

Décollement
Consulting
Inc.



Scale: 5" / 100'
Measured Depth Log

Well Name State Seventy Holes F-J-8HNB

Location NWNW Sec 8 T4N R62W

State Colorado

Country USA

API Number 05-123-37552-00

County Weld

Rig Number Ensign 136

Field DJ. Basin

Spud Date 7/12/2013

Drilling Completed 7/20/2013

Surface Coordinates 395 FNL X 1095 FWL

Ground Elevation 4537'

K.B. Elevation 4550'

Logged Interval 5800' To 10759'

Total Depth 10759

Formation Niobrara "B" Chalk

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

Fossils

F FOSSIL

GASTROPD

ALGAE

AMPHIPORA

BELMNTTE

BIOLCLASTIC

BRACHIOPOD

BRYOZOA

CEPHALOPD

CORAL

CRINOID

ECHINOID

FISH

FORAMINIFERA

Minerals

ANHYDRITIC

FERRUGINOUS

TUFFACEOUS

SILTY

SILTSTONE STRINGER

Stringer

ANHYDRITE STRINGER

BENTONITE STRINGER

COAL STRINGER

DOLOMITE STRINGER

GYPSUM STRINGER

LIMESTONE STRINGER

MARLSTONE (CALC) STRG

MARLSTONE (DOL) STRG

SANDSTONE STRINGER

SHALE STRINGER

Fossils

F FOSSIL

GASTROPD

ALGAE

AMPHIPORA

BELMNTTE

BIOLCLASTIC

BRACHIOPOD

BRYOZOA

CEPHALOPD

CORAL

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SILTSTONE STRINGER

Stringer

ANHYDRITE STRINGER

BENTONITE STRINGER

COAL STRINGER

DOLOMITE STRINGER

GYPSUM STRINGER

LIMESTONE STRINGER

MARLSTONE (CALC) STRG

MARLSTONE (DOL) STRG

SANDSTONE STRINGER

SHALE STRINGER

Other Symbols

Oil Show

ORGANIC

P PINPOINT

DEAD

EVEN

QUESTIONABLE

SPOTTED STAINING

Engineering

BIT

CONNECTION (LEFT)

CONNECTION (RIGHT)

E EARTHY

F FENESTRAL

F FRACTURE

INTERCRYSTALLINE

INTEROOLITIC

MOLDIC

Textures

B\$ BOUNDSTONE

P POOR

C CHALKY

CX CRYPTOXLN

E EARTHY

FX FINELYXLN

B\$ GRAINSTONE

L LITHOGRAPHIC

Sorting

MX MICROXLN

M\$ MUDSTONE

R ROUNDED

a SUBANG

r SUBRND

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

SLIDE

SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

Rounding

A ANGULAR

R ROUNDED

a SUBANG

r SUBRND

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

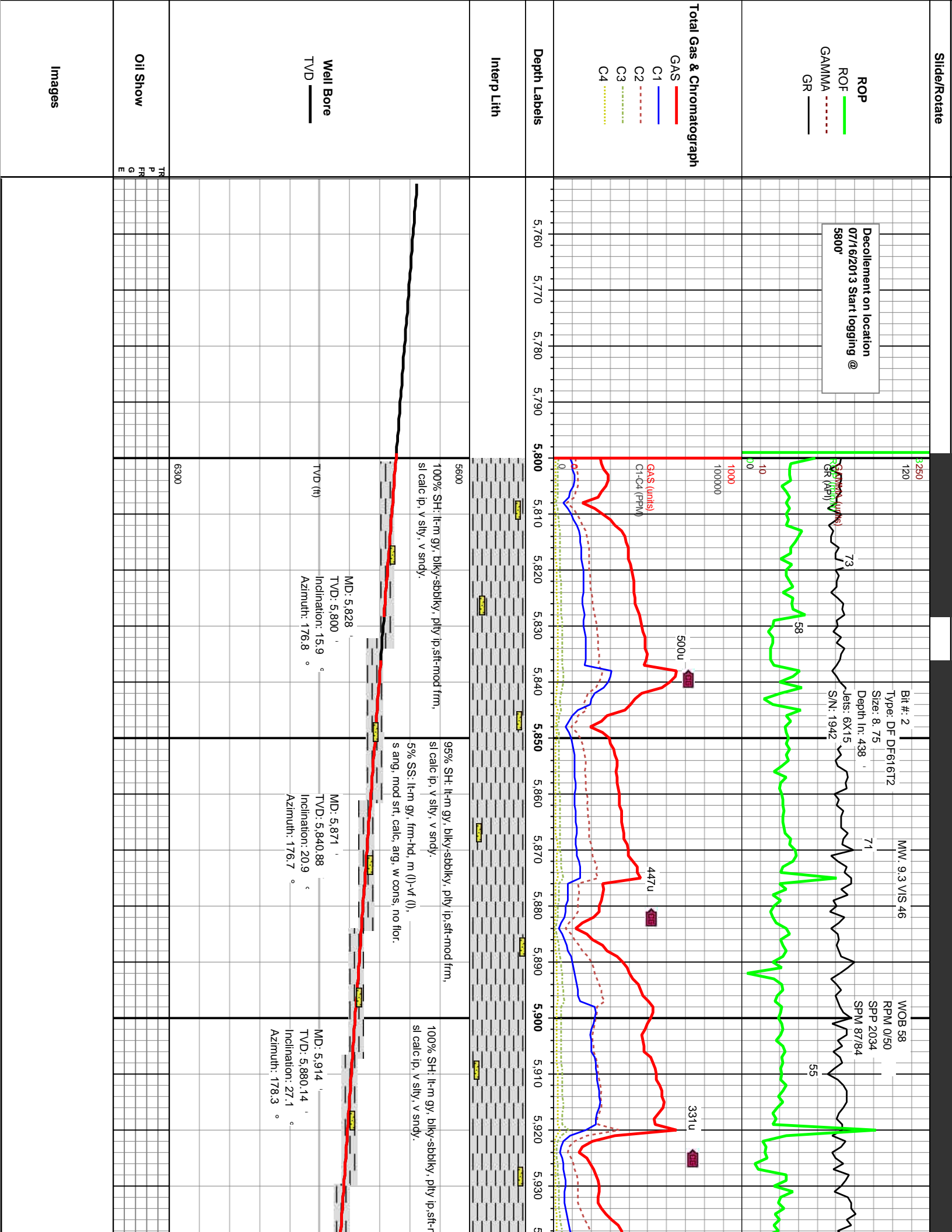
SLIDE

SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

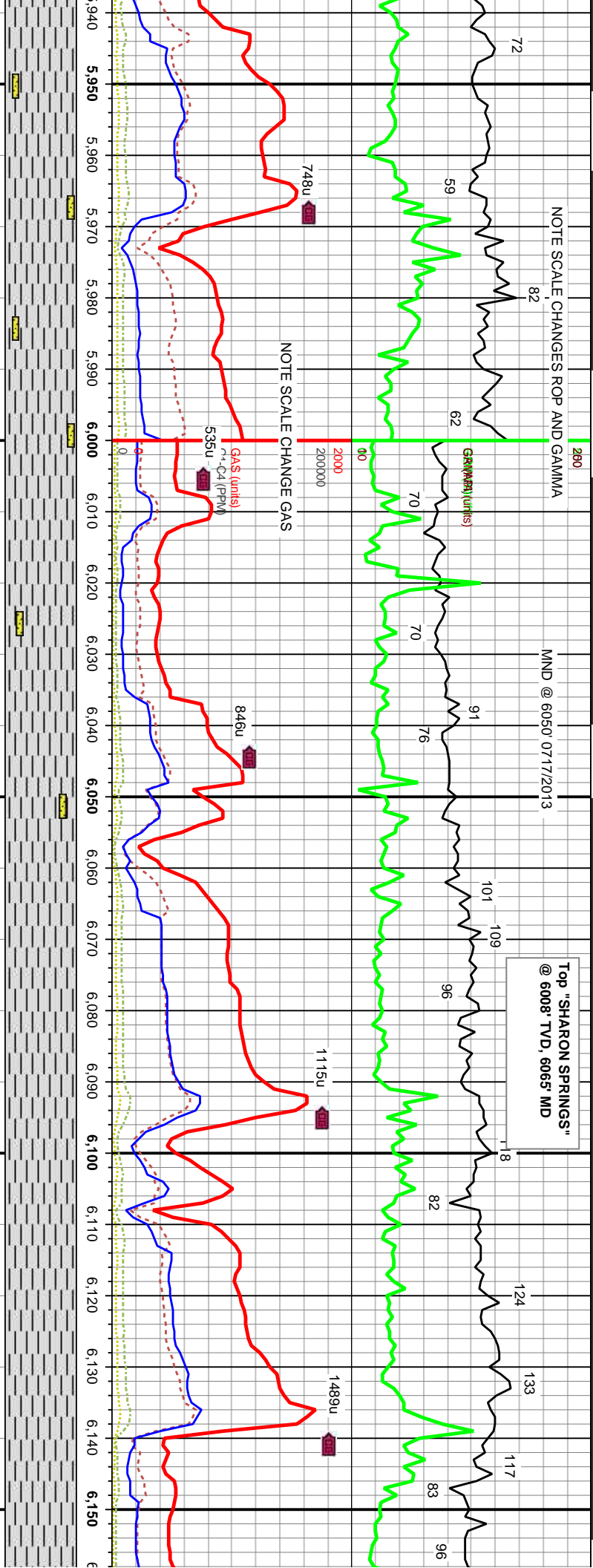
WIRELINE TESTED - RT



NOTE SCALE CHANGES ROP AND GAMMA

MND @ 6050' 07/17/2013

Top "SHARON SPRINGS"
@ 6008' TVD, 6065' MD



100% SH: lt-m gy, blk-y-sbdky, pily ip, sft-mod frm,
sl calc ip, v silty, v sndy.

100% SH: lt-m gy, blk-y-sbdky, pily ip, sft-mod frm,
sl calc ip, v silty, v sndy.

100% SH: lt-m gy, blk-y-sbdky, pily ip, sft-mod frm,
sl calc ip, v silty, sndy.

100% SH: m-dk gy, blk-y-sbdky -pily ip, wxy ip,
carb ip, lt-bent, pale yel flor, silw wht cut

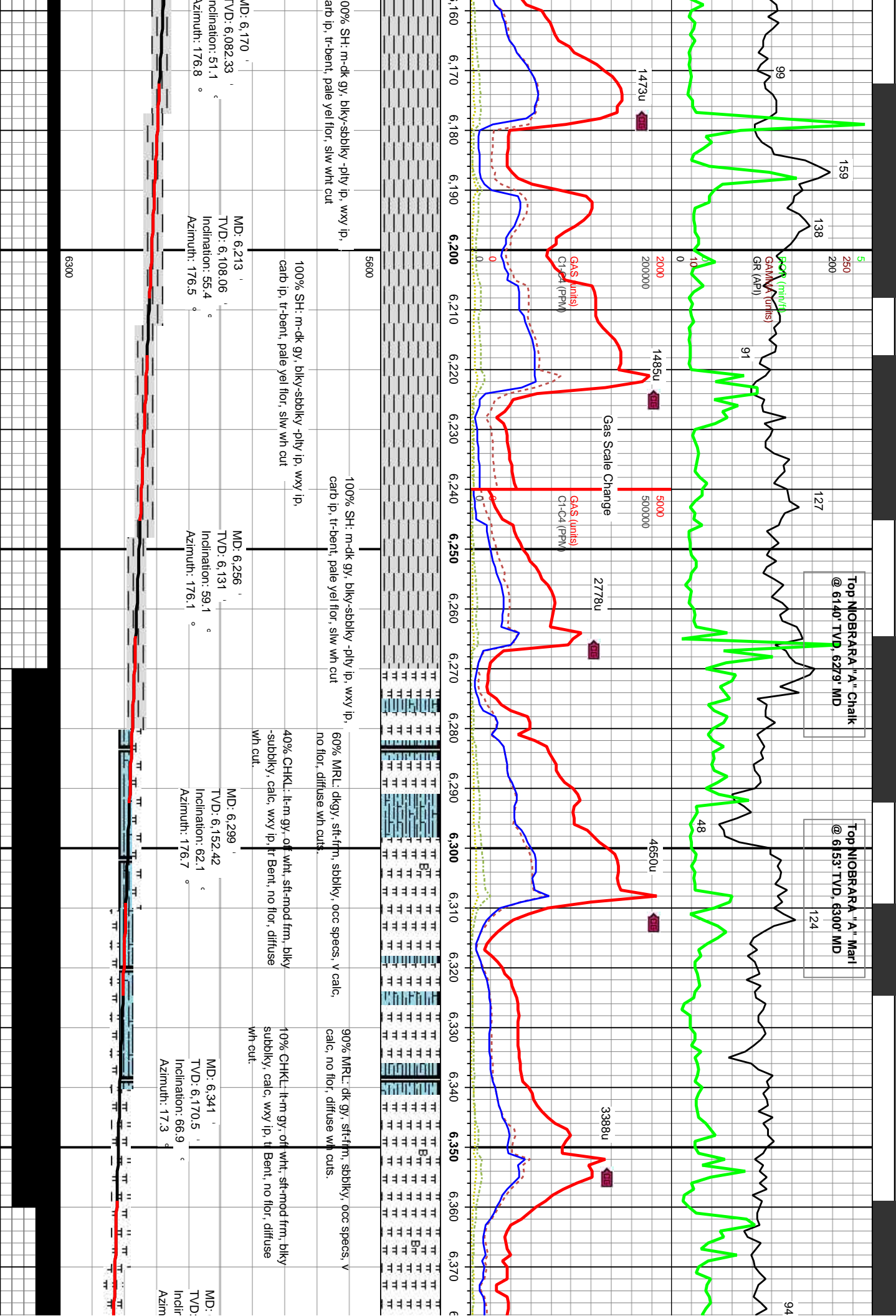
MD: 5,966 '
TVD: 5,916.91 '
Inclination: 30.7 °
Azimuth: 178.6 °

MD: 5,999 '
TVD: 5,953.49 '
Inclination: 32.7 °
Azimuth: 177.6 °

MD: 6,042 '
TVD: 5,989.22 '
Inclination: 34.9 °
Azimuth: 176.9 °

MD: 6,085 '
TVD: 6,023.39 '
Inclination: 39.8 °
Azimuth: 176.7 °

MD: 6,127 '
TVD: 6,054.02 '
Inclination: 46.5 °
Azimuth: 176.9 °

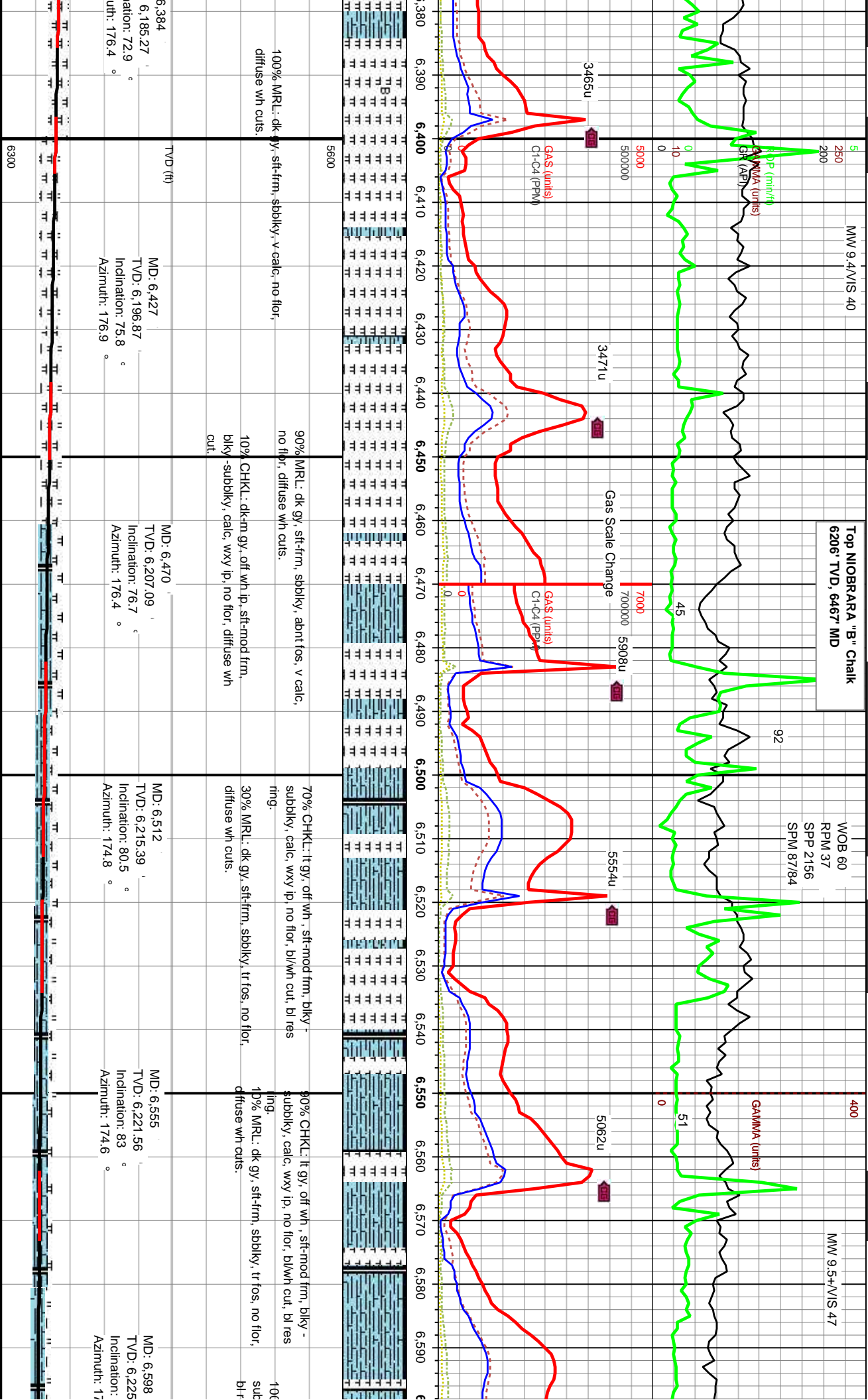


MM 9.4/VIS 40

Top NIOBRARA "B" Chalk
6206' TVD, 6467' MD

WOB 60
RPM 37
SPM 2156
SPM 87/84

MM 9.5+/VIS 47



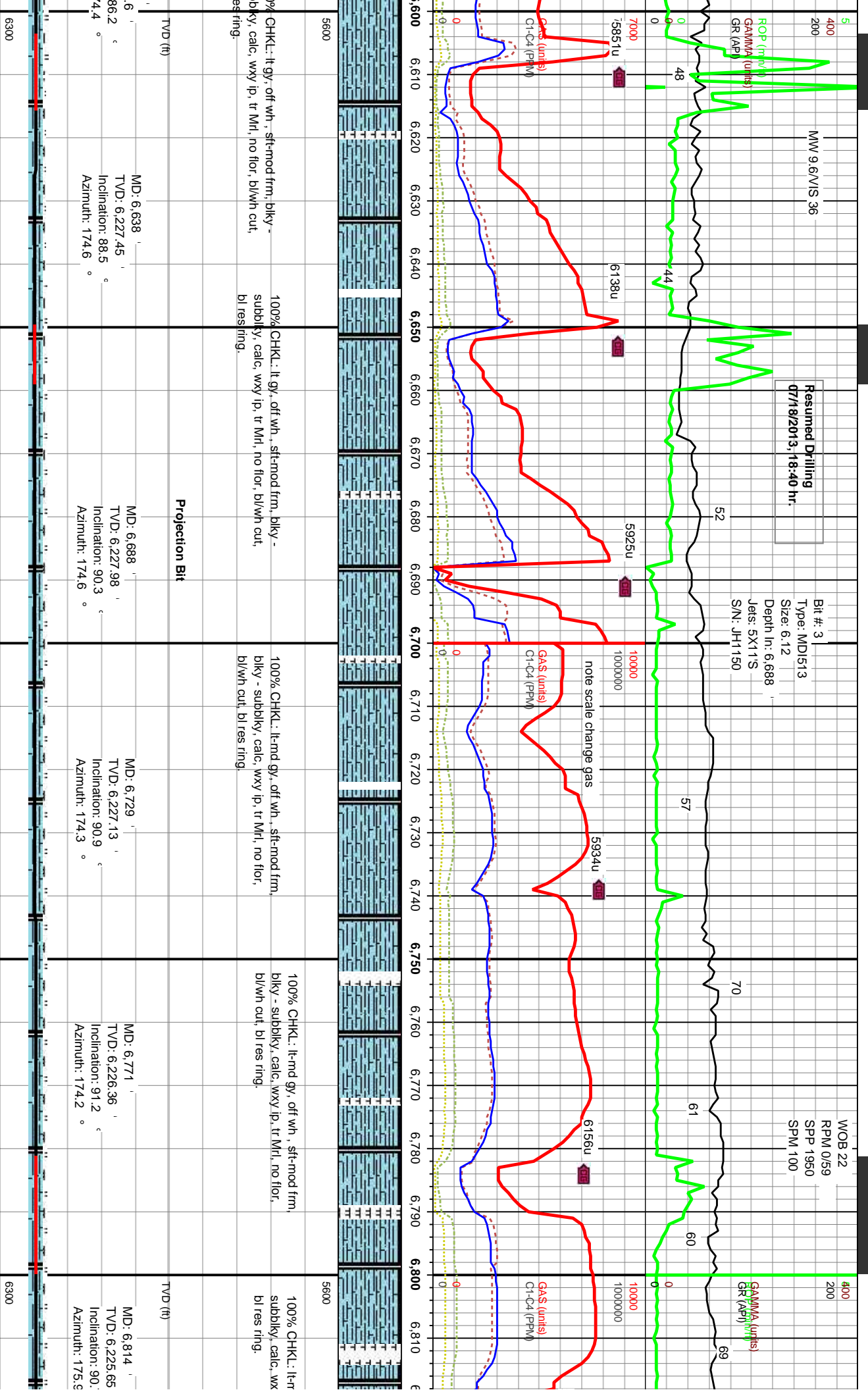
100% MRL: dk gy, st-frm, sbblky, v calc, no flor, diffuse wh cuts.

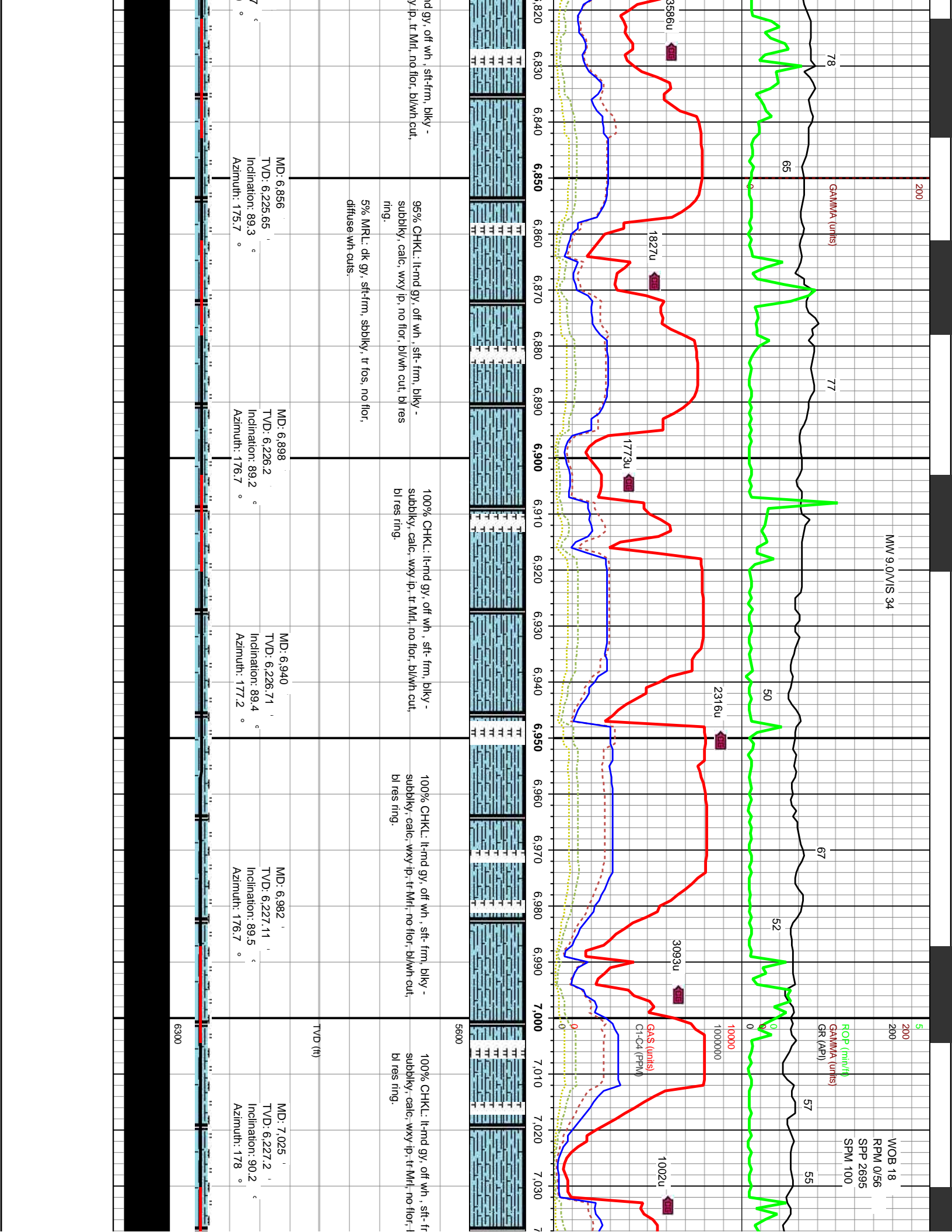
90% MRL: dk gy, st-frm, sbblky, abnt fos, v calc, no flor, diffuse wh cuts.
10% CHKL: dk-m gy, off wh ip, st-mod frm, blkly -subblky, calc, wxy ip, no flor, diffuse wh cut.

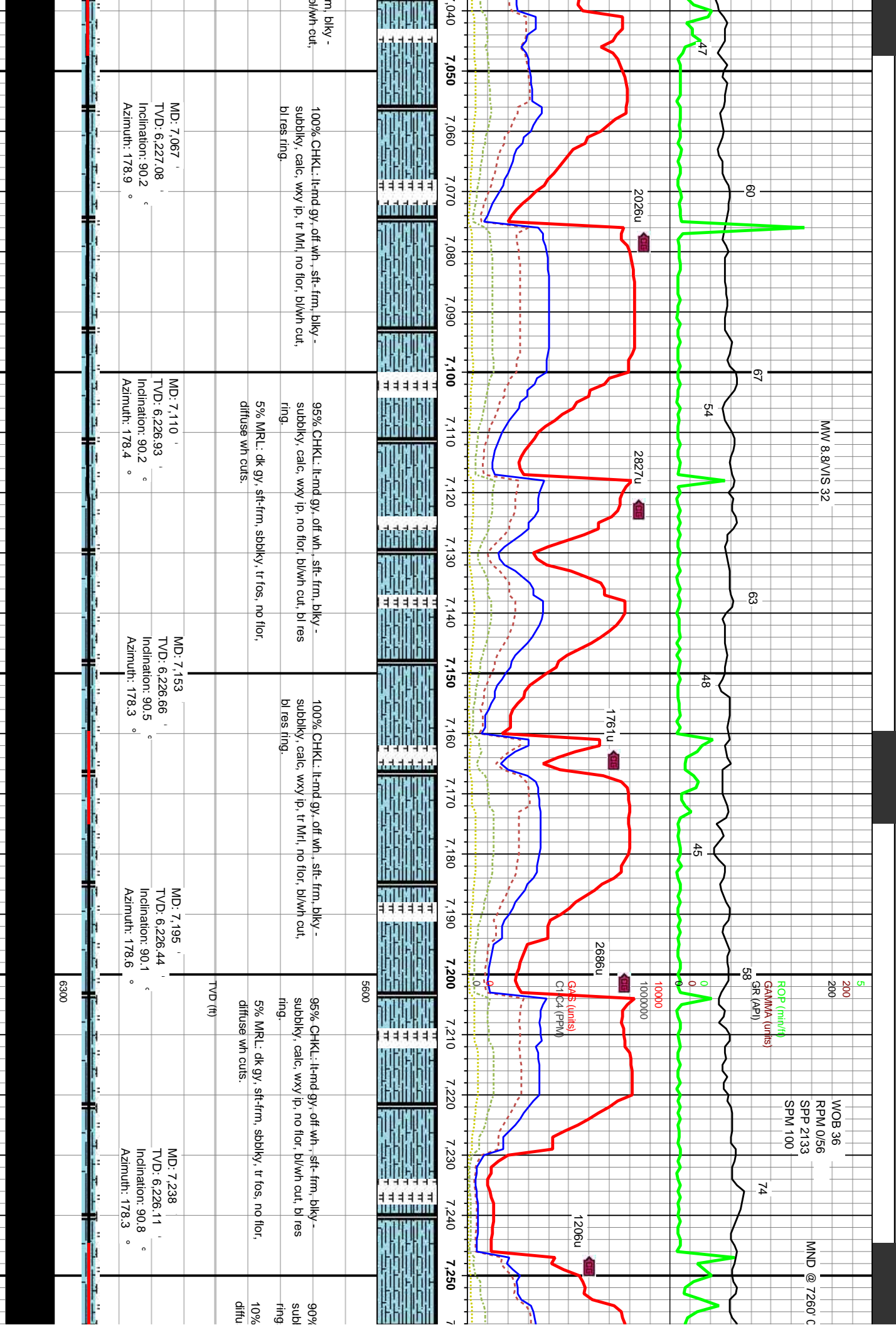
70% CHKL: lt gy, off wh, st-mod frm, blkly -subblky, calc, wxy ip, no flor, bl/wh cut, bl res ting.
30% MRL: dk gy, st-frm, sbblky, tr fos, no flor, diffuse wh cuts.

90% CHKL: lt gy, off wh, st-mod frm, blkly -subblky, calc, wxy ip, no flor, bl/wh cut, bl res ting.
10% MRL: dk gy, st-frm, sbblky, tr fos, no flor, diffuse wh cuts.

100% MRL: dk gy, st-frm, sbblky, v calc, no flor, diffuse wh cuts.







7/19/2013

MW 8.8/VIS 32



CHKL: lt-md gy, off wh, sft-fm, bky -
bky, calc, wxy ip, no flr, bl/w cut, bl res

MRL: dk gy, sft-fm, sbky, tr fos, no flr, se wh cuts.

95% CHKL: lt-md gy, off wh, sft-fm, bky -
subbky, calc, wxy ip, no flr, bl/w cut, bl res
ring.

5% MRL: dk gy, sft-fm, sbky, tr fos, no flr, diffuse wh cuts.

100% CHKL: lt-md gy, off wh, sft-fm, bky -
subbky, calc, wxy ip, tr Mrl, no flr, bl/w cut, bl res ring.

95% CHKL: lt-md gy, off wh, sft-fm, bky -
subbky, calc, wxy ip, no flr, bl/w cut, bl res
ring.

5% MRL: dk gy, sft-fm, sbky, tr fos, no flr, diffuse wh cuts.

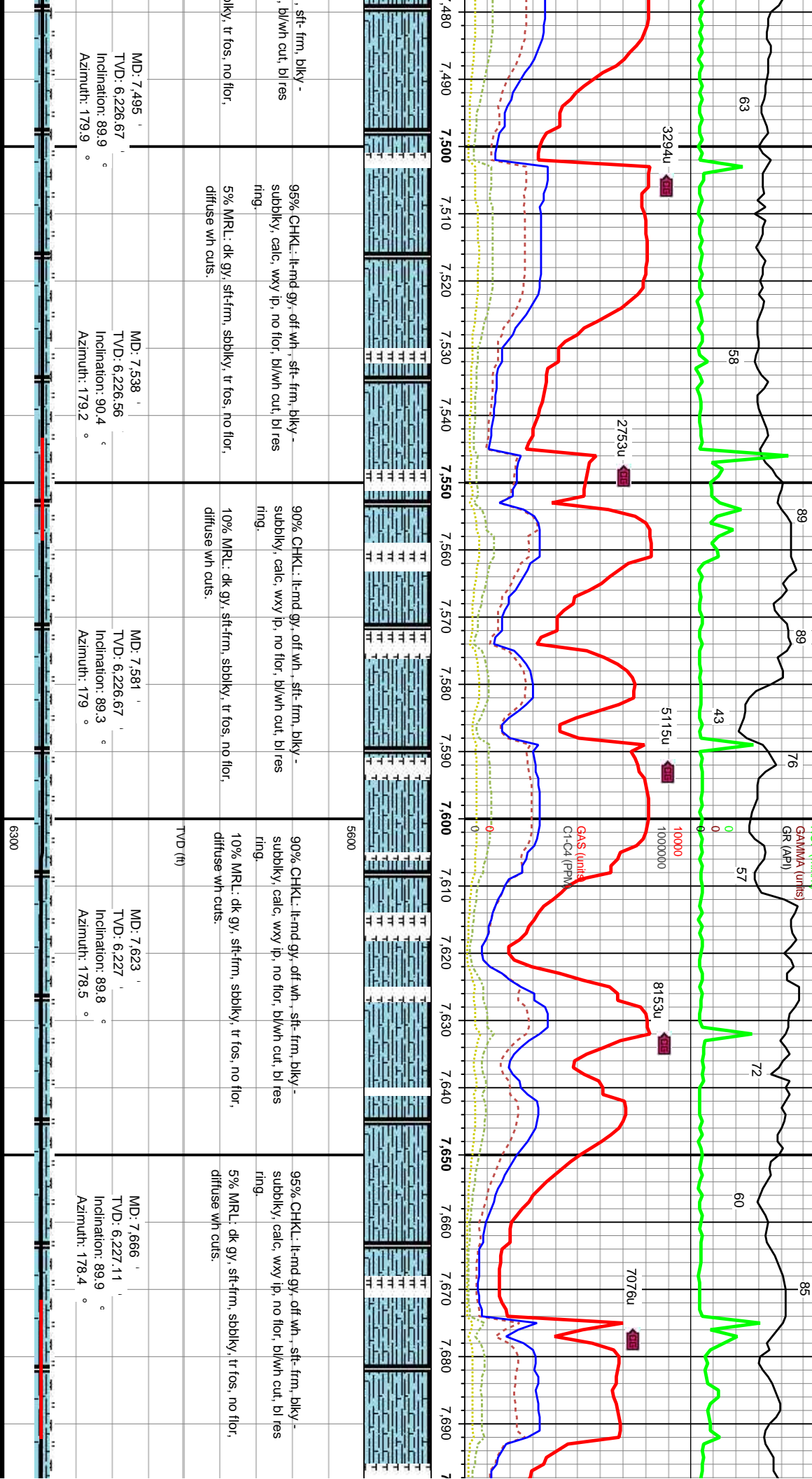
85% CHKL: lt-md gy, off wh, sft-fm, bky -
subbky, calc, wxy ip, no flr
ring.

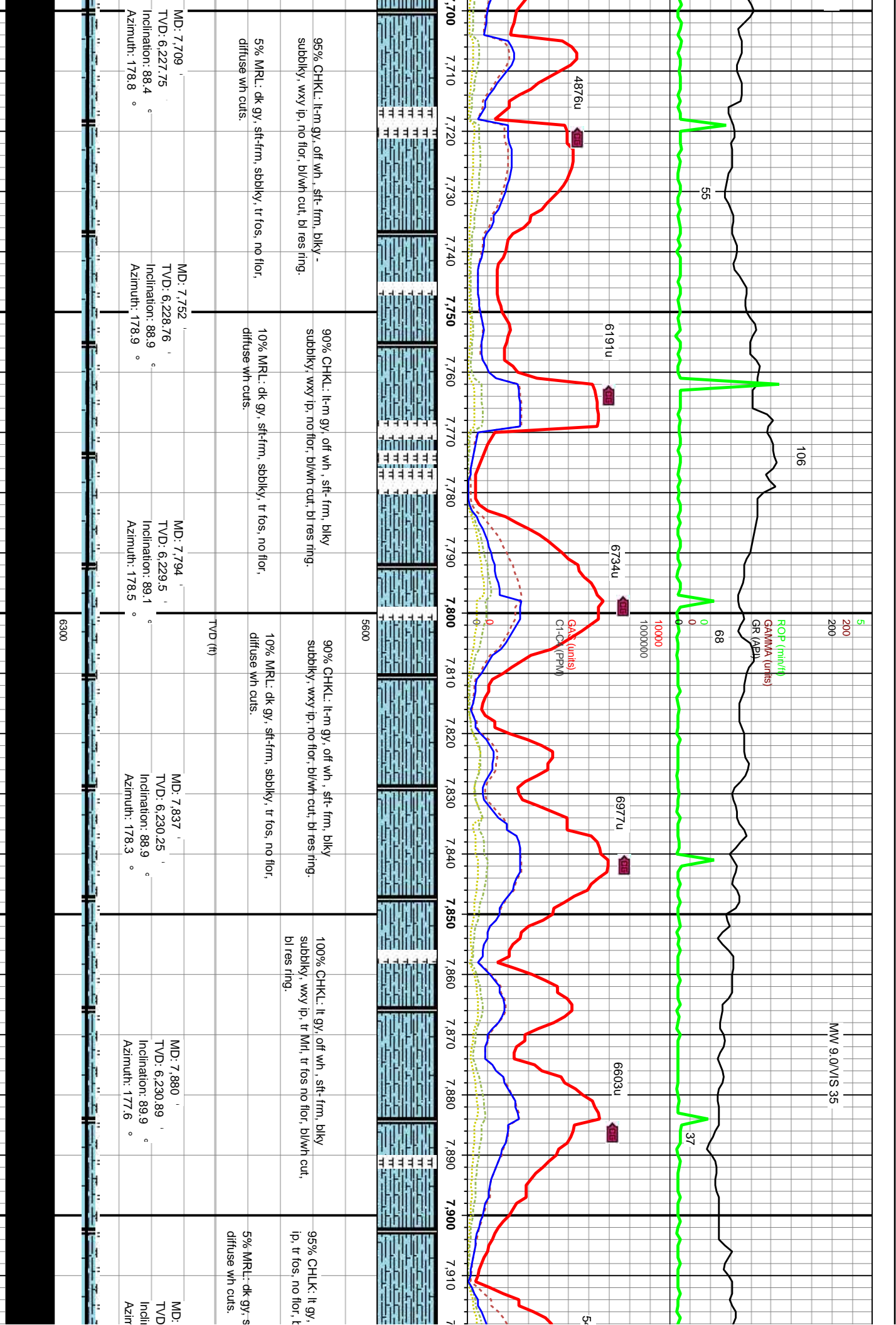
15% MRL: dk gy, sft-fm, sbt
diffuse wh cuts.

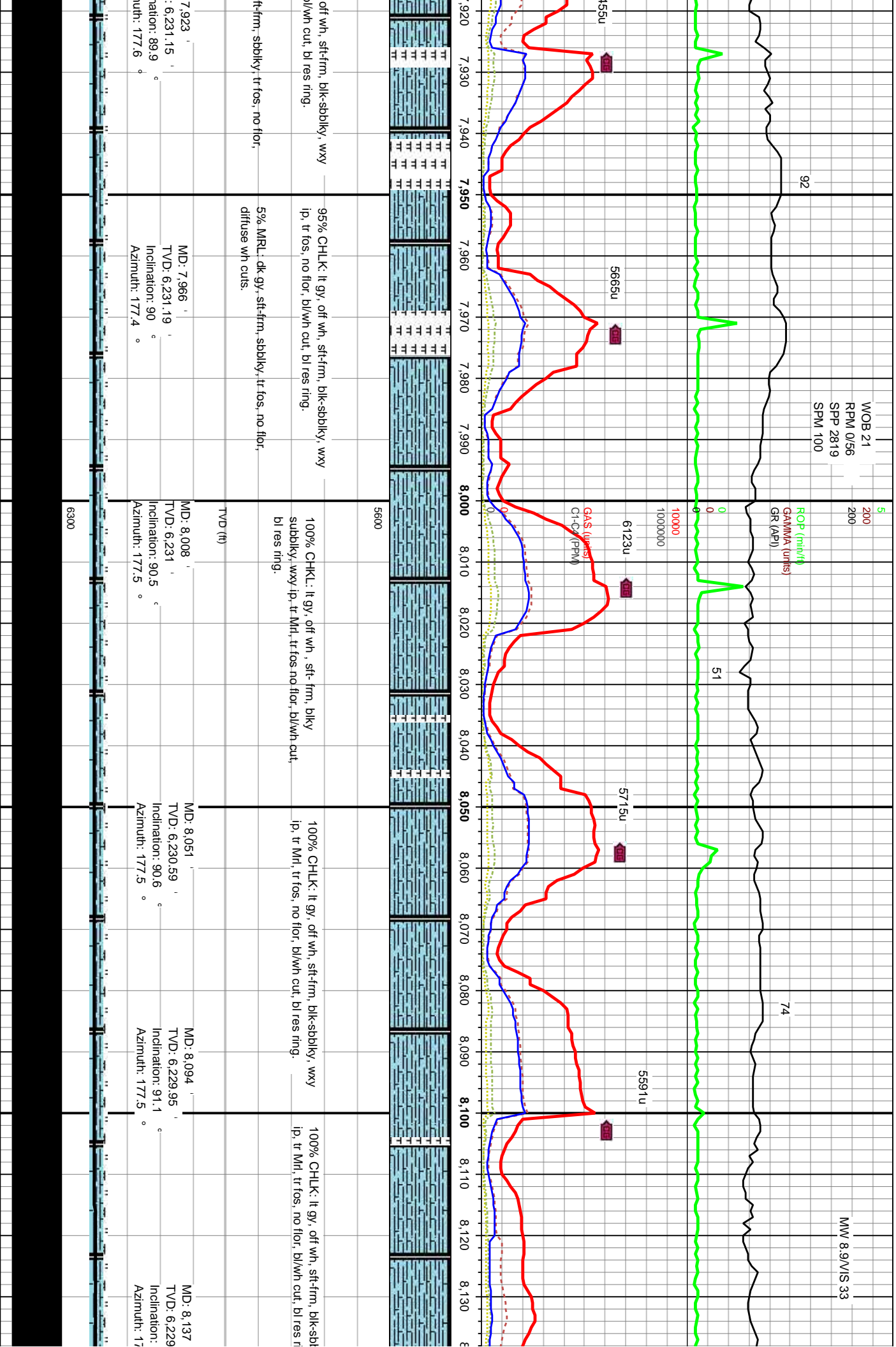
JOB 20
PM 0/55
PP 2573
PM 99

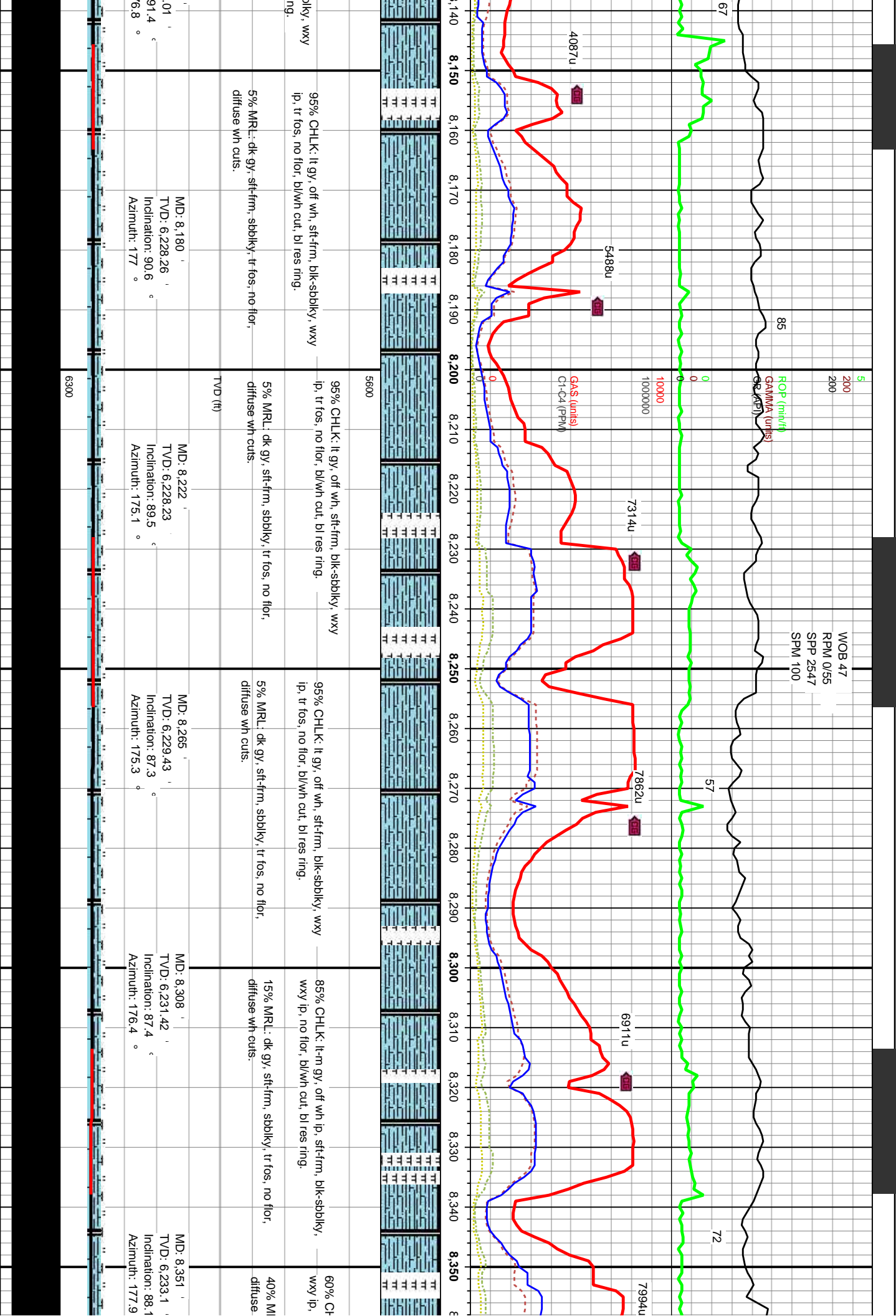
MW 8.8N/S 38

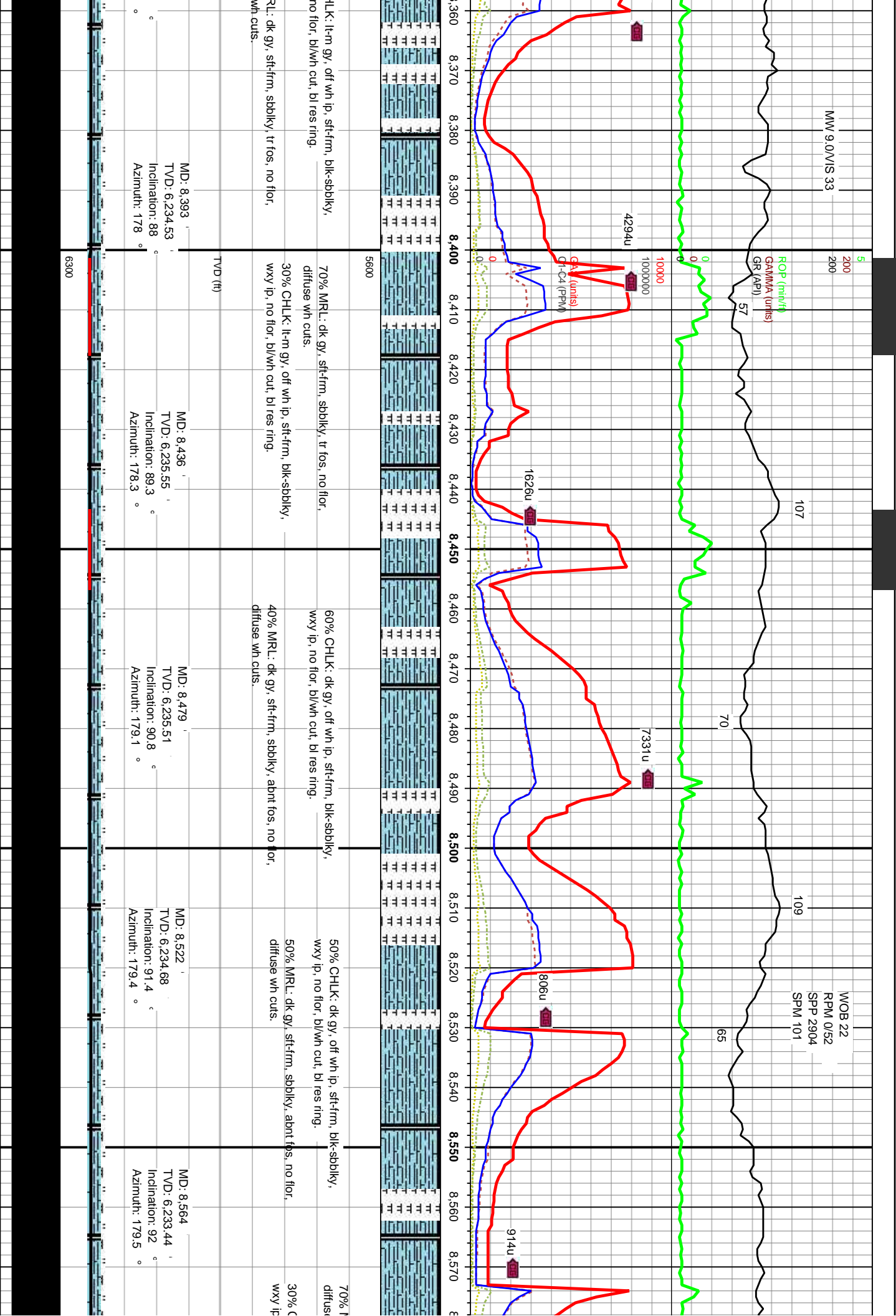
WOB 17
RPM 0/55
SPP 2664
SPM 100

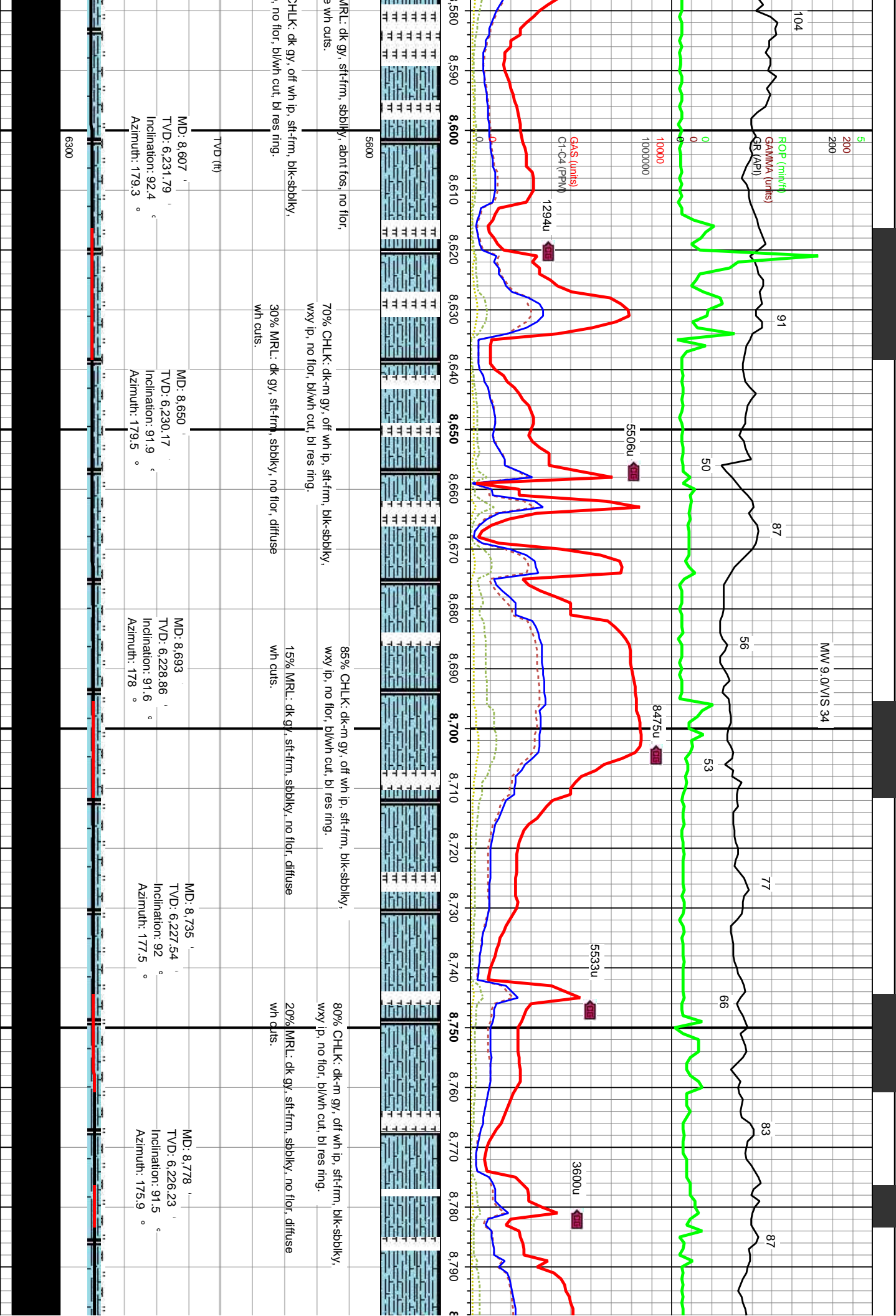


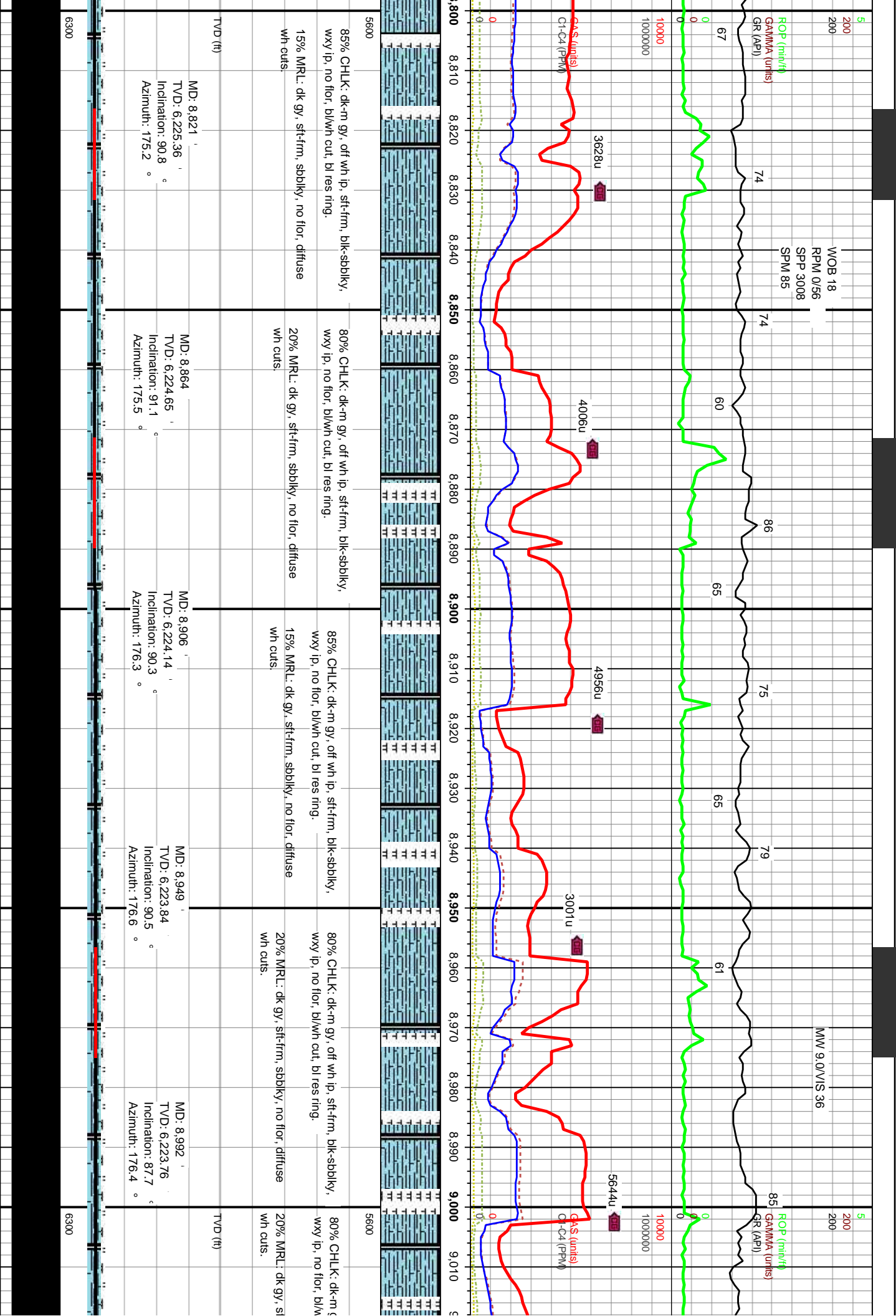


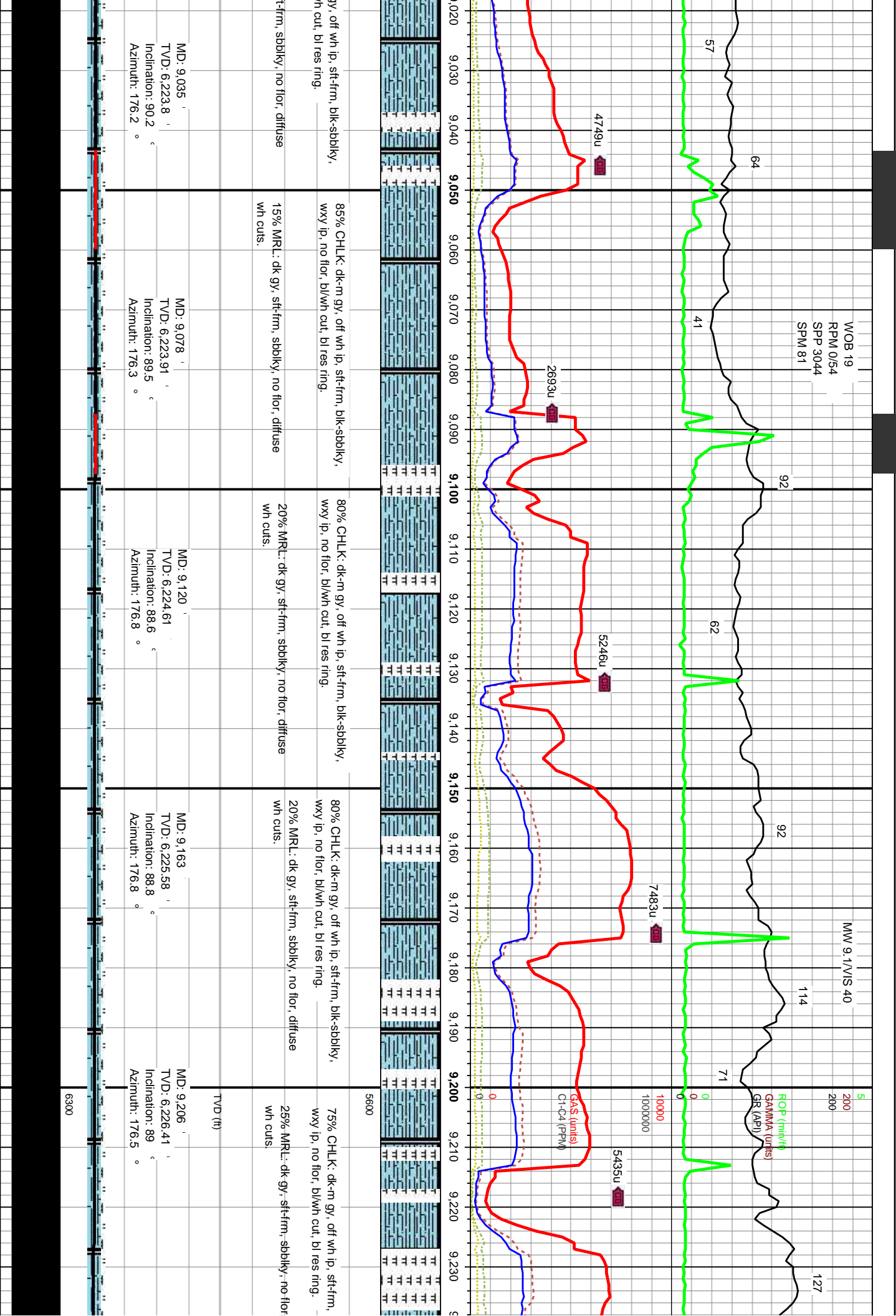


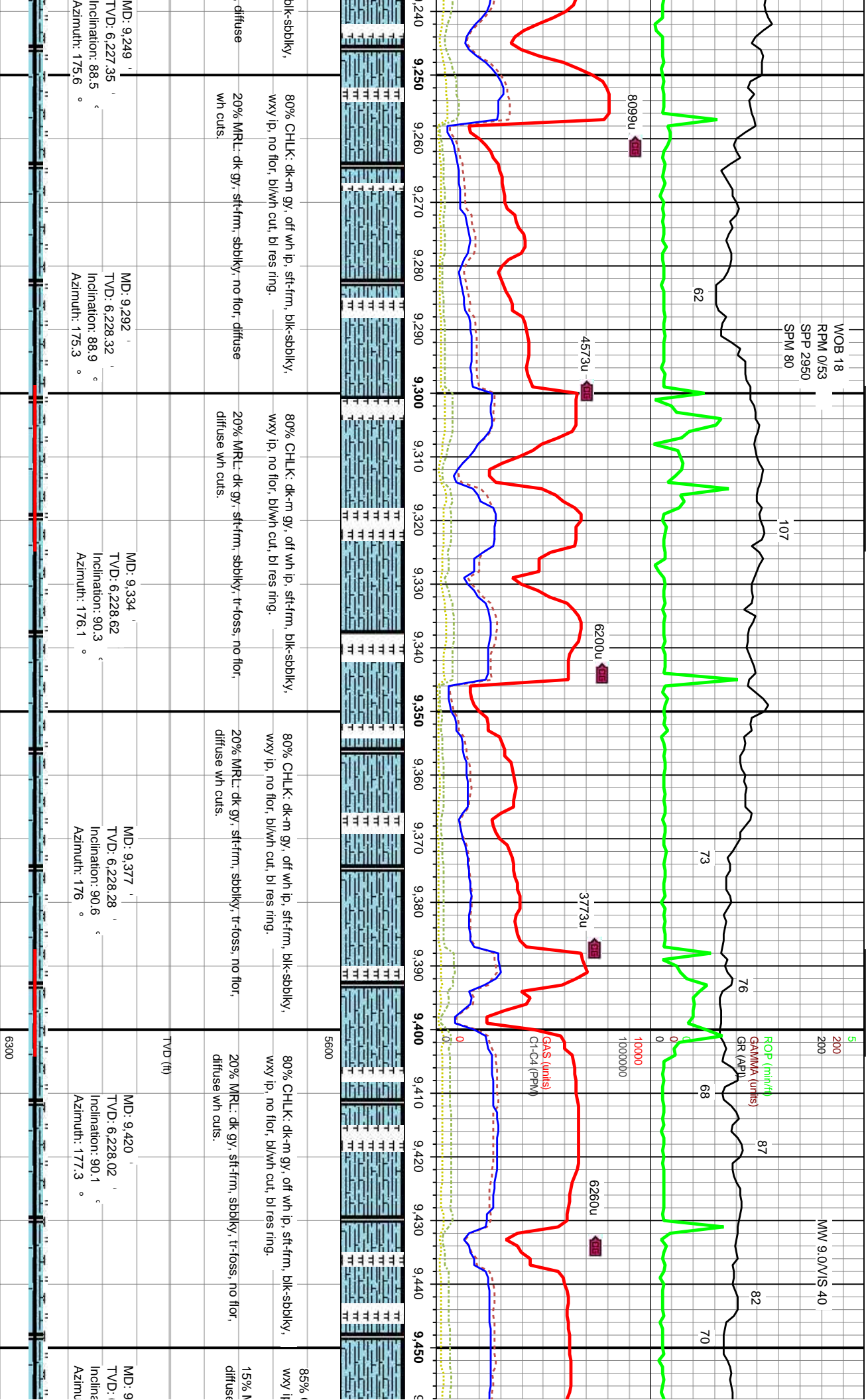


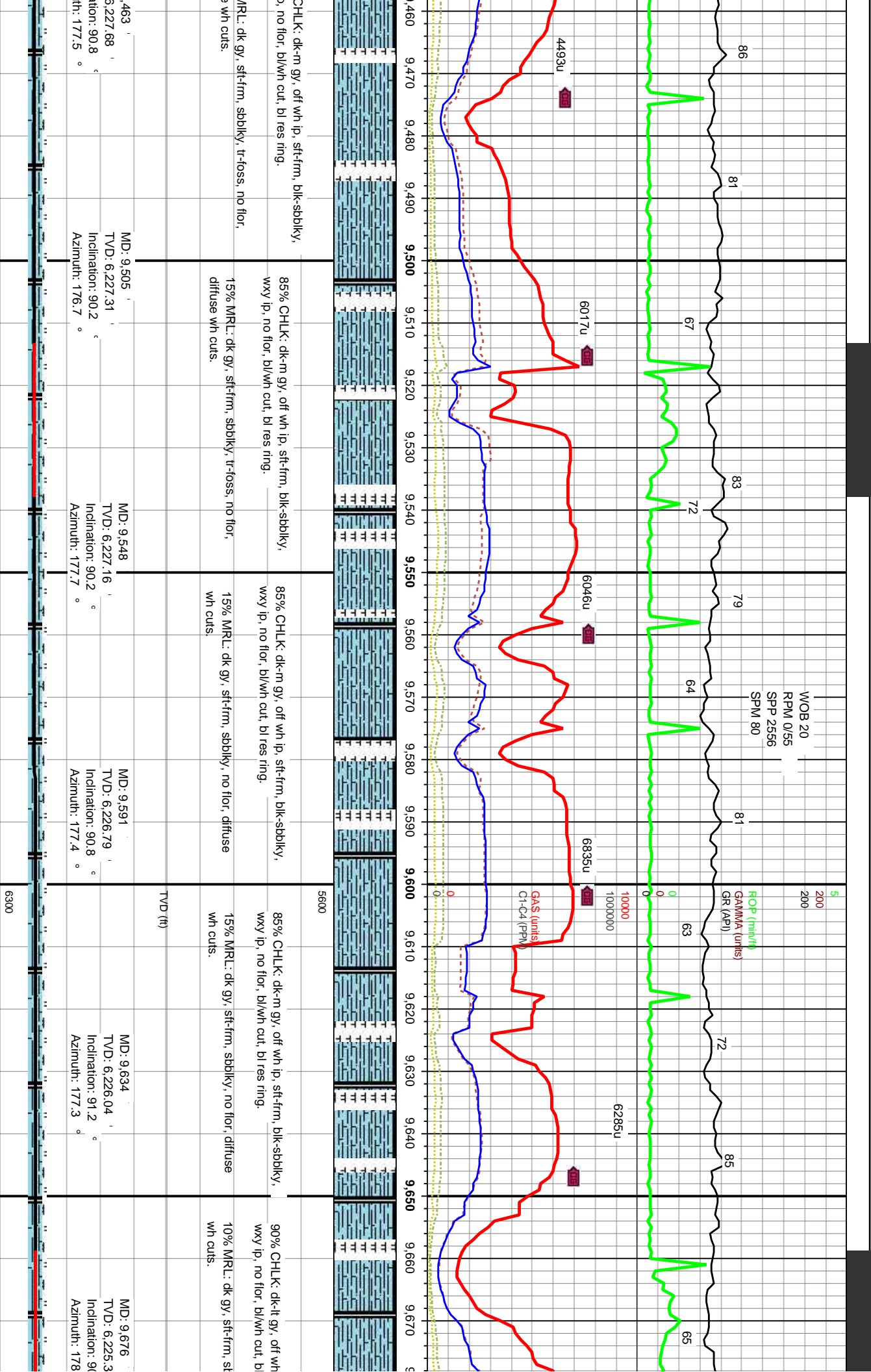












CHLK: dk-m gy, off wh ip, sft-frm, blk-sbblky,
no flor, bl/wh cut, bl res ring.

MRL: dk gy, sft-frm, sbblky, tr-foss, no flor,
wh cuts.

85% CHLK: dk-m gy, off wh ip, sft-frm, blk-sbblky,
wxy ip, no flor, bl/wh cut, bl res ring.

15% MRL: dk gy, sft-frm, sbblky, tr-foss, no flor,
diffuse wh cuts.

85% CHLK: dk-m gy, off wh ip, sft-frm, blk-sbblky,
wxy ip, no flor, bl/wh cut, bl res ring.

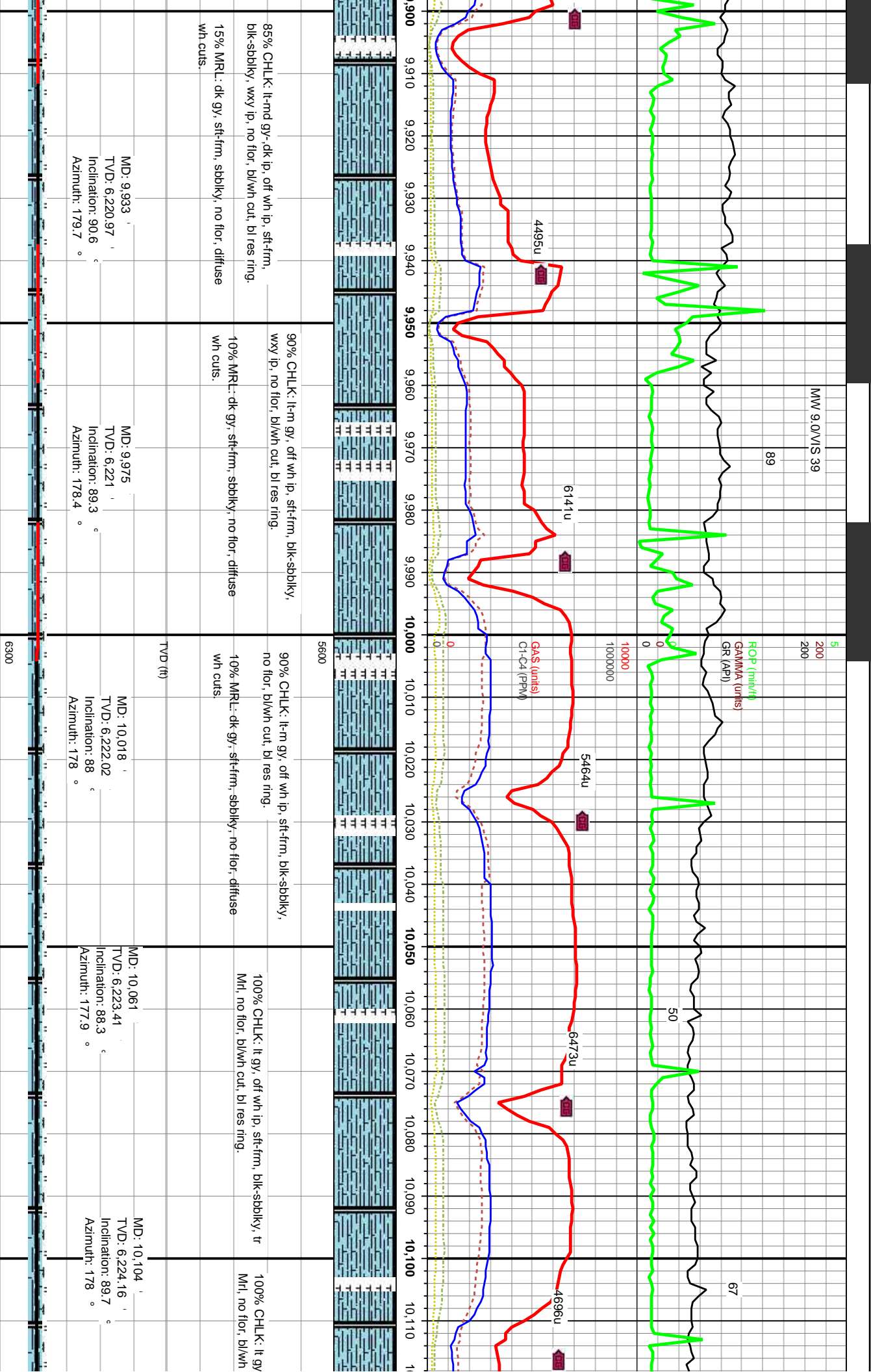
15% MRL: dk gy, sft-frm, sbblky, no flor, diffuse
wh cuts.

85% CHLK: dk-m gy, off wh ip, sft-frm, blk-sbblky,
wxy ip, no flor, bl/wh cut, bl res ring.

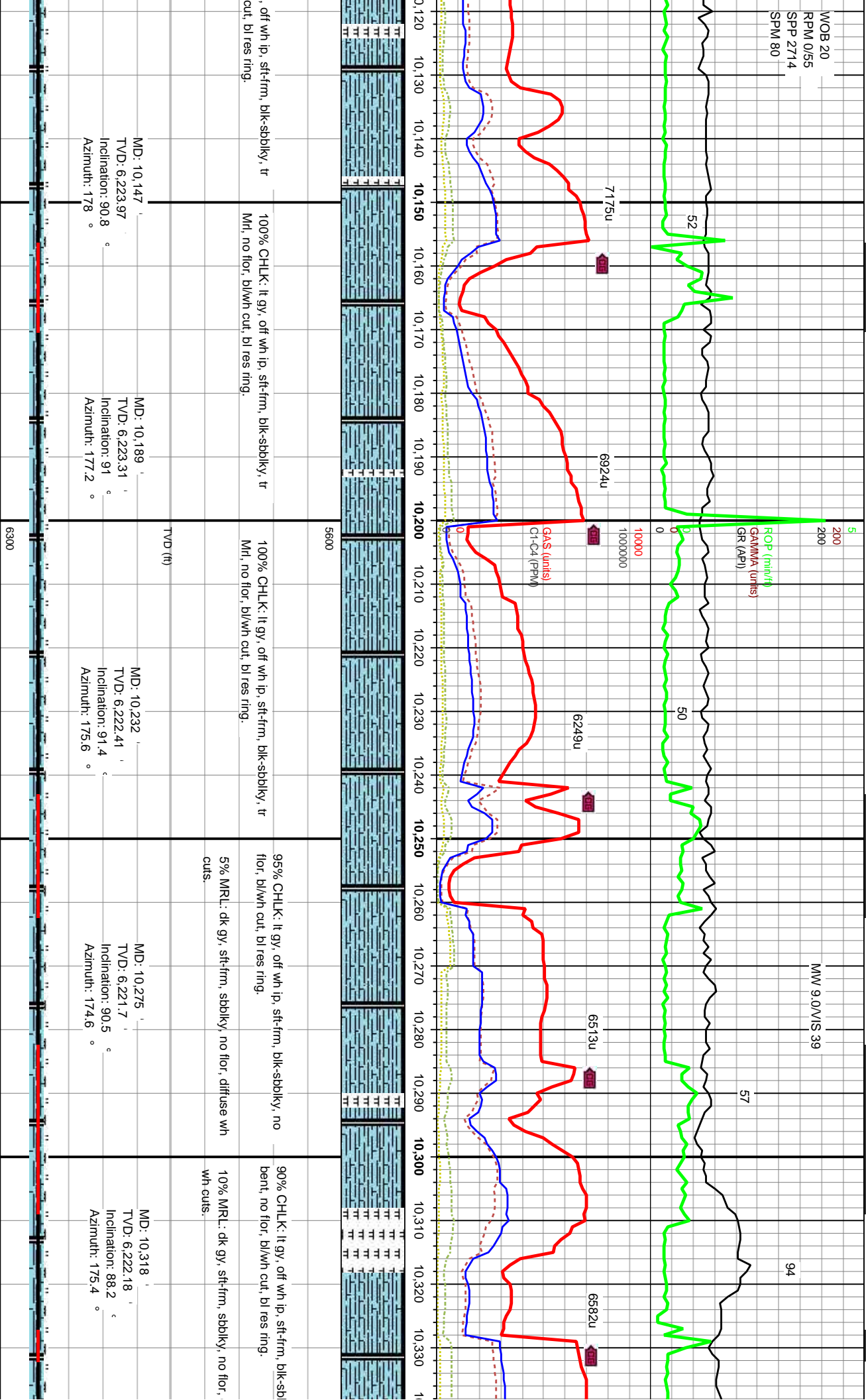
15% MRL: dk gy, sft-frm, sbblky, no flor, diffuse
wh cuts.

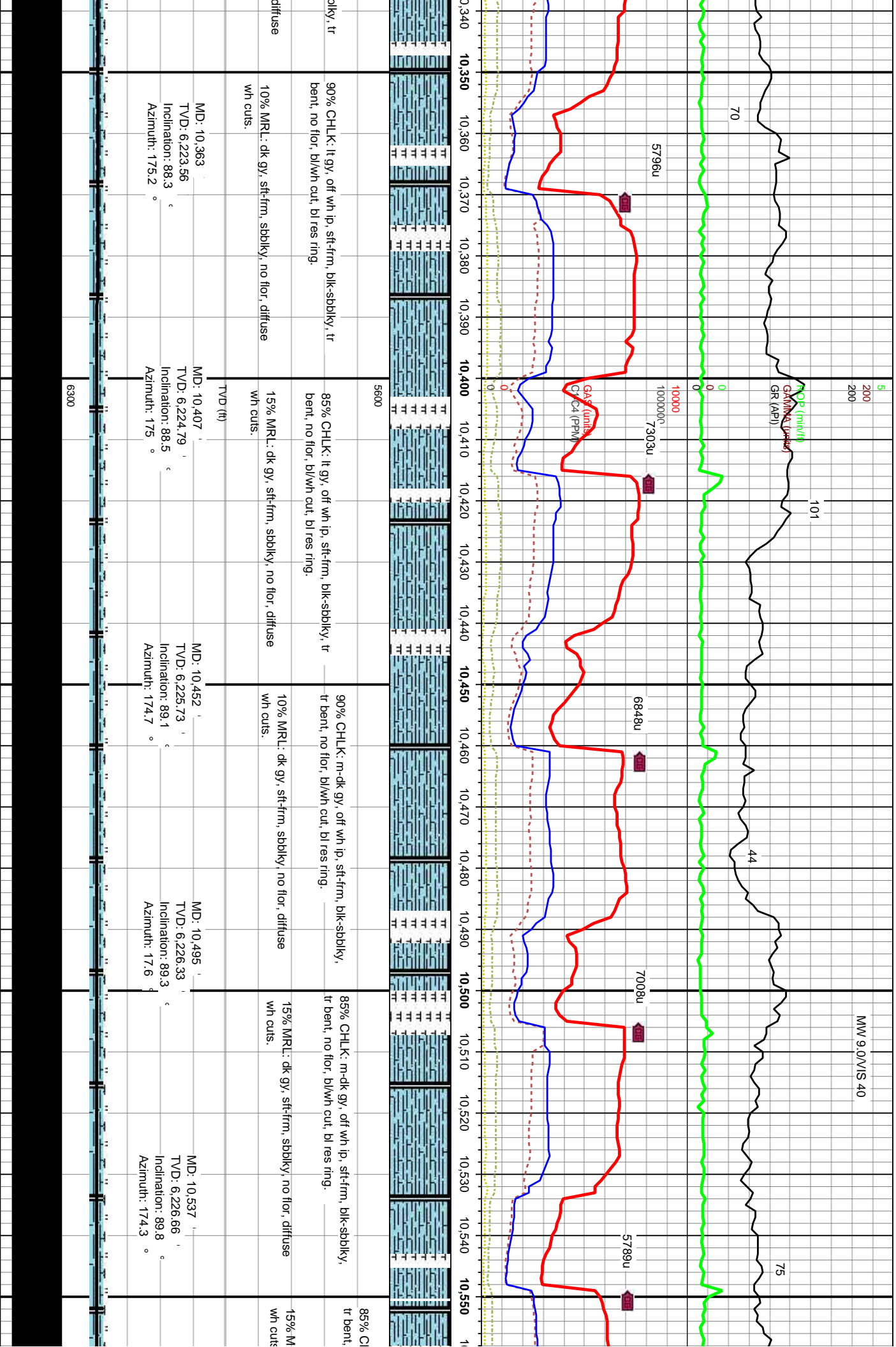
90% CHLK: dk-lt gy, off wh
wxy ip, no flor, bl/wh cut, bl

10% MRL: dk gy, sft-frm, st
wh cuts.



94





WOB 20
RPM 0/55
SPP 2936
SPM 80

TD @ 10759' 07/20/2013
11:35 hr

