

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name NCLP AA06-62-1HNA(HORZ)

Location SEC4-T6N-R63W

State COLORADO

Country USA

API Number 05-123-39161-0000

Region DJ BASIN

Spud Date 6/20/2014

Surface Coordinates LAT: 40.51038°N
LONG: 104.45086°W
675' FSL
100' FEL

Bottom Hole Coordinates 330' FSL
2360' FEL

Ground Elevation 4708'

Logged Interval 5991'

To 14455'

Formation NIOBRARA "B" CHALK/"B" MARL

Type of Drilling Fluid MUD;WATER;POLY

K.B. Elevation 4732'

Total Depth 14455'

County WELD

Rig Number H&P 322

Field WATTENBERG

Drilling Completed 6/27/2014

Company Noble Energy Inc

Address 1625 Broadway
Denver, CO 802

Name MIKE GREENE;

Company COLUMBINE LOGGING

Address 2385 S. LIPAN S
DENVER, COLO
(303) 289-7764

Oil
Note
Error

? UNKNOWN
ANHYDRITE
BENTONITE
BRECCIA
CHALK
CEMENT
CHERT
CLAY CHOKE SAND
CLAYSTONE
CO.

Operator

Suite 2200

02

Geologist

JERED KARR

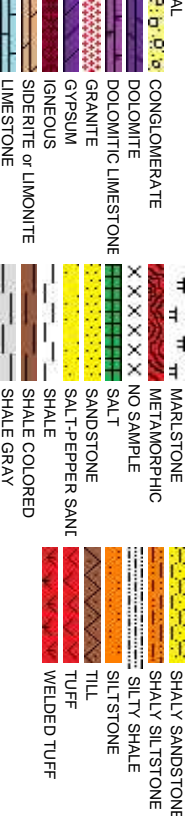
OGGING INC.

ST
RADO 80223

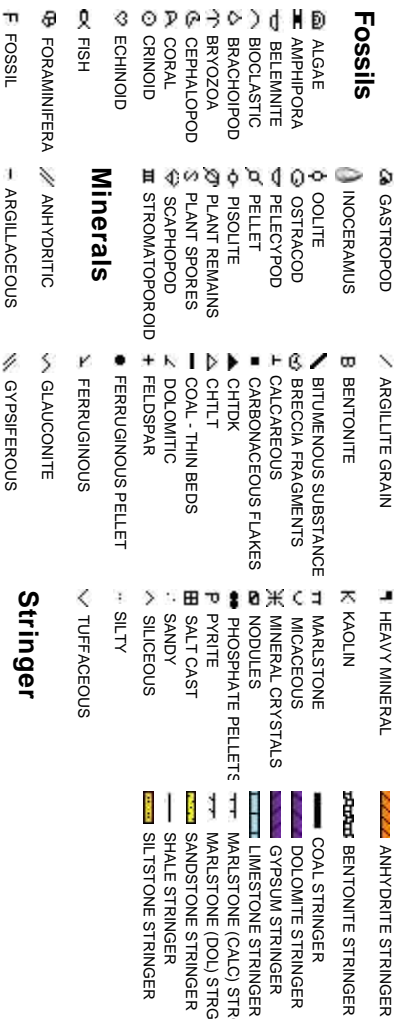
Zone Color Coding



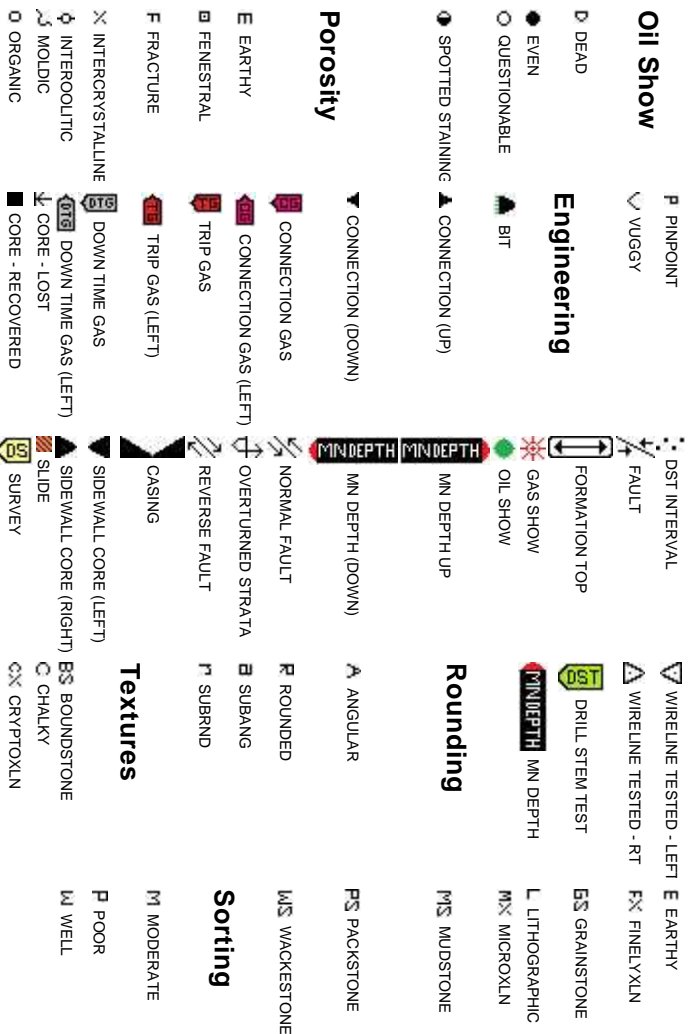
Rock Types

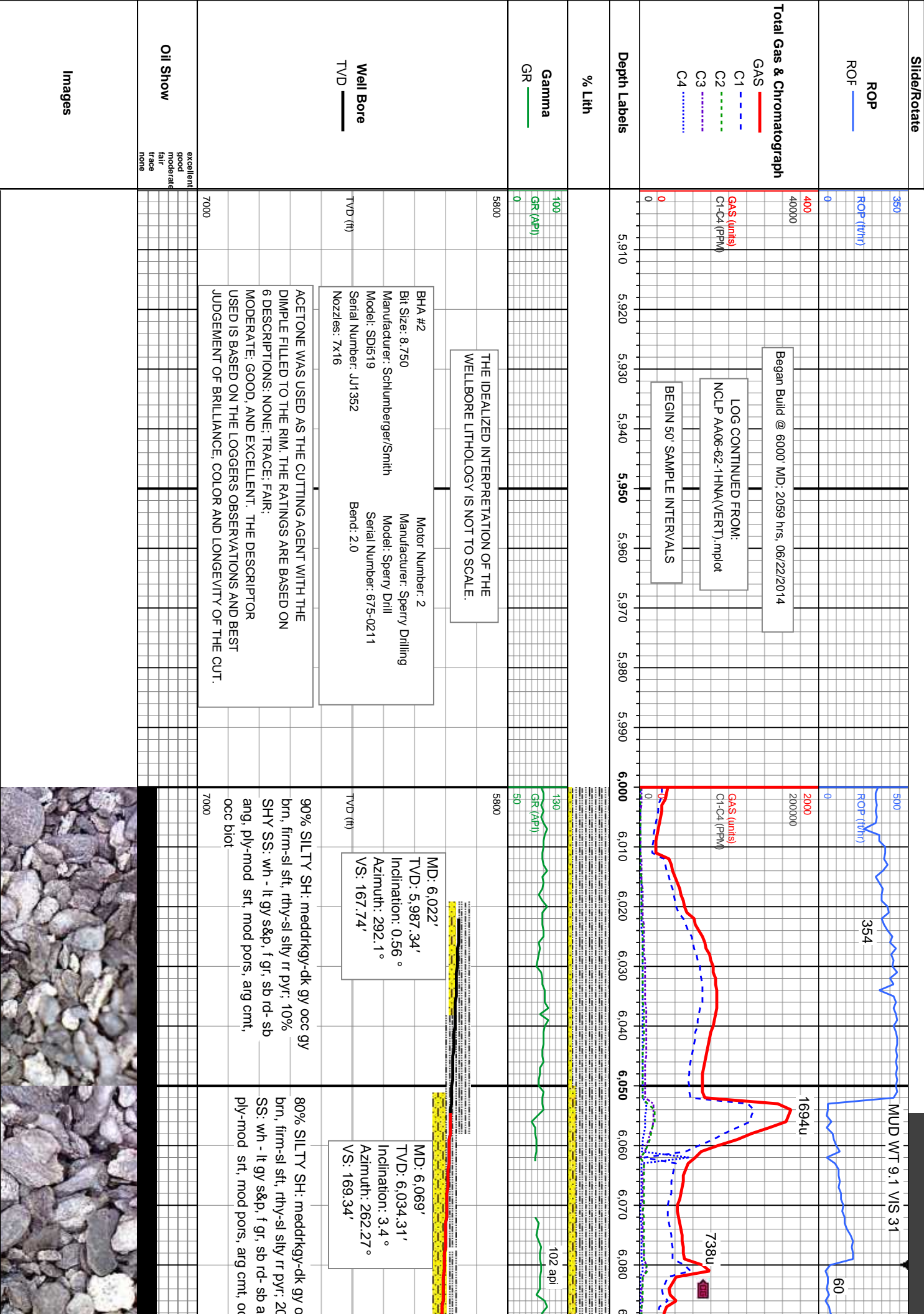


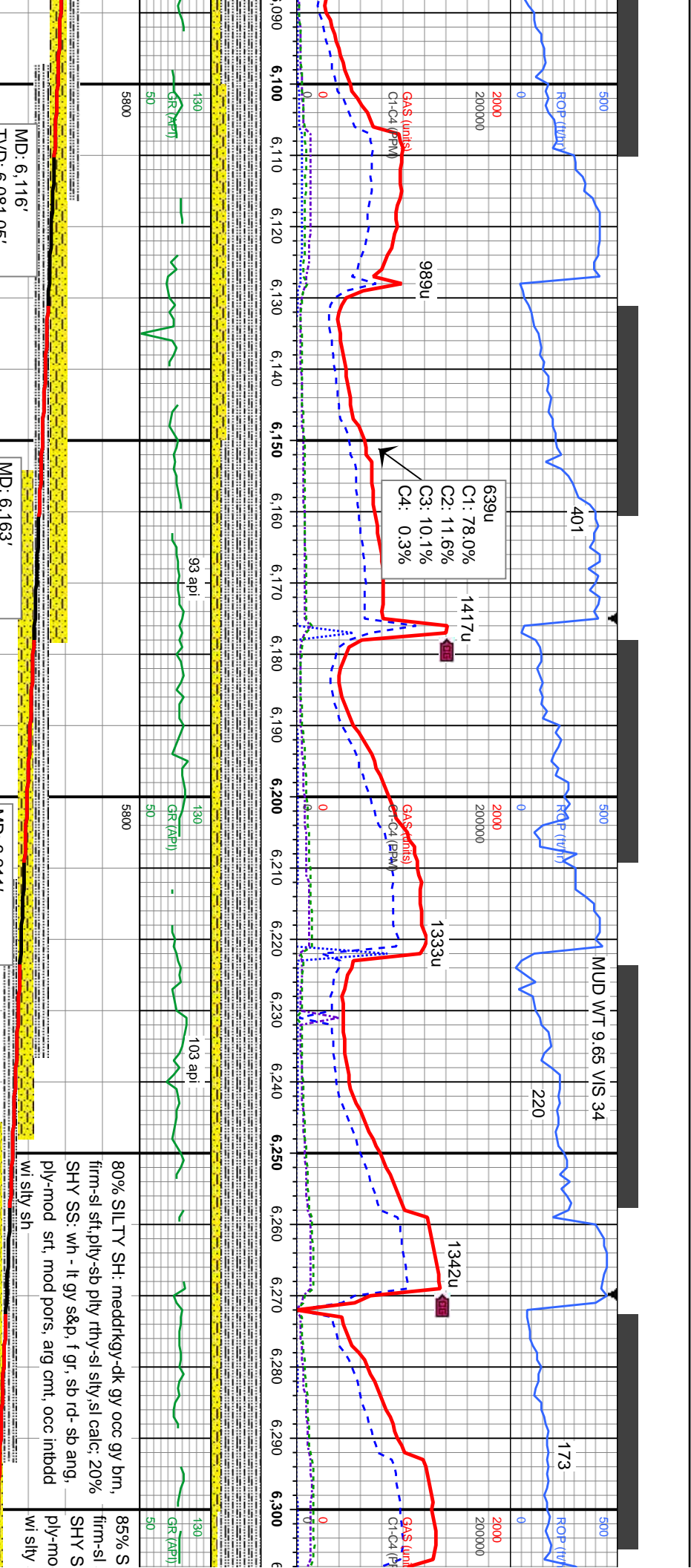
Accessories



Other Symbols







MD: 6,116'
TVD: 6,081.05'
Inclination: 8.17 °
Azimuth: 267.43 °
VS: 174.07'

MD: 6,163'
TVD: 6,127.38'
Inclination: 11.23 °
Azimuth: 266.78 °
VS: 181.99'

MD: 6,211'
TVD: 6,174.13'
Inclination: 14.86 °
Azimuth: 265.59 °
VS: 192.82'

MD: 6,258'
TVD: 6,219.19'
Inclination: 18.12 °
Azimuth: 271.38 °
VS: 206.13'

MD: 6,305'
TVD: 6,263.33'
Inclination: 27.12 °
Azimuth: 271.38 °
VS: 221.95'

70% SILTY SH: meddkgy-dk gy occ gy
brn, firm-slt, rthy-slt r pyr; 30%
SHY SS: wh - lt gy s&p, f gr, sb rd - sb
ang, ply-mod srt, mod pors, arg cnt,
occ biot

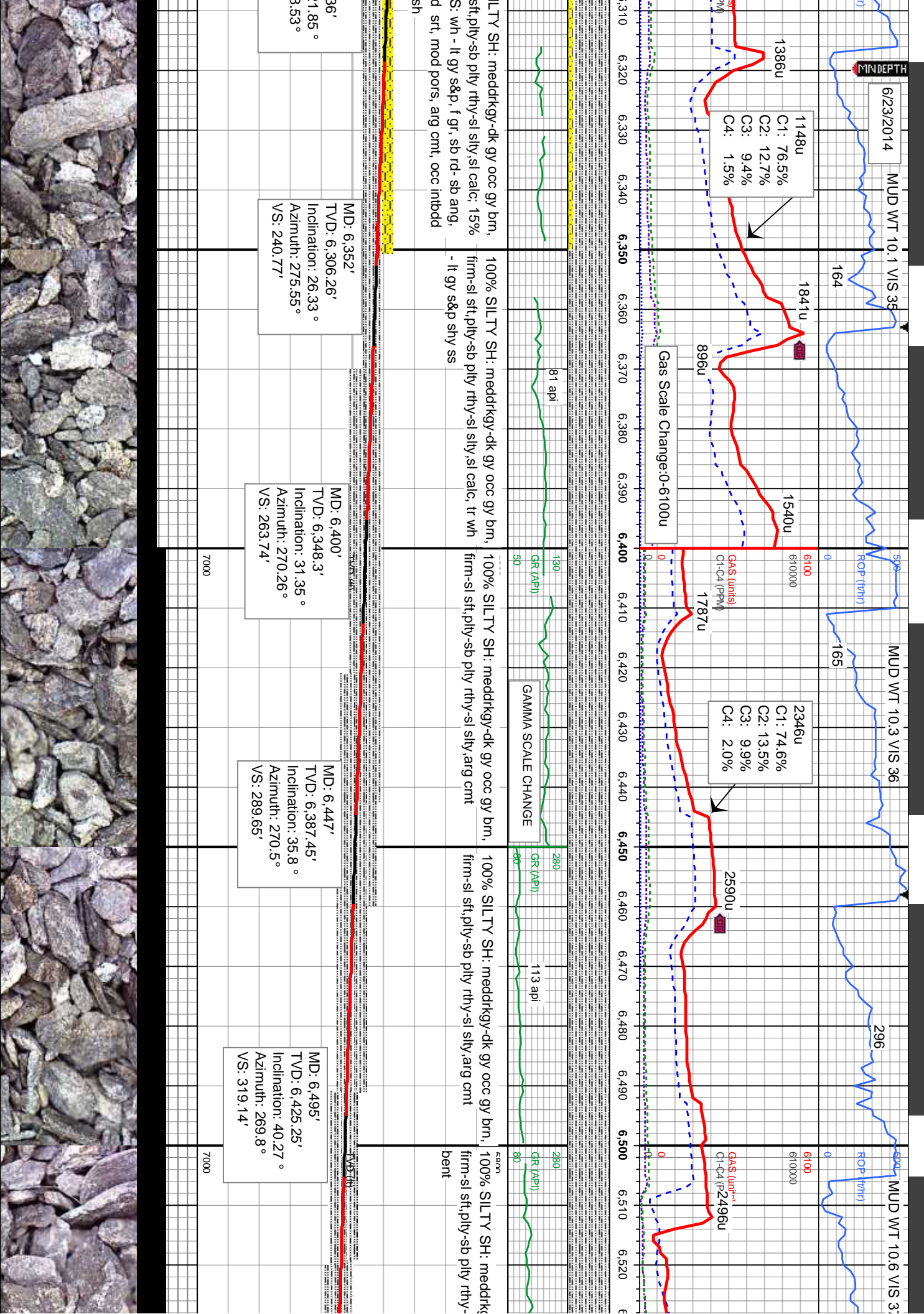
80% SILTY SH: meddkgy-dk gy occ gy
brn, firm-slt, rthy-slt; 20% SHY SS:
wh - lt gy s&p, f gr, sb rd - sb ang, ply-mod
srt, mod pors, arg cnt, occ biot

80% SILTY SH: meddkgy-dk gy occ gy brn,
firm-slt, rthy-slt; 20% SHY SS: wh - lt
gy s&p, f gr, sb rd - sb ang, ply-mod srt,
mod pors, arg cnt, occ biot

80% SILTY SH: meddkgy-dk gy occ gy brn,
firm-slt, ply-sb rthy-slt, sl calc; 20%
SHY SS: wh - lt gy s&p, f gr, sb rd - sb ang,
ply-mod srt, mod pors, arg cnt, occ intbdd
wi slty sh

85% S
firm-slt
SHY S
ply-mo
wi slty

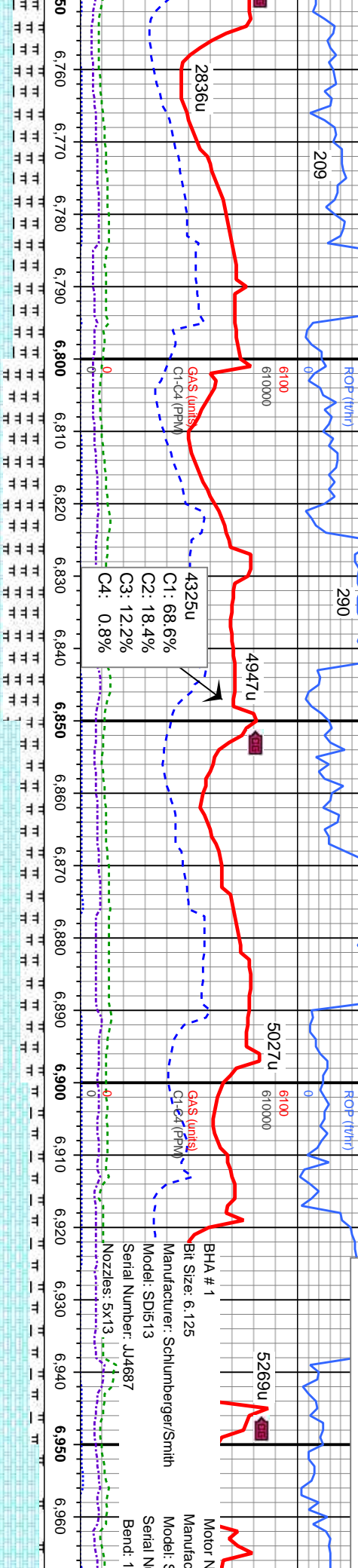




MUD WT 10.8 VIS 38

MUD WT 10.8 VIS 38

TOOH for 7" Casing @ 7004 0949 hrs 06/23/14.



60% MRLST:dk gy-gy brn, mod sft-sl frm, sb
biky-sb pty, rthy-sily tex, sl mot, vit lstr, v
calc; 40% CHK: lt-med gy, sft - mod sft, occ
frm, biky-sb biky, wxy - rthy tex;

80% MRLST:dk gy-gy brn, mod sft-sl frm, sb
biky-sb pty, rthy-sily tex, sl mot, vit lstr, v
calc; 20% CHK: lt-med gy, sft - mod sft, occ
frm, biky-sb biky, wxy - rthy tex;

55% CHK: lt-med gy, sft - mod sft, occ frm,
biky-sb biky, wxy - rthy tex; 45% MRLST:dk
gy-gy brn, mod sft-sl frm, sb biky-sb pty,
rthy-sily tex, sl mot, vit lstr

75% CHK: buff - lt brn mot, occ wht sb-pty
to sb-biky, frm -occ sft, rthy - sl sb wxy, mtx;
25% MRLST:dk gy-gy brn, mod sft-sl frm,
sb biky-sb pty, rthy-sily tex, sl mot, vit lstr

90% CHK: buff -
sb-pty - sb biky,
mtx; 10% MRLS
frm, sb biky-sb p

MD: 6,780'
TVD: 6,594.6'
Inclination: 66.92 °
Azimuth: 270.58 °
VS: 544.94'

MD: 6,827'
TVD: 6,611.55'
Inclination: 70.78 °
Azimuth: 271.51 °
VS: 588.59'

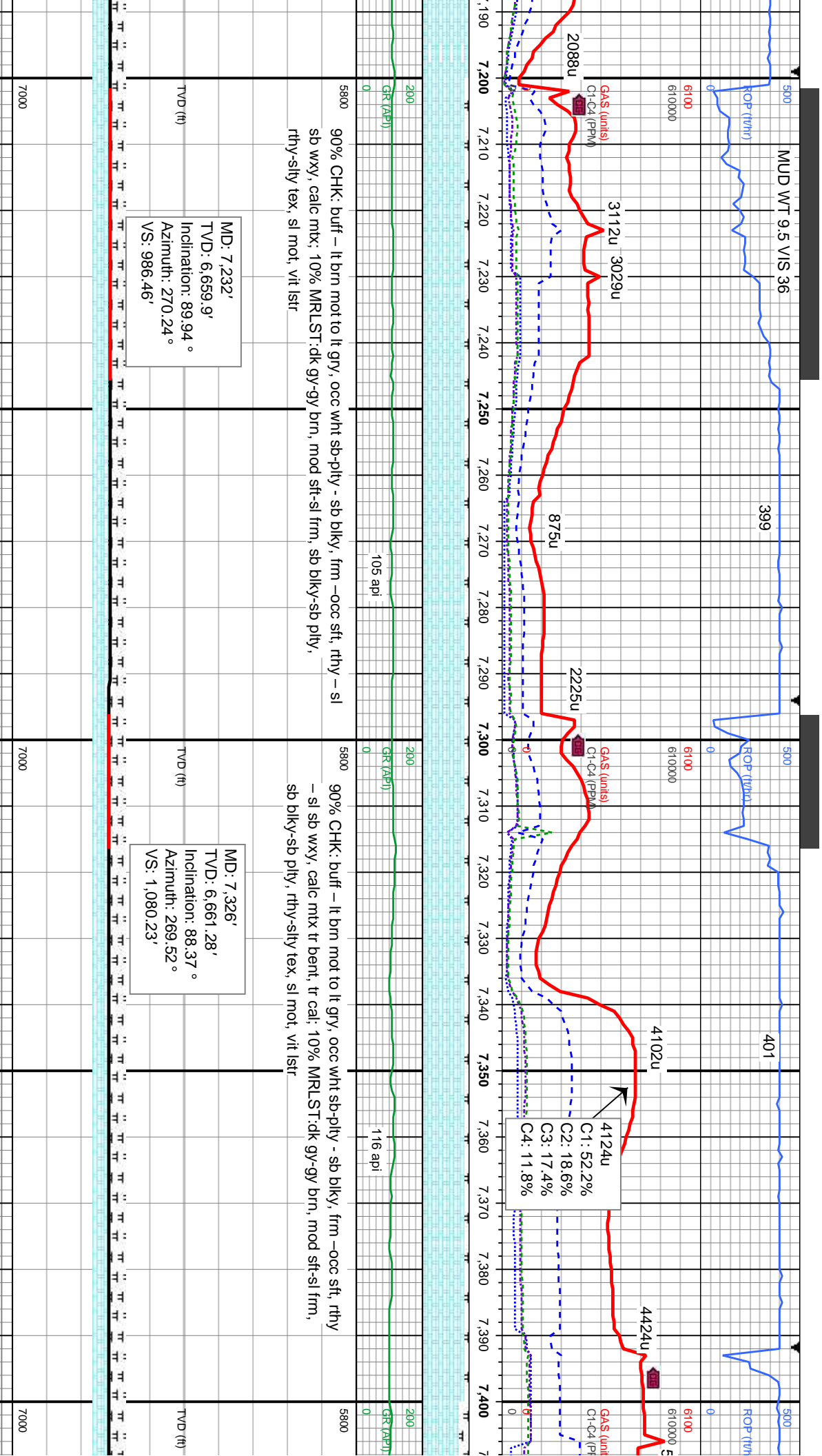
MD: 6,875'
TVD: 6,625.82'
Inclination: 74.62 °
Azimuth: 271.47 °
VS: 634.2'

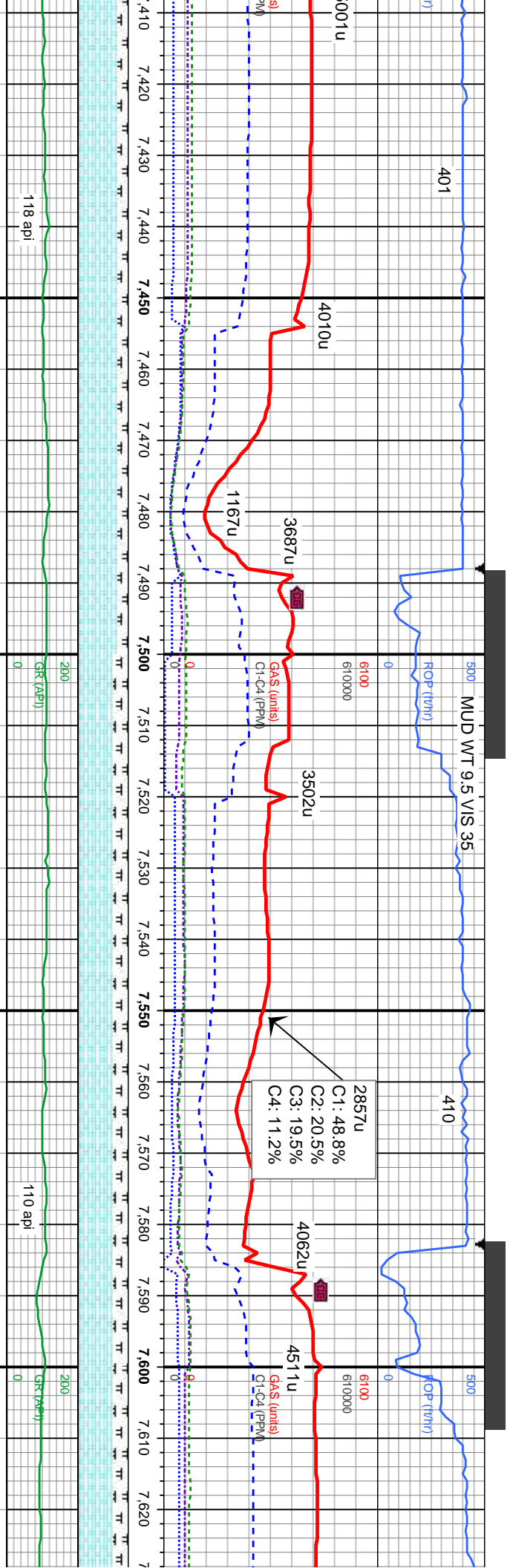
MD: 6,922'
TVD: 6,637.08'
Inclination: 77.67 °
Azimuth: 271.69 °
VS: 679.61'

MD: 6,946'
TVD: 6,641.8'
Inclination: 79.65 °
Azimuth: 271.42 °
VS: 703.03'

LOGGER TOP B CHALK
6895 MD/6630' TVD







80% CHK: buff - lt brn mot, occ wht sb-pty - sb blkly, frm -occ sft, rthy - sl
sb wxy, calc mtx tr bent, tr cal, 20% MRLST:dk gy-gy brn, mod sft-sl frm,
sb blkly-sb pty, rthy-sily tex, sl mot, vit lstr

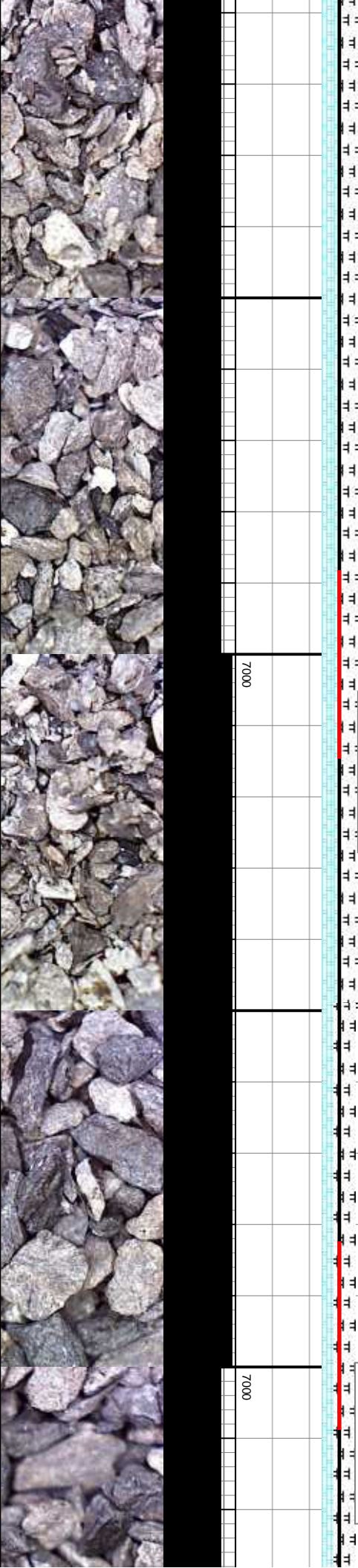
MD: 7,422'
TVD: 6,662.36'
Inclination: 90.34 °
Azimuth: 268.86 °
VS: 1,176.07'

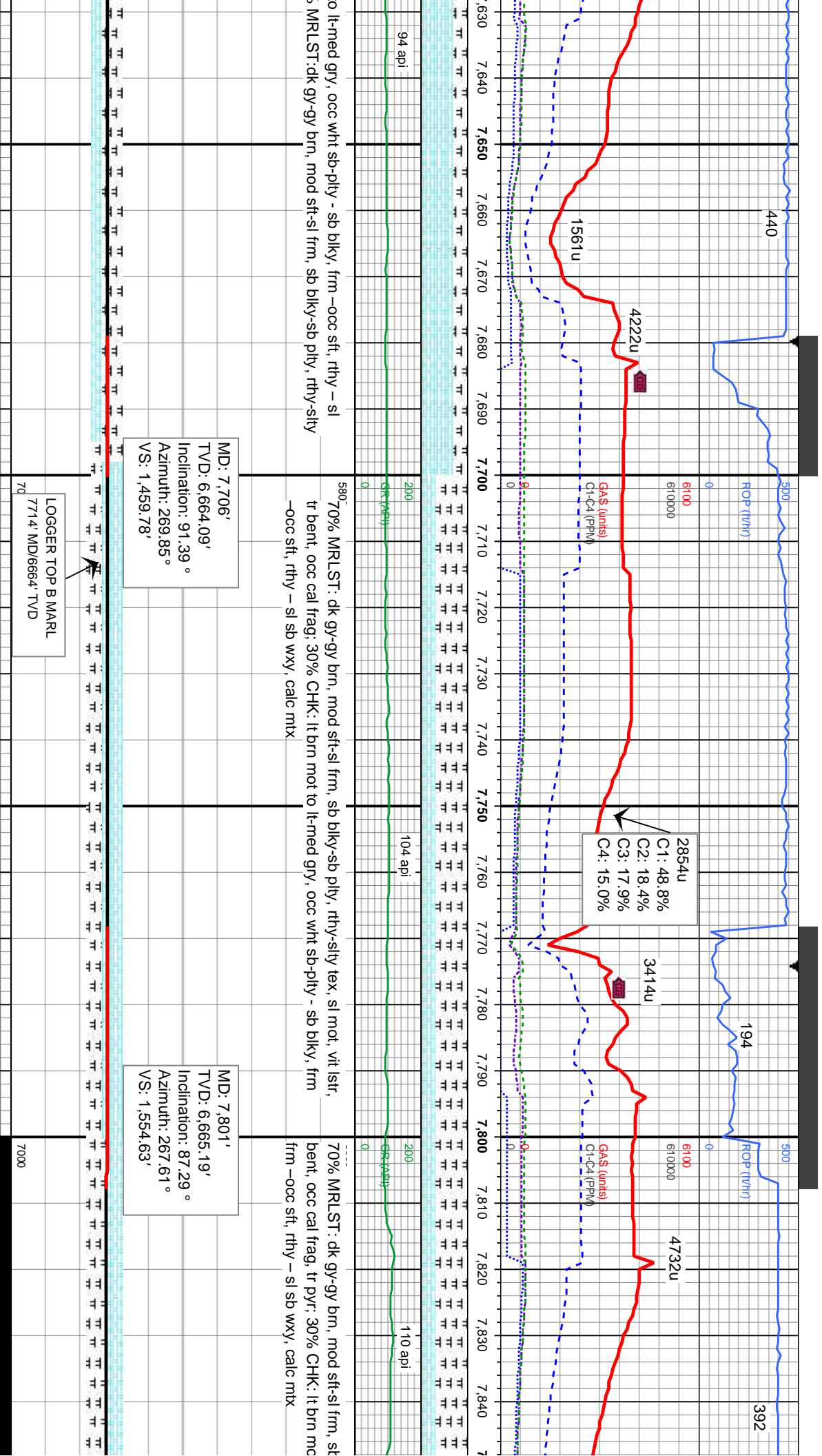
70% CHK: lt brn mot to lt-med gry, occ wht sb-pty - sb blkly, frm -occ sft, rthy - sl
sb wxy, calc mtx: 30% MRLST:dk gy-gy brn, mod sft-sl frm, sb blkly-sb pty, rthy-sily
tex, sl mot, vit lstr

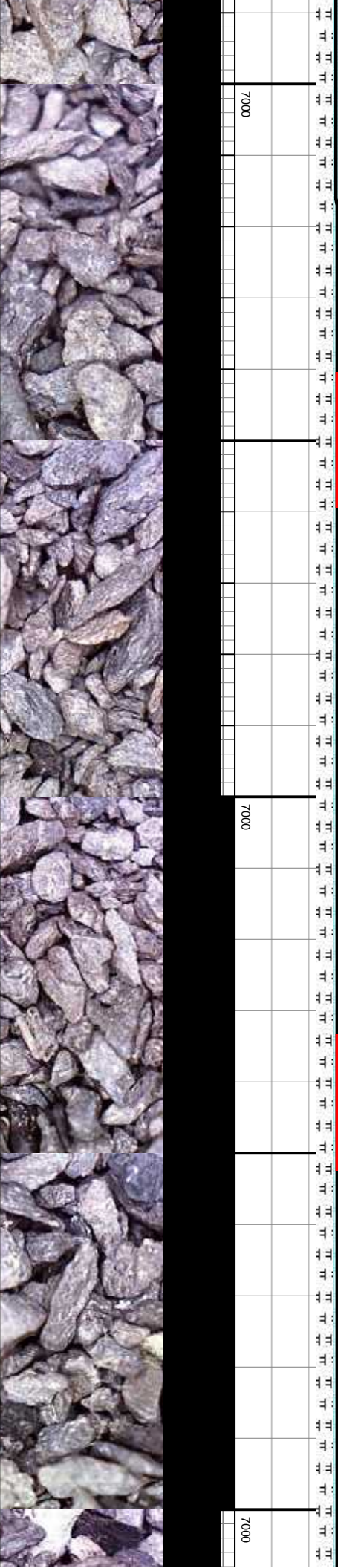
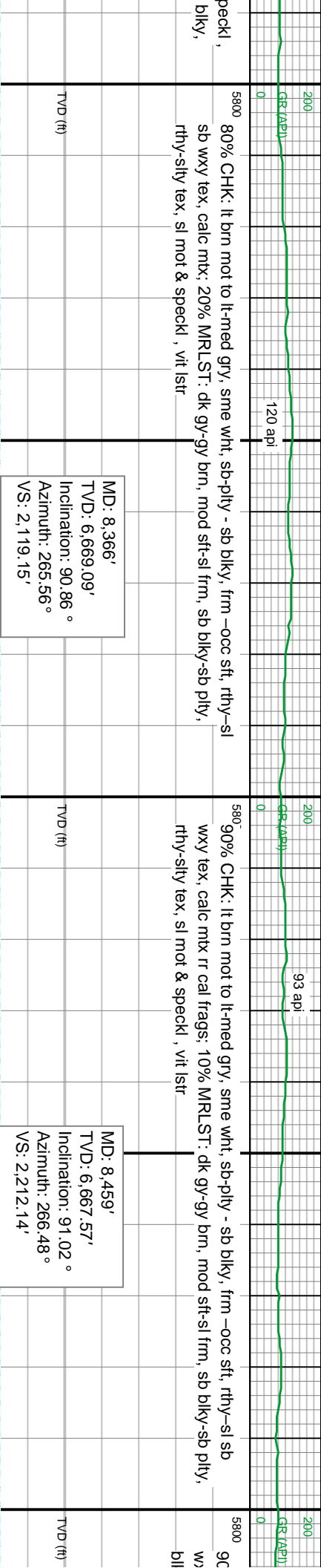
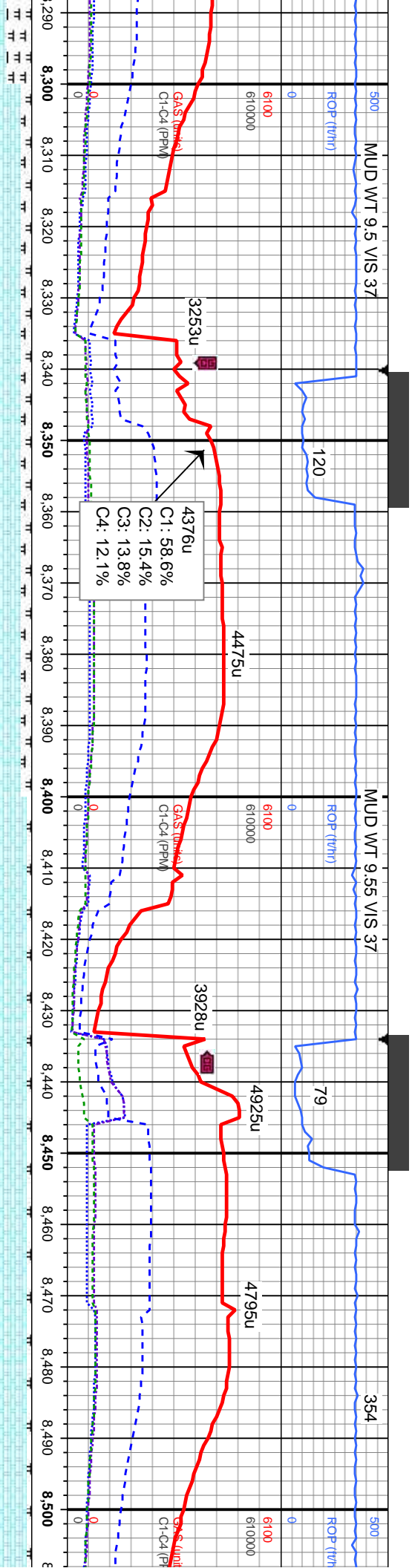
MD: 7,516'
TVD: 6,662.76'
Inclination: 89.17 °
Azimuth: 267.54 °
VS: 1,269.99'

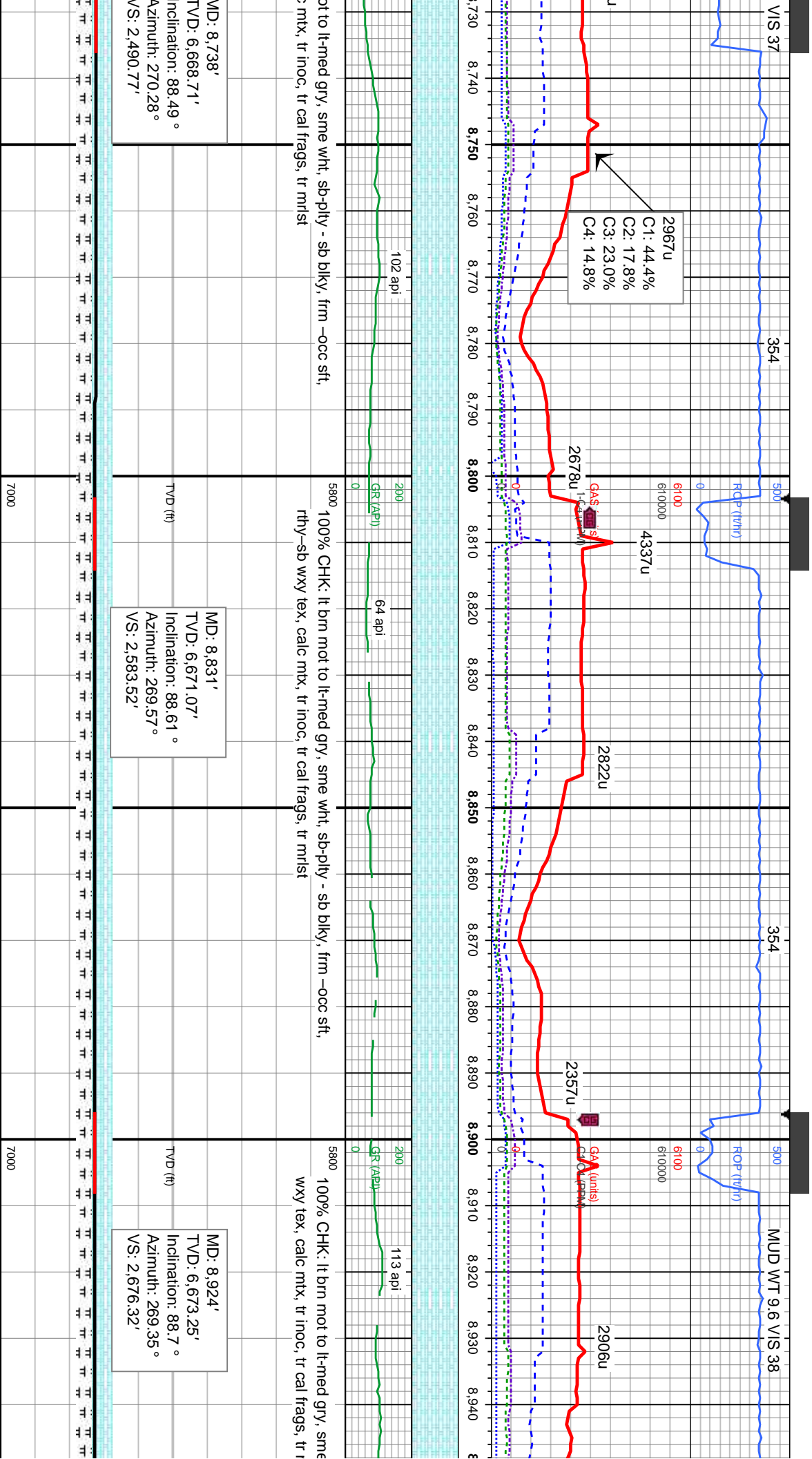
70% CHK: lt brn mot to
sb wxy, calc mtx: 30%
tex, sl mot, vit lstr

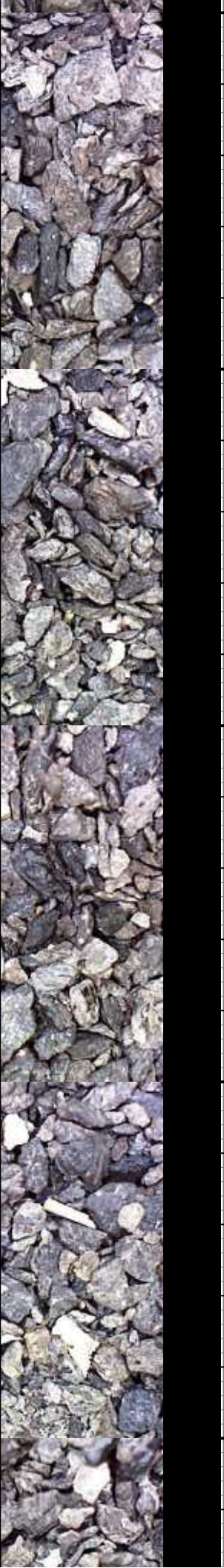
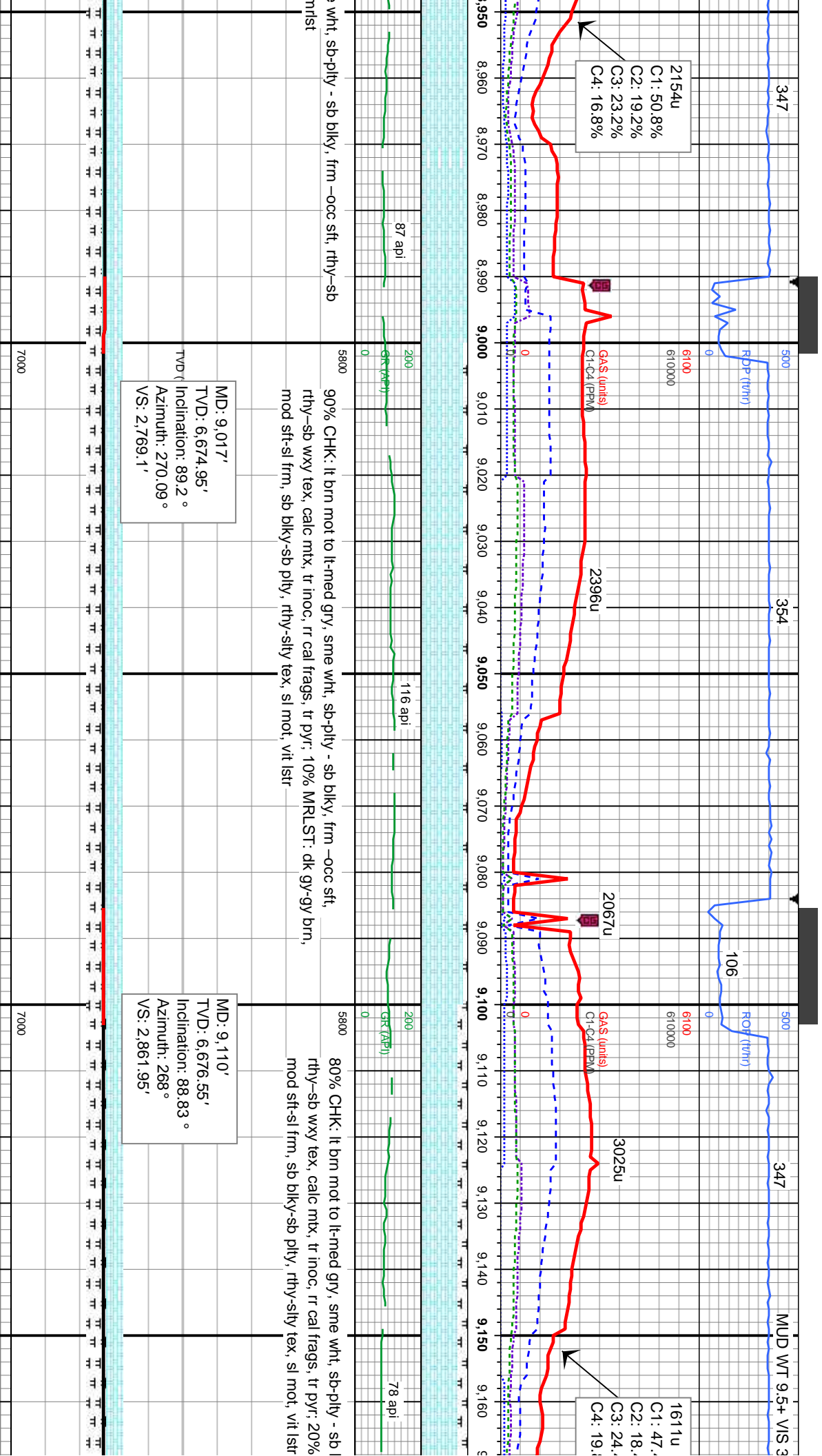
MD: 7,611'
TVD: 6,664.35'
Inclination: 88.92 °
Azimuth: 268.22 °
VS: 1,364.92'

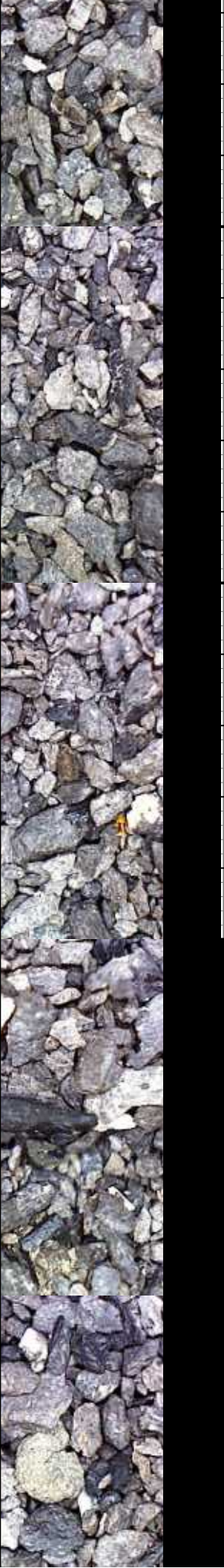
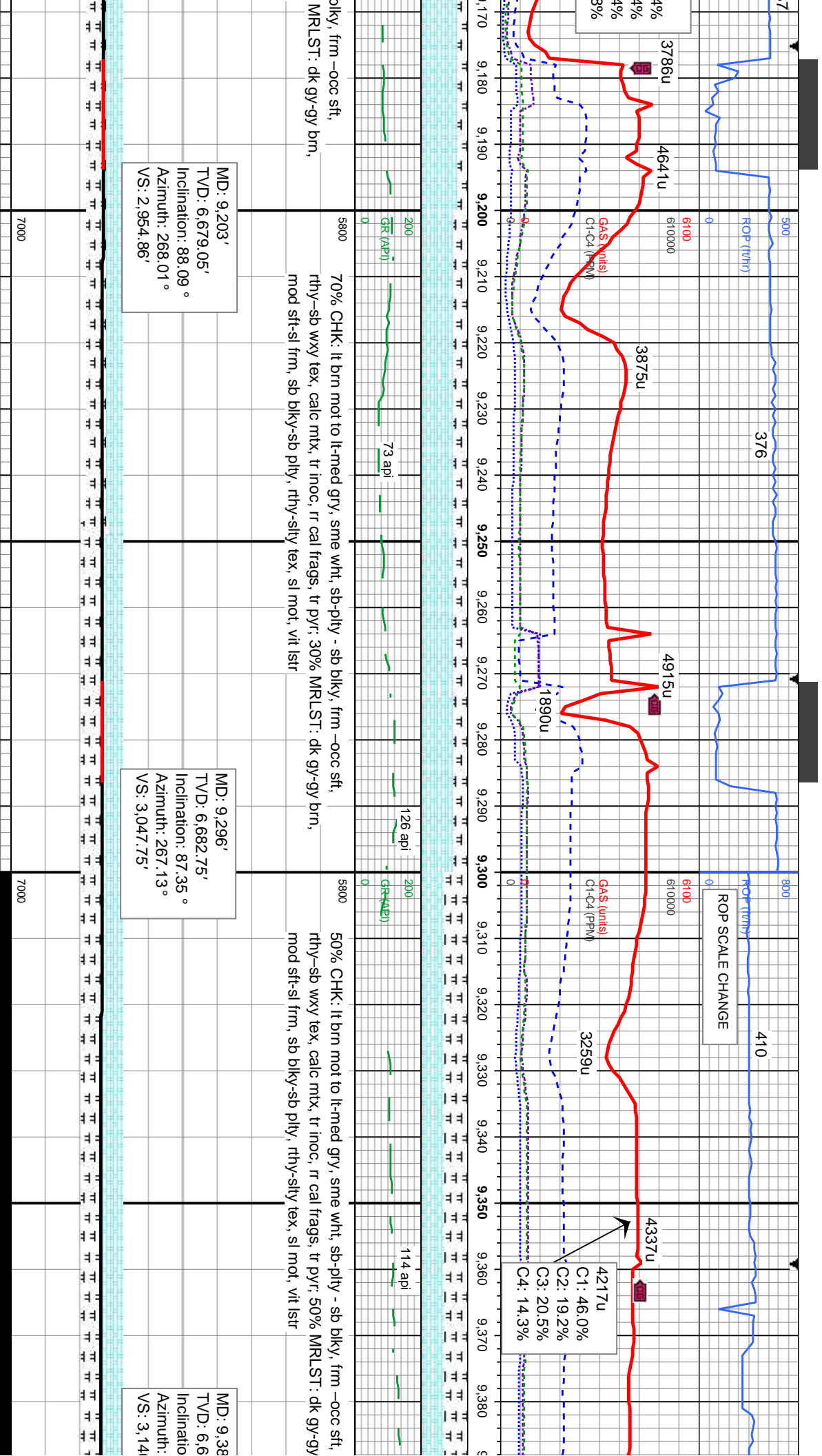


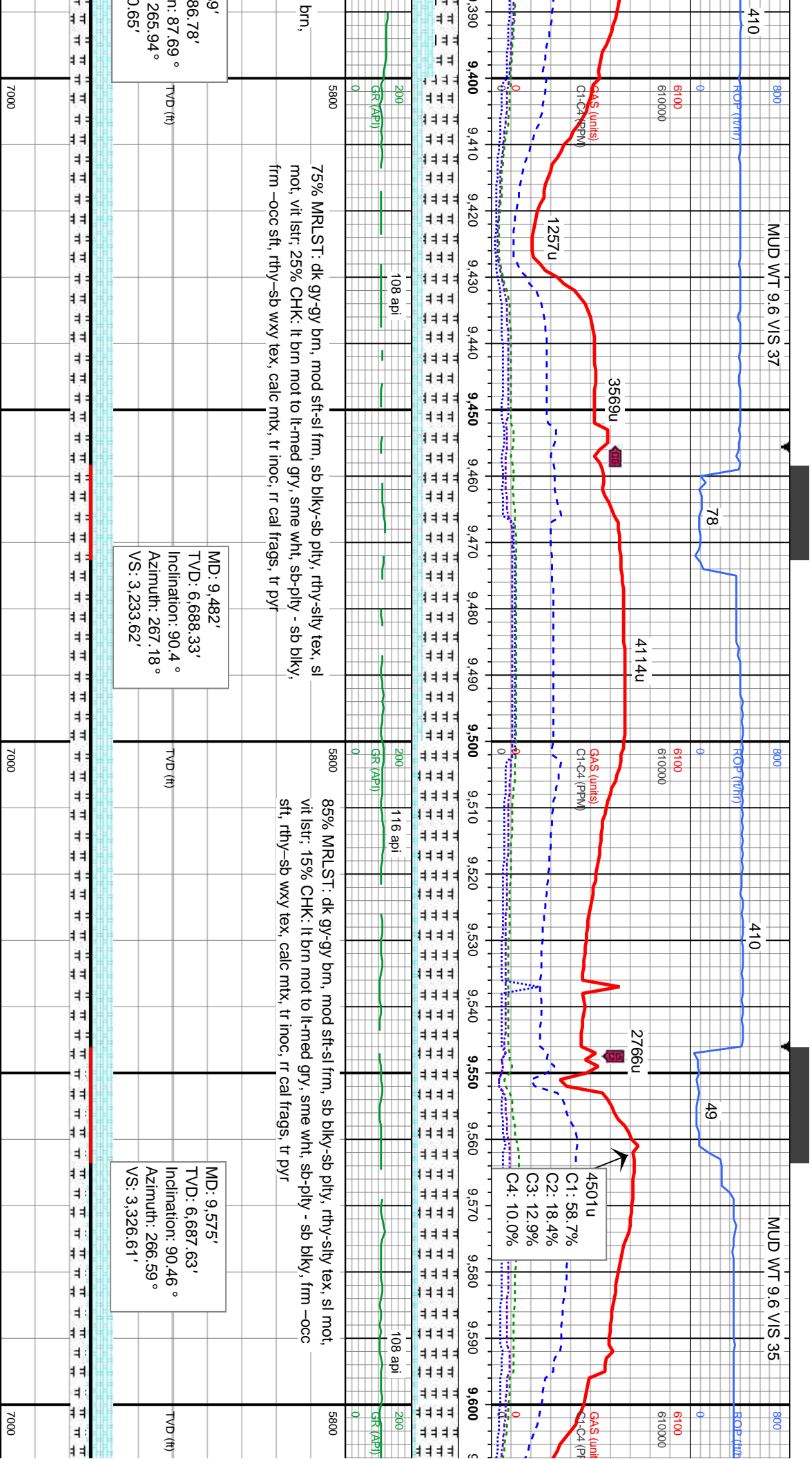


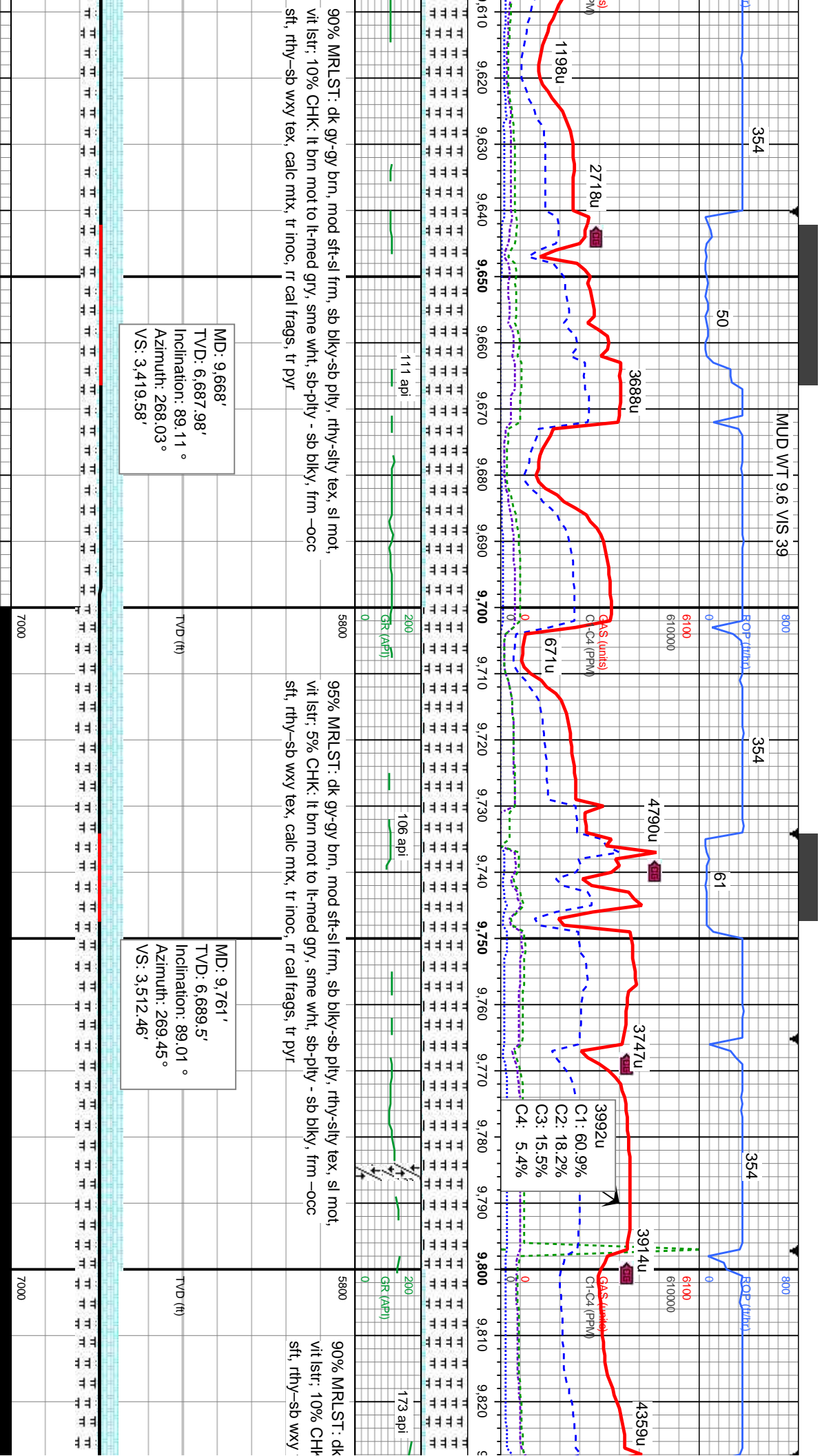


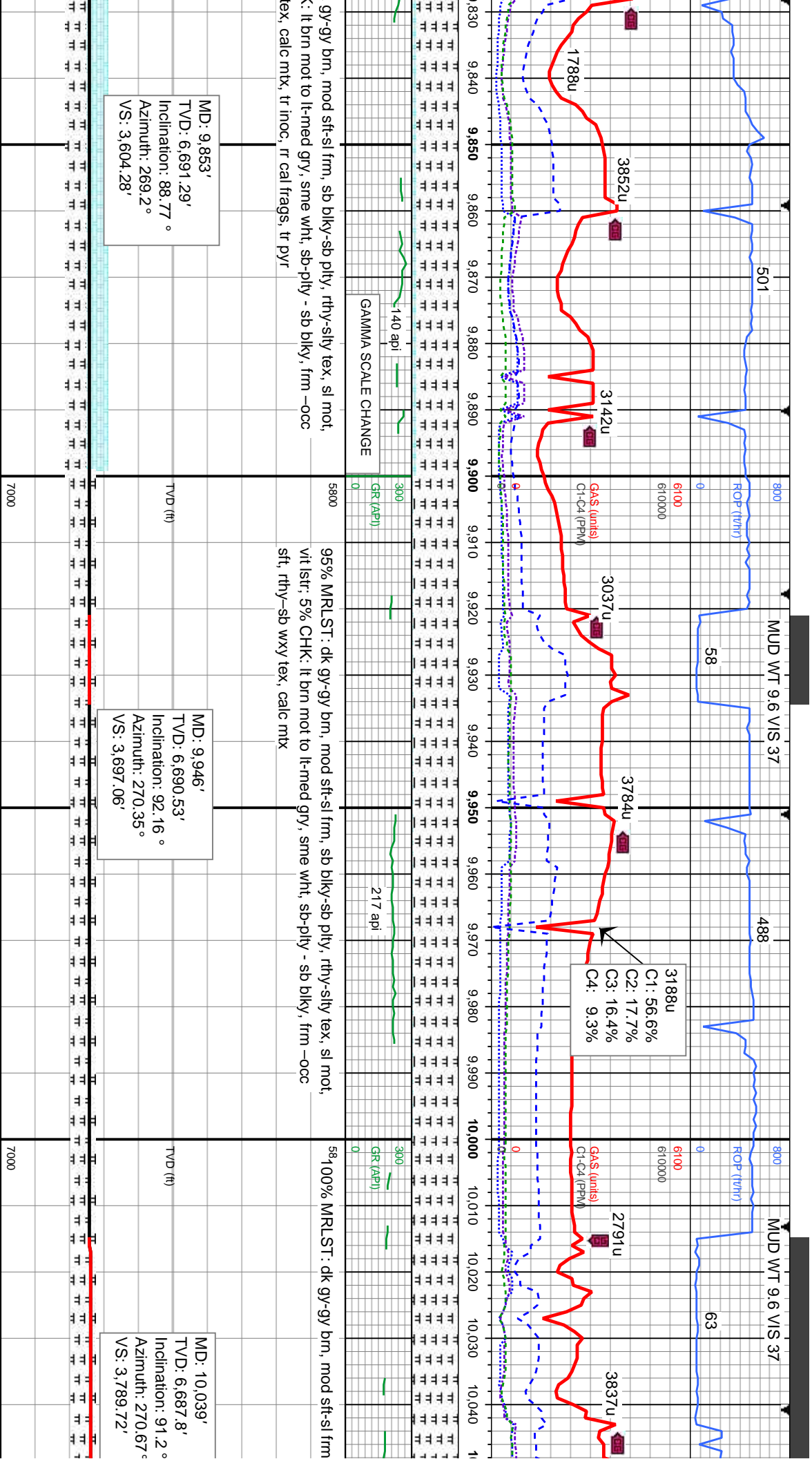


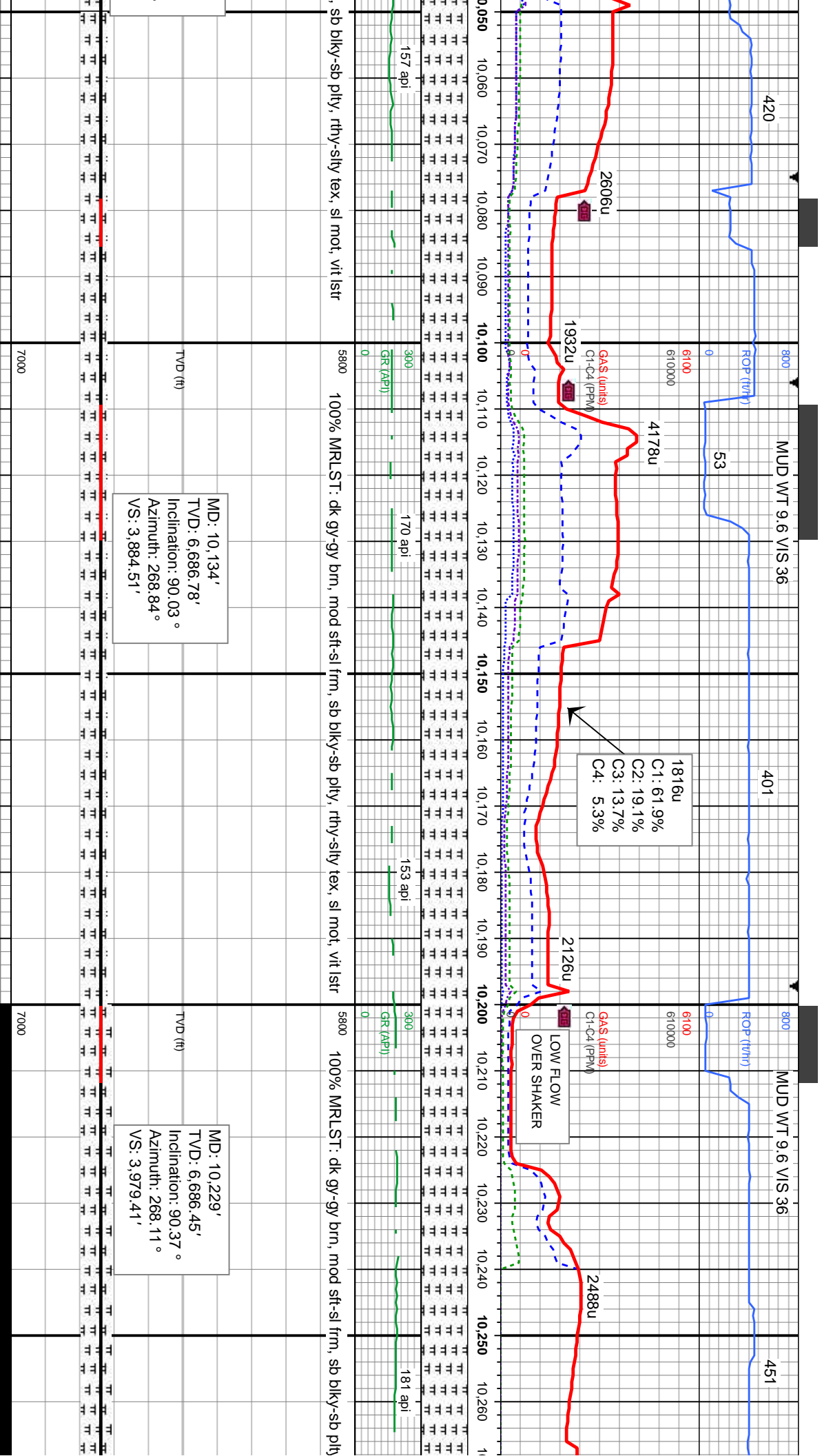


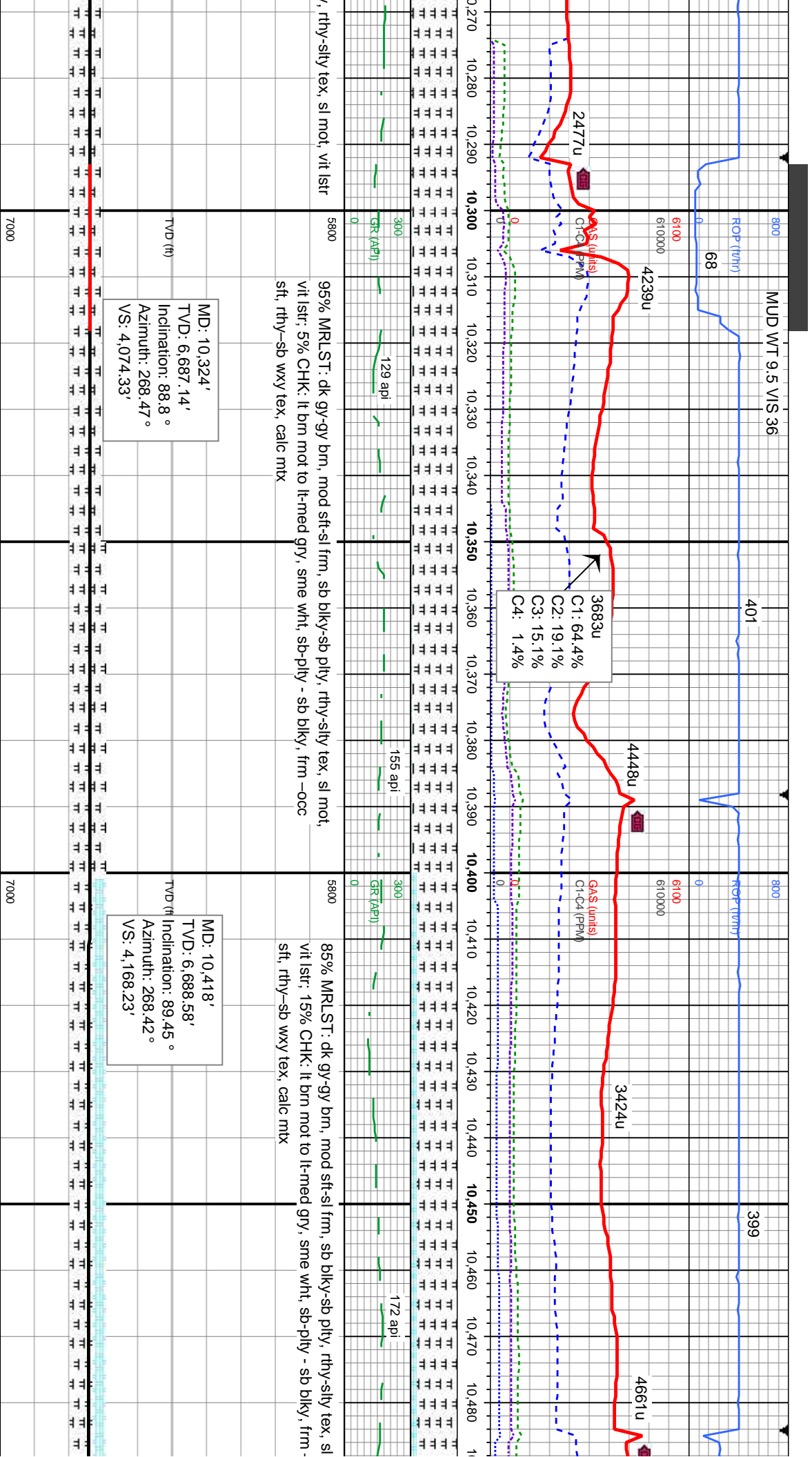


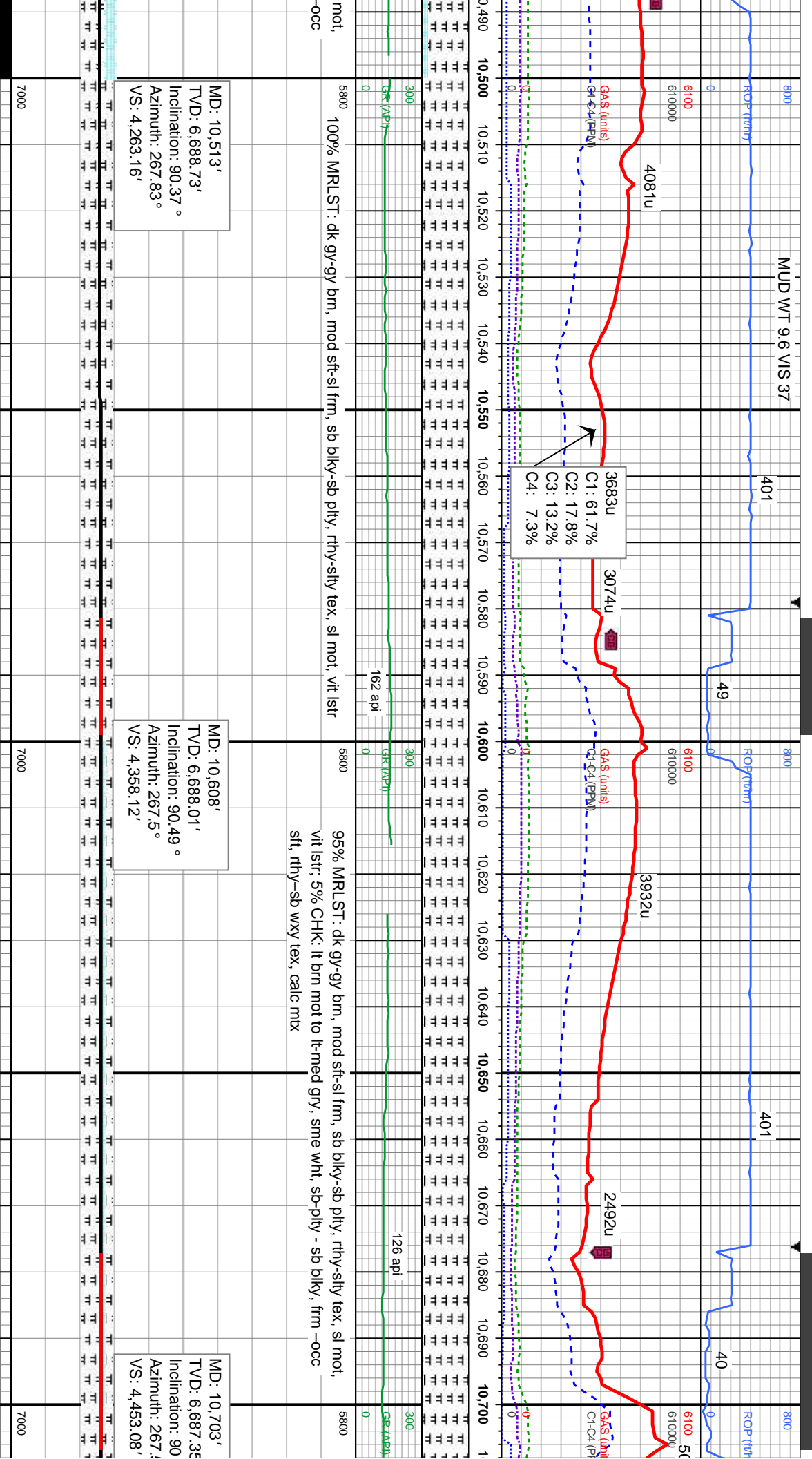


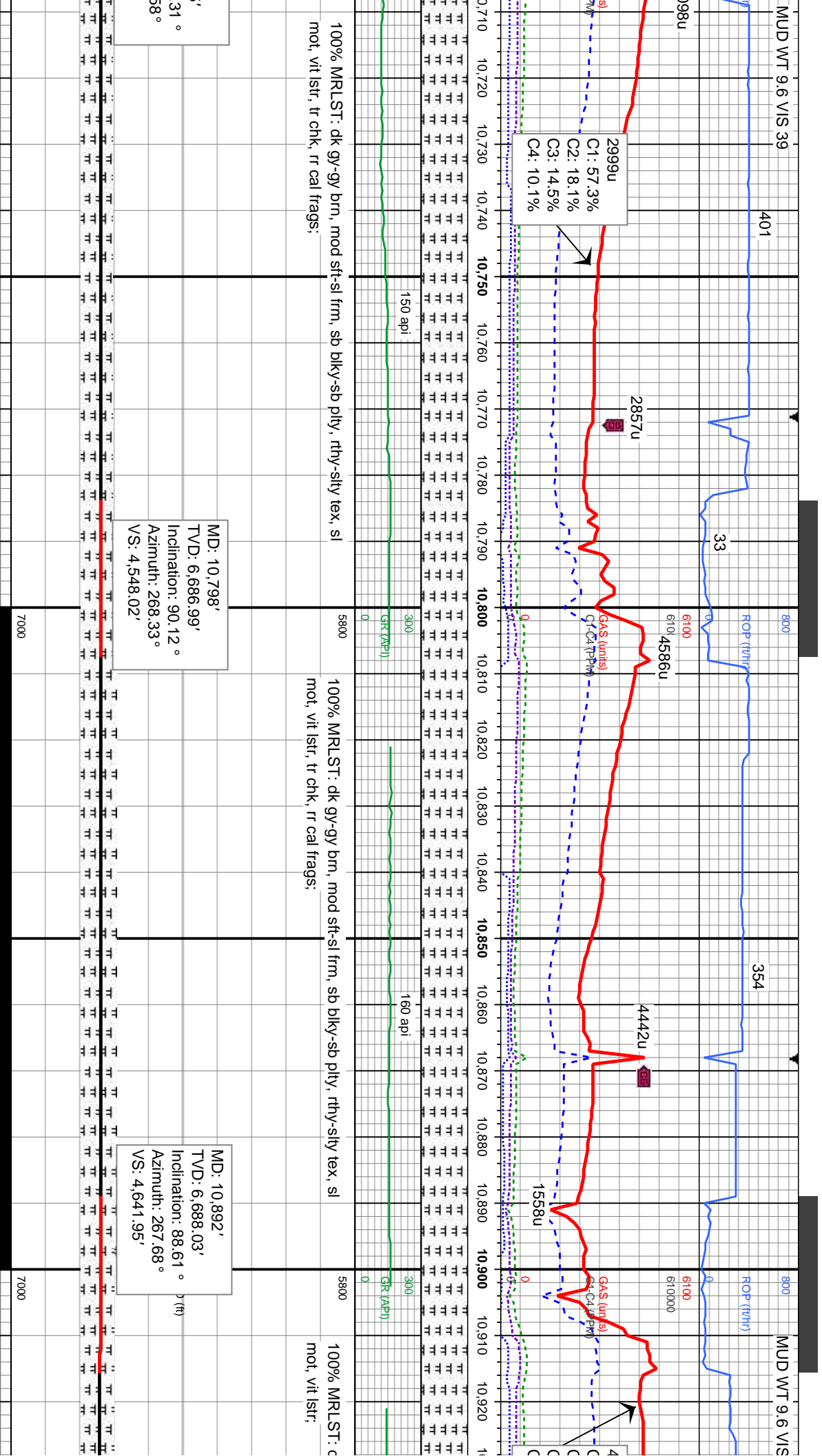


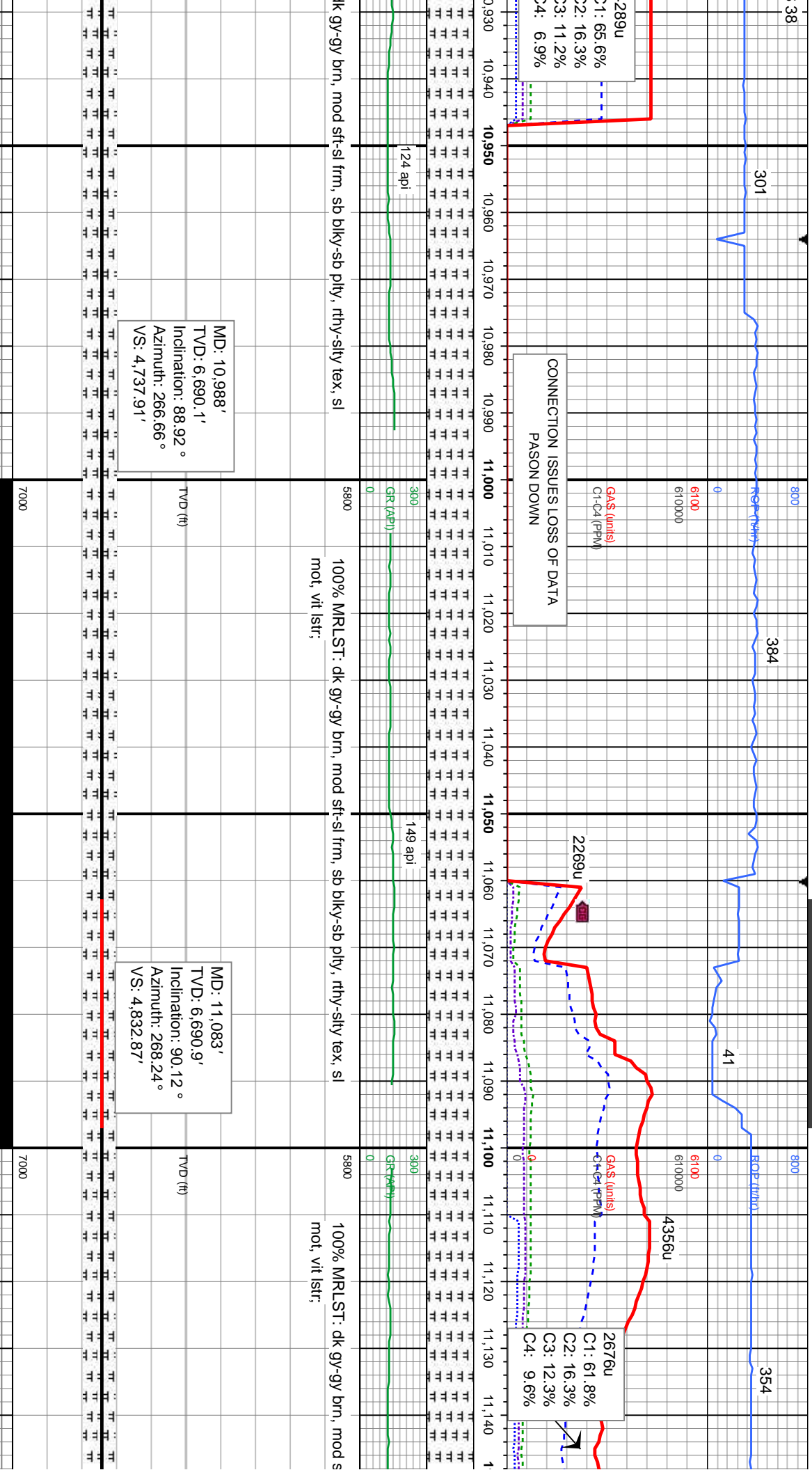


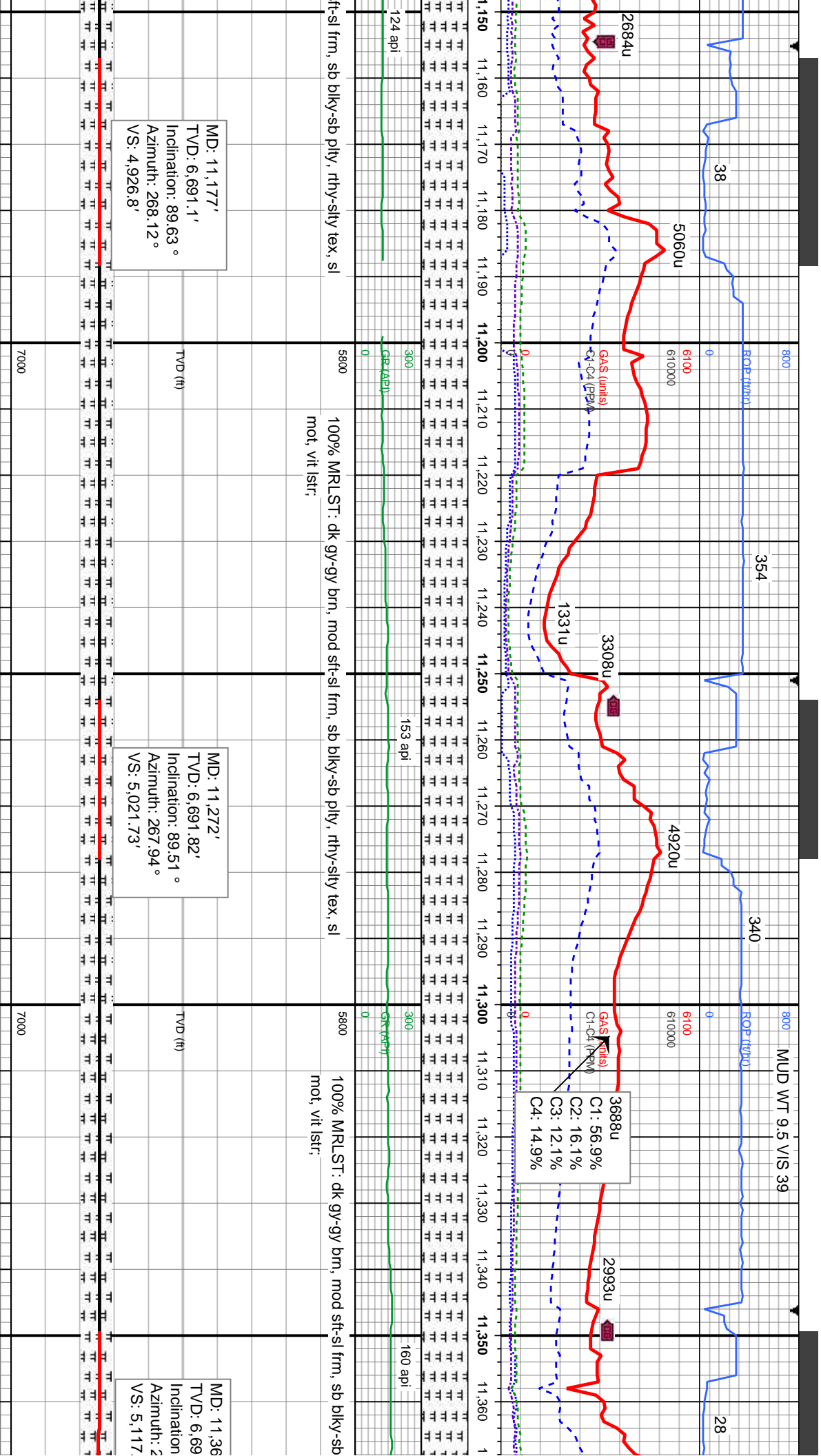


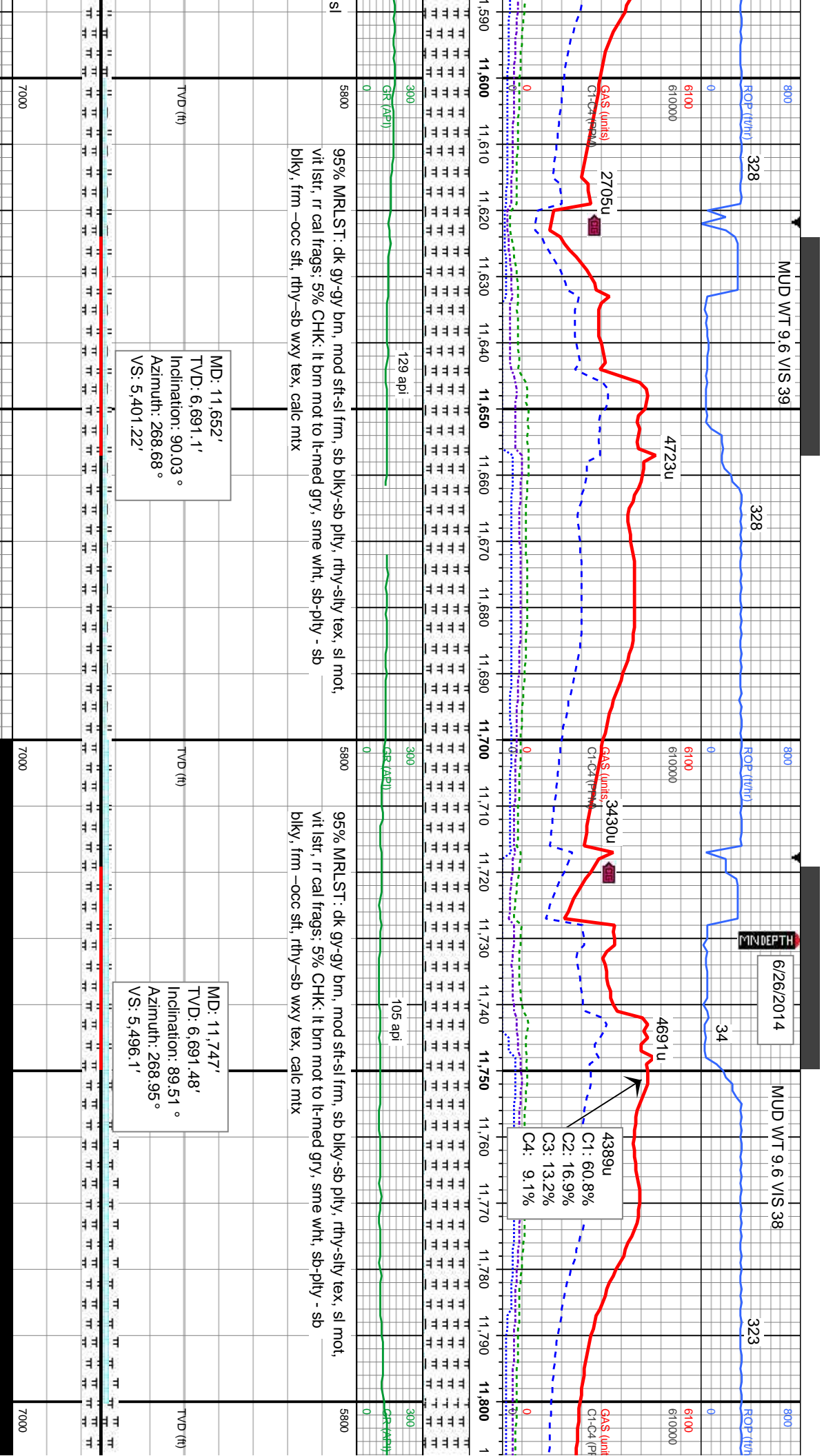


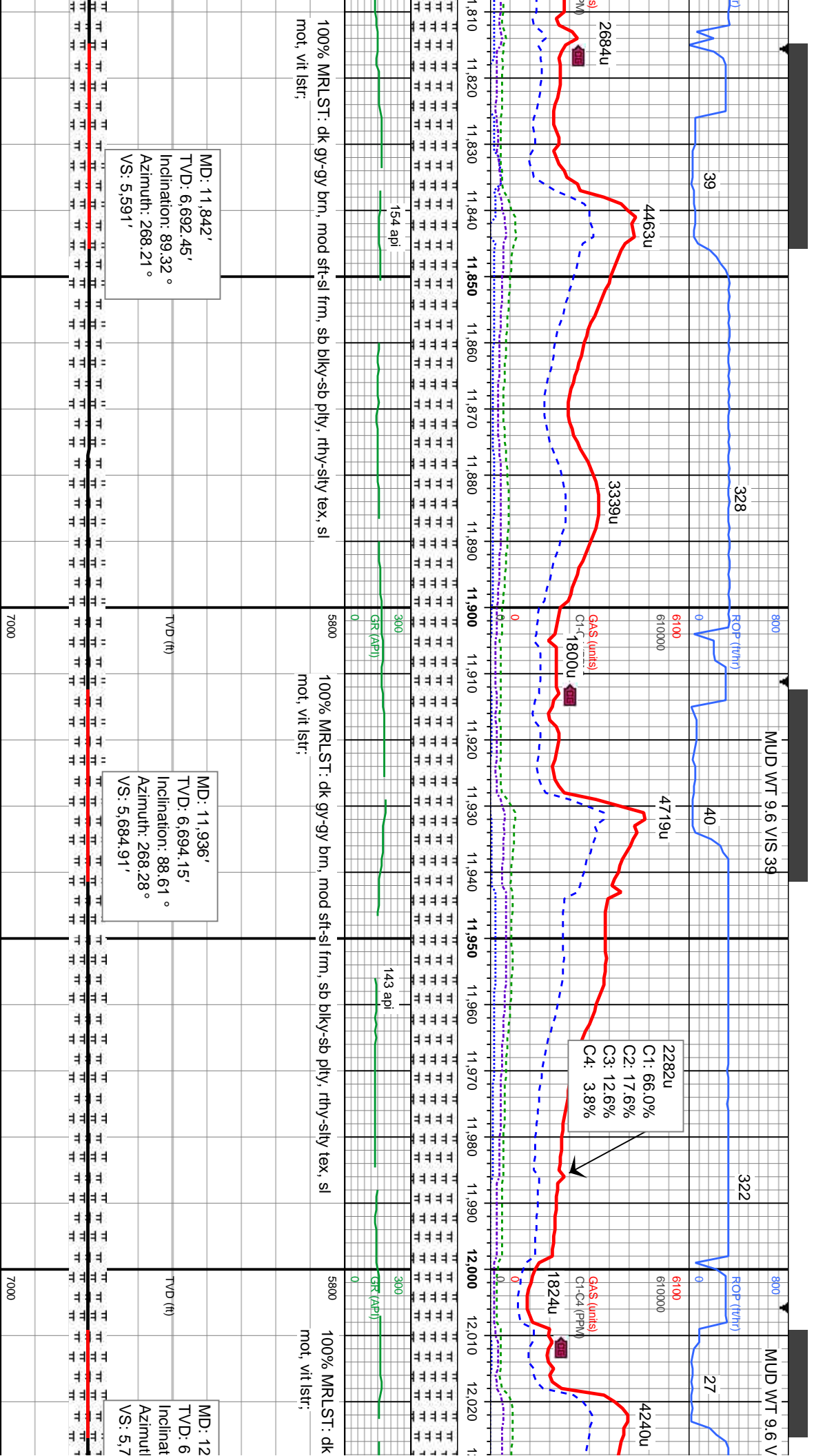


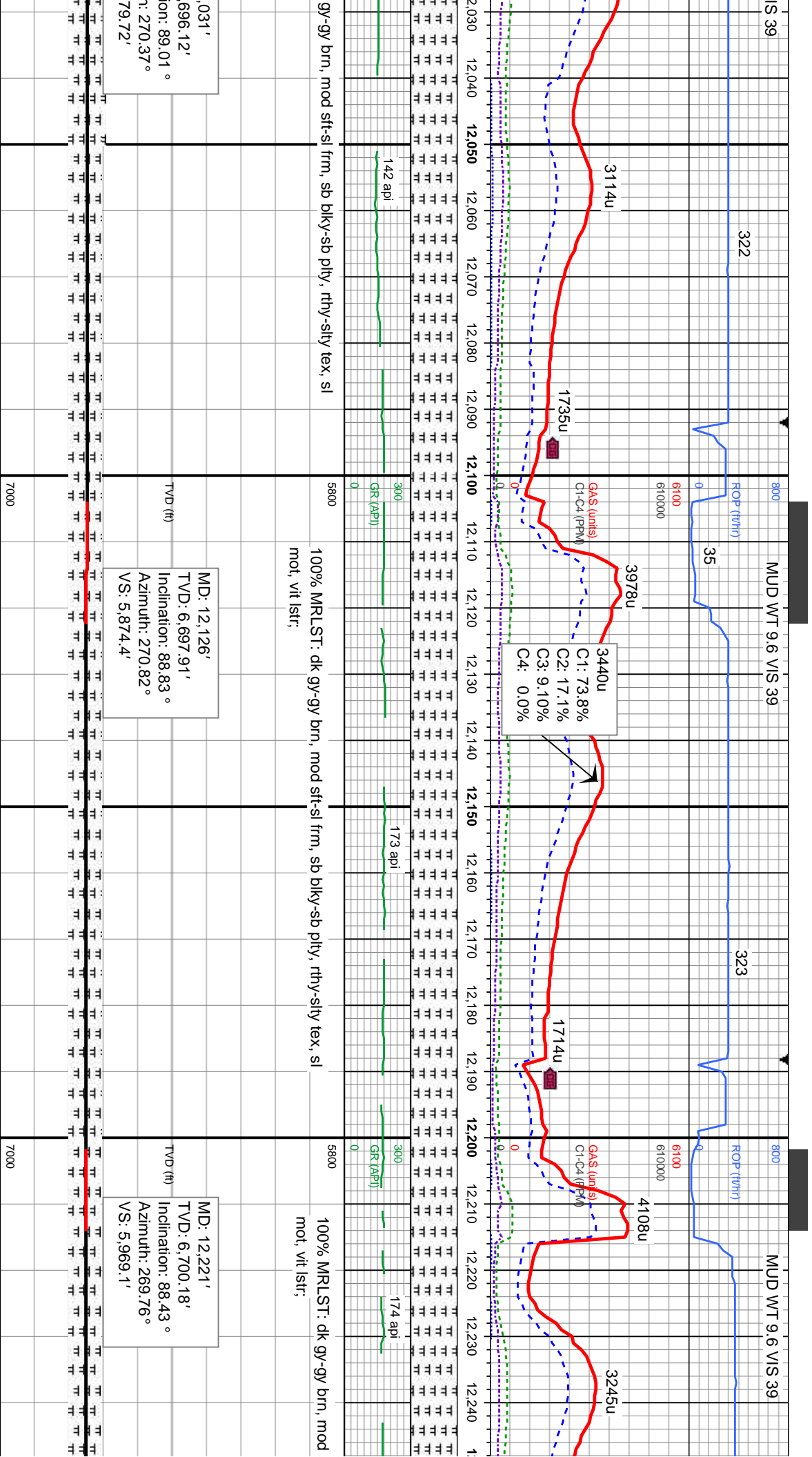


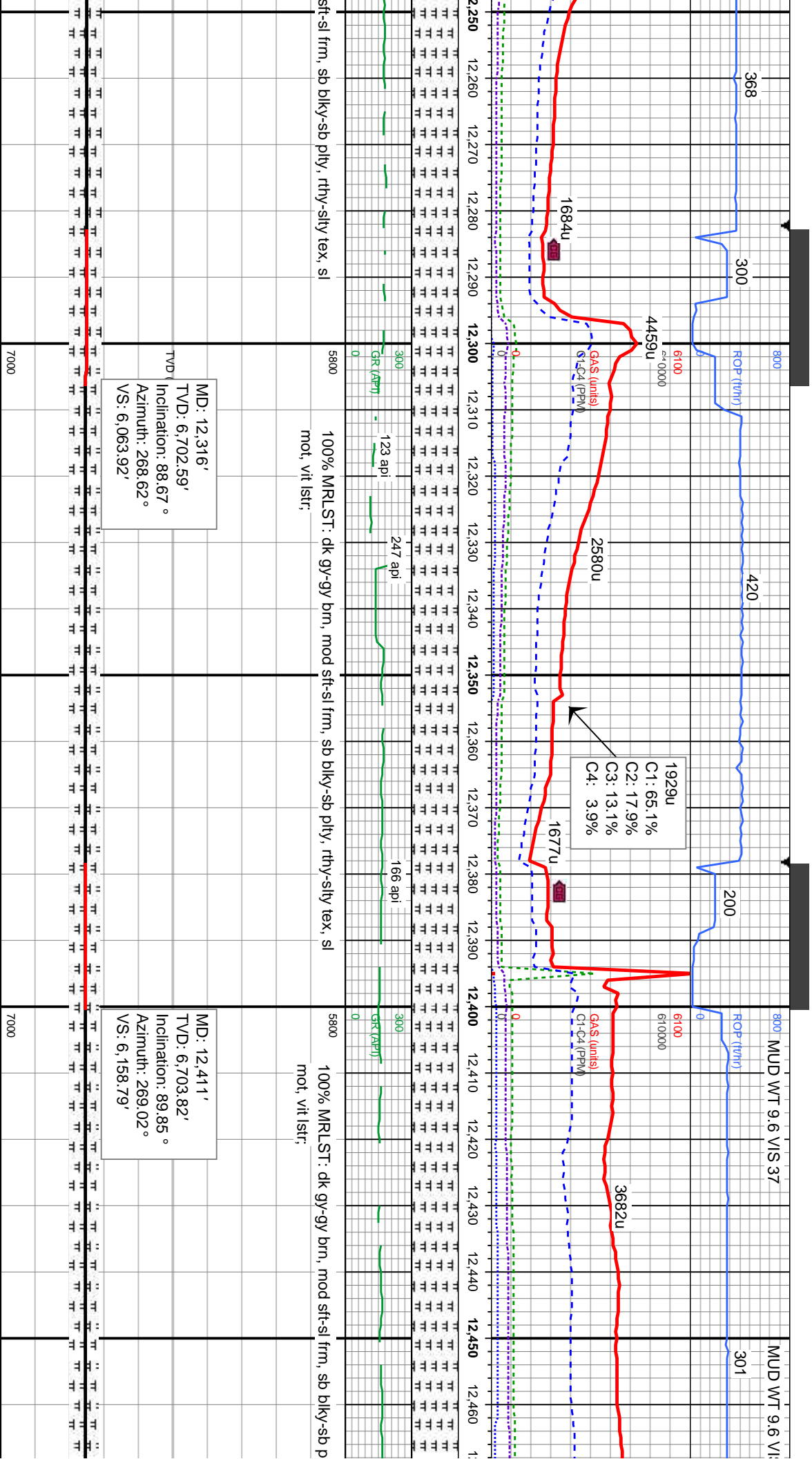


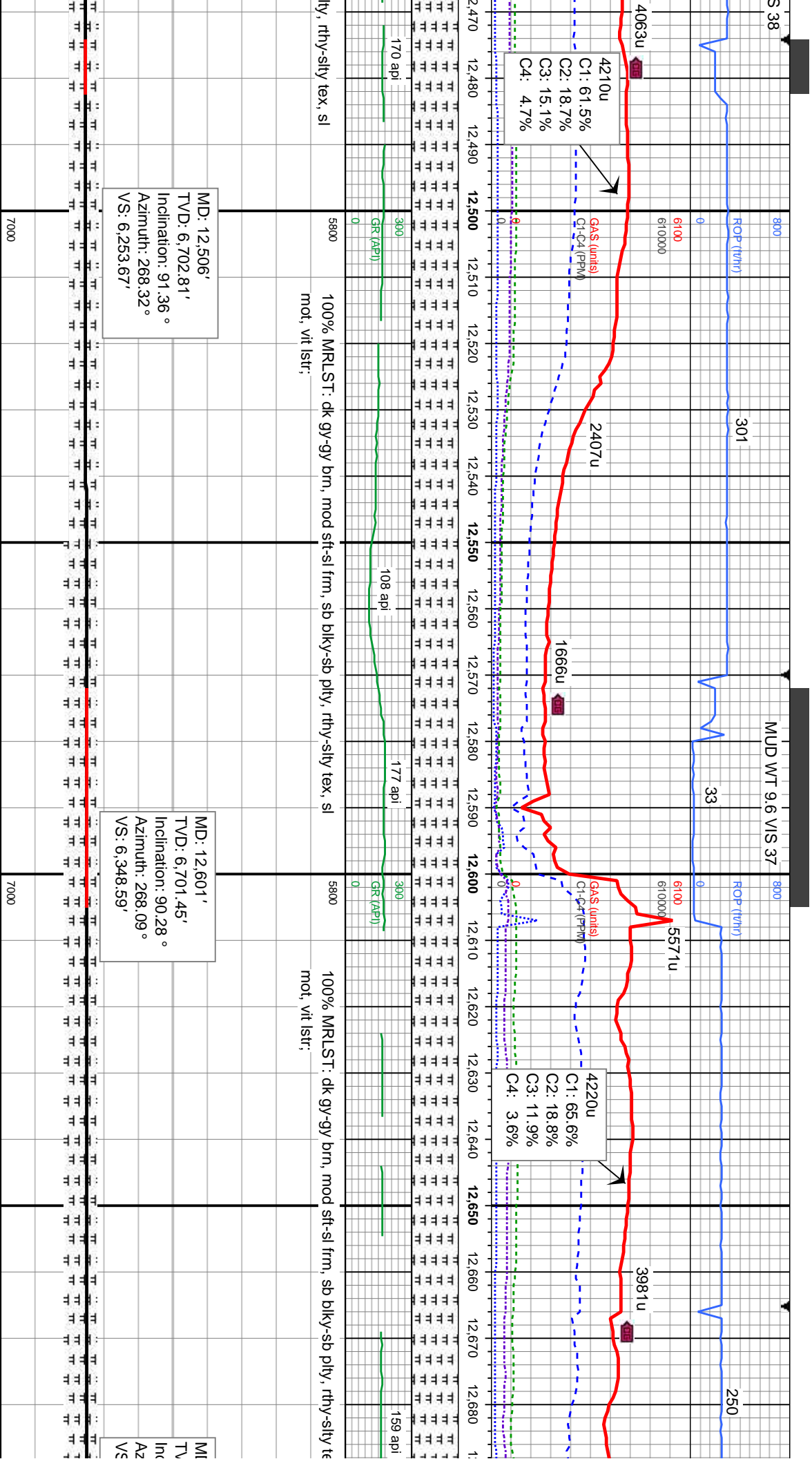


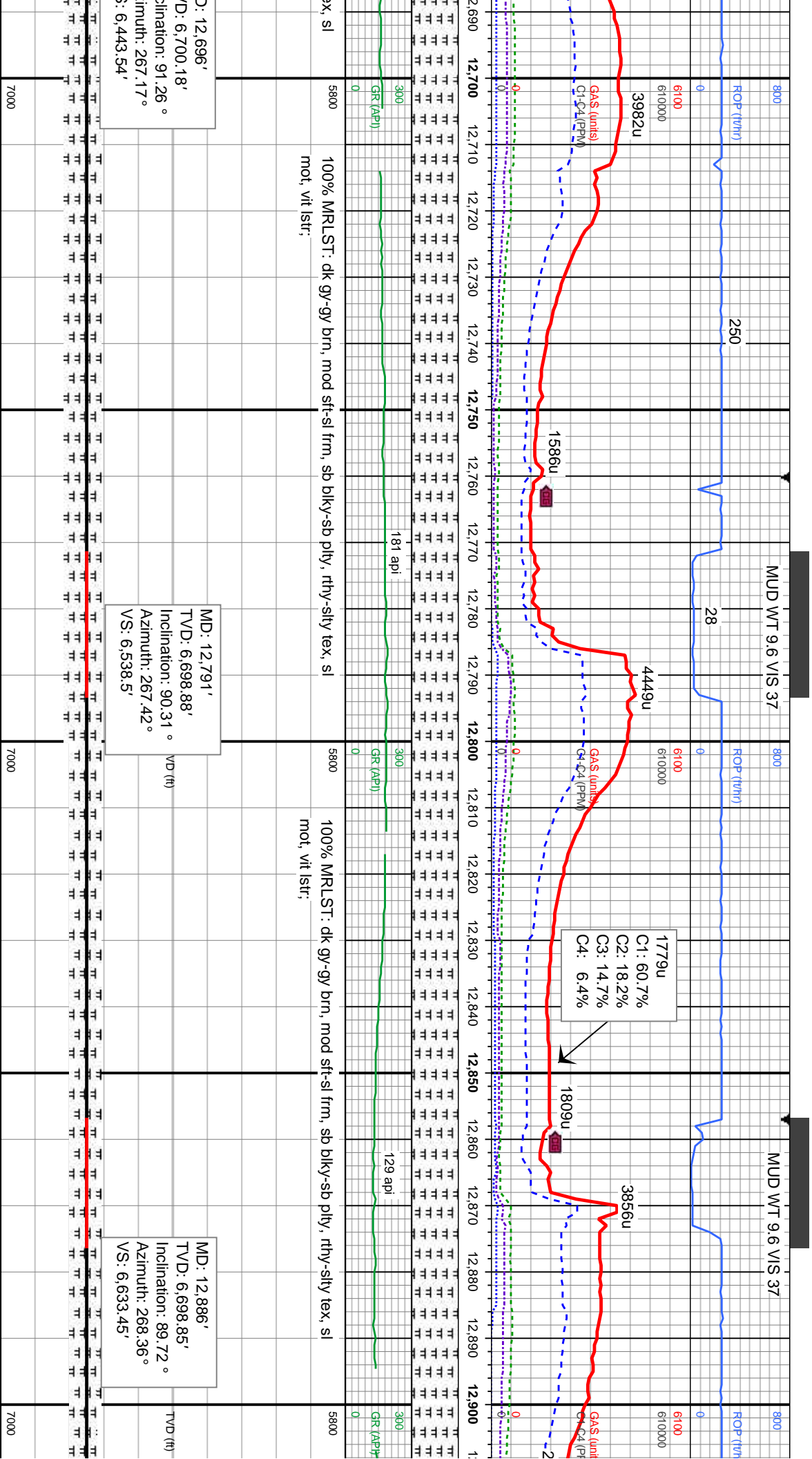


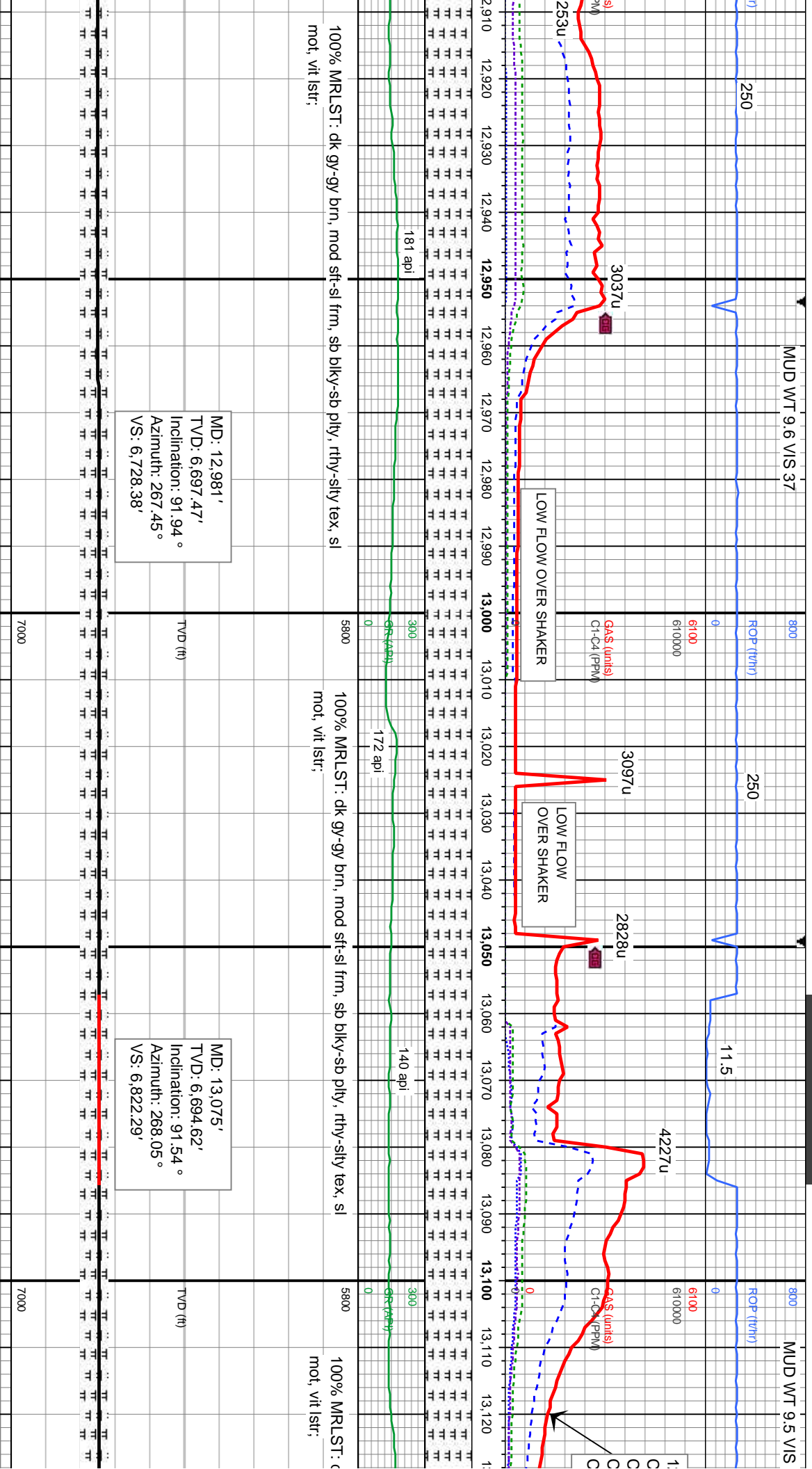


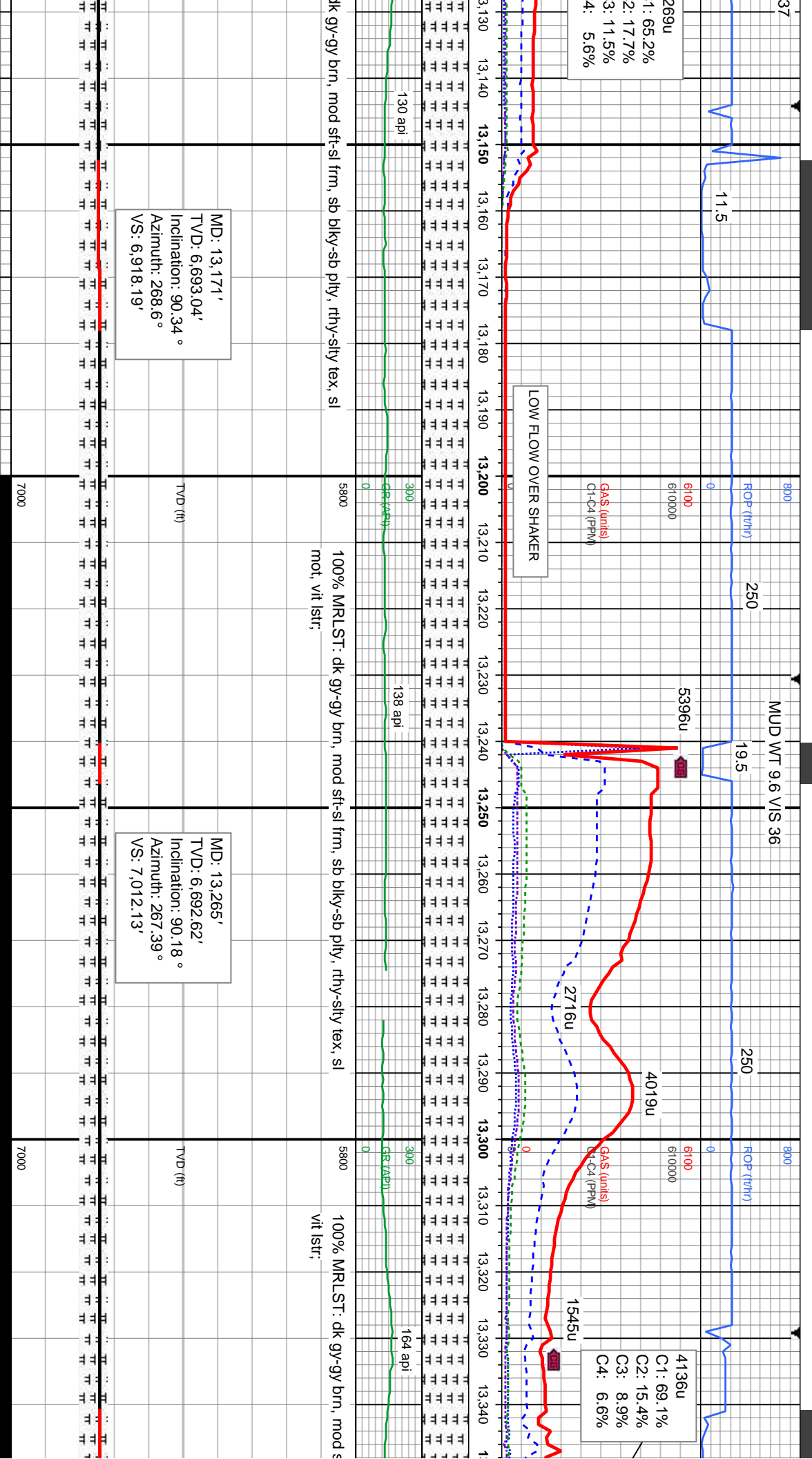


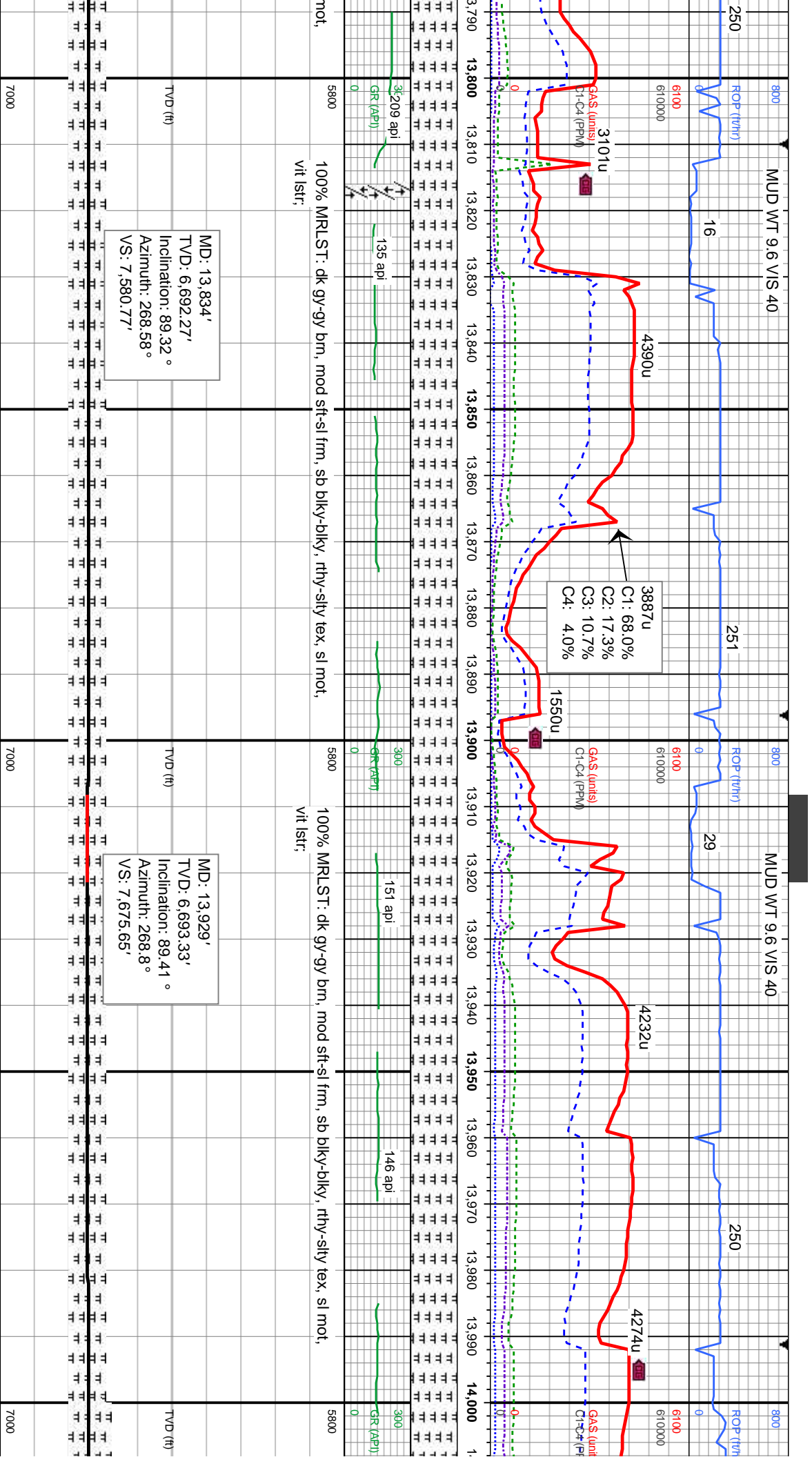


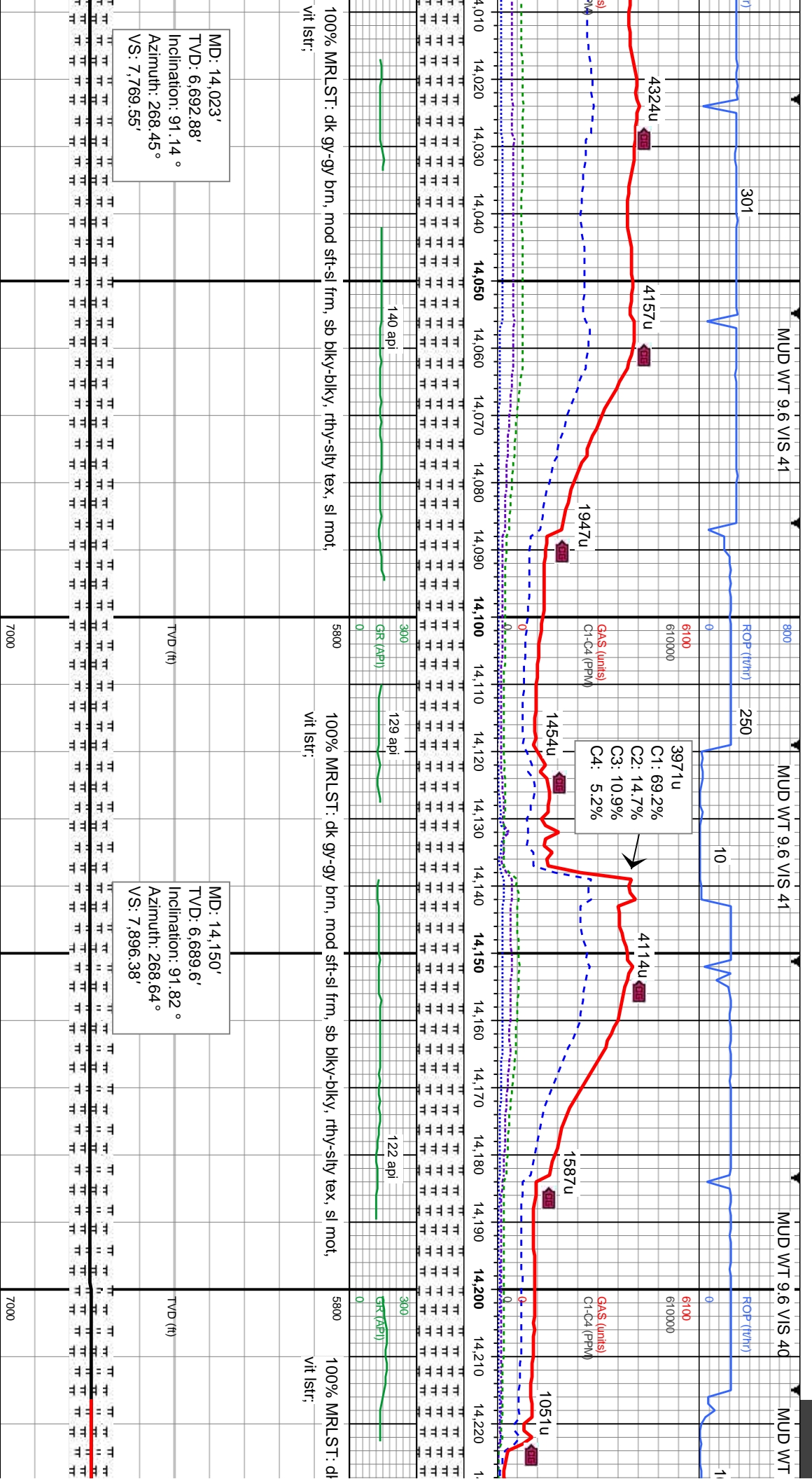


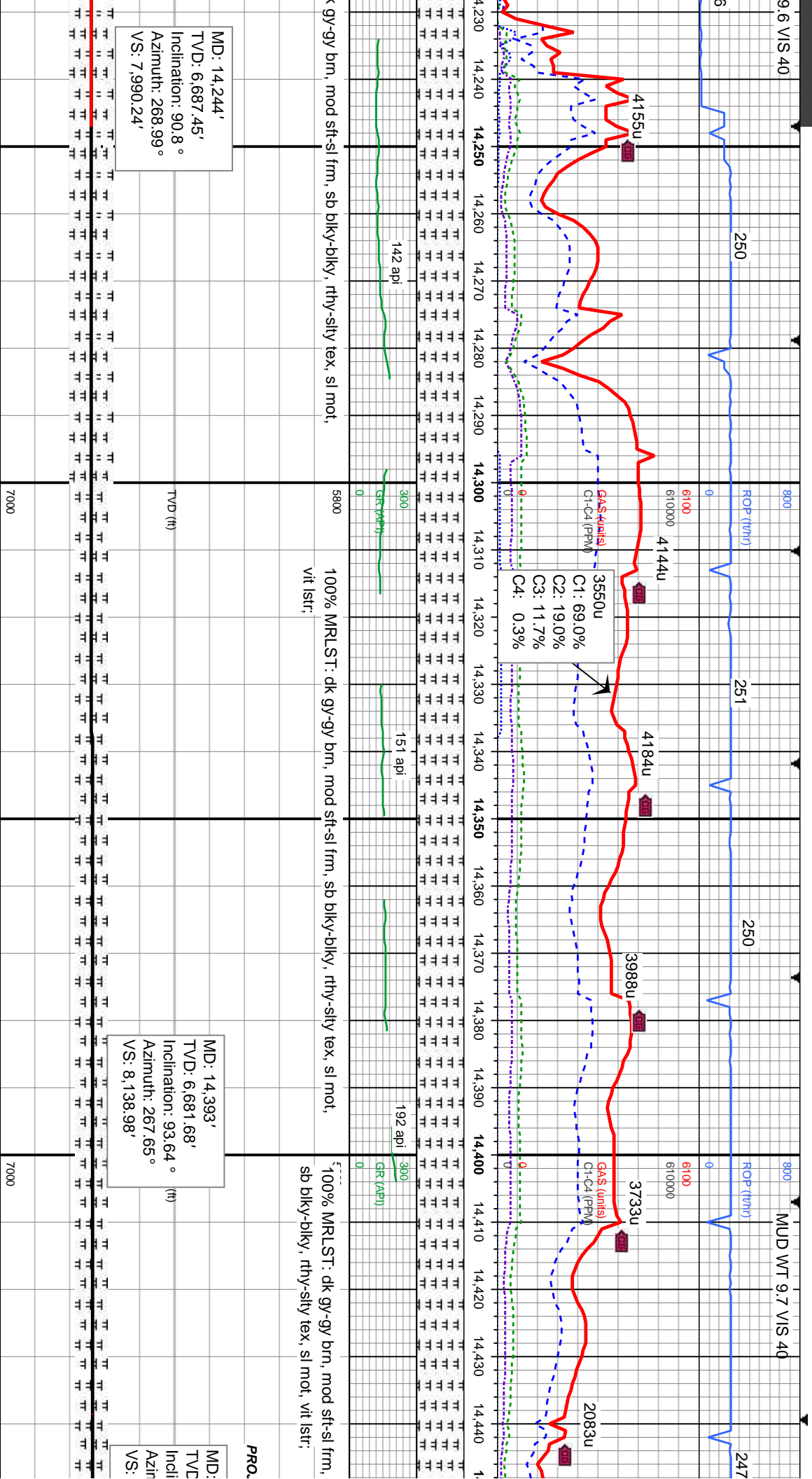






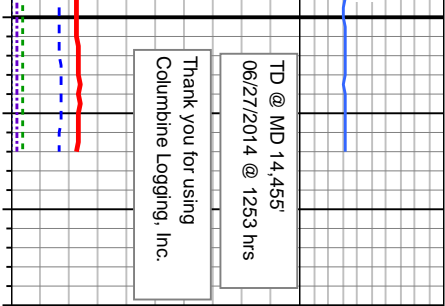






TD @ MD 14,455'
06/27/2014 @ 1253 hrs

Thank you for using
Columbine Logging, Inc.



14,450	14,455	14,460	14,465	14,470	14,475	14,480	14,485	14,490	14,495	14,500
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≡	≡	≡	≡
≡	≡	≡	≡
≡	≡	≡	≡

SECTION @ BIT

14,455'
: 6,681.68'
nation: 93.64 °
nuth: 267.65 °
8,138.98'

