

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name Chandler State D15-72-1HN_HORZ

Location Sec. 15 T3N R64W

State COLORADO

Country USA

API Number #05-123-38322

Region DJ BASIN

Spud Date 4/17/2014

Surface Coordinates 40.231830, -104.529090
300' FNL X 350' FEL

Bottom Hole Coordinates 40.21836, -104.52905
75' FSL X 330' FEL

Ground Elevation 4786'

Logged Interval 700' To 11640'

Formation NIOBRARA C Marl

Type of Drilling Fluid LSND

County WELD

Rig Number PRECISIN 829

AFE # 136990

Field WATTENBERG

Drilling Completed 4/25/2014

K.B. Elevation 4802'

Total Depth 11640'

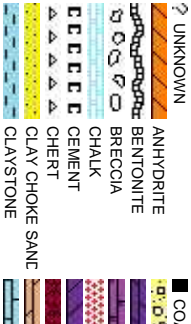
Company Noble Energy Inc

Name Holly Duncan

Company Noble Energy Inc

Jeremy Loftness

Jason Beach



Operator

9.

Geologist

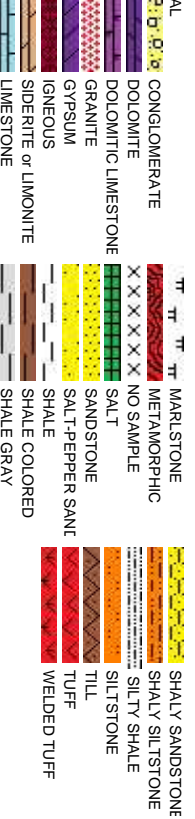
9.

Other

Primary Well-site Geologist

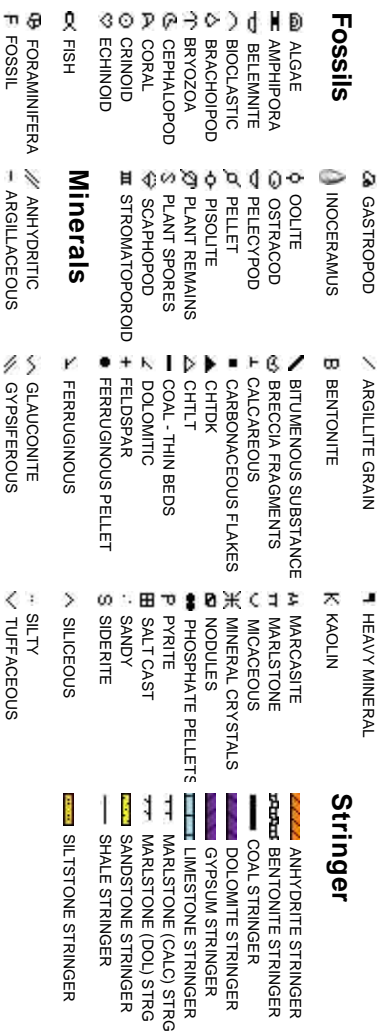
Well-site Geologist

Rock Types



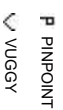
Accessories

Fossils

**Springer**

Other Symbols

Oil Show

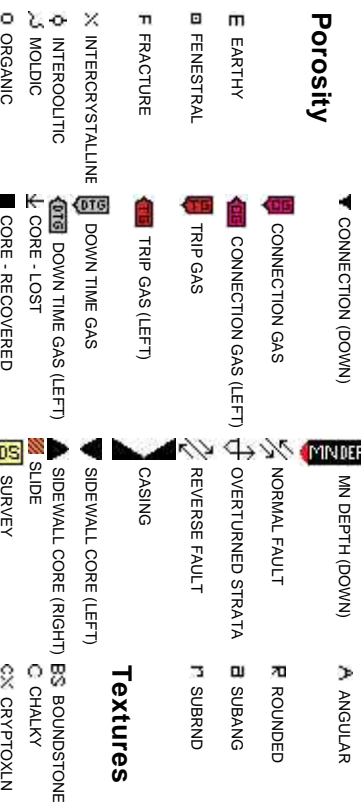


Engineering

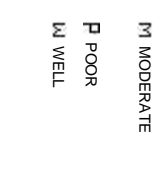


SPOTTED STAINING ▲ CONNECTION (UP)

Porosity



Textures



Slide/Rotate

Log Continued from Chandler
State D15-72-1HN

WT: 9.9/ VS: 36

MINDEPTH
04/22/2014

ROP
ROF
GAMMA

GAS
C1
C2
C3
C4

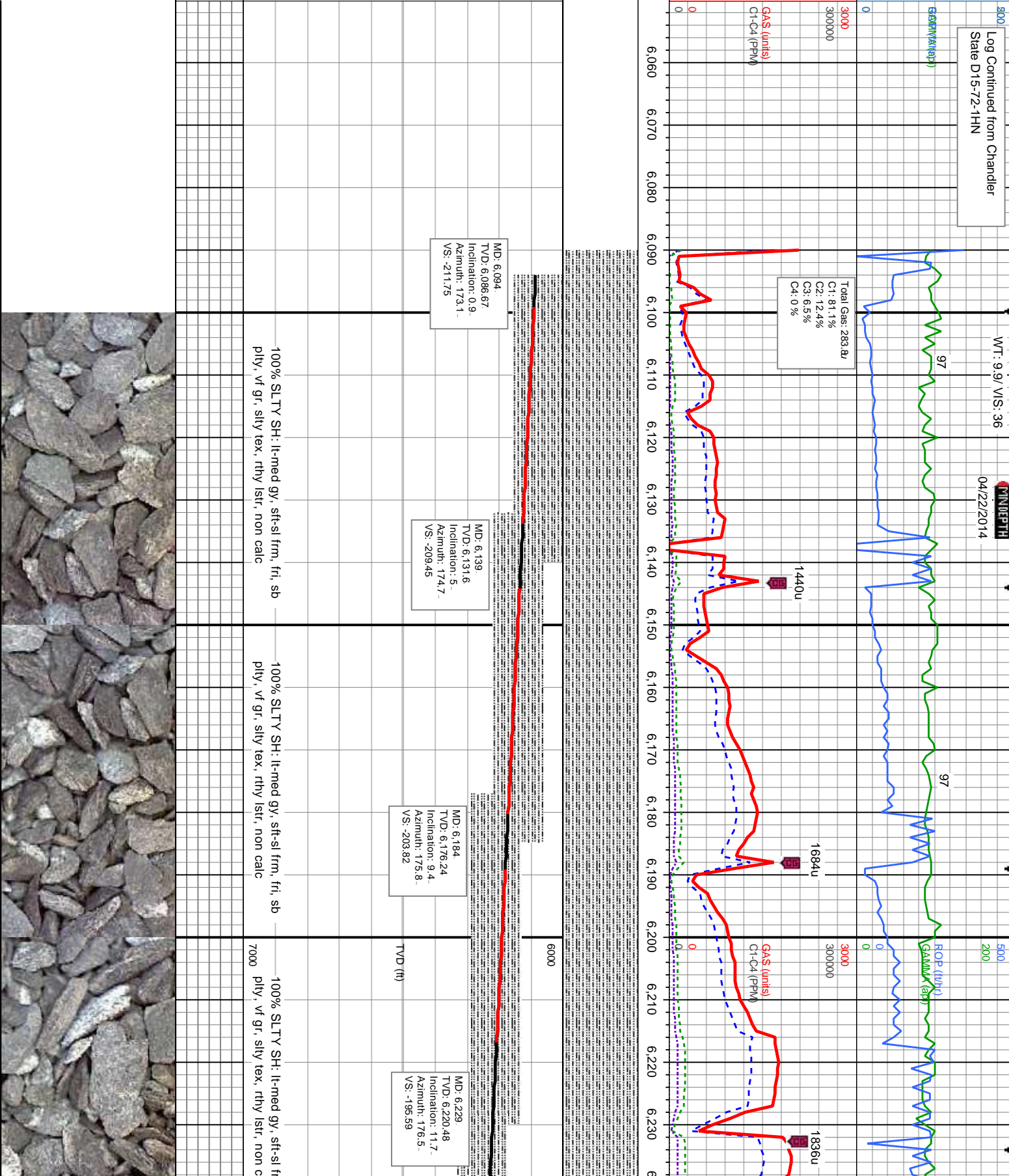
Depth Labels

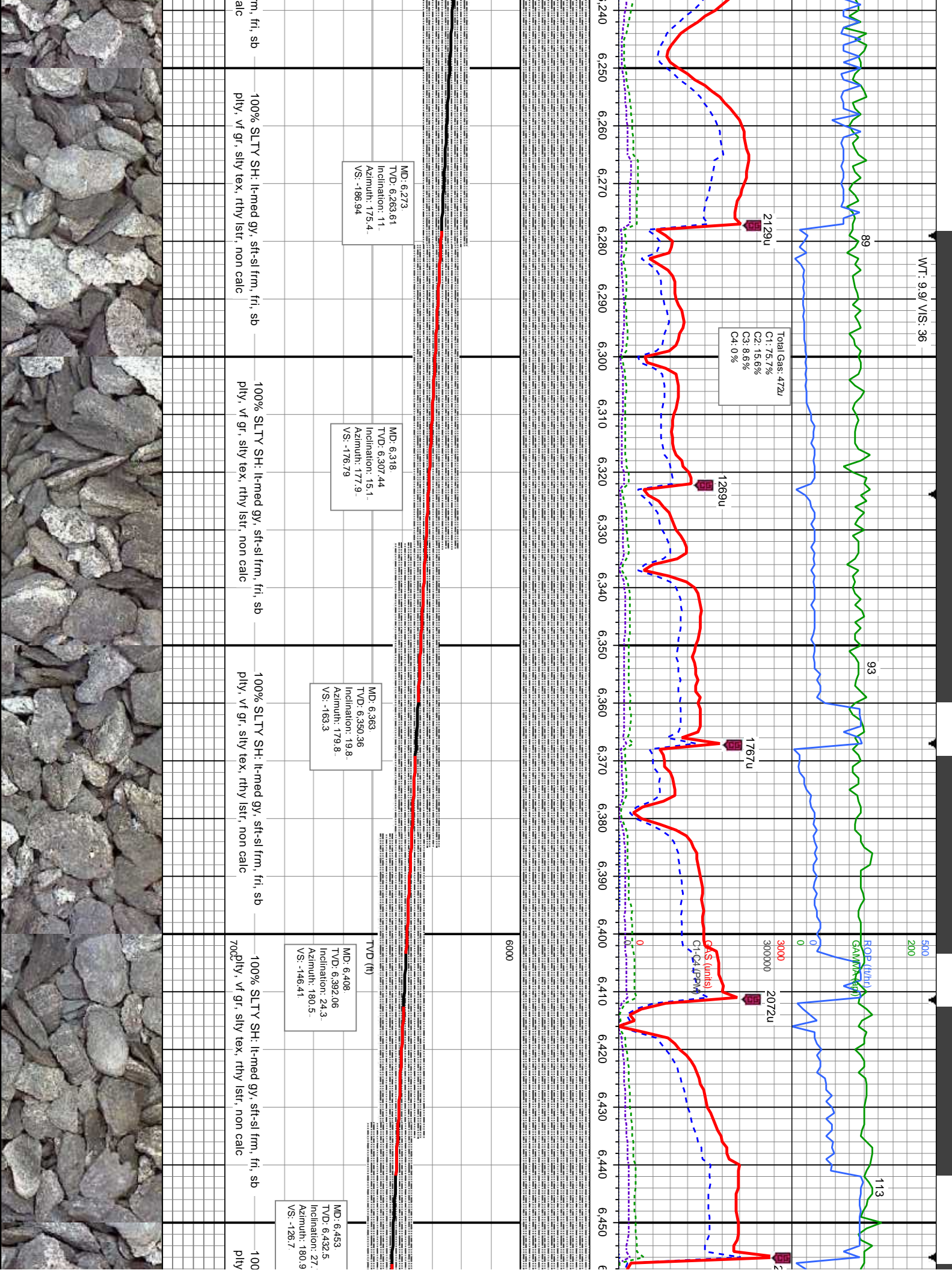
% Lith

Well Bore
TVD

Oil Show

Images





WT: 10.4/ VIS: 36

WT: 10.4/ VIS: 38

ROP (ft/hr)
GAMMA (api)

500 175
200 7000

<<GAS SCALE CHANGE>>

Total Gas: 1.685, tv
C1: 100%
C2: 0%
C3: 0%
C4: 0%

GAS (units)
C1-C4 (PPM)

3372u
3167u
2994u
3683u

GAS (units)
C1-C4 (PPM)

SHARON SPRINGS
6663 MD / 6605 TVD

100% SLTY SH: lt-med gy, sft-sl frm, fri, sb
ply, vf gr, silty tex, rthy lstr, non calc

100% SLTY SH: lt-med gy, sft-sl frm, fri, sb
ply, vf gr, silty tex, rthy lstr, non calc

6000 100% SLTY SH: lt-med gy, sft-sl frm, fri, sb
ply, vf gr, silty tex, rthy lstr, non calc

60% SLTY SH: lt-med gy, s
ply-bkly, vf gr, silty tex, rth
sh, 30% CHK: lgy-crm, mc
ply-bkly, v calc: 10% MRLS
frm-mod nd, sb ply-bkly, s

MD: 6.498
TVD: 6.472.12
Inclination: 28.9
Azimuth: 180.7
VS: -105.37

MD: 6.543
TVD: 6.510.95
Inclination: 31.8
Azimuth: 181.1
VS: -82.64

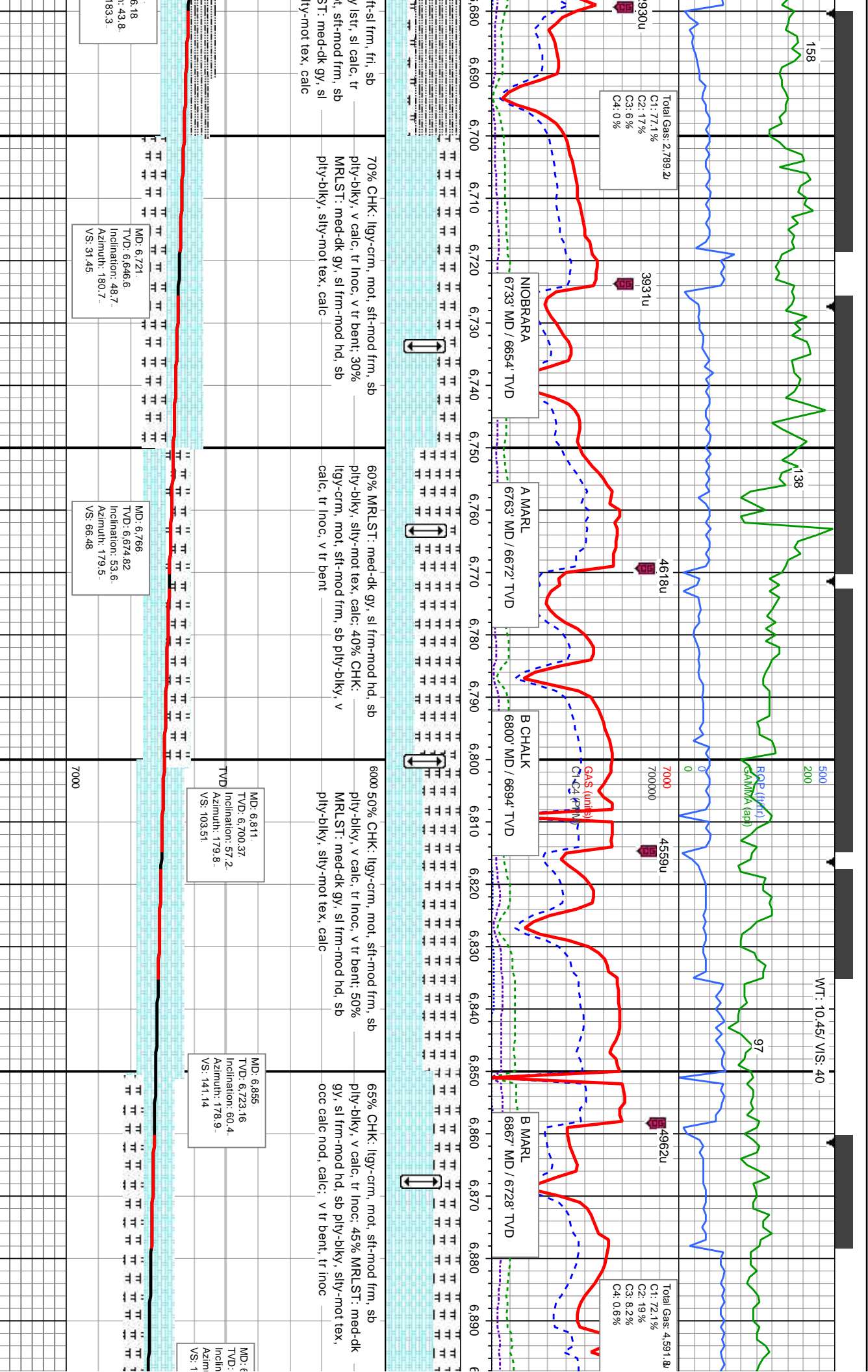
MD: 6.587
TVD: 6.547.33
Inclination: 36.6
Azimuth: 183.2
VS: -57.96

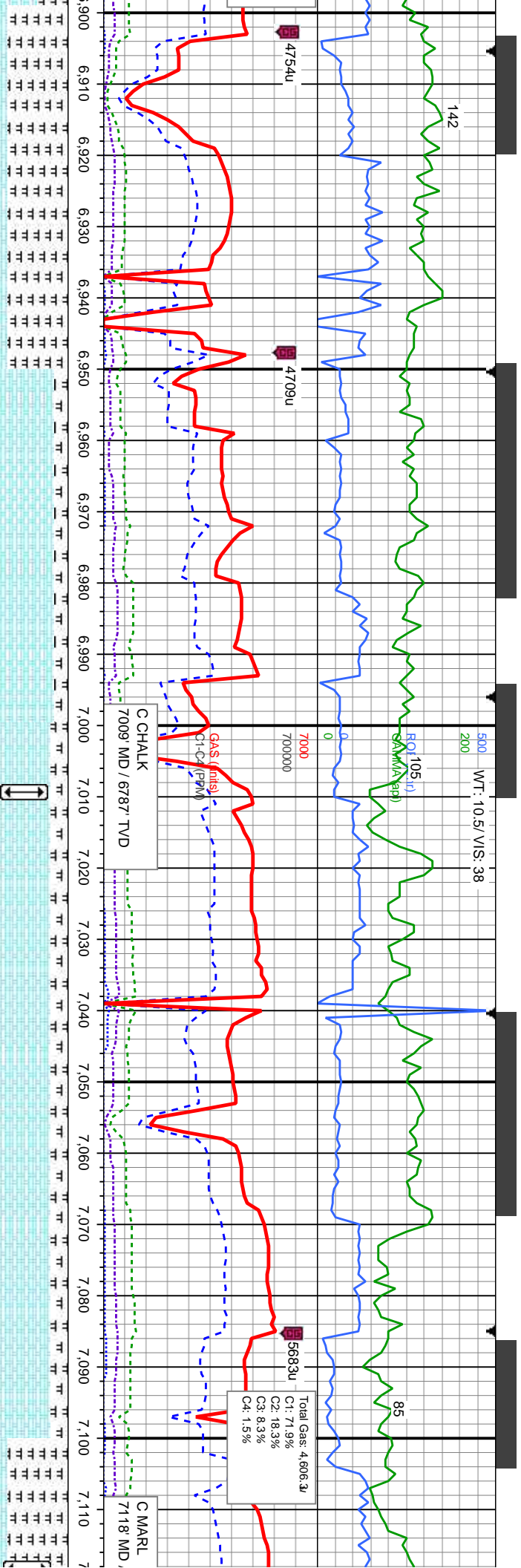
MD: 6.632
TVD: 6.582.66
Inclination: 39.9
Azimuth: 184.7
VS: -30.2

MD: 6.677
TVD: 6.61
Inclination:
Azimuth:
VS: -0.28

% SLTY SH: lt-med gy, sft-sl frm, fri, sb
vf gr, silty tex, rthy lstr, non calc







70% MRLST: med-dk gy, sl frm-mod hd, sb
ply-biky, silty-mot tex, occ calc nod, calc; v
tr bent, tr inoc;
30% CHK: lgy-crm, mot, sft-mod frm, sb
ply-biky, v calc, tr inoc, v tr bent

MD: 6,945
TVD: 6,764.21
Inclination: 65.2
Azimuth: 180
VS: 221.2

85% CHK: lgy-crm, mot, sft-mod frm, sb
ply-biky, v calc, tr inoc, v tr bent; 15%
MRLST: med-dk gy, sl frm-mod hd, sb
ply-biky, silty-mot tex, calc

MD: 6,990
TVD: 6,781.47
Inclination: 69.7
Azimuth: 180.9
VS: 262.74

6000 80% CHK: lgy-crm-brn, mot, sft-mod frm, sb
ply-biky, v calc
20% MRLST: med-dk gy, sl frm-mod hd, sb
ply-biky, silty-mot tex, occ calc nod, calc; tr
bent, tr inoc

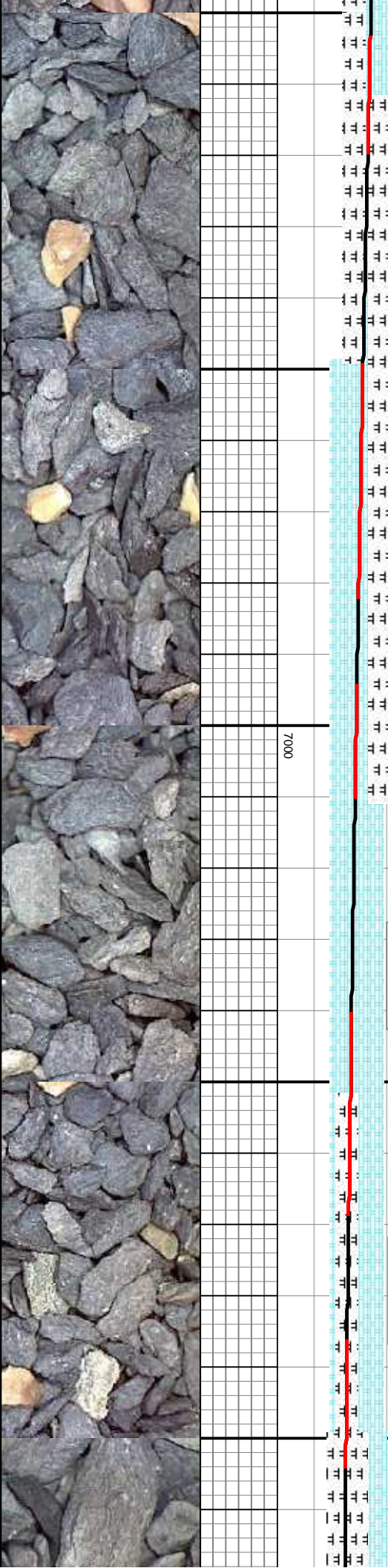
MD: 7,035
TVD: 6,796.15
Inclination: 72.2
Azimuth: 181.4
VS: 305.25

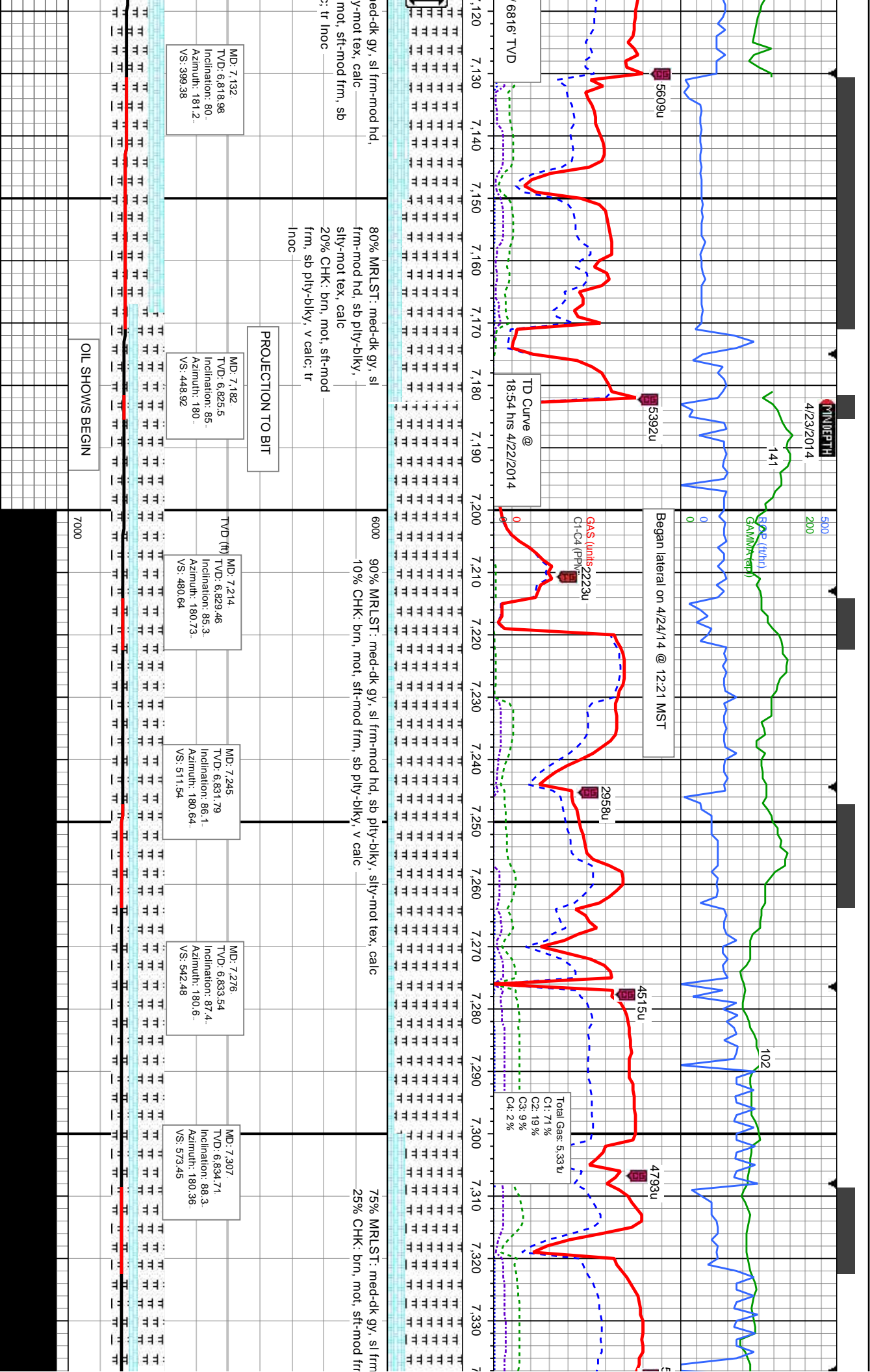
80% CHK: lgy-crm-brn, mot, sft-mod frm, sb
ply-biky, v calc
20% MRLST: med-dk gy, sl frm-mod hd, sb
ply-biky, silty-mot tex, occ calc nod, calc; tr
bent, tr inoc

MD: 7,079
TVD: 6,808.09
Inclination: 76.3
Azimuth: 181.6
VS: 347.56

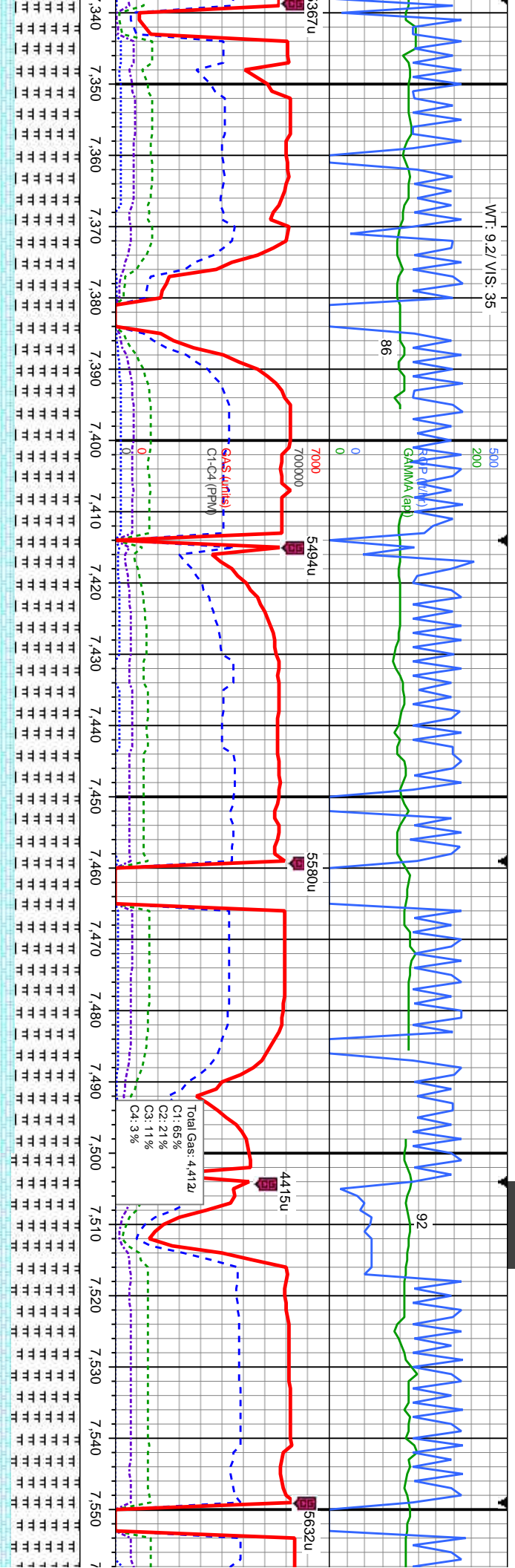
70% MRLST: r
sb ply-biky, sil
30% CHK: brn,
ply-biky, v calc

MD: 6,945
TVD: 6,764.21
Inclination: 65.2
Azimuth: 180
VS: 221.2





WT: 9.2/ VIS: 35



-mod hd, sb pty-bkly, silty-mot tex, calc
n, sb pty-bkly, v calc

6000 75% MRLST: med-dk gy, sl frm-mod hd, sb pty-bkly, v calc
25% CHK: brn, mot, sft-mod frm, sb pty-bkly, v calc

80% MRLST: med-dk gy, sl frm-mod hd, sb pty-bkly,
20% CHK: brn, mot, sft-mod frm, sb pty-bkly, v calc

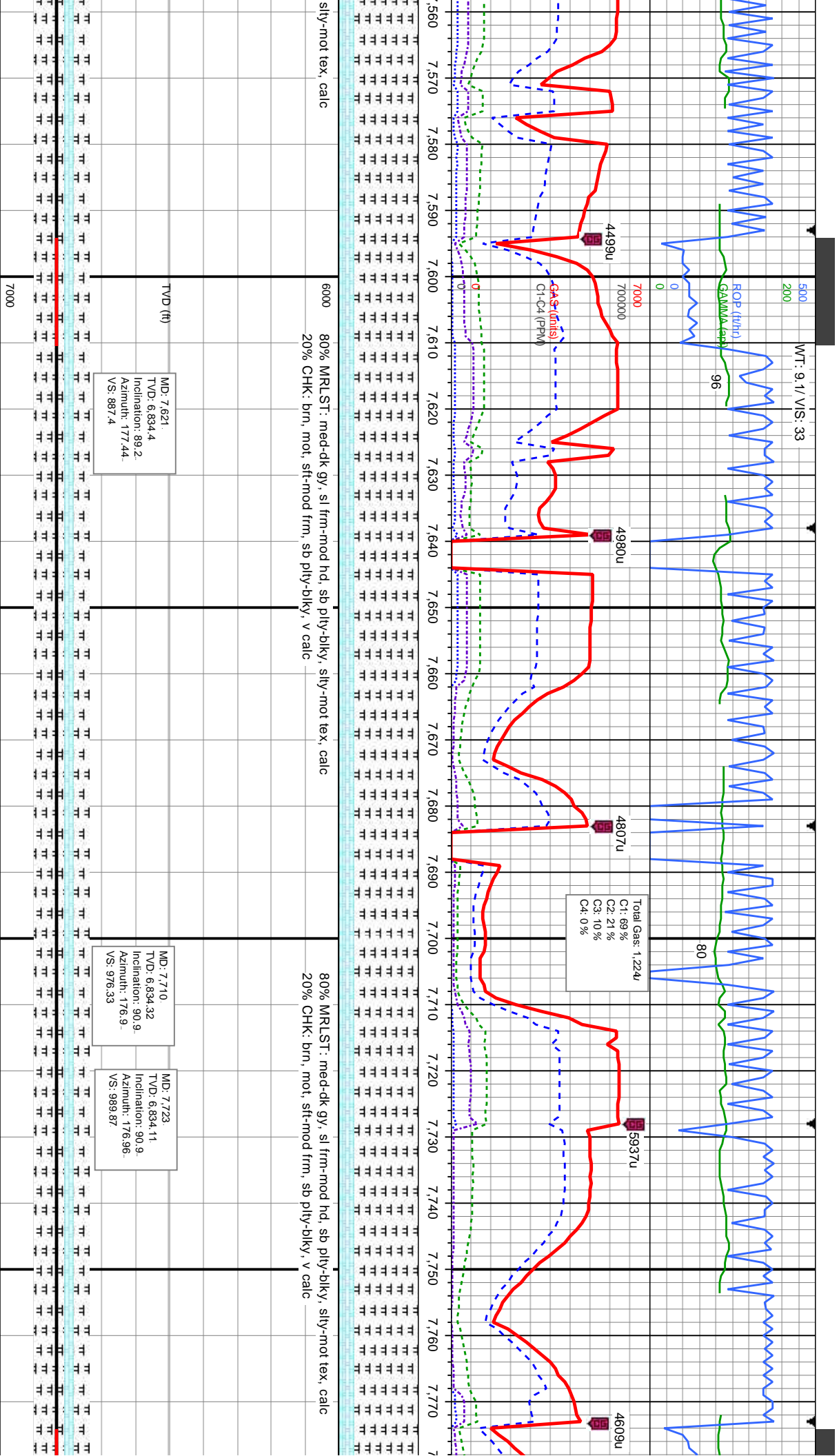
MD: 7,352
TVD: 6,835.57
Inclination: 89.5
Azimuth: 180.3
VS: 618.44

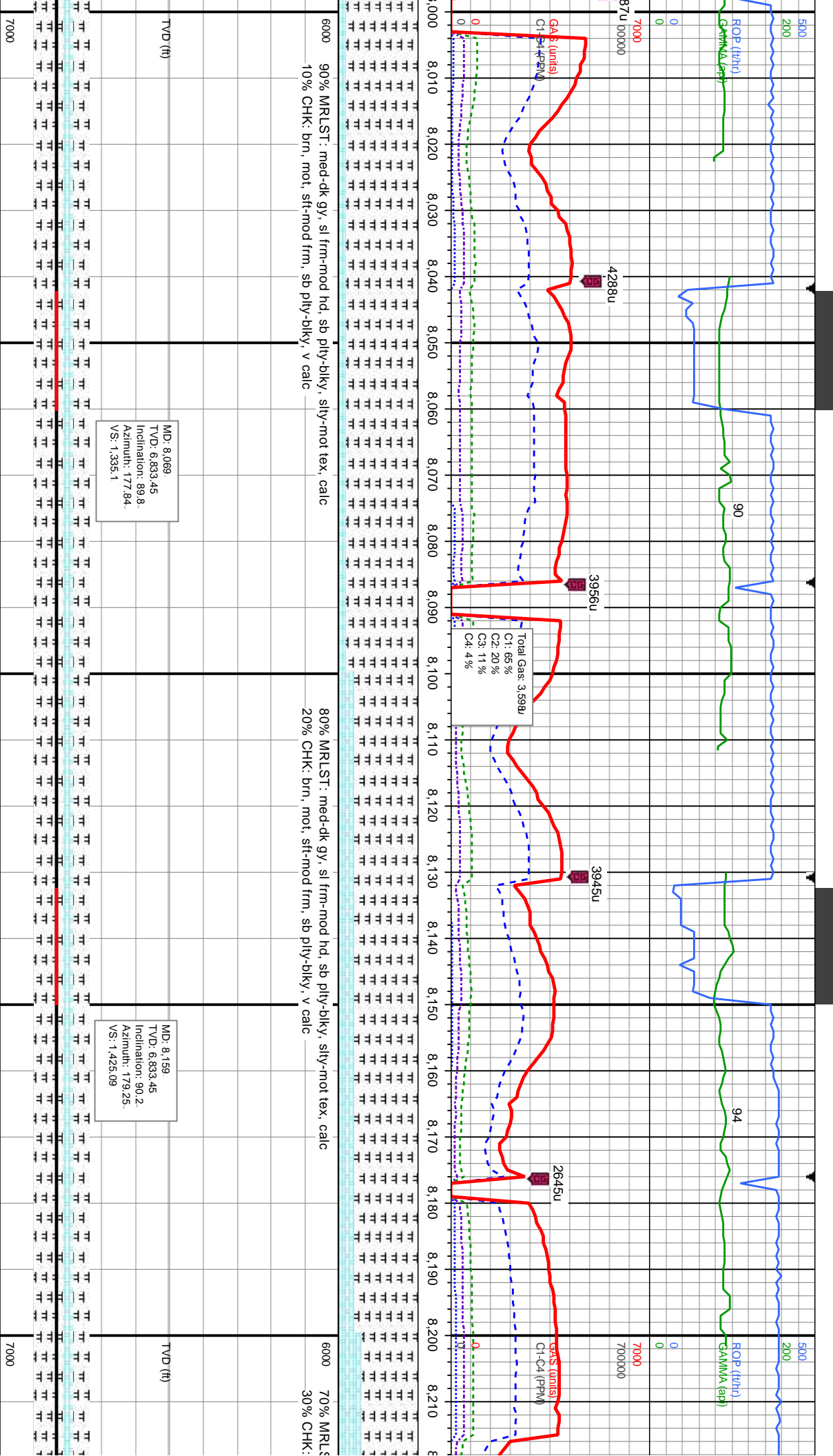
TVD (ft)

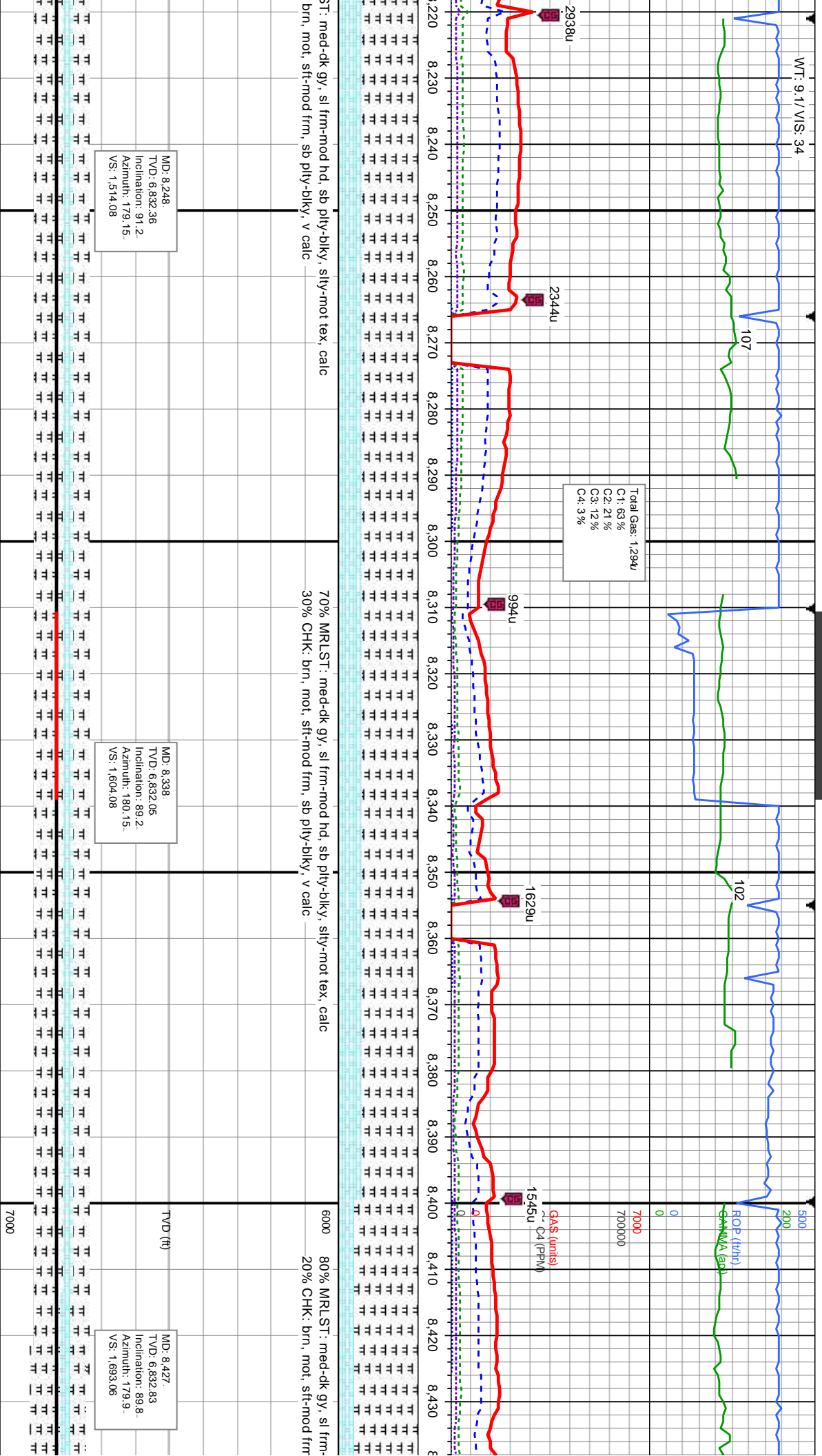
MD: 7,441
TVD: 6,835.18
Inclination: 91
Azimuth: 179.97
VS: 707.42

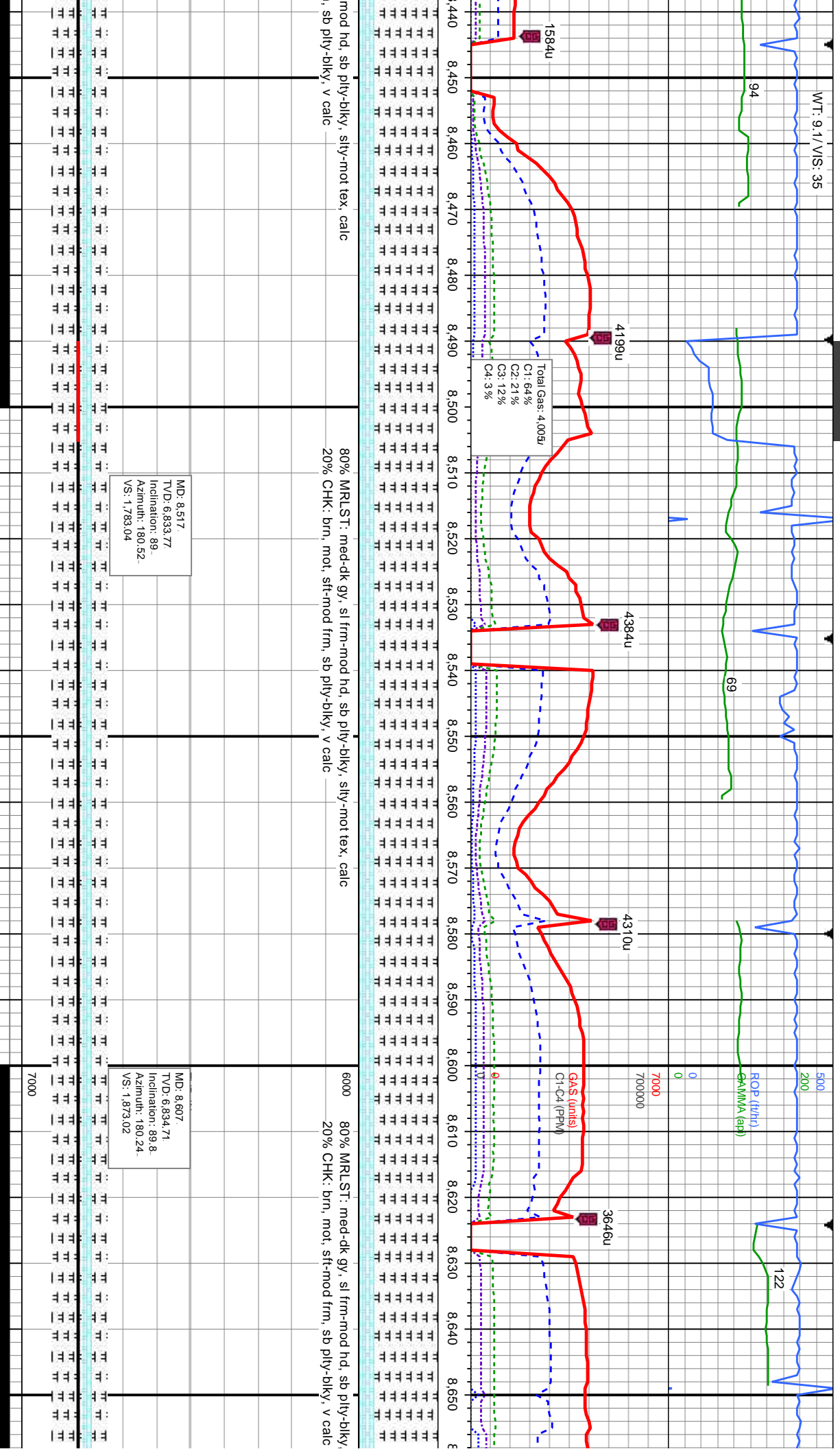
MD: 7,531
TVD: 6,834.08
Inclination: 90.4
Azimuth: 179.19
VS: 797.41

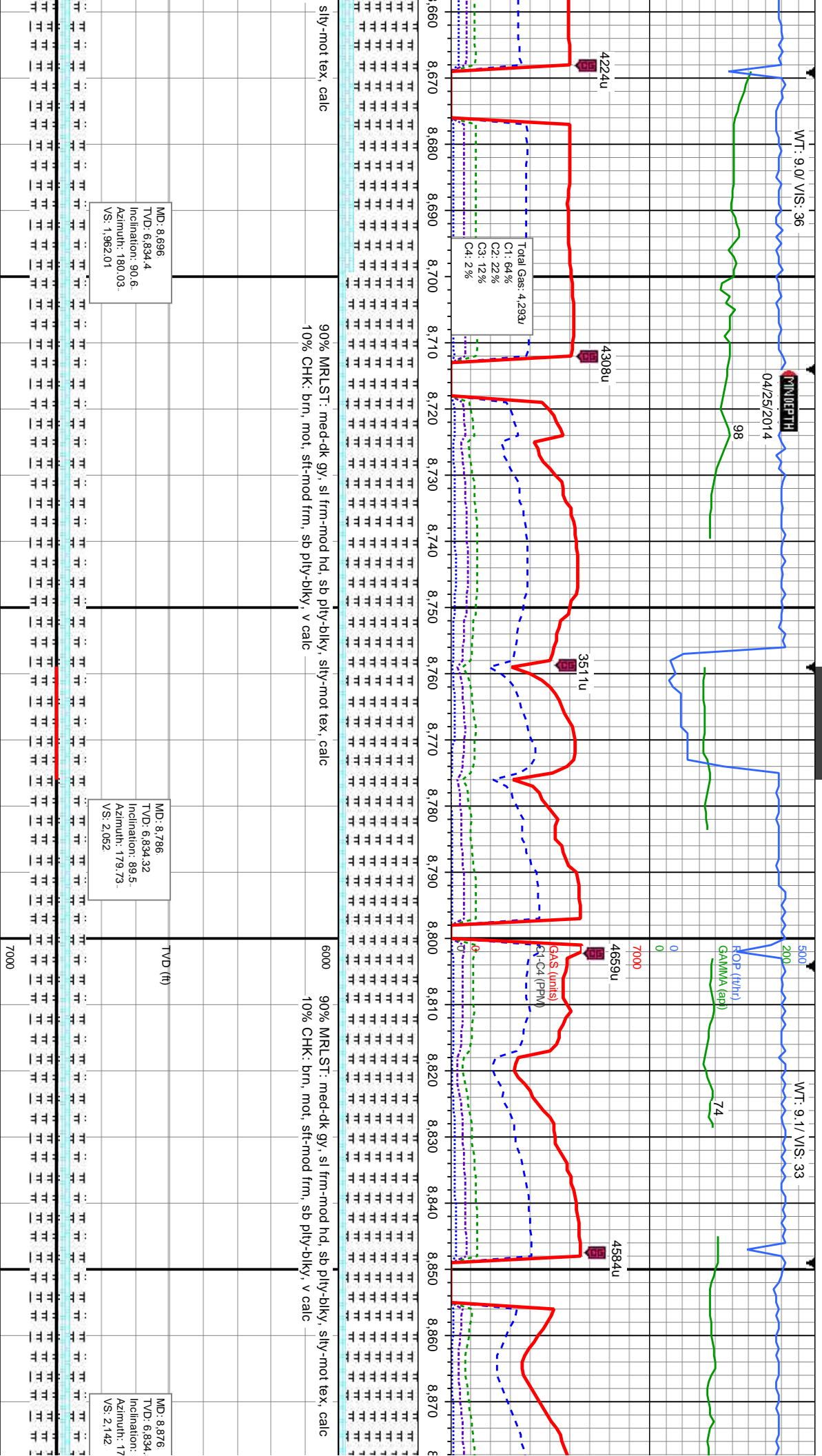


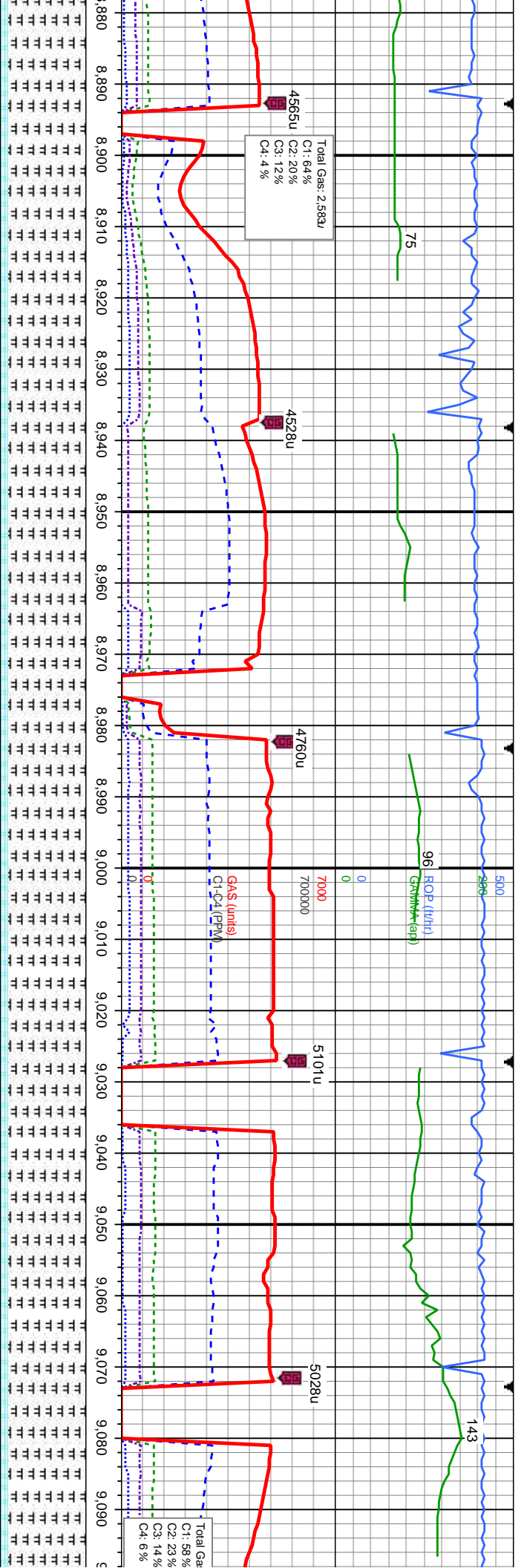












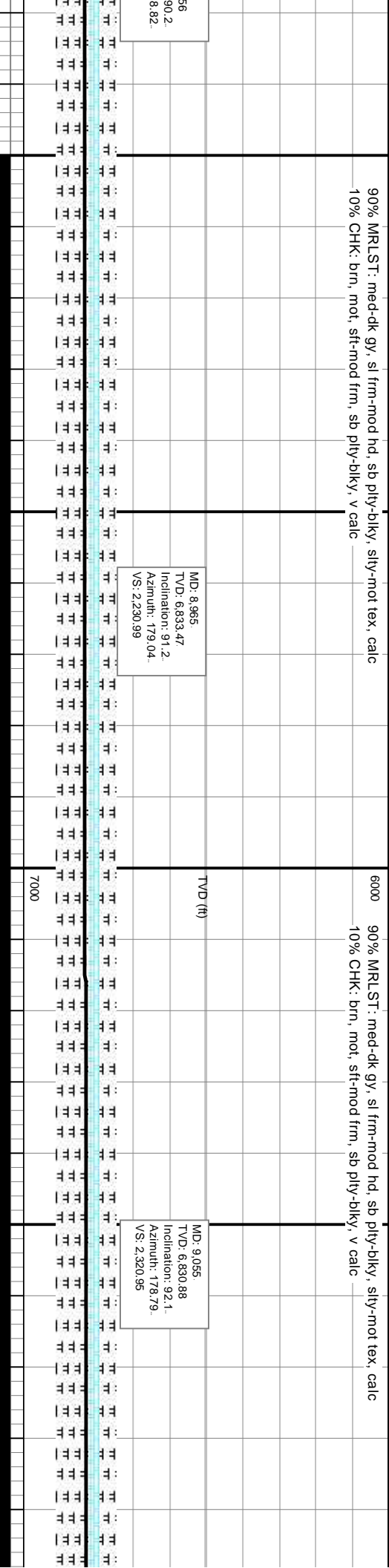
90% MR.LST: med-dk gy, sl frm-mod hd, sb ply-biky, silty-mot tex, calc
10% CHK: brn, mod, sft-mod frm, sb ply-biky, v calc

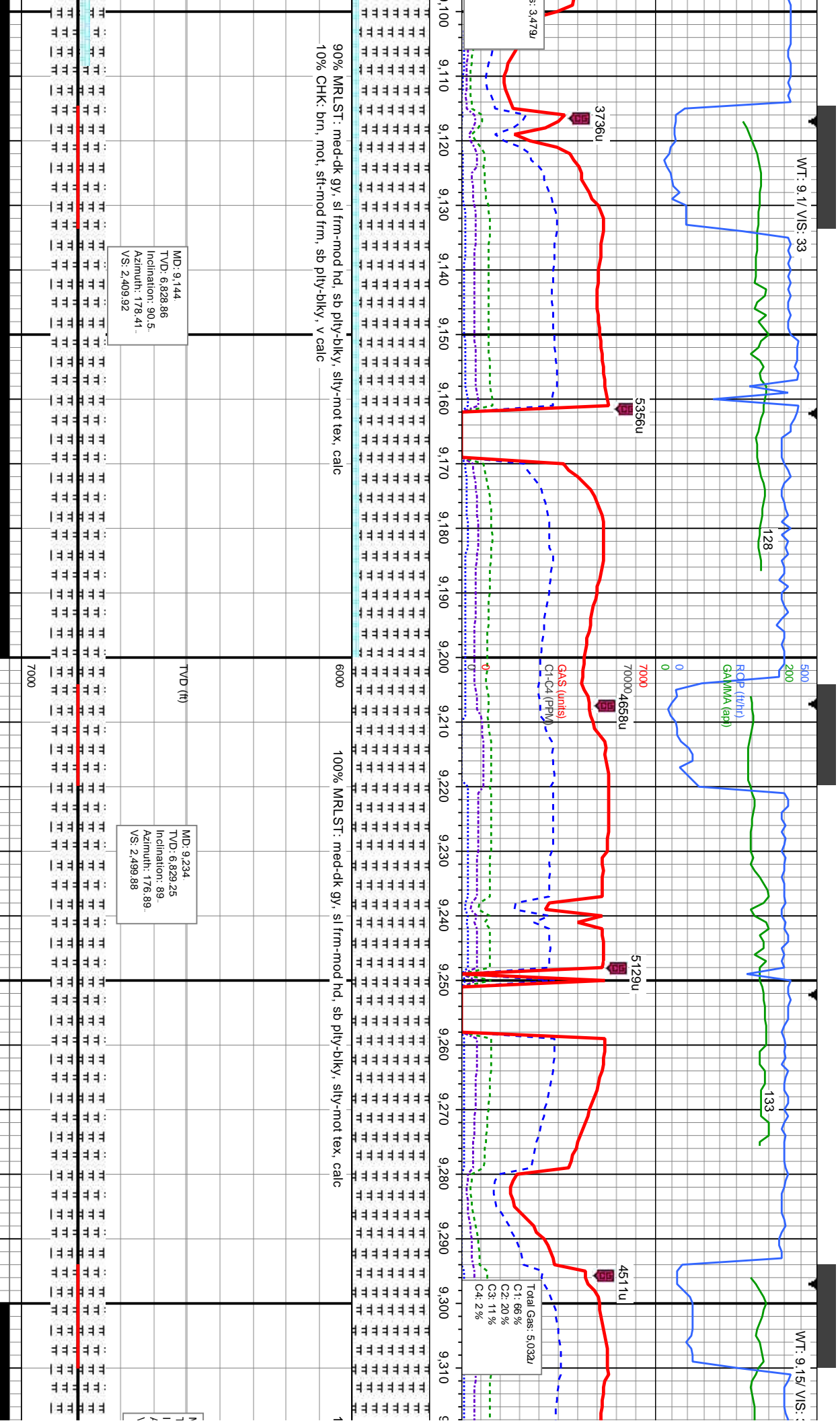
MD: 8.965
TVD: 6.833.47
Inclination: 91.2
Azimuth: 179.04
VS: 2.230.99

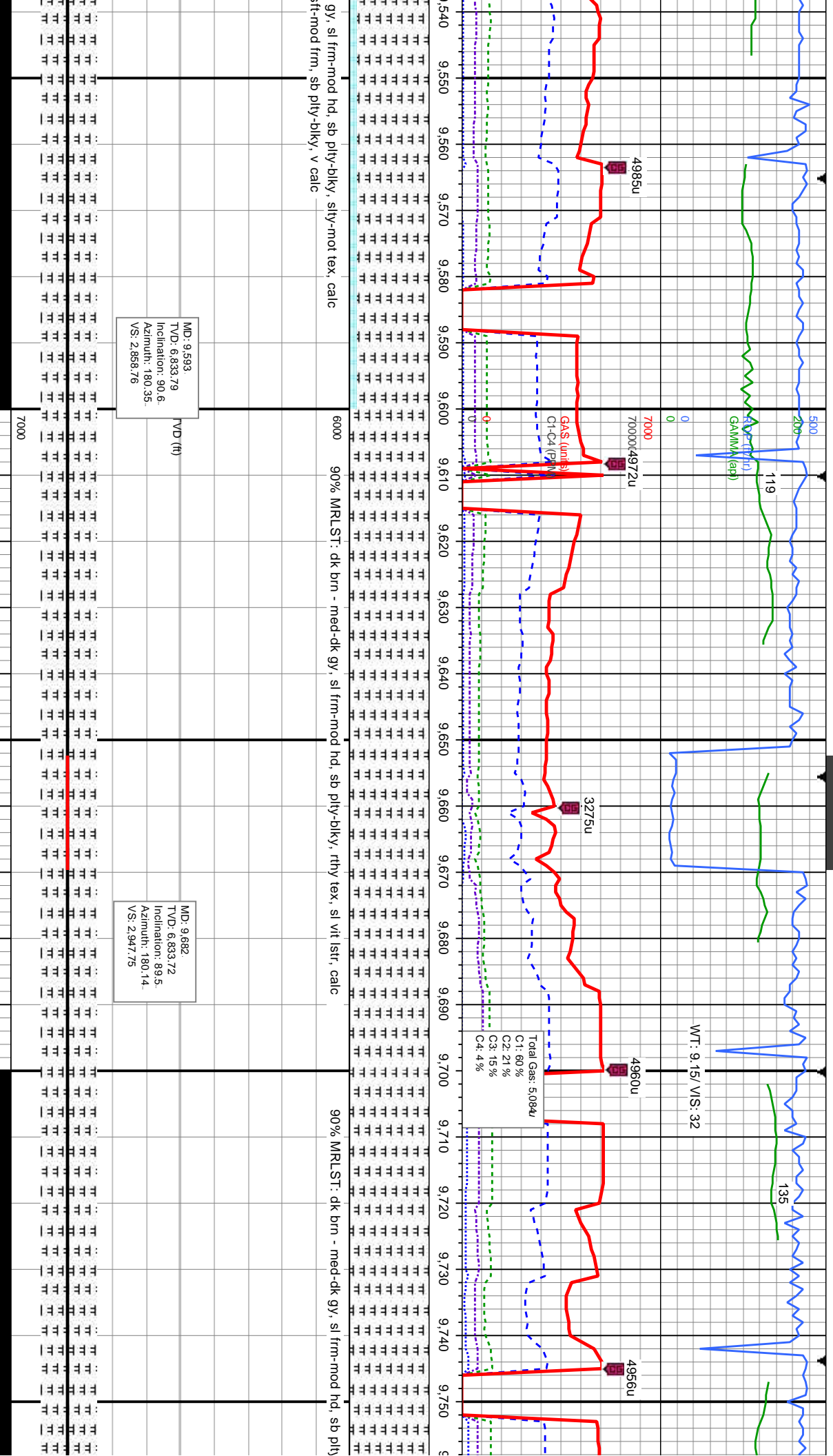
MD: 8.965
TVD: 6.833.47
Inclination: 91.2
Azimuth: 179.04
VS: 2.230.99

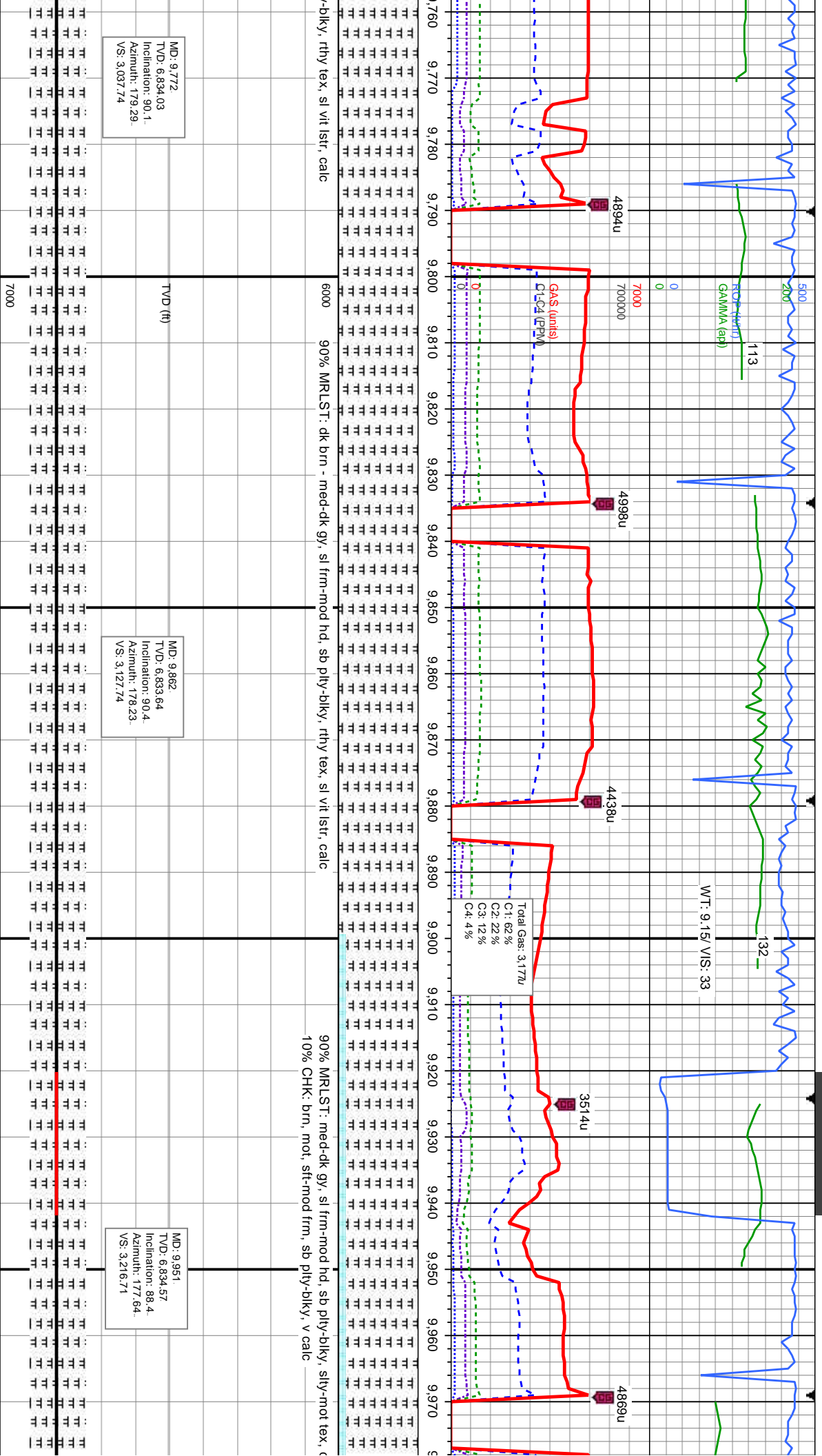
MD: 9.055
TVD: 6.830.88
Inclination: 92.1
Azimuth: 178.79
VS: 2.320.95

90% MR.LST: med-dk gy, sl frm-mod hd, sb ply-biky, silty-mot tex, calc
10% CHK: brn, mod, sft-mod frm, sb ply-biky, v calc







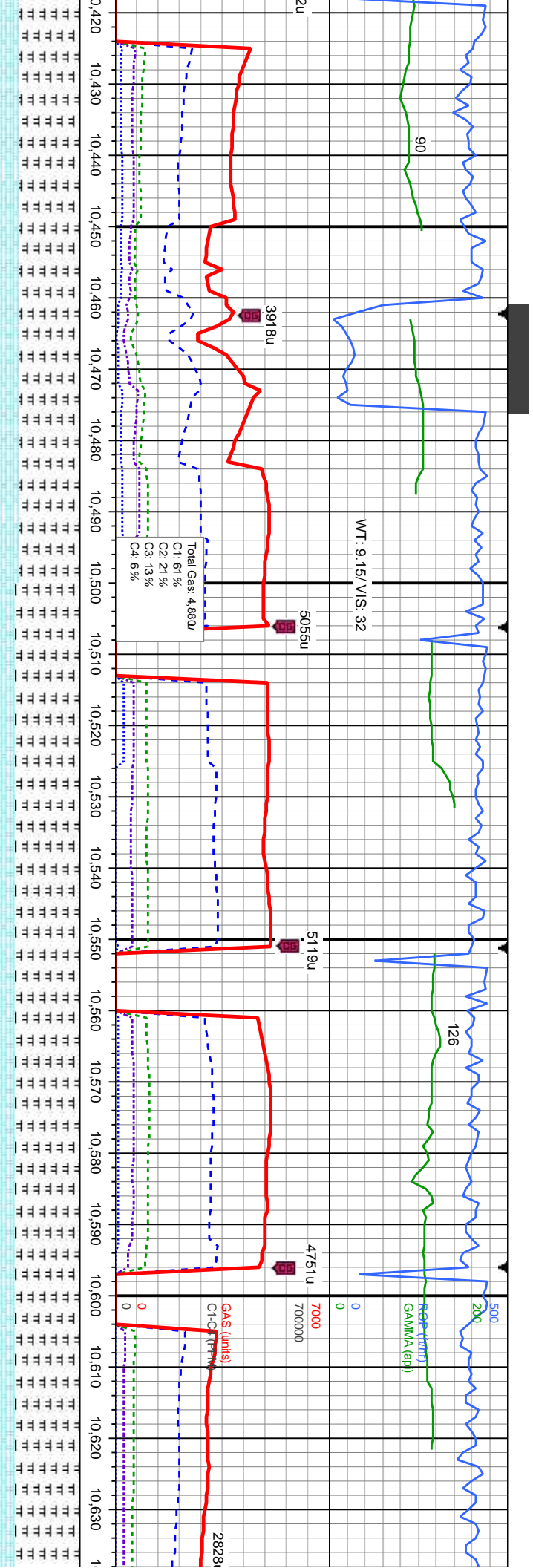


MD: 9.772
TVD: 6.834.03
Inclination: 90.1
Azimuth: 179.29
VS: 3.037.74

MD: 9.862
TVD: 6.833.64
Inclination: 90.4
Azimuth: 178.23
VS: 3.127.74

MD: 9.951
TVD: 6.834.57
Inclination: 88.4
Azimuth: 177.64
VS: 3.216.71





MRLST: med-dk gy, sl frm-mod hd, sb pty-bkly, silty-mot tex, calc
HK: brn, mot, sft-mod frm, sb pty-bkly, v calc

75% MRLST: med-dk gy, sl frm-mod hd, sb pty-bkly, silty-mot tex, calc
25% CHK: brn, mot, sft-mod frm, sb pty-bkly, v calc

6000 75% MRLST: med-dk gy, sl frm
25% CHK: brn, mot, sft-mod frm

MD: 10.489
TVD: 6.835.84
Inclination: 90.8
Azimuth: 180.95
VS: 3.754.56

MD: 10.579
TVD: 6.834.19
Inclination: 91.3
Azimuth: 180.8
VS: 3.844.51

TVD (ft)
7000



