COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name	Greasewood 8-18H		
Location	NWNE SEC 18-T6N-R61W		
State	COLORADO	**County**	WELD
Country	USA	**Rig Number**	CADE 24
API Number	05-123-33780	**AFE #**	18289D
Region	DJ BASIN	**Field**	WILDCAT
Spud Date	8/17/2013	**Drilling Completed**	8/26/2013
Surface Coordinates	501' FNL 2413' FEL		
Bottom Hole Coordinates	SWSE SEC 18-T6N-R61W 500' FSL 2000' FEL		
Ground Elevation	4727	**K.B. Elevation**	4743
Logged Interval	4900 **To** 10816	**Total Depth**	10816
Formation	NIOBRARA B2 CHALK		
Type of Drilling Fluid	SPUD		

Company BILL BARRETT

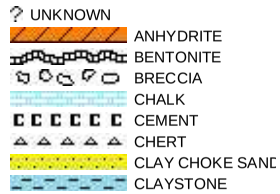
Address 1099 18TH STR
DENVER, CO 8

Name JOHN ROESIN

Company BILL BARRETT

Address 1099 18TH STR
DENVER, CO 8

WELLSITE GEOLOGISTS



Operator

T CORPORATION

REET, SUITE 2300
80202

Geologist

K

T CORPORATION

REET, SUITE 2300
80202

Other

CHARLES TRODICK
KYLE KNIGHT

Rock Types

OAL
CONGLOMERATE
DOLOMITE
GRANITE
GYPSUM
IGNEOUS
SIDERITE or LIMONITE
LIMESTONE
MARLSTONE
METAMORPHIC
NO SAMPLE
SALT
SANDSTONE
SALT-PEPPER SAND
SHALE
SHALE COLORED
SHALE GRAY
SHALY SANDSTONE
SHALY SILTSTONE
SILTY SHALE
SILTSTONE
TILL
TUFF
WELDED TUFF

Accessories

Fossils

ALGAE
AMPHIPORA
BELEMNITE
BIOCLASTIC
BRACHOIPOD
BRYOZOA
CEPHALOPOD
CORAL
CRINOID
ECHINOID
FISH
FORAMINIFERA
FOSSIL
GASTROPOD
OOLITE
OSTRACOD
PELECYPOD
PELLET
PISOLITE
PLANT REMAINS
PLANT SPORES
SCAPHOPOD
STROMATOPOROID

Minerals

ANHYDRITIC
ARGILLACEOUS
ARGILLITE GRAIN
BENTONITE
BITUMENOUS SUBSTANCE
BRECCIA FRAGMENTS
CALCAREOUS
CARBONACEOUS FLAKES
CHTDK
CHTLT
COAL - THIN BEDS
DOLOMITIC
FELDSPAR
FERRUGINOUS PELLET
FERRUGINOUS
GLAUCONITE
GYPSIFEROUS
HEAVY MINERAL
INOCERAMUS
KAOLIN
MARLSTONE
MINERAL CRYSTALS
NODULES
PHOSPHATE PELLETS
PYRITE
SALT CAST
SANDY
SILICEOUS
SILTY
TUFFACEOUS

Stringer

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

Oil Show

DEAD
EVEN
QUESTIONABLE
SPOTTED STAINING

Porosity

EARTHY
FENESTRAL
FRACTURE
INTERCRYSTALLINE
INTEROOLITIC
MOLDIC
ORGANIC
PINPOINT
VUGGY

Engineering

BIT
CONNECTION (LEFT)
CONNECTION (RIGHT)
CONNECTION GAS
CORE - LOST
CORE - RECOVERED
DST INTERVAL
FAULT
FORMATION TOP
GAS SHOW
MN 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

Rounding

ANGULAR
ROUNDED
SUBANG
SUBRND

Textures

BOUNDSTONE
CHALKY
CRYPTOXLN
EARTHY
FINELYXLN
GRAINSTONE
LITHOGRAPHIC
MICROXLN
MUDSTONE
PACKSTONE
WACKESTONE

Sorting

MODERATE
POOR
WELL

Slide/Rotate

ROP
ROF
GAMMA

COLUMBINE LOGGING INC.
RIGGED UP ON 8/19/13
MANNED 2-PERSON LOGGING
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0550

90api
95api
IN WT 9.2 VIS 35/OUT WT 9.3 VIS 41
5
200
ROP (min/ft)
GAMMA (units)
0
0

Total Gas & Chromatograph
GAS
C1
C2
C3
C4
CO2

1101u
C1 100%
C2 0%
C3 0%
C4 0%

1666u
341u
6000
600000
1
GAS (units)
C1-C4 (PPM)
CO2 (units)
0
0
0

Depth Labels

4,860 4,870 4,880 4,890 **4,900** 4,910 4,920 4,930 4,940 **4,950** 4,960 4,970 4,980 4,990 **5,000** 5,010 5,020 5,030

% Lith

Well Bore
TVD

Bit Data
Bit #: 2
Type: SMITH FXD56
Size: 8.75
Depth In: 850 ′
Depth Out: 5,810 ′
Hours: 14.1 *hrs*
Avg Ft/Hr: 351*′/hr*
Jets: 5X16
S/N: 12085907

4800

MD: 4,965 ′
TVD: 4,919.44 ′
Inclination: 5.7 °
Azimuth: 29.2 °
VS: -411.93 ′

TVD (ft)

SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc
SS: wh, lt gy, med grn, sub rnd-sub, ang brit, p cmt, sl calc, fri grnd, tr biot incl, occ mas glau ip

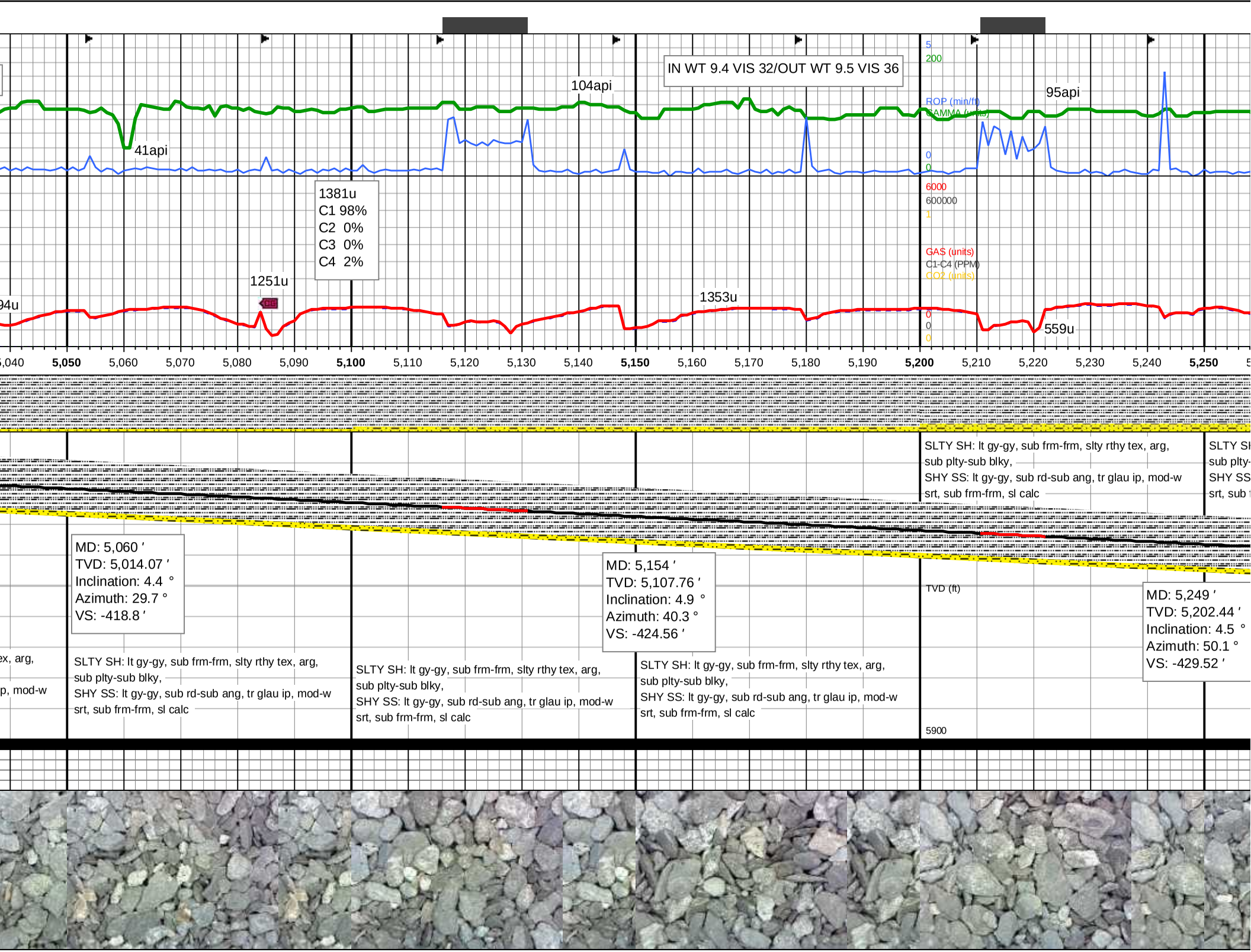
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc
SS: wh, lt gy, med grn, sub rnd-sub, ang brit, p cmt, sl calc, fri grnd, tr biot incl, occ mas glau ip

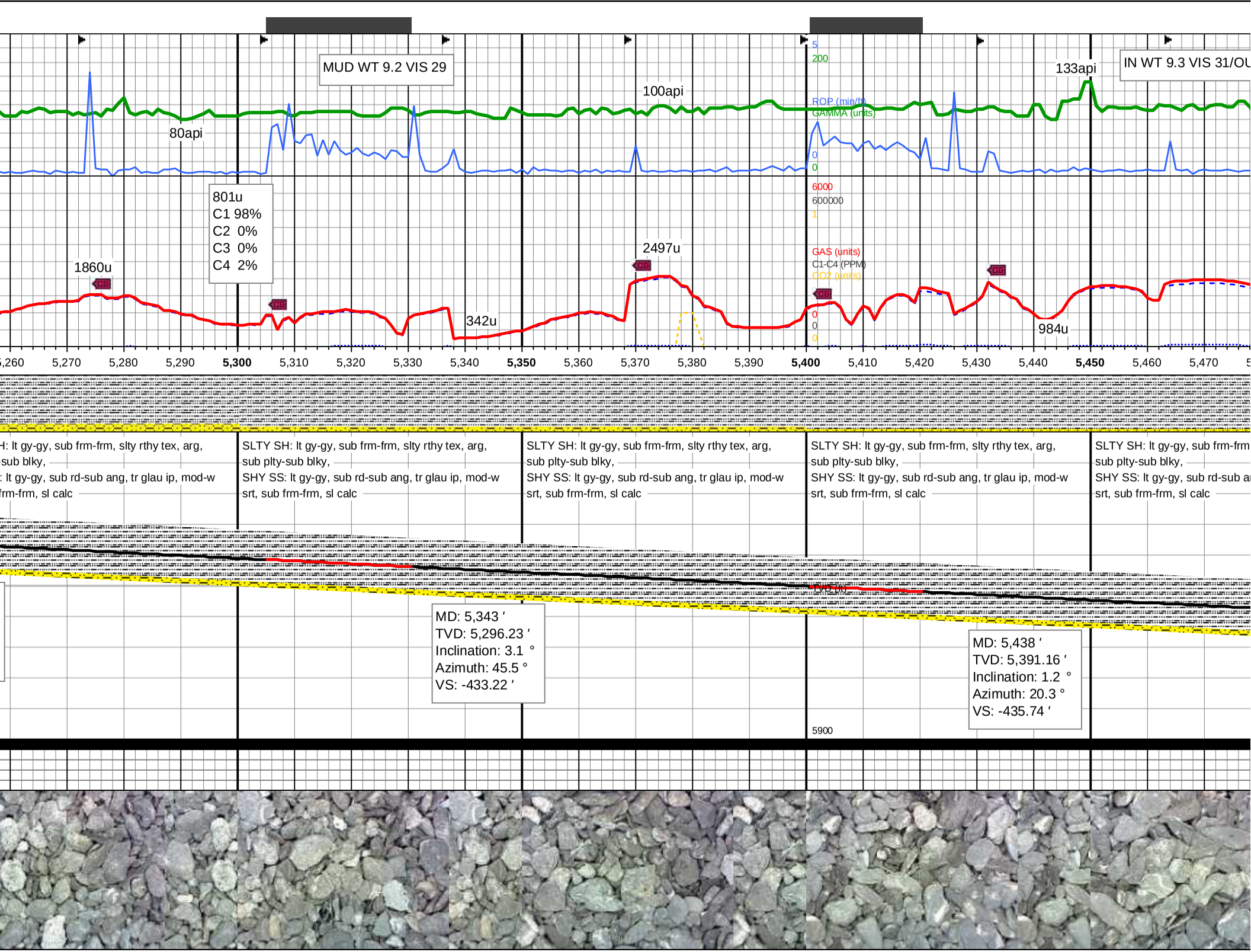
SLTY SH: lt gy-gy, sub frm-frm, slty rthy te
sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau i
srt, sub frm-frm, sl calc

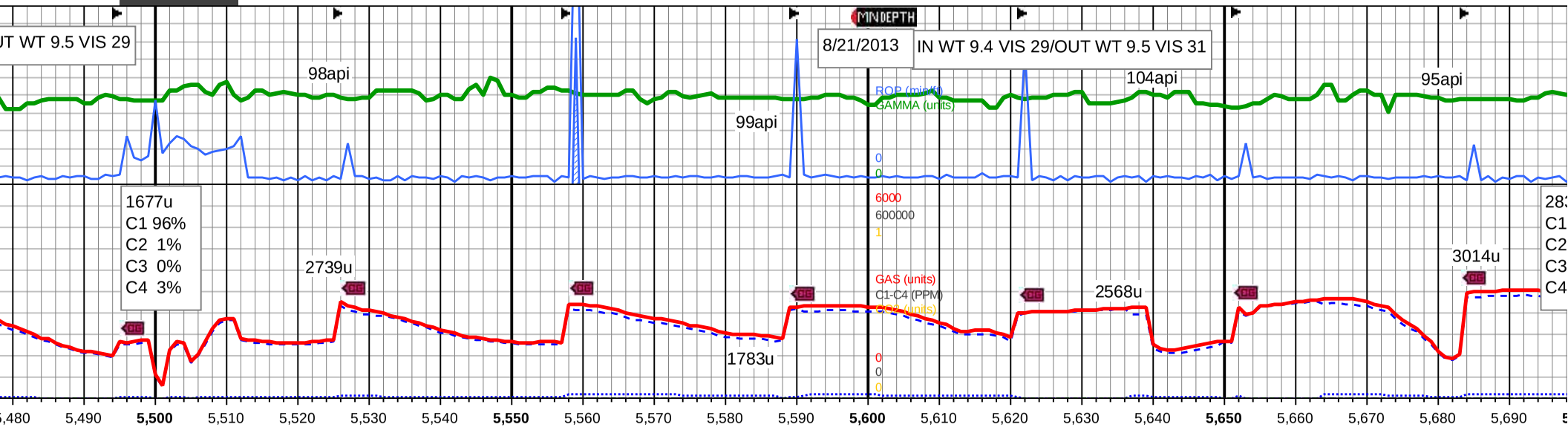
5900

Oil Show
TR
P
FR
G
E

Images


IN WT 9.4 VIS 32/OUT WT 9.5 VIS 36
104api
95api
41api
1381u
C1 98%
C2 0%
C3 0%
C4 2%
1251u
1353u
559u
94u
5
200
ROP (min/ft)
GAMMA (api)
0
0
6000
600000
1
GAS (units)
C1-C4 (PPM)
CO2 (units)
0
0
0
5,040
5,050
5,060
5,070
5,080
5,090
5,100
5,110
5,120
5,130
5,140
5,150
5,160
5,170
5,180
5,190
5,200
5,210
5,220
5,230
5,240
5,250
MD: 5,060 '
TVD: 5,014.07 '
Inclination: 4.4 °
Azimuth: 29.7 °
VS: -418.8 '
MD: 5,154 '
TVD: 5,107.76 '
Inclination: 4.9 °
Azimuth: 40.3 °
VS: -424.56 '
MD: 5,249 '
TVD: 5,202.44 '
Inclination: 4.5 °
Azimuth: 50.1 °
VS: -429.52 '
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc
TVD (ft)
5900


MUD WT 9.2 VIS 29
IN WT 9.3 VIS 31/OU
80api
100api
133api
ROP (min/ft)
GAMMA (units)
801u
C1 98%
C2 0%
C3 0%
C4 2%
1860u
2497u
342u
984u
GAS (units)
C1-C4 (PPM)
CO2 (units)
5,260
5,270
5,280
5,290
5,300
5,310
5,320
5,330
5,340
5,350
5,360
5,370
5,380
5,390
5,400
5,410
5,420
5,430
5,440
5,450
5,460
5,470
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky, SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc
MD: 5,343 '
TVD: 5,296.23 '
Inclination: 3.1 °
Azimuth: 45.5 °
VS: -433.22 '
MD: 5,438 '
TVD: 5,391.16 '
Inclination: 1.2 °
Azimuth: 20.3 °
VS: -435.74 '
5900



slty rthy tex, arg,
ng, tr glau ip, mod-w

SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc

MD: 5,532 '
TVD: 5,485.15 '
Inclination: 0.5 °
Azimuth: 14.5 °
VS: -437.01 '

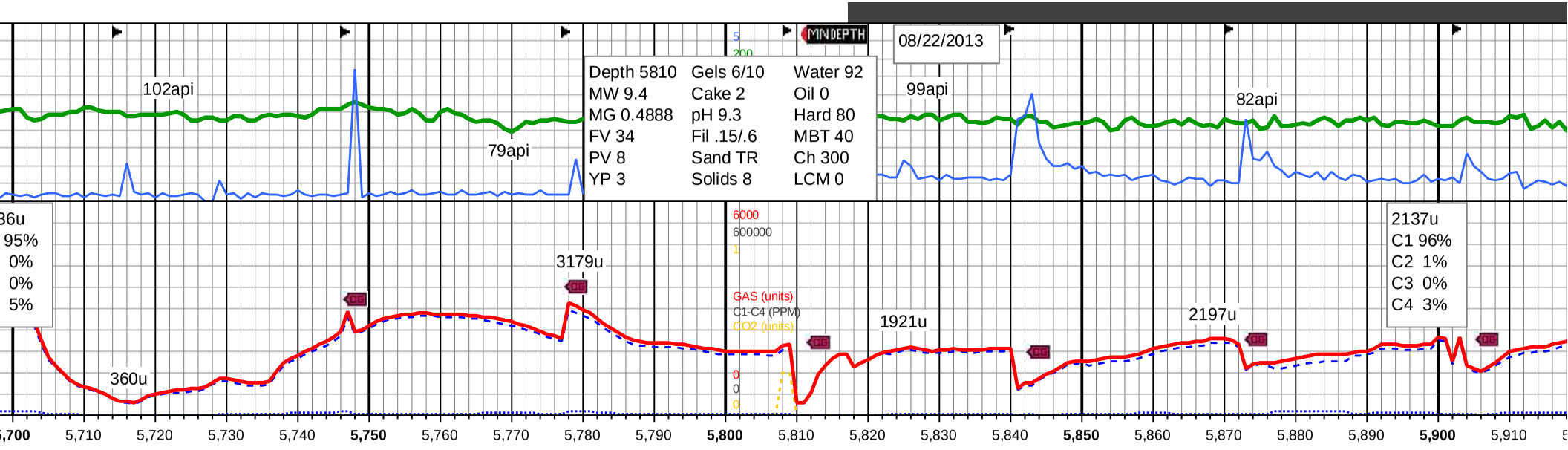
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc

SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc

MD: 5,627 '
TVD: 5,580.15 '
Inclination: 0.6 °
Azimuth: 92.8 °
VS: -437.33 '

TVD (ft)
5900

SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc



SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc

MD: 5,722 '
TVD: 5,675.14 '
Inclination: 0.7 °
Azimuth: 130.5 °
VS: -436.84 '

SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc

MD: 5,755 '
TVD: 5,708.14 '
Inclination: 0.7 °
Azimuth: 108.2 °
VS: -436.54 '

MD: 5,785 '
TVD: 5,738.14 '
Inclination: 0.8 °
Azimuth: 118.2 °
VS: -436.36 '

Bit Data
Bit #: 3
Type: SMITH SDI61
Size: 8.75
Depth In: 5,810 '
Depth Out: 6,659 '
Hours: 12.1 *hrs*
Avg Ft/Hr: 70*'/hr*
Jets: 6X15
S/N: 650487

SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc

MD: 5,816 '
TVD: 5,769.13 '
Inclination: 1.9 °
Azimuth: 147.5 °
VS: -435.78 '

TVD Scale Change
5800' - 6350'

MD: 5,848 '
TVD: 5,801.06 '
Inclination: 5.5 °
Azimuth: 165.9 °
VS: -433.79 '

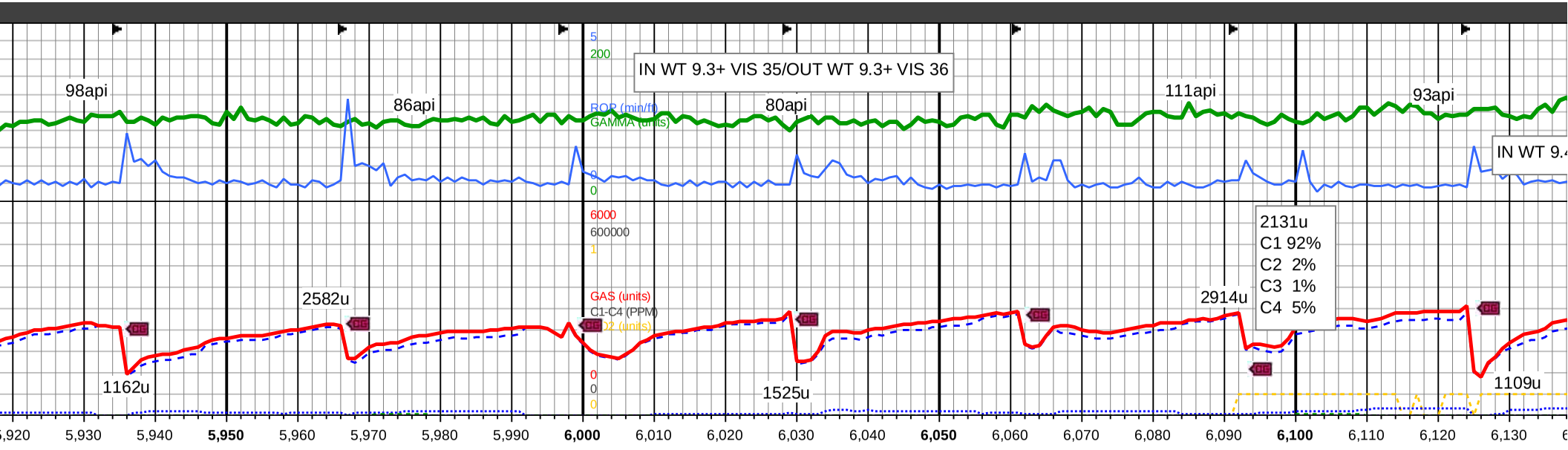
MD: 5,879 '
TVD: 5,831.79 '
Inclination: 9.5 °
Azimuth: 172.9 °
VS: -429.76 '

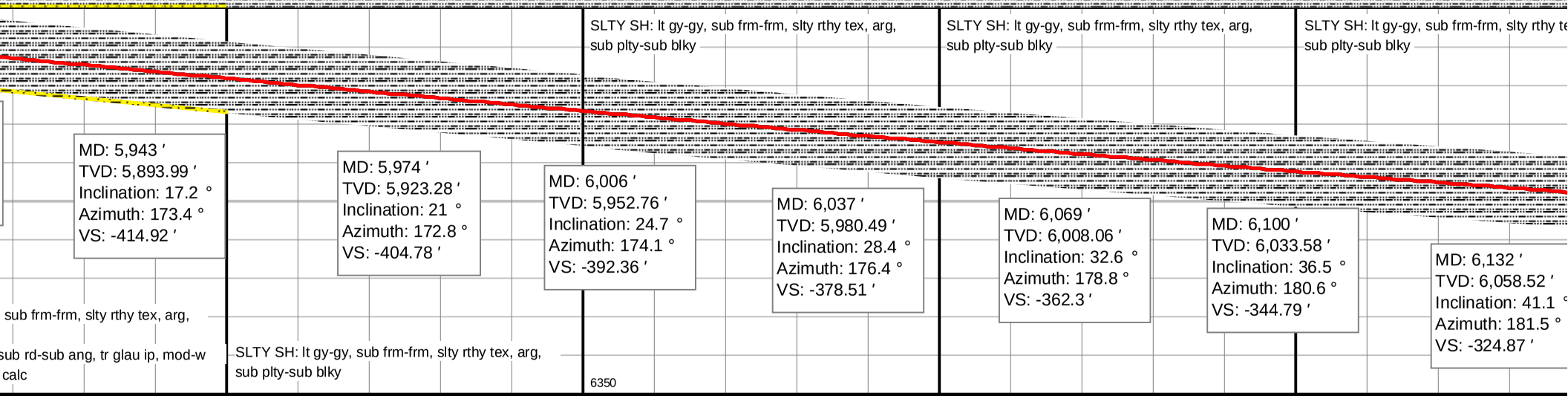
MD: 5,911 '
TVD: 5,863.14 '
Inclination: 13.5 °
Azimuth: 174 °
VS: -423.39 '

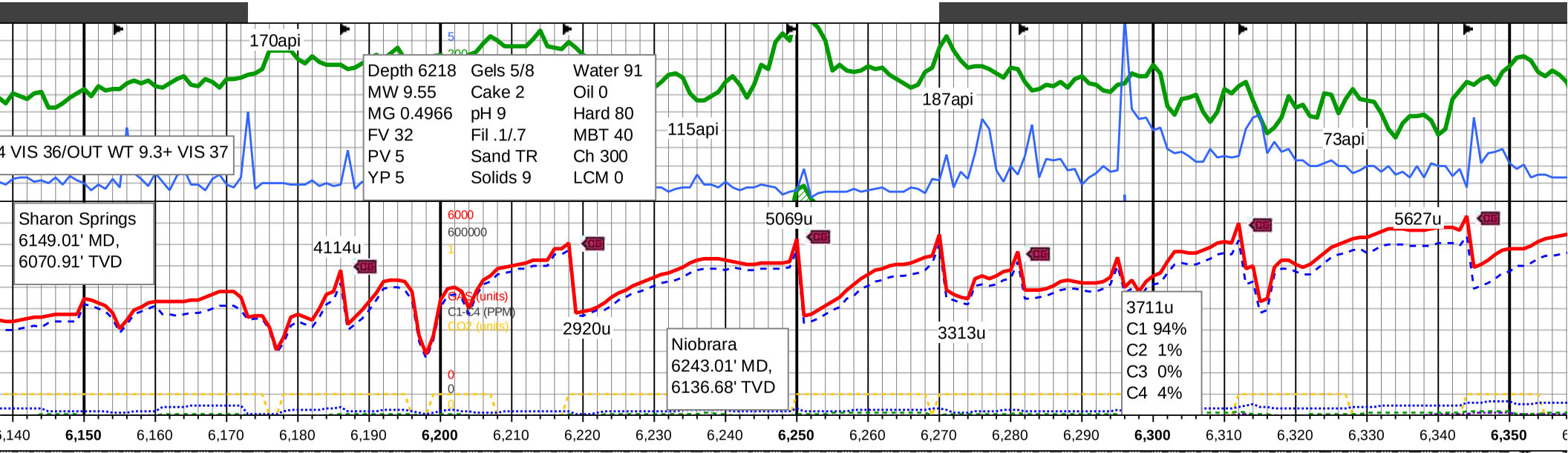
5800
5900

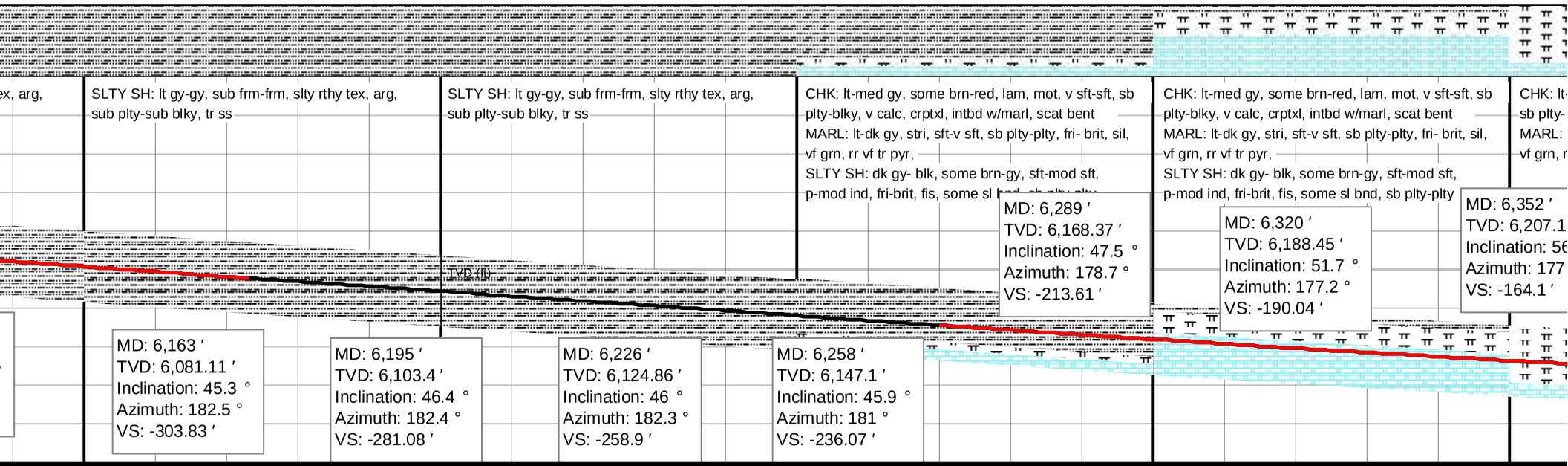
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky,
SHY SS: lt gy-gy, sub rd-sub ang, tr glau ip, mod-w srt, sub frm-frm, sl calc

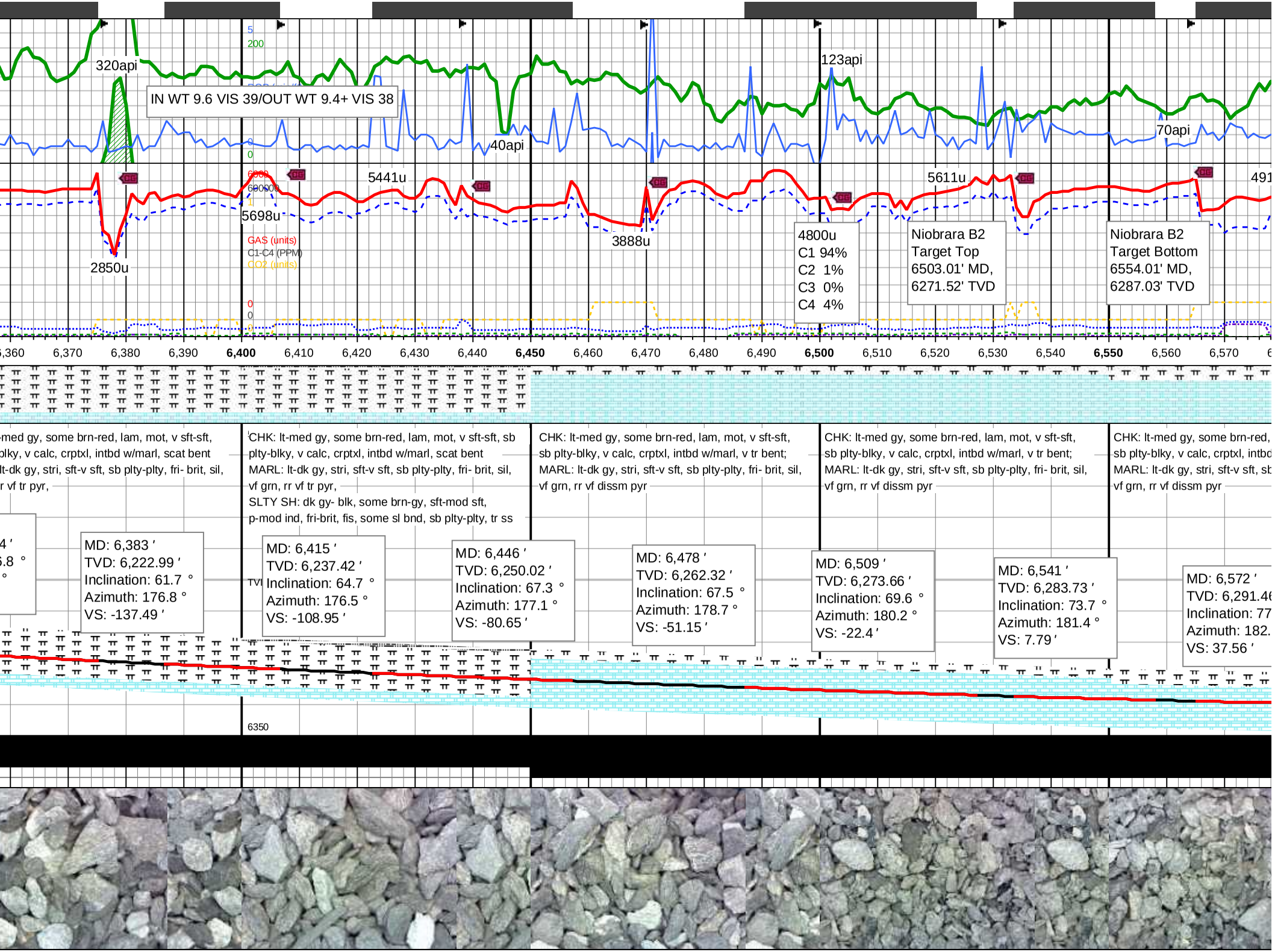
SLTY SH: lt gy-gy, sub plty-sub blky,
SHY SS: lt gy-gy, srt, sub frm-frm, sl

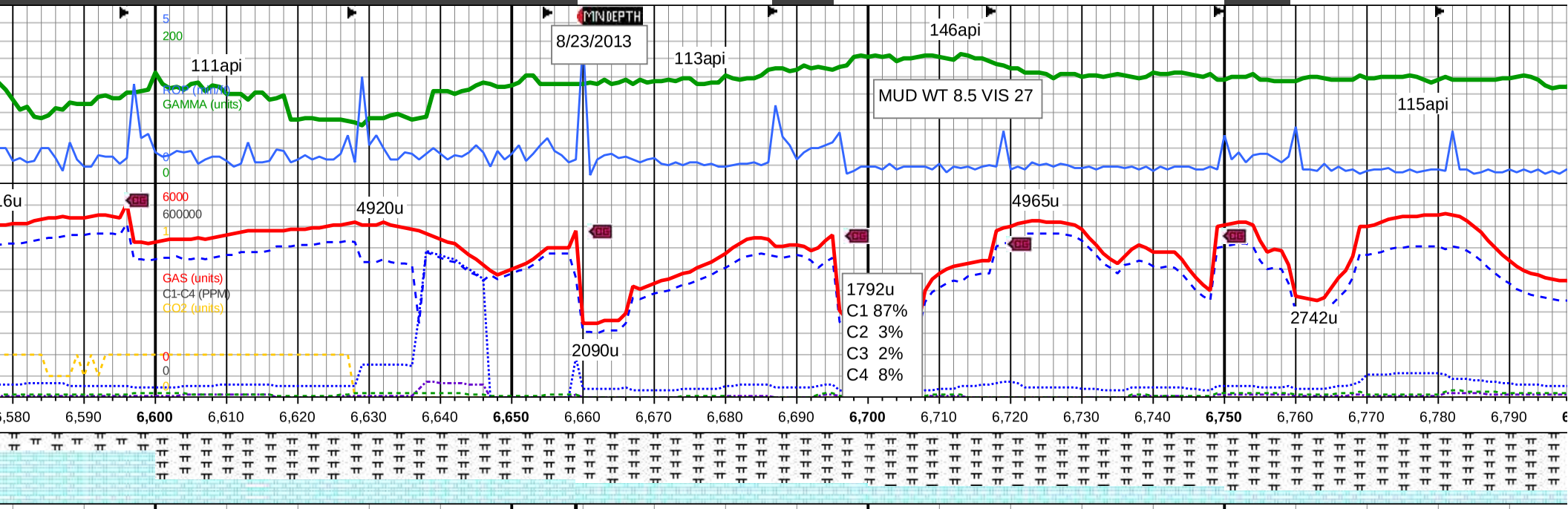

IN WT 9.3+ VIS 35/OUT WT 9.3+ VIS 36
98api
86api
80api
111api
93api
IN WT 9.4
ROP (min/ft)
GAMMA (units)
GAS (units)
C1-C4 (PPM)
C2 (units)
2582u
1162u
1525u
2914u
2131u
C1 92%
C2 2%
C3 1%
C4 5%
1109u
5,920
5,930
5,940
5,950
5,960
5,970
5,980
5,990
6,000
6,010
6,020
6,030
6,040
6,050
6,060
6,070
6,080
6,090
6,100
6,110
6,120
6,130


SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky
SLTY SH: lt gy-gy, sub frm-frm, slty rthy te
sub plty-sub blky
MD: 5,943 '
TVD: 5,893.99 '
Inclination: 17.2 °
Azimuth: 173.4 °
VS: -414.92 '
MD: 5,974 '
TVD: 5,923.28 '
Inclination: 21 °
Azimuth: 172.8 °
VS: -404.78 '
MD: 6,006 '
TVD: 5,952.76 '
Inclination: 24.7 °
Azimuth: 174.1 °
VS: -392.36 '
MD: 6,037 '
TVD: 5,980.49 '
Inclination: 28.4 °
Azimuth: 176.4 °
VS: -378.51 '
MD: 6,069 '
TVD: 6,008.06 '
Inclination: 32.6 °
Azimuth: 178.8 °
VS: -362.3 '
MD: 6,100 '
TVD: 6,033.58 '
Inclination: 36.5 °
Azimuth: 180.6 °
VS: -344.79 '
MD: 6,132 '
TVD: 6,058.52 '
Inclination: 41.1 °
Azimuth: 181.5 °
VS: -324.87 '
sub frm-frm, slty rthy tex, arg,
sub rd-sub ang, tr glau ip, mod-w
calc
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky
6350


170api
4 VIS 36/OUT WT 9.3+ VIS 37
Depth 6218 Gels 5/8 Water 91
MW 9.55 Cake 2 Oil 0
MG 0.4966 pH 9 Hard 80
FV 32 Fil .1/.7 MBT 40
PV 5 Sand TR Ch 300
YP 5 Solids 9 LCM 0
115api
187api
73api
Sharon Springs
6149.01' MD,
6070.91' TVD
4114u
2920u
5069u
3313u
5627u
3711u
C1 94%
C2 1%
C3 0%
C4 4%
Niobrara
6243.01' MD,
6136.68' TVD
6000
600000
C1-C4 (PPM)
6,140
6,150
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


ex, arg,
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky, tr ss
SLTY SH: lt gy-gy, sub frm-frm, slty rthy tex, arg, sub plty-sub blky, tr ss
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, scat bent
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf tr pyr,
SLTY SH: dk gy- blk, some brn-gy, sft-mod sft, p-mod ind, fri-brit, fis, some sl bnd, sb plty-plty
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, scat bent
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf tr pyr,
SLTY SH: dk gy- blk, some brn-gy, sft-mod sft, p-mod ind, fri-brit, fis, some sl bnd, sb plty-plty
TVD (ft)
MD: 6,163 '
TVD: 6,081.11 '
Inclination: 45.3 °
Azimuth: 182.5 °
VS: -303.83 '
MD: 6,195 '
TVD: 6,103.4 '
Inclination: 46.4 °
Azimuth: 182.4 °
VS: -281.08 '
MD: 6,226 '
TVD: 6,124.86 '
Inclination: 46 °
Azimuth: 182.3 °
VS: -258.9 '
MD: 6,258 '
TVD: 6,147.1 '
Inclination: 45.9 °
Azimuth: 181 °
VS: -236.07 '
MD: 6,289 '
TVD: 6,168.37 '
Inclination: 47.5 °
Azimuth: 178.7 °
VS: -213.61 '
MD: 6,320 '
TVD: 6,188.45 '
Inclination: 51.7 °
Azimuth: 177.2 °
VS: -190.04 '
MD: 6,352 '
TVD: 6,207.1
Inclination: 56
Azimuth: 177
VS: -164.1 '


320api
IN WT 9.6 VIS 39/OUT WT 9.4+ VIS 38
40api
123api
70api
5441u
5698u
2850u
3888u
5611u
GAS (units)
C1-C4 (PPM)
CO2 (units)
4800u
C1 94%
C2 1%
C3 0%
C4 4%
Niobrara B2
Target Top
6503.01' MD,
6271.52' TVD
Niobrara B2
Target Bottom
6554.01' MD,
6287.03' TVD
6,360
6,370
6,380
6,390
6,400
6,410
6,420
6,430
6,440
6,450
6,460
6,470
6,480
6,490
6,500
6,510
6,520
6,530
6,540
6,550
6,560
6,570
-med gy, some brn-red, lam, mot, v sft-sft,
blky, v calc, crptxl, intbd w/marl, scat bent
lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
r vf tr pyr,
MD: 6,383 '
TVD: 6,222.99 '
Inclination: 61.7 °
Azimuth: 176.8 °
VS: -137.49 '
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb
plty-blky, v calc, crptxl, intbd w/marl, scat bent
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf tr pyr,
SLTY SH: dk gy- blk, some brn-gy, sft-mod sft,
p-mod ind, fri-brit, fis, some sl bnd, sb plty-plty, tr ss
MD: 6,415 '
TVD: 6,237.42 '
Inclination: 64.7 °
Azimuth: 176.5 °
VS: -108.95 '
MD: 6,446 '
TVD: 6,250.02 '
Inclination: 67.3 °
Azimuth: 177.1 °
VS: -80.65 '
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr
MD: 6,478 '
TVD: 6,262.32 '
Inclination: 67.5 °
Azimuth: 178.7 °
VS: -51.15 '
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr
MD: 6,509 '
TVD: 6,273.66 '
Inclination: 69.6 °
Azimuth: 180.2 °
VS: -22.4 '
MD: 6,541 '
TVD: 6,283.73 '
Inclination: 73.7 °
Azimuth: 181.4 °
VS: 7.79 '
CHK: lt-med gy, some brn-red,
sb plty-blky, v calc, crptxl, intbd
MARL: lt-dk gy, stri, sft-v sft, sb
vf grn, rr vf dissm pyr
MD: 6,572 '
TVD: 6,291.46
Inclination: 77
Azimuth: 182.
VS: 37.56 '
6350



lam, mot, v sft-sft,
w/marl, v tr bent;
plty-plty, fri- brit, sil,

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr

Representing 15' Target Zone

SCALE CHANGE
1 White Block on
TVD Scale = 10'

TVD (ft)

Bit Data
Bit #: 4
Type: SMITH MDI513
Size: 6.12
Depth In: 6,659 '
Depth Out: 10,816 '
Hours: 33.2 *hrs*
Avg Ft/Hr: 125*'/hr*
Jets: 5X16
S/N: JH0938

MD: 6,604 '
TVD: 6,296.96 '
Inclination: 82.8 °
Azimuth: 182.9 °
VS: 68.77 '

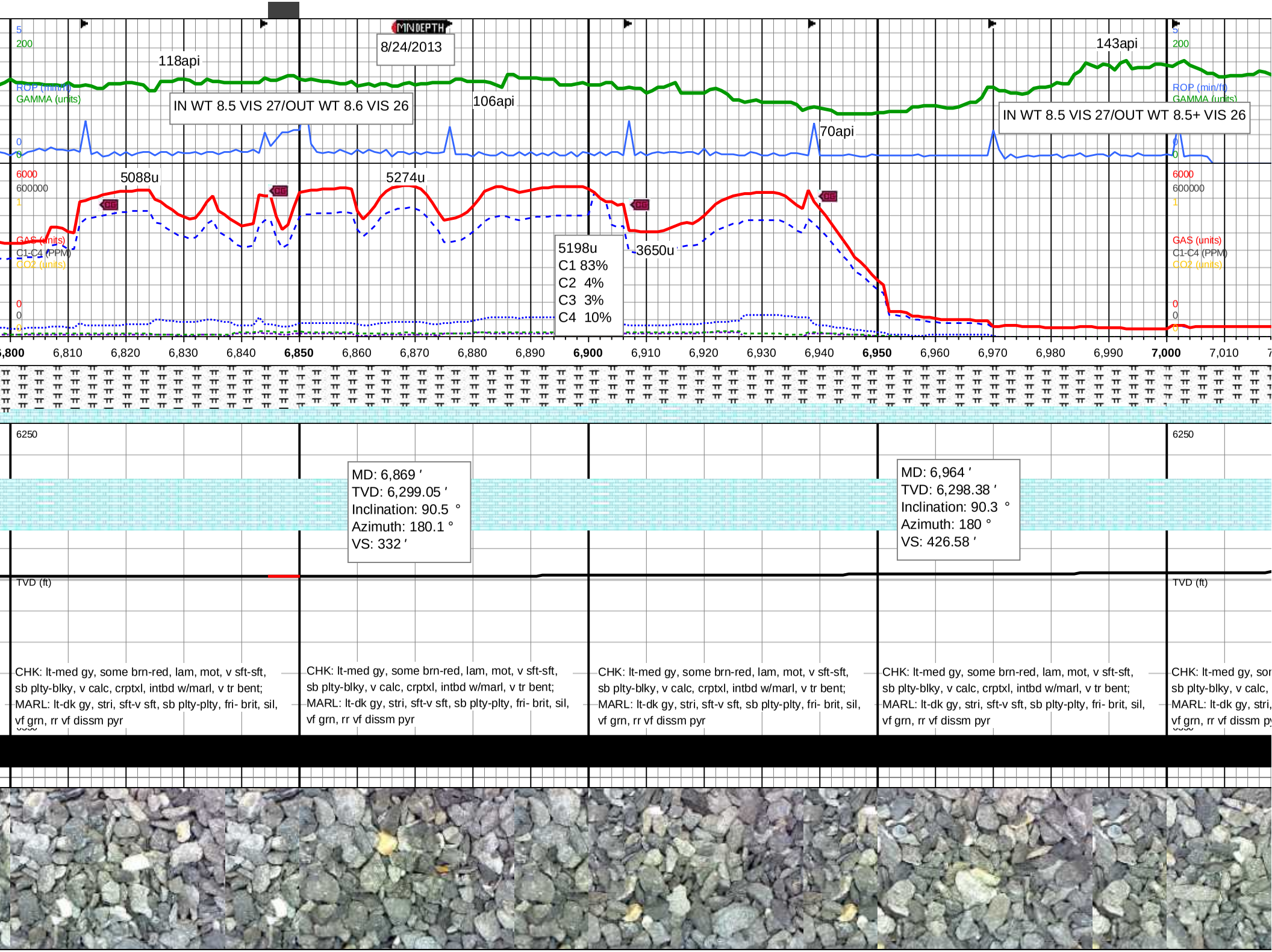
MD: 6,680 '
TVD: 6,300.21 '
Inclination: 92.3 °
Azimuth: 181.4 °
VS: 143.97 '

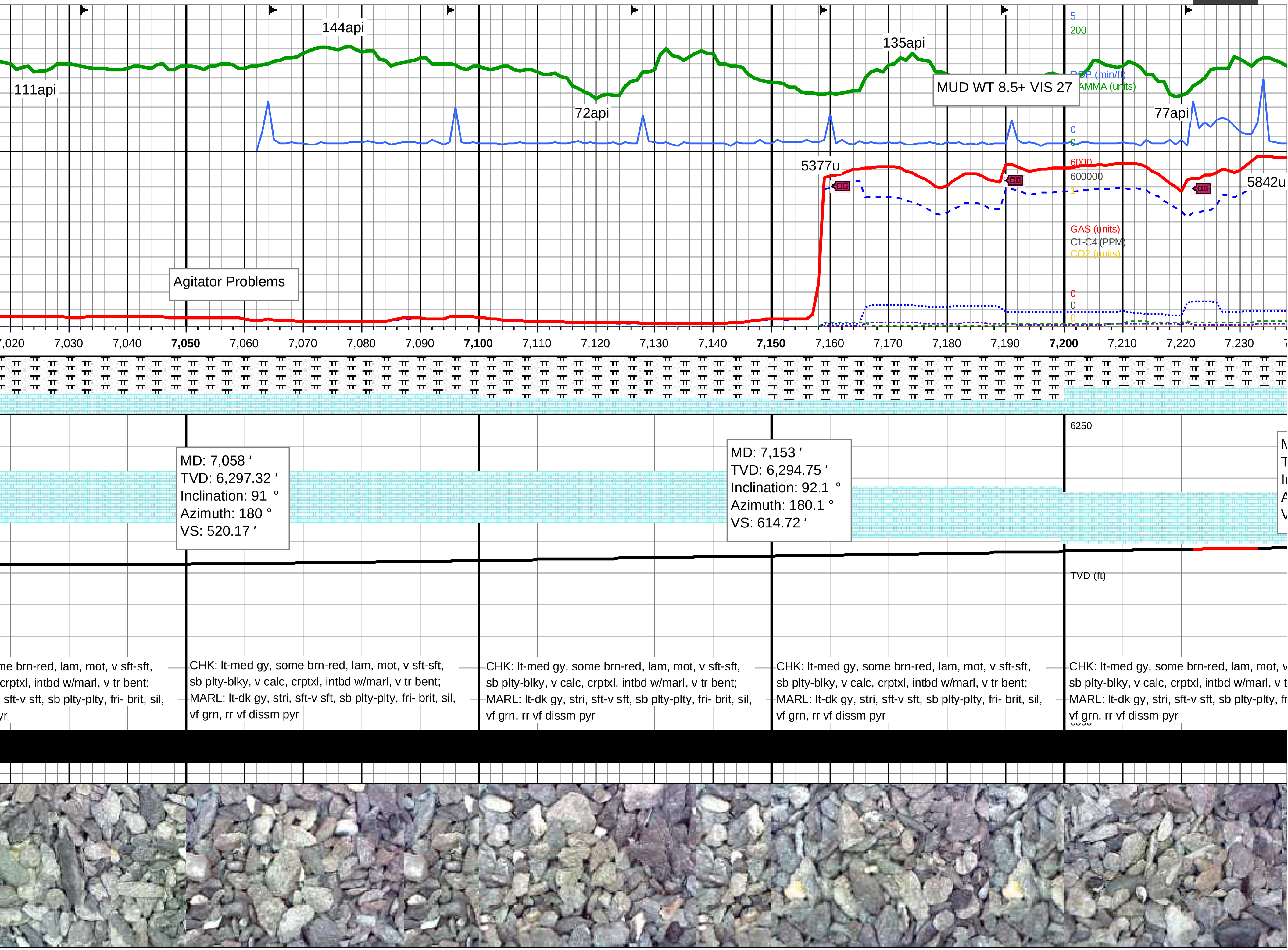
MD: 6,775 '
TVD: 6,298.88 '
Inclination: 89.3 °
Azimuth: 180.1 °
VS: 238.42 '

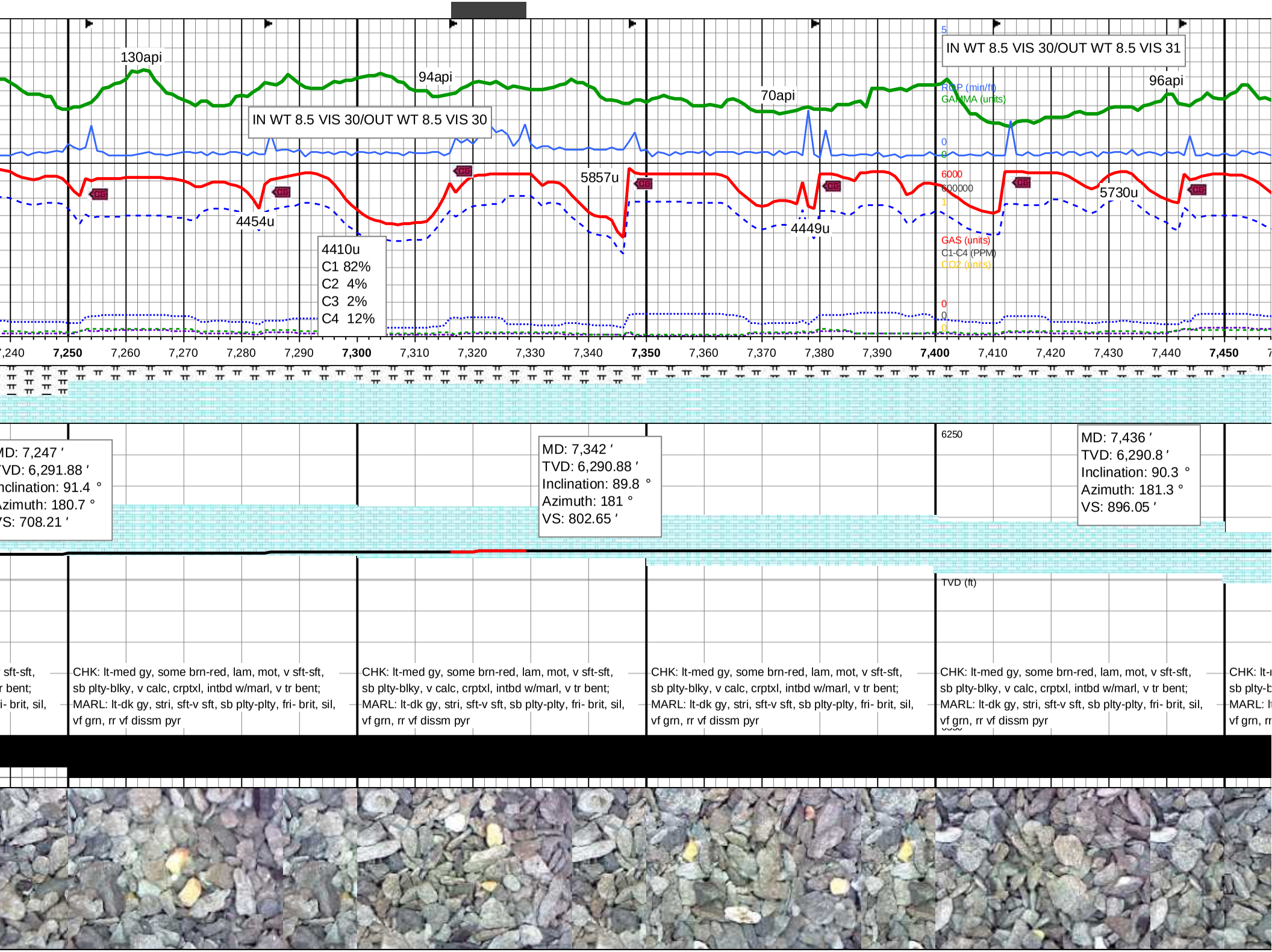
6350

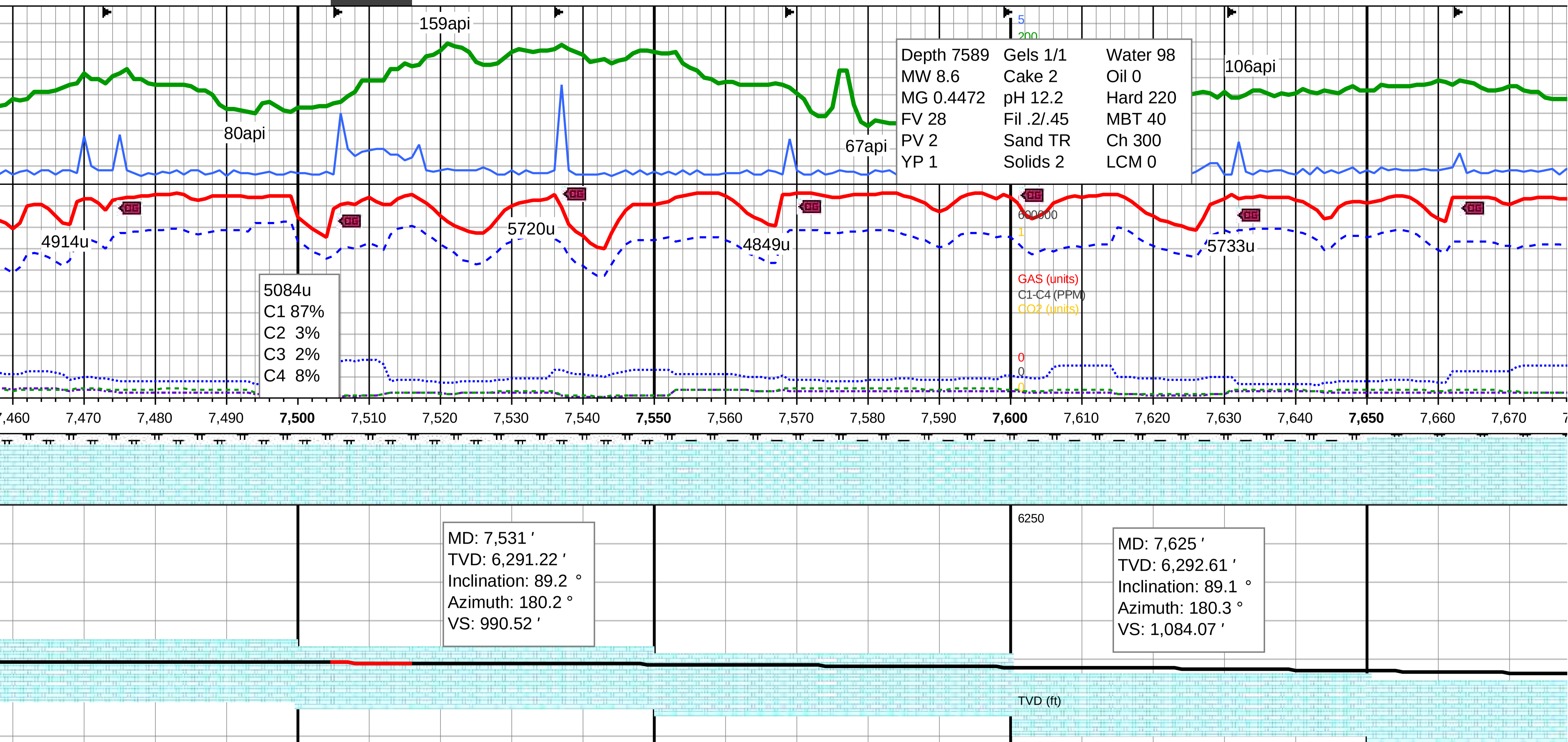
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr


MINDEPTH
8/24/2013
118api
106api
143api
70api
IN WT 8.5 VIS 27/OUT WT 8.6 VIS 26
IN WT 8.5 VIS 27/OUT WT 8.5+ VIS 26
ROP (min/ft)
GAMMA (units)
GAS (units)
C1-C4 (PPM)
CO2 (units)
5088u
5274u
3650u
5198u
C1 83%
C2 4%
C3 3%
C4 10%
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
7,010
6250
MD: 6,869 '
TVD: 6,299.05 '
Inclination: 90.5 °
Azimuth: 180.1 °
VS: 332 '
MD: 6,964 '
TVD: 6,298.38 '
Inclination: 90.3 °
Azimuth: 180 °
VS: 426.58 '
TVD (ft)
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr


111api
144api
72api
135api
77api
MUD WT 8.5+ VIS 27
ROP (min/ft)
GAMMA (units)
5
200
0
0
5377u
5842u
6000
600000
GAS (units)
C1-C4 (PPM)
CO2 (units)
0
0
0
Agitator Problems
7,020
7,030
7,040
7,050
7,060
7,070
7,080
7,090
7,100
7,110
7,120
7,130
7,140
7,150
7,160
7,170
7,180
7,190
7,200
7,210
7,220
7,230
6250
MD: 7,058 ′
TVD: 6,297.32 ′
Inclination: 91 °
Azimuth: 180 °
VS: 520.17 ′
MD: 7,153 ′
TVD: 6,294.75 ′
Inclination: 92.1 °
Azimuth: 180.1 °
VS: 614.72 ′
TVD (ft)
me brn-red, lam, mot, v sft-sft,
crptxl, intbd w/marl, v tr bent;
sft-v sft, sb plty-plty, fri- brit, sil,
yr
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft,
sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent;
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil,
vf grn, rr vf dissm pyr
CHK: lt-med gy, some brn-red, lam, mot, v
sb plty-blky, v calc, crptxl, intbd w/marl, v t
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fr
vf grn, rr vf dissm pyr


130api
94api
70api
96api
IN WT 8.5 VIS 30/OUT WT 8.5 VIS 30
IN WT 8.5 VIS 30/OUT WT 8.5 VIS 31
ROP (min/ft)
GAMMA (units)
5857u
4454u
4449u
5730u
4410u
C1 82%
C2 4%
C3 2%
C4 12%
GAS (units)
C1-C4 (PPM)
CO2 (units)
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
7,400
7,410
7,420
7,430
7,440
7,450
MD: 7,247 '
TVD: 6,291.88 '
Inclination: 91.4 °
Azimuth: 180.7 °
VS: 708.21 '
MD: 7,342 '
TVD: 6,290.88 '
Inclination: 89.8 °
Azimuth: 181 °
VS: 802.65 '
6250
MD: 7,436 '
TVD: 6,290.8 '
Inclination: 90.3 °
Azimuth: 181.3 °
VS: 896.05 '
TVD (ft)
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr



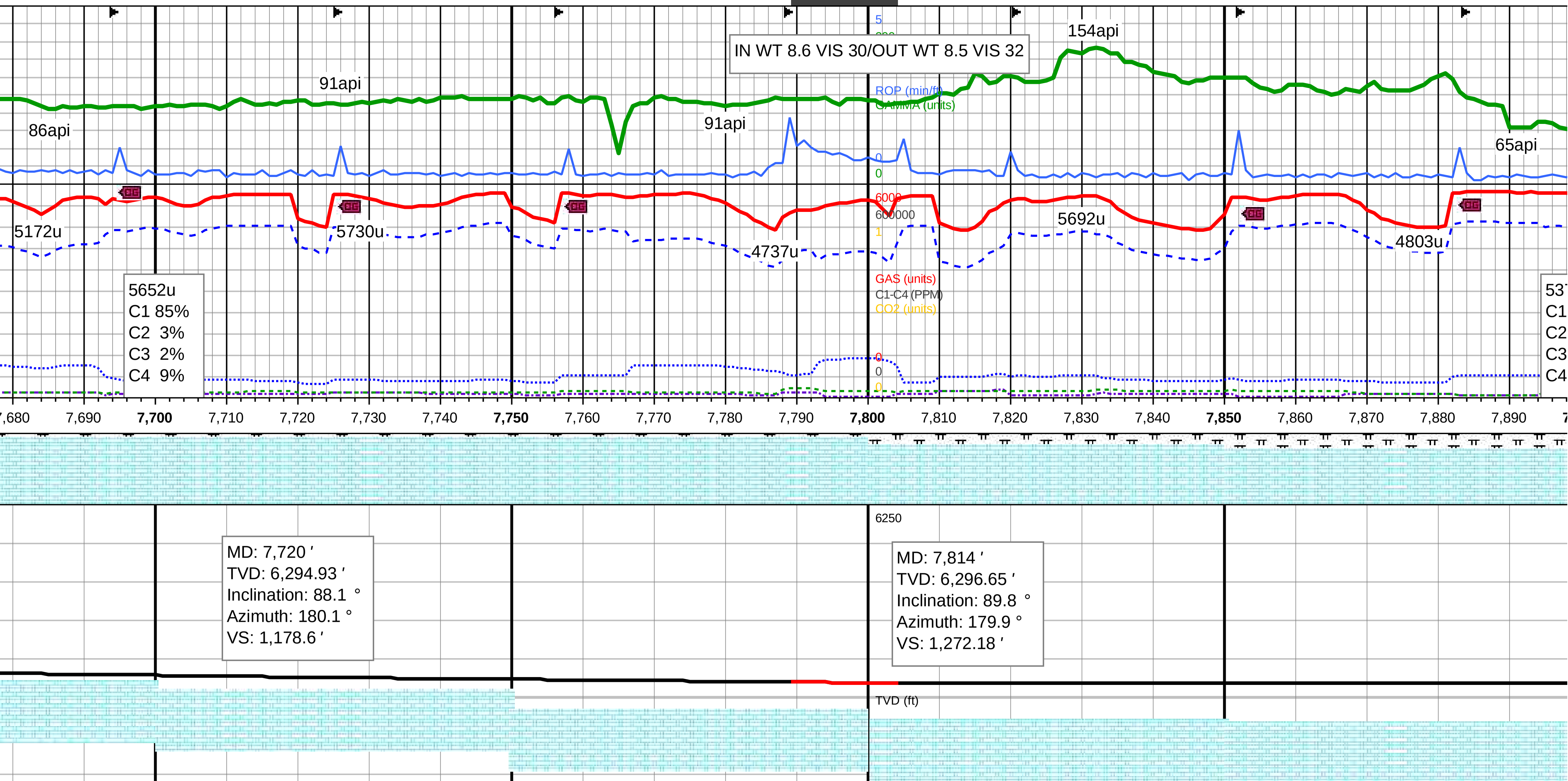
med gy, some brn-red, lam, mot, v sft-sft, blky, v calc, crptxl, intbd w/marl, v tr bent; -dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf dissm pyr

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

CHK: lt-med gy, some brn-red, sb plty-blky, v calc, crptxl, intb MARL: lt-dk gy, stri, sft-v sft, sl vf grn, rr vf dissm pyr



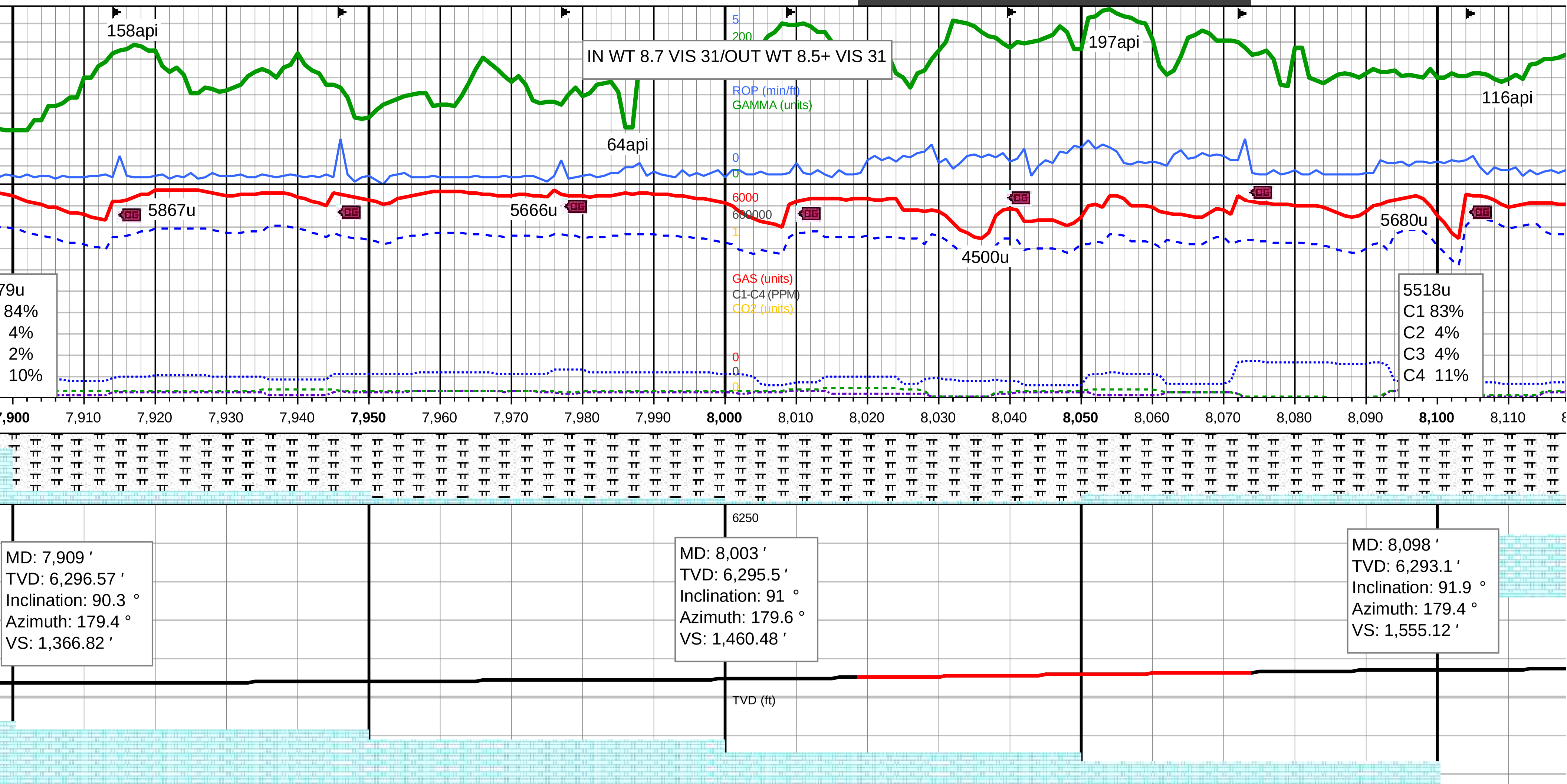
lam, mot, v sft-sft, d w/marl, v tr bent; plty-plty, fri- brit, sil,

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr



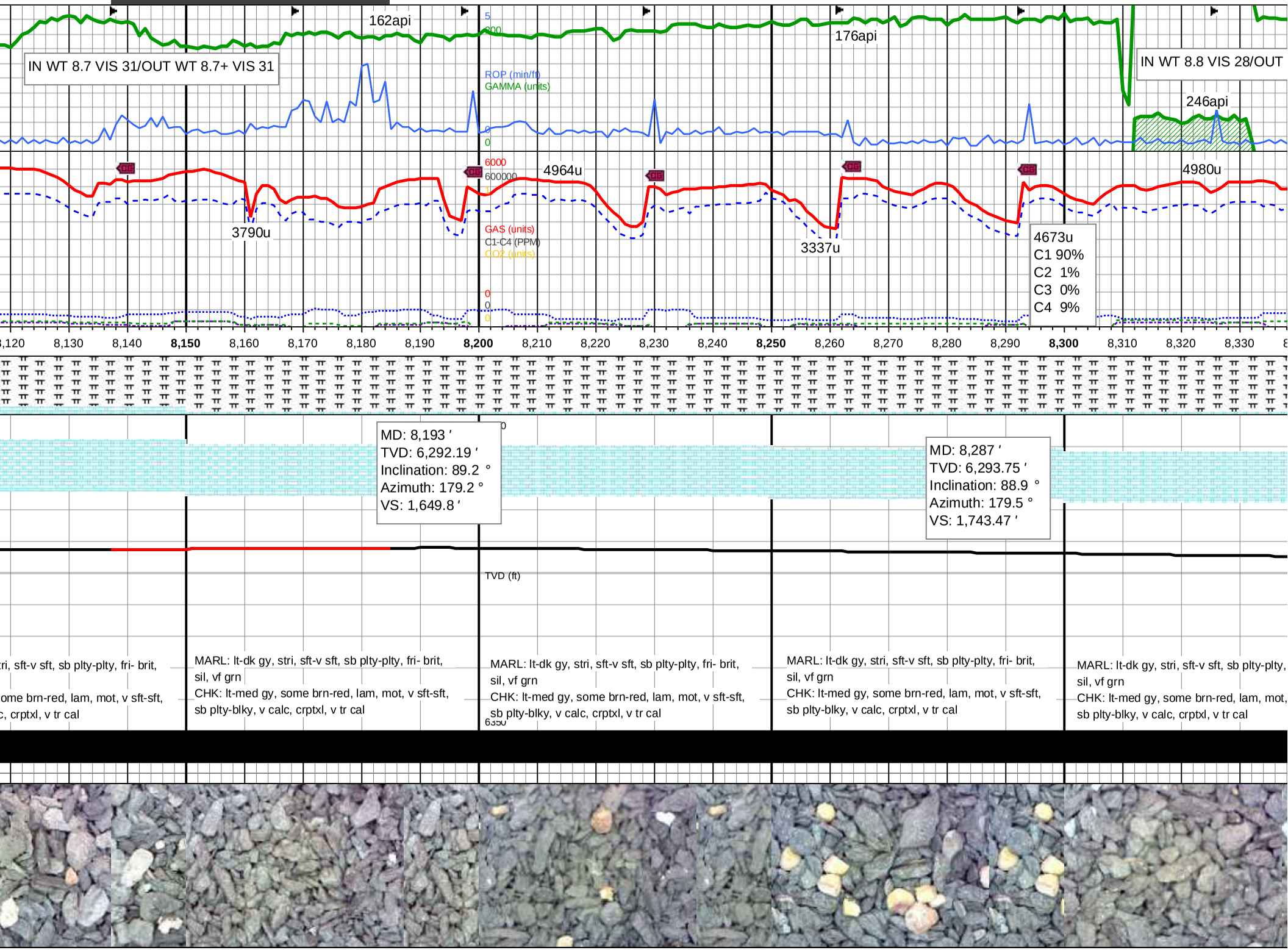
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

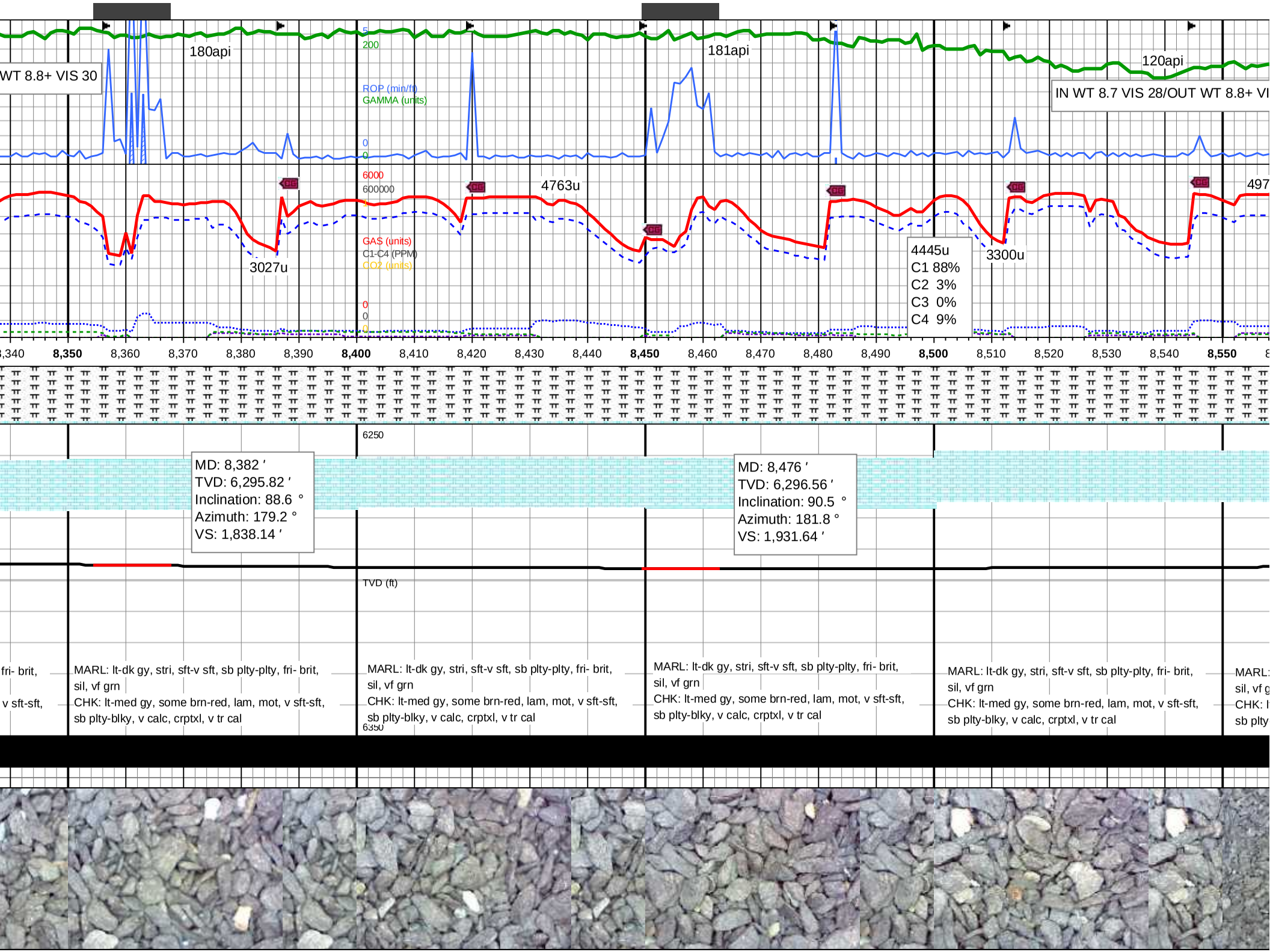
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

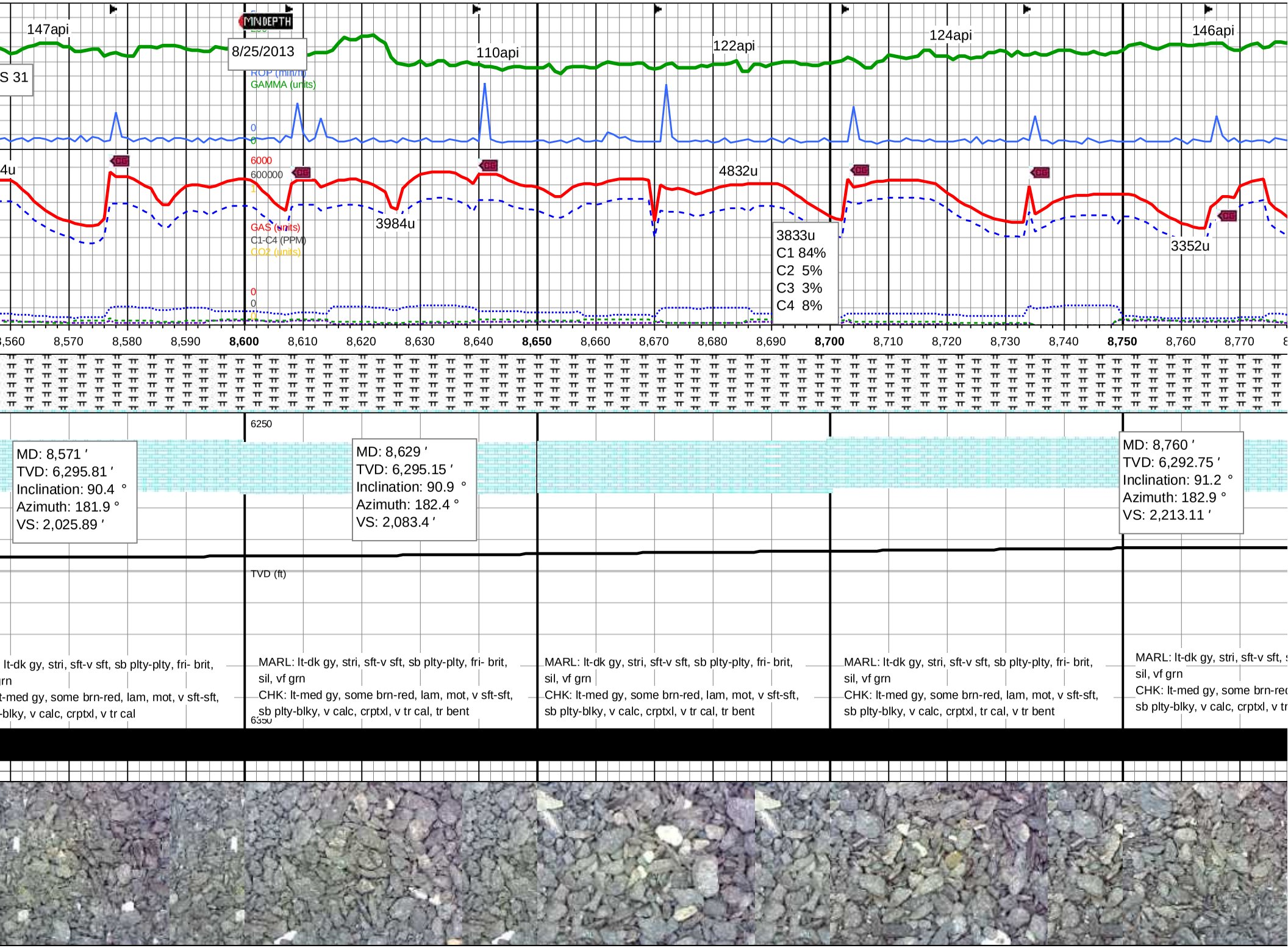
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, intbd w/marl, v tr bent; MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn, rr vf dissm pyr

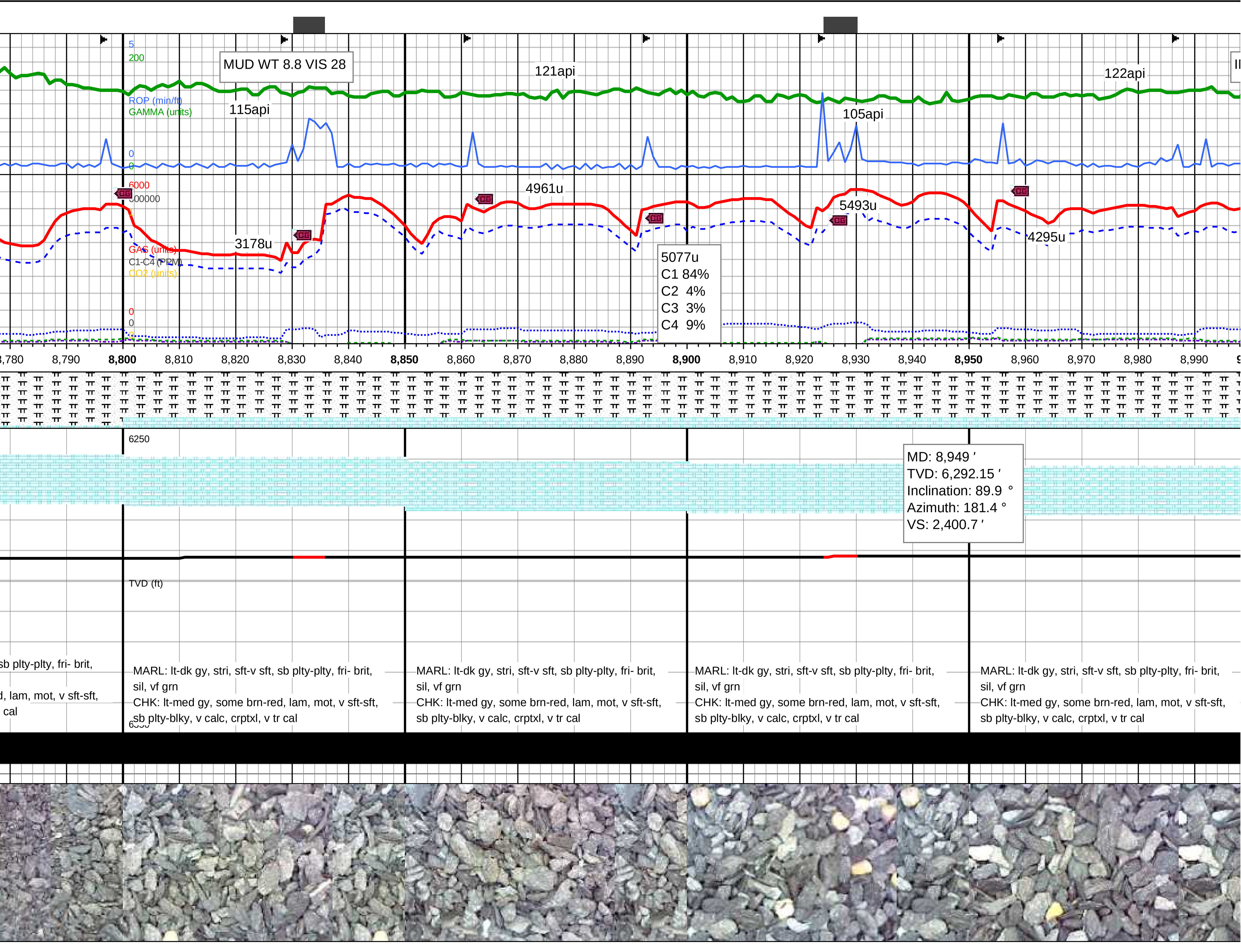
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal

MARL: lt-dk gy, st
sil, vf grn
CHK: lt-med gy, s
sb plty-blky, v calc


162api
IN WT 8.7 VIS 31/OUT WT 8.7+ VIS 31
ROP (min/ft)
GAMMA (units)
176api
IN WT 8.8 VIS 28/OUT
246api
4964u
4980u
3790u
3337u
4673u
C1 90%
C2 1%
C3 0%
C4 9%
GAS (units)
C1-C4 (PPM)
CO2 (units)
8,120
8,130
8,140
8,150
8,160
8,170
8,180
8,190
8,200
8,210
8,220
8,230
8,240
8,250
8,260
8,270
8,280
8,290
8,300
8,310
8,320
8,330
MD: 8,193 '
TVD: 6,292.19 '
Inclination: 89.2 °
Azimuth: 179.2 °
VS: 1,649.8 '
MD: 8,287 '
TVD: 6,293.75 '
Inclination: 88.9 °
Azimuth: 179.5 °
VS: 1,743.47 '
TVD (ft)
ri, sft-v sft, sb plty-plty, fri- brit,
ome brn-red, lam, mot, v sft-sft,
c, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, sb plty-blky, v calc, crptxl, v tr cal


WT 8.8+ VIS 30
180api
181api
120api
IN WT 8.7 VIS 28/OUT WT 8.8+ VI
5
200
ROP (min/ft)
GAMMA (units)
0
0
6000
600000
GAS (units)
C1-C4 (PPM)
CO2 (units)
0
0
0
3027u
4763u
4445u
C1 88%
C2 3%
C3 0%
C4 9%
3300u
497
8,340
8,350
8,360
8,370
8,380
8,390
8,400
8,410
8,420
8,430
8,440
8,450
8,460
8,470
8,480
8,490
8,500
8,510
8,520
8,530
8,540
8,550
6250
MD: 8,382 '
TVD: 6,295.82 '
Inclination: 88.6 °
Azimuth: 179.2 °
VS: 1,838.14 '
MD: 8,476 '
TVD: 6,296.56 '
Inclination: 90.5 °
Azimuth: 181.8 °
VS: 1,931.64 '
TVD (ft)
fri- brit,
v sft-sft,
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
6350
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL:
sil, vf g
CHK:
sb plty


147api
S 31
MINDEPTH
8/25/2013
ROP (min/ft)
GAMMA (units)
110api
122api
124api
146api
4u
6000
600000
GAS (units)
C1-C4 (PPM)
CO2 (units)
3984u
4832u
3833u
C1 84%
C2 5%
C3 3%
C4 8%
3352u
8,560
8,570
8,580
8,590
8,600
8,610
8,620
8,630
8,640
8,650
8,660
8,670
8,680
8,690
8,700
8,710
8,720
8,730
8,740
8,750
8,760
8,770
6250
MD: 8,571 '
TVD: 6,295.81 '
Inclination: 90.4 °
Azimuth: 181.9 °
VS: 2,025.89 '
MD: 8,629 '
TVD: 6,295.15 '
Inclination: 90.9 °
Azimuth: 182.4 °
VS: 2,083.4 '
MD: 8,760 '
TVD: 6,292.75 '
Inclination: 91.2 °
Azimuth: 182.9 °
VS: 2,213.11 '
TVD (ft)
lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit,
rn
t-med gy, some brn-red, lam, mot, v sft-sft,
blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal, tr bent
6350
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal, tr bent
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, tr cal, v tr bent
MARL: lt-dk gy, stri, sft-v sft,
sil, vf grn
CHK: lt-med gy, some brn-red
sb plty-blky, v calc, crptxl, v tr



MUD WT 8.8 VIS 28
5
200
ROP (min/ft)
GAMMA (units)
0
0
115api
121api
105api
122api
6000
00000
GAS (units)
C1-C4 (PPM)
CO2 (units)
0
0
3178u
4961u
5493u
4295u
5077u
C1 84%
C2 4%
C3 3%
C4 9%
8,780
8,790
8,800
8,810
8,820
8,830
8,840
8,850
8,860
8,870
8,880
8,890
8,900
8,910
8,920
8,930
8,940
8,950
8,960
8,970
8,980
8,990
6250
MD: 8,949 ′
TVD: 6,292.15 ′
Inclination: 89.9 °
Azimuth: 181.4 °
VS: 2,400.7 ′
TVD (ft)
sb plty-plty, fri- brit,
l, lam, mot, v sft-sft,
cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal
MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal

N WT 8.7+ VIS 31/OUT WT 8.8 VIS 30

ROP (min/ft)
GAMMA (units)

110api
117api
111api
126u

Depth 9206	Gels 5/10	W
MW 8.85	Cake 2	C
MG 0.4602	pH 11.7	H
FV 29	Fil .15/.8	M
PV 6	Sand TR	C
YP 5	Solids 4	L

GAS (units)
C1-C4 (PPM)
CO2 (units)

5003u
3743u
5168u
3711u

4720u
C1 85%
C2 5%
C3 4%
C4 7%

9,000 9,010 9,020 9,030 9,040 **9,050** 9,060 9,070 9,080 9,090 **9,100** 9,110 9,120 9,130 9,140 **9,150** 9,160 9,170 9,180 9,190 **9,200** 9,210

MD: 9,044 '
TVD: 6,291.73 '
Inclination: 90.6 °
Azimuth: 179.9 °
VS: 2,495.19 '

MD: 9,139 '
TVD: 6,291.57 '
Inclination: 89.6 °
Azimuth: 178.9 °
VS: 2,589.86 '

TVD (ft)

MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal

Water 96
Oil 0
Hard 220
MBT 10
Ch 300
CM 0

144api
69api
75api
123api
87api
IN WT 8.8+ VIS 30/OUT WT 8.7 VIS 32
ROP (min/ft)
GAMMA (units)

6u
3562u
2934u
C1 85%
C2 5%
C3 4%
C4 6%
4292u
Blocked Sample Line
GAS (units)
C1-C4 (PPM)
C5-C7 (units)

9,220 9,230 9,240 **9,250** 9,260 9,270 9,280 9,290 **9,300** 9,310 9,320 9,330 9,340 **9,350** 9,360 9,370 9,380 9,390 **9,400** 9,410 9,420 9,430

6250

TVD (ft)

MD: 9,233 '
TVD: 6,290.83 '
Inclination: 91.3 °
Azimuth: 176.6 °
VS: 2,683.72 '

MD: 9,328 '
TVD: 6,288.34 '
Inclination: 91.7 °
Azimuth: 176.5 °
VS: 2,778.63 '

MD: 9,422 '
TVD: 6,287.19 '
Inclination: 89.7 °
Azimuth: 177.5 °
VS: 2,872.54 '

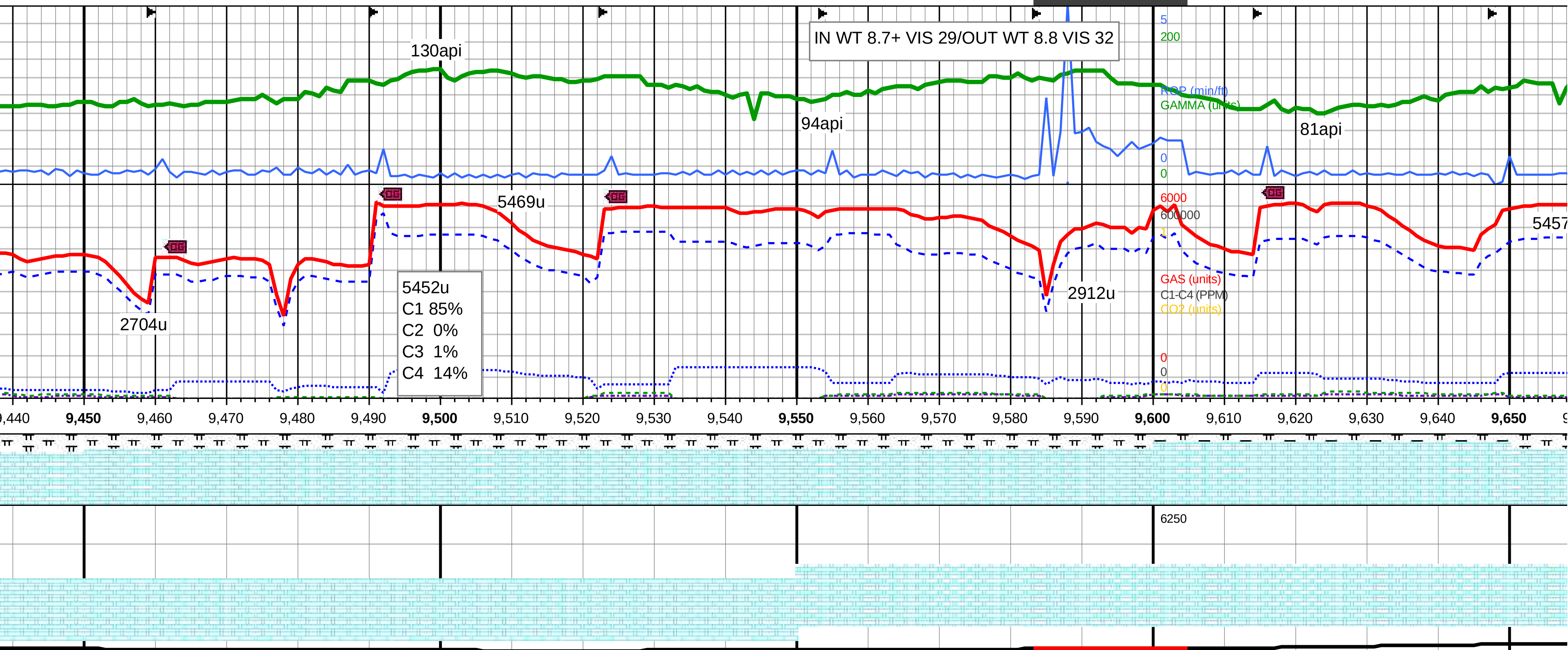
ri, sft-v sft, sb plty-plty, fri- brit,
ome brn-red, lam, mot, v sft-sft,
c, crptxl, v tr cal

MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal

MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal

MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, fri- brit, sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl, v tr cal

MARL: lt-dk gy, stri, sft-v sft, sb plty-plty, f
sil, vf grn
CHK: lt-med gy, some brn-red, lam, mot, sb plty-blky, v calc, crptxl, v tr cal



MD: 9,517 ′
TVD: 6,287.86 ′
Inclination: 89.5 °
Azimuth: 177 °
VS: 2,967.45 ′

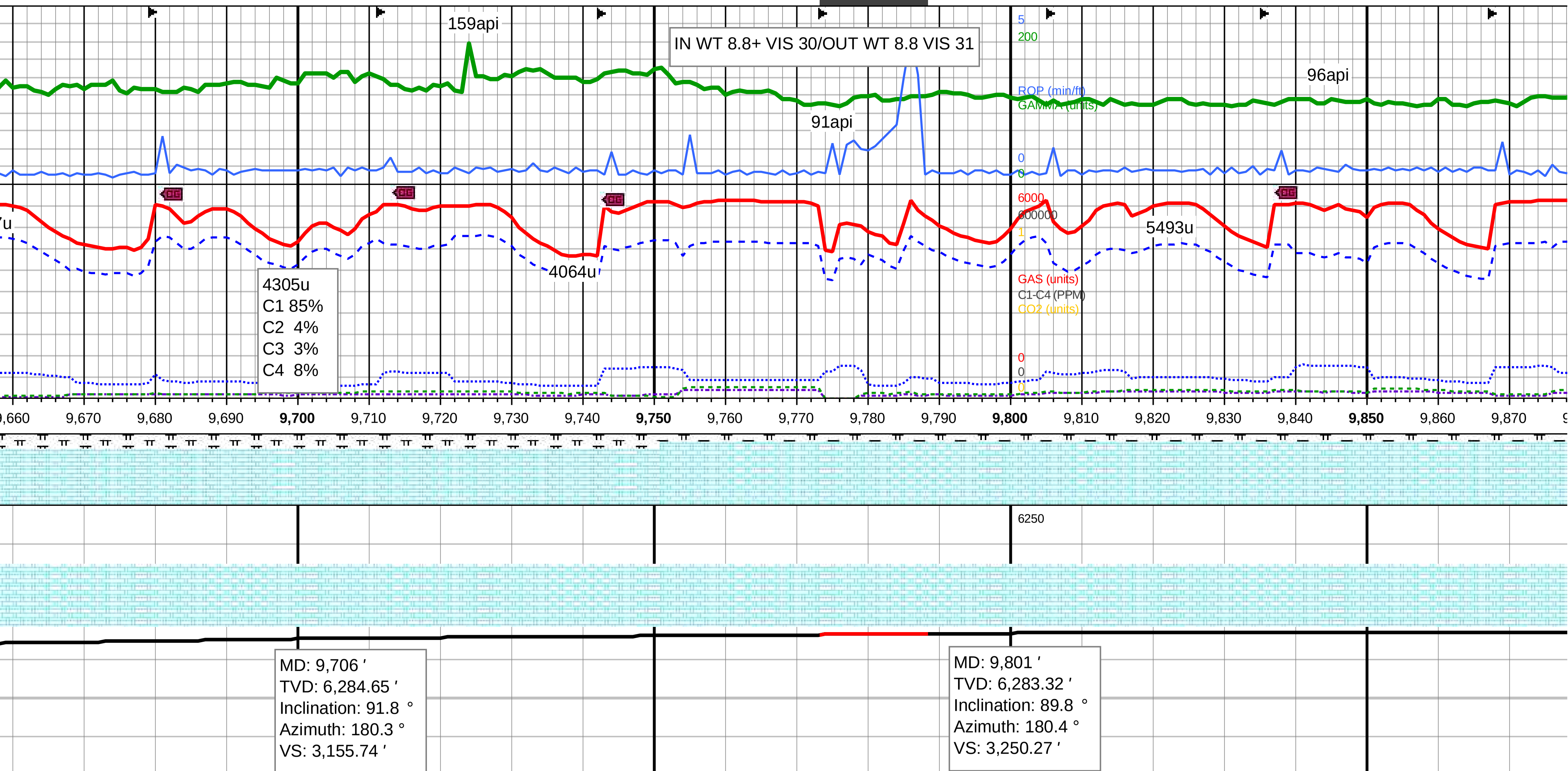
MD: 9,612 ′
TVD: 6,287.19 ′
Inclination: 91.3 °
Azimuth: 180.1 °
VS: 3,062.21 ′

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal



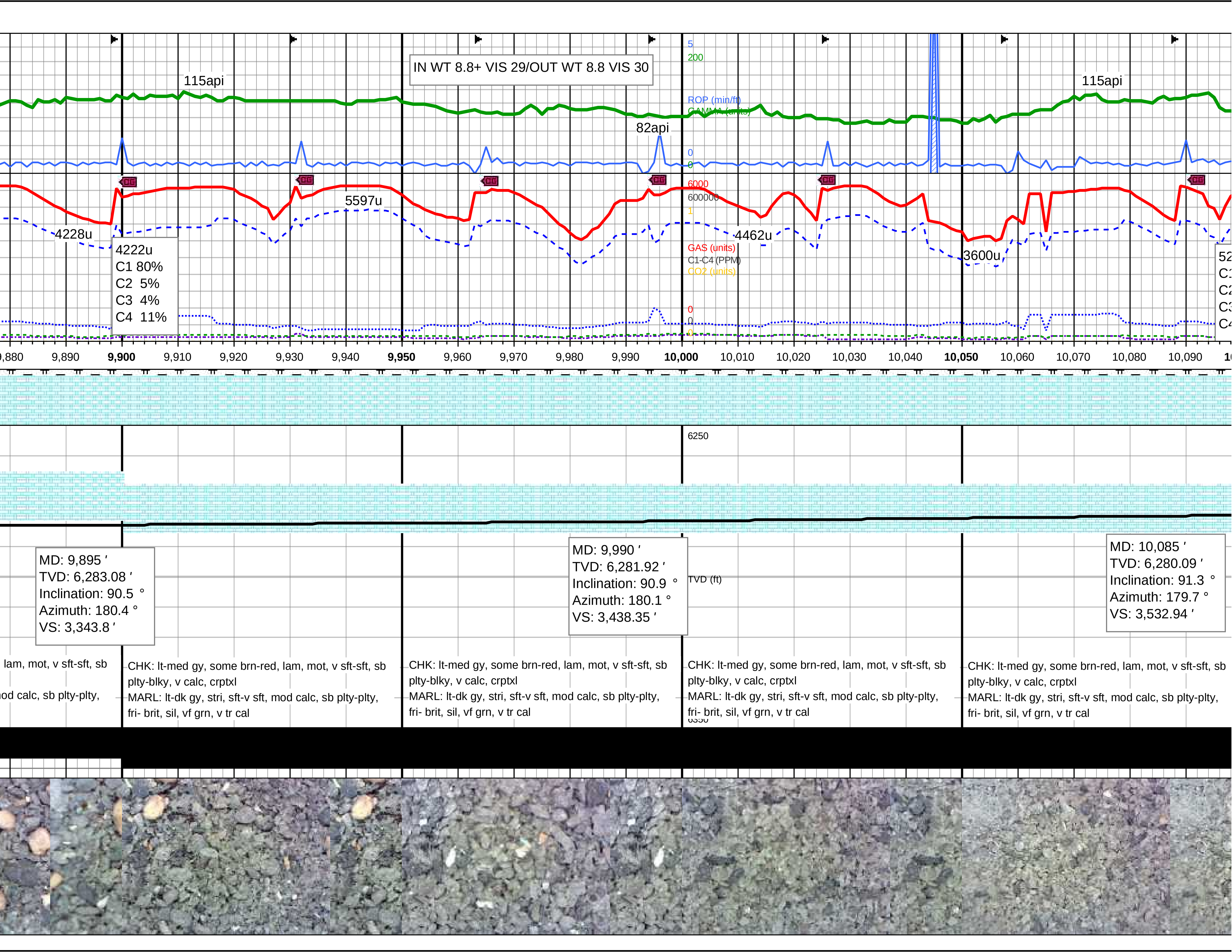
-med gy, some brn-red, lam, mot, v sft-sft, sb
-y, v calc, crptxl
-t-dk gy, stri, sft-v sft, mod calc, sb plty-plty,
-sil, vf grn, v tr cal

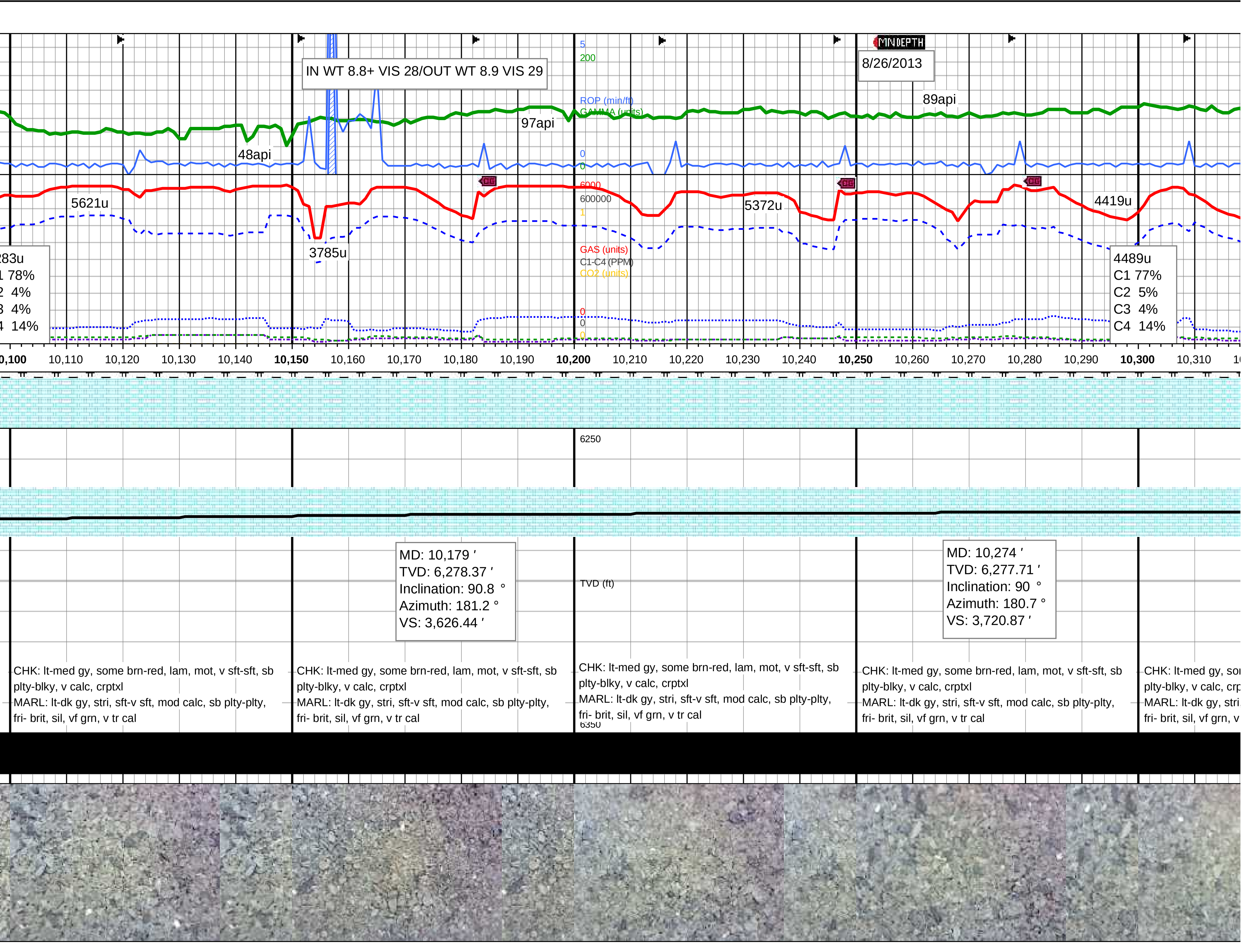
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

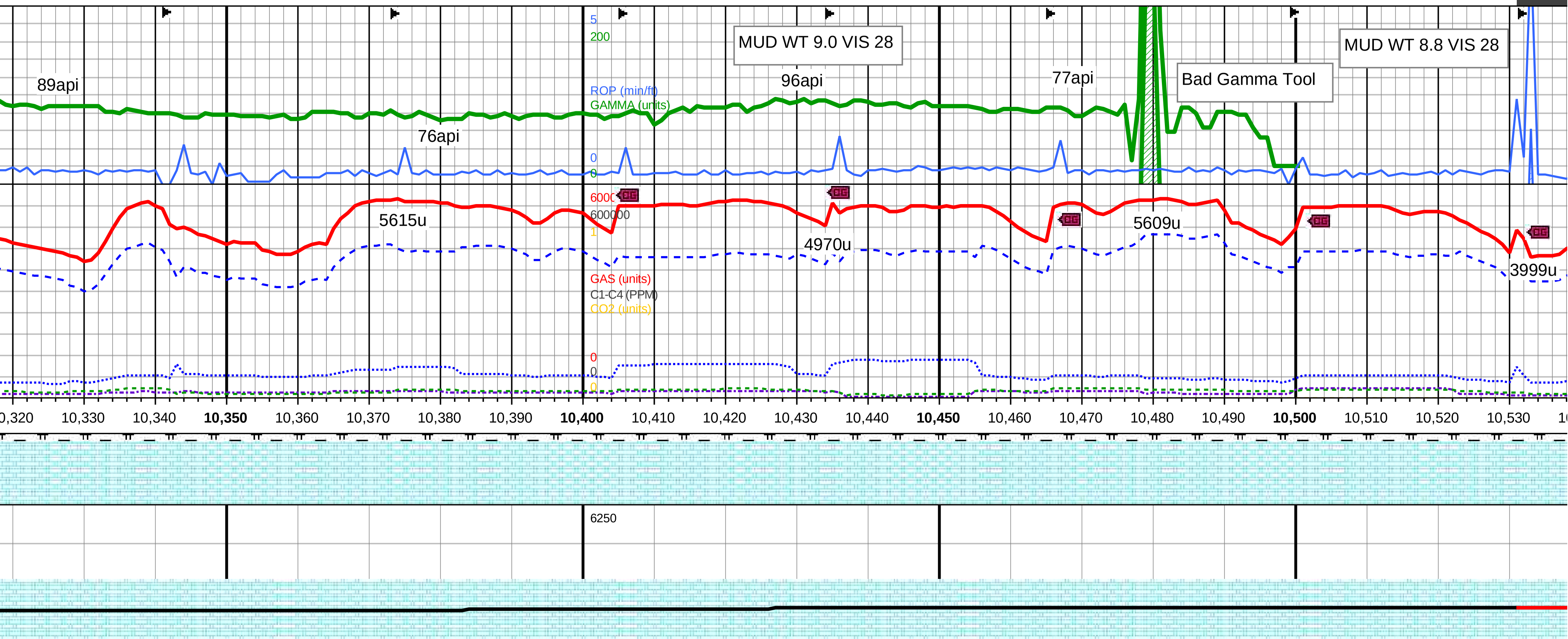
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red,
plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, m
fri- brit, sil, vf grn, v tr cal


IN WT 8.8+ VIS 29/OUT WT 8.8 VIS 30
115api
82api
115api
ROP (min/ft)
GAMMA (units)
GAS (units)
C1-C4 (PPM)
CO2 (units)
4228u
4222u
C1 80%
C2 5%
C3 4%
C4 11%
5597u
4462u
3600u
9,880
9,890
9,900
9,910
9,920
9,930
9,940
9,950
9,960
9,970
9,980
9,990
10,000
10,010
10,020
10,030
10,040
10,050
10,060
10,070
10,080
10,090
6250
TVD (ft)
MD: 9,895 ′
TVD: 6,283.08 ′
Inclination: 90.5 °
Azimuth: 180.4 °
VS: 3,343.8 ′
MD: 9,990 ′
TVD: 6,281.92 ′
Inclination: 90.9 °
Azimuth: 180.1 °
VS: 3,438.35 ′
MD: 10,085 ′
TVD: 6,280.09 ′
Inclination: 91.3 °
Azimuth: 179.7 °
VS: 3,532.94 ′
lam, mot, v sft-sft, sb
od calc, sb plty-plty,
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal


IN WT 8.8+ VIS 28/OUT WT 8.9 VIS 29
8/26/2013
MNDEPTH
5
200
ROP (min/ft)
GAMMA (units)
0
0
6000
600000
1
GAS (units)
C1-C4 (PPM)
CO2 (units)
0
0
0
48api
97api
89api
5621u
3785u
5372u
4419u
283u
C1 78%
C2 4%
C3 4%
C4 14%
4489u
C1 77%
C2 5%
C3 4%
C4 14%
10,100
10,110
10,120
10,130
10,140
10,150
10,160
10,170
10,180
10,190
10,200
10,210
10,220
10,230
10,240
10,250
10,260
10,270
10,280
10,290
10,300
10,310
6250
TVD (ft)
6350
MD: 10,179 ′
TVD: 6,278.37 ′
Inclination: 90.8 °
Azimuth: 181.2 °
VS: 3,626.44 ′
MD: 10,274 ′
TVD: 6,277.71 ′
Inclination: 90 °
Azimuth: 180.7 °
VS: 3,720.87 ′
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal



MD: 10,368 ′
TVD: 6,277.54 ′
Inclination: 90.2 °
Azimuth: 180.4 °
VS: 3,814.38 ′

MD: 10,463 ′
TVD: 6,276.72 ′
Inclination: 90.8 °
Azimuth: 180.4 °
VS: 3,908.91 ′

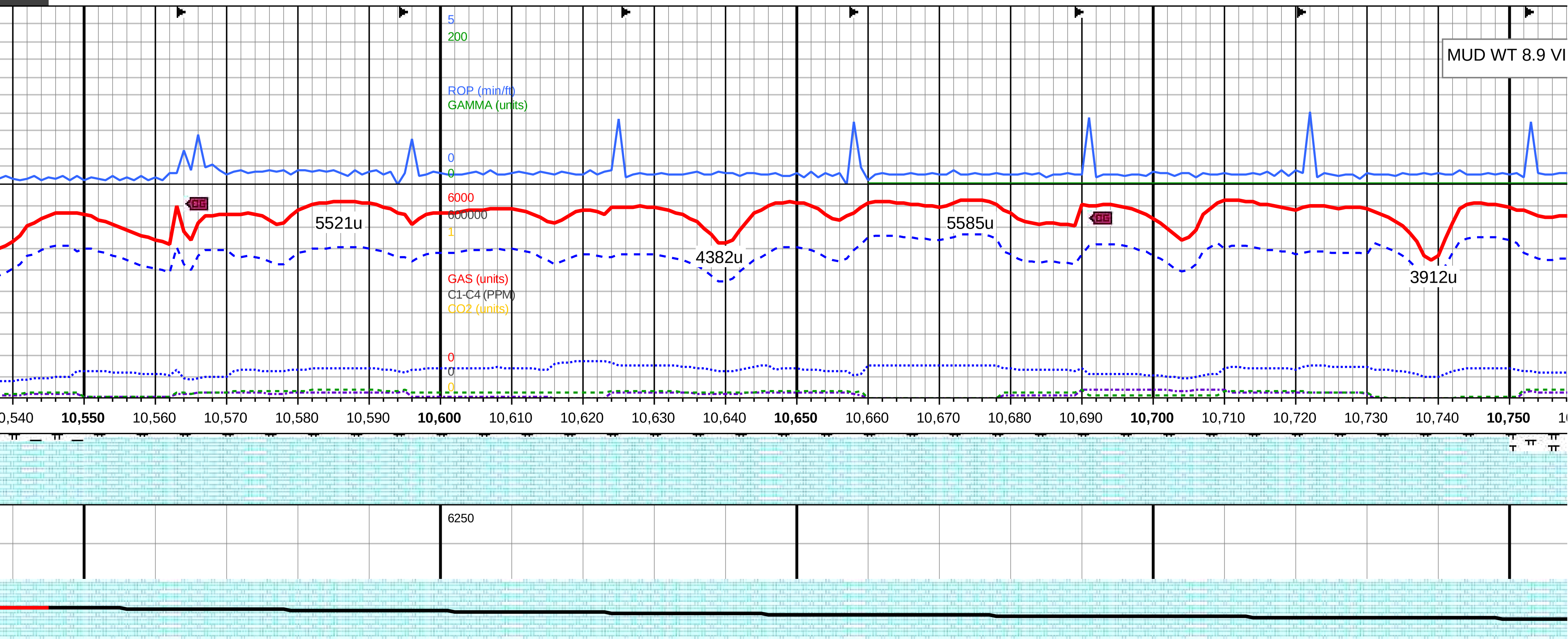
me brn-red, lam, mot, v sft-sft, sb
txl
, sft-v sft, mod calc, sb plty-plty,
tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v
plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb
fri- brit, sil, vf grn, v tr cal



MD: 10,557 ′
TVD: 6,277.04 ′
Inclination: 88.8 °
Azimuth: 181.4 °
VS: 4,002.35 ′

MD: 10,652 ′
TVD: 6,278.62 ′
Inclination: 89.3 °
Azimuth: 181.4 °
VS: 4,096.68 ′

MD: 10,747 ′
TVD: 6,279.61 ′
Inclination: 89.5 °
Azimuth: 181.3 °
VS: 4,191.04 ′

sft-sft, sb
plty-plty,

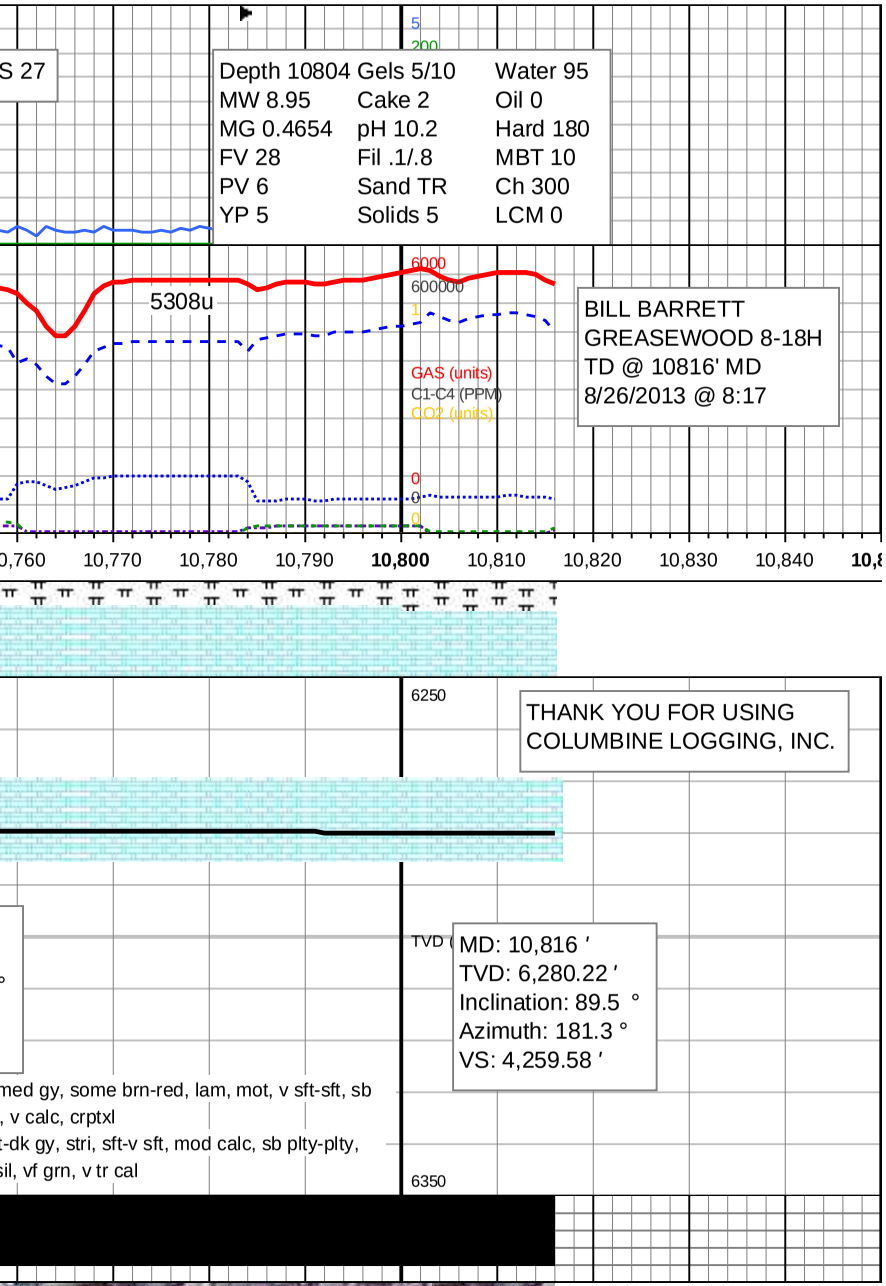
CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-med gy, some brn-red, lam, mot, v sft-sft, sb plty-blky, v calc, crptxl
MARL: lt-dk gy, stri, sft-v sft, mod calc, sb plty-plty, fri- brit, sil, vf grn, v tr cal

CHK: lt-
plty-blky
MARL: l
fri- brit, s


S 27
Depth 10804 Gels 5/10 Water 95
MW 8.95 Cake 2 Oil 0
MG 0.4654 pH 10.2 Hard 180
FV 28 Fil .1/.8 MBT 10
PV 6 Sand TR Ch 300
YP 5 Solids 5 LCM 0
5
200
6000
600000
1
5308u
GAS (units)
C1-C4 (PPM)
CO2 (units)
0
0
0
BILL BARRETT
GREASEWOOD 8-18H
TD @ 10816' MD
8/26/2013 @ 8:17
0,760
10,770
10,780
10,790
10,800
10,810
10,820
10,830
10,840

6250
THANK YOU FOR USING
COLUMBINE LOGGING, INC.
TVD (
MD: 10,816 '
TVD: 6,280.22 '
Inclination: 89.5 °
Azimuth: 181.3 °
VS: 4,259.58 '
med gy, some brn-red, lam, mot, v sft-sft, sb
, v calc, crptxl
-dk gy, stri, sft-v sft, mod calc, sb plty-plty,
il, vf grn, v tr cal
6350