

Décollement Consulting Inc.



Scale: 5" / 100'
Measured Depth Log

Well Name North Platte U-Y-28HNB

Location NENE Sec 28, T5N, R63W

State Colorado

Country USA

API Number 05-123-37063-00

County Weld

Rig Number Ensign 136

Field Wattenburg

Spud Date 4/15/2013

Drilling Completed 4/23/2013

Surface Coordinates 388 FNL X 539 FEL

Bottom Hole Coordinates 570' FSL X 130' FEL

Ground Elevation 4,546

K.B. Elevation 4,558

Logged Interval 5,500 To 10,789

Total Depth 10,789

Formation Niobrara "B" Chalk

Type of Drilling Fluid WBM

Company Bonanza Creek Energy
Address 410 17th Street, Suite 100
Denver, CO 80202

Name Leo Carrasco/Chris Carrasco
Company Décollement Consulting
13300 Braun Road
Golden, CO 80401



Operator

rgy

ite 1500

Geologist

Irwin

ing Inc.

Accessories

- F FOSSIL
- GASTROPOD
- ALGAE
- AMPHIPORA
- BELEMNITE
- BIOCLASTIC
- BRACHIOPOD
- BRYOZOA
- CEPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA
- ARGILLACEOUS
- ARGILLITE GRAIN
- BENTONITE
- BITUMENOUS SUBSTANCE
- BRECCIA FRAGMENTS
- CALCAREOUS
- CARBONACEOUS FLAKES
- CHITL
- CHITL
- COAL - THIN BEDS
- SCAPHOPOD
- STROMATOPOROID
- FELDSPAR
- FERRUGINOUS PELLET
- FERRUGINOUS
- FERRUGINOUS
- TUFFACEOUS
- GLAUCONITE
- GYPSIFEROUS
- HEAVY MINERAL
- KAOLIN
- MARLSTONE
- MINERAL CRYSTALS
- NODULES
- PHOSPHATE PELLET
- PYRITE
- SALT CAST
- SANDY
- SILTY
- 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

Rock Types

- DOLOMITE
- CHERT
- MARLSTONE
- CLAYSTONE
- SHALE GRAY
- SHALE COLORED
- SILTSTONE
- SANDSTONE
- CONGLOMERATE
- TILL
- BENTONITE
- TUFF
- IGNEOUS
- METAMORPHIC
- BRECCIA
- Chalk

Other Symbols

- ORGANIC
- PINPOINT
- DEAD
- EVEN
- QUESTIONABLE
- SPOTTED STAINING
- BIT
- CONNECTION (LEFT)
- CONNECTION (RIGHT)
- CONNECTION GAS
- FENESTRAL
- FRACTURE
- INTERCRYSTALLINE
- INTEROOLITIC
- WOLVIC
- 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
- ANGULAR
- ROUNDED
- SUBANG
- SUBRRND
- BOUNDSTONE
- POOR
- CHALKY
- CRYPTOXLN
- E EARTHY
- GRAINSTONE
- LITHOGRAPHIC
- MIX MICROXLN
- MIS MUDSTONE
- R ROUND
- PACKSTONE
- WACKESTONE
- M MODERATE
- P POOR
- W WELL
- CHALK

Rounding

- FORMATION TOP

Slide/Rotate

ROP
ROF
GAMMA
GR

Decollement on location
04/18/2013 Start logging @
5500'

Bit #: 2
Type: VM513SH
Size: 8.75
Depth In: 465
Jars: 7x14
SN: 4004946

WOB 18
RPM 0/30
SPP 2817
SPM 110

MW 9.4/MIS 47

Total Gas & Chromatograph

GAS
C1
C2
C3
C4

GAS (units)
C1-C4 (PPM)

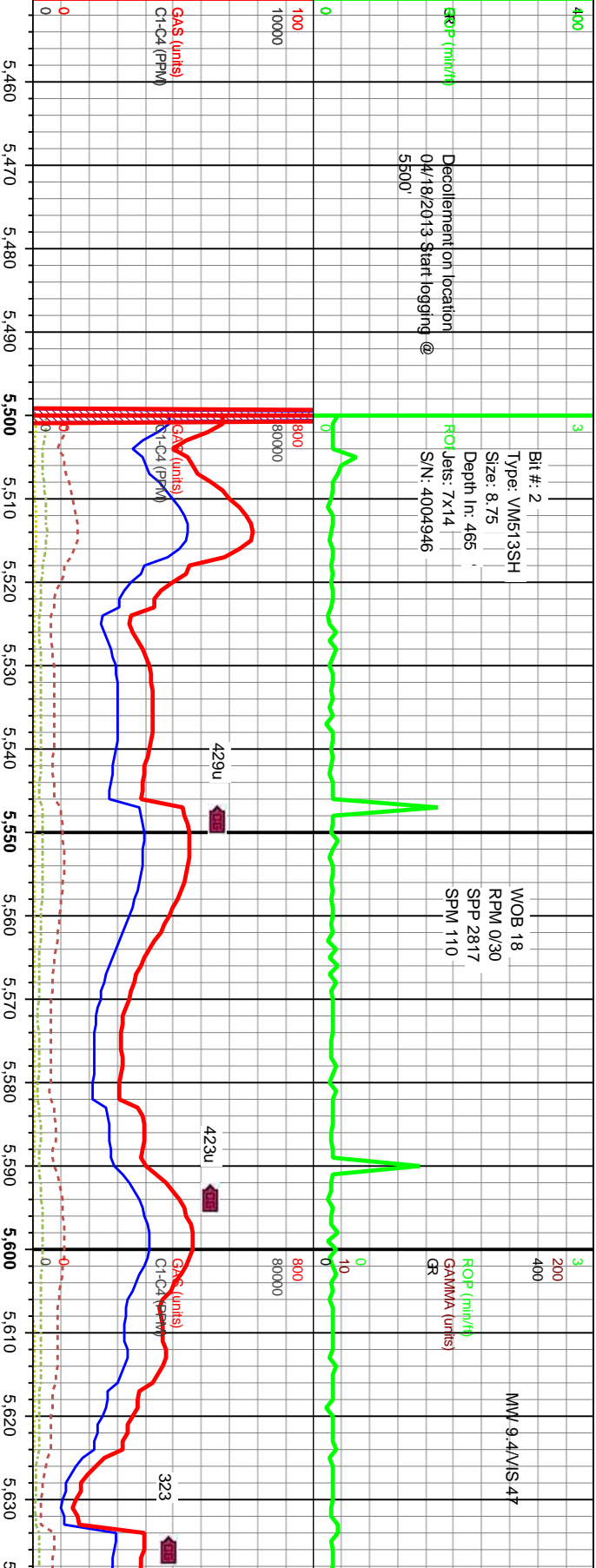
Depth Labels

Interp Lith

Well Bore
TVD

Oil Show

Images



100% SH: lt-m gy, blk-y-sbdky, sft-frm, sl calc, sl silty,
no flor, no cut.

100% SH: lt-m gy, blk-y-sbdky, sft-frm, sl calc, sl silty,
no flor, no cut.

5700
100% SH: lt-m gy, blk-y-sbdky, sft-frm
no flor, no cut.

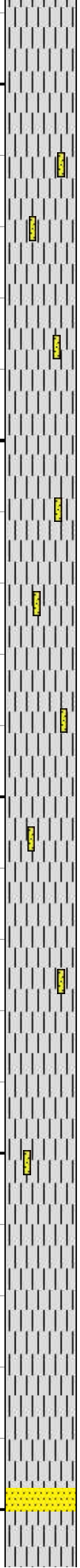
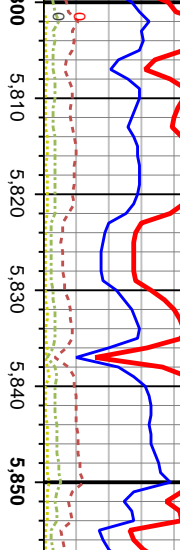
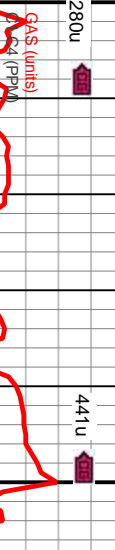
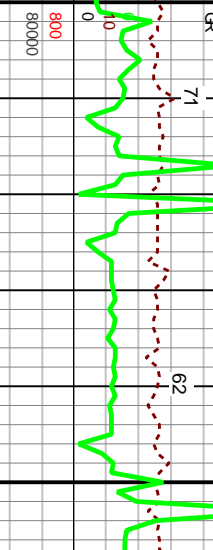
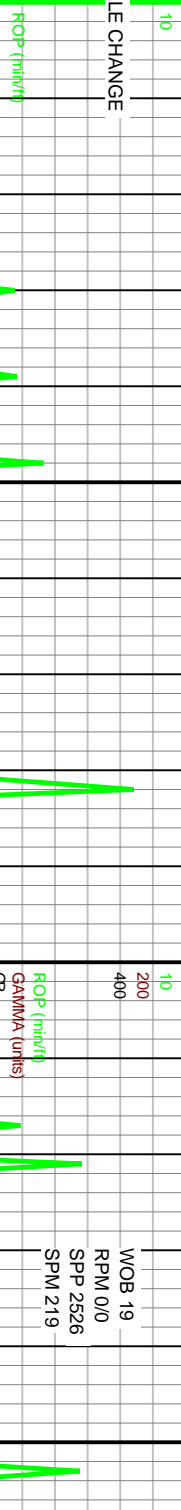
MD: 5.626
TVD: 5.586.82
Inclination: 1.1
Azimuth: 206.

TR
P
FR
G
E

6400

TVD (ft)

NOTE SCALE CHANGE



100% SH: lt-m gy, blk-y-sbdkly, sft-frm, sl calc, sl silty,
w/wh, v(lu)gr, sbnd, mod srt, no cal SS strng, no
flor, no cut.

MD: 5,670
TVD: 5,630.83
Inclination: 1.1 °
Azimuth: 189.8 °

100% SH: lt-m gy, blk-y-sbdkly, sft-frm, sl calc, sl silty,
w/wh, v(lu)gr, sbnd, mod srt, no cal SS strng, no
flor, no cut.

MD: 5,756
TVD: 5,716.82
Inclination: 0.6 °
Azimuth: 157.9 °

MD: 5,799
TVD: 5,759.81
Inclination: 2 °
Azimuth: 203.4 °

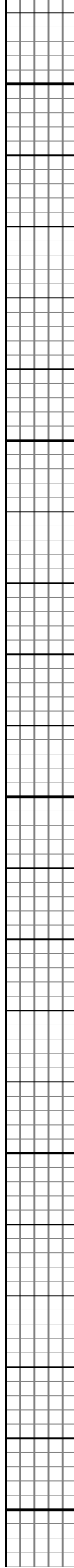
90% SH: lt-m gy, blk-y-sb
no flor, no cut
10% SS: lt-m gy, frm-hd,
mod sort, arg, w-cons, no 1

MD: 5,842
TVD: 5,802.71
Inclination: 5.5 °
Azimuth: 198.5 °

6400

6400

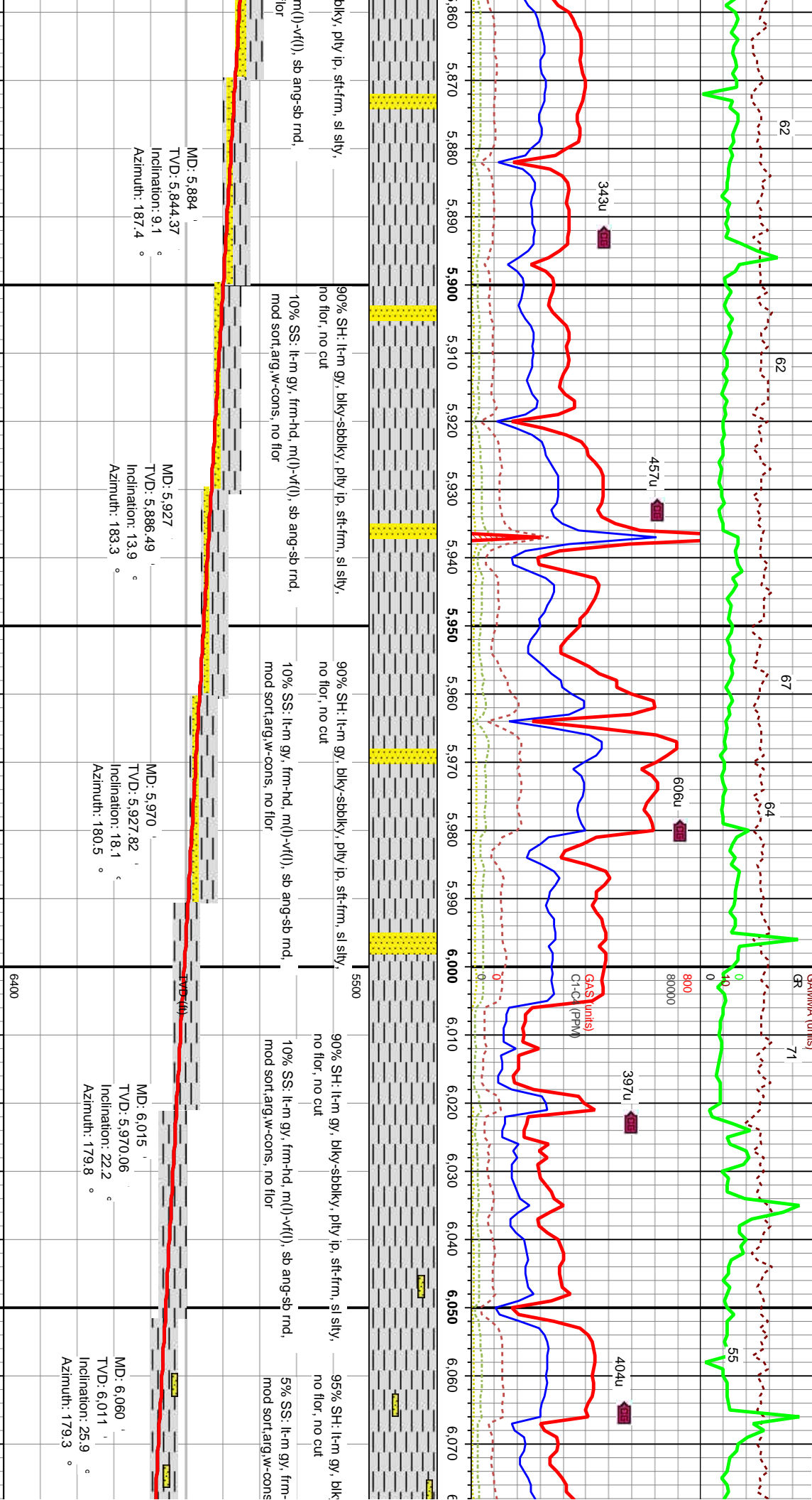
6400



MW 9.2/VIS 38

NMD @ 6020' 04/19/2013

WOB 21
RPM 0/0
SPP 265
SPM 227



MD: 5.884
TVD: 5.844.37
Inclination: 9.1 °
Azimuth: 187.4 °

MD: 5.927
TVD: 5.886.49
Inclination: 13.9 °
Azimuth: 183.3 °

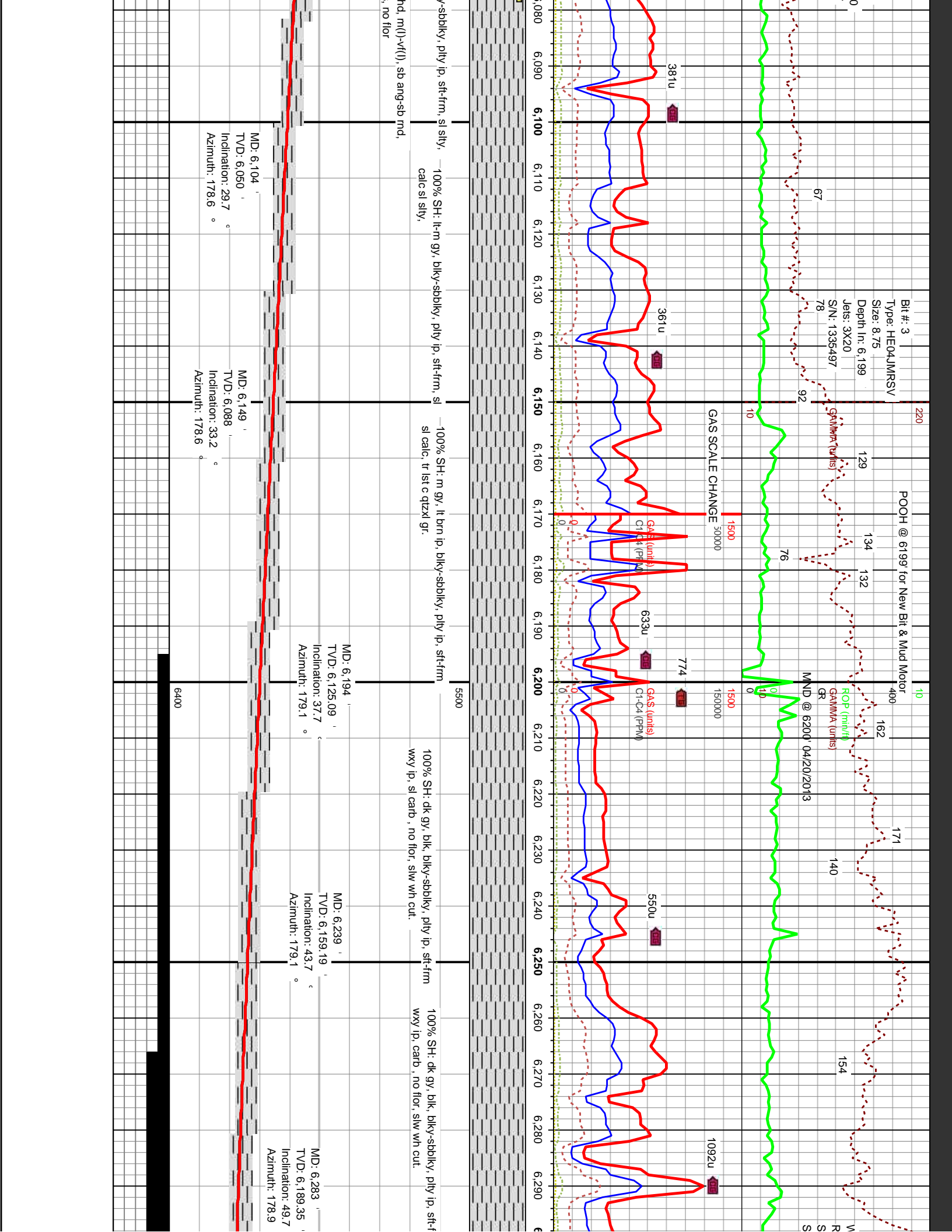
MD: 5.970
TVD: 5.927.82
Inclination: 18.1 °
Azimuth: 180.5 °

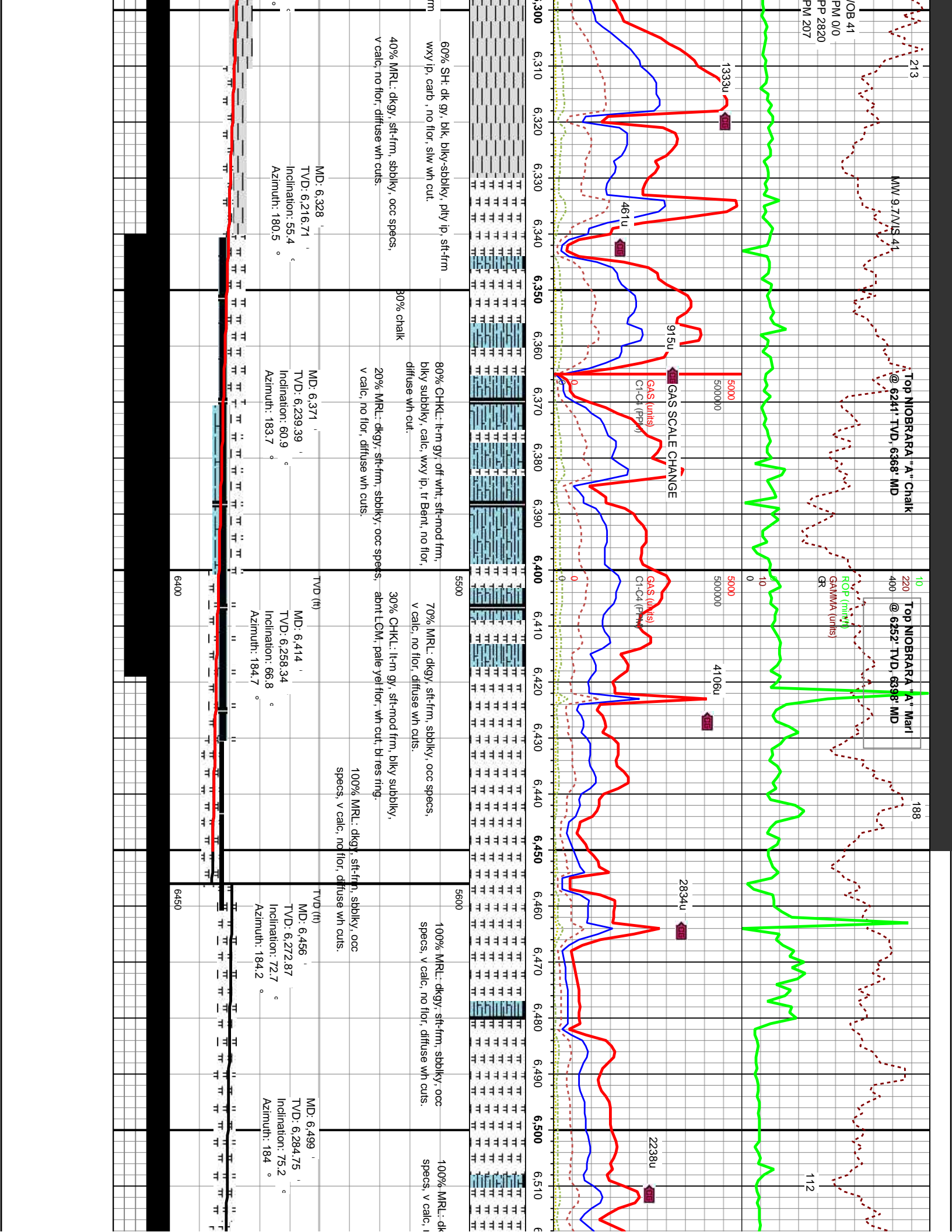
MD: 6.015
TVD: 5.970.06
Inclination: 22.2 °
Azimuth: 179.8 °

MD: 6.060
TVD: 6.011
Inclination: 25.9 °
Azimuth: 179.3 °

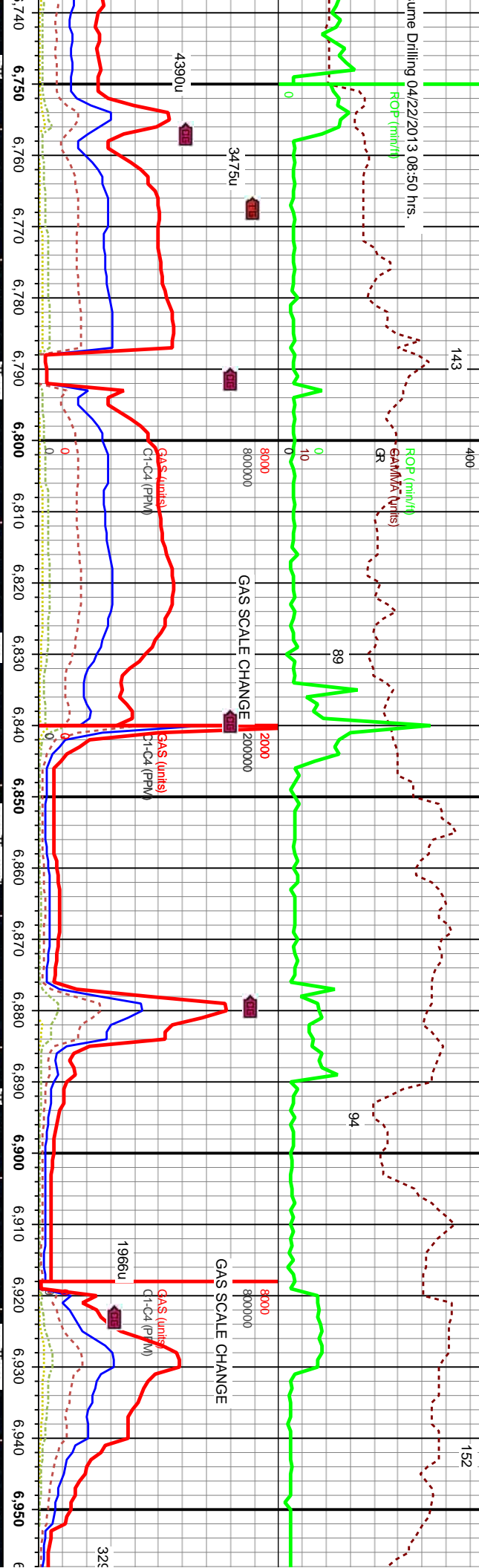
6400

blky, ply ip, sft-frm, sl sily,
m(l)-v(f), sb ang-sb mnd,
90% SH: lt-m gy, blk-sbblky, ply ip, sft-frm, sl sily,
no flor, no cut
10% SS: lt-m gy, frm-hd, m(l)-v(f), sb ang-sb mnd,
mod sort,arg,w-cons, no flor
90% SH: lt-m gy, blk-sbblky, ply ip, sft-frm, sl sily,
no flor, no cut
10% SS: lt-m gy, frm-hd, m(l)-v(f), sb ang-sb mnd,
mod sort,arg,w-cons, no flor
90% SH: lt-m gy, blk-sbblky, ply ip, sft-frm, sl sily,
no flor, no cut
5% SS: lt-m gy, frm-
mod sort,arg,w-cons





Time Drilling 04/22/2013 08:50 hrs.

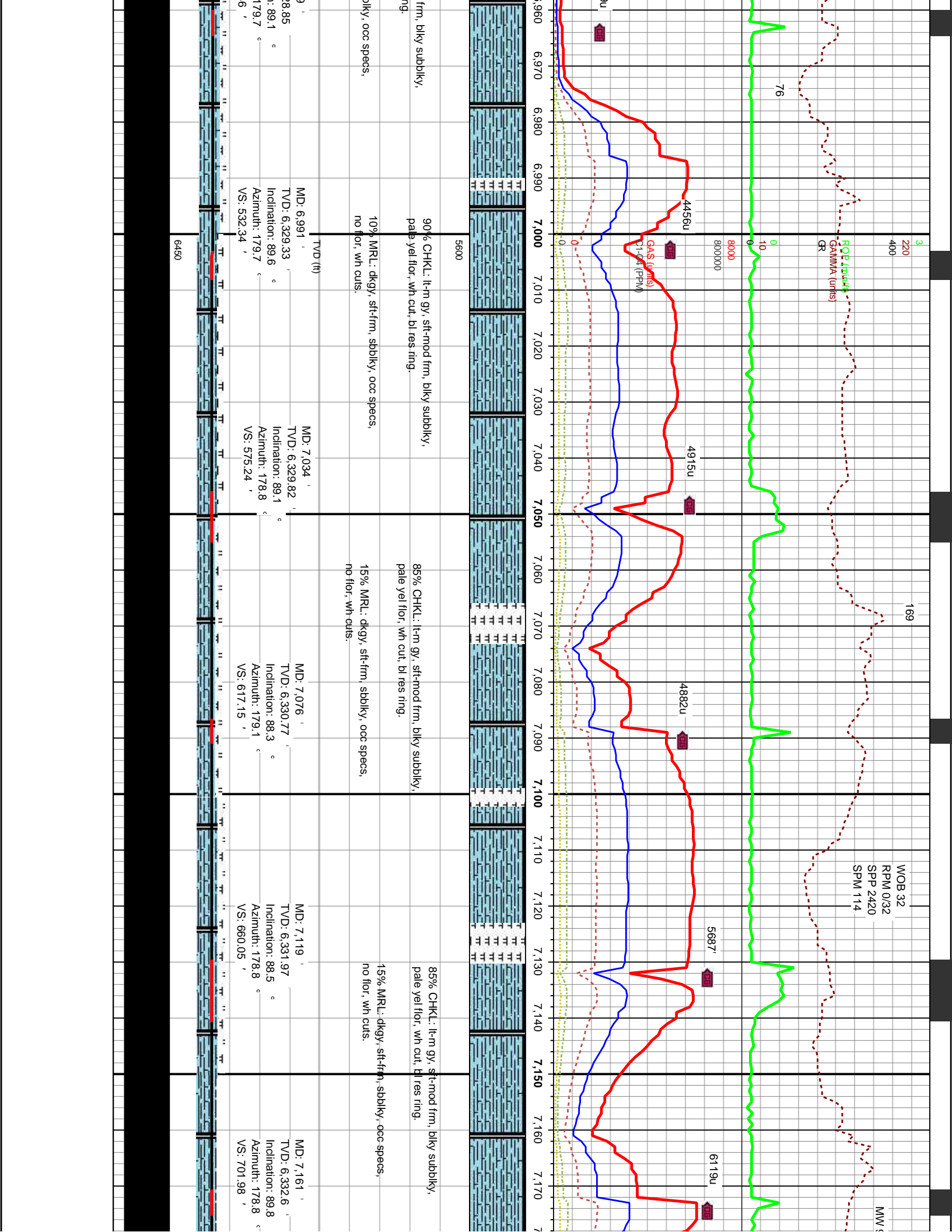


6,740 - 6,750	6,750 - 6,760	6,760 - 6,770	6,770 - 6,780	6,780 - 6,790	6,790 - 6,800	6,800 - 6,810	6,810 - 6,820	6,820 - 6,830	6,830 - 6,840	6,840 - 6,850	6,850 - 6,860	6,860 - 6,870	6,870 - 6,880	6,880 - 6,890	6,890 - 6,900	6,900 - 6,910	6,910 - 6,920	6,920 - 6,930	6,930 - 6,940	6,940 - 6,950
TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT

<p>lt-m gy, sft-nod frm, blkly subblky, wh cut, bl res ring.</p> <p>gy, sft-frm, sbblky, occ specs, cuts.</p>	<p>90% CHKL: lt-m gy, sft-nod frm, blkly subblky, pale yel flor, wh cut, bl res ring.</p> <p>10% MRL: dkgy, sft-frm, sbblky, occ specs, no flor, wh cuts.</p>	<p>85% CHKL: lt-m gy, sft-nod frm, blkly subblky, pale yel flor, wh cut, bl res ring.</p> <p>15% MRL: dkgy, sft-frm, sbblky, occ specs, no flor, wh cuts.</p>	<p>90% CHKL: lt-m gy, sft-nod frm, blkly subblky, pale yel flor, wh cut, bl res ring.</p> <p>10% MRL: dkgy, sft-frm, sbblky, occ specs, no flor, wh cuts.</p>
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<p>MD: 6,758</p> <p>TVD: 6,329.61</p> <p>Inclination: 90</p> <p>Azimuth: 181.6</p>	<p>MD: 6,780</p> <p>TVD: 6,330.08</p> <p>Inclination: 90.6</p> <p>Azimuth: 180.7</p>	<p>MD: 6,822</p> <p>TVD: 6,329.49</p> <p>Inclination: 91</p> <p>Azimuth: 180.7</p>	<p>MD: 6,865</p> <p>TVD: 6,328.85</p> <p>Inclination: 90.7</p> <p>Azimuth: 180.9</p>	<p>MD: 6,907</p> <p>TVD: 6,328.56</p> <p>Inclination: 90.1</p> <p>Azimuth: 180.4</p> <p>VS: 448.6</p>	<p>MD: 6,948</p> <p>TVD: 6,328.56</p> <p>Inclination: 90.1</p> <p>Azimuth: 180.4</p> <p>VS: 490.4</p>
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2+V/S43

3

220

400

183

17

RQP (mN/m)
GAMMA (units)
GR

74

0

10

80000

80000

6271u



5202u



5967u



4189u



3478u



GAS (units)
C1-C4 (PPM)

1.80 7.190 7.200 7.210 7.220 7.230 7.240 7.250 7.260 7.270 7.280 7.290 7.300 7.310 7.320 7.330 7.340 7.350 7.360 7.370 7.380 7.390 7



5600

85% CHKL: lt-m gy, sft-mod frm, blkky subblky,
pale yel flor, wh cut, bl res ring.

15% MRU: dkgy, sft-frm, sbblky, occ specs,
no flor, wh cuts.

TVD (ft)

MD: 7.204
TVD: 6.332.52
Inclination: 90.4
Azimuth: 178.4
VS: 744.91

60% MRU: dkgy, sft-frm, sbblky, occ specs,
abt fos, no flor, wh cuts.

40% CHKL: lt-m gy, sft-mod frm, blkky subblky,
flor, wh cut, bl res ring.

TVD (ft)

MD: 7.289
TVD: 6.331.4
Inclination: 91.2
Azimuth: 179.1
VS: 829.74

70% MRU: dkgy, sft-frm, sbblky, occ
abt fos, no flor, wh cuts.

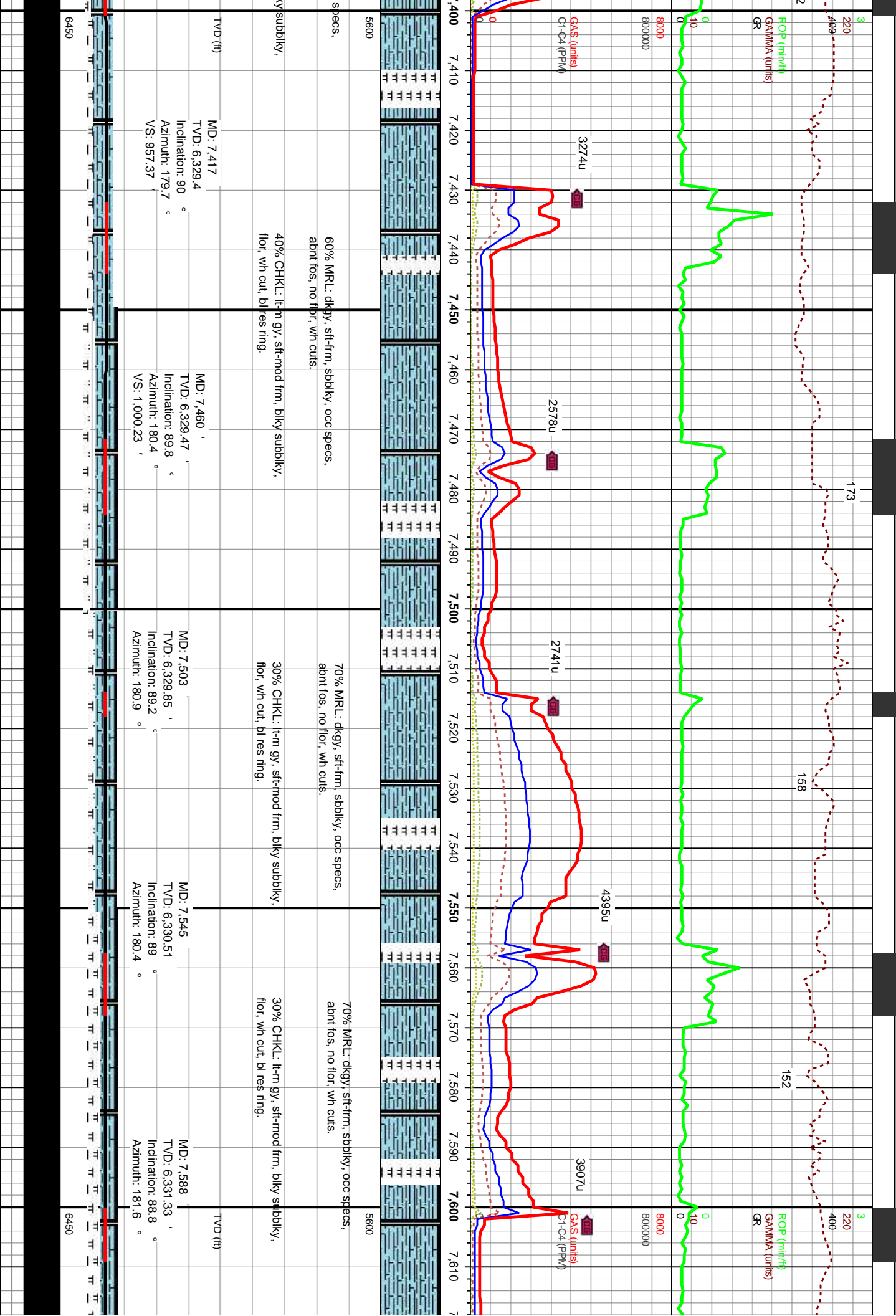
30% CHKL: lt-m gy, sft-mod frm, blk
flor, wh cut, bl res ring.

TVD (ft)

MD: 7.374
TVD: 6.329.62
Inclination: 90.6
Azimuth: 179.8
VS: 914.49



6450



3 220 400 800000

ROP (min/h)

GAMMA (units)

GR

3 220 400 800000

ROP (min/h)

GAMMA (units)

GR

G&S (units)

C1-C4 (PPM)

3274u

2578u

2741u

4395u

3907u

G&S (units)

C1-C4 (PPM)

5600

5600

specs,

60% MRL: dkgy, st-fm, sbblky, occ specs,
abnt fos, no fibr, wh cuts.

70% MRL: dkgy, st-fm, sbblky, occ specs,
abnt fos, no flor, wh cuts.

70% MRL: dkgy, st-fm, sbblky, occ specs,
abnt fos, no flor, wh cuts.

40% CHKL: li-m gy, st-mod frm, blkyy subblky,
flor, wh cut, bl res ring.

30% CHKL: li-m gy, st-mod frm, blkyy subblky,
flor, wh cut, bl res ring.

30% CHKL: li-m gy, st-mod frm, blkyy subblky,
flor, wh cut, bl res ring.

TVDD (ft)

MD: 7.417 '
TVDD: 6.329.4 '
Inclination: 90 °
Azimuth: 179.7 °
VS: 957.37 '

MD: 7.460 '
TVDD: 6.329.47 '
Inclination: 89.8 °
Azimuth: 180.4 °
VS: 1.000.23 '

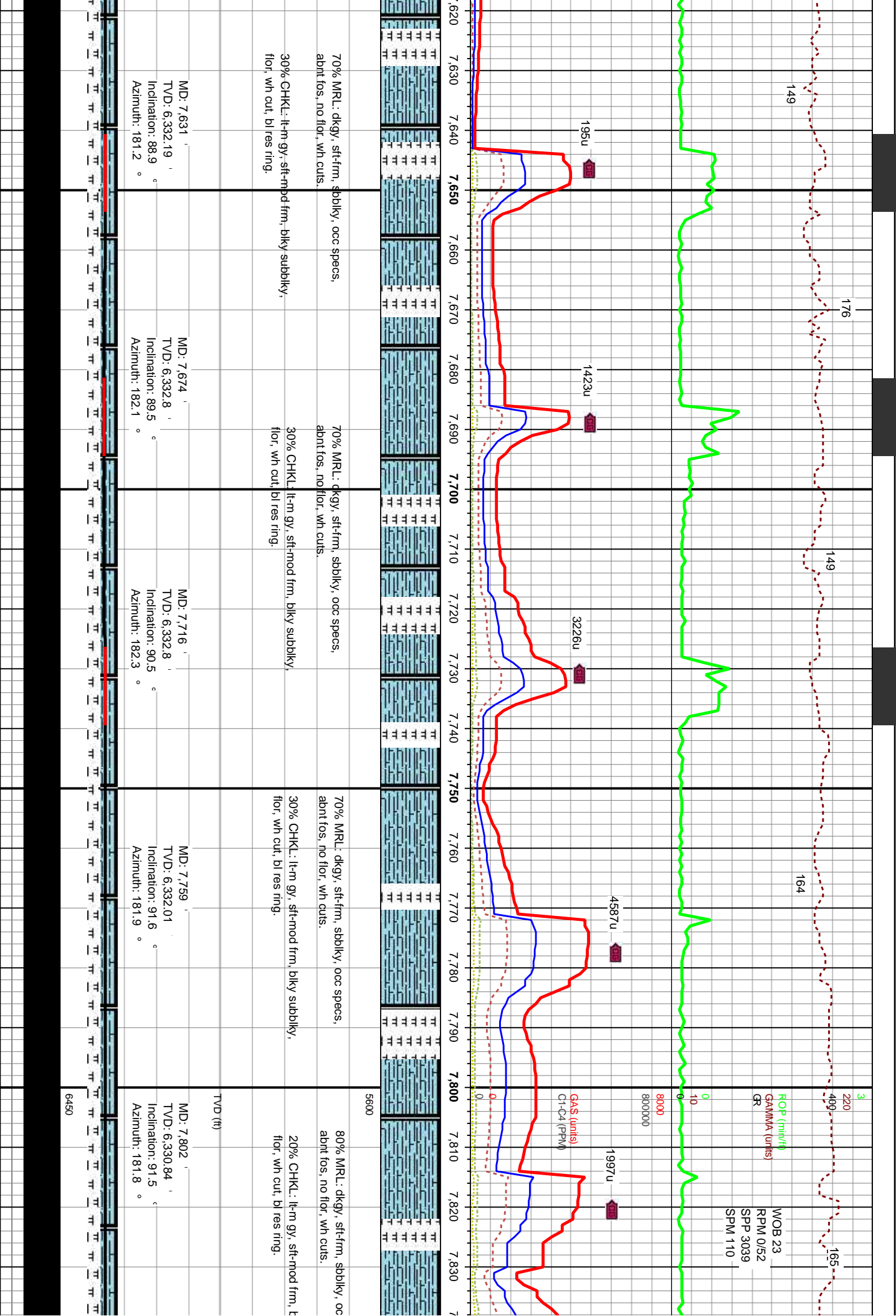
MD: 7.503 '
TVDD: 6.329.85 '
Inclination: 89.2 °
Azimuth: 180.9 °

MD: 7.545 '
TVDD: 6.330.51 '
Inclination: 89 °
Azimuth: 180.4 °

MD: 7.588 '
TVDD: 6.331.33 '
Inclination: 88.8 °
Azimuth: 181.6 °

6450

6450



149

176

149

164

220

165

ROP (min/hr)
GAMMA (units)
GR

WOB 23
RPM 0/52
SPP 3039
SPM 110

GAS (units)
G1-C4 (PPM)

70% MRL: dkgy, stf-fm, sbblky, occ specs, abnt fos, no flor, wh cuts.
30% CHKL: lt-m gy, stf-nod frm, blkly subblky, flor, wh cut, bl res ring.

70% MRL: dkgy, stf-fm, sbblky, occ specs, abnt fos, no flor, wh cuts.
30% CHKL: lt-m gy, stf-nod frm, blkly subblky, flor, wh cut, bl res ring.

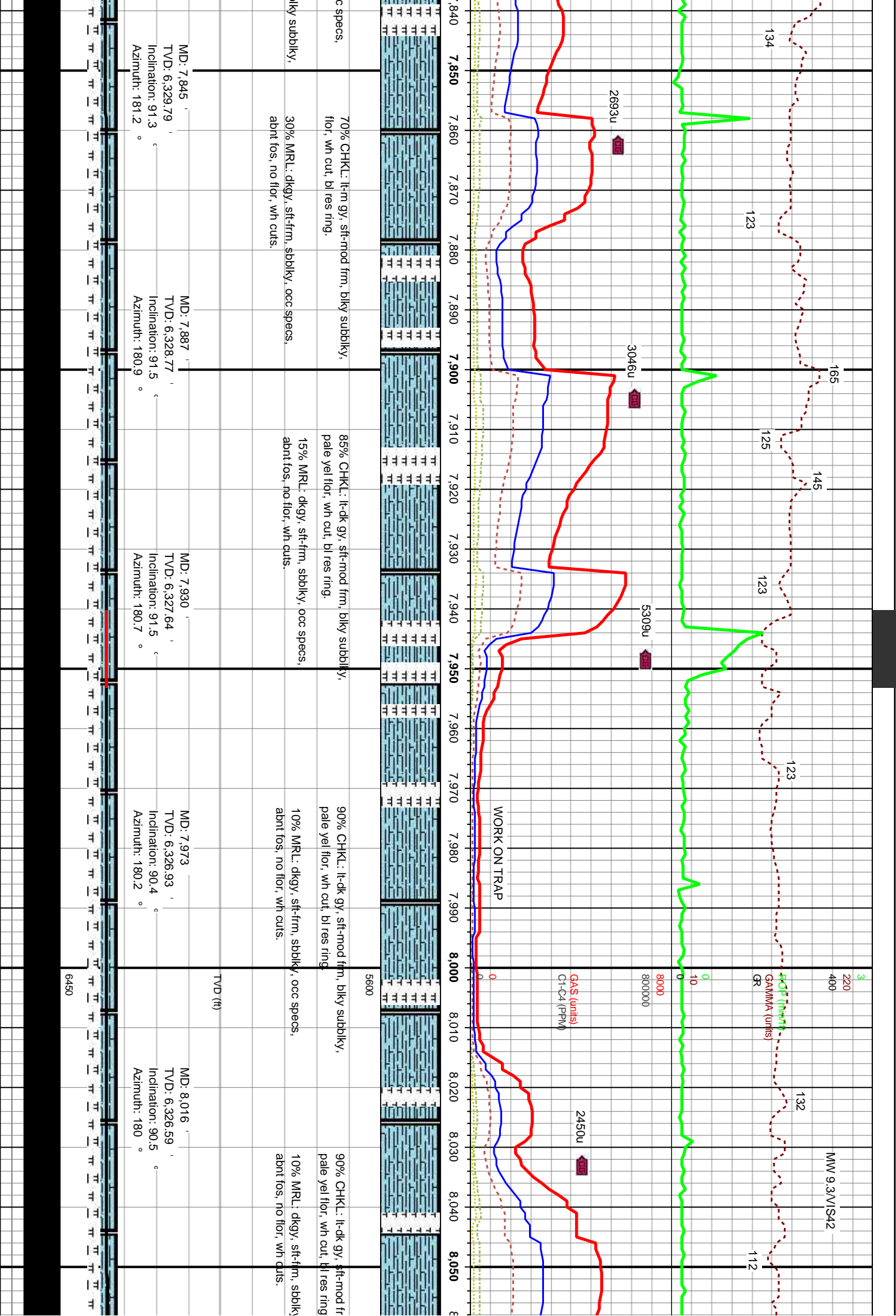
70% MRL: dkgy, stf-fm, sbblky, occ specs, abnt fos, no flor, wh cuts.
30% CHKL: lt-m gy, stf-nod frm, blkly subblky, flor, wh cut, bl res ring.

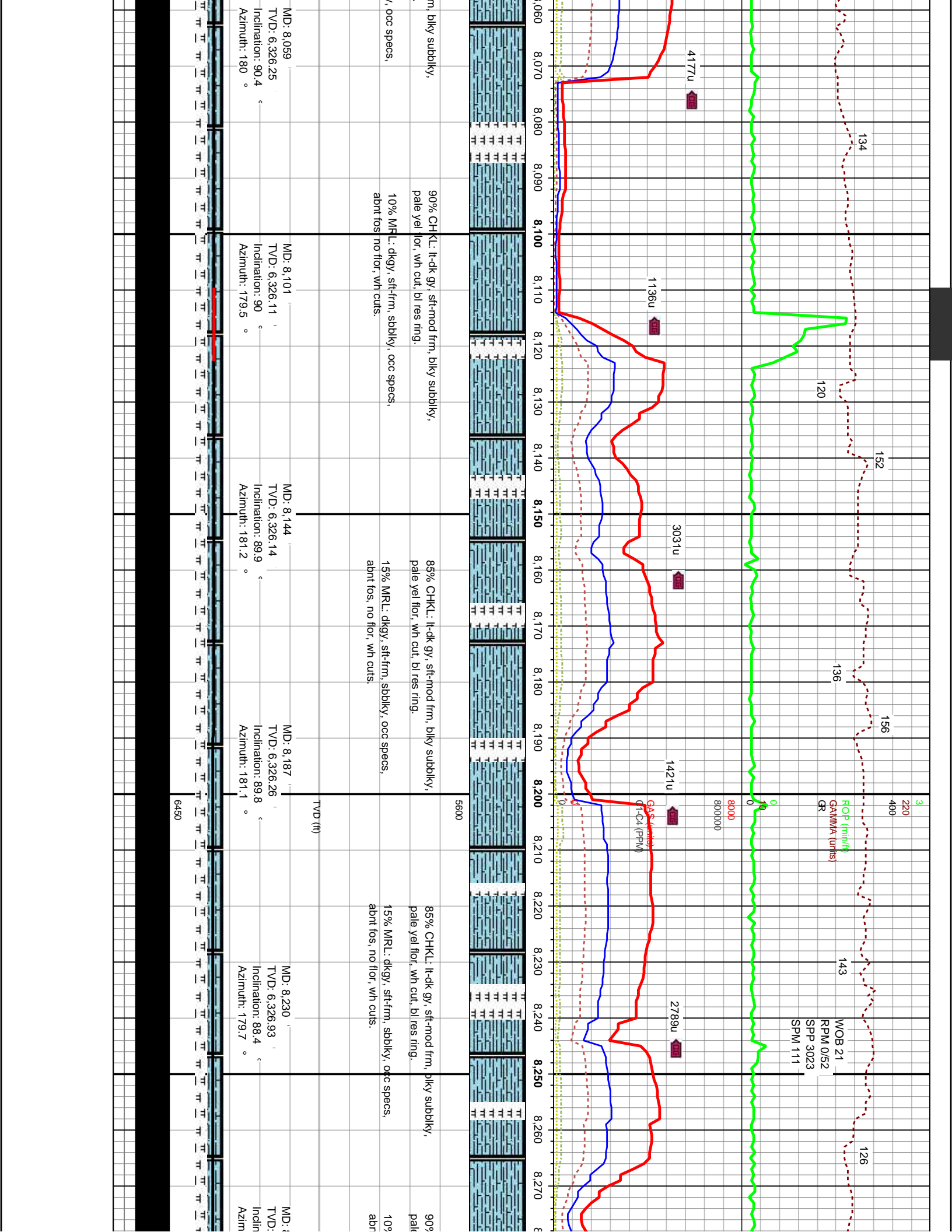
80% MRL: dkgy, stf-fm, sbblky, occ specs, abnt fos, no flor, wh cuts.
20% CHKL: lt-m gy, stf-nod frm, blkly subblky, flor, wh cut, bl res ring.

TVD (ft)

5600

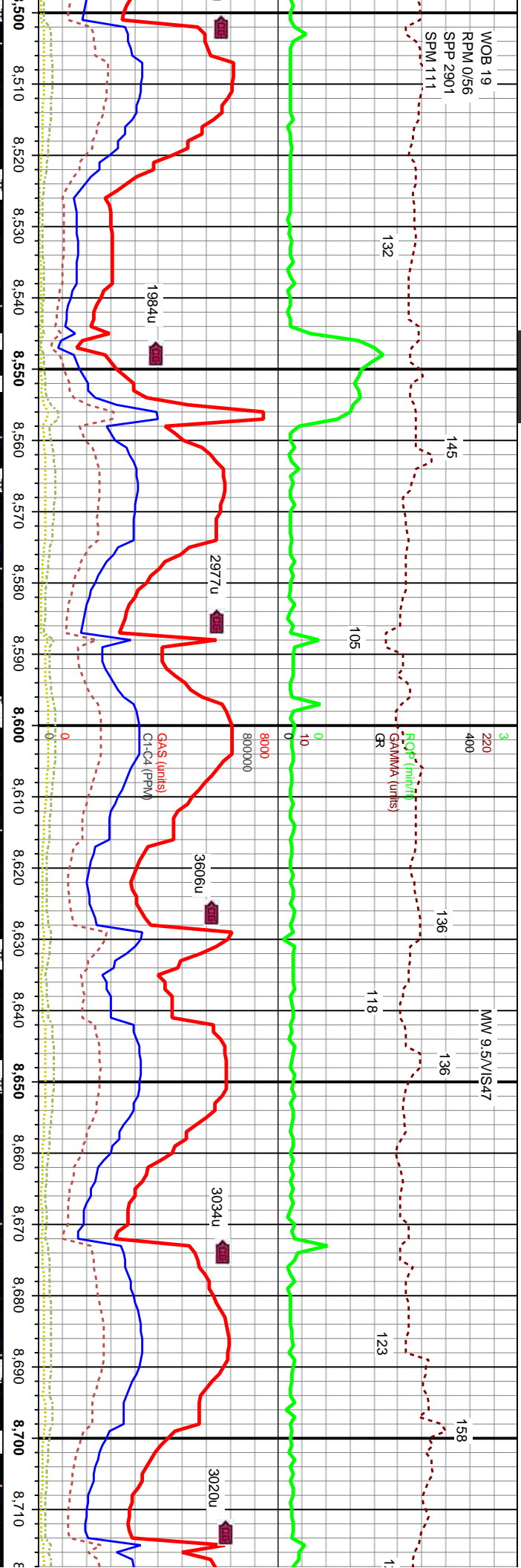
6450





WOB 19
RPM 0/56
SPP 2901
SPM 111

MW 9.5V/S47



85% CHKL: lt-dk gy, sft-mod frm, blkly subblkly
pale yel flor, wh cut, bl res ring.
15% MRL: dkgy, sft-frm, sbbkly, occ specs,
abnt fos, no flor, wh cuts.

90% CHKL: lt-dk gy, sft-mod frm, blkly subblkly,
pale yel flor, wh cut, bl res ring.
10% MRL: dkgy, sft-frm, sbbkly, occ specs,
abnt fos, no flor, wh cuts.

80% CHKL: lt-dk gy, sft-mod frm, blkly subblkly,
pale yel flor, wh cut, bl res ring.
20% MRL: dkgy, sft-frm, sbbkly, occ specs,
abnt fos, no flor, wh cuts.

75% CHKL: lt-dk gy, sft-mod frm, blkly subblkly,
pale yel flor, wh cut, bl res ring.
25% MRL: dkgy, sft-frm, sbbkly, occ specs,
abnt fos, no flor, wh cuts.

MD: 8.529
TVD: 6.329.65
Inclination: 90.9 °
Azimuth: 181.4 °

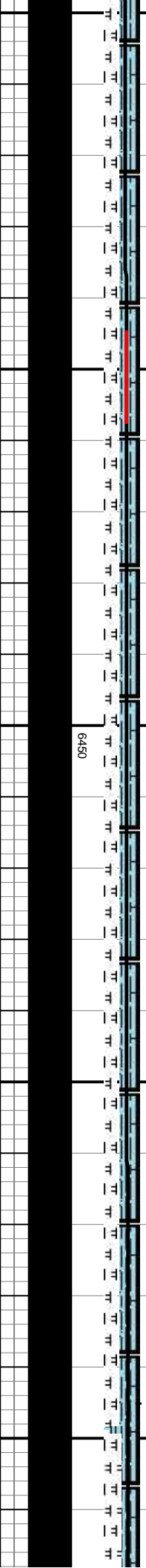
MD: 8.572
TVD: 6.328.71
Inclination: 91.6 °
Azimuth: 181.9 °

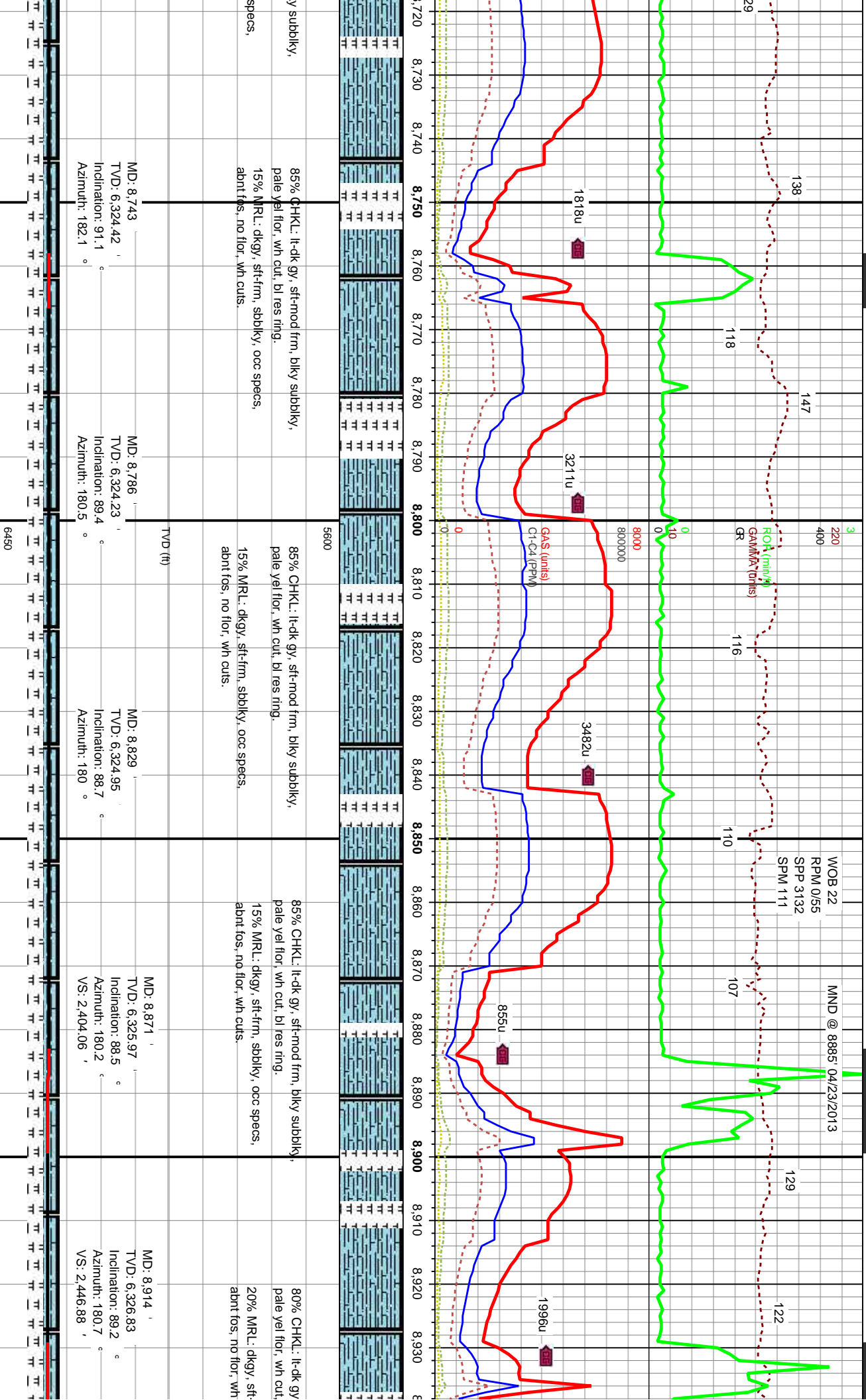
MD: 8.615
TVD: 6.327.55
Inclination: 91.5 °
Azimuth: 181.8 °

MD: 8.657
TVD: 6.326.41
Inclination: 91.6 °
Azimuth: 181.8 °

MD: 8.700
TVD: 6.325.32
Inclination: 91.3 °
Azimuth: 181.9 °

5600
TVD (ft)
6450





WOB 22
RPM 0/55
SPP 3132
SPM 111

MND @ 8885 04/23/2013

138

118

147

1818u

3211u

3482u

855u

110

107

129

122

6450

5600

TV D (ft)

GAS (units)
C1-C4 (PEM)

ROA (tonn/y)
GAMMA (tonns)
GR

3

220

400

80000

800000

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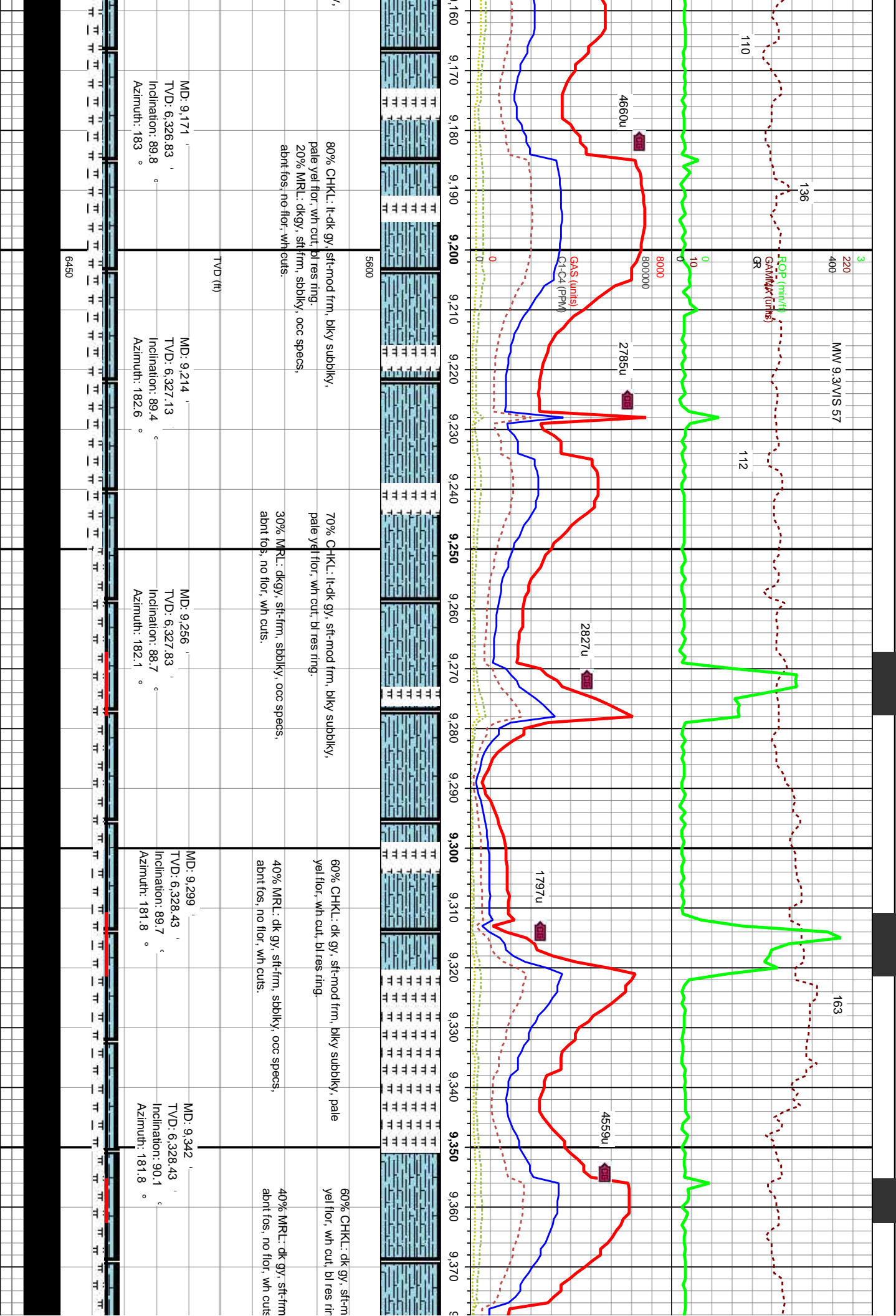
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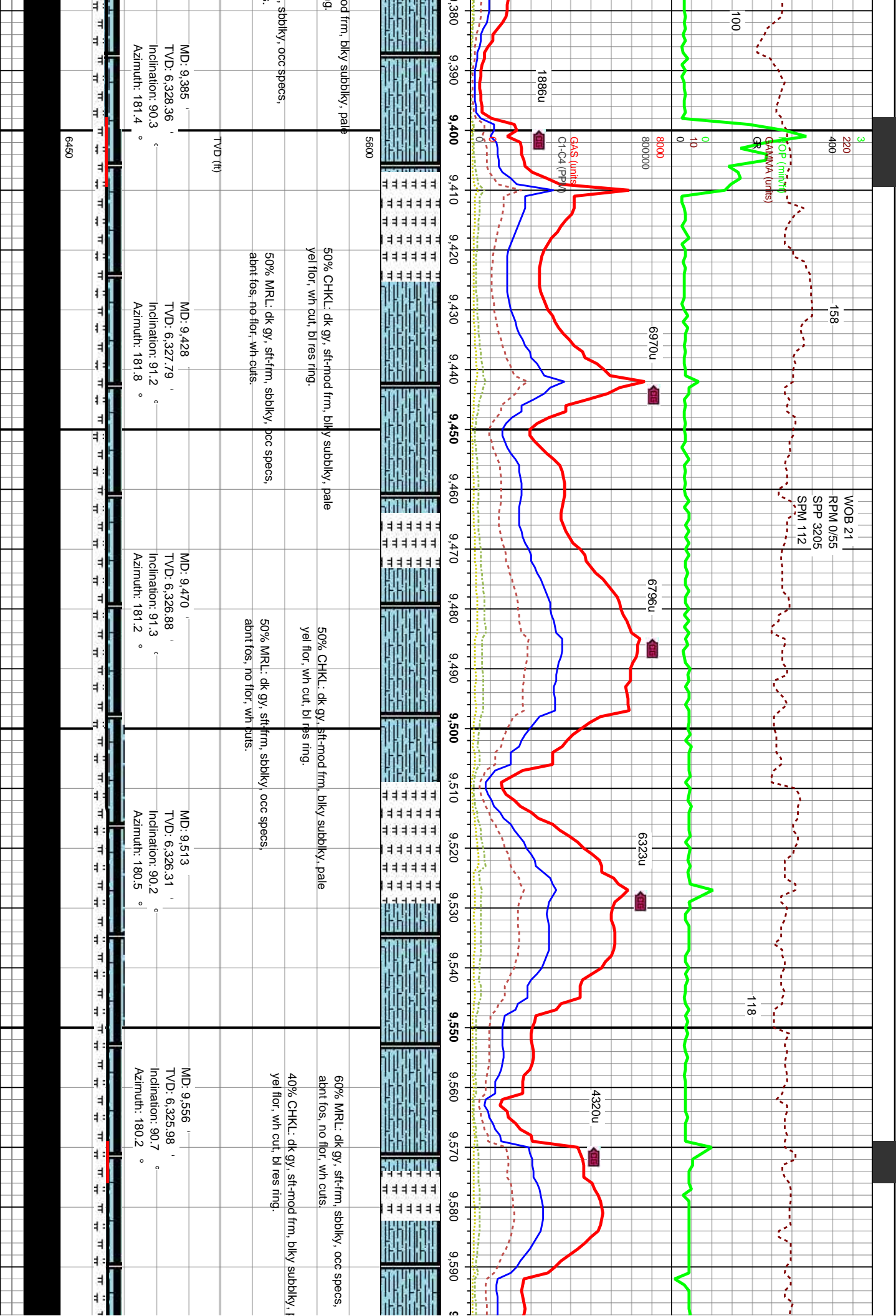
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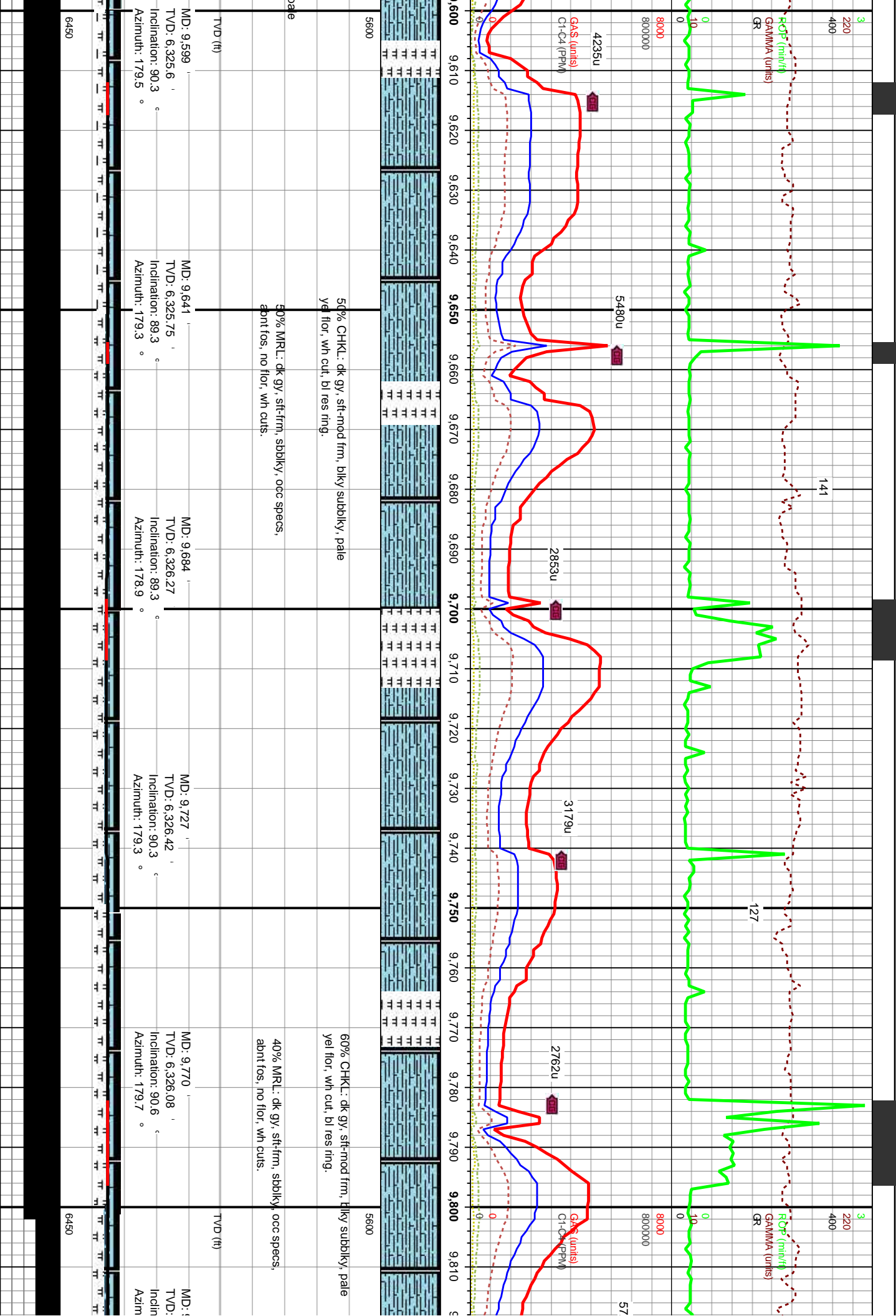
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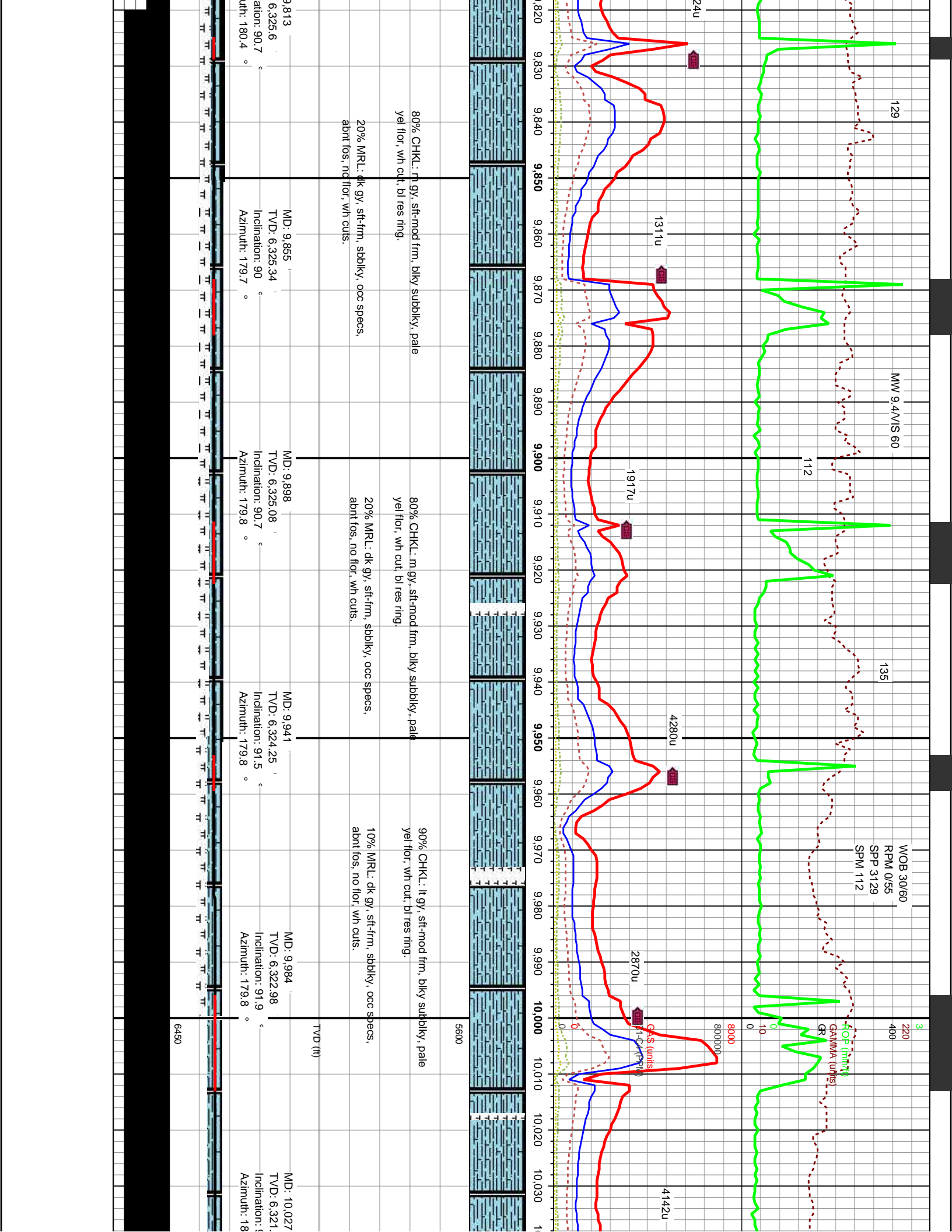
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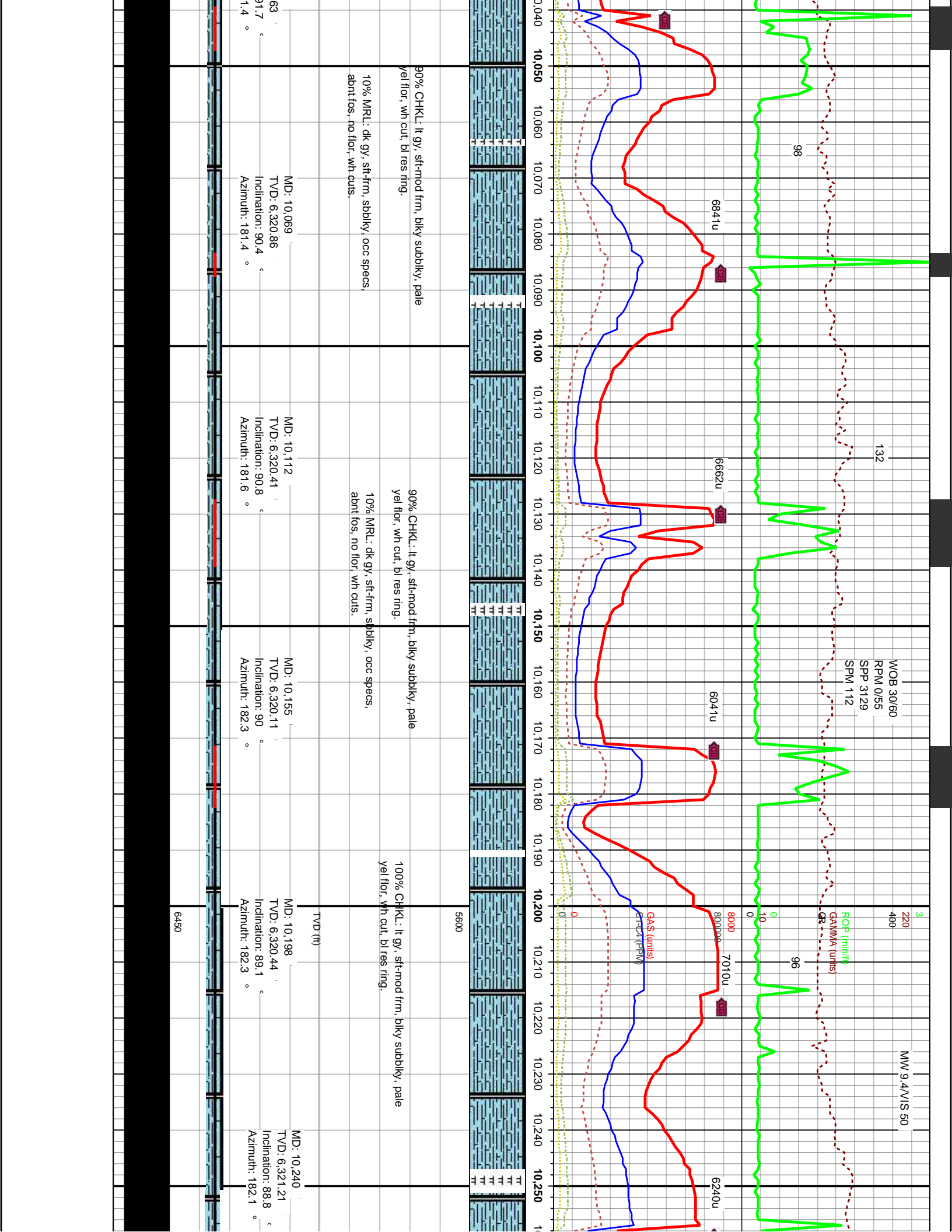
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MOB 30/60
RPM 0/55
SPP 3129
SPM 112

ROP (m/hr)
GAMMA (units)
GR

GAS (units)
SPP (PPM)

90% CHKL: lt gy, sft-mod frm, blkly subblky, pale
yel flor, wh cut, bl res ring.
10% MRL: dk gy, sft-frm, sbblky, occ specs,
abnt fos, no flor, wh cuts.

MD: 10,069
TVD: 6,320.86
Inclination: 90.4 °
Azimuth: 181.4 °

90% CHKL: lt gy, sft-mod frm, blkly subblky, pale
yel flor, wh cut, bl res ring.
10% MRL: dk gy, sft-frm, sbblky, occ specs,
abnt fos, no flor, wh cuts.

MD: 10,112
TVD: 6,320.41
Inclination: 90.8 °
Azimuth: 181.6 °

90% CHKL: lt gy, sft-mod frm, blkly subblky, pale
yel flor, wh cut, bl res ring.
10% MRL: dk gy, sft-frm, sbblky, occ specs,
abnt fos, no flor, wh cuts.

MD: 10,155
TVD: 6,320.11
Inclination: 90 °
Azimuth: 182.3 °

100% CHKL: lt gy, sft-mod frm, blkly subblky, pale
yel flor, wh cut, bl res ring.

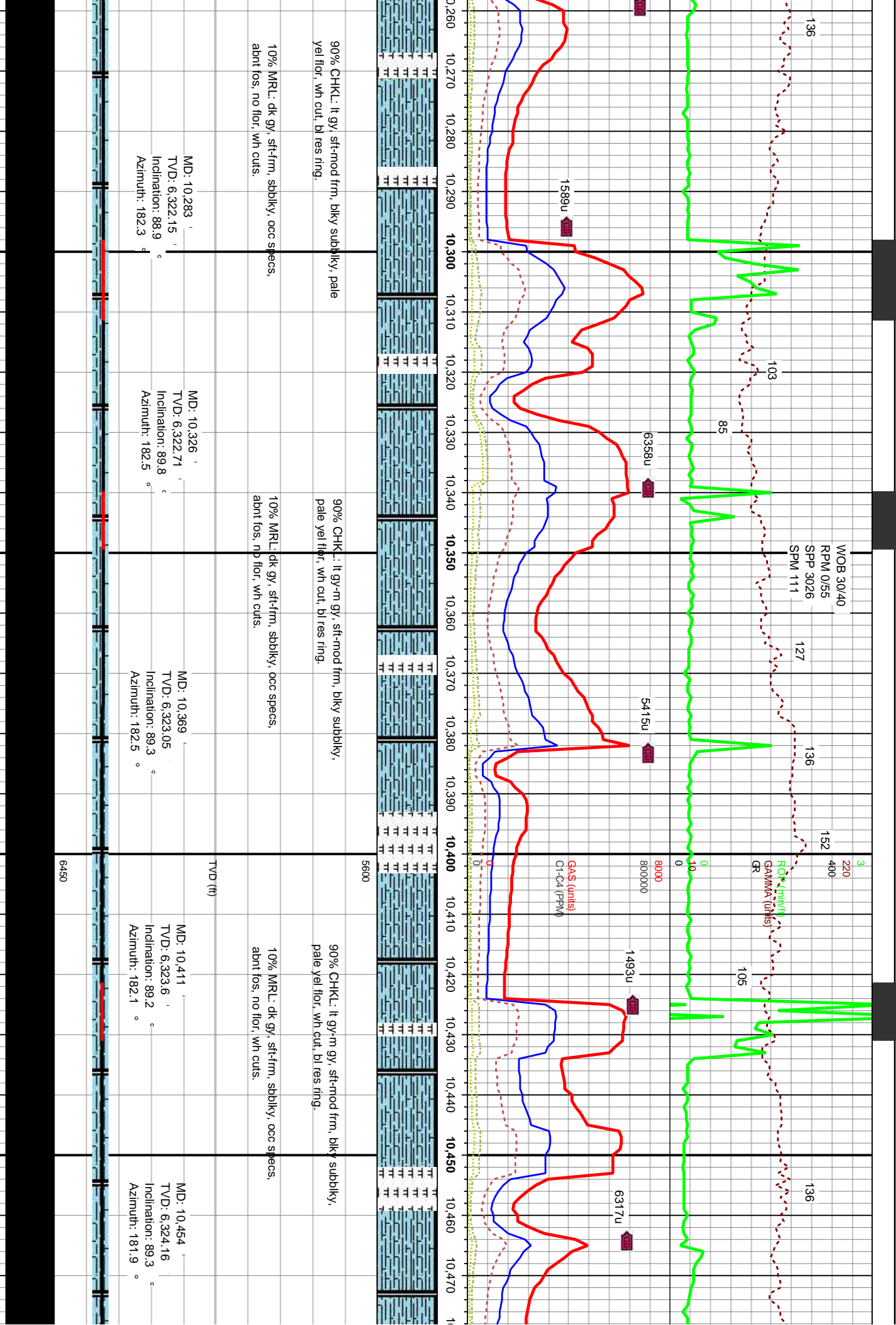
MD: 10,198
TVD: 6,320.44
Inclination: 89.1 °
Azimuth: 182.3 °

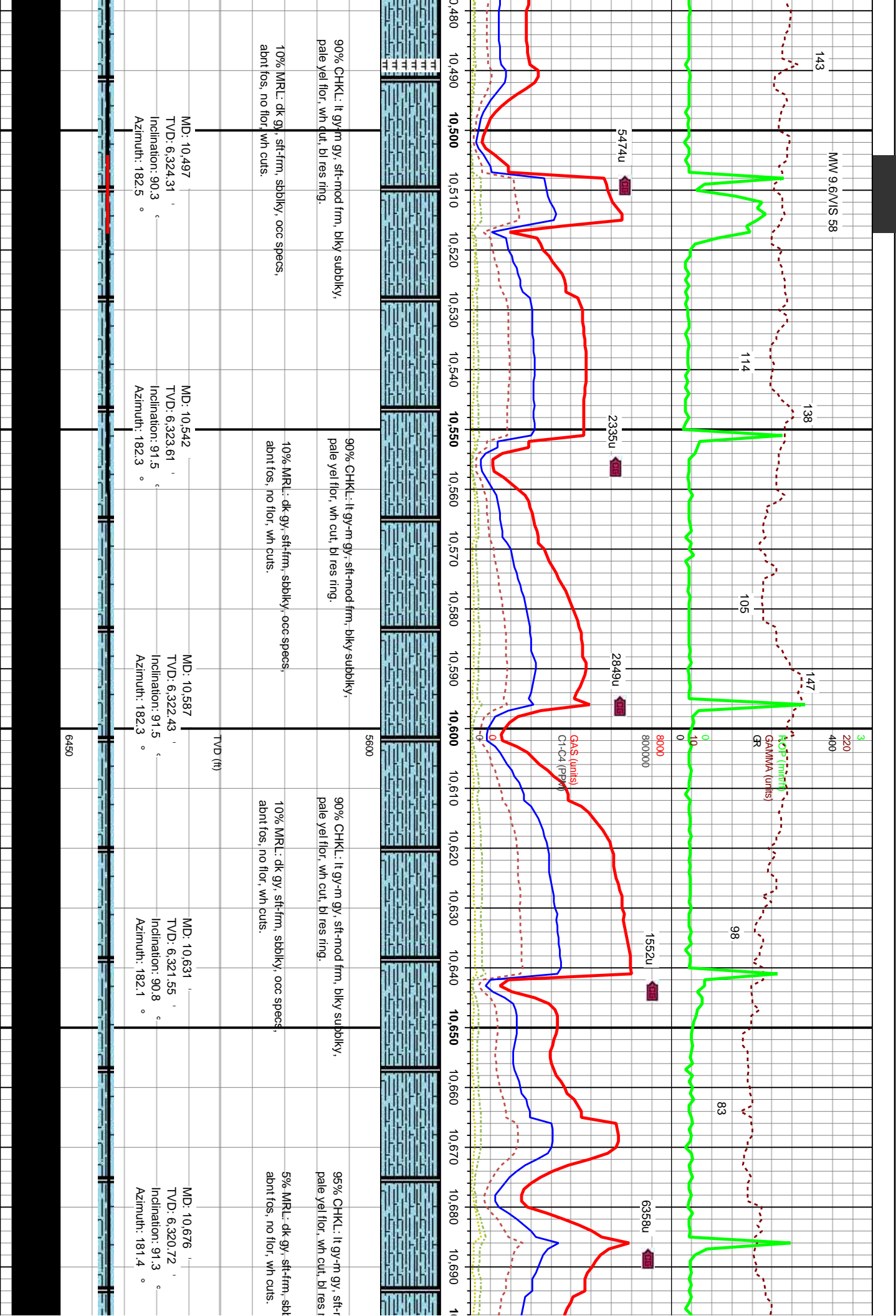
MD: 10,240
TVD: 6,321.21
Inclination: 88.8 °
Azimuth: 182.1 °

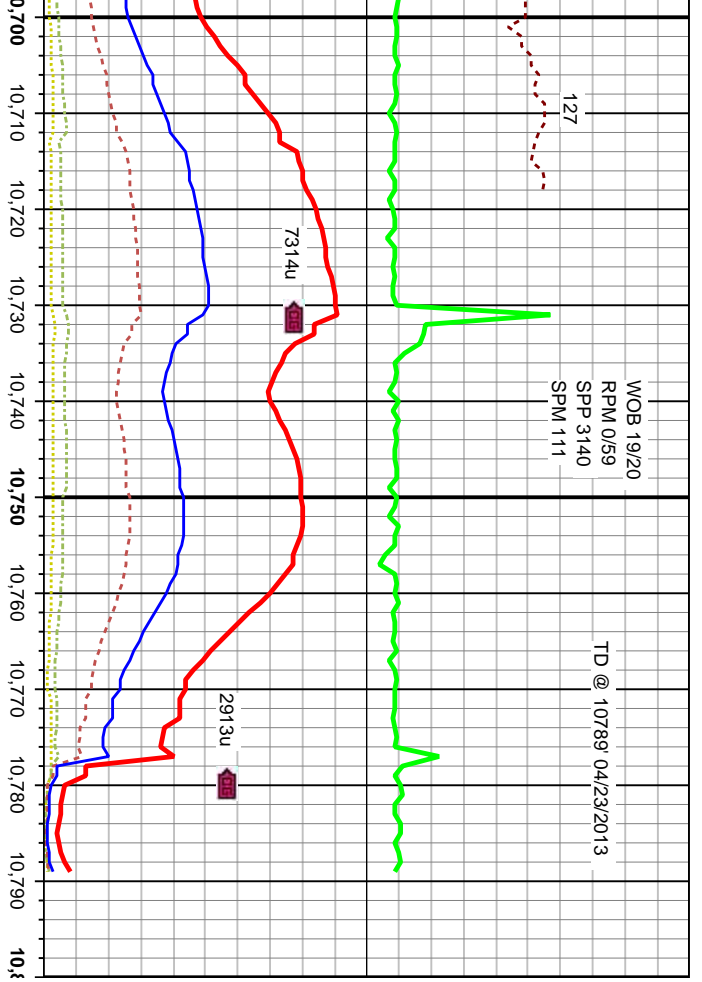
6450

5600

TVD (ft)







10,700	10,710	10,720	10,730	10,740	10,750	10,760	10,770	10,780	10,790
<p>90% CHKL: gy-m gy, sft-mod frm, blkly subblky, pale yei flr, wh cut, bl res ring.</p> <p>10% MR: dk gy, sft-frm, sbblky, occ specs, abnt fos, no flr, wh cuts.</p> <p>Projection Bit</p>									
<p>MD: 10,721 TVD: 6,319.54 Inclination: 91.7° Azimuth: 181.9°</p>					<p>MD: 10,789 TVD: 6,317.63 Inclination: 91.6° Azimuth: 181.8°</p>				
<p>nd frm, blkly subblky, ing.</p> <p>blkly, occ specs.</p>									