



Scale: 5" / 100'
Measured Depth Log

Well Name 0512336633-0000_Griffiths_35C-20HZ

Location NENW SEC 17, T1N, R67W

State COLORADO

Country USA

API Number 05-123-366330000

Region DJ BASIN

Spud Date 7/4/2013

Surface Coordinates 465' FNL & 1787' FWL

Bottom Hole Coordinates RELATIVE TO WELLHEAD:
9622.83' S & 66.00' W

Ground Elevation 5056'

Logged Interval 7120' To 17117'

Formation CodeII

Type of Drilling Fluid WBM

County WELD

Rig Number H&P 307

AFE # 2075213

Field WATTENBERG

Drilling Completed 9/26/2013

K.B. Elevation 5081'

Total Depth 17117'

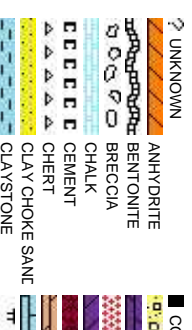
Company Anadarko

Address 1099 18th St.
Suite 1800
Denver, CO. 80

Name Chris Johnson,

Company Columbine Logg

Address 2385 S. Lipan S
Denver, CO



Operator

202

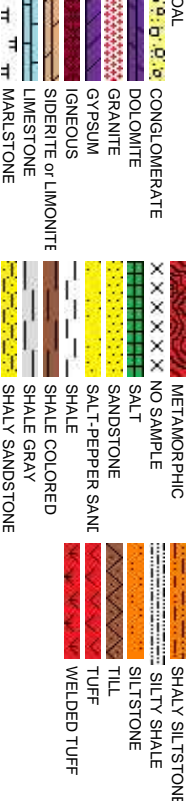
Geologist

Alec Walker, Jim Frank

qing

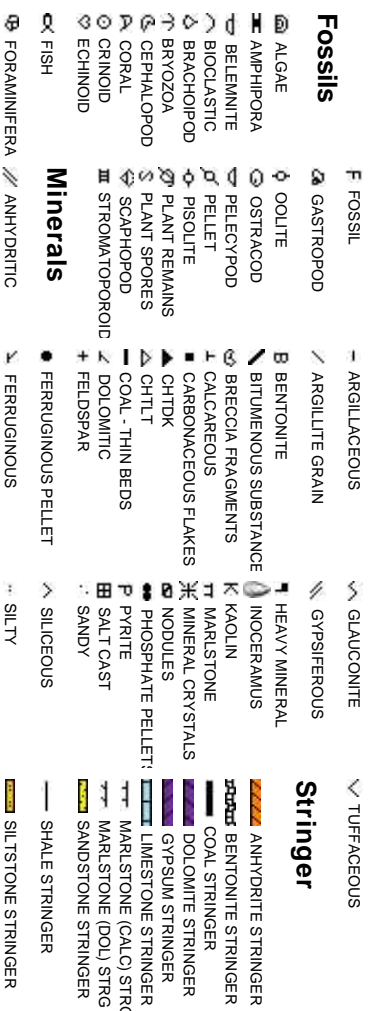
st.

Rock Types



Accessories

Fossils

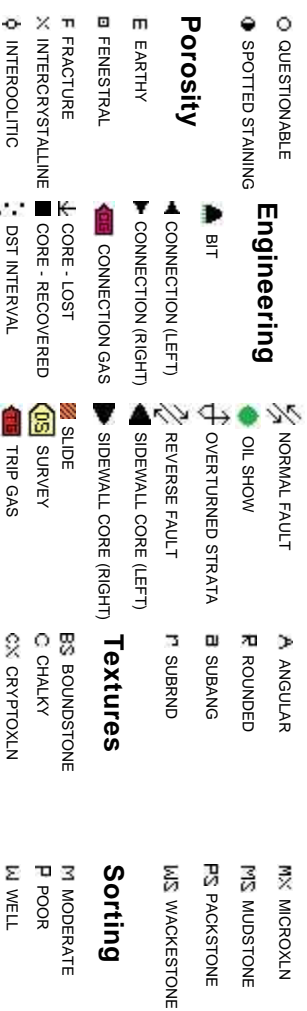


Other Symbols

Oil Show

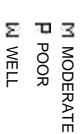


Porosity



Textures

Sorting



Slide/Rotate

ROP
ROF
GR

Total Gas & Chromatograph

GAS
C1
C2
C3
C4

Depth Labels

% Lith

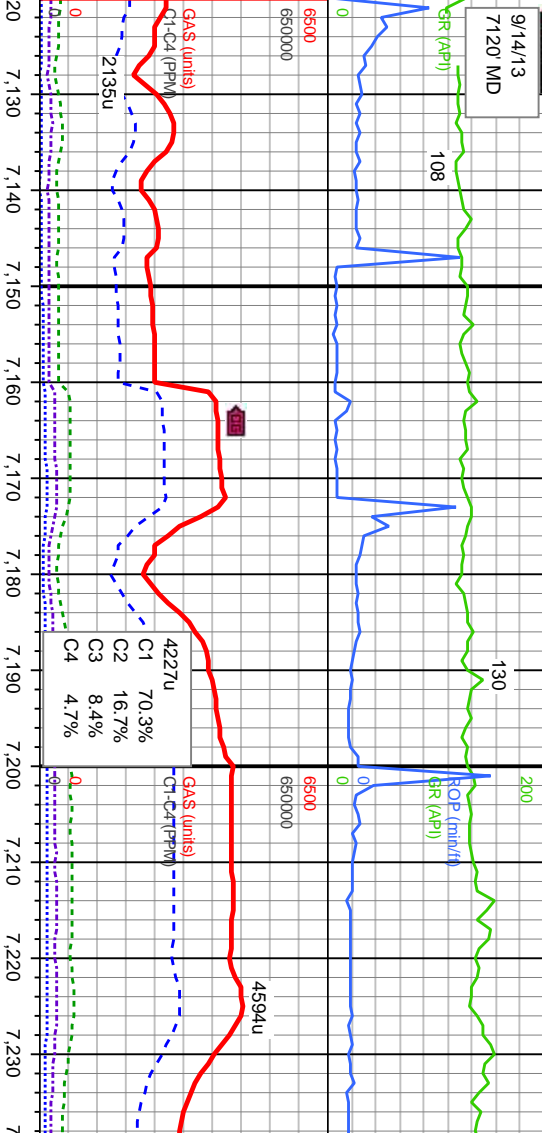
Well Bore
TVD

Oil Show

Images

Bit #: 1
Type: sdi611
Size: 8.75
Depth In: 1,090 '
Depth Out: 8,079 '
Hours: 46.5 hrs

9/14/13
7120' MD



COLUMBINE LOGGING 2 MAN UNIT
RIGGED UP 9/13/13, BEGIN LOGGING
@ 11:58 PM W/ BLOODHOUND #0125

WT IN 8.8 OUT 8.8
VIS IN 34 OUT 34

DRILLING IN
SUSSEX FM

7120'-7150': SLTY SH: med gy-dk gy, sb pily-sb
biky, firm to med sft, sb rnd-sb ang, mod fri, sl
calc, tr bent, lt bl flr sl halo cut

7150'-7200': SLTY SH: med gy-dk gy, sb pily-sb
biky, firm to med sft, sb rnd-sb ang, mod fri, sl
calc, tr bent, lt bl flr sl halo cut

7200'-7250': SLTY SH: med gy-dk gy, s
biky, firm to med sft, sb rnd-sb ang, m
calc, tr bent, lt bl flr sl halo cut

KOP 7120' MD

MD: 7,160
TVD: 7,150.54
Inclination: 3.43 -
Azimuth: 193.69 -
VS: -8.58

MD: 7,208
TVD: 7,198.28
Inclination: 8.22 -
Azimuth: 188.02 -
VS: -3.79

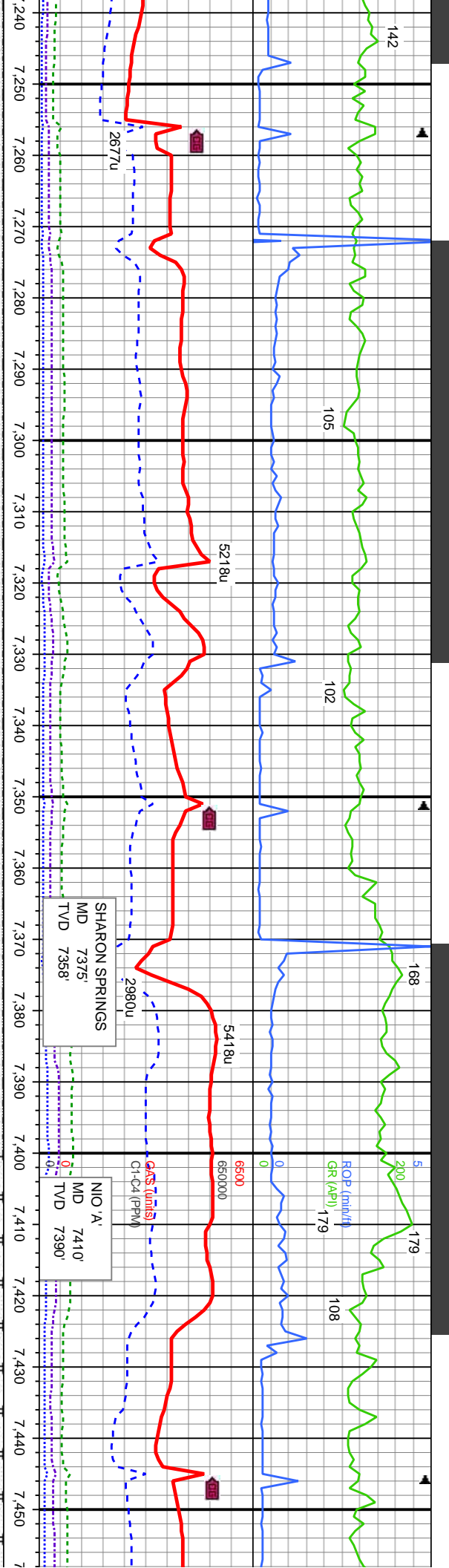
TR
P
FR
GD
EXL

TVD (ft)

TVD (ft)

TVD (ft)

TVD (ft)



WT IN 9.4
VIS IN 36
OUT 9.3
OUT 35

WT IN 9.7
VIS IN 37
OUT 9.5
OUT 35

MD: 7,255
TVD: 7,244.46
Inclination: 12.99
Azimuth: 184.77
VS: 4.8

MD: 7,302
TVD: 7,289.79
Inclination: 17.58
Azimuth: 183.25
VS: 17.15

MD: 7,349
TVD: 7,334.17
Inclination: 20.78
Azimuth: 184.02
VS: 32.56

MD: 7,396
TVD: 7,377.55
Inclination: 24.45
Azimuth: 181.09
VS: 50.6

MD: 7,445
TVD: 7,421.54
Inclination: 27.79
Azimuth: 178.96
VS: 72.17

b ply-sb
od fri, sl
7250'-7300': SLTY SH: med gy-dk gy, sb ply-sb
biky, firm to med sft, sb rnd-sb ang, mod fri, sl
calc, tr bent, lt bl flr sl halo cut

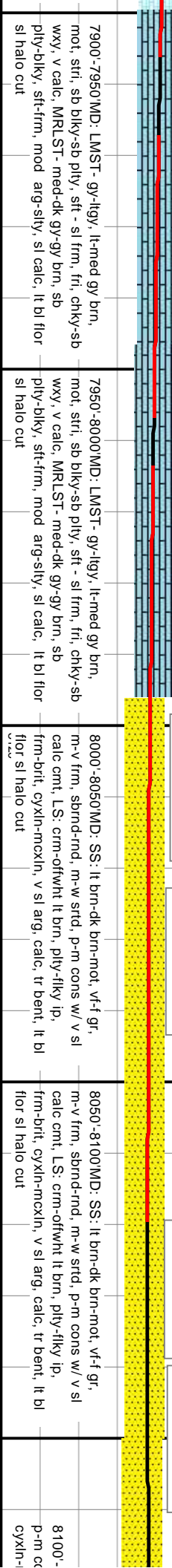
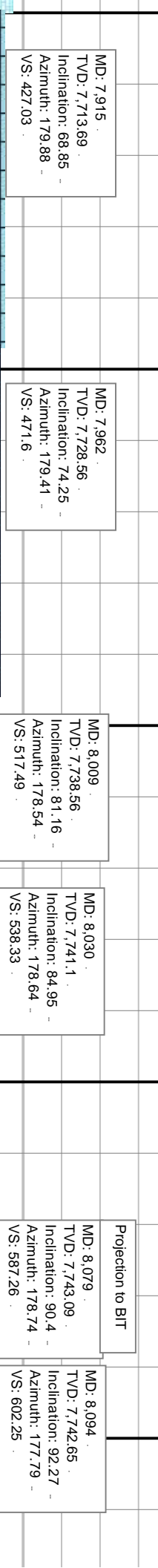
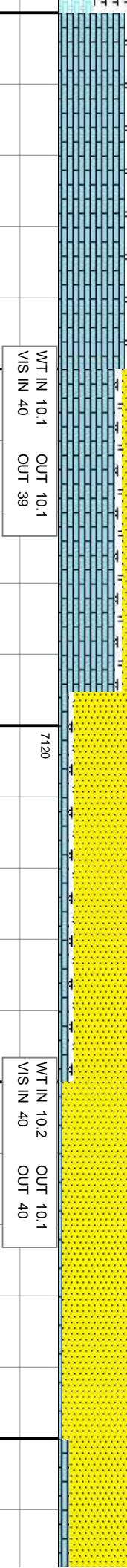
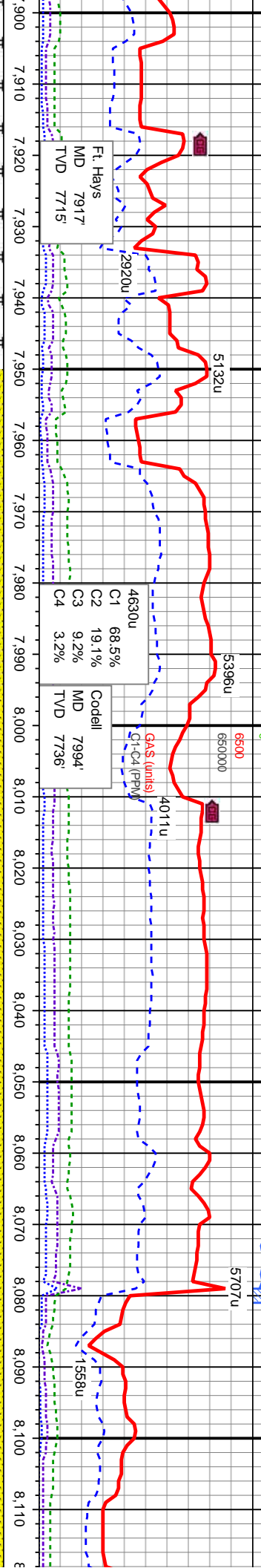
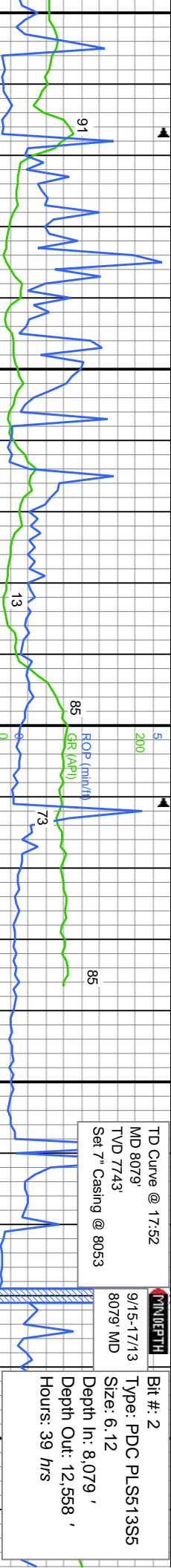
7300'-7350': SLTY SH: med gy-dk gy, sb ply-sb
biky, firm to med sft, sb rnd-sb ang, mod fri, sl
calc, tr bent, lt bl flr sl halo cut

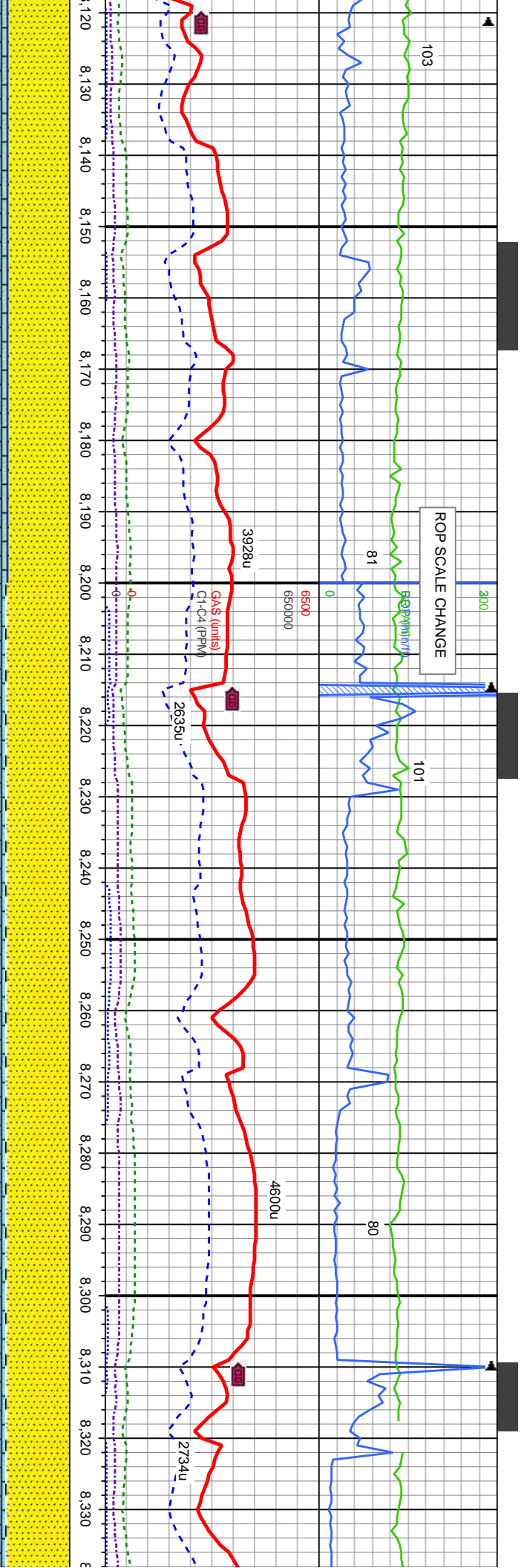
7350'-7400': SLTY SH: med gy-dk gy, sb
ply-sb biky, firm to med sft, sb rnd-sb ang,
mod fri, sl calc, tr bent, lt bl flr sl halo cut

7400'-7450MD: CHK- lt-med gy, lt-med gy brn,
mot, strl, sb biky-sb ply, sft - sl frm, fri, chky-sb
wxy, v calc, MRST- med-dk gy-gy brn, sb
ply-biky, sft-frm, mod arg-sily, sl calc, lt bl flr
w sl halo cut
8120

7450'-7
mot, str
wxy, v c
ply-bik
sl halo







MD: 8,157
TVD: 7,740.49
Inclination: 91.66
Azimuth: 178.02
VS: 665.18

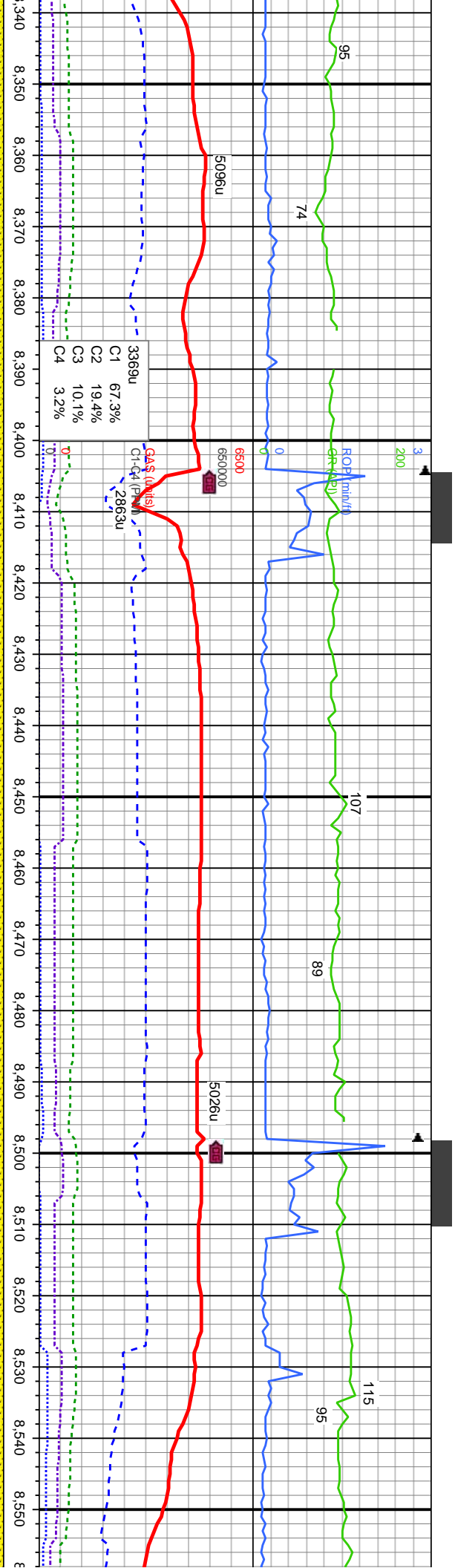
TVD (ft)

MD: 8,251
TVD: 7,739.1
Inclination: 90.03
Azimuth: 178.64
VS: 759.14

8200'-8300' MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fily ip, frm-brlt, cyxln-mcxln, v sl arg, calc, tr bent, MRLST- med-dk gy-gy brn, sb ply-blly, sft-frm, mod arg-sily, sl calc, lt bl flr sl halo cut

8300'-8400' MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fily ip, frm-brlt, cyxln-mcxln, v sl arg, calc, tr bent, MRLST- med-dk gy-gy brn, sb ply-blly, sft-frm, mod arg-sily, sl calc, lt bl flr sl halo cut





D: 8.346
D/D: 7.739.47
Inclination: 89.53
Azimuth: 179.21
S: 854.13

TVD (ft)

MD: 8.440
TVD: 7.741.07
Inclination: 88.52
Azimuth: 178.25
VS: 948.1

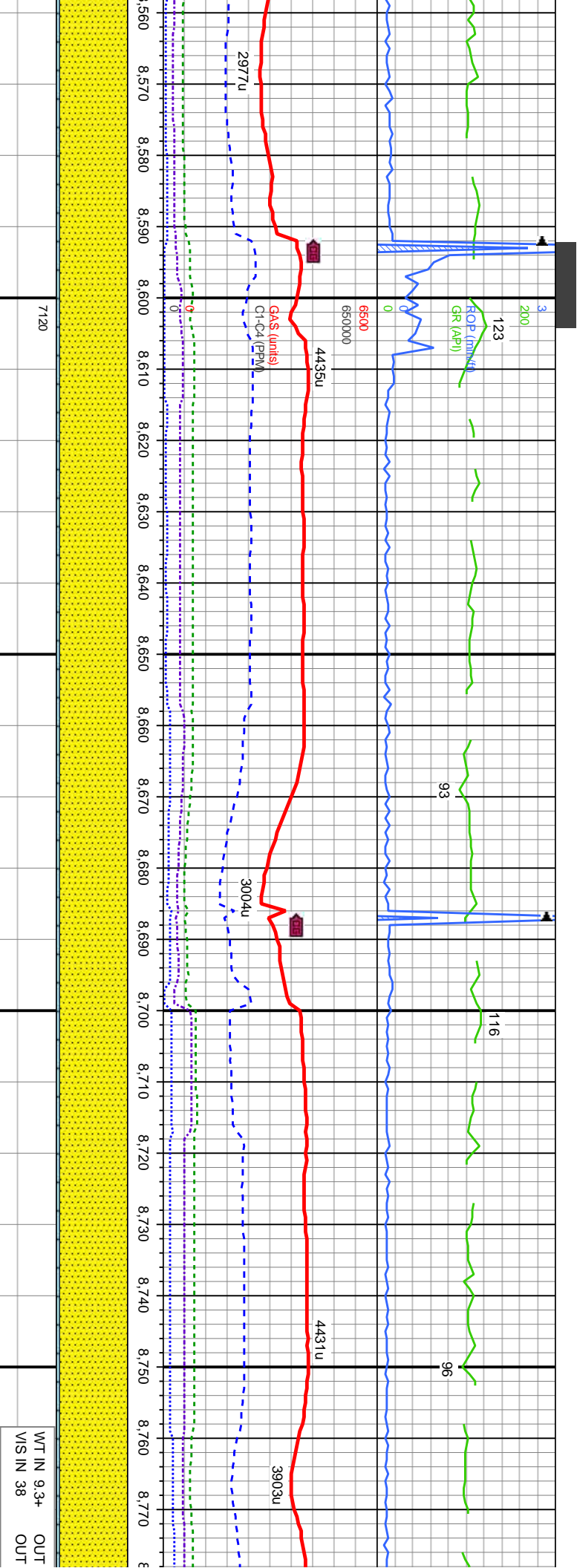
MD: 8.534
TVD: 7.743.17
Inclination: 88.92
Azimuth: 178.9
VS: 1,042.05

WT IN 9.3
VIS IN 40
OUT 9.3
OUT 38

8400'-8500' MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-flky lp, frm-brtl, cyxln-mexln, v sl arg, calc, tr bent, MRLST- med-dk gy-gy brn, sb pty-bkly, sft-frm, mod arg-sily, sl calc, lt bl flr sl halo cut

8500'-8600' MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, cyxln-mexln, v sl arg, calc, tr bent, lt bl flr sl halo cut

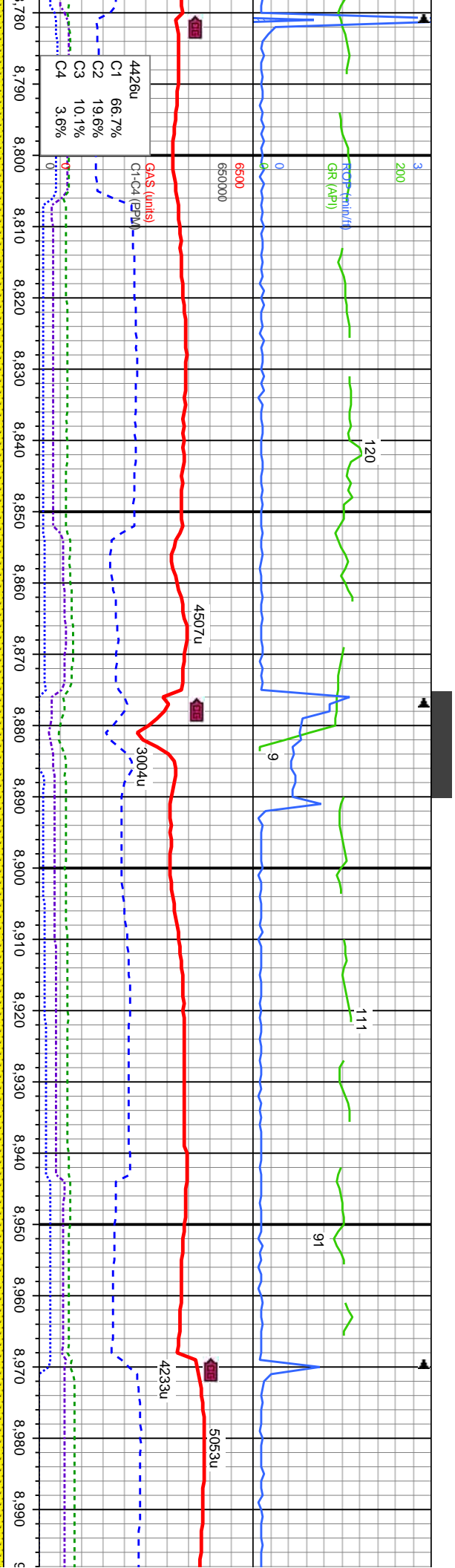




7120	MD: 8,628 TVD: 7,744.31 Inclination: 89.69 Azimuth: 180 VS: 1,136.04
TVD (ft)	

8600'-8700' MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-illy ip, frm-brit, cyxln-mcxl, v sl arg, calc, tr bent, lt bl flr sl halo cut



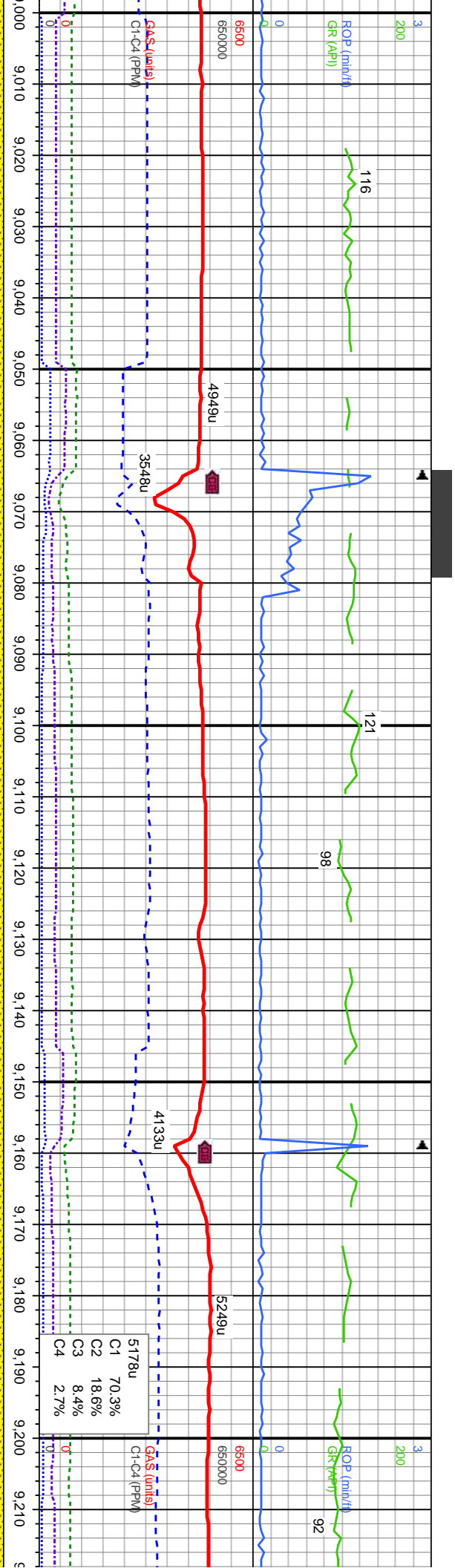


9.4 38	7120	WT IN 9.3+ VIS IN 38	OUT 9.4 OUT 38
MD: 8,817 TVD: 7,745.8 Inclination: 89.32 Azimuth: 178.49 VS: 1,325.03			
MD: 8,912 TVD: 7,746.41 Inclination: 89.94 Azimuth: 179.41 VS: 1,420.02			

8800'-8900'MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbrnd-rnd, m-w srt'd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-filky ip, frm-brt, cyxln-mcxl'n, v sl arg, calc, tr bent, lt bl flr sl halo cut

8900'-9000'MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbrnd-rnd, m-w srt'd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-filky ip, frm-brt, cyxln-mcxl'n, v sl arg, calc, tr bent, lt bl flr sl halo cut





D: 9.006
ID: 7.746.32
Inclination: 90.18
Azimuth: 178.43
VS: 1.514.01

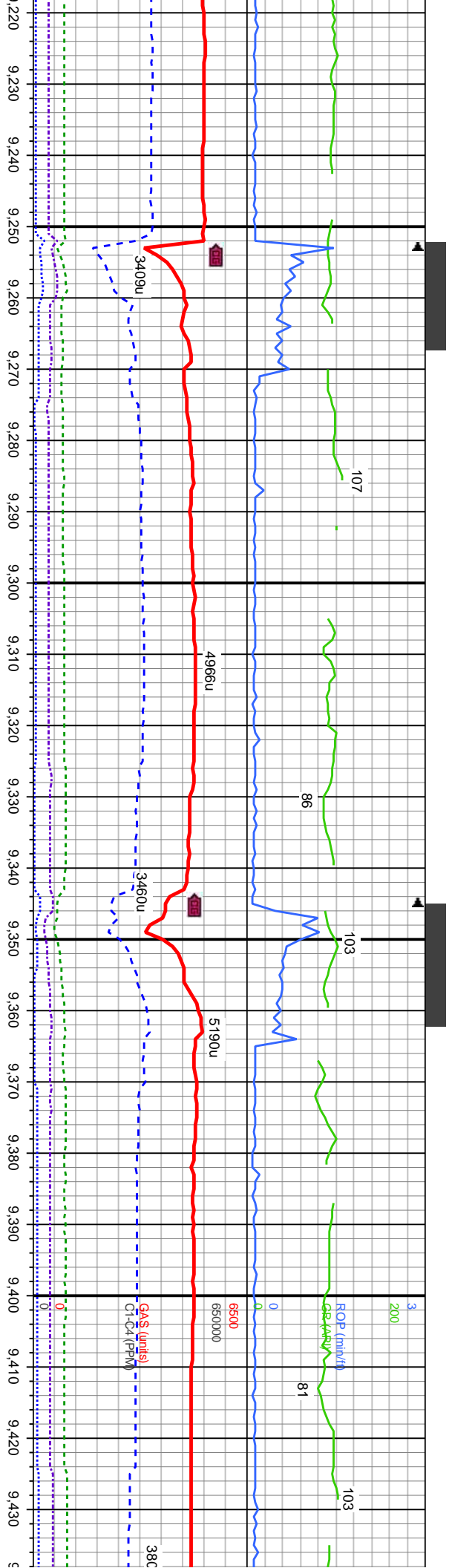
MD: 9.100
TVD: 7.745.91
Inclination: 90.31
Azimuth: 179.44
VS: 1.608

MD: 9.194
TVD: 7.744.83
Inclination: 91.01
Azimuth: 179.26
VS: 1.701.99

9000'-9100'MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-fiky ip, frm-brit, cyxn-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

9100'-9200'MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-fiky ip, frm-brit, cyxn-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut





MD: 9.289
TVD: 7,743.38
Inclination: 90.74
Azimuth: 179.56
VS: 1,796.98

MD: 9.383
TVD: 7,742.8
Inclination: 89.97
Azimuth: 179.93
VS: 1,890.97

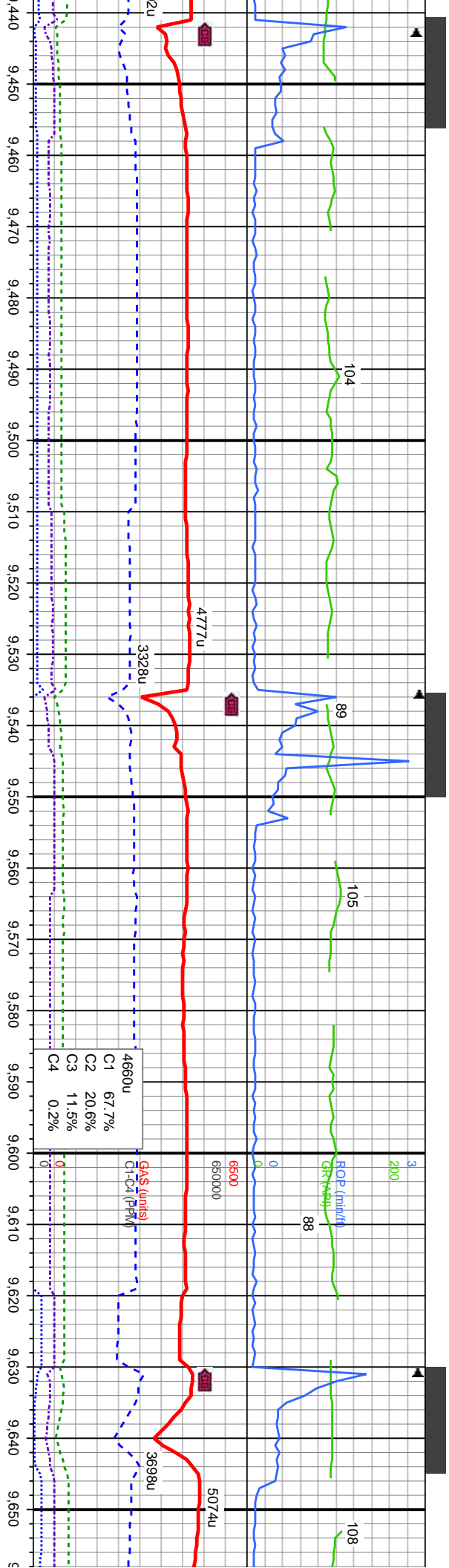
TVD (ft)
7120

9300' MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbrnd-rnd, m-w srt'd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pily-filky ip, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

9300'-9400' MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbrnd-rnd, m-w srt'd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pily-filky ip, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

9400'-9500' MD: SS: lt brn-c p-m cons w/ v sl calc cnt, l cyxln-mcxln, v sl arg, calc,





MD: 9.477
TVD: 7,743.38
Inclination: 89.32
Azimuth: 180.49
VS: 1,984.97

WT IN 9.2 OUT 9.3
VIS IN 38 OUT 38

MD: 9.572
TVD: 7,744.73
Inclination: 89.05
Azimuth: 180.45
VS: 2,079.95

4660u
C1 67.7%
C2 20.6%
C3 11.5%
C4 0.2%

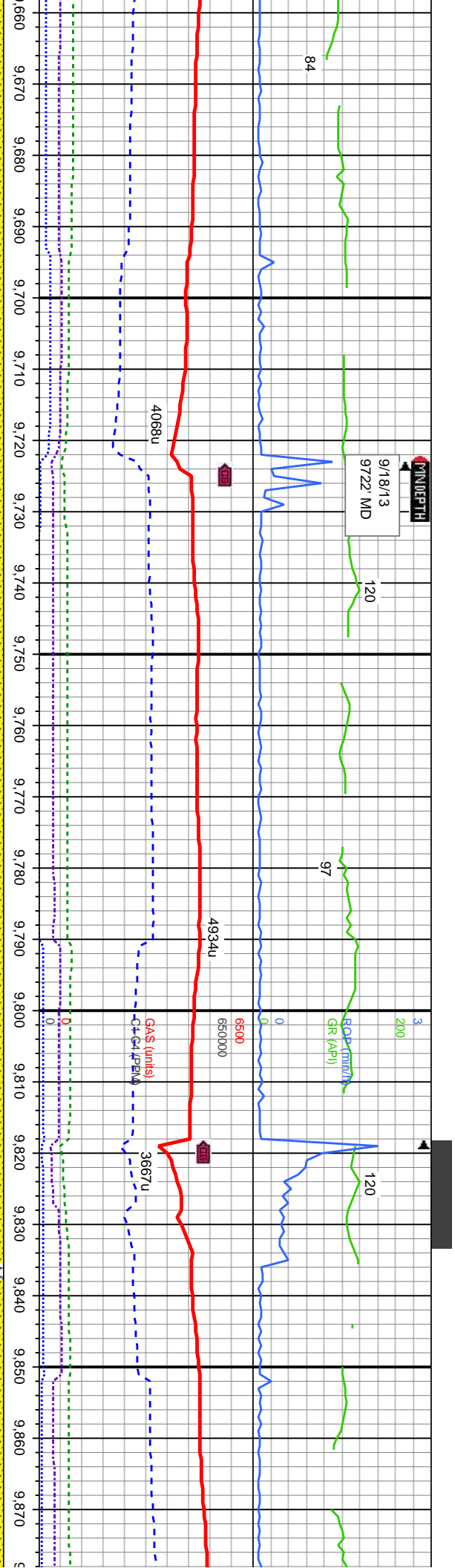
7120
TVD (ft)

lk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd,
S: crm-offwht lt brn, pty-fiky ip, frm-brit,
tr bent, lt bl flr sl halo cut

9500'-9600'MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd,
p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-fiky ip, frm-brit,
cylxln-mcxltn, v sl arg, calc, tr bent, lt bl flr sl halo cut

9600'-9700'MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd,
p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-fiky ip, frm-brit,
cylxln-mcxltn, v sl arg, calc, tr bent, lt bl flr sl halo cut





D: 9.666
VD: 7.746.37
Inclination: 88.95
Azimuth: 181.89
S: 2.173.9

MD: 9.760
TVD: 7.747.79
Inclination: 89.32
Azimuth: 181.5
VS: 2.267.83

TVD (ft)

MD: 9.853
TVD: 7.749.54
Inclination: 88.53
Azimuth: 181.92
VS: 2.360.76

WT IN 9.2 OUT 9.2
VIS IN 39 OUT 39

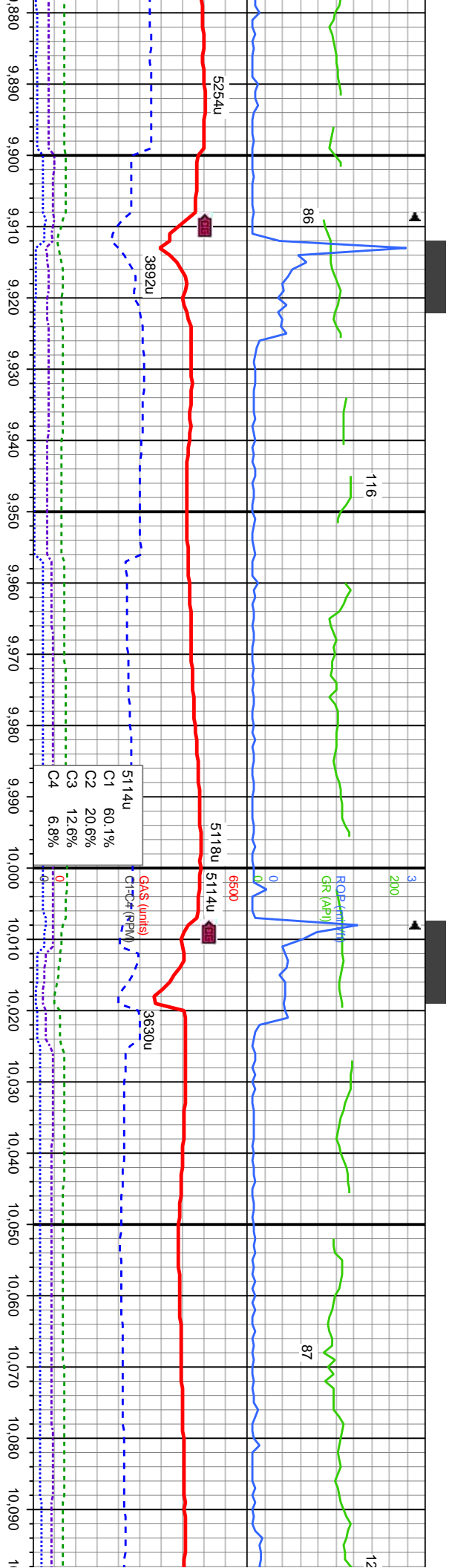
7120

v frm, sbmrd-rnd, m-w strd,
ply-filly ip, frm-brit,
to cut

9700'-9800MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbmrd-rnd, m-w strd,
p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-filly ip, frm-brit,
cylxn-mcxlh, v sl arg, calc, tr bent, lt bl flr sl halo cut

9800'-9900MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbmrd-rnd, m-w s
p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-filly ip, frm-brit,
cylxn-mcxlh, v sl arg, calc, tr bent, lt bl flr sl halo cut





MD: 9.949
TVD: 7,750.95
Inclination: 89.78
Azimuth: 182.35
VS: 2,456.66

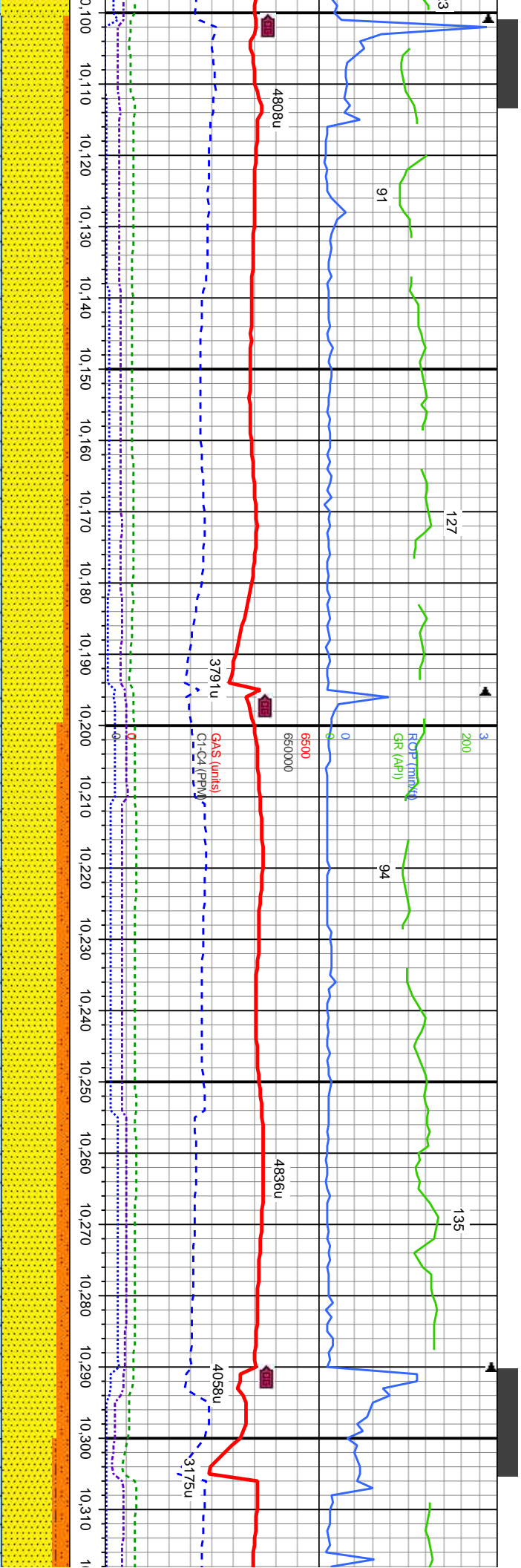
7120 WT IN 9.1 OUT 9.1
VIS IN 40 OUT 40

MD: 10.043
TVD: 7,751.76
Inclination: 89.23
Azimuth: 182.38
VS: 2,550.56

9900'-10000MD: SS: lt brn-dk brn-mot, vt-f gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-fily ip, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

10000'-10100MD: SS: lt brn-dk brn-mot, vt-f gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-fily ip, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut





WT IN 9.1
VIS IN 40
OUT 9.1
OUT 40

MD: 10.137
TVD: 7.753.36
Inclination: 88.82
Azimuth: 180.97
VS: 2.644.49

7120
TVD (ft)

MD: 10.232
TVD: 7.754.57
Inclination: 89.72
Azimuth: 181.03
VS: 2.739.45

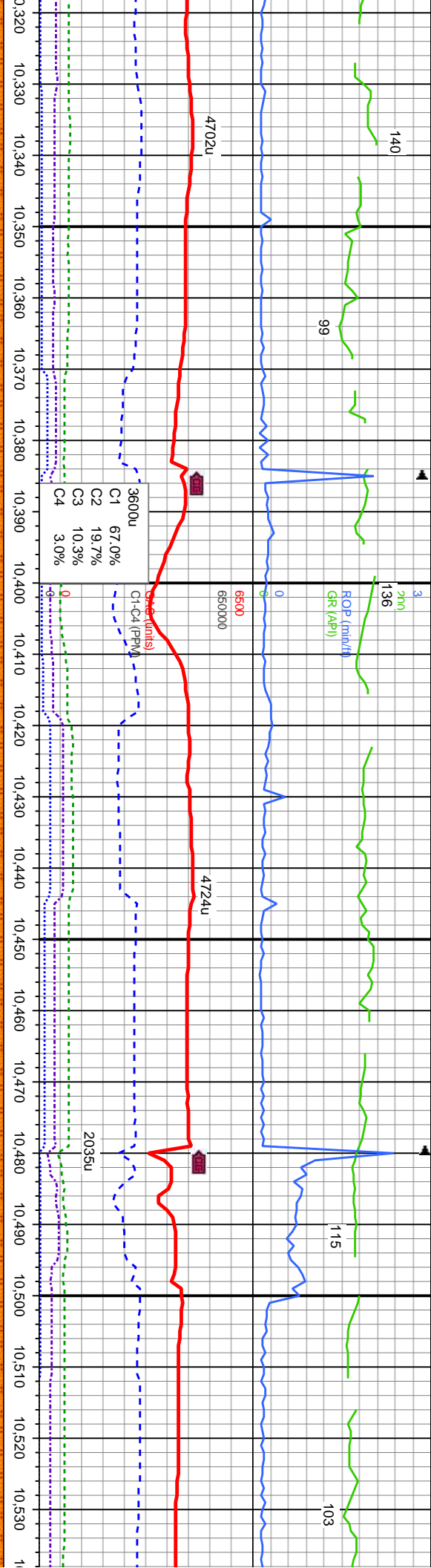
M
T
In
A
V

10100'-10200' MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w srted, p-m cons w/ v sl calc cmt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w srted, p-m cons w/ v sl calc cmt, LS: crm-offwht lt brn, pily-filky ip, frm-brlt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flor sl halo cut

10200'-10300' MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w srted, p-m cons w/ v sl calc cmt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w srted, p-m cons w/ v sl calc cmt, LS: crm-offwht lt brn, pily-filky ip, frm-brlt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flor sl halo cut

10300'-10400' SS: sl calc cmt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w srted, p-m cons w/ v sl calc cmt, LS: crm-offwht lt brn, pily-filky ip, frm-brlt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flor sl halo cut





D: 10.326
D/D: 7.755.06
Inclination: 89.69
Azimuth: 179.76
VS: 2.833.44

MD: 10.420
TVD: 7.757.11
Inclination: 87.81
Azimuth: 179.27
VS: 2.927.42

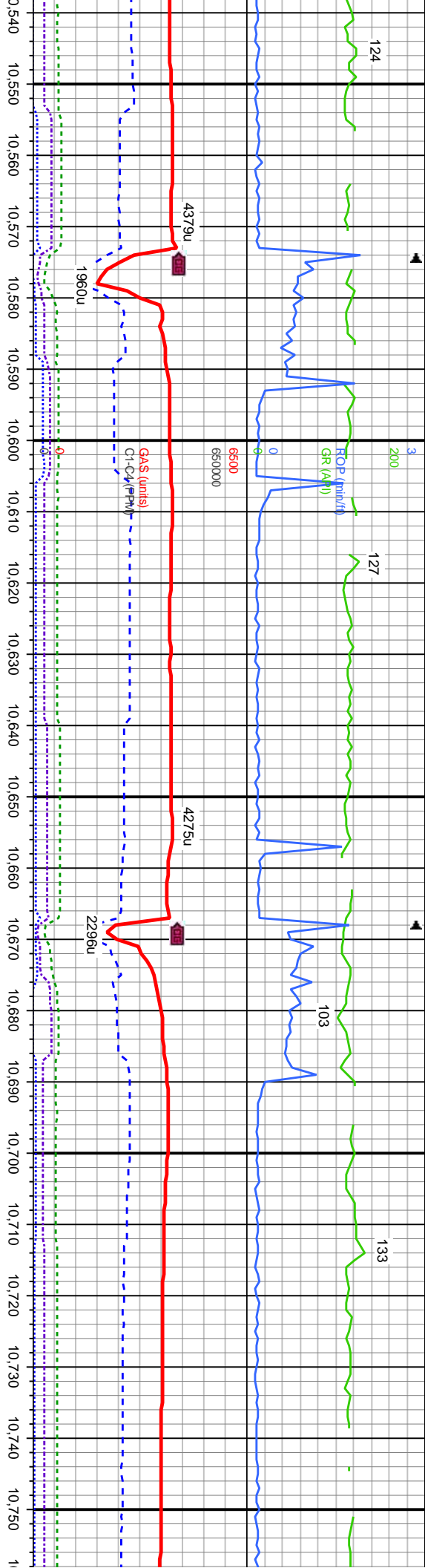
MD: 10.515
TVD: 7.760.28
Inclination: 88.36
Azimuth: 179.39
VS: 3.022.36

MD: SS: It brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v
SLTY SH: med gy-dk gy, sb ply-sb blk, firm to med sft, sb rnd-sb ang, mod fri, sl
bl flr sl halo cut, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w
w/ v sl calc cnt, LS: crm-offwht It brn, ply-fiky ip, frm-brt, cyxln-mcxln, v sl
nt, It bl flr sl halo cut

10400'-10500' MD: SS: It brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v
sl calc cnt, SLTY SH: med gy-dk gy, sb ply-sb blk, firm to med sft, sb rnd-sb ang, mod fri, sl
calc, tr bent, It bl flr sl halo cut, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w
srt, p-m cons w/ v sl calc cnt, LS: crm-offwht It brn, ply-fiky ip, frm-brt, cyxln-mcxln, v sl
812' arg, calc, tr bent, It bl flr sl halo cut

10500'-10600' MD: SS: It brn-dk brn-mot
sl calc cnt, SLTY SH: med gy-dk gy, sb
calc, tr bent, It bl flr sl halo cut, SLTST
srt, p-m cons w/ v sl calc cnt, LS: crm
arg, calc, tr bent, It bl flr sl halo cut





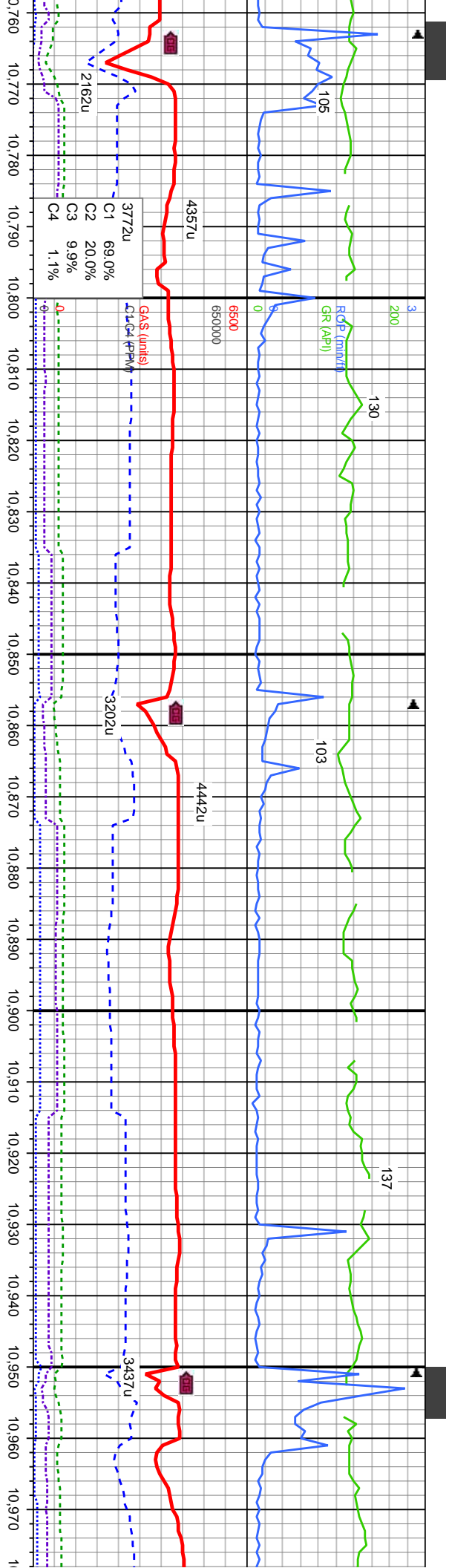
MD: 10,609
TVD: 7,762.09
Inclination: 89.44
Azimuth: 179.54
VS: 3,116.34

WT IN 8.9
VIS IN 39
OUT 8.9
OUT 39

MD: 10,703
TVD: 7,762.3
Inclination: 90.3
Azimuth: 180.53
VS: 3,210.34

10600'-10700' MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, SLTY SH: med gy-dk gy, sb pty-sb blk, firm to med sft, sb rnd-sb ang, mod fri, sl calc, tr bent, lt bl flr sl halo cut, SLTST: med brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pty-illy lp, frm-brit, cylin-mcclin, v sl arg, calc, tr bent, lt bl flr sl halo cut





MD: 10,798
TVD: 7,761.08
Inclination: 91.17
Azimuth: 180.52
VS: 3,305.32

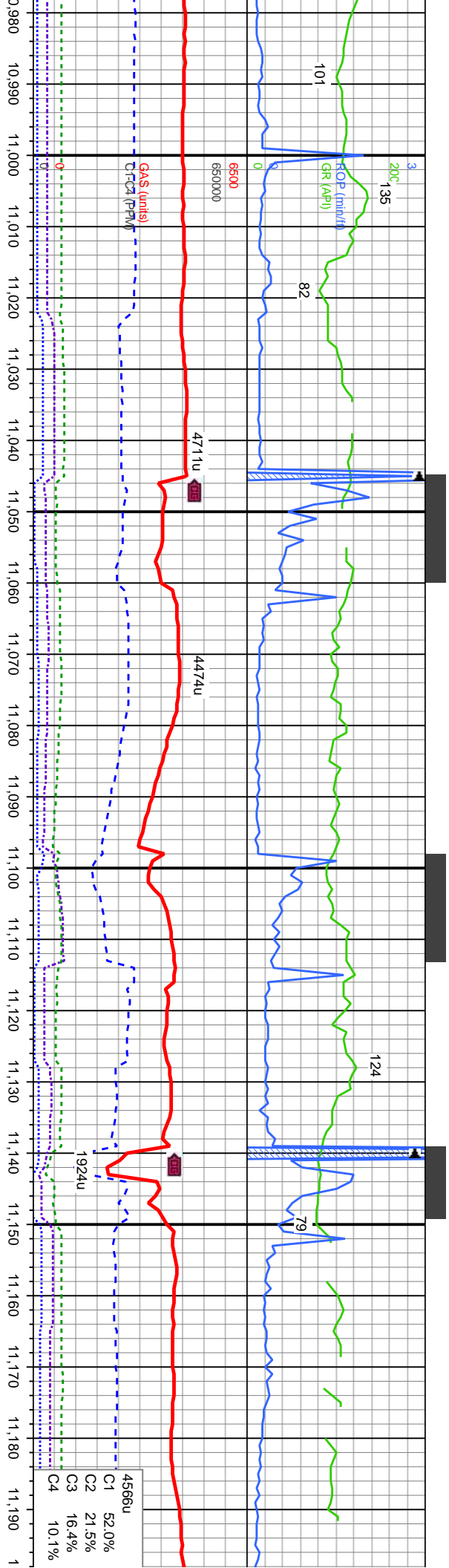
MD: 10,892
TVD: 7,759.14
Inclination: 91.2
Azimuth: 180.37
VS: 3,399.29

sbnd-rnd, m-w strd, p-m cons w/ v
to med sft, sb rnd-sb ang, mod fri, sl
-mot, v/ gr, m-v frm, sbnd-rnd, m-w
ply-fiky ip, frm-brt, cyxn-mcxl, v sl

10800'-10900'MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons
w/ v sl calc cnt, SLTY SH: med gy-dk gy, sb ply-sb biky, firm to med sft, sb rnd-sb ang,
mod fri, sl calc, tr bent, lt bl flr sl halo cut, SLTST: med brn-dk brn-mot, v/ gr, m-v frm,
sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky ip,
frm-brt, cyxn-mcxl, v sl arg, calc, tr bent, lt bl flr sl halo cut

10900'-11000'MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd
sl calc cnt, SLTY SH: med gy-dk gy, sb ply-sb biky, firm to med sft, sb rnd-
calc, tr bent, lt bl flr sl halo cut, SLTST: med brn-dk brn-mot, v/ gr, m-v frm
strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky ip, frm-brt, c
arg, calc, tr bent, lt bl flr sl halo cut





ID: 10.987
VD: 7.756.49
Inclination: 91.99
Azimuth: 180.69
VS: 3.494.24

TVD (ft)

MD: 11.081
TVD: 7.753.45
Inclination: 91.72
Azimuth: 181.77
VS: 3.588.16

MD: 11.176
TVD: 7.751.49
Inclination: 90.64
Azimuth: 180.33
VS: 3.683.11

WT IN 8.8
VIS IN 40
OUT 8.9
OUT 40

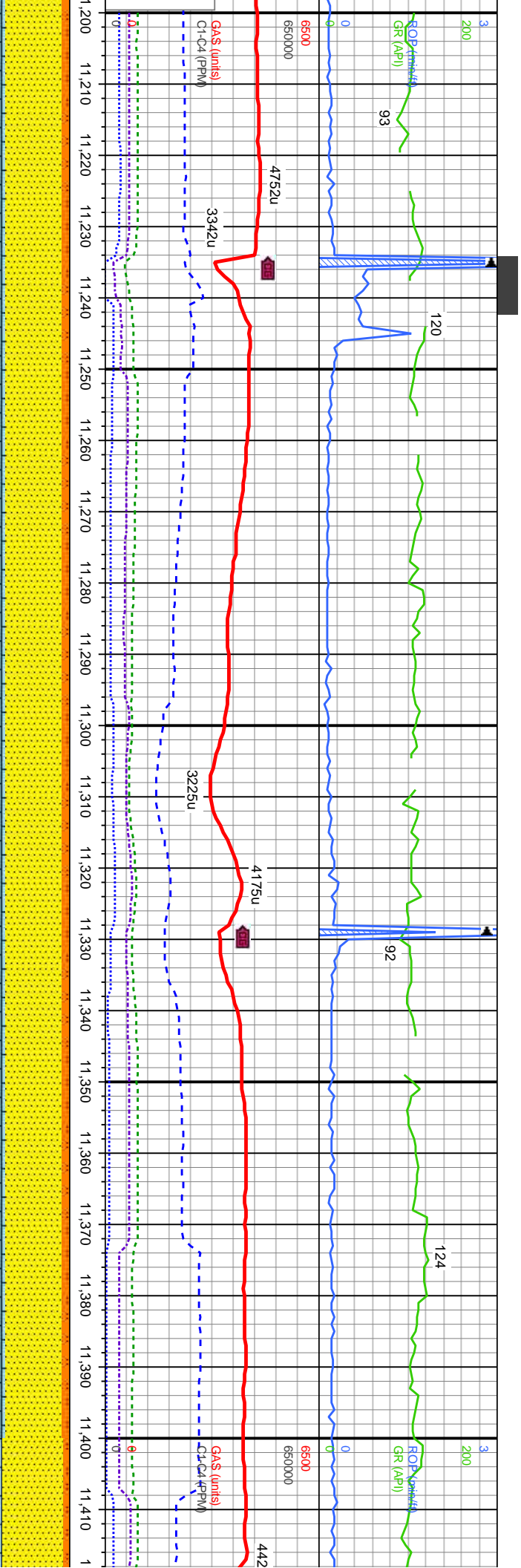
WT IN 8.8+
VIS IN 40
OUT 8.8+
OUT 40

1. p-m cons w/ v
sb ang, mod fri, sl
sbnd-rnd, m-w
yyxln-mcxln, v sl

11000'-11100MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cmt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cmt, LS: crm-offwht lt brn, pty-fiky ip, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

11100'-11200MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cmt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cmt, LS: crm-offwht lt brn, pty-fiky ip, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut





WT IN 8.9
VIS IN 39

OUT 8.9
OUT 39

MD: 11,271
TVD: 7,750.79
Inclination: 90.21
Azimuth: 179.79
VS: 3.778.1

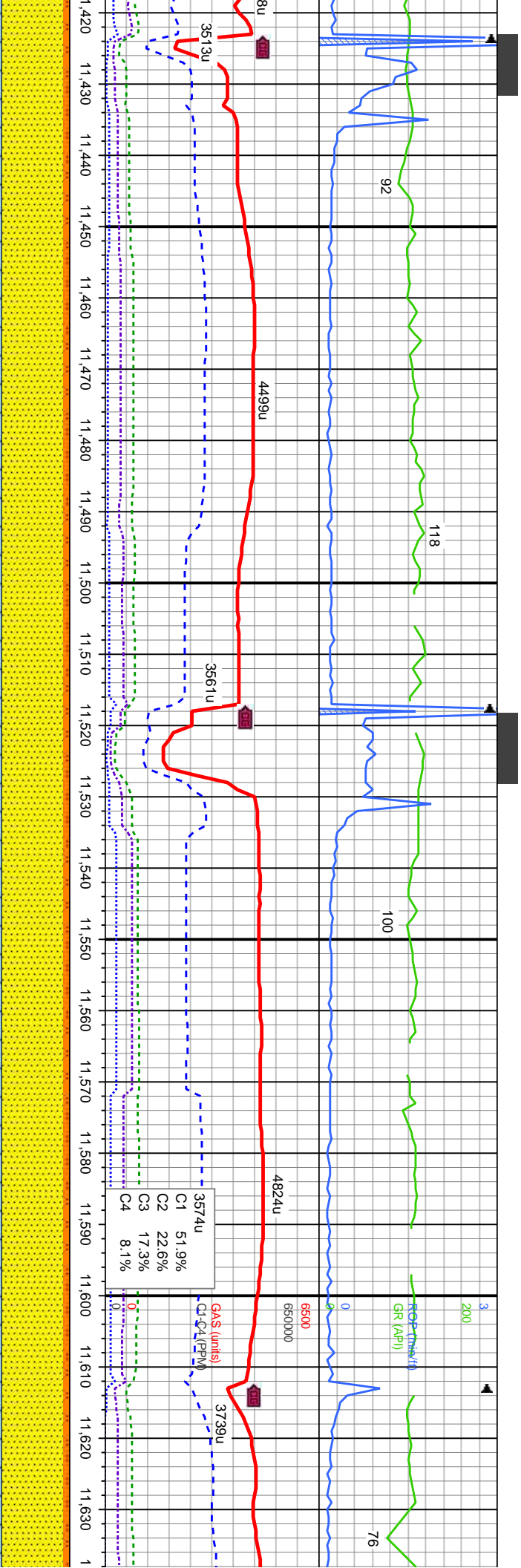
MD: 11,365
TVD: 7,750.24
Inclination: 90.46
Azimuth: 179.31
VS: 3.872.1

11200'-11300'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-n cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-n cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky ip, frm-brt, cyxn-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

11300'-11400'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-n cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-n cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky ip, frm-brt, cyxn-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

11400'-11500'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-n cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-n cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky ip, frm-brt, cyxn-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut





IN 9.0	OUT 9.0
IN 39	OUT 39

MD: 11,460
TVD: 7,749.81
Inclination: 90.06
Azimuth: 178.89
VS: 3,967.1

WT IN 9.0	OUT 9.0
VIS IN 39	OUT 39

MD: 11,554
TVD: 7,750.44
Inclination: 89.17
Azimuth: 179.16
VS: 4,061.09

7120	WT IN 8.9	OUT 9.0
	VIS IN 39	OUT 39

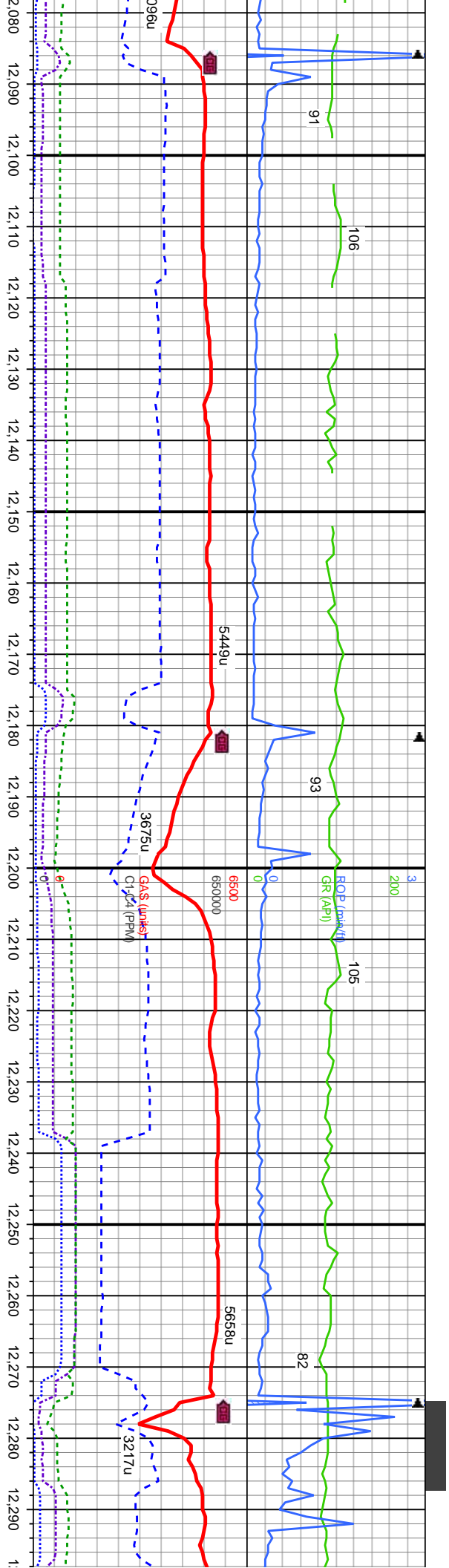
TVD (ft)

MD: SS: lt brn-dk brn-mot, vt-f gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v
SLTST: med brn-dk brn-mot, vt gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v sl
ut : crm-offwht lt brn, pily-illy ip, frm-bit, cyxln-mcxln, v sl arg, calc, tr bent, lt bl

11500'-11600' MD: SS: lt brn-dk brn-mot, vt-f gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v
sl calc cmt, SLTST: med brn-dk brn-mot, vt gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v sl
calc cmt, LS: crm-offwht lt brn, pily-illy ip, frm-bit, cyxln-mcxln, v sl arg, calc, tr bent, lt bl
flor sl halo cut

11600'-11700' MD: SS: lt brn-dk brn-mot, vt-f gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v
sl calc cmt, SLTST: med brn-dk brn-mot, vt gr, m-v frm, sbnd-rnd, m-w srt, p-m cons w/ v sl
calc cmt, LS: crm-offwht lt brn, pily-illy ip, frm-bit, cyxln-mcxln, v sl arg, calc, tr bent, lt bl
flor sl halo cut





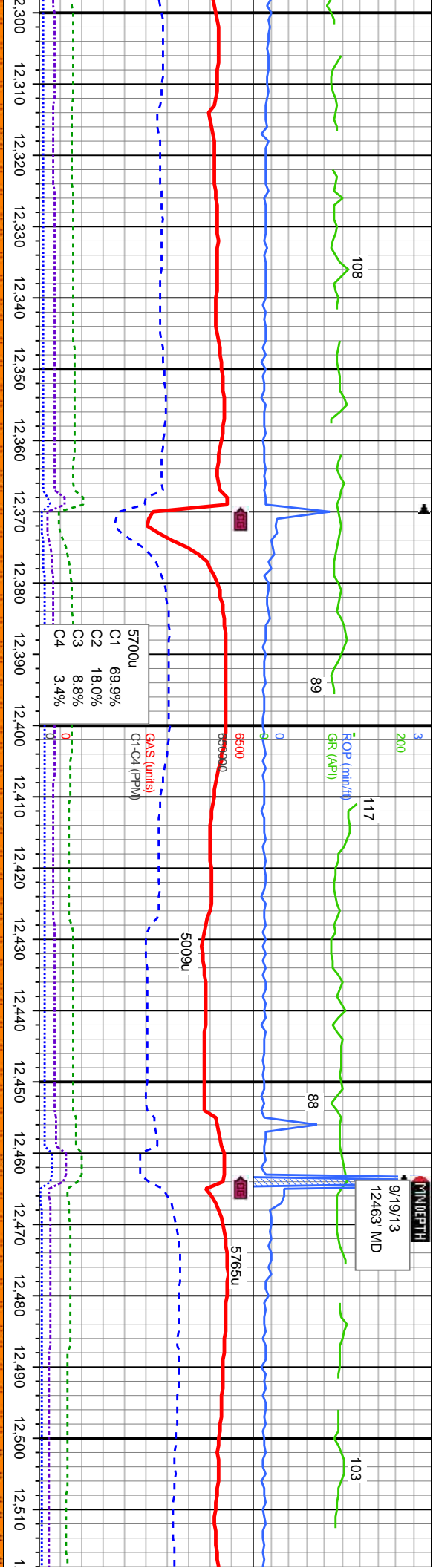
IN 8.8+ IN 38	OUT 8.9+ OUT 36	WT IN 8.9 VIS IN 41	OUT 8.9+ OUT 39	7120	WT IN 8.9+ VIS IN 39	OUT 9.0 OUT 41
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MD: 12.122
TVD: 7,751.31
Inclination: 90.68
Azimuth: 179.62
VS: 4.629.01

MD: 12.217
TVD: 7,749.76
Inclination: 91.2
Azimuth: 179.38
TVD (ft)
VS: 4.724

12,080-12,100 MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crn-offwht lt brn, pty-fily ip, frm-brit, cyxln-mcxln, v sl arg, calc, tt bent, lt bl flor sl halo cut	12,100-12,200 MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crn-offwht lt brn, pty-fily ip, frm-brit, cyxln-mcxln, v sl arg, calc, tt bent, lt bl flor sl halo cut	12,200-12,300 MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crn-offwht lt brn, pty-fily ip, frm-brit, cyxln-mcxln, v sl arg, calc, tt bent, lt bl flor sl halo cut
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MD: 12,311 TVD: 7,749.25 Inclination: 89.42 Azimuth: 179.46 VS: 4,817.99	MD: 12,406 TVD: 7,750.39 Inclination: 89.2 Azimuth: 178.92 VS: 4,912.98	MD: 12,501 TVD: 7,750.67 Inclination: 90.46 Azimuth: 179.86 VS: 5,007.98
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12300'-12400'MD: SS: lt brn-dk brn-mot, vt-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vt gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky lp, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut	12400'-12500'MD: SS: lt brn-dk brn-mot, vt-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vt gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky lp, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut	12500'-12600'MD: SS: lt brn-dk brn-mot, vt-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vt gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky lp, frm-brt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut
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MINDEPTH
9/20-21/13
12558' MD

TRIP FOR BHA &
BIT @ 12558' MD

Bit #: 3
Type: PDC PLS513S5
Size: 6.12
Depth In: 12,558'

MD: 12,590
TVD: 7,749.48
Inclination: 91.07
Azimuth: 179.06
VS: 5,096.97

TVD (ft)

WT IN 9.3+ OUT 9.4+
VIS IN 42 OUT 39

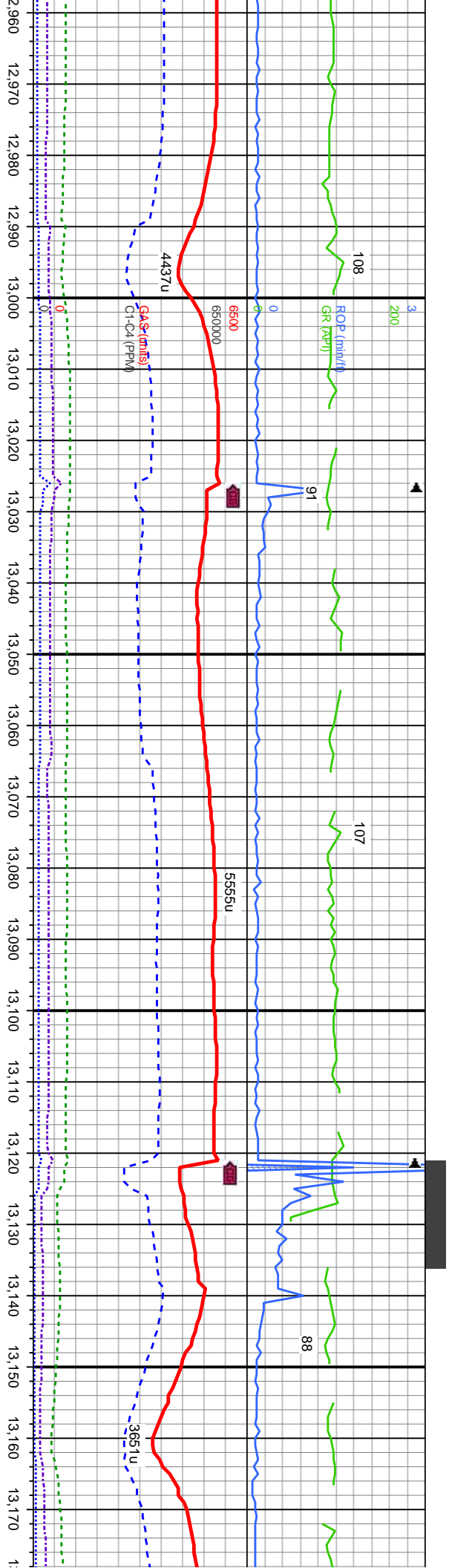
MD: 12,685
TVD: 7,748.95
Inclination: 89.57
Azimuth: 177.9
VS: 5,191.94

000MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons
cmt, SLTST: med brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m
calc cmt, LS: crm-offwht lt brn, pily-fiky ip, frm-brt, cyxln-mcxl, v sl arg,
t, lt bl flr sl halo cut

12600-12700MD: SS: lt brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons
w/ v sl calc cmt, SLTST: med brn-dk brn-mot, v-f gr, m-v frm, sbnd-rnd, m-w strd, p-m
cons w/ v sl calc cmt, LS: crm-offwht lt brn, pily-fiky ip, frm-brt, cyxln-mcxl, v sl arg,
calc, tr bent, lt bl flr sl halo cut

12700-12800MD: SS: lt brn
p-m cons w/ v sl calc cmt, S
sbnd-rnd, m-w strd, p-m co
ip, frm-brt, cyxln-mcxl, v s





MD: 12.968
TVD: 7,753.07
Inclination: 89.07
Azimuth: 179.8
VS: 5.474.81

TVD (ft)

13000'-13100'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky ip, frm-brt, cyxn-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

MD: 13.063
TVD: 7,754.23
Inclination: 89.53
Azimuth: 178.88
VS: 5.569.8

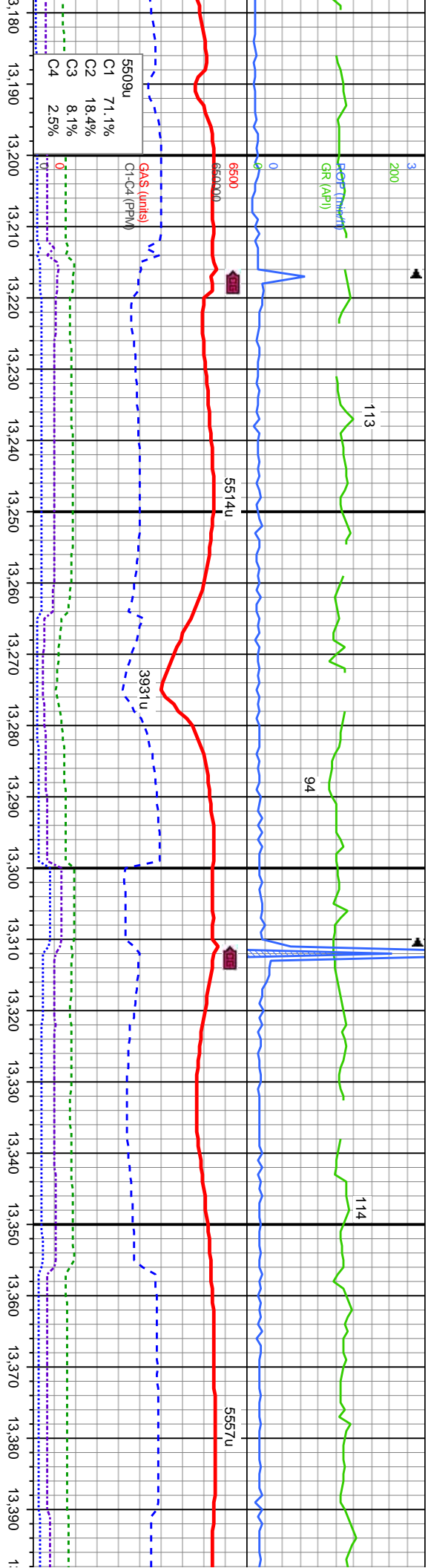
WT IN 9.4
VIS IN 40

OUT 9.4
OUT 40

MD: 13.158
TVD: 7,755.91
Inclination: 88.45
Azimuth: 179.06
VS: 5.664.78

13100'-13200'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky ip, frm-brt, cyxn-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut





7120	WT IN 9.4 VIS IN 41	OUT 9.4 OUT 40
MD: 13.252 TVD: 7,758.09 Inclination: 88.89 Azimuth: 179.15 VS: 5,758.75		
TVD (ft)		

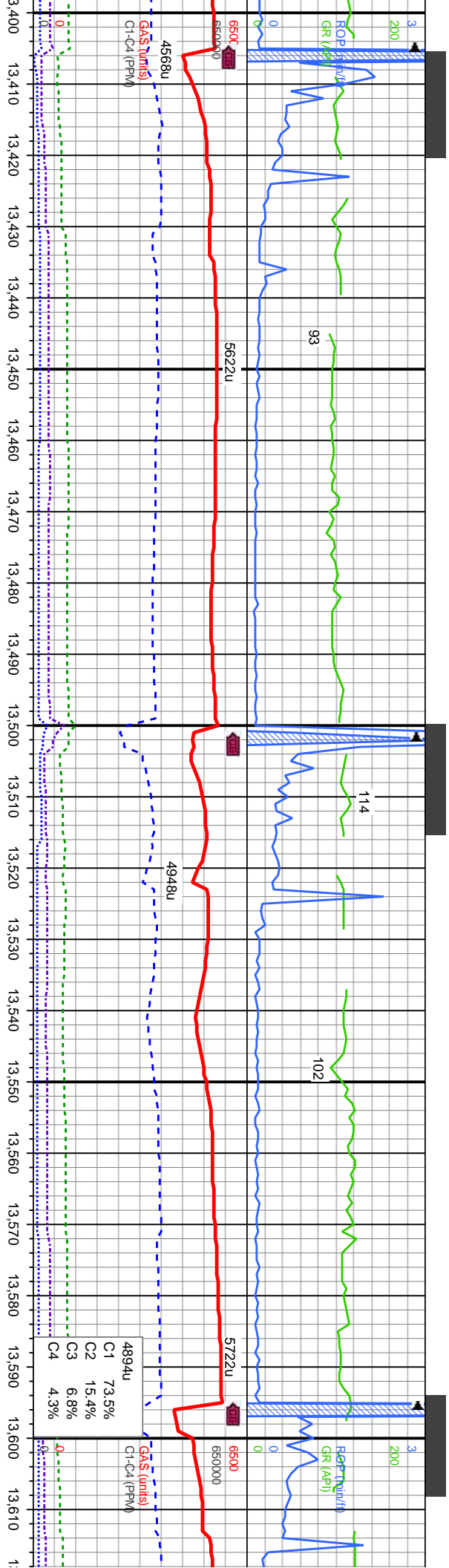
13200'-13300'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w
strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky ip,frm-brit,
cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

8120

MD: 13.347
TVD: 7,759.6
Inclination: 89.29
Azimuth: 178.25
VS: 5,853.72

13300'-13400'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w
strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, ply-fiky
ip,frm-brit, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut

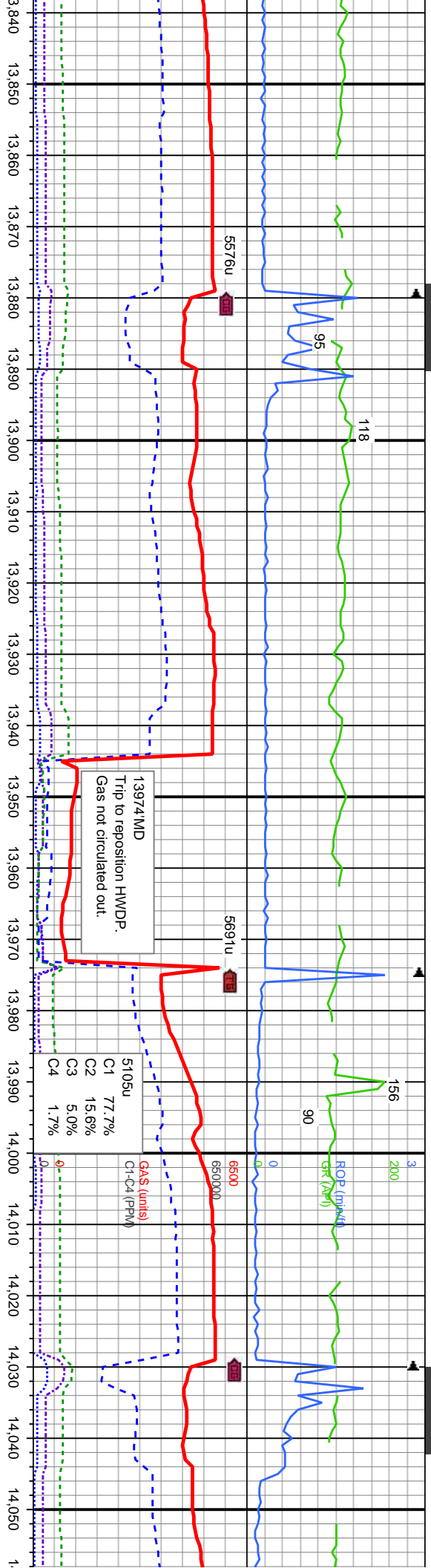




7120	WT IN 9.4	OUT 9.4	7120
	VIS IN 41	OUT 40	
MD: 13.442 TVD: 7,761.01 Inclination: 89.01 Azimuth: 179.03 VS: 5.948.69			
TVD (ft)			TVD (ft)

8120			8120
13400-13500 MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pily-fiky ip, frm-brlt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut			
13500-13600 MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w strd, p-m cons w/ v sl calc cnt, LS: crm-offwht lt brn, pily-fiky ip, frm-brlt, cyxln-mcxln, v sl arg, calc, tr bent, lt bl flr sl halo cut			





MD: 13,915
TVD: 7,759.74
Inclination: 90.33
Azimuth: 181.16
VS: 6,421.44

MD: 13,972
TVD: 7,759.15
Inclination: 90.87
Azimuth: 180.35
VS: 6,478.42

TVD (ft)

WT IN 9.8 OUT 9.7
VIS IN 41 OUT 40

WT IN 9.8 OUT 9.9+
VIS IN 43 OUT 41

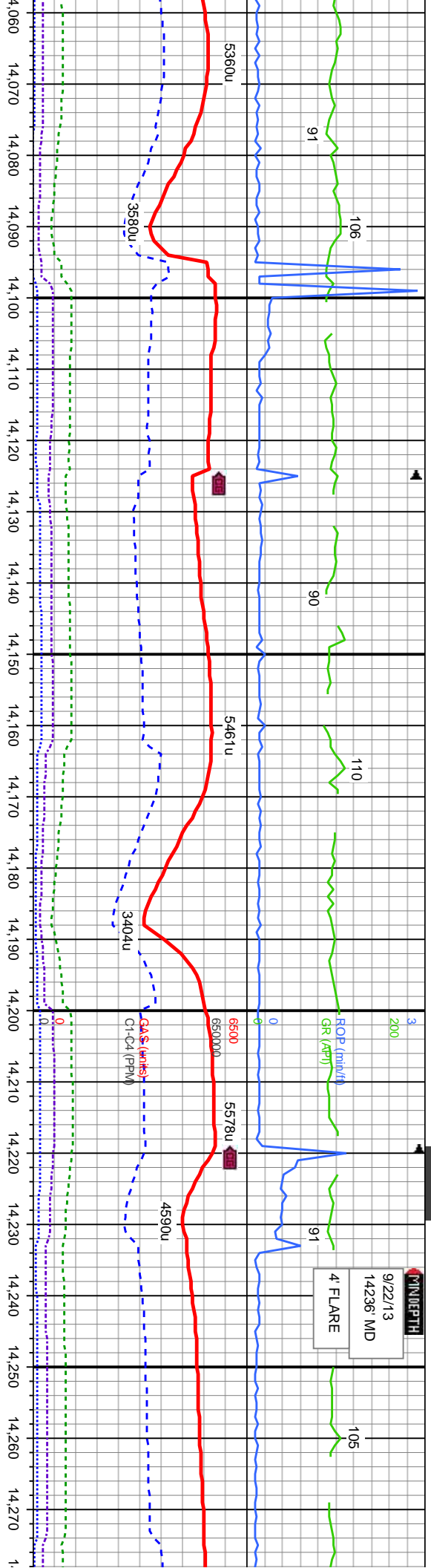
WT IN 9.8 OUT 9.8
VIS IN 42 OUT 42

13900'-14000' MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w srid, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w srid, p-m cons w/ v sl calc cnt, lt bl flr sl halo cut

14000'-14100' MD: SS: lt brn-dk brn-mot, vf-f gr, p-m cons w/ v sl calc cnt, SLTST: med brn-dk brn-mot, vf gr, m-v frm, sbnd-rnd, m-w srid, p-m cons w/ v sl calc cnt, lt bl flr sl halo cut



9/22/13
14236' MD
4' FLARE



D: 14.066
/D: 7.758.53
Inclination: 89.88
Azimuth: 180.75
S: 6.572.41

MD: 14.161
TVD: 7.758.15
Inclination: 90.58
Azimuth: 180.88
VS: 6.667.39

TVD (ft)

MD: 14.256
TVD: 7.757.88
Inclination: 89.75
Azimuth: 180.74
VS: 6.762.37

WT IN 9.6+ OUT 9.7+
VIS IN 39 OUT 41

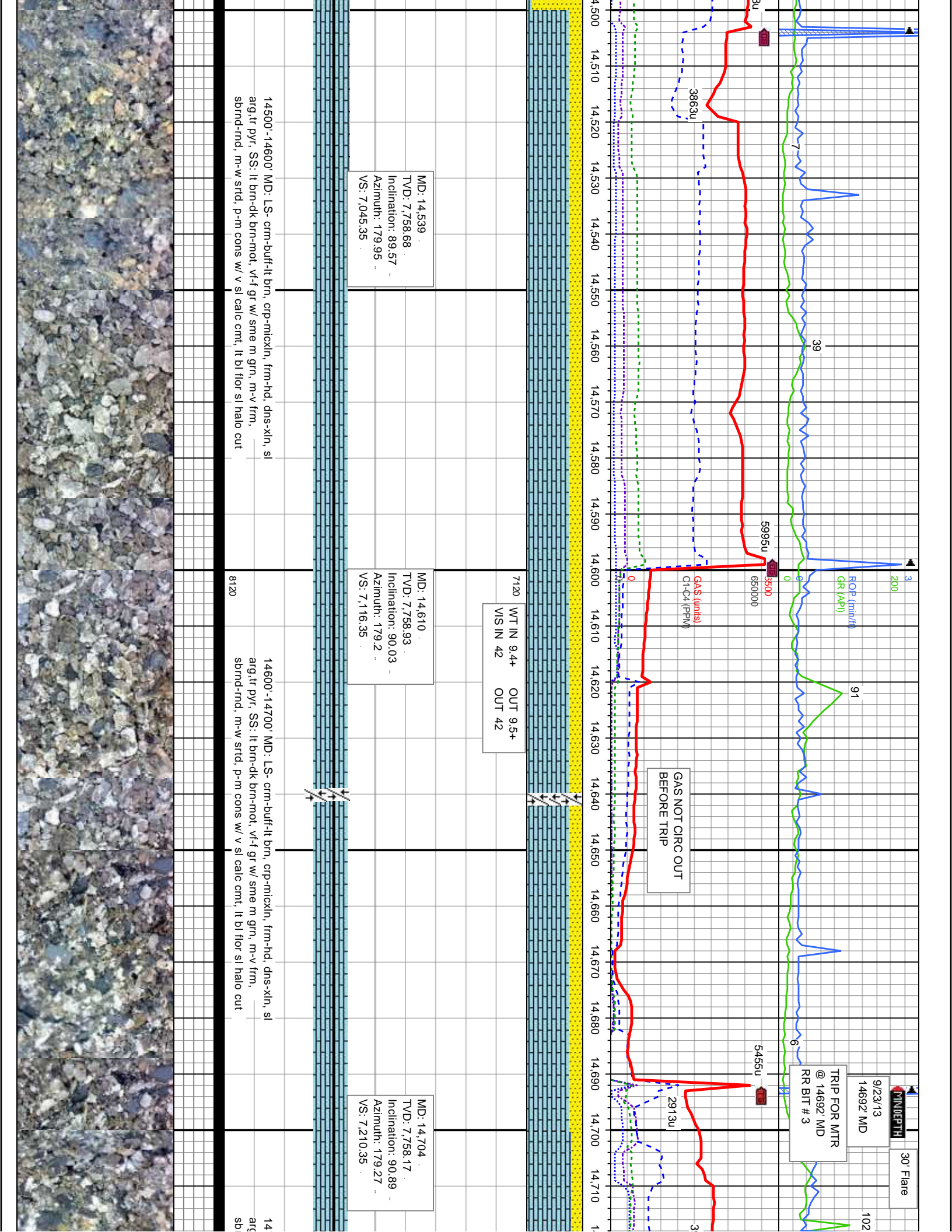
7120

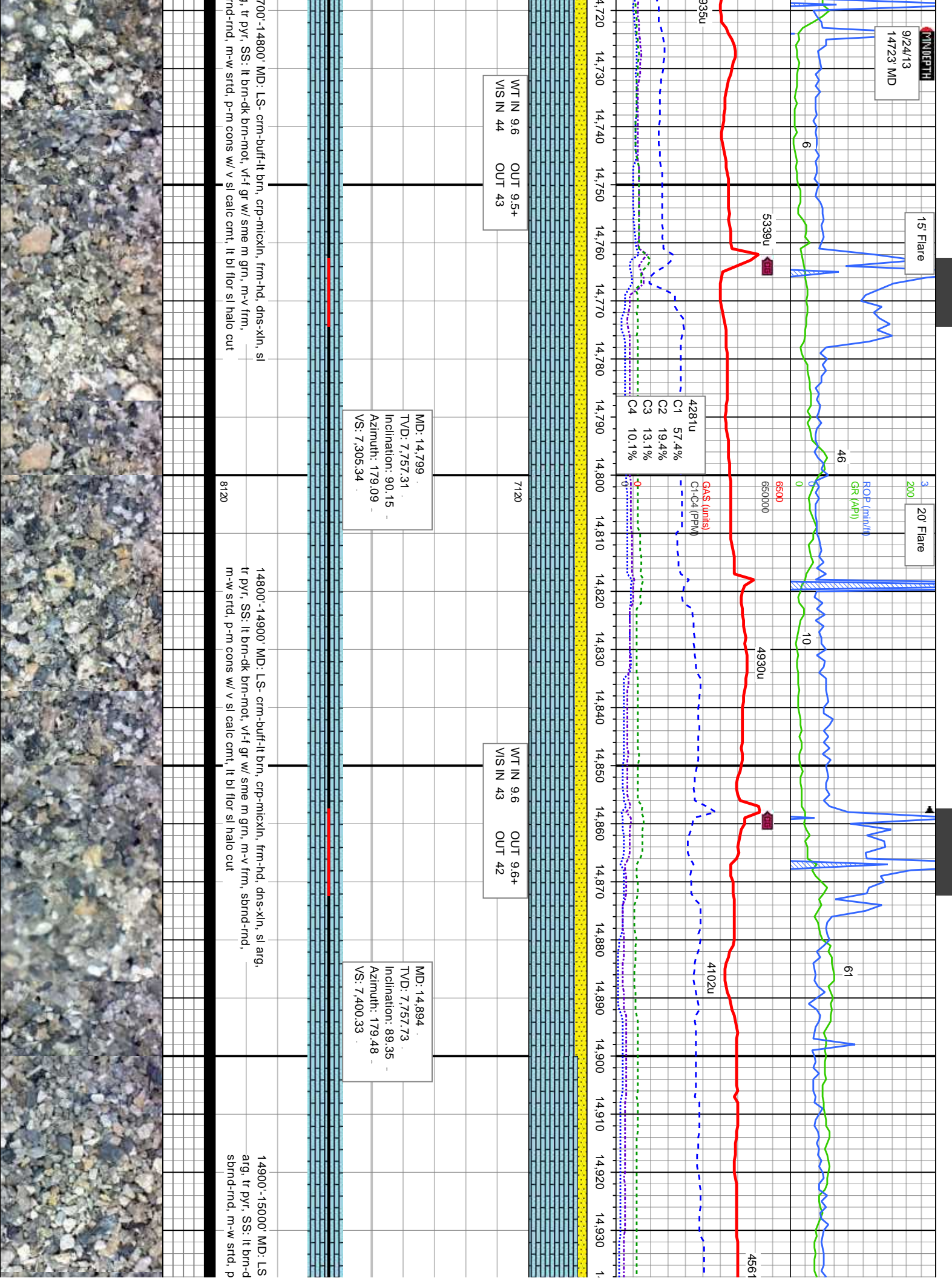
m-v frm, sbnd-rnd, m-w srt,
p-m cons w/ v sl calc cmt, SLTST: med brn-dk brn-mot, vf gr, m-v frm,
t bl flr sl halo cut

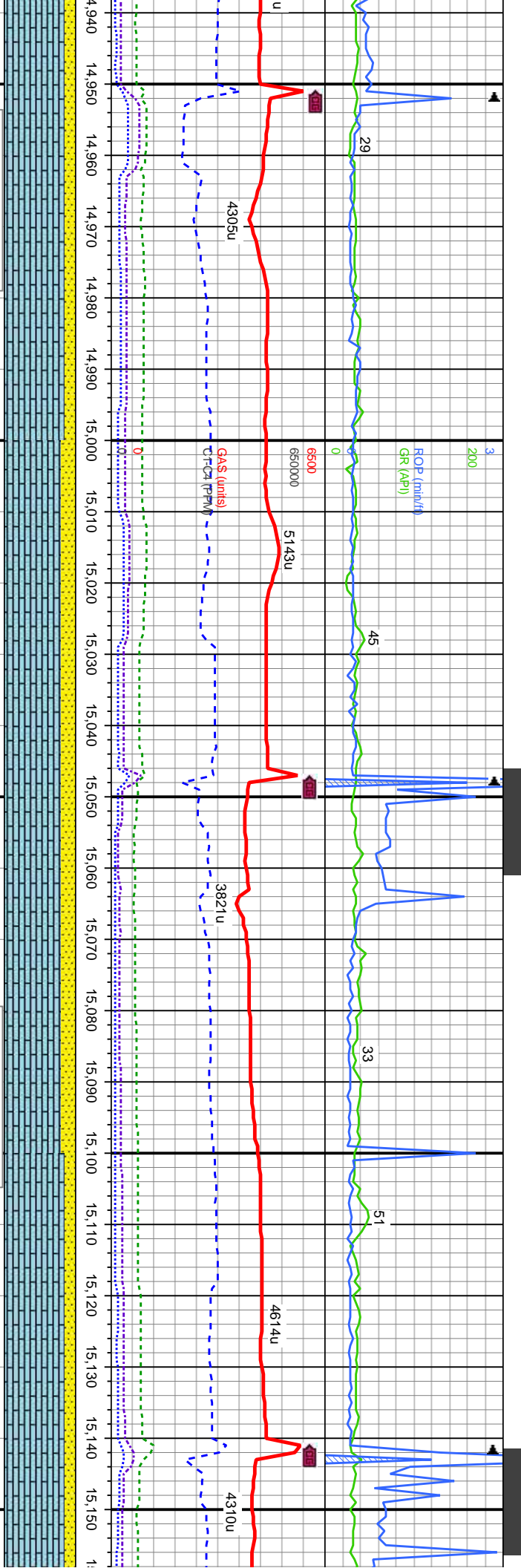
14100'-14200'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-w srt,
p-m cons w/ v sl calc cmt, SLTST: med brn-dk brn-mot, vf gr, m-v frm,
sbnd-rnd, m-w srt, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut

14200'-14300'MD: SS: lt brn-dk brn-mot, vf-f gr, m-v frm, sbnd-rnd, m-
p-m cons w/ v sl calc cmt, SLTST: med brn-dk brn-mot, vf gr, m-v frm
sbnd-rnd, m-w srt, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut









WT IN 9.5
VIS IN 42
OUT 9.6
OUT 42

MD: 14,988
TVD: 7,757.69
Inclination: 90.7
Azimuth: 179.98
VS: 7,494.33

TVD (ft)

WT IN 9.5
VIS IN 42
OUT 9.5
OUT 42

MD: 15,083
TVD: 7,756.96
Inclination: 90.18
Azimuth: 179.6
VS: 7,589.33

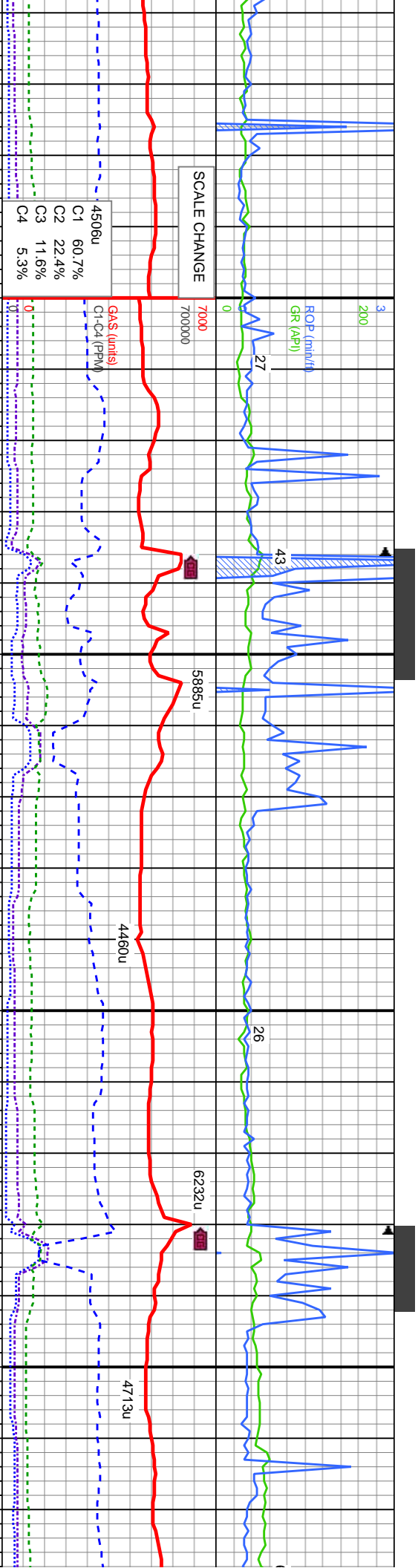
crm-buff-lt brn, crp-micxln, frm-hd, dns-xln, sl
k brn-mot, vt-f gr w/ sme m grn, m-v frm,
-m cons w/ v sl calc cmt, lt bl flr sl halo cut

15000'-15100' MD: LS- crm-buff-lt brn, crp-micxln, frm-hd, dns-xln, sl
arg, tr pyr, SS: lt brn-dk brn-mot, vt-f gr w/ sme m grn, m-v frm,
sbrnd-rnd, m-w strd, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut

15100'-15200' MD: LS- crm-buff-lt brn, crp-mic
tr pyr, SS: lt brn-dk brn-mot, vt-f gr w/ sme m
m-w strd, p-m cons w/ v sl calc cmt, lt bl flr s

8120





MD: 15,177
TVD: 7,756.71
Inclination: 90.12
Azimuth: 180.15
VS: 7,683.33

7120
WT IN 9.5 OUT 9.6
VIS IN 42 OUT 42

MD: 15,272
TVD: 7,757.25
Inclination: 89.23
Azimuth: 179.21
VS: 7,778.32

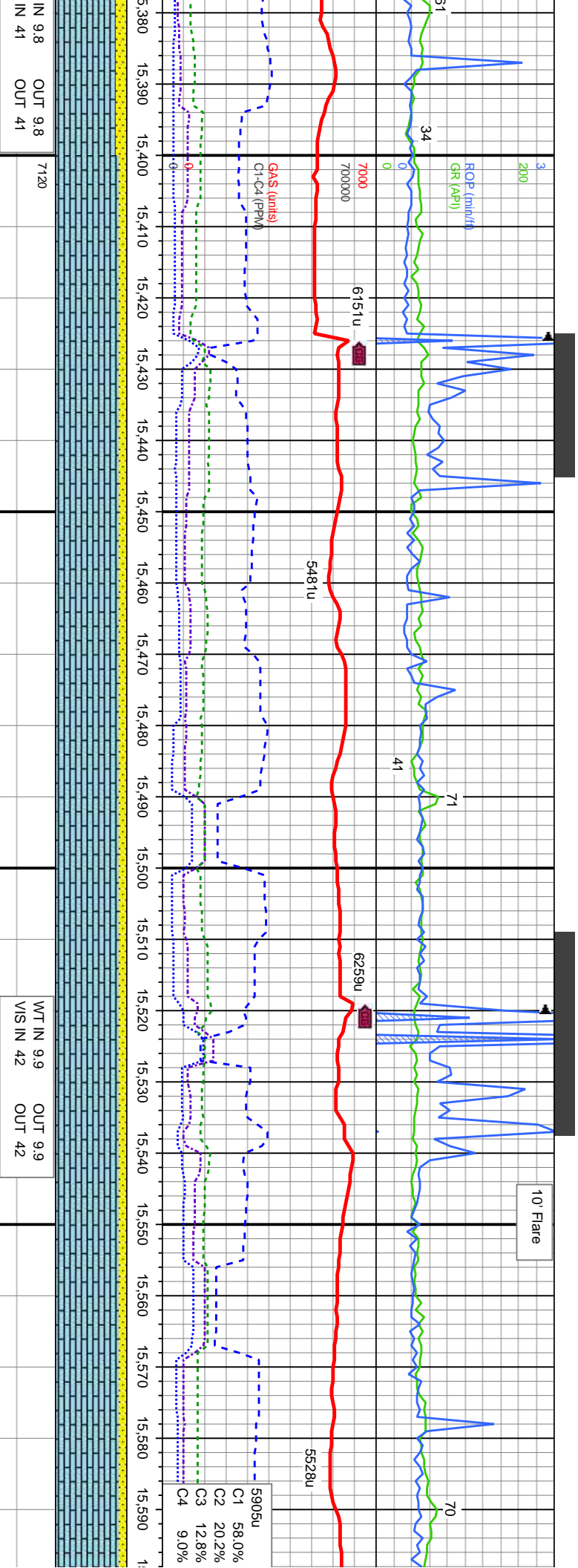
WT IN 9.7+ OUT 9.7
VIS IN 41 OUT 41

MD: 15,367
TVD: 7,757.89
Inclination: 90
Azimuth: 179.76
VS: 7,873.32

15200'-15300' MD: LS- crm-buff-lt brn, crp-micxln, frm-hd, dns-xln, sl arg, tr pyr, SS- lt brn-dk brn-mot, vf-f gr w/ sme m grn, m-v frm, sbrnd-rnd, m-w srt, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut

15300'-15400' MD: LS- crm-buff-lt brn, crp-micxln, frm-hd, dns-xln arg, tr pyr, SS- lt brn-dk brn-mot, vf-f gr w/ sme m grn, m-v frm, sbrnd-rnd, m-w srt, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut

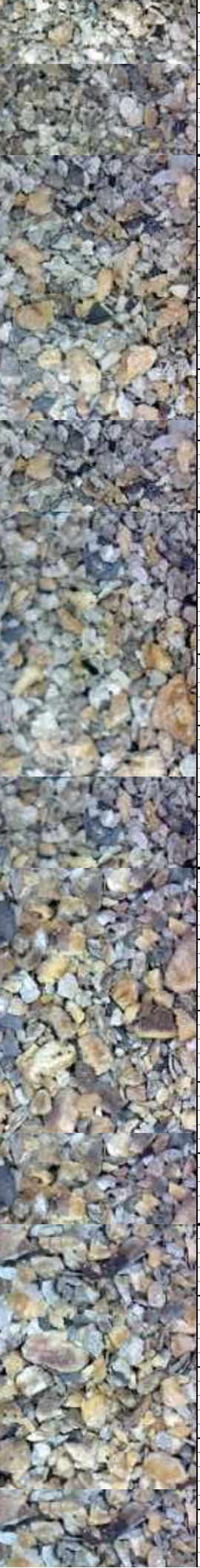


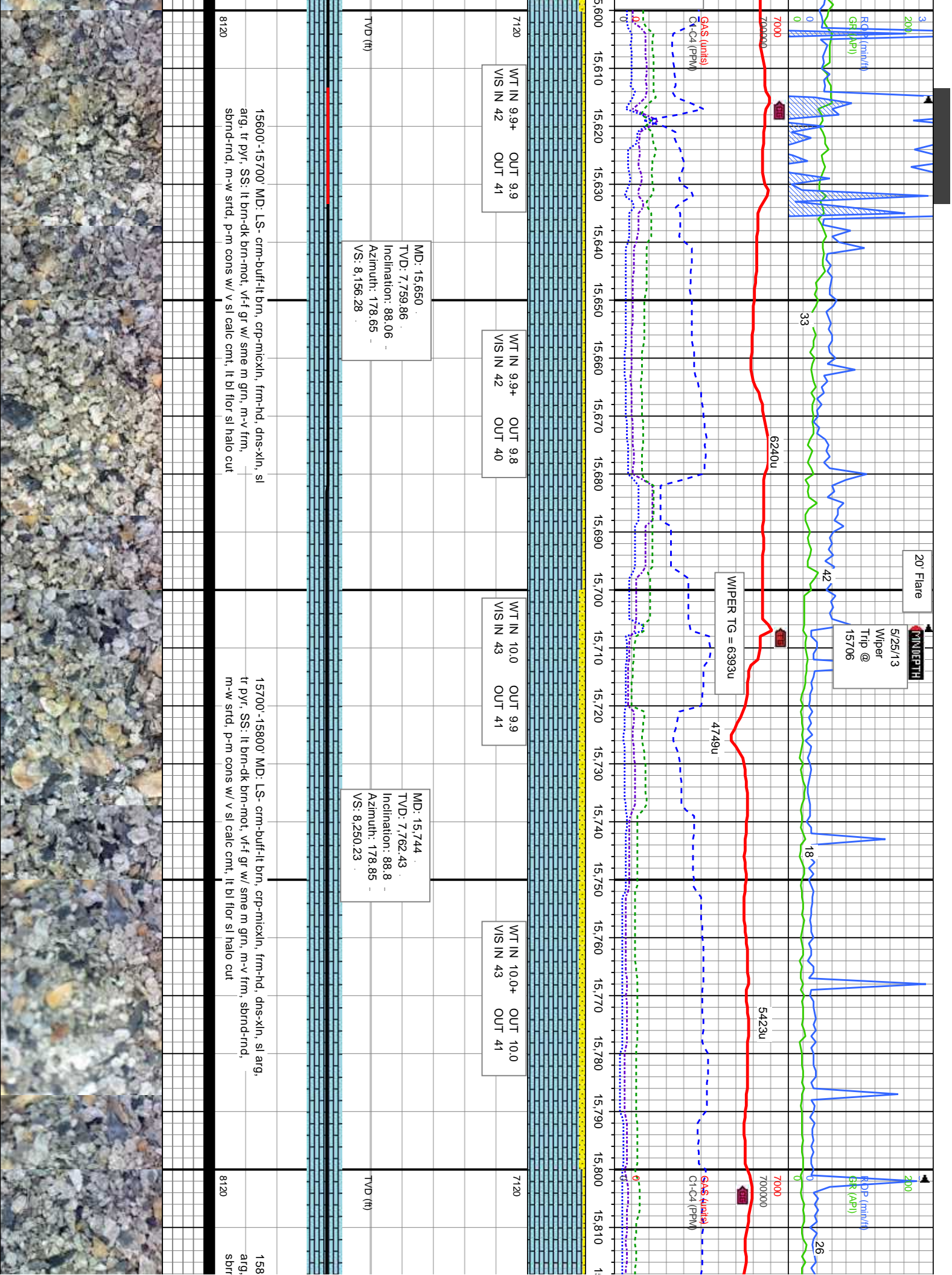


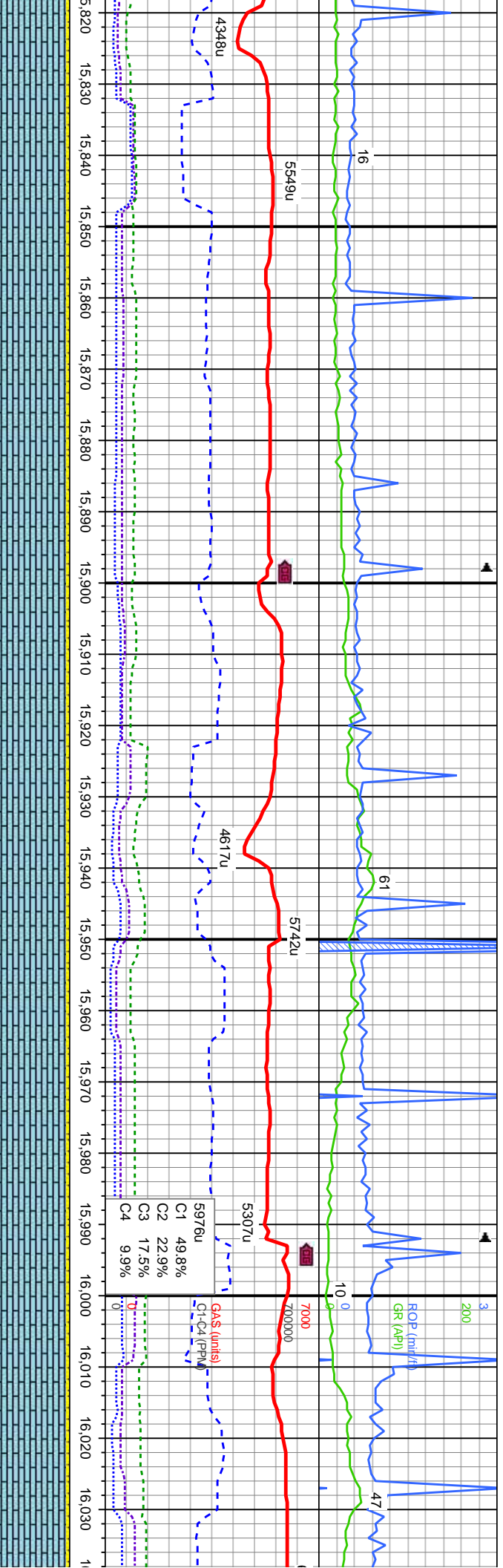
15400'-15500' MD: LS- crm-buff-lt brn, crp-micxln, frm-hd, dhs-xln, sl
arg, tr pyr, SS: lt brn-dk brn-mot, vf-f gr w/ sme m grn, m-v frm,
sbrnd-rnd, m-w strd, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut

8120

15500'-15600' MD: LS- crm-buff-lt brn, crp-micxln, frm-hd, dhs-xln, sl
arg, tr pyr, SS: lt brn-dk brn-mot, vf-f gr w/ sme m grn, m-v frm,
sbrnd-rnd, m-w strd, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut







MD: 15,839
TVD: 7,764.01
Inclination: 89.29
Azimuth: 178.64
VS: 8,345.2

MD: 15,933
TVD: 7,764.65
Inclination: 89.93
Azimuth: 178.87
VS: 8,439.18

MD: 16,028
TVD: 7,764.87
Inclination: 89.81
Azimuth: 178.67
VS: 8,534.17

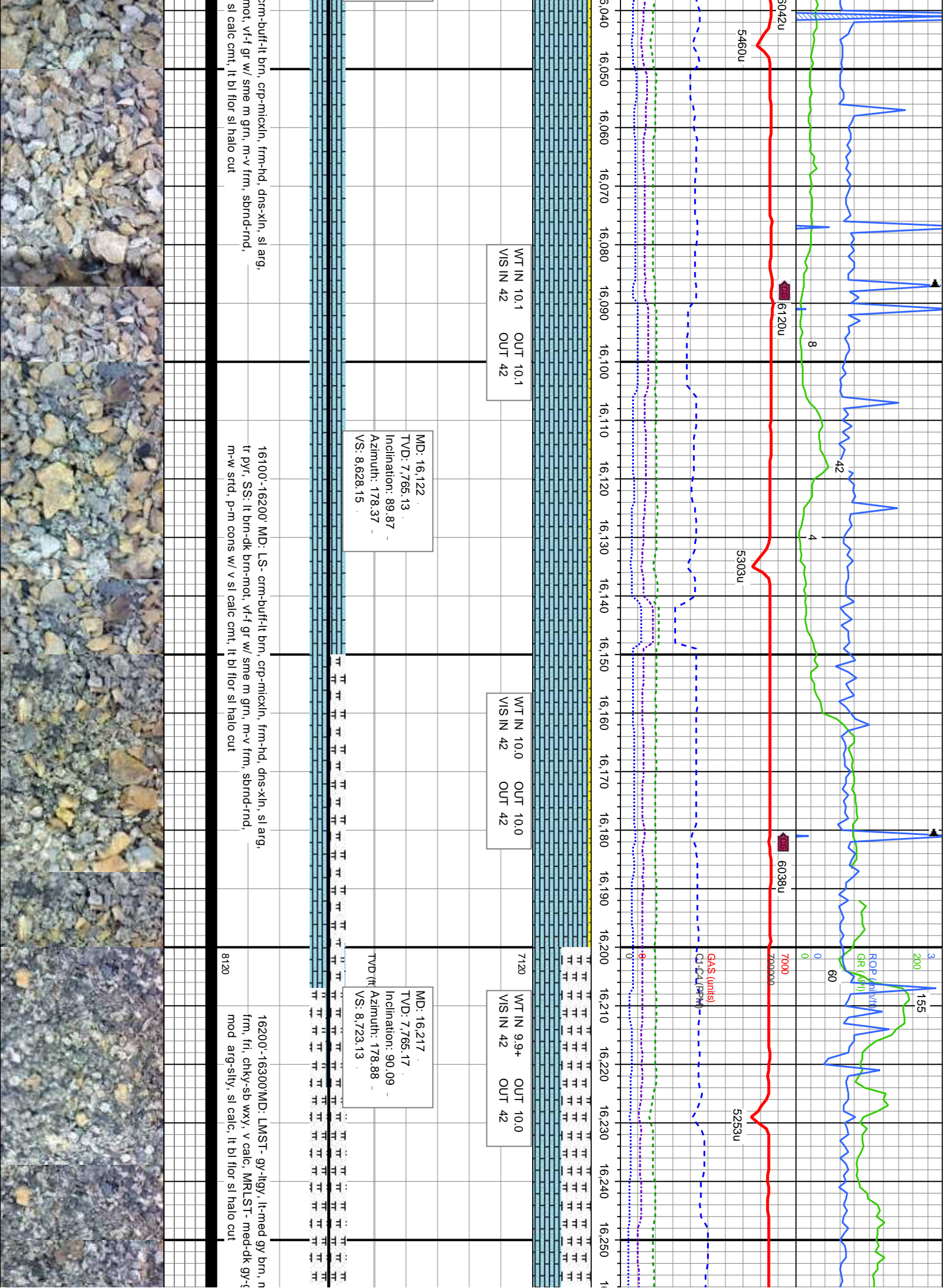
WT IN 10.1
VIS IN 42
OUT 10.1
OUT 42

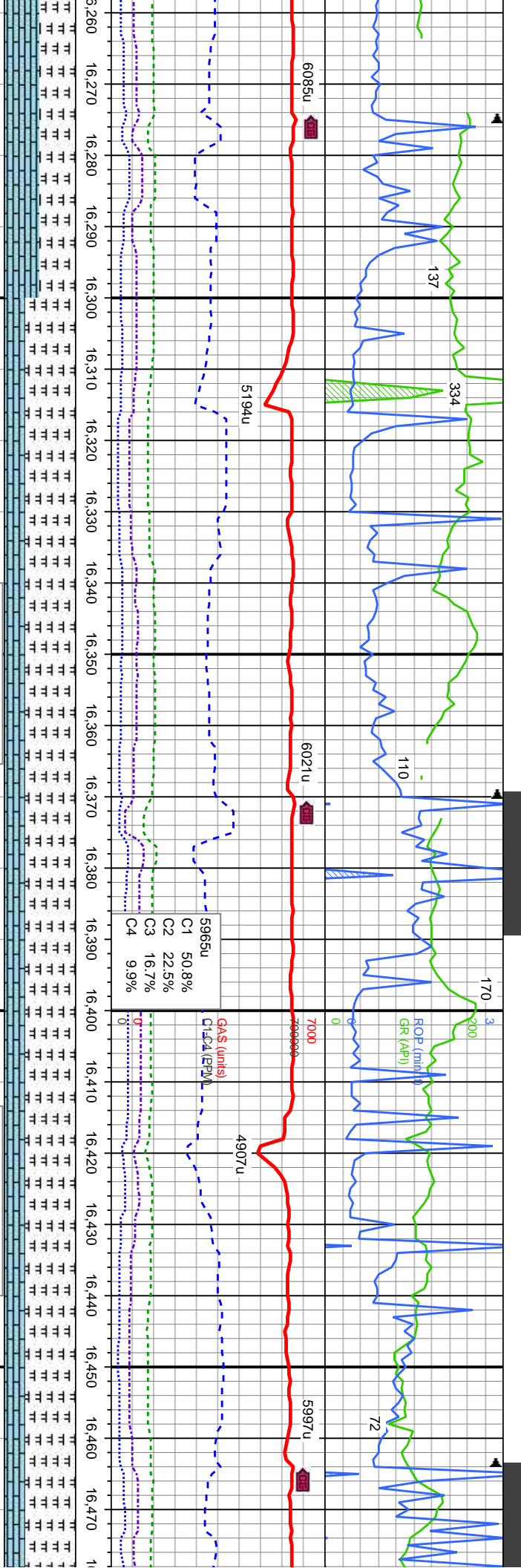
00'-15900' MD: LS- crm-buff-lt brn, crp-micxln, frm-hd, dns-xln, sl
tr pyr, SS: lt brn-dk brn-mot, vf-f gr w/ sme m grn, m-v frm,
m-w strd, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut

15900'-16000' MD: LS- crm-buff-lt brn, crp-micxln, frm-hd, dns-xln, sl
arg, tr pyr, SS: lt brn-dk brn-mot, vf-f gr w/ sme m grn, m-v frm,
sbrnd-rnd, m-w strd, p-m cons w/ v sl calc cmt, lt bl flr sl halo cut

16000'-16100' MD: LS- c
tr pyr, SS: lt brn-dk brn-
m-w strd, p-m cons w/ v







MD: 16,311
TVD: 7,766.2
Inclination: 88.65
Azimuth: 178.18
VS: 8,817.1

WT IN 9.8 OUT 9.9
VIS IN 42 OUT 41

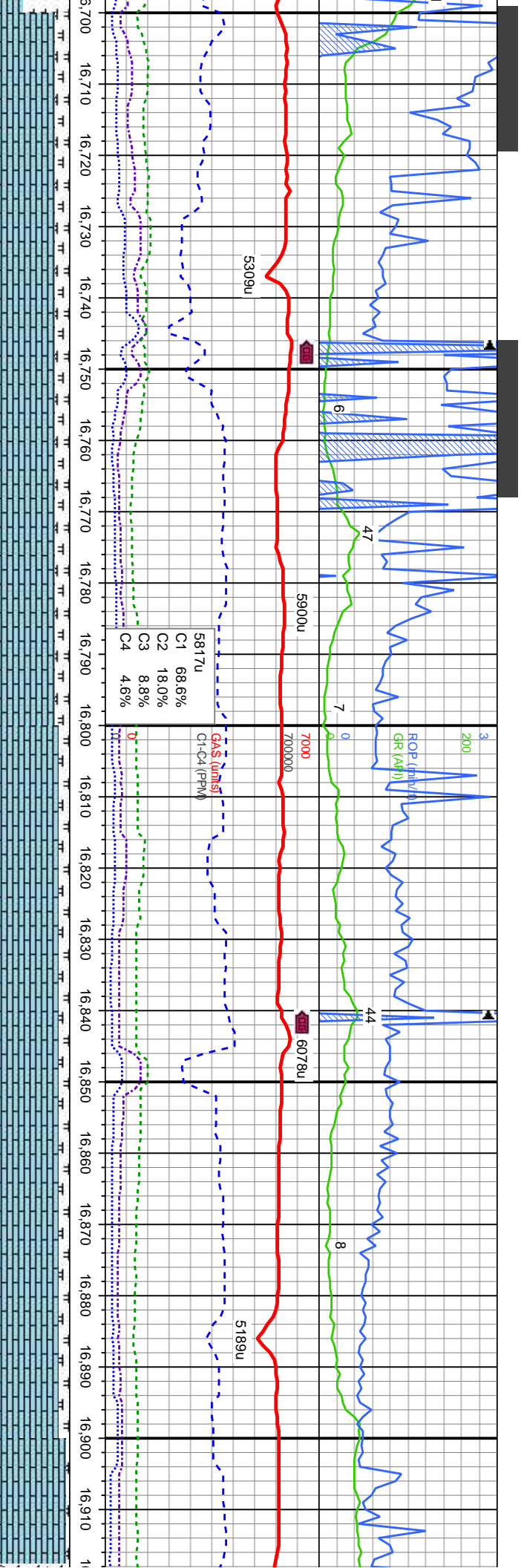
MD: 16,405
TVD: 7,768.36
Inclination: 88.71
Azimuth: 178.22
VS: 8,911.05

WT IN 9.8+ OUT 9.7+
VIS IN 42 OUT 40

not, stri, sb blk-y-sb ply, sft - sl
gy brn, sb ply-blky, sft-frn,
16300'-16400' MD: LMST - gy-lgy, lt-med gy brn, mot, stri, sb blk-y-sb ply, sft - sl
frn, fri, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-blky, sft-frn,
mod arg-sily, sl calc, lt bl flr sl halo cut

16400'-16500' MD: LMST - gy-lgy, lt-med gy brn, mot, stri, sb blk-y-sb ply, sft - sl
frn, fri, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-blky, sft-frn,
mod arg-sily, sl calc, lt bl flr sl halo cut





WT IN 9.9+ OUT 9.9
VIS IN 43 OUT 42

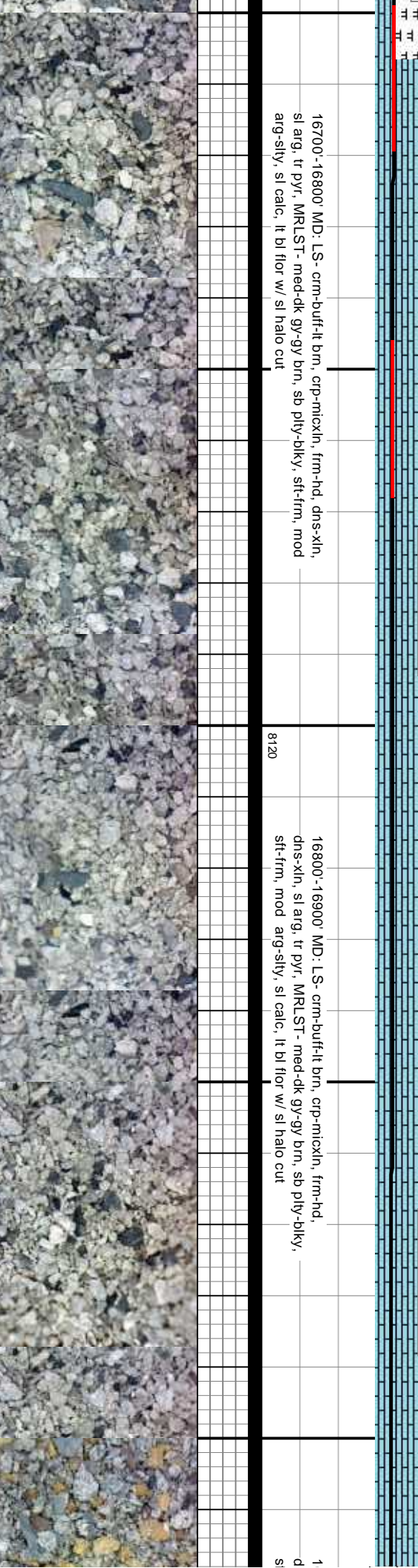
7120 WT IN 9.9 OUT 9.8
VIS IN 42 OUT 42

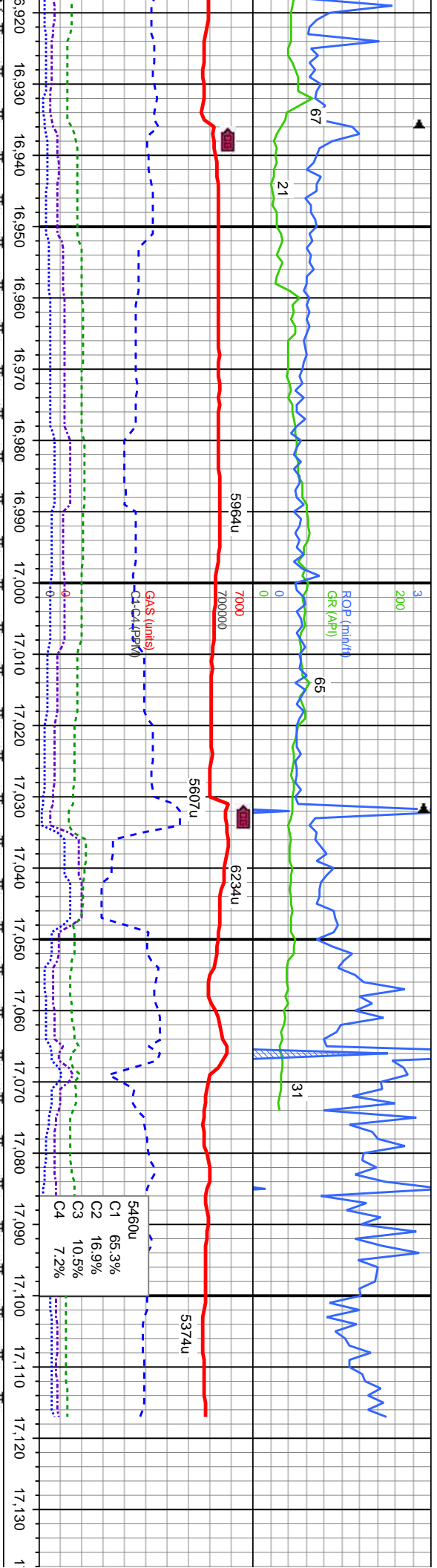
WT IN 10.0 OUT 10.0
VIS IN 42 OUT 42

MD: 16,782
TVD: 7,781.19
Inclination: 88.76
Azimuth: 178.71
VS: 9,287.54

MD: 16,877
TVD: 7,783.27
Inclination: 88.73
Azimuth: 178.81
VS: 9,382.51

TVD (ft)





MD: 16,971
TVD: 7,785.94
Inclination: 88.02
Azimuth: 178.34
VS: 9.476,45

TVD (ft)

MD: 17,059
TVD: 7,788.55
Inclination: 88.58
Azimuth: 179.03
VS: 9.564,4

WT IN 10.1+ OUT 10.0
VIS IN 42 OUT 41

WT IN 10.1 OUT 10.1+
VIS IN 43 OUT 41

PROJECTION TO BIT

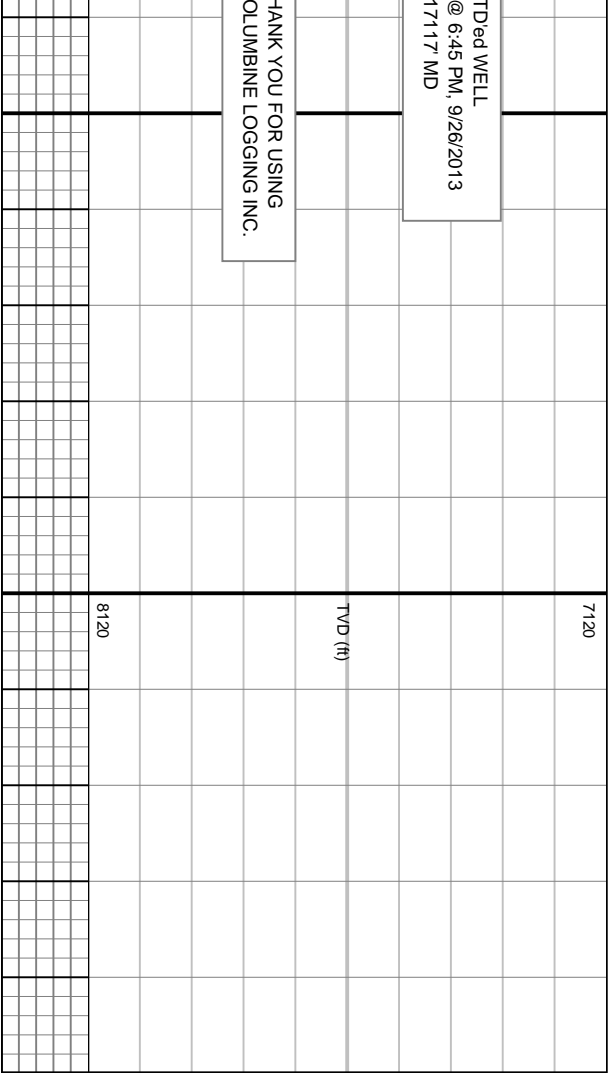
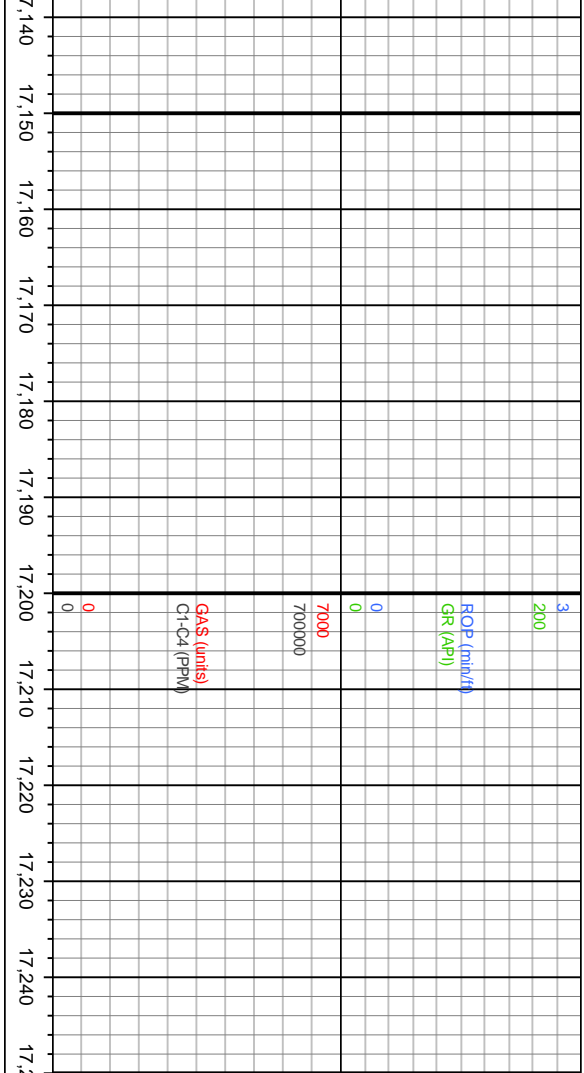
MD: 17,117
TVD: 7,789.99
Inclination: 88.58
Azimuth: 179.03
VS: 9.622,38

69900'-17000' MD: LS- crm-buff-lt brn, crp-micxn, frm-hd,
s-xln, sl arg, tr pyr, MRLST- med-dk gy-gy brn, sb plty-blky,
t-frm, mod arg-slt, sl calc, lt bl flr w/ sl halo cut

8120

17000'-17117' MD: LS- crm-buff-lt brn, crp-micxn, frm-hd,
s-xln, sl arg, tr pyr, MRLST- med-dk gy-gy brn, sb plty-blky,
sft-frm, mod arg-slt, sl calc, lt bl flr w/ sl halo cut





THANK YOU FOR USING
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