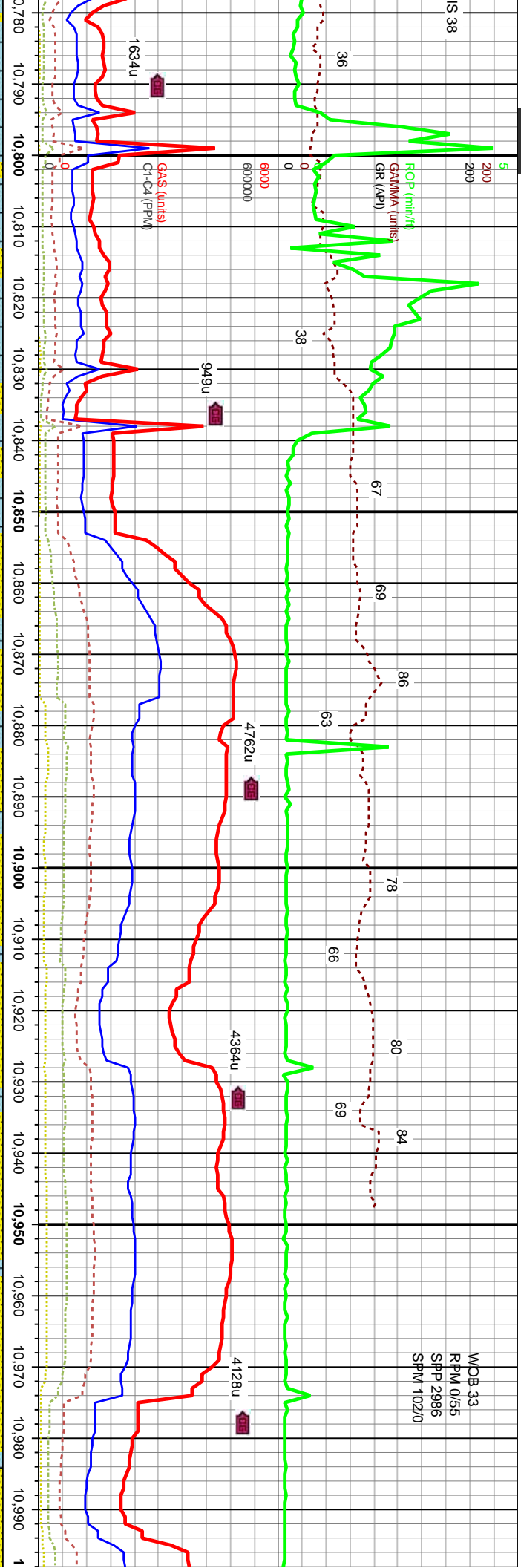
GR (API)

MOB 28
RPM 0.69
SPP 2905
SPM 1660

MW 9.2/V

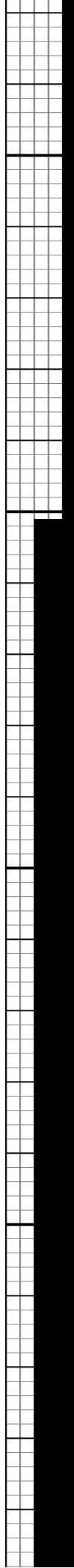


MOB 33
RPM 0/55
SPP 2986
SPM 102/0



crxln, wxy tx,	90% LS: lt brn-crm, off wht, crxln, wxy tx, pl yel flr, slw blm cut	70% SS: lt-m gy, off wht, clr ip, vf(l)-vf(u), sbnd-sbang frm, w srt, arg ip, sl calc, pale yel flr, diffuse wh/bl cuts, bl res ring, tr-sh	80% SS: lt-m gy, off wht, clr ip, vf(l)-vf(u), sbnd-sbang frm, w srt, arg ip, sl calc, pale yel flr, diffuse wh/bl cuts, bl res ring, tr-sh	20% LS: lt brn-crm, off wht, crxln, wxy tx, pl yel flr, slw blm cut	90% SS: lt-m gy, off wht, clr ip, vf(l)-vf(u), sbng-sbang frm, w srt, arg ip, sl calc, pale yel flr, diffuse wh/bl cuts, bl res ring, tr-sh	10% LS: lt brn-crm, off wht, crxln, wxy tx, pl yel flr, slw blm cut
ringd- sbang frm, w srt, asse wh/bl cuts, bl res	10% SS: lt-m gy, vf(l)-vf(u), sbnd- sbang frm, w srt, arg ip, sl calc, pale yel flr, diffuse wh/bl cuts, bl res ring, hvy tr-sh	30% LS: lt brn-crm, off wht, crxln, wxy tx, pl yel flr, slw blm cut				
	TVD (ft)					
	MD: 10,821 TVD: 6,499.33 Inclination: 90 ° Azimuth: 177.1 °	MD: 10,866 TVD: 6,499.68 Inclination: 89.1 ° Azimuth: 176.8 °	MD: 10,910 TVD: 6,500.64 Inclination: 88.4 ° Azimuth: 175.4 °	MD: 10,953 TVD: 6,501.99 Inclination: 88 ° Azimuth: 174.5 °	MD: 10,963 TVD: 6,501.99 Inclination: 88 ° Azimuth: 174.5 °	MD: 10,963 TVD: 6,501.99 Inclination: 88 ° Azimuth: 174.5 °

6600



TD @ 11015 10/20/2013
03:30 AM

ROP (min/ft)
GAMMA (units)
GR (API)

6000

~~GAS (units)~~
C1-C4 (PPM)

11,010	11,020	11,030
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5700

diffuse

OBJECTION

504.47
ion: 87.42
n: 173.2 °

6600