



Scale: 5" / 100'
Measured Depth Log

Well Name BERRY FARMS 31C-8HZ

Location SEC 8 T3N R67W

State COLORADO

County WELD

Country UNITED STATES OF AMERICA

Rig Number ENSIGN 145

API Number 051233889600

AFE # 2091185

Region DJ BASIN

Field WATTENBERG

Spud Date 5/31/2014

Drilling Completed 6/7/2014

Surface Coordinates LAT/LONG: 40.2439584/-104.9053724
FNL: 1337' FEL: 300'

Bottom Hole Coordinates FFNLL: 1035' FFWLL: 50'

Ground Elevation 4,821'

K.B. Elevation 4,833'

Logged Interval 6,700'

To 11,919'

Total Depth 11,919'

Formation CODELL

Type of Drilling Fluid FWLSND

Operator

Company Anadarko

Address 1099 18TH ST.
DENVER, CO. 80202

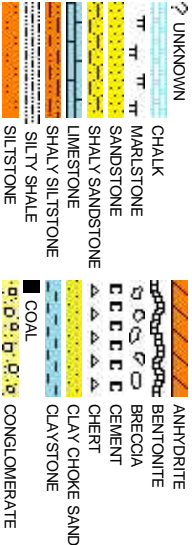
Geology

Name Mohammed Almubarak, Jack Weinerth, J
Company COLUMBINE LOGGING, INC.
Address 2385 S. Lipan St
Denver, CO 80223

Zone Color



Rock Type



tor

gist

eramy Murray

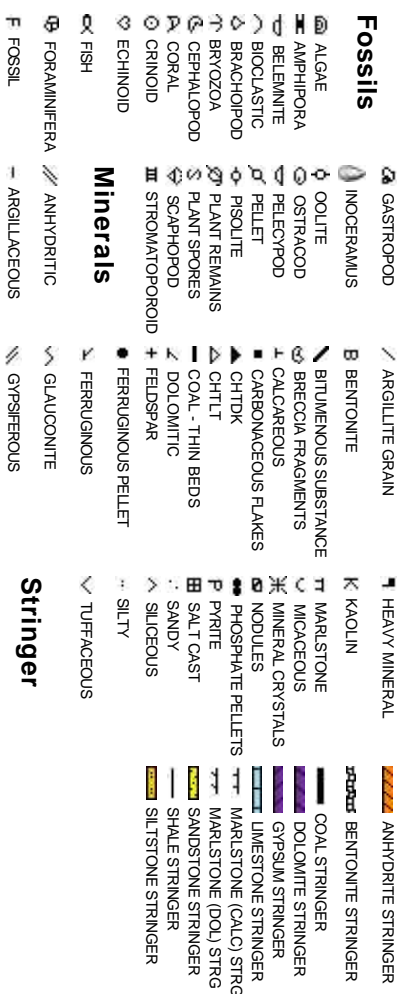
Coding



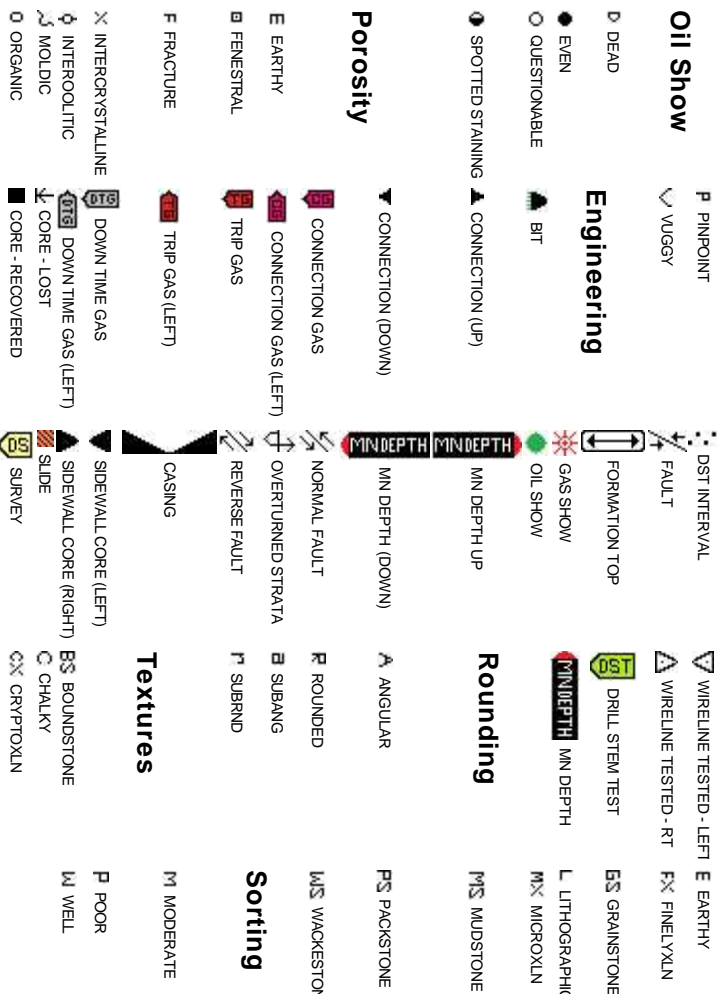
ypes



Accessories



Other Symbols



Slide/Rotate

ROP

ROP

Total Gas & Chromatograph

- GAS
- C1
 - C2
 - C3
 - C4

Depth Labels

% Lith

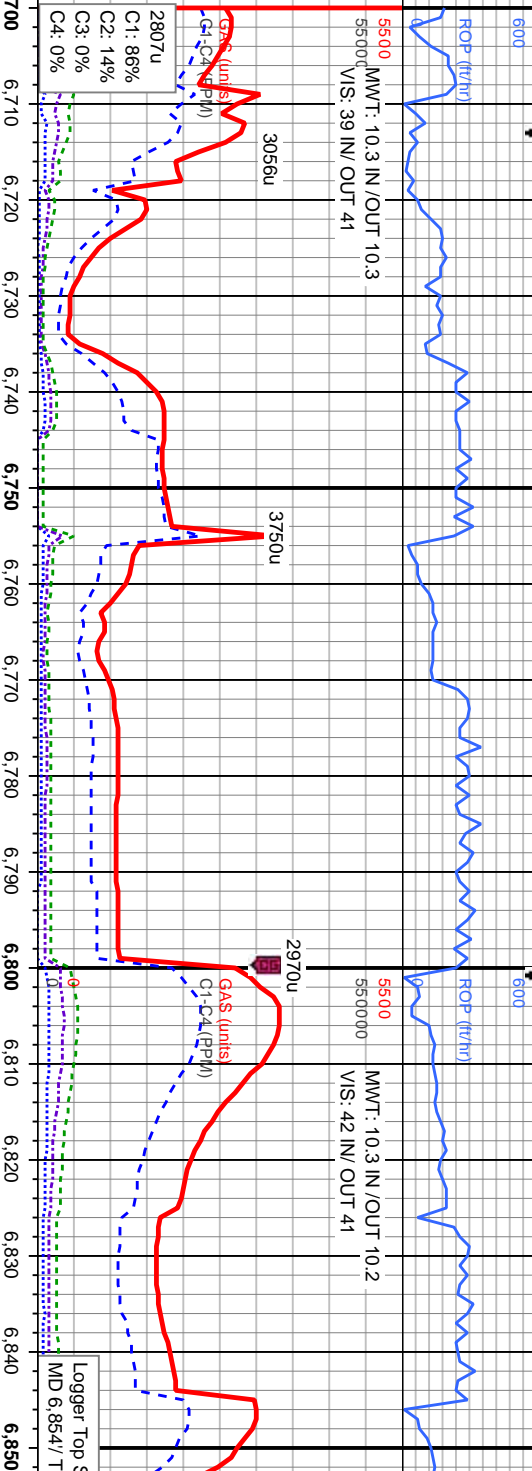
Curves

GAMMA

Well Bore
TV D

Oil Show

Images



COLUMBINE LOGGING 06/1/14
1-MAN LOGGING - CURVE
2-MAN LOGGING - LATERAL
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #314

Bit Data
Bit #: 1
Type: SDI611
Size: 8.75
Depth In: 826"
Jets: 6 x 20
S/N: JH7092

MD: 6,742
TVD: 6,703.67
Inclination: 20.3
Azimuth: 265.05

MD: 6,787
TVD: 6,745.59
Inclination: 22.35
Azimuth: 262.43

MD: 6,832
TVD: 6,786.74
Inclination: 25.37
Azimuth: 263.66

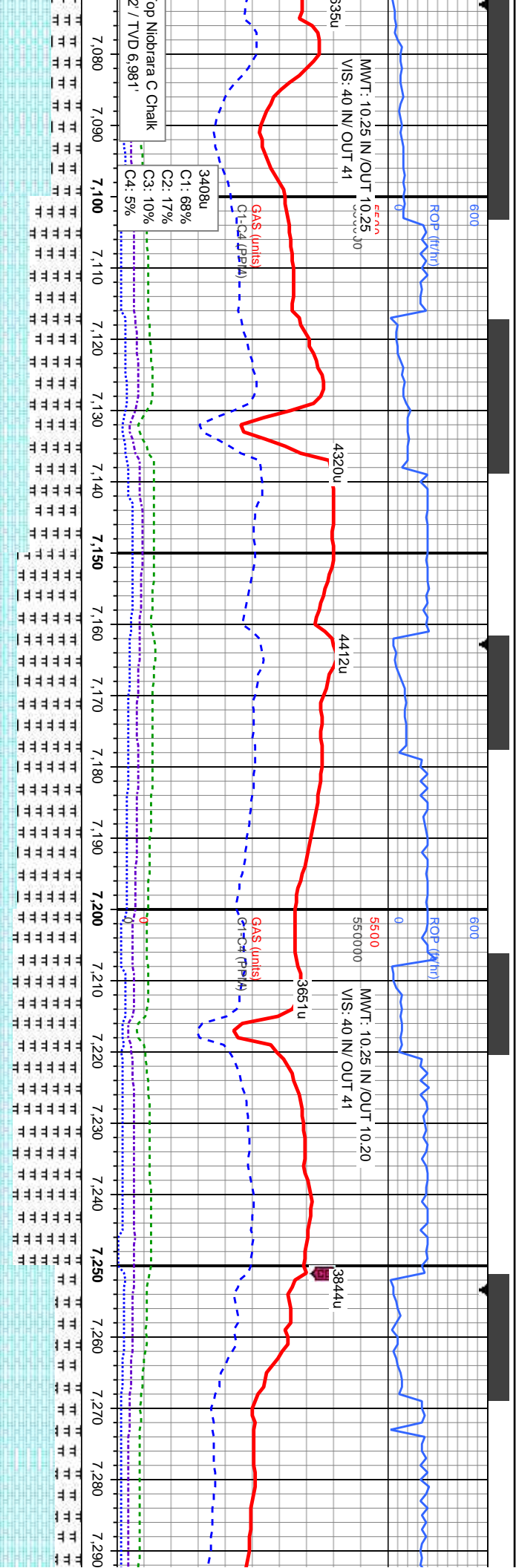
100% SLTY SH: lt - dk gy/brn, sb pty - pty, silty
tex, v f grn, sft - mod frm, v sl calc, com bent; O
SHW: thk mod bl/wh cut, slow thk bl/wh string,
mod shn, tr o

100% SLTY SH: lt - dk gy/brn, sb pty - pty, silty
tex, v f grn, sft - mod frm, v sl calc, com bent; O
SHW: thk mod bl/wh cut, slow thk bl/wh string,
mod shn, tr o

90% SLTY SH: lt - dk gy/brn, sb pty - pty, silty
tex, v f grn, sft - mod frm, v sl calc, 10%
MRSLT: med - dk gy/brn, silty tex, arg, fri, sl
mot, sft - mod, calc, sb pty - sb rnd, abnt
bent; O SHW: thk mod bl/wh cut, fast thk
gcb/wh string, g stn, g o

E
G
M
FR
TR
SL





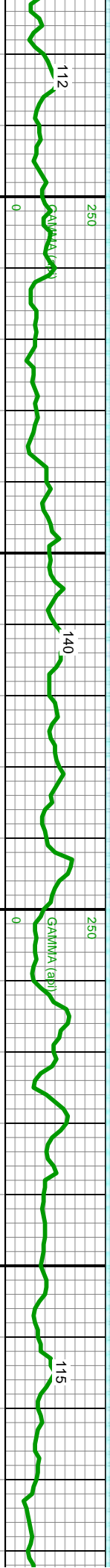
Top Niobrara C Chalk
2' / TVD 6.981'

3408u
C1: 68%
C2: 17%
C3: 10%
C4: 5%

MMWT: 10.25 IN/OUT 10.25
VIS: 40 IN/OUT 41

MMWT: 10.25 IN/OUT 10.20
VIS: 40 IN/OUT 41

3844u



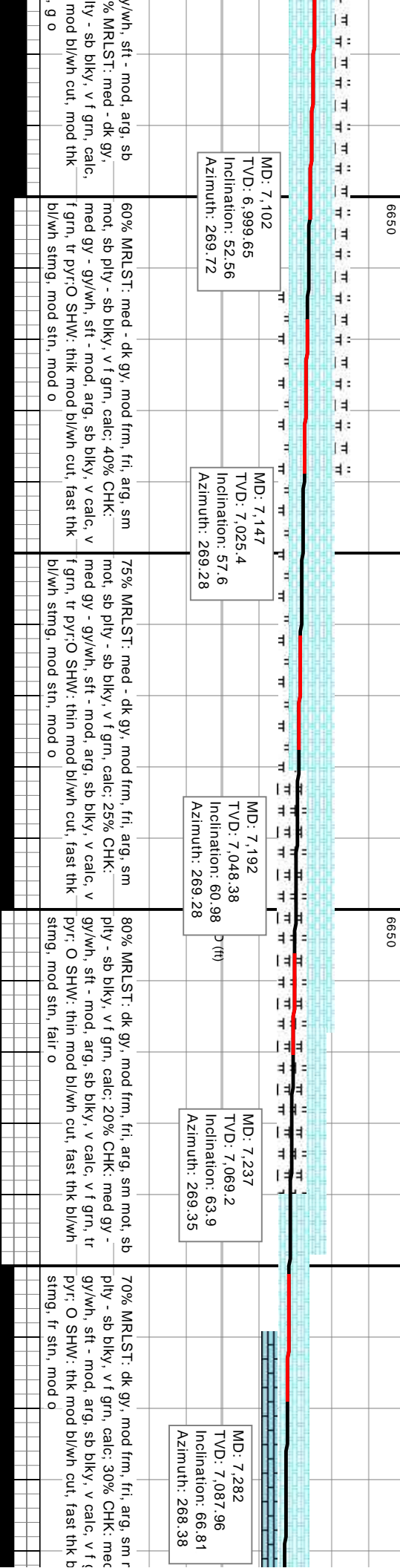
MD: 7.102
TVD: 6.999.65
Inclination: 52.56
Azimuth: 269.72

MD: 7.147
TVD: 7.025.4
Inclination: 57.6
Azimuth: 269.28

MD: 7.192
TVD: 7.048.38
Inclination: 60.98
Azimuth: 269.28

MD: 7.237
TVD: 7.069.2
Inclination: 63.9
Azimuth: 269.35

MD: 7.282
TVD: 7.087.96
Inclination: 66.81
Azimuth: 268.38

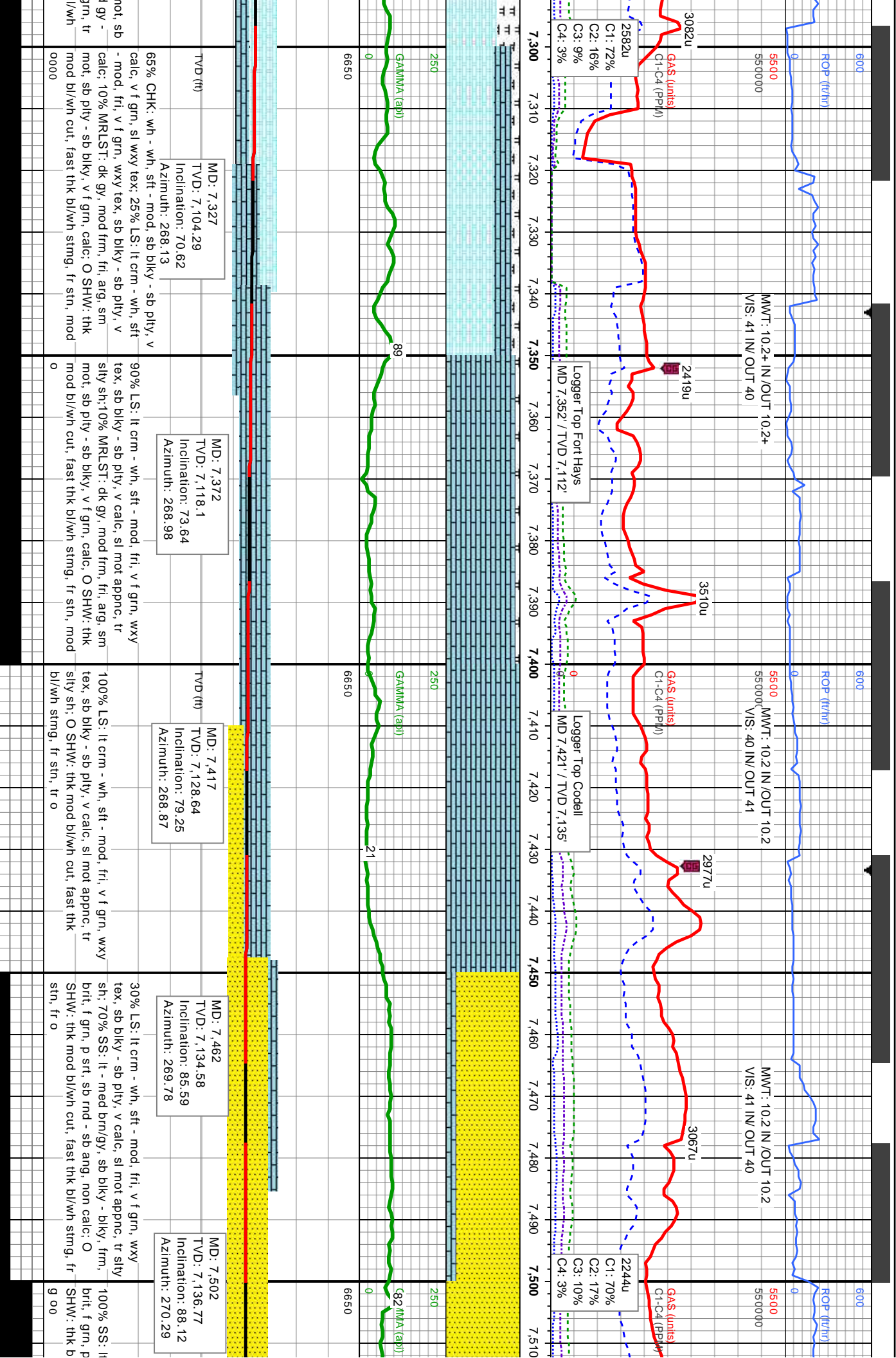


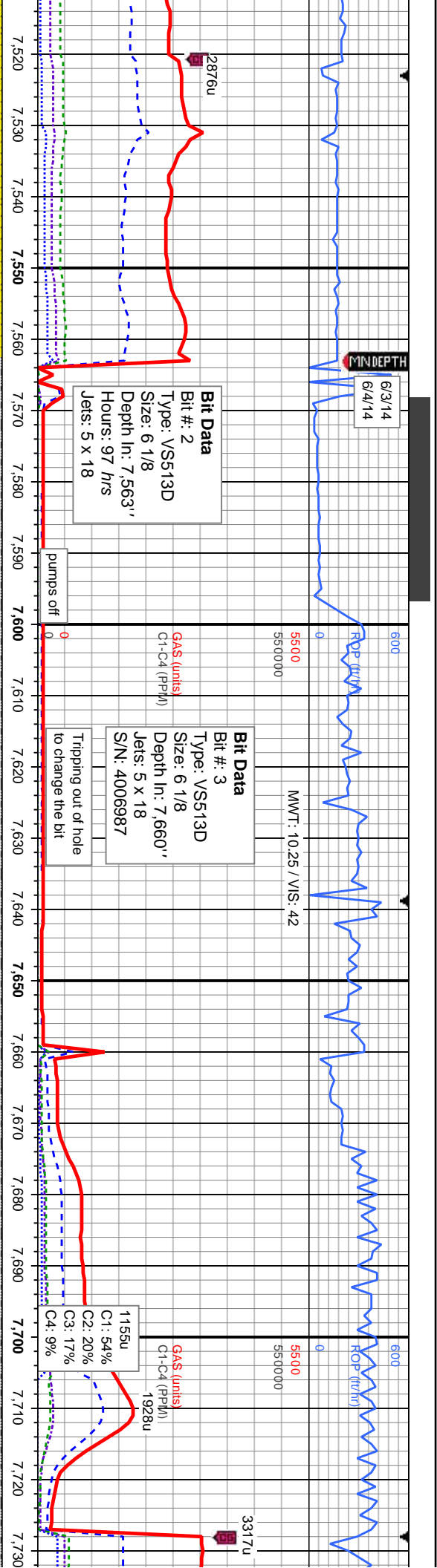
60% MRLST: med - dk gy, mod frm, fri, arg, sm mot, sb ply - sb blkly, v f grn, calc: 40% CHK: med gy - gy/wh, sft - mod, arg, sb blkly, v calc, v f grn, tr pyr: O SHW: thk mod bl/wh cut, fast thk bl/wh string, mod str, mod o

75% MRLST: med - dk gy, mod frm, fri, arg, sm mot, sb ply - sb blkly, v f grn, calc: 25% CHK: med gy - gy/wh, sft - mod, arg, sb blkly, v calc, v f grn, tr pyr: O SHW: thin mod bl/wh cut, fast thk bl/wh string, mod str, mod o

80% MRLST: dk gy, mod frm, fri, arg, sm mot, sb ply - sb blkly, v f grn, calc: 20% CHK: med gy - gy/wh, sft - mod, arg, sb blkly, v calc, v f grn, tr pyr: O SHW: thin mod bl/wh cut, fast thk bl/wh string, mod str, mod o

70% MRLST: dk gy, mod frm, fri, arg, sm mot, sb ply - sb blkly, v f grn, calc: 30% CHK: med gy - gy/wh, sft - mod, arg, sb blkly, v calc, v f grn, tr pyr: O SHW: thk mod bl/wh cut, fast thk bl/wh string, mod str, mod o





MD: 7,571
TVD: 7,137.56
Inclination: 90.58
Azimuth: 271.76

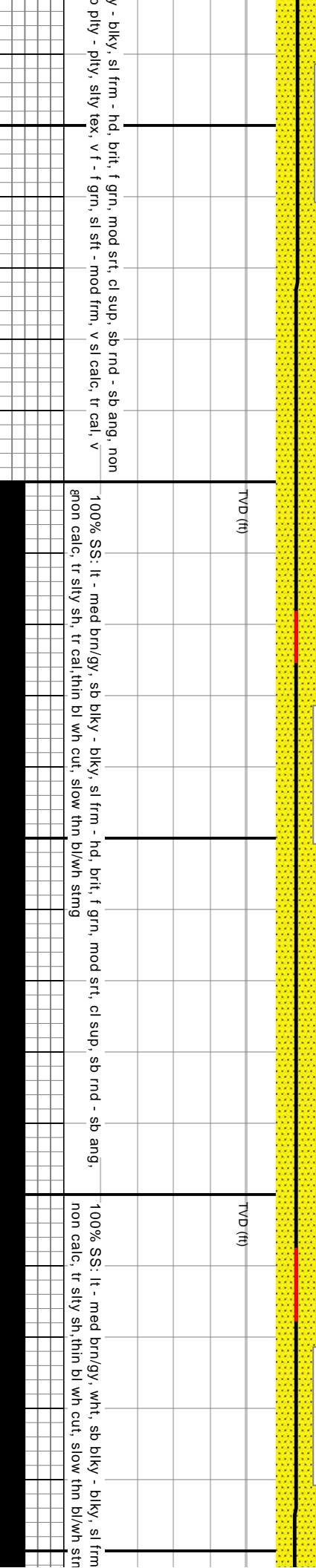
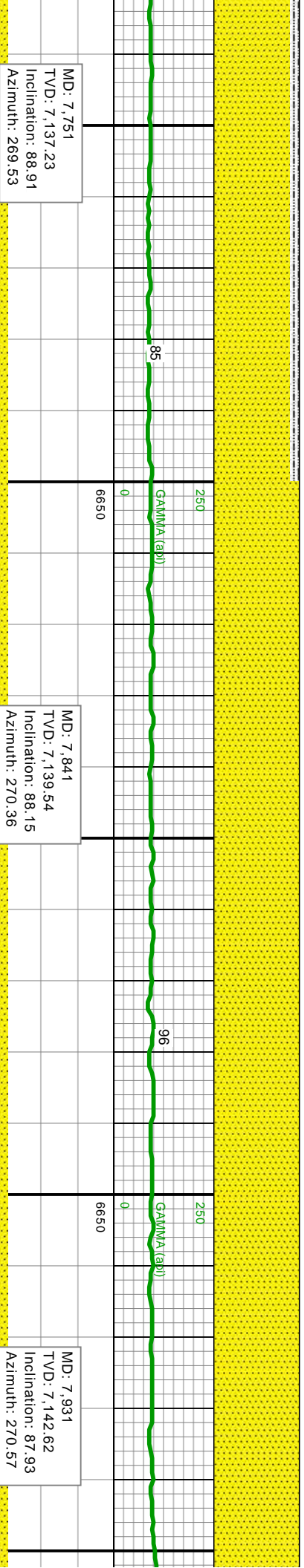
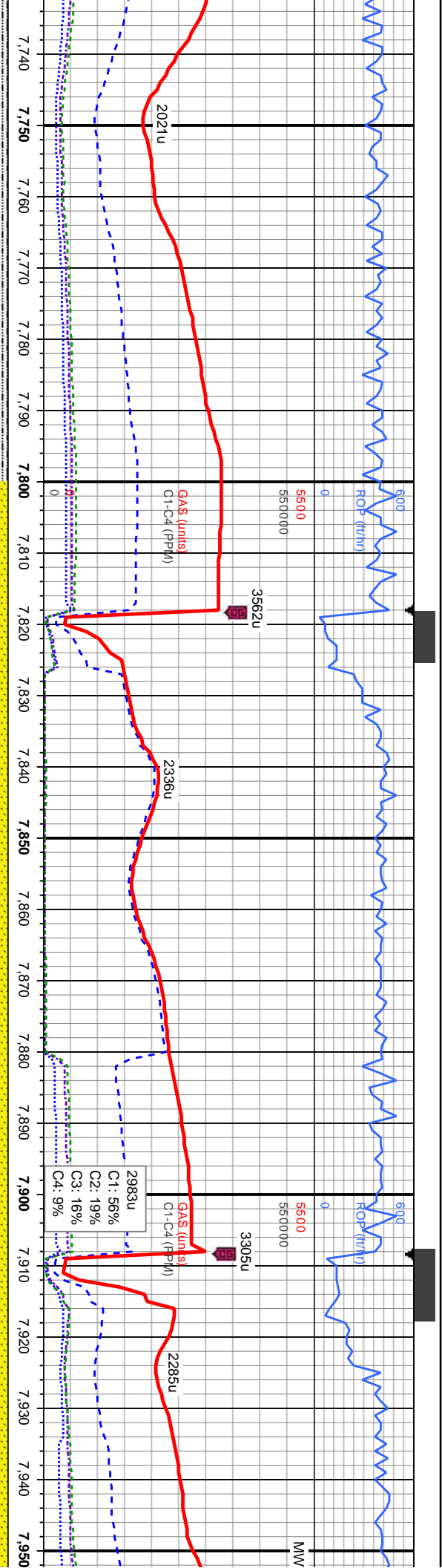
MD: 7,563
TVD: 7,138.29
Inclination: 89.04
Azimuth: 270.29

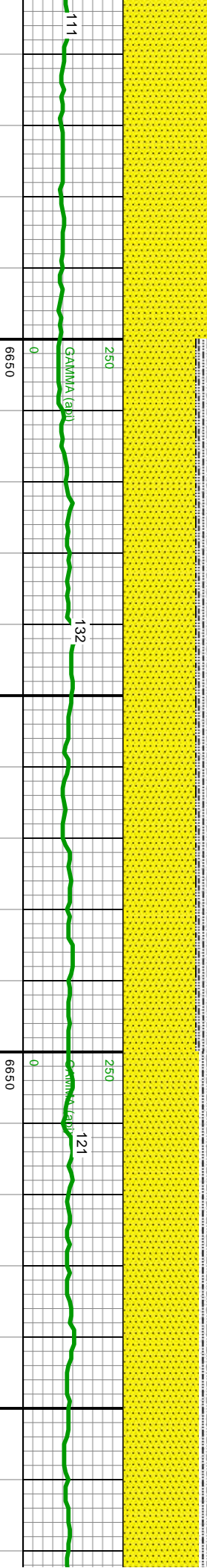
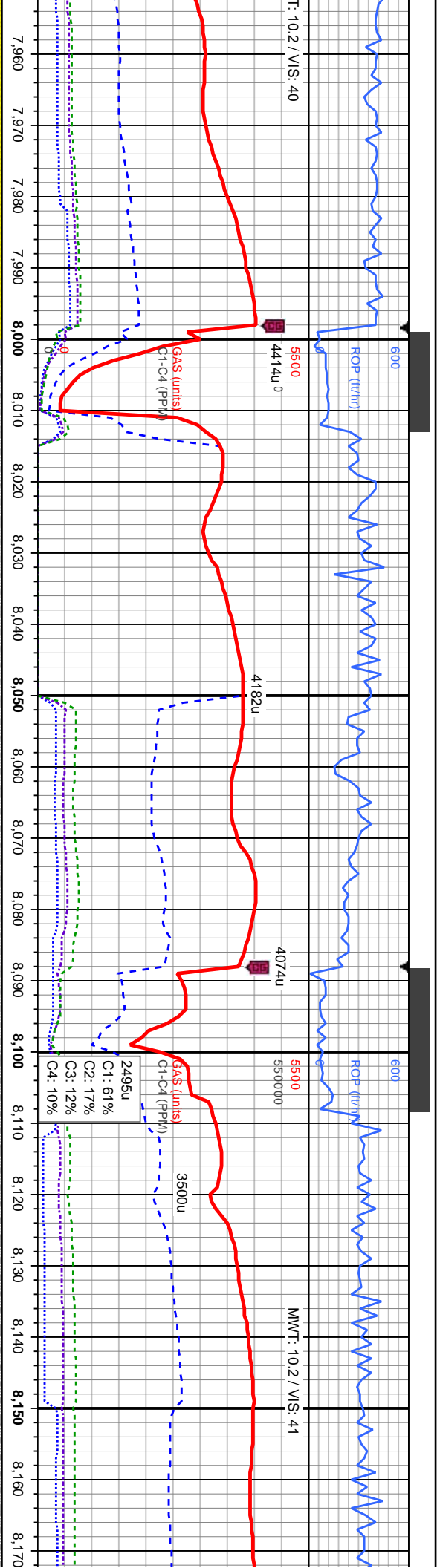
70% SLTY SH: lt - dk gy, sb pily - pily, silty
tex, v f - f grn, sl sft - mod frm, v sl calc; 30%
SS: lt - med brn/gy, sb blk - blk, sl frm,
brlt, f grn, p srl, sb rnd - sb ang, non calc, tr
lmst, v thin wh cut, no stmg

40% SLTY SH: lt - dk gy, sb pily - pily, silty tex, v f - f grn, sl sft - mod frm, v sl calc; 60% SS: lt -
med brn/gy, sb blk - blk, sl frm, brlt, f grn, p srl, sb rnd - sb ang, non calc, tr lmst, v thin wh cut,
grn stmg

90% SS: lt - med brn/gy, sb blk
calc; 10% SLTY SH: lt - dk gy, sl
thin wh cut, no stmg





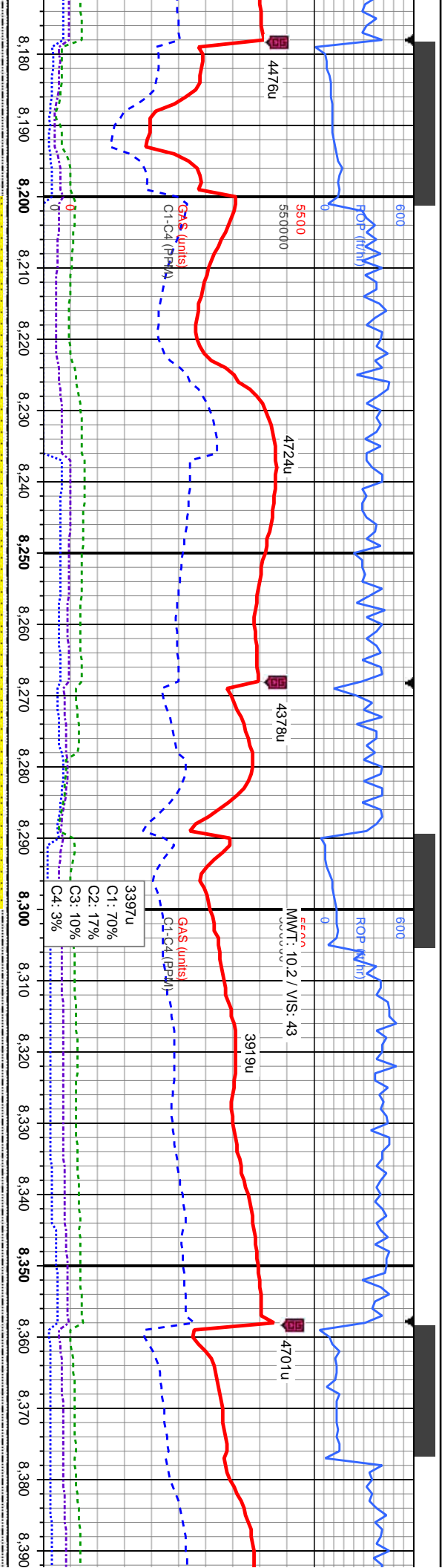


MD: 8,021
TVD: 7,145.7
Inclination: 88.15
Azimuth: 271.27

MD: 8,111
TVD: 7,147.86
Inclination: 89.1
Azimuth: 271.69

TVD (ft)		TVD (ft)	
- hd, brit, f grn, mod srt, cl sup, sb rnd - ang, g		90% SS: lt - med brn/gy, sb plty - blk, frm - sl hd, brit, f grn, mod srt, c	
85% SS: lt - med brn/gy, sb blk, si frm - hd, brit, f grn, mod srt, cl sup, sb rnd - ang, non		10% SLTY SH: med - dk gy, sb plty - plty, silty tex, v f - f grn, frm - v frm, sl calc, thin bl wh cul,	
slow thn bl/wh stmg		thin bl/wh stmg	





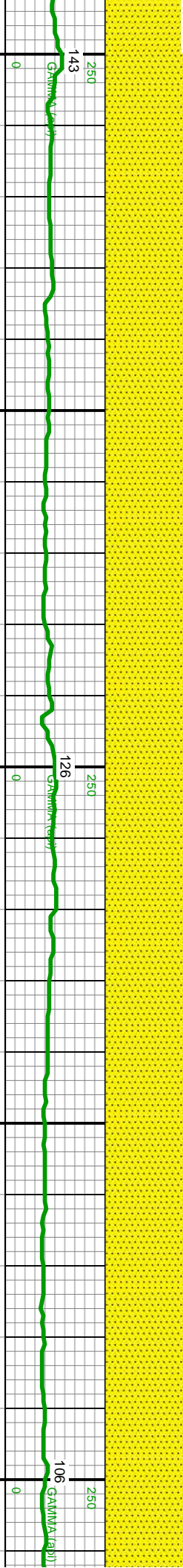
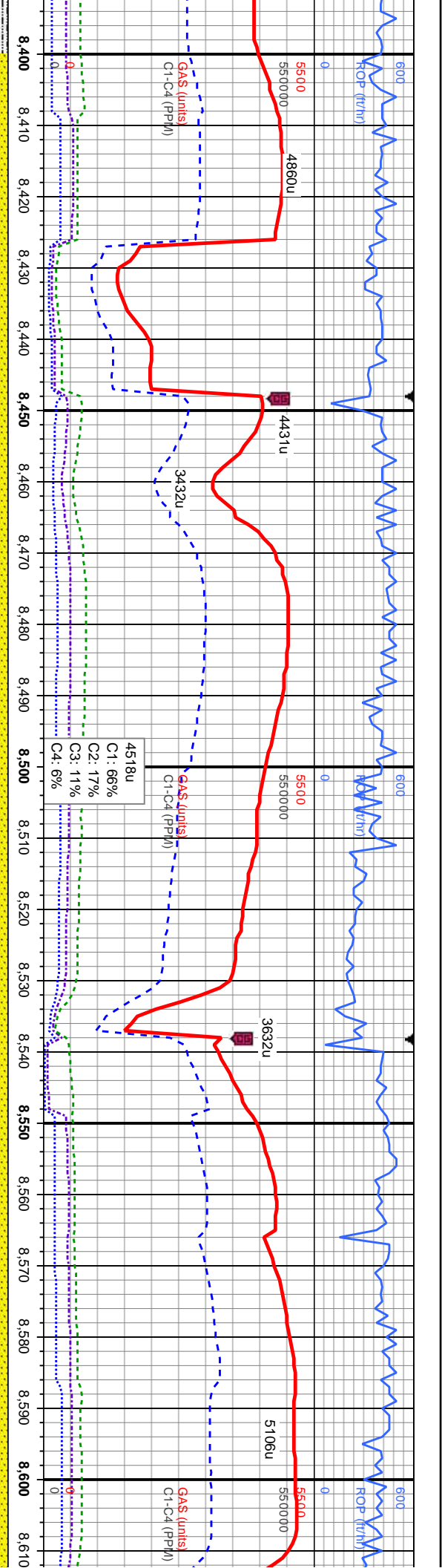
MD: 8,201
TVD: 7,148.25
Inclination: 90.4
Azimuth: 272.41

MD: 8,291
TVD: 7,147.57
Inclination: 90.46
Azimuth: 272.28

MD: 8,381
TVD: 7,145.38
Inclination: 92.34
Azimuth: 271.81

TVD (ft)		TVD (ft)	
sup, sb rnd - ang, non calc	95% SS: lt - med brn/gy, sb pily - blk, frm - sl hd, brit, f grn, mod srt, cl sup, sb rnd - ang, non	90% SS: lt - med brn/gy, sb blk - blk, frm - sl hd, brit, f grn, mod srt, cl sup, sb rnd - ang,	
sl calc, thin bl wh cut, slow	calc: 5% SLTY SH: med - dk gy, sb pily - pily, silty tex. v f - f grn, frm - v frm, sl calc, thin bl wh	calc: 10% SLTY SH: med - dk gy, sb pily - pily, silty tex. v f - f grn, v frm, sl calc, thin bl wh	
gcut, slow thn bl/wh stmg	gcut, slow thn bl/wh stmg	gln bl/wh stmg	



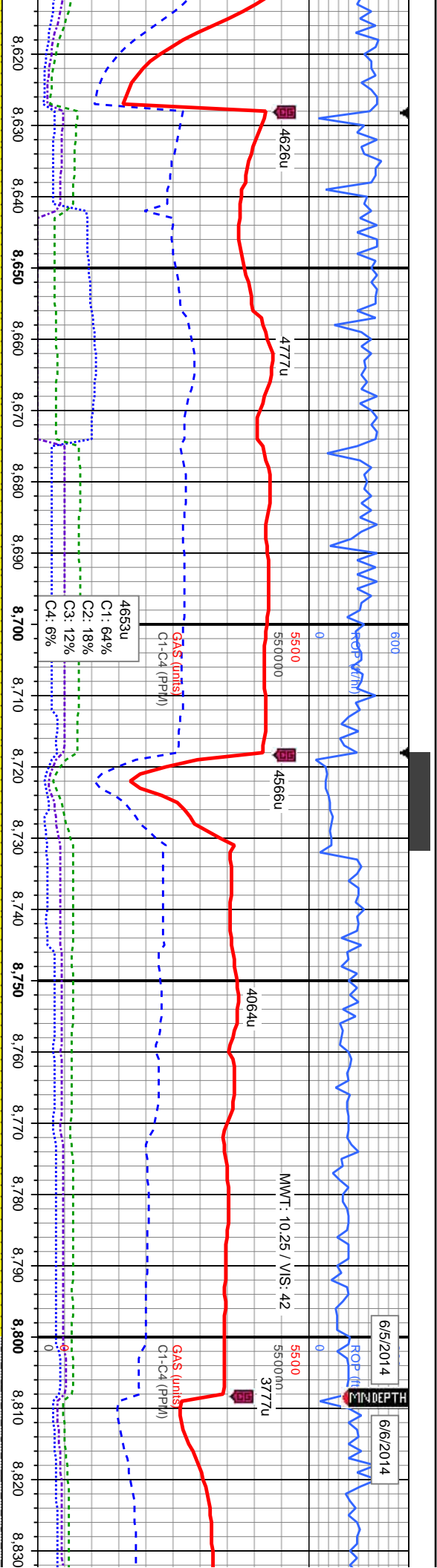


MD: 8,471
TVD: 7,142.31
Inclination: 91.56
Azimuth: 271.92

MD: 8,561
TVD: 7,140.37
Inclination: 90.92
Azimuth: 271.99

Depth (ft)	Gamma Ray (API)	ROP (ft/hr)	Gas (units)	C1-C4 (PPH)
8400	143		55000	
8410			4860u	
8420				
8430				
8440				
8450			4431u	
8460				
8470				
8480				
8490				
8500	126		55000	
8510				
8520				
8530				
8540			3632u	
8550				
8560				
8570				
8580				
8590			5106u	
8600	106		55000	
8610				





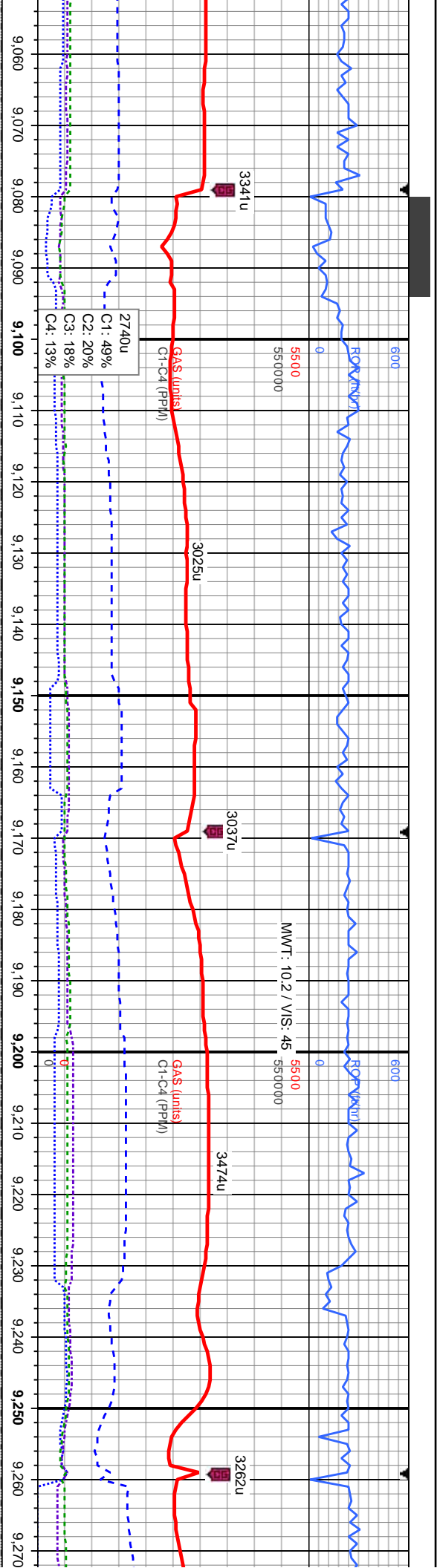
MD: 8,651
TVD: 7,139.79
Inclination: 89.81
Azimuth: 271.28

MD: 8,741
TVD: 7,140.36
Inclination: 89.47
Azimuth: 271.05

MD: 8,831
TVD: 7,14
Inclination
Azimuth: 2

100% SS: lt - med brn/gy, wht, sb blk, mod frm - v frm, brlt, f grn, mod srl, cl sup, sb rnd - calc, tr silty sh, thin bl wh cut, slow thin bl/wh stmg	TVD (ft)
50% SS: lt - med brn/gy, wht, sb blk, non calc, 50% SLTY SH: med - c thin wh cut, no stmg	TVD (ft)



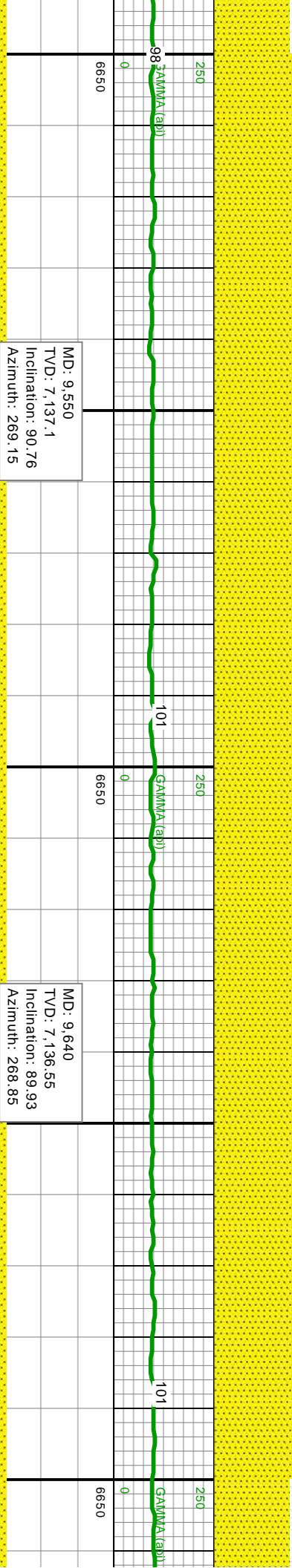
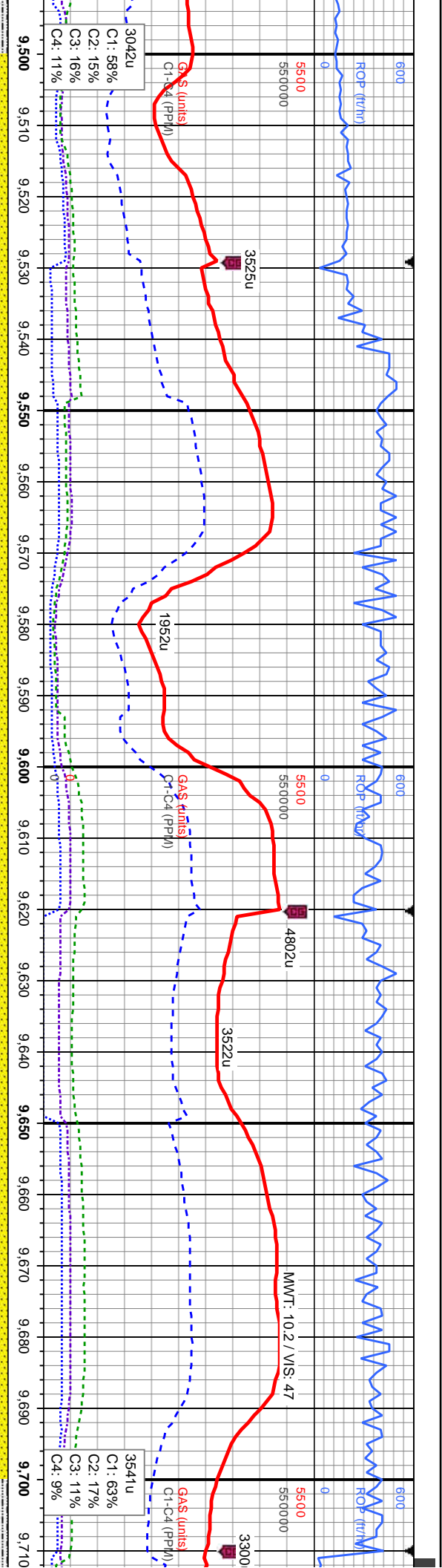


MD: 9,101
TVD: 7,140.55
Inclination: 90.86
Azimuth: 269.59

MD: 9,191
TVD: 7,139.6
Inclination: 90.36
Azimuth: 269.71

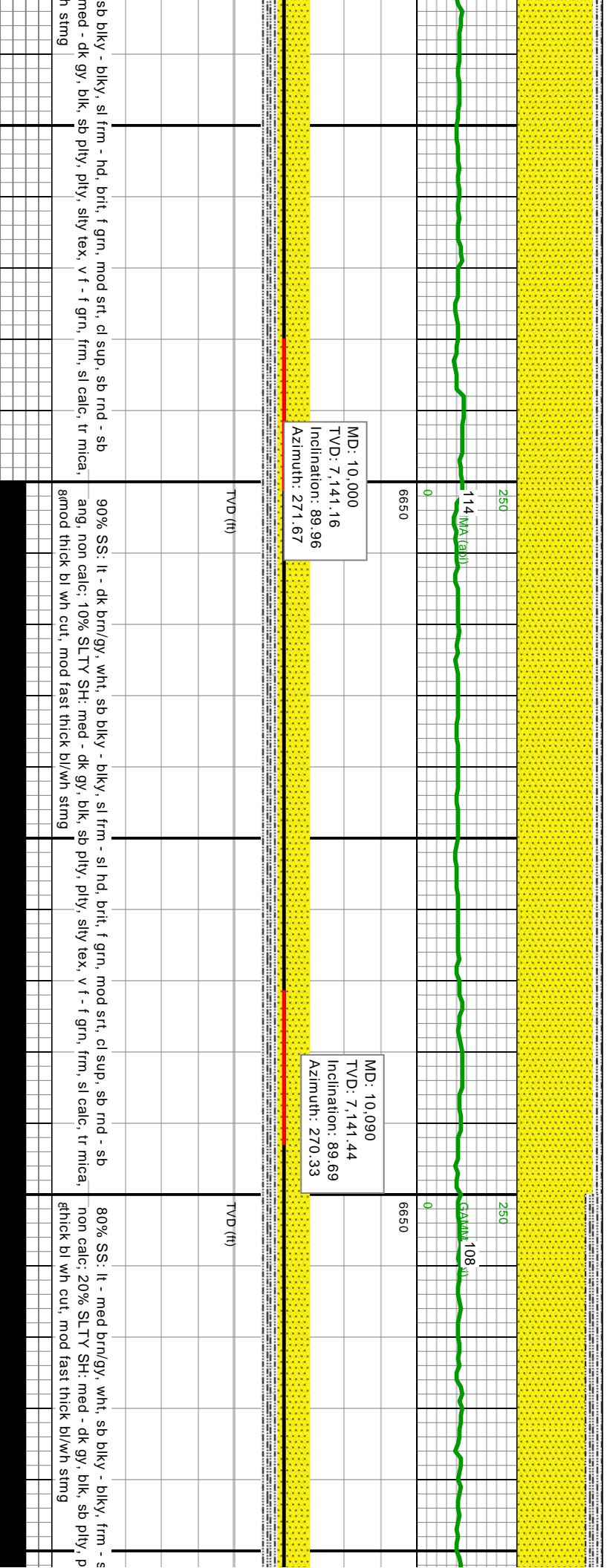
TVD (ft)		TVD (ft)	
90% SS: lt - med brn/gy, wht, sb blk, sl frm - hd, brit, f grn, mod srl, cl sup, sb rnd - sb ang, non calc; 10% SLTY SH: med - dk gy, blk, sb plty, plty, silty tex, v f - f grn, frm, sl calc, sl tr		90% SS: lt - med brn/gy, wht, sb blk, sl frm - hd, brit, f grn, mod srl, cl sup, sb rnd - sb non calc; 10% SLTY SH: med - dk gy, blk, sb plty, plty, silty tex, v f - f grn, frm, sl calc, sl tr	

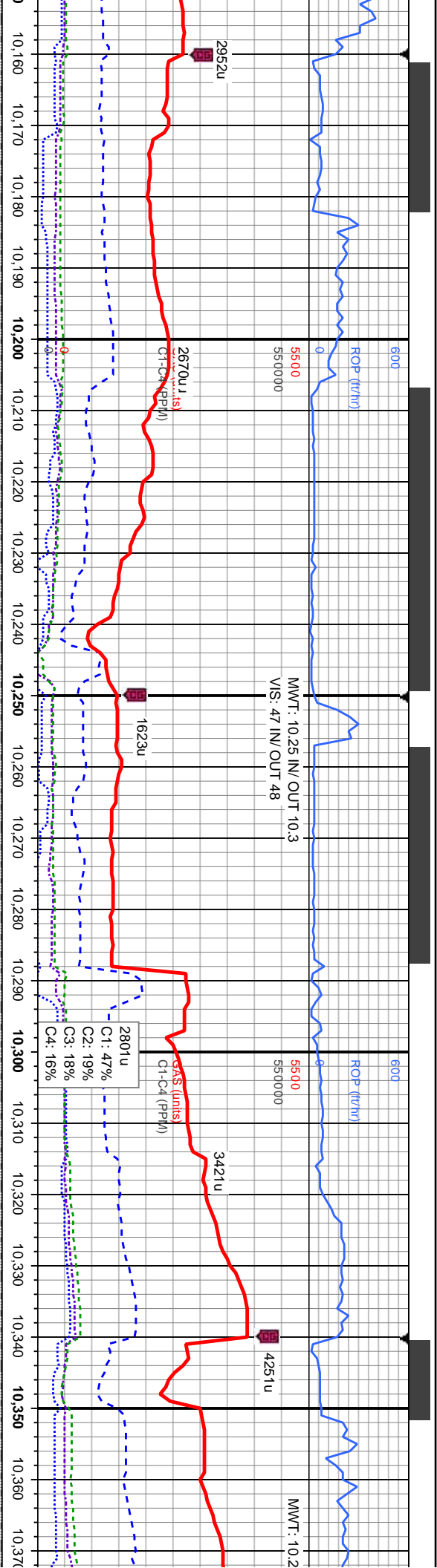




TVD (ft)	TVD (ft)	TVD (ft)
100% SS: lt - med brn/gy, sb blkly - blkly, sl frm - hd, brit, f grn, mod srt, cl sup, sb rnd - sb ang, 80% non calc, sl tr mica, thin bl wh cut, slow thin bl/wh string	100% SS: lt - med brn/gy, sb blkly - blkly, sl frm - hd, brit, f grn, mod srt, cl sup, sb rnd - sb ang, 80% non calc, sl tr mica, thin bl wh cut, mod fastthin bl/wh string	90% SS: lt - med brn/gy, sb blkly - blkly, sl frm - hd, brit, f grn, mod srt, cl sup, sb rnd - sb ang, 10% non calc, 10% wh cut, v silt







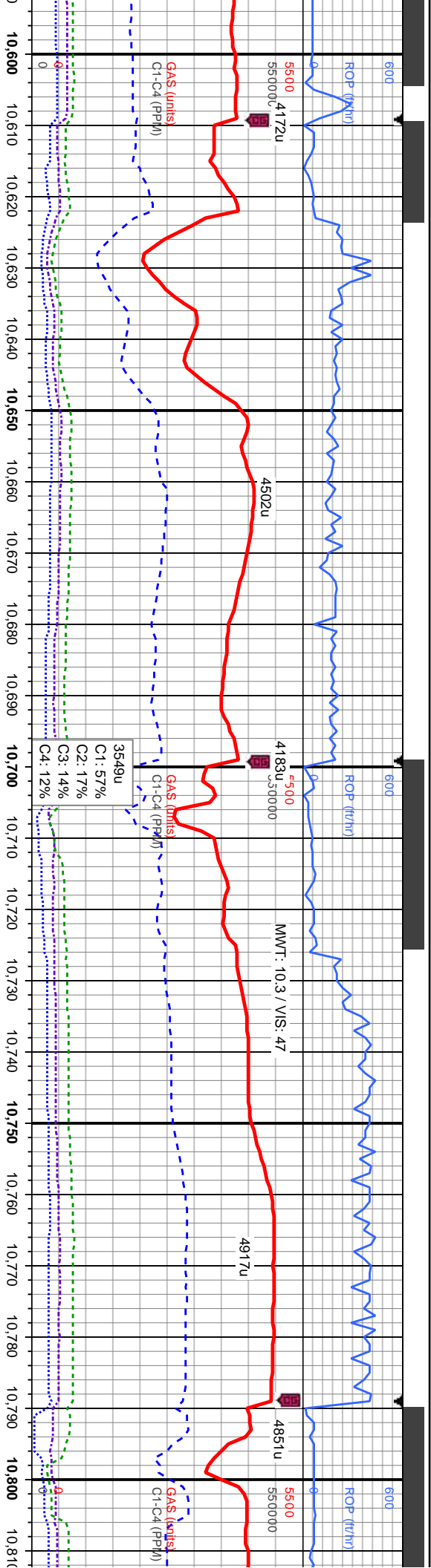
MD: 10,180
TVD: 7,140.84
Inclination: 91.07
Azimuth: 270.65

MD: 10,270
TVD: 7,139.88
Inclination: 90.15
Azimuth: 270.59

MD: 10,360
TVD: 7,137.93
Inclination: 92.34
Azimuth: 270.7

113	250	0	6650	TVD (ft)	85% SS: lt - med brn/gy, wht, sb blk - blk, frm, brit, f grn, mod srl, cl sup, sb rnd - sb ang, calc: 15% SLTY SH: med - dk gy, blk, sb plty, plty, silty tex, v f - f grn, frm, sl calc, tr mica, mod gcut, mod fast thick bl/wh string
127	250	0	6650	TVD (ft)	80% SS: lt - med brn/gy, wht, sb blk - blk, frm, brit, f grn, mod srl, cl sup, sb rnd - sb ang, non calc: 20% SLTY SH: med - dk gy, blk, sb plty, plty, silty tex, v f - f grn, frm, sl calc, tr mica, mod gcut, mod fast thick bl/wh string





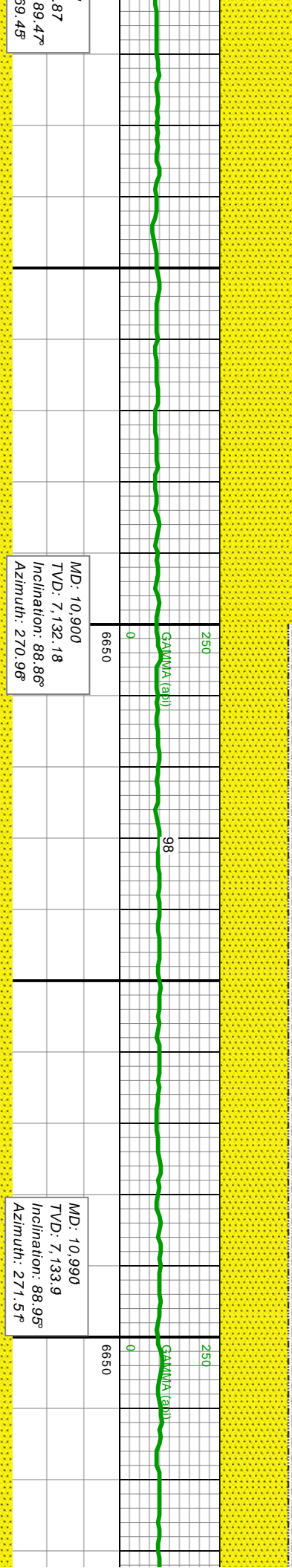
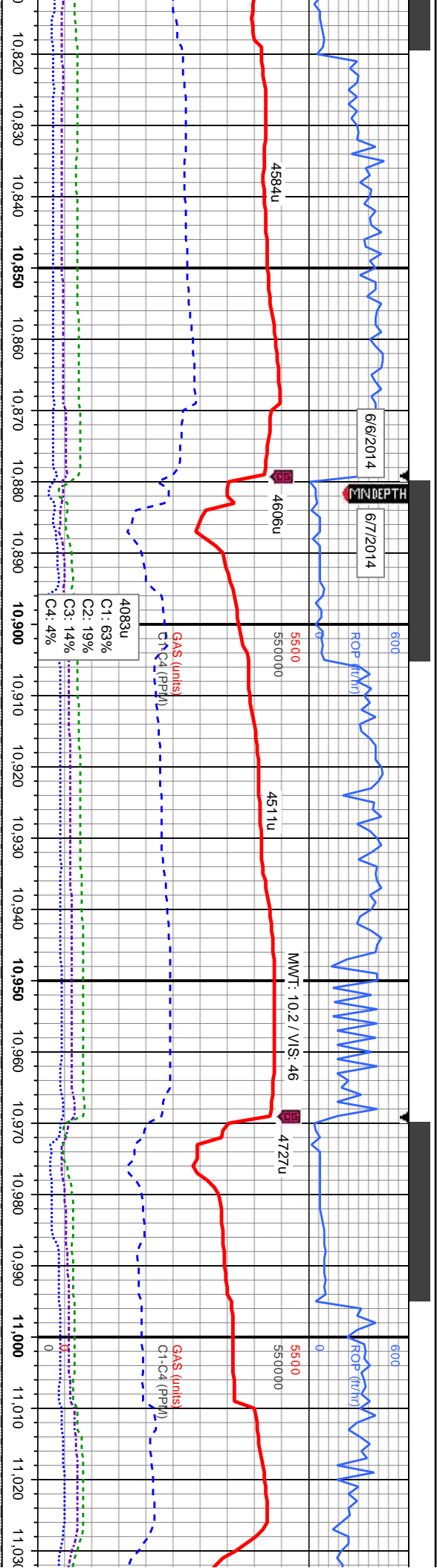
MD: 10,630
TVD: 7,130.52
Inclination: 91.26
Azimuth: 269.61

MD: 10,720
TVD: 7,129.99
Inclination: 89.41
Azimuth: 268.02

MD: 10,810
TVD: 7,130
Inclination:
Azimuth: 21

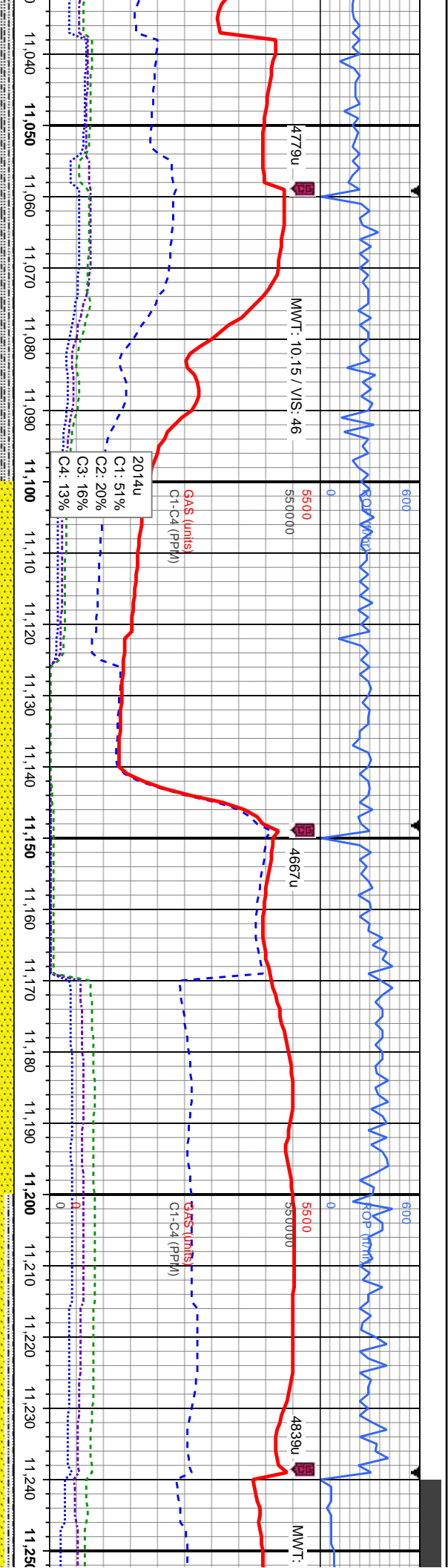
TVD (ft)	TVD (ft)	TVD (ft)
85% SS: lt - med brn/gy, wht, sb blkly - blkly, frm, brit, f grn, mod srt, cl sup, sb rnd - sb ang, non calc; 15% SLTY SH: med - dk gy, blk, sb plty, plty, stly tex, v f - f grn, frm, sl calc, thin bl wh cut, no gsmg	80% SS: lt - med brn/gy, wht, sb blkly - blkly, frm, brit, f grn, mod srt, cl sup, sb rnd - sb ang, non calc; 20% SLTY SH: med - dk gy, blk, sb plty, plty, stly tex, v f - f grn, frm, sl calc, thin bl wh cut, 80% string	85% SS: non calc; 80cut, no st





TVD (ft)		TVD (ft)	
80% SS: lt - med brn/gy, wht, sb blk, frm, brit, f grn, mod srt, cl sup, sb rnd - sb ang, non calc, 20% SLTY SH: med - dk gy, blk, plty, silty tex, v f - f grn, frm, sl calc, thin bl wh cut, 8000 smg		80% SS: lt - med brn/gy, wht, sb blk, frm, brit, f grn, mod srt, cl sup, sb rnd - sb ang, non calc, 20% SLTY SH: med - dk gy, blk, plty, silty tex, v f - f grn, frm, sl calc, thin bl wh cut, 8000 smg	

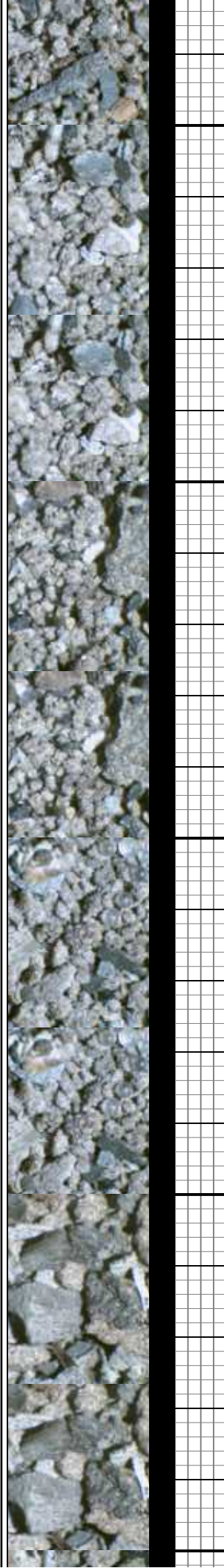


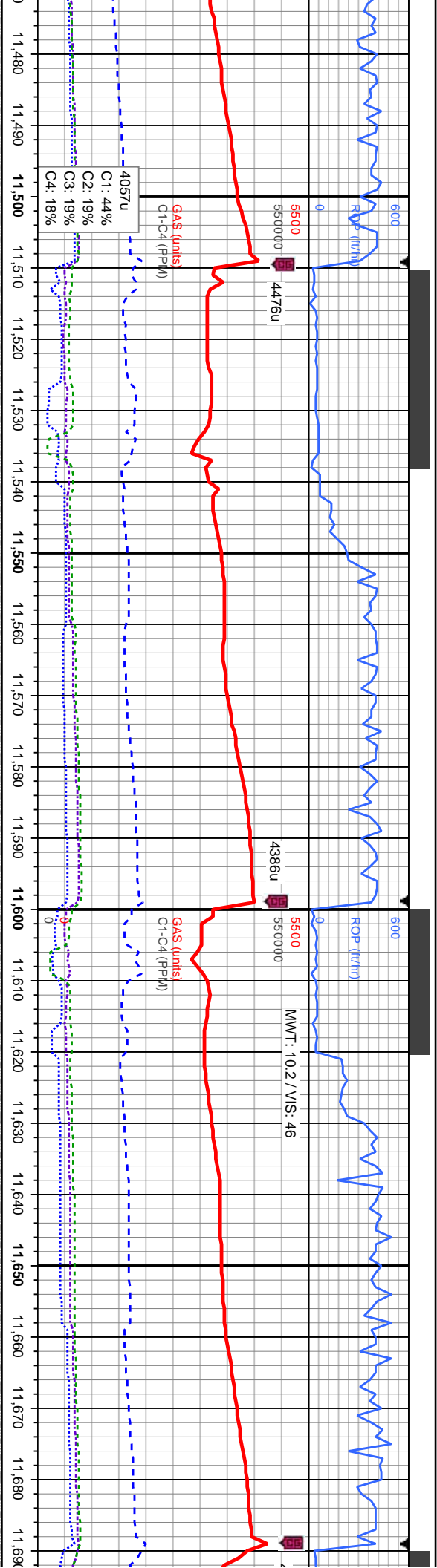


MD: 11,080
TVD: 7,135.64
Inclination: 88.83
Azimuth: 271.76

MD: 11,170
TVD: 7,137.97
Inclination: 88.21
Azimuth: 271.49

100	250	6650	105	250	6650	104	250	6650
GAMMA (api)								
0								
TVD (ft)								
100% SS: lt - med brn/gy, wht, sb blk - blk, frm, brit, f grn, mod srt, cl sup, sb rnd - sb ang, non gcalc, thin bl wh cut, no stmg								
90% SS: lt - med brn/gy, wht, sb blk - blk, frm, brit, f grn, mod srt, cl sup, sb rnd - sb ang, non gcalc, 10% SLTY SH: med - dk gy, blk, sb pty, pty, s								





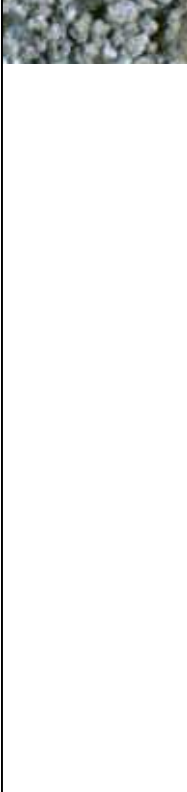
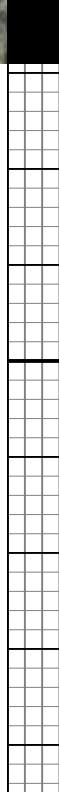
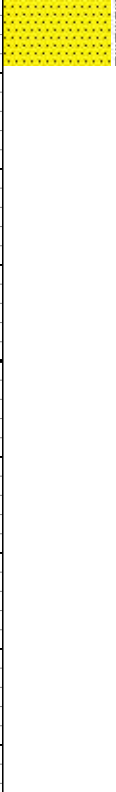
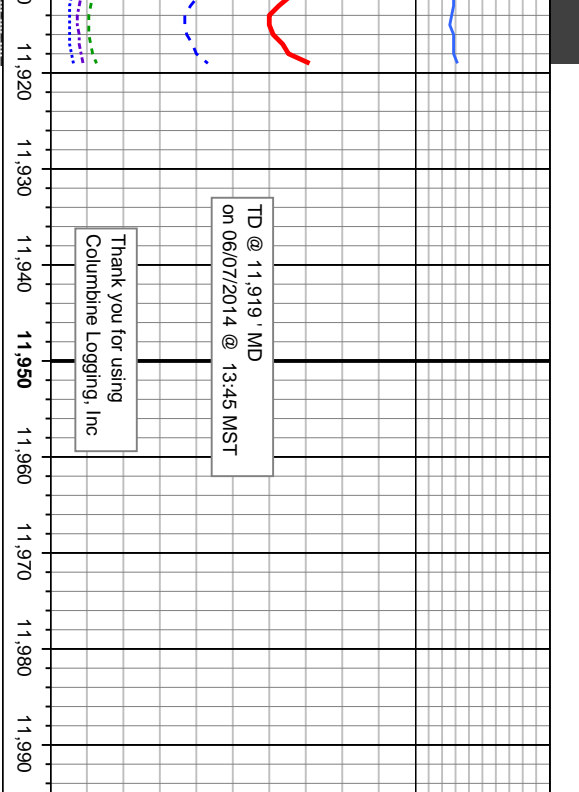
ROP (ft/hr)
GAS (units)
C1-C4 (PPH)
4057u
C1: 44%
C2: 19%
C3: 19%
C4: 18%

MD: 11,530
TVD: 7,143.14
Inclination: 90.3
Azimuth: 268.28

MD: 11,620
TVD: 7,141.27
Inclination: 92.09
Azimuth: 269.12

sup, sb rnd - sb ang, non	80% SS: lt - med brn/gy, wht, sb blk - blk, frm, brit, f grn, mod srt, cl sup, sb rnd - sb ang, non calc, 90% SS: lt - med brn/gy, wht, sb blk - blk, frm, brit, f grn, mod srt, cl sup, sb rnd - sb ang, calc: 10% SLTY SH: med - dk gy, blk, sb plty, plty, silty tex, v f - f grn, frm, sl calc, mod fast thick bl/wh
m, sl calc, mod thick bl wh	20% SLTY SH: med - dk gy, blk, sb plty, plty, silty tex, v f - f grn, frm, sl calc, mod fast thick bl/wh
stimg	bl/wh stimg
TVD (ft)	TVD (ft)





med brn/gy, wht, sb blk/ - blk/gy, frm, brt, f grn, mod srt, cl sup, sb rnd - sb ang, non calc;
i: med - dk gy, blk, sb ply, pty, stly tex, v f - f grn, frm, st calc, mod fast thick b/w/stmg