



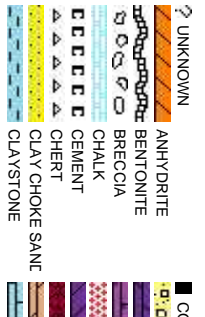
Scale: 5" / 100'  
Measured Depth Log

Well Name	FERGE 4C-14HZ		
Location	SEC 14, T3N, R66W		
State	COLORADO	County	WELD
Country	USA	Rig Number	ENSIGN 132
API Number	05-123-36343	AFE #	2073368
Region	DJ BASIN	Field	WATTENBERG
Spud Date	3/30/2014	Drilling Completed	4/6/2014
Surface Coordinates	282' FSL & 1058' FWL 40.21859 -104.75002		
Bottom Hole Coordinates	1' FNL & 635' FWL 40.2322 -104.7516		
Ground Elevation	4913'	K.B. Elevation	4926'
Logged Interval	6818'	To	12383'
Formation	CODELL	Total Depth	12383'
Type of Drilling Fluid	FSNL		

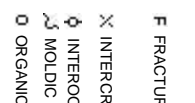
Company ANADARKO PE  
Address 1099 18th St, S  
Denver , CO 80

Name JAKE STUART  
Company ANADARKO PE  
Address 1099 18th St, S  
Denver , CO 80

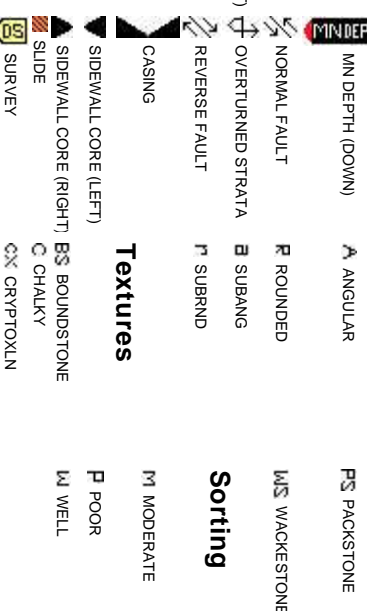
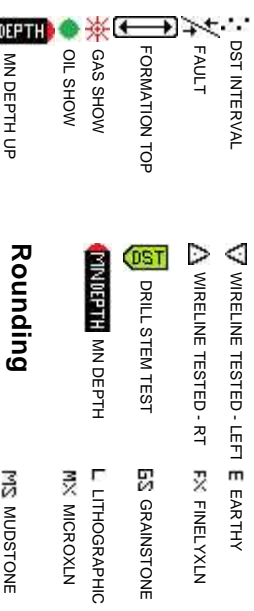
COLUMBINE LOGGERS



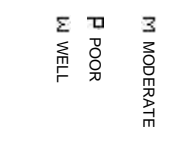
## Accessories



**Stringer**



## MODELING



Slide/Rotate

Columbine Logging Two Person  
Rigged Up 1800hrs 03/31/2014  
With Bloodhound Unit # 0624

ROP  
ROF  
GAMMA

Logging Started @  
1430hrs 04/01/2014  
at 6818' MD

Total Gas & Chromatograph

GAS  
C1  
C2  
C3  
C4

Bit Data  
Bit #: 03  
Type: SMITH SD1611  
Size: 8.75  
Depth In: 1,317'  
Depth Out: 6,972'  
Jets: 3x18 3x16  
S/N: JH6571

Depth Labels

% Lith

Begin in Sussex Formation

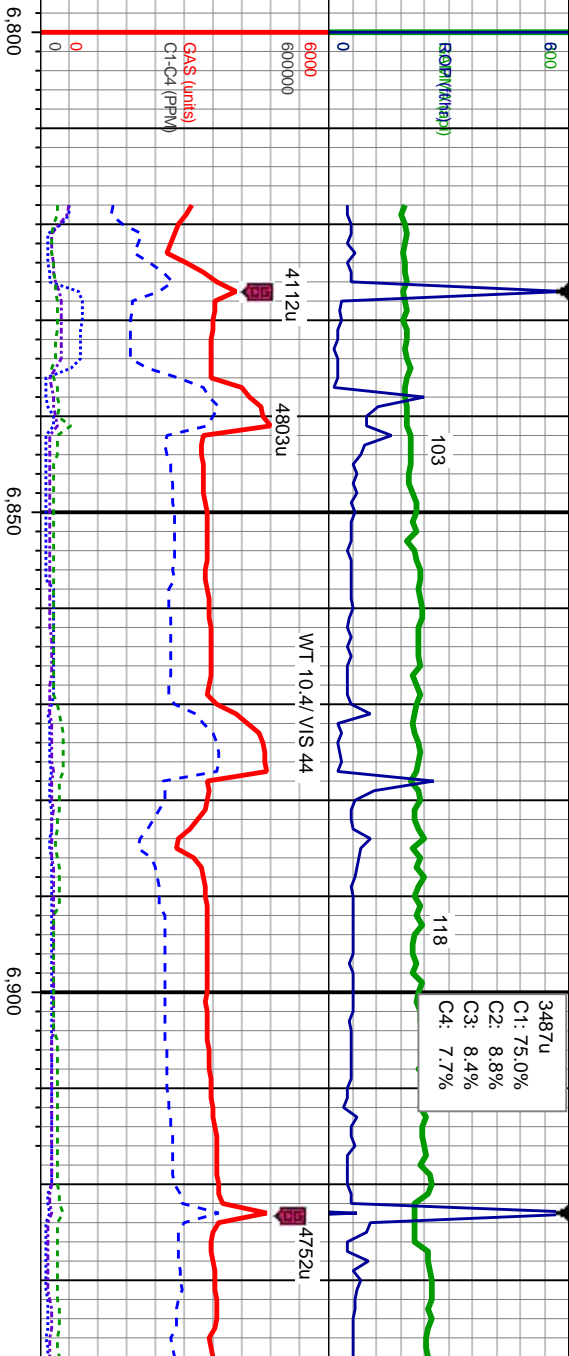
Well Bore  
TVD

Acetone was used as the cutting agent with the dimple filled to the rim  
The ratings are based on 7 descriptors:  
None, Slight trace, Trace, Fair, Moderate, Good, and Excellent. The descriptor used is based on the loggers observations and best judgement of brilliance, color and longevity of the cut.

Oil Show

ST  
FM  
CE

Images



MD: 6,830'  
TVD: 6,788.58'  
Inclination: 2.01°  
Azimuth: 292.31°  
VS: -238.92

MD: 6,877'  
TVD: 6,835.55'  
Inclination: 2.78°  
Azimuth: 326.59°  
VS: -237.66

MD: 6,925'  
TVD: 6,883.45'  
Inclination: 4.37°  
Azimuth: 349.7°  
VS: -234.89

SLTY SH: lt-med gy, sb ply-sb blk, mod  
sft-fm, w srt, v c grs, sb rnd-sb ang, mod  
fri, stimg bl cut, dull bl ring

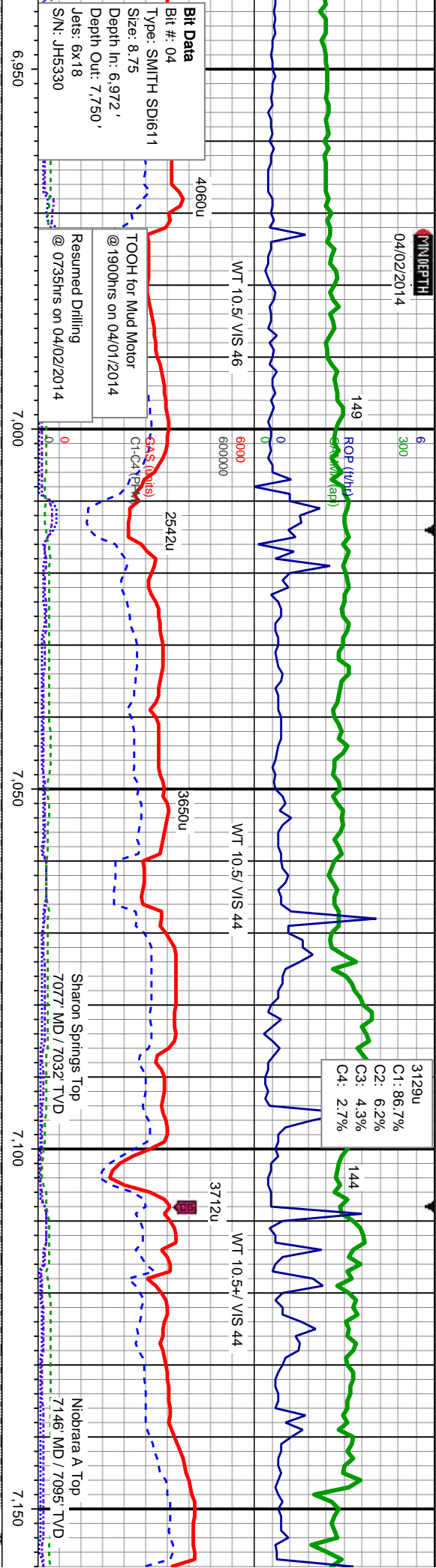
SLTY SH: lt-med gy, sb ply-sb blk, mod  
sft-fm, w srt, v c grs, sb rnd-sb ang, mod  
fri, stimg bl cut, dull bl ring

SLTY SH: lt-med gy, sb ply-sb blk, mod  
sft-fm, w srt, v c grs, sb rnd-sb ang, mod  
fri, stimg bl cut, dull bl ring





DATE  
04/02/2014



MD: 6,972  
TVD: 6,930.22  
Inclination: 6.9°  
Azimuth: 3.01°  
VS: -229.81

MD: 7,020  
TVD: 6,982.49  
Inclination: 12.58°  
Azimuth: 17.17°  
VS: -221.93

MD: 7,067  
TVD: 7,022.77  
Inclination: 18.58°  
Azimuth: 16.11°  
VS: -210.33

MD: 7,115  
TVD: 7,067.52  
Inclination: 24.49°  
Azimuth: 18.18°  
VS: -193.98

MD: 7  
TVD:  
Inclin:  
Azim:  
VS: -1

SLTY SH: lt-med gy, sb ply-sb blk, mod  
sft-firm, w srt, v c grs, sb rnd-sb ang, mod  
fri, sting bl cut, dull bl ring

SLTY SH: lt-med gy, sb ply-sb blk, mod  
sft-firm, w srt, v c grs, sb rnd-sb ang, mod  
fri, tr bent, sting bl cut, dull bl ring

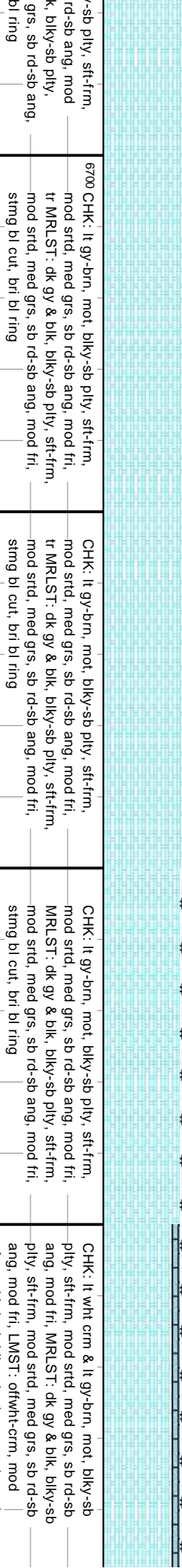
SLTY SH: lt-med gy, sb ply-sb blk, mod  
sft-firm, w srt, v c grs, sb rnd-sb ang, mod  
fri, tr bent, sting bl cut, mod bri bl ring

CHK: lt gy-brn, mot, blk-sb ply, sft-firm,  
mod strd, c grs, sb rd-sb ang, mod fri,  
MRSLT: med-dk gy & blk, blk-sb ply,  
sft-firm, mod strd, c grs, sb rd-sb ang, mod  
fri, SLTY SH: lt-med gy, sb ply-sb blk,  
mod sft-firm, w srt, v c grs, sb rnd-sb ang,  
mod fri, tr bent, sting bl cut, mod bri bl  
ring





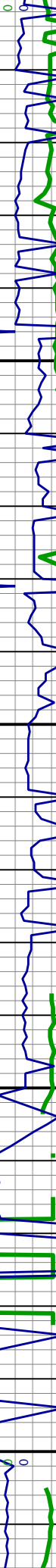






ROP (ft/hr)

GAMMA (api)



2792u

C1: 74.1%

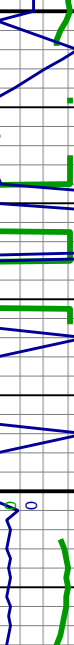
C2: 12.5%

C3: 7.9%

C4: 5.6%

ROP (ft/hr)

GAMMA (api)



TD Curve @ 7750'

@ 0615hrs on 04/03/2014

Bit #: 05

Type: VAREL VS613D

Size: 6.12

Depth In: 7,750'

Depth Out: 12,383'

Jets: 5x18

S/N: 4006847

Start drilling the Lateral

@ 2200 hrs on 04/04/2014

6700 SS: med gy, med-dk brn, clr-s&p, clus, w  
srt, f-med grs, mod sft-hd, w rd, non-sl  
calc, SH: blk-dk gy, sb ply-ply, mod  
sft-firm, mod strd, med grs, LMST:  
offwh-crm, mod sft-mod hd, sb blk-y-sb  
ply, w strd, med grs, sting bl cut, mod bri  
bl ring

MD: 7.638'  
TVD: 7.357.94  
Inclination: 77.9°  
Azimuth: 1.17°  
VS: 213.77

SS: med gy, med-dk brn, clr-s&p, clus, w  
srt, f-med grs, mod sft-hd, w rd, non-sl  
calc, SH: blk-dk gy, sb ply-ply, mod  
sft-firm, mod strd, med grs, LMST:  
offwh-crm, mod sft-mod hd, sb blk-y-sb  
ply, w strd, med grs, sting bl cut, bri bl  
ring

MD: 7.686'  
TVD: 7.365.29  
Inclination: 84.48°  
Azimuth: 1.39°  
VS: 261.17

SS: med gy, med-dk brn, clr-s&p, clus, w  
srt, f-med grs, mod sft-hd, w rd, non-sl  
calc, SH: blk-dk gy, sb ply-ply, mod  
sft-firm, mod strd, med grs, sting bl cut, bri  
bl ring

MD: 7.708'  
TVD: 7.366.73  
Inclination: 88°  
Azimuth: 2.22°  
VS: 283.11

SS: med gy, med-dk brn, clr-s&p, clus, w  
srt, f-med grs, mod sft-hd, w rd, sl calc,  
SH: blk-dk gy, sb ply-ply, mod sft-firm,  
mod strd, f-med grs, sting bl cut, mod bri  
bl ring

MD: 7.777'  
TVD: 7.368.05  
Inclination: 89.72°  
Azimuth: 1.95°  
VS: 352.12

7100

TVD

SCALE

CHANGE





C1: 83.8%  
C2: 10.3%  
C3: 3.4%  
C4: 2.5%

87

113.2 (tph)  
Gamma (app)

2312u

2651u

2059u

2616u

3089u

GAS (tph)  
Gamma (app)

7,850

7,900

7,950

8,000

SS: med gy, med-dk brn, clr-s&p, clus, w  
srt, f-med grs, mod sft-hd, w rd, mod calc,  
SH: blk-dk gy, sb plty-plty, mod sft-frn,  
mod strd, med grs, sting bl cut, bri bl ring

SS: med gy, med-dk brn, clr-s&p, clus, w  
srt, f-med grs, mod sft-hd, w rd, sl calc,  
SH: blk-dk gy, sb plty-plty, mod sft-frn,  
mod strd, f-med grs, sting bl cut, mod bri  
bl ring

SS: r  
srt, f-med  
SH: b  
mod s

MD: 7.872  
TVD: 7.368.69  
Inclination: 89.5°  
Azimuth: 0.95°  
VS: 447.08

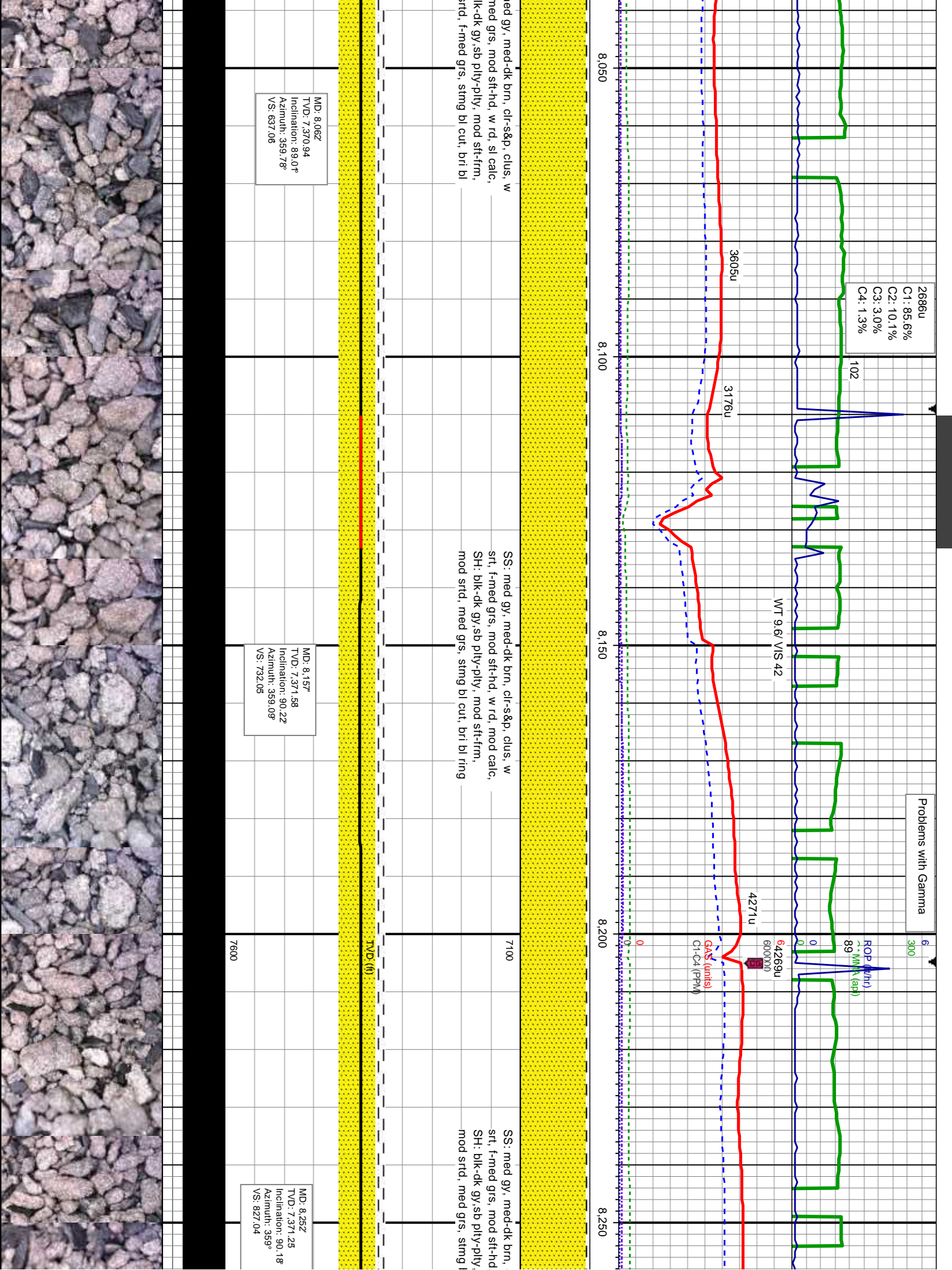
MD: 7.967  
TVD: 7.369.61  
Inclination: 89.38°  
Azimuth: 0.25°  
VS: 542.07

TVD (ft)

7600

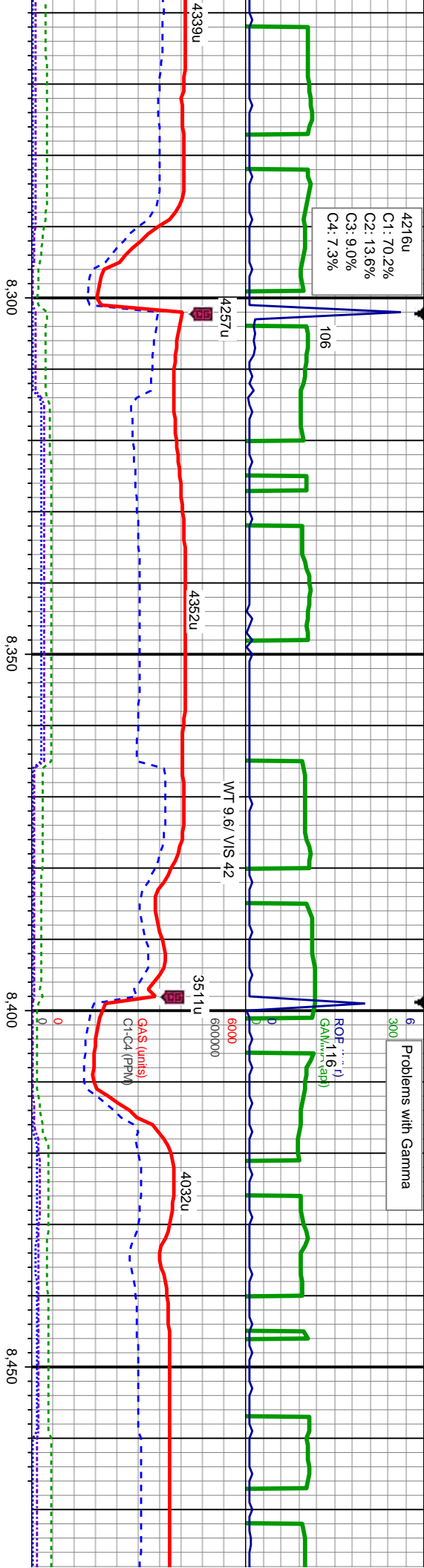
7100







Problems with Gamma



cl-s&p, clus, w  
w rd, mod calc,  
mod sft-frm,  
bl cut, bri bl ring

SS: med gy, med-dk brn, cl-s&p, clus, w  
srt, f-med grs, mod sft-hd, w rd, sl calc,  
SH: blk-dk gy, sb ply-ply, mod sft-frm,  
mod srt, f-med grs, sting bl cut, bri bl  
ring

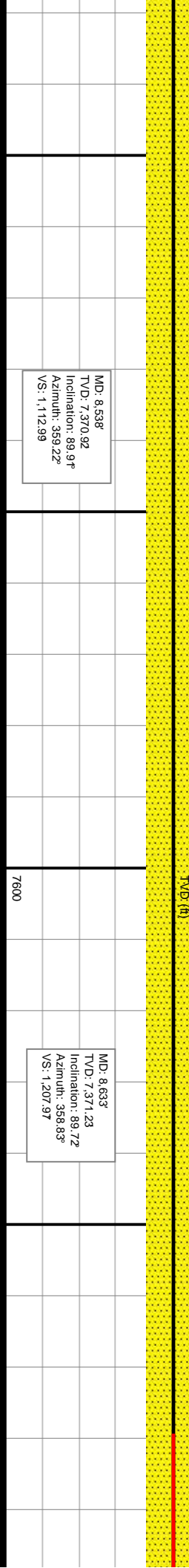
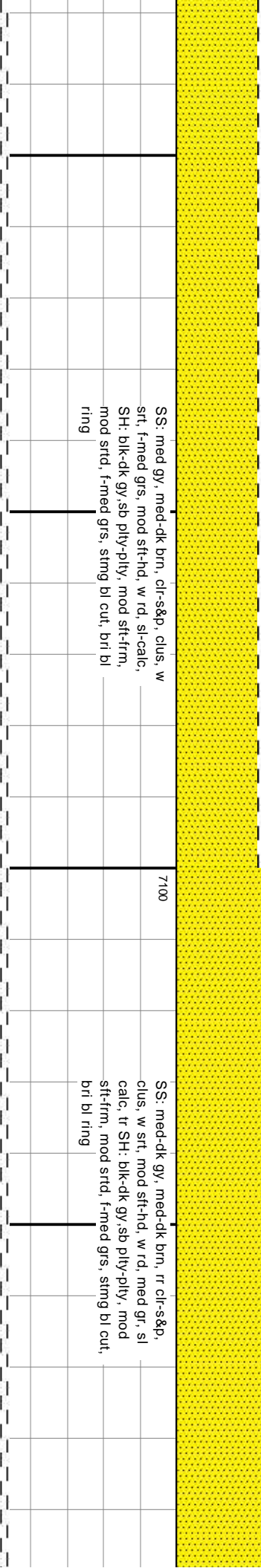
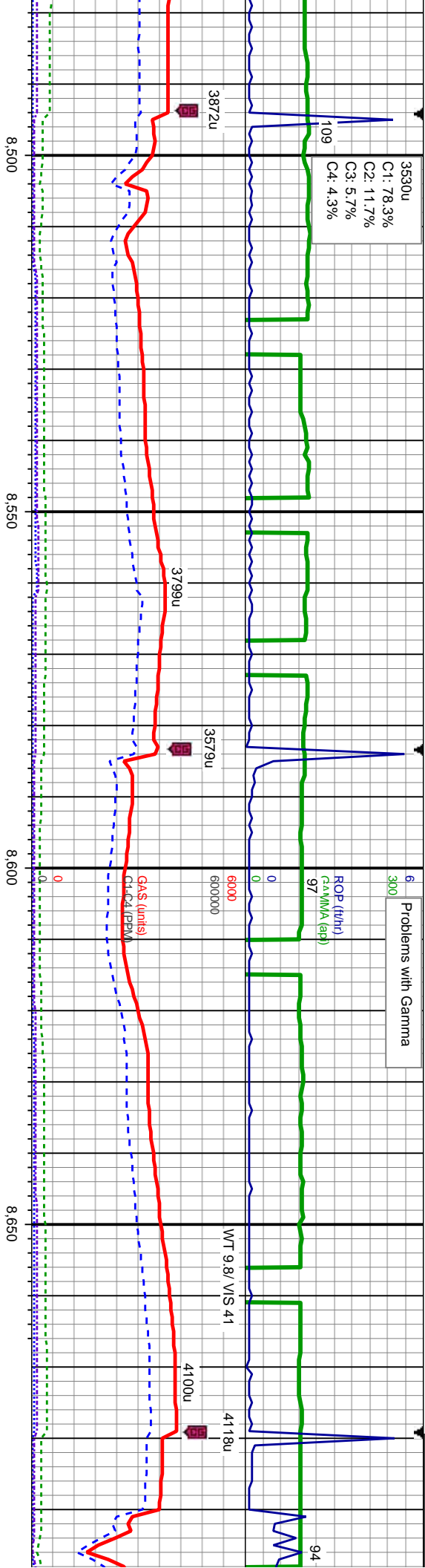
SS: med gy, med-dk brn, cl-s&p, clus, w  
srt, f-med grs, mod sft-hd, w rd, sl calc,  
SH: blk-dk gy, sb ply-ply, mod sft-frm,  
mod srt, f-med grs, sting bl cut, bri bl  
ring

MD: 8.348'  
TVD: 7.370.95  
Inclination: 90.18°  
Azimuth: 358.57°  
VS: 923.02

MD: 8.443'  
TVD: 7.370.82  
Inclination: 89.97°  
Azimuth: 358.99°  
VS: 1.018





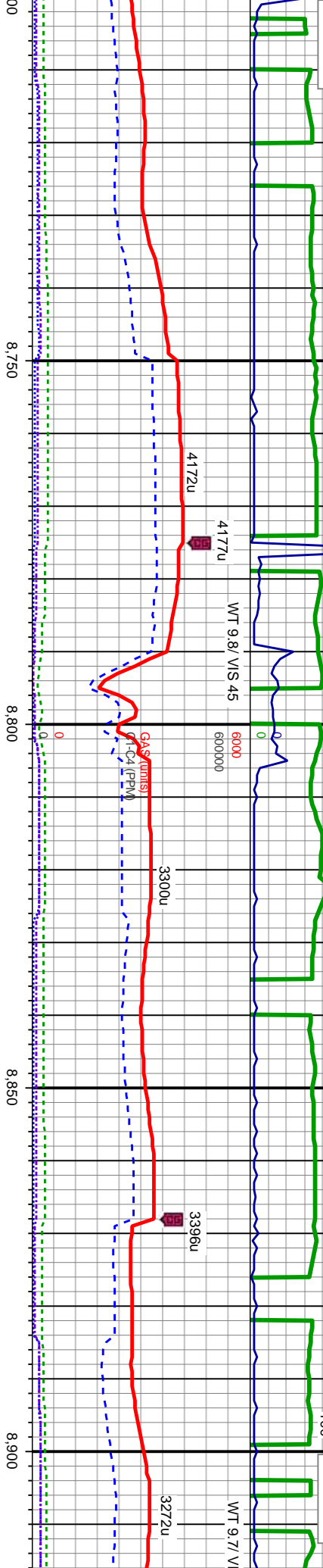




4157u  
C1: 82.3%  
C2: 11.0%  
C3: 4.3%  
C4: 2.4%

Problems with Gamma

3495u  
C1: 82.1%  
C2: 11.2%  
C3: 4.3%  
C4: 2.3%



SS: med-dk gy, med-dk brn, rr cl-s&p, clus, w srl, mod sft-hd, w rd, med gr, mod calc, tr SH: blk-dk gy, sb pty-pty, mod sft-frm, mod strd, med grs, sting bl cut, bri bl ring

SS: med-dk gy, med-dk brn, rr cl-s&p, clus, w srl, mod sft-hd, w rd, med gr, sl calc, tr SH: blk-dk gy, sb pty-pty, mod sft-frm, mod strd, f-med grs, sting bl cut, mod bri bl ring

MD: 8.728  
TVD: 7,370.7  
Inclination: 90.92  
Azimuth: 358.37°  
VS: 1,302.94

MD: 8.823  
TVD: 7,368.22  
Inclination: 92.07  
Azimuth: 0.65°  
VS: 1,397.9

MD: 8.9  
TVD: 7,368.22  
Inclination: 92.07  
Azimuth: 0.65°  
VS: 1,465.9





Problems with Gamma

6

300

3771u  
C1: 81.4%  
C2: 11.2%  
C3: 4.6%  
C4: 2.7%

ROP (t/h)

82

GAMMA (ap)

0

6000

600000

41

WT 9.7/ VIS 41

84

3509u

3214u

3359u

3014u

GAS (units)

0

600000

8,950

9,000

9,050

9,100

SS: med-dk gy, med-dk brn, rr clr-s&p,  
clus, w srl, mod sft-hd, w rd, med gr, sl  
calc, tr SH: blk-dk gy, sb ply-ply, mod  
sft-frm, mod strd, f-med grs, sting bl cut,  
mod bri bl ring

7100

SS: med-dk gy, med-dk brn, rr clr-s&p,  
clus, w srl, mod sft-hd, w rd, med gr,  
non-sl calc, tr SH: blk-dk gy, sb ply-ply,  
mod sft-frm, mod strd, f-med grs, sting bl  
cut, bri bl ring

TVD (ft)

MD: 9.013  
TVD: 7.362.34  
Inclination: 90.89  
Azimuth: 0.71°  
VS: 1.587.79

7600

MD: 9.109  
TVD: 7.361.1  
Inclination: 90.59  
Azimuth: 0.11°  
VS: 1.683.78

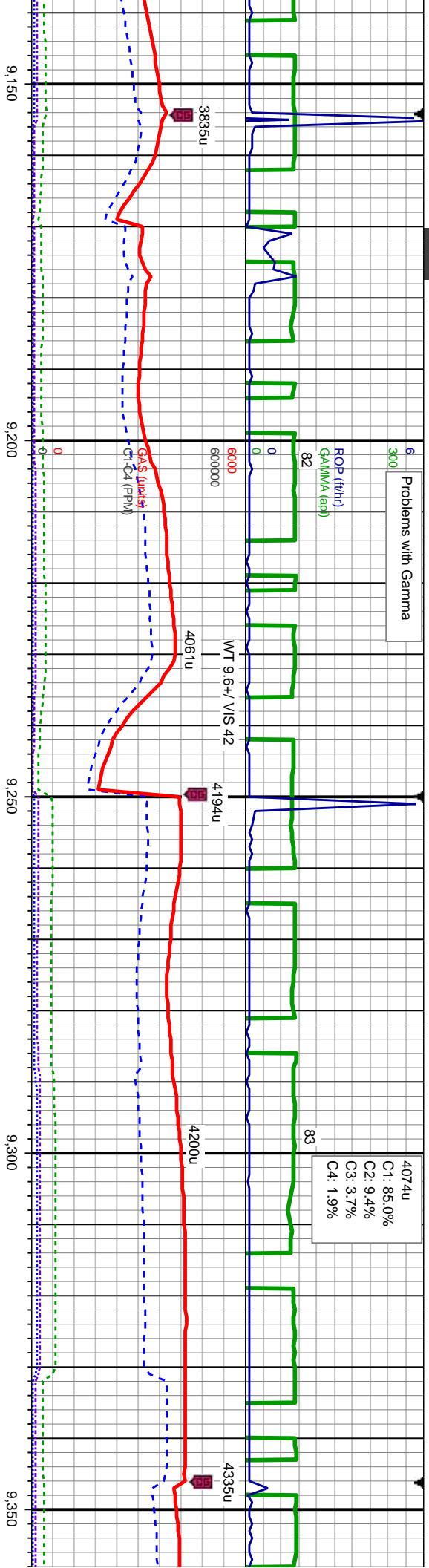
SS: med-dk gy, med-dk brn, rr clr-s&p,  
clus, w srl, mod sft-hd, w rd, med gr,  
calc, tr SH: blk-dk gy, sb ply-ply, mod  
sft-frm, mod strd, f-med grs, sting bl  
cut, bri bl ring

8'  
664.79  
Don: 92.07°  
: 0.16°  
2.83





Problems with Gamma



C1: 85.0%  
C2: 9.4%  
C3: 3.7%  
C4: 1.9%

d-dk gy, med-dk brn, rr cl-s&p,  
srt, mod sft-hd, w rd, med gr, sl  
SH: blk-dk gy, sb ply-pty, mod  
mod srt, med grs, sting bl cut,  
bl ring

SS: med-dk gy, med-dk brn, rr cl-s&p,  
clus, w srt, mod sft-hd, w rd, med gr, sl  
calc, tr SH: blk-dk gy, sb ply-pty, mod  
sft-frm, mod srt, med grs, sting bl cut,  
mod bri bl ring

SS: med-dk gy, med-dk brn, rr cl-s&p,  
clus, w srt, mod sft-hd, w rd, med gr, sl  
calc, tr SH: blk-dk gy, sb ply-pty, mod  
sft-frm, mod srt, med grs, sting bl cut,  
mod bri bl ring

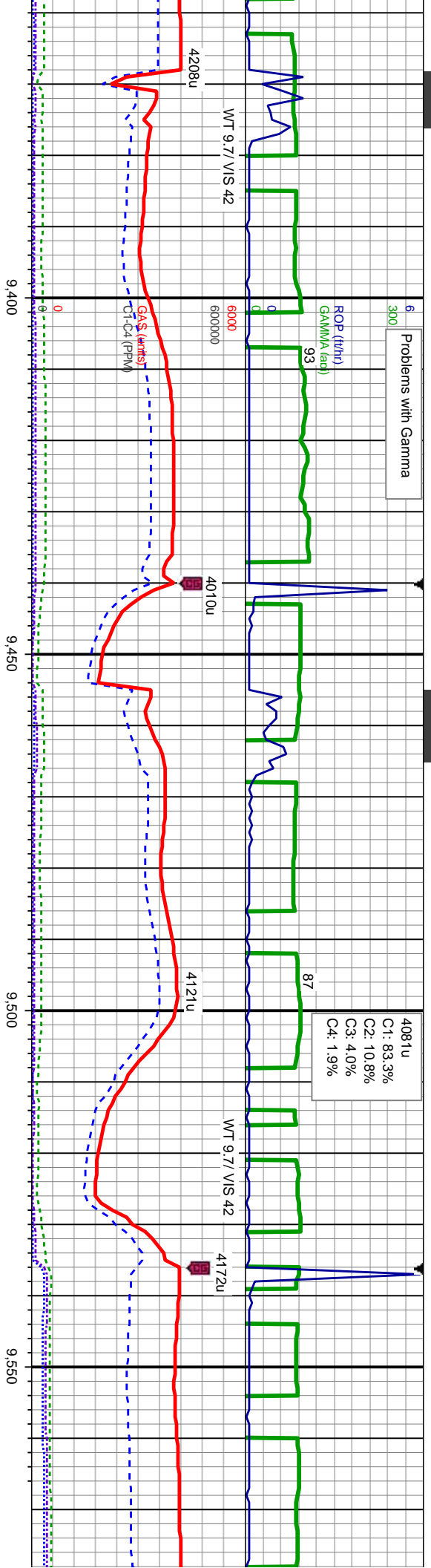
MD: 9,204'  
TVD: 7,360.82  
Inclination: 89.75°  
Azimuth: 0.14°  
VS: 1,778.78

MD: 9,299'  
TVD: 7,361.66  
Inclination: 89.23°  
Azimuth: 359.31°  
VS: 1,873.77





Problems with Gamma



rr clt-s&p,  
rd, med gr, mod  
ity-pty, mod  
s, sting bl cut,

SS: dk gy, med-dk brn, rr clt-s&p, clus, w  
srt, mod sft-hd, w rd, med gr, sl calc, tr  
SH: blk-dk gy, sb pty-pty, mod sft-frn,  
mod srt, med grs, sting bl cut, mod bri bl  
ring

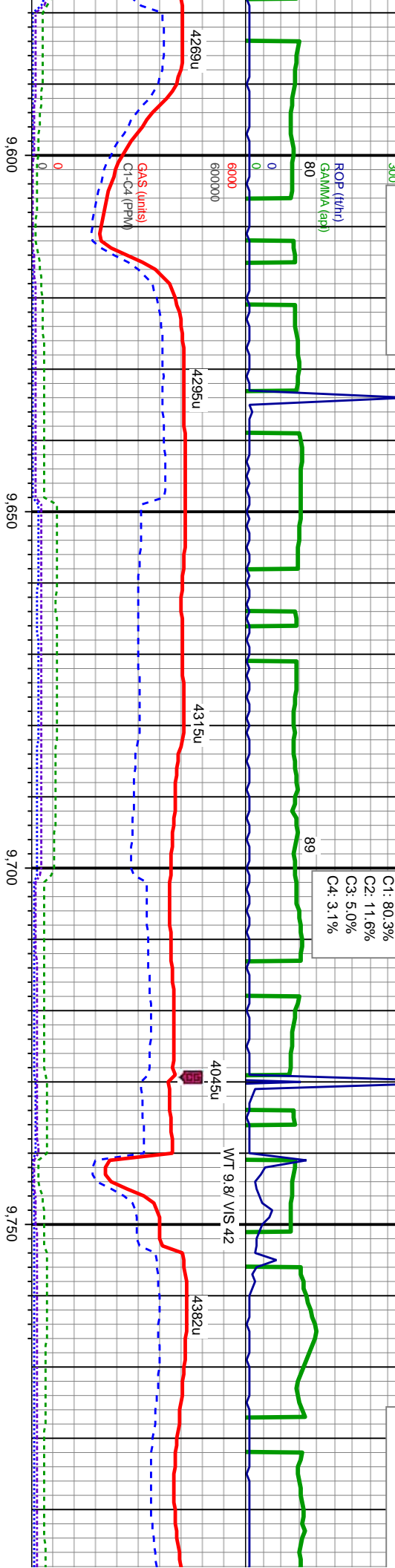
MD: 9.394'  
TVD: 7.363.37  
Inclination: 88.7°  
Azimuth: 0.03°  
VS: 1.968.76

MD: 9.489'  
TVD: 7.364.68  
Inclination: 88.72°  
Azimuth: 359.5°  
VS: 2.063.75

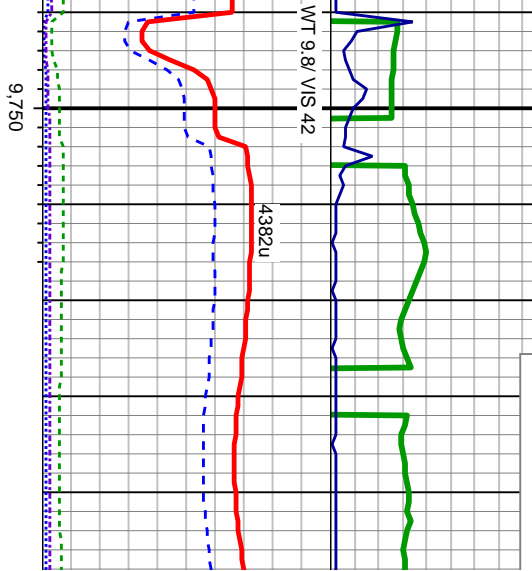




Problems with Gamma



Problems with Gamma



SS: med-dk gy, med-dk brn, rr cl-s&dp, clus, w srt, mod sft-hd, w rd, med gr, non-si-calc, tr SH: blk-dk gy, sb pty-pty, mod sft-firm, mod srt, med grs, sting bl cut, mod bri bl ring

SS: med gy, med-dk brn, cl-s&dp, clus, w srt, f-med grs, mod sft-hd, w rd, non-si-calc, SH: blk-dk gy, sb pty-pty, mod sft-firm, mod srt, f-med grs, sting bl cut, mod bri bl ring

MD: 9.584'  
TVD: 7.365.24  
Inclination: 89.6°  
Azimuth: 359.43°  
VS: 2.158.74

MD: 9.680'  
TVD: 7.366.45  
Inclination: 88.99°  
Azimuth: 358.61°  
VS: 2.254.72

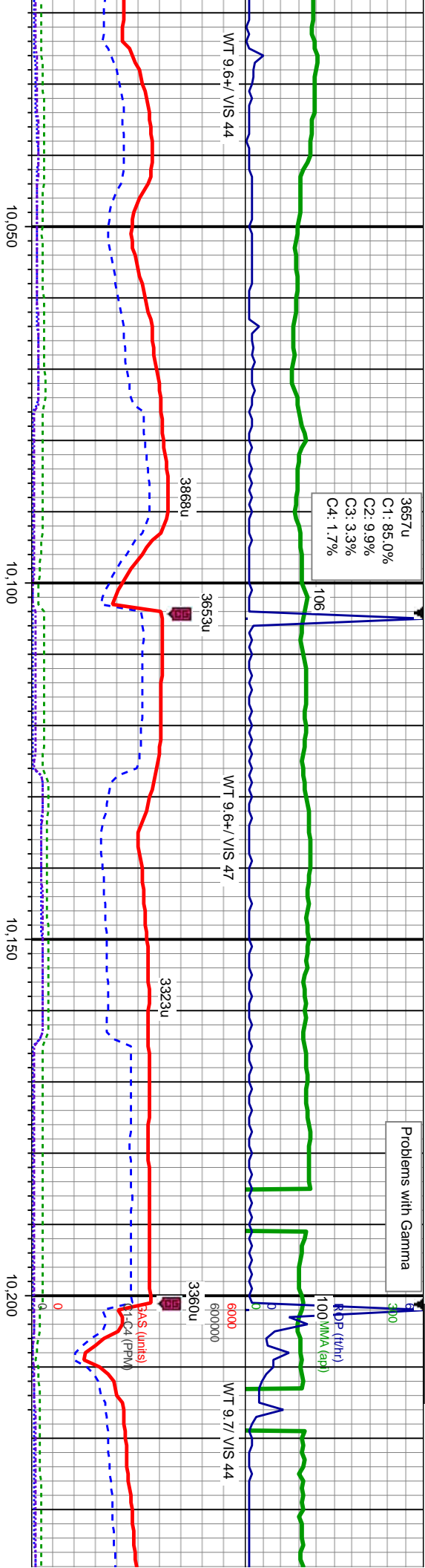
MD: 9.775'  
TVD: 7.367.81  
Inclination: 89.4°  
Azimuth: 359.23°  
VS: 2.349.69











SS: med gy, med-dk brn, tr clr-s&p, clus,  
mod srt, f-med grs, mod sft-hd, w rd,  
sl-calc, SH: blk-dk gy, sb ply-ply, mod  
sft-firm, mod strd, f-med grs, sting bl cut,  
bri bl ring

SS: med gy, med-dk brn, tr clr-s&p, clus,  
mod srt, f-med grs, mod sft-hd, w rd, mod  
calc, SH: blk-dk gy, sb ply-ply, mod  
sft-firm, mod strd, f-med grs, sting bl cut,  
bri bl ring

SS: med  
mod srt,  
sl-mod c  
mod sft-

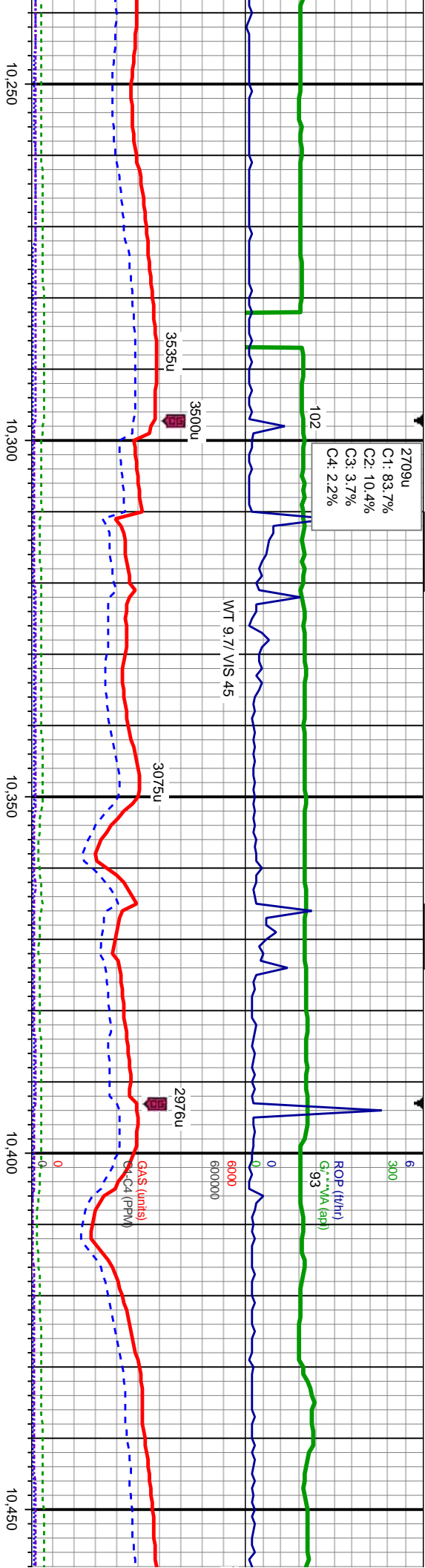
MD: 10.067  
TVD: 7.363.49  
Inclination: 90.92  
Azimuth: 359.47  
VS: 2.634.64

MD: 10.155  
TVD: 7.362.16  
Inclination: 90.68  
Azimuth: 359.12  
VS: 2.729.62

7600







gy, med-dk brn, tr clr-s&p, clus, f-med grs, mod sft-hd, w rd, blc-dk gy, sb ply-ply, frm, mod strd, f-med grs, sting bl bri bl ring

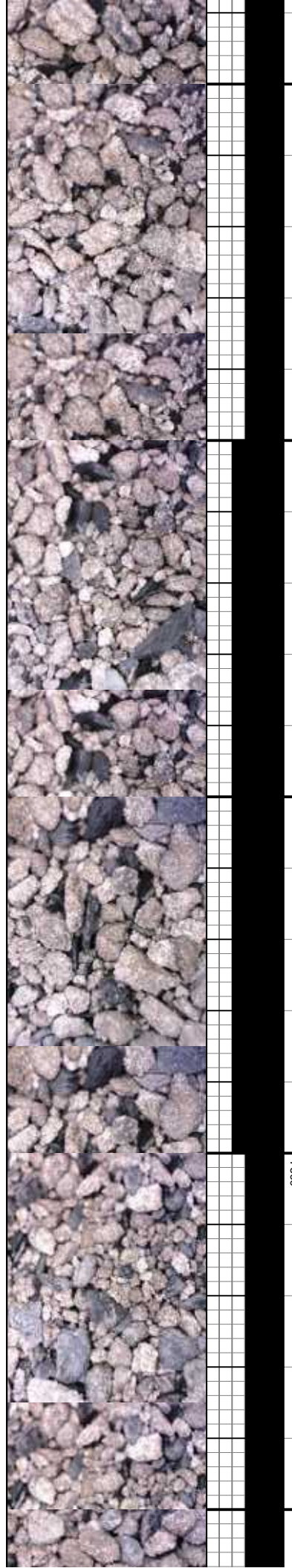
SS: med gy, med-dk brn, tr clr-s&p, clus, mod srt, f-med grs, mod sft-hd, w rd, si-mod calc, SH: blk-dk gy, tr lt gy, sb ply-ply, mod sft-frm, mod strd, f-med grs, sting bl cut, bri bl ring

SS: med gy, med-dk brn, tr clr-s&p, clus, mod srt, f-med grs, mod sft-hd, w rd, calc, SH: blk-dk gy, tr lt gy, st mod sft-frm, mod strd, f-med cut, mod bri bl ring

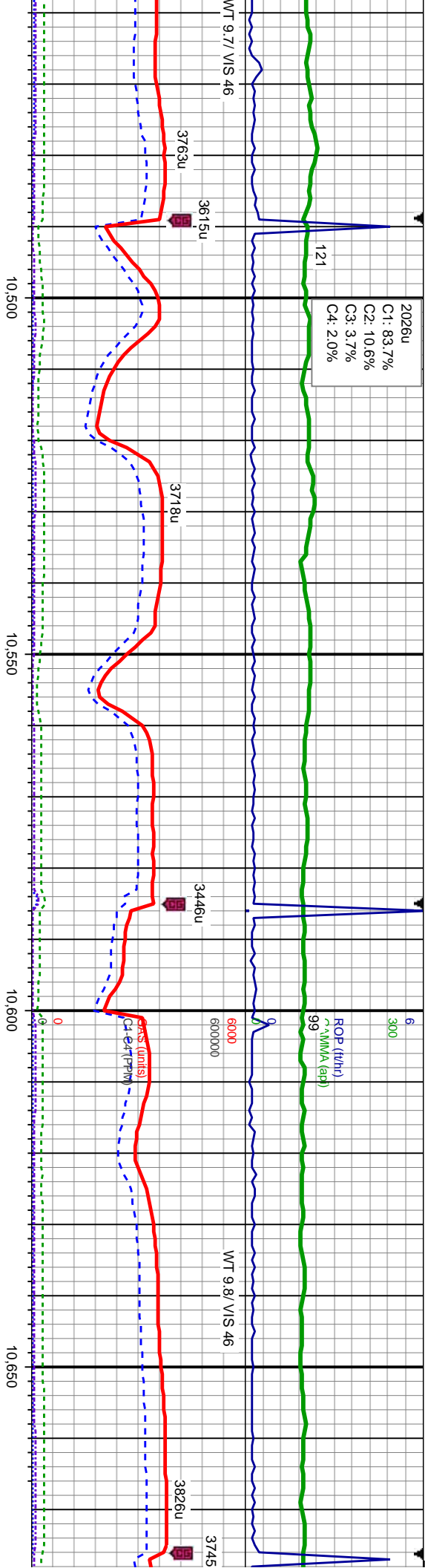
MD: 10.250'  
TVD: 7,360.17  
Inclination: 91.73  
Azimuth: 0.01°  
VS: 2.824.6

MD: 10.346'  
TVD: 7,358.33  
Inclination: 90.48  
Azimuth: 1.04°  
VS: 2.920.57

MD: 10.441'  
TVD: 7,358.82  
Inclination: 88.95  
Azimuth: 1.37°  
VS: 3.015.55





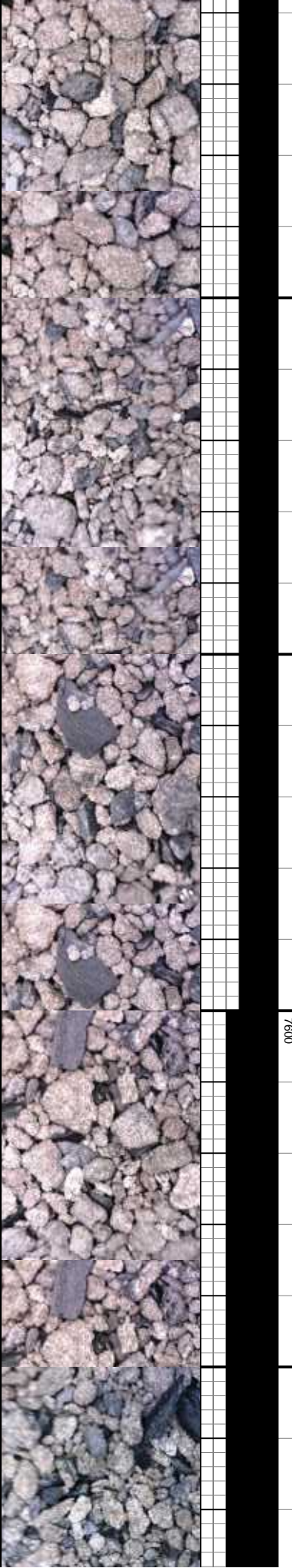


SS: med gy, med-dk brn, tr clr-s&p, clus, mod srt, f-med grs, mod sft-hd, w rd, mod calc, SH: blk-dk gy, tr lt gy, sb ply-pty, mod sft-frm, mod srt, med grs, sting bl cut, mod bri bl ring

SS: med gy, med-dk brn, tr clr-s&p, clus, mod srt, f-med grs, mod sft-hd, w rd, si-mod calc, SH: blk-dk gy, tr lt gy, sb ply-pty, mod sft-frm, mod srt, f-med grs, sting bl cut, bri bl ring

MD: 10.536  
TVD: 7,360.71  
Inclination: 88.77°  
Azimuth: 1.47°  
VS: 3.110.5

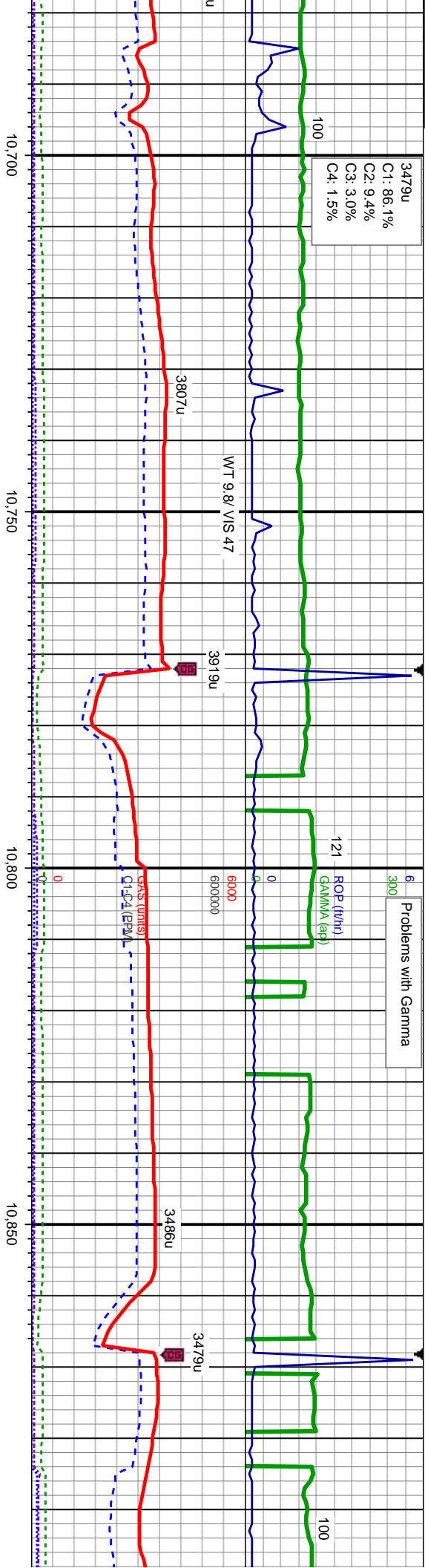
MD: 10.631  
TVD: 7,362.98  
Inclination: 88.49°  
Azimuth: 1.06°  
VS: 3.205.45





Problems with Gamma

3479u  
C1: 86.1%  
C2: 9.4%  
C3: 3.0%  
C4: 1.5%

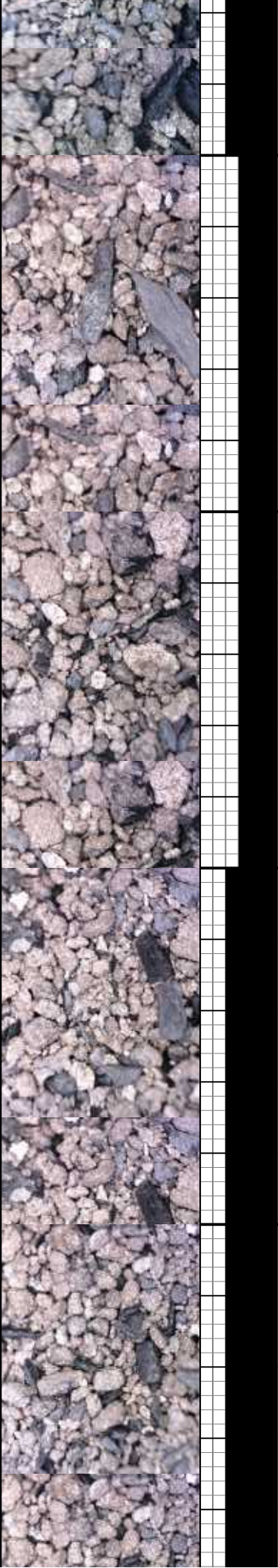


SS: med gy, med-dk brn, tr cl-s&p, clus,  
mod srt, f-med grs, mod sft-hd, w rd, mod  
calc, SH: blk-dk gy, tr lt gy, sb ply-ply,  
mod sft-frm, mod srt-d, f-med grs, sting bl  
cut, mod bri bl ring

MD: 10,726'  
TVD: 7,364.28  
Inclination: 89.94°  
Azimuth: 0.41°  
VS: 3,300.43

MD: 10,821'  
TVD: 7,363.95  
Inclination: 90.48°  
Azimuth: 359.86°  
VS: 3,395.43

SS: med gy, med-dk brn, tr cl-s&p, clus,  
mod srt, f-med grs, mod sft-hd, w rd,  
sl-mod calc, SH: blk-dk gy, tr lt gy, sb  
ply-ply, mod sft-frm, mod srt-d, f-med grs,  
sting bl cut, bri bl ring





3528u  
C1: 73.4%  
C2: 13.3%  
C3: 7.4%  
C4: 5.8%

3004u  
C1: 84.9%  
C2: 10.0%  
C3: 3.5%  
C4: 1.6%

ROP (t/h)  
GAMMA (cp)

96

98

WT 9.7 / VIS 4.7

6000

600000

GAS (units)  
C1-C4 (ppm)

3688u

3285u

3620u

3538u

3753u

10,950  
11,000  
11,050  
11,100

SS: med gy, med-dk brn, tr clr-s&p, clus,  
mod srt, f-c grs, mod sft-hd, w rd, sl-mod  
calc, SH: blk-dk gy, tr lt gy, sb ply-pty,  
mod sft-frm, mod srtld, f-med grs, sting bl  
cut, mod bri bl ring

SS: med gy, med-dk brn, tr clr-s&p, clus,  
mod srt, f-c grs, mod sft-hd, w rd, sl-mod  
calc, SH: blk-dk gy, tr lt gy, sb ply-pty,  
mod sft-frm, mod srtld, f-med grs, sting bl  
cut, mod bri bl ring

TVD (ft)

7100

MD: 10.917  
TVD: 7.363.2  
Inclination: 90.43°  
Azimuth: 359.89°  
VS: 3.491.42

MD: 11.012  
TVD: 7.362.64  
Inclination: 90.25°  
Azimuth: 358.8°  
VS: 3.586.42

MD: 11.107  
TVD: 7.362.49  
Inclination: 89.94°  
Azimuth: 358.35°  
VS: 3.681.39

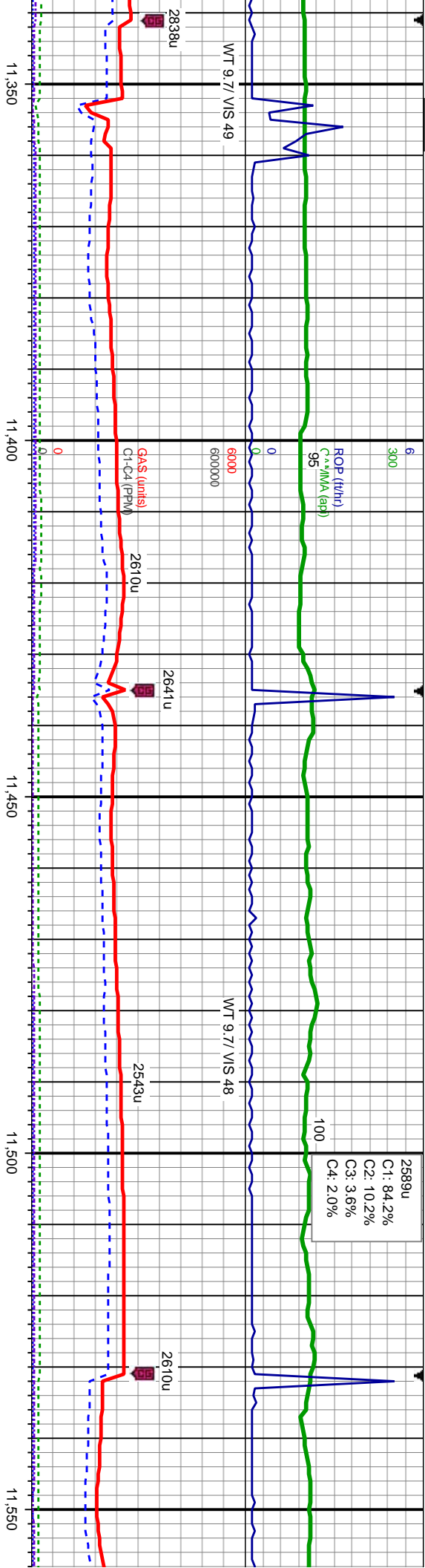
7600











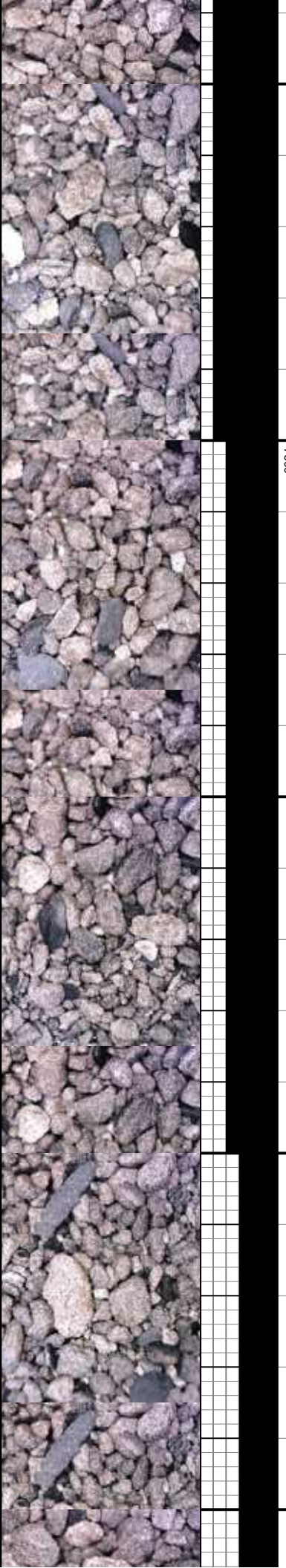
d gy, med-dk brn, tr clr-s&p, clus,  
i, f-med grs, mod sft-hd, w rd,  
calc, SH: blk-dk gy, tr lt gy, sb  
/, mod sft-frm, mod strd, f-med grs,  
cut, bri bl ring

SS: gy, med-dk brn, tr clr-s&p, clus, mod  
srt, f-med grs, mod sft-hd, w rd, mod calc,  
SH: blk-dk gy, tr lt gy, sb pily-pily, mod  
sft-frm, mod strd, f-med grs, sting bl cut,  
bri bl ring

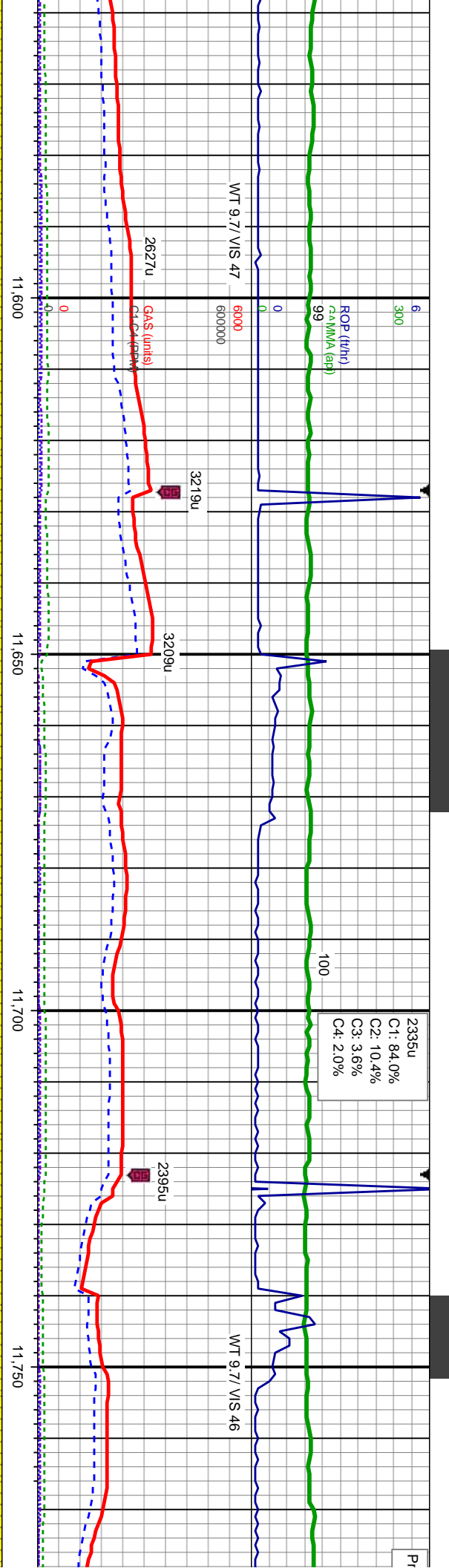
SS: dk gy, med-dk brn, tr cl  
srt, mod sft-hd, w rd, med g  
SH: blk-dk gy, sb pily-pily, n  
mod strd, med grs, sting bl  
ring

MD: 11,382  
TVD: 7,361.97  
Inclination: 90.3°  
Azimuth: 0.46°  
VS: 3,966.3

MD: 11,487  
TVD: 7,362.28  
Inclination: 89.32°  
Azimuth: 358.7°  
VS: 4,061.29







r-s&p, clus, w  
r, sl calc, tr  
mod sft-frm,  
cut, mod brl bl

SS: dk gy, med-dk brn, rr clt-s&p, clus, w  
srt, mod sft-hd, w rd, med gr, non-sl calc,  
tr SH: blk-dk gy, sb ply-ply, mod sft-frm,  
mod srtid, med grs, sting bl cut, mod brl bl  
ring

SS: dk gy, med-dk brn, rr clt-s&p, clus, w  
srt, mod sft-hd, w rd, med gr, non-sl calc,  
tr SH: blk-dk gy, sb ply-ply, mod sft-frm,  
mod srtid, med grs, sting bl cut, brl bl ring

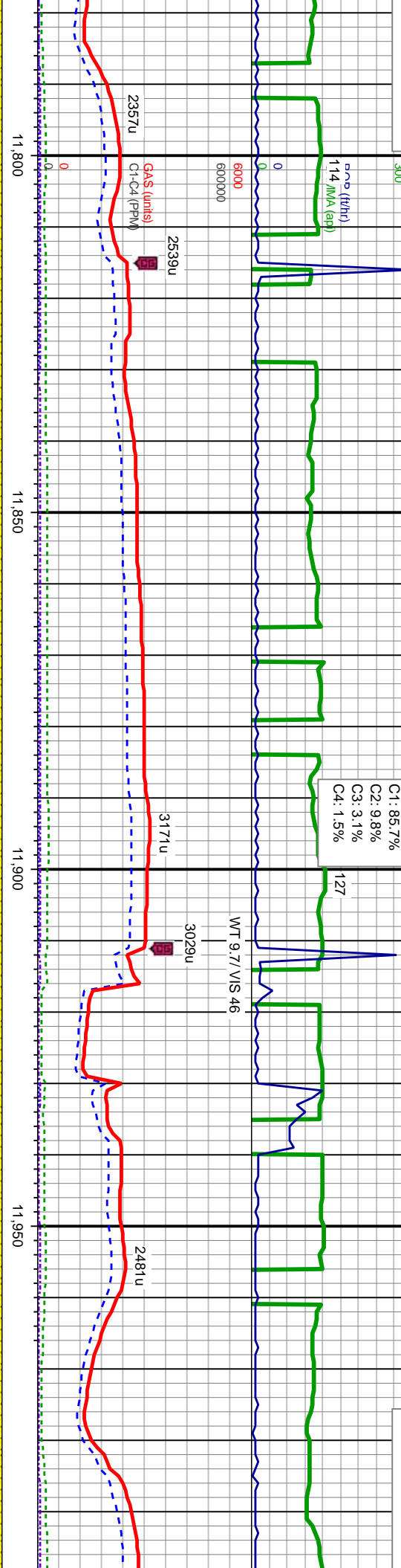
MD: 11.582  
TVD: 7,363.58  
Inclination: 89.1°  
Azimuth: 358.2°  
VS: 4,156.25

MD: 11.677  
TVD: 7,363.79  
Inclination: 90.65°  
Azimuth: 0.55°  
VS: 4,251.23

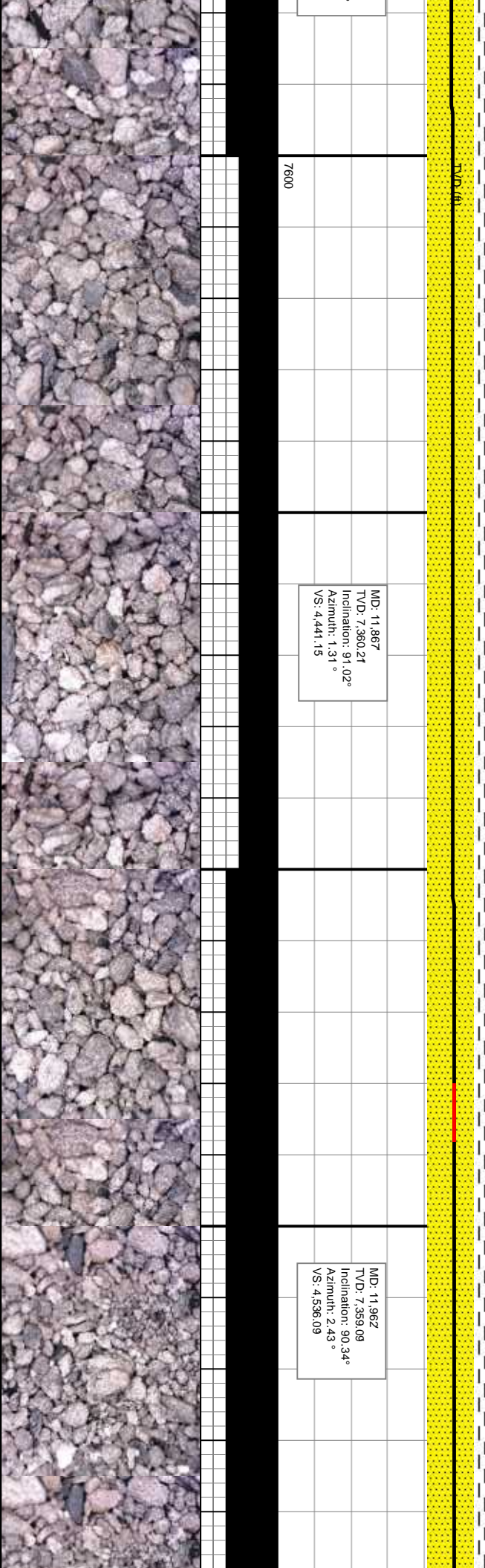
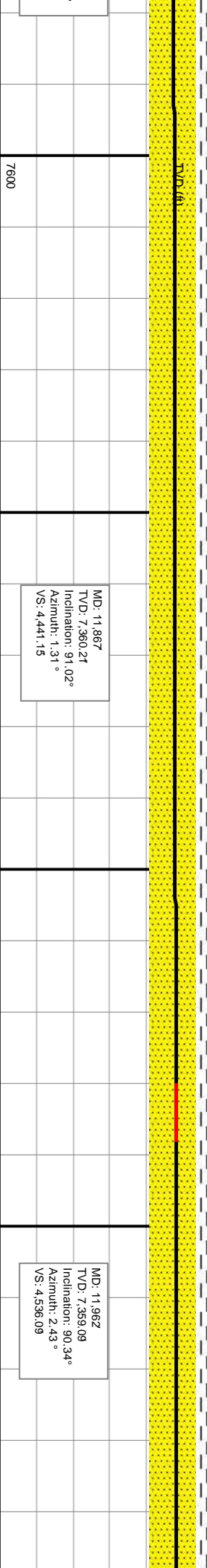
MD: 11.772  
TVD: 7,362.15  
Inclination: 91.33°  
Azimuth: 1.51°  
VS: 4,346.2



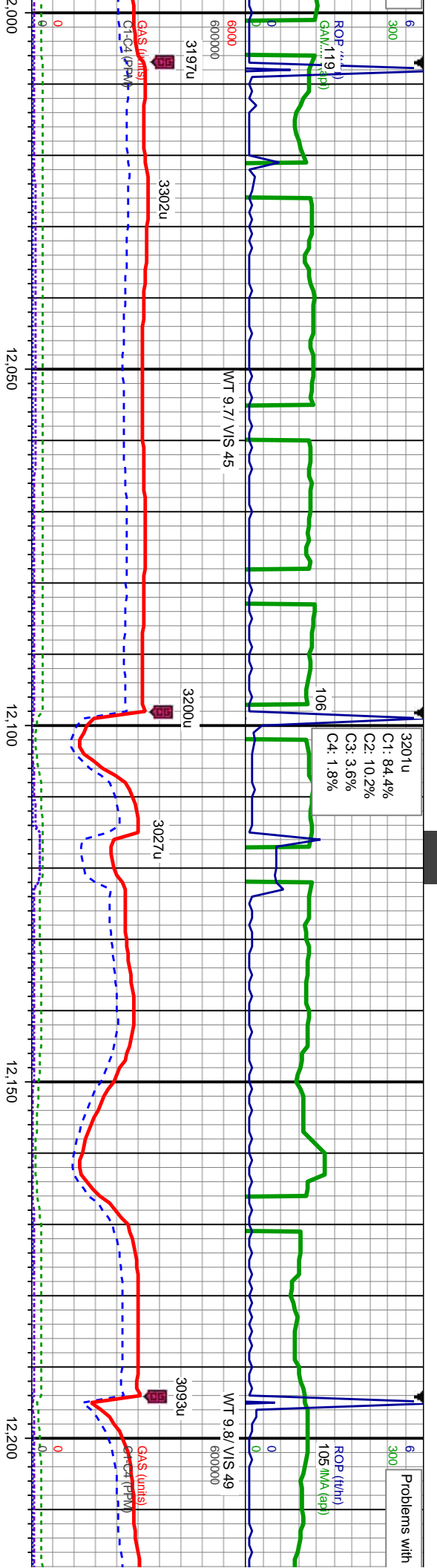




SS: dk gy, med-dk brn, rr clr-s&p, clus, w srt, mod sft-hd, w rd, med gr, non-sl calc, tr SH: blk-dk gy, sb ply-pty, mod sft-frm, mod srt, med grs, sting bl cut, mod bri bl ring





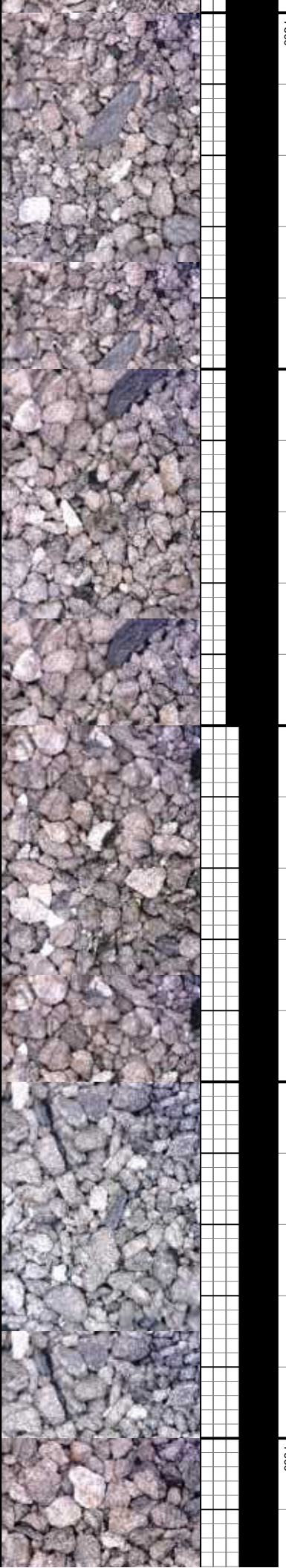


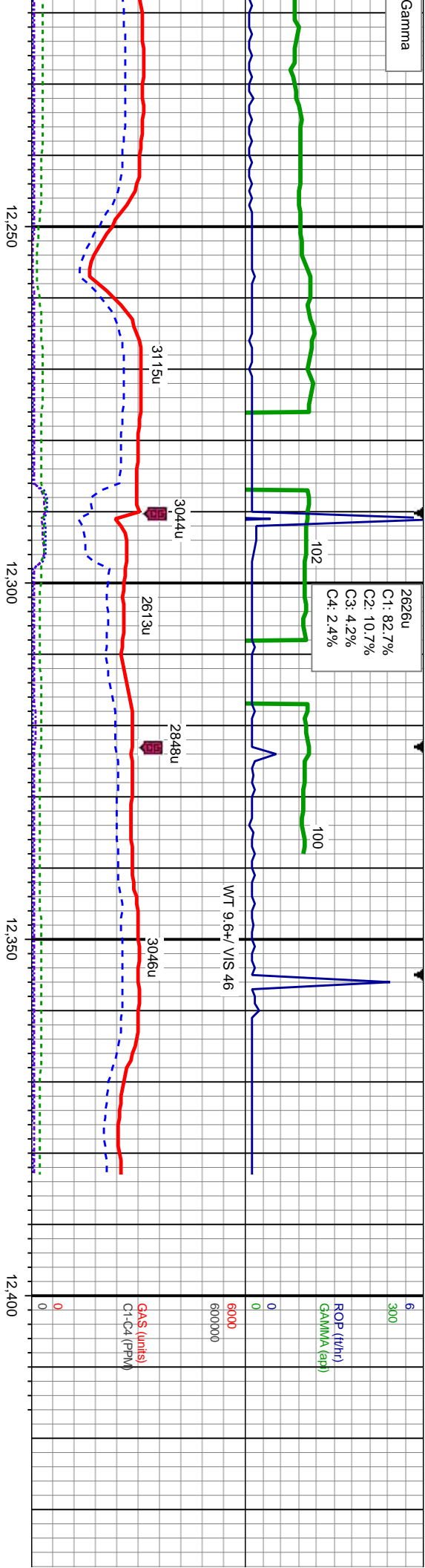
SS: med dk gy, med-dk brn, rr clt-s&p, clus, w srl, mod sft-hd, w rd, med gr, sl calc, tr SH: blk-dk gy, sb pty-pty, mod sft-fm, mod strd, med grs, sting bl cut, bri bl ring

SS: med dk gy, med-dk brn, rr clt-s&p, clus, w srl, mod sft-hd, w rd, med gr, sl calc, tr SH: blk-dk gy, sb pty-pty, mod sft-fm, mod strd, med grs, sting bl cut, mod bri bl ring

MD: 12.067  
TVD: 7.358.5  
Inclination: 90.37°  
Azimuth: 2.86°  
VS: 4.630.99

MD: 12.152  
TVD: 7.358.6  
Inclination: 89.51°  
Azimuth: 2.55°  
VS: 4.725.88





SS: med dk gy, med-dk brn, rr cl-s&p,  
clus, w srt, mod sft-hd, w rd, med gr, sl  
calc, tr SH: blk-dk gy, sb ply-pty, mod  
sft-firm, mod strd, med grs, sting bl cut,  
mod bri bl ring

SS: med dk gy, med-dk brn, rr cl-s&p,  
clus, w srt, mod sft-hd, w rd, med gr, sl  
calc, tr SH: blk-dk gy, sb ply-pty, mod  
sft-firm, mod strd, med grs, sting bl cut,  
mod bri bl ring

MD: 12,247  
TVD: 7,359.68  
Inclination: 89.20°  
Azimuth: 1.57°  
VS: 4,820.81

MD: 12,338  
TVD: 7,361.12  
Inclination: 88.98°  
Azimuth: 0.94°  
VS: 4,911.78

MD: 12,383  
TVD: 7,361.92  
Inclination: 88.98°  
Azimuth: 0.94°  
VS: 4,956.77

PROJECTION TO BIT

ANADARKO  
FERGE 4C-14HZ  
WELL TD @ 12383' MD  
ON 04/06/2014 @ 1100HRS

THANK YOU FOR USING  
COLUMBINE LOGGING INC.

