



Scale: 5" / 100'
Measured Depth Log

Well Name State North Platte 41-44-26HNC Ensign 128

Location NENE Sec 26 T5N R63W

State CO

County Weld

Country USA

Rig Number 128

API Number 05-123-37562

Region DJ Basin

Field Wattenberg

Spud Date 10/21/2013

Drilling Completed 10/29/2013

Surface Coordinates 758 FNL x 764 FEL (Lat: 40.37534, 104.39641)

Bottom Hole Coordinates 470 FSL x 800 FEL (Lat: 40.36446, 104.39677)

Ground Elevation 4563'

K.B. Elevation 4578'

Logged Interval 5900' To 10890'

Total Depth 10890'

Formation Niobrara, C-Chalk

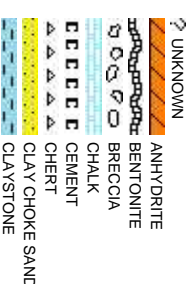
Type of Drilling Fluid H2O, LSND

Company Bonanza Creek

Name Paul McKay

Company Bonanza Creek

Address 410 17th Street
Denver, CO 80202



Operator

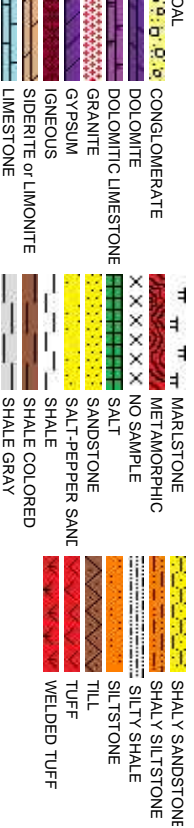
Energy Inc.

Geologist

Energy Inc.

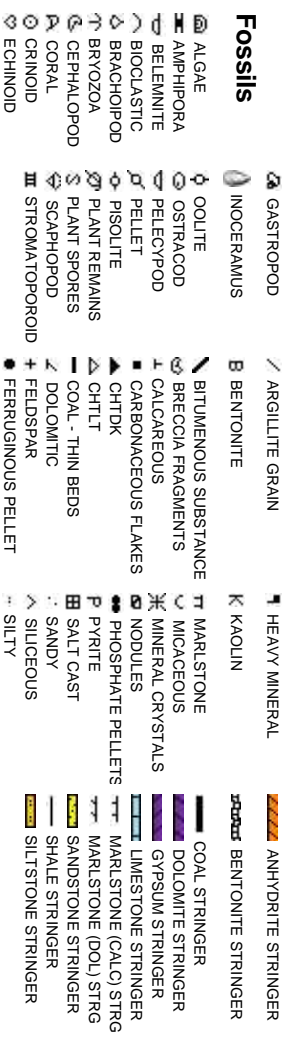
Suite 1500
202

Rock Types



Accessories

Fossils



Minerals

**Springer**

Other Symbols

Oil Show



Engineering



Rounding

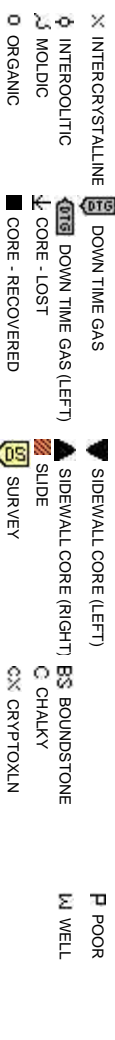


Porosity



Sorting

Textures



ROP
ROF
GAMMA

Bit Data
Bit #: 3
Type: HEO4JMRSV
Size: 8.75
Depth In: 5,860 '
Jets: 3- 20
S/N: 1376498

Total Gas & Chromatograph

GAS
C1
C2
C3
C4

COLUMBINE LOGGING RIGGED
UP ON 10/24/2013 MANNED
2-PERSON LOGGING WITH
BLOODHOUND GAS
CHROMATOGRAPH UNIT #0608
BEGAN ON 10/24/2013

Depth Labels

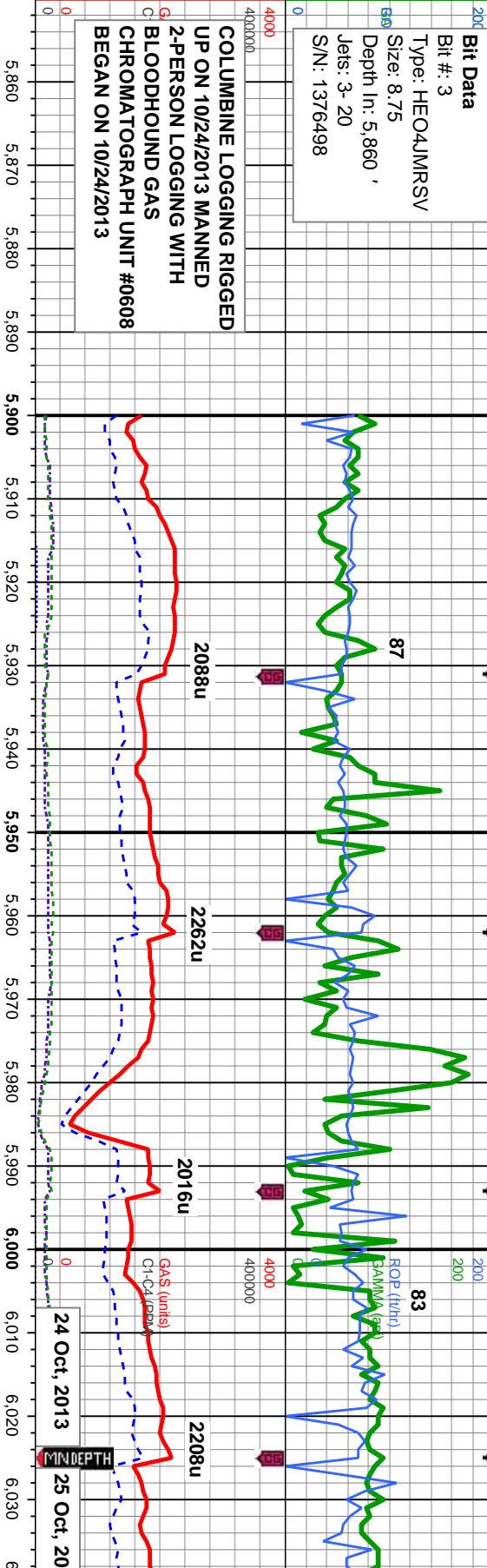
% Lith

Well Bore
TVD

Oil Show

EMFST

Images



MD: 5,912 '
TVD: 5,867.5 '
Inclination: 2 °
Azimuth: 182.5 °
VS: -722.42 '

MD: 5,943 '
TVD: 5,888.42 '
Inclination: 5.6 °
Azimuth: 178.5 °
VS: -720.37 '

MD: 5,975 '
TVD: 5,920.14 '
Inclination: 9.6 °
Azimuth: 177.6 °
VS: -716.15 '

MD: 6,006 '
TVD: 5,950.52 '
Inclination: 13.1 °
Azimuth: 178.3 °
VS: -710.06 '

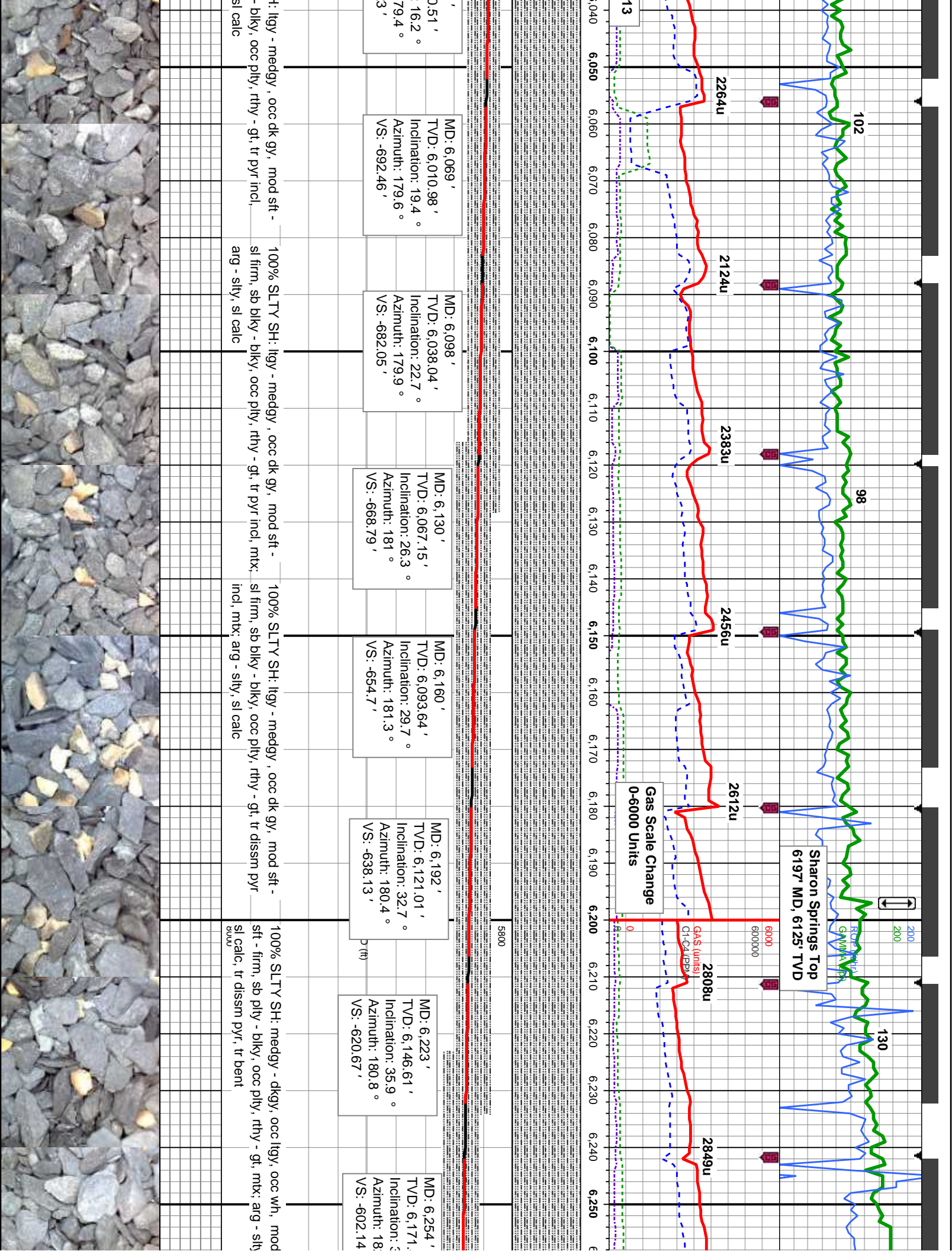
MD: 6,037 '
TVD: 5,980.14 '
Inclination: 13.1 °
Azimuth: 178.3 °
VS: -702.22 '

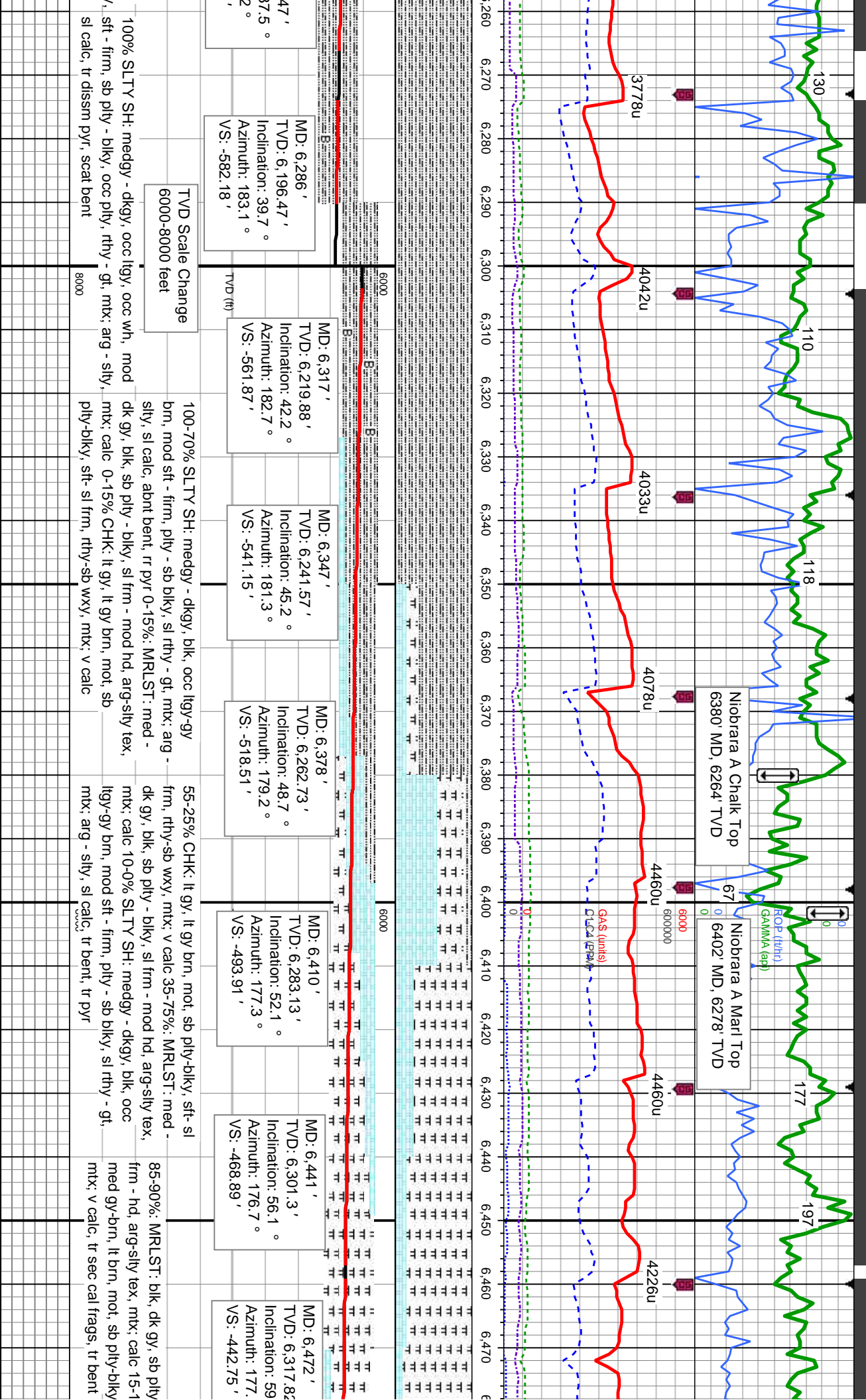
85-90% SLTY SH: ltgy - medgy, occ dk gy, mod sft -
sl firm, sb blkly - blkly, occ ply, rthy - gt, mtx; arg - slty,
15-10% SHY SS: off wh - ltgy, occ s&p, mod hd - hd,
sb blkly - blkly, vf-f gr, mics, tr glauc

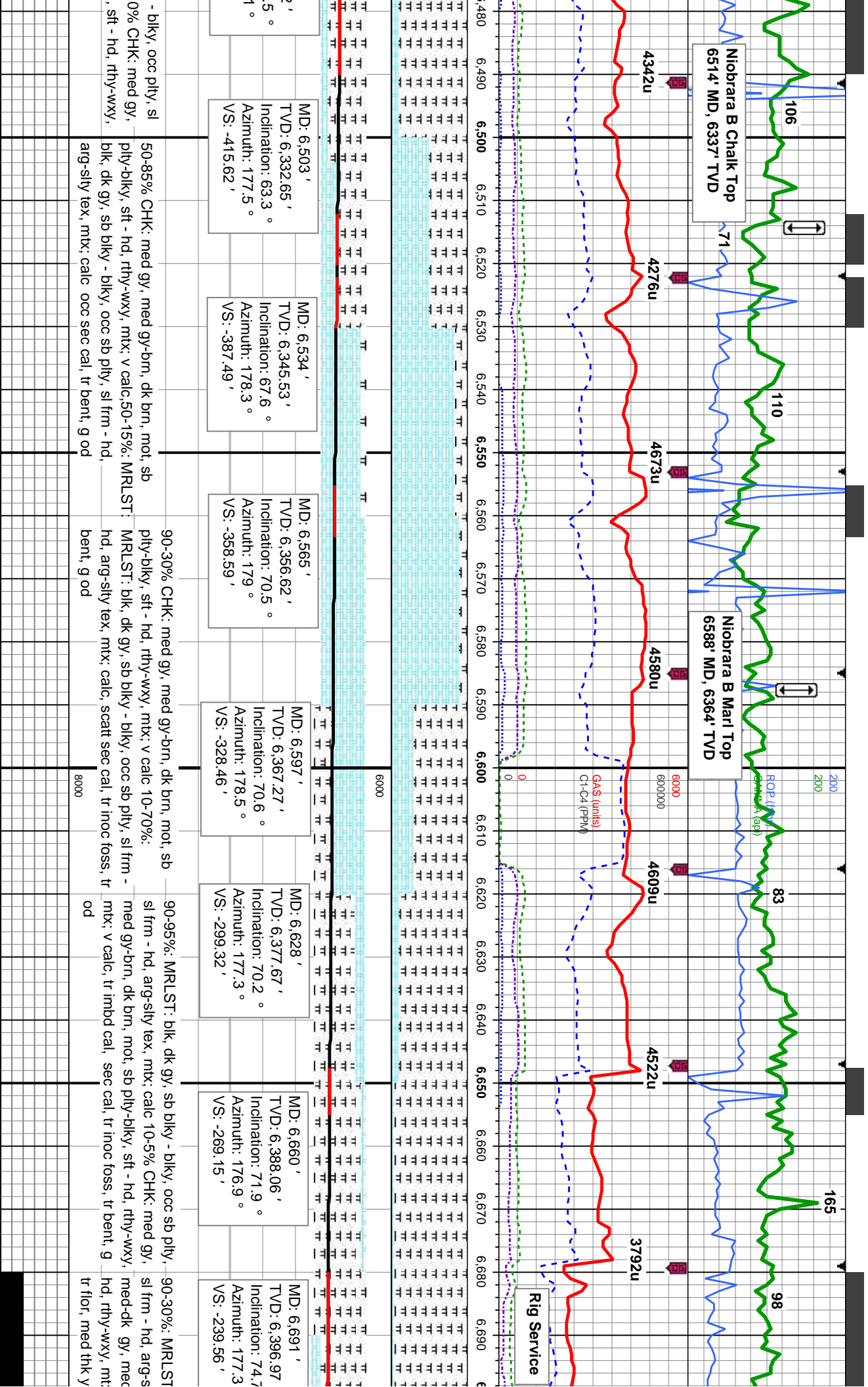
100-95% SLTY SH: ltgy - medgy, occ dk gy, mod sft -
sl firm, sb blkly - blkly, occ ply, rthy - gt, tr pyr incl, mtx;
arg - slty, 0-5% SHY SS: off wh - ltgy, occ s&p, mod hd
- hd, sb blkly - blkly, vf-f gr, mics, tr glauc

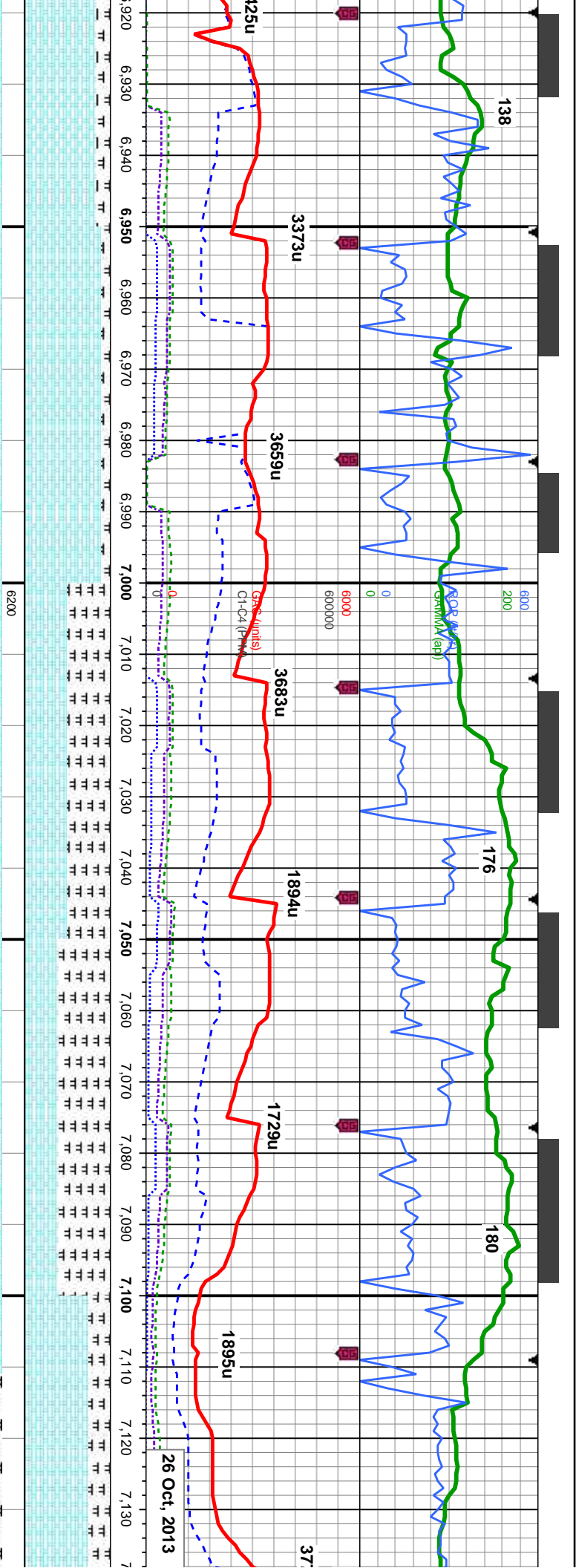
100% SLTY SH
sl firm, sb blkly
mtx; arg - slty, ;











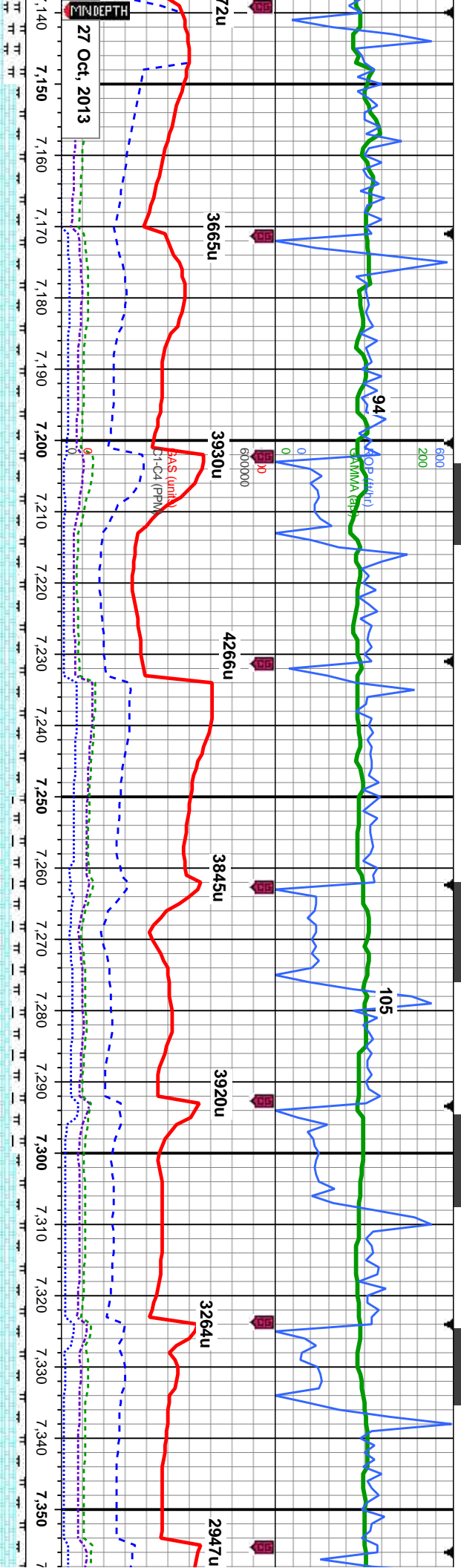
MD: 6.930 ' TVD: 6,416.63 ' Inclination: 91.5 ° Azimuth: 184.3 ° VS: -2.66 '	MD: 6.960 ' TVD: 6,415.85 ' Inclination: 91.5 ° Azimuth: 184.5 ° VS: 27.3 '	MD: 6.991 ' TVD: 6,415.06 ' Inclination: 91.4 ° Azimuth: 184.3 ° VS: 58.26 '	MD: 7.022 ' TVD: 6,414.28 ' Inclination: 91.5 ° Azimuth: 184.1 ° VS: 89.22 '	MD: 7.054 ' TVD: 6,413.86 ' Inclination: 90 ° Azimuth: 182.9 ° VS: 121.2 '	MD: 7.085 ' TVD: 6,414.32 ' Inclination: 88.3 ° Azimuth: 182.2 ° VS: 152.19 '	MD: 7.116 ' TVD: 6,415.13 ' Inclination: 88.7 ° Azimuth: 181.8 ° VS: 183.18 '
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0% CHK: med-lt gy, med-dk gy brn, occ wh-cm, dk brn, mot, sb pily-blky, rthy-wxy, mt; v calc, tr bent 15-20%: MRLST: blk, dk gy, sb blky - blky, sb pily, sl frm - hd, arg-sily tex, mt; calc, g od, bri wh-bl fst stmg cut, even thk bri wh-yel amb ring, mod yel-brn sin

50-40% CHK: med dk gy, med-dk gy brn, dk brn, mot, sb pily-blky, sft - hd, rthy-wxy, mt; v calc, tr bent 50-60%: MRLST: blk, dk gy, sb blky - blky, occ sb pily, sl frm - hd, arg-sily tex, mt; calc, tr diss pyr, g od, bri wh-bl mod-fst stmg cut, even mod thk mod wh-yel amb ring, mod yel-brn sin

75-90% CHK: med dk gy, med-c rthy-wxy, mt; v calc, tr bent 25 pily, sl frm - hd, arg-sily tex, mt cut, uneven thk mod wh-yel amb





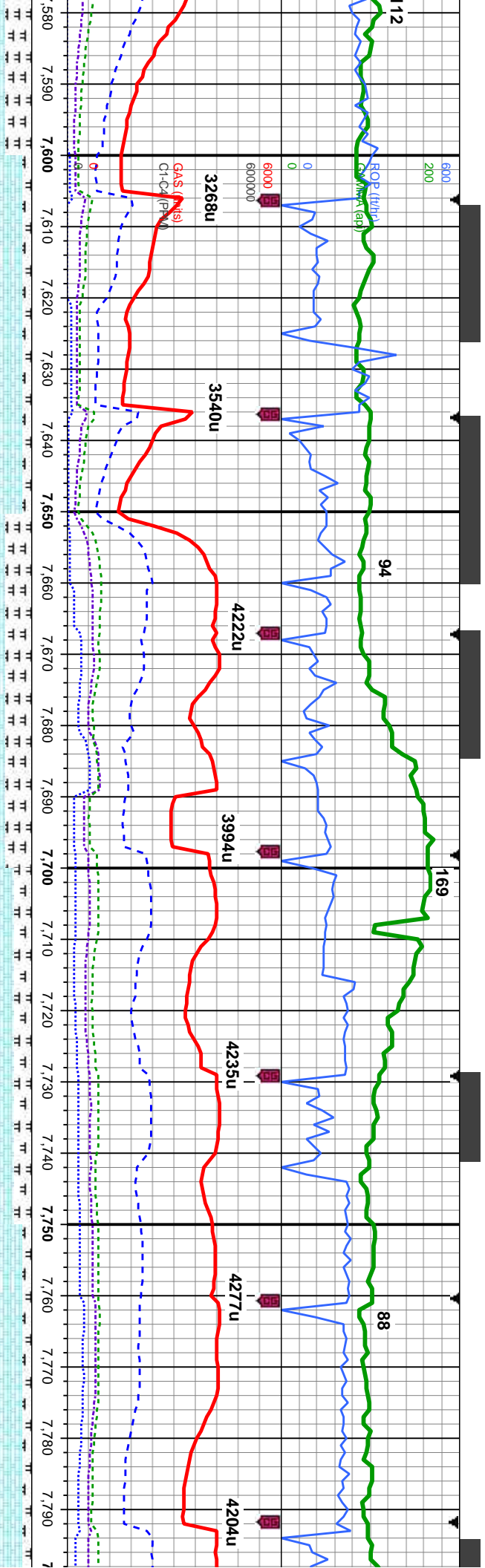
MD: 7,147' TVD: 6,415.67' Inclination: 89.3° Azimuth: 181.3° VS: 214.18'	MD: 7,178' TVD: 6,415.97' Inclination: 89.6° Azimuth: 181.1° VS: 245.17'	MD: 7,210' TVD: 6,416.22' Inclination: 89.5° Azimuth: 181° VS: 277.17'	MD: 7,241' TVD: 6,416.3' Inclination: 90.2° Azimuth: 181.5° VS: 308.17'	MD: 7,272' TVD: 6,416.25' Inclination: 90° Azimuth: 181.8° VS: 339.17'	MD: 7,303' TVD: 6,416.35' Inclination: 89.6° Azimuth: 182.2° VS: 370.17'	MD: 7,334' TVD: 6,416.57' Inclination: 89.6° Azimuth: 182.2° VS: 401.17'
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blk gy brn, dk brn, mot, sb pily-blky, sft - hd, rthy-wxy, mtx; v calc, tr bent 10-15%; MRLST: blk, dk gy, sb bly - bly, occ sb pily, sl frm - hd, arg-sily tex, mtx; calc, tr diss pyr, g od, bri wh-bl mod-fst string 80% cut, even mod thk mod wh-yel amb ring, mod yel-brn sin

90-85% CHK: med dk gy, med-dk gy brn, dk brn, mot, sb pily-blky, sft - hd, rthy-wxy, mtx; v calc, tr bent 10-15%; MRLST: blk, dk gy, sb bly - bly, occ sb pily, sl frm - hd, arg-sily tex, mtx; calc, tr diss pyr, g od, bri wh-bl mod-fst string 80% cut, even mod thk mod wh-yel amb ring, mod yel-brn sin

90% CHK: med dk gy, med-dk gy brn, occ wh-crm hd, rthy-wxy, mtx; v calc 10%; MRLST: blk, dk gy, frm - hd, arg-sily tex, mtx; calc, tr diss pyr, g od, mod thk mod-bri wh-yel amb ring, thk yel-brn sin

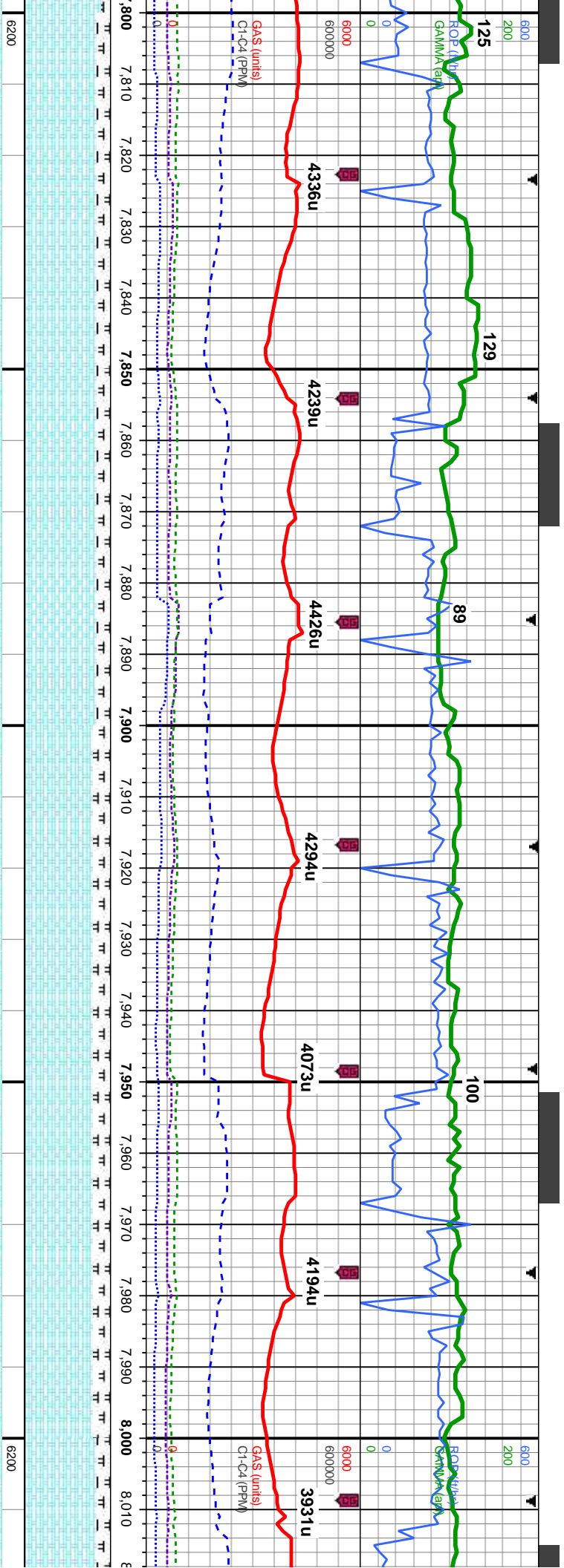




MD: 7,583' TVD: 6,413.87' Inclination: 90.7° Azimuth: 178.7° VS: 650.02'	MD: 7,614' TVD: 6,413.57' Inclination: 90.4° Azimuth: 178.7° VS: 680.97'	MD: 7,645' TVD: 6,413.63' Inclination: 89.4° Azimuth: 179.7° VS: 711.94'	MD: 7,676' TVD: 6,414.14' Inclination: 88.7° Azimuth: 180.6° VS: 742.92'	MD: 7,708' TVD: 6,414.92' Inclination: 88.5° Azimuth: 180.6° VS: 774.91'	MD: 7,739' TVD: 6,415.71' Inclination: 88.6° Azimuth: 181° VS: 805.89'	MD: 7,770' TVD: 6,416.3' Inclination: 89.2° Azimuth: 181° VS: 836.88'	MD: 7,790' TVD: 6,416.3' Inclination: 89.2° Azimuth: 181° VS: 836.88'
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90-70% CHK: med-lt gy, med-dk gy brn, occ wh-crm dk brn, mot, sb pily-biky, sft - hd, rthy-wxy, mtx: v calc, tr bent 10-30%: MRLST: blk, dk gy, sb biky - biky, occ sb pily, sl frm - hd, arg-sily tex, mtx: calc, tr diss pyr, g od, bri wh-bl fst string cut, even thk bri wh-yel ring, mod yel-brn stn	80-90% CHK: med-lt gy, med-dk gy brn, mot, sb biky-biky, sft - hd, rthy-wxy, mtx: v calc, tr bent 20-10%: MRLST: blk, dk gy, sb biky - biky, occ sb pily, sl frm - hd, arg-sily tex, mtx: calc, occ sec imbd cal, tr od, bri wh-bl fst string cut, even v thk bri wh-yel ring, thk yel-brn stn
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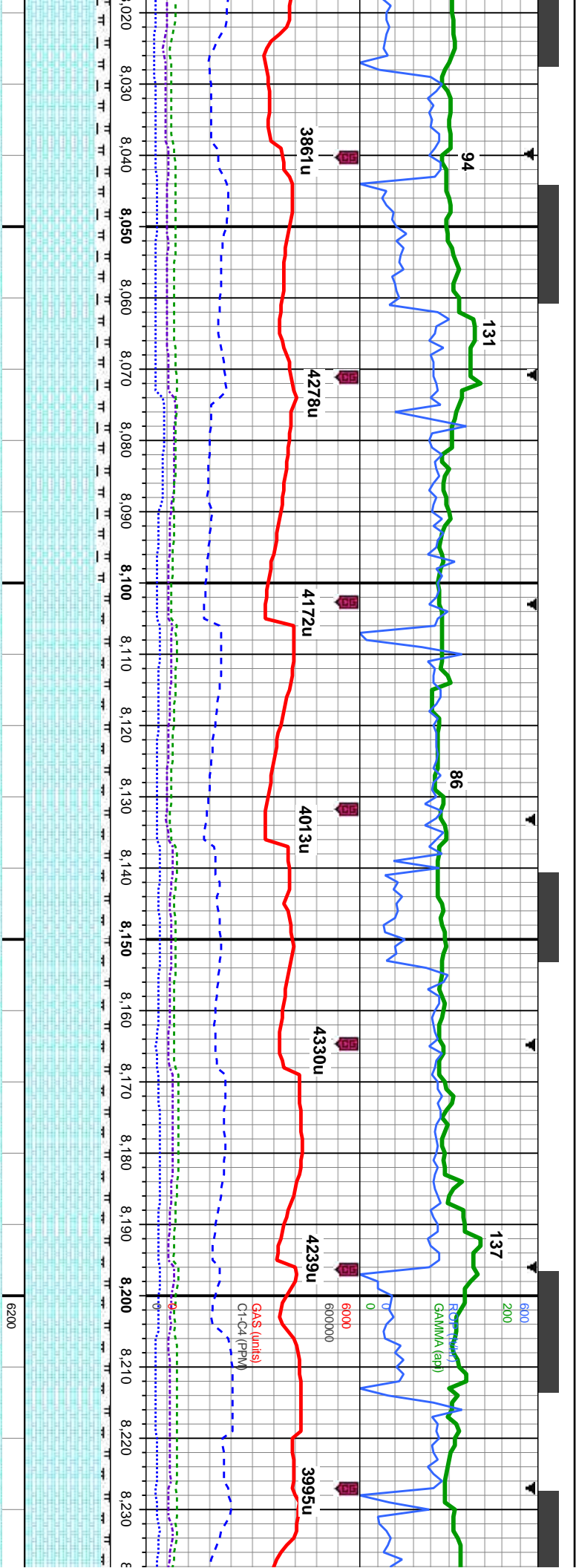
801 ' 6,416.82 ' Station: 88.9 ° Azimuth: 181.3 ° VS: 67.88 ' MD: 7.833 ' TVD: 6,417.35 ' Inclination: 89.2 ° Azimuth: 181.3 ° VS: 899.87 ' MD: 7.864 ' TVD: 6,417.89 ' Inclination: 88.8 ° Azimuth: 181.8 ° VS: 930.87 ' MD: 7.895 ' TVD: 6,418.4 ' Inclination: 89.3 ° Azimuth: 182 ° VS: 961.86 ' MD: 7.925 ' TVD: 6,418.66 ' Inclination: 89.7 ° Azimuth: 181.8 ° VS: 991.86 ' MD: 7.956 ' TVD: 6,418.75 ' Inclination: 90 ° Azimuth: 181.8 ° VS: 1,022.86 ' MD: 7.987 ' TVD: 6,418.56 ' Inclination: 90.7 ° Azimuth: 181.8 ° VS: 1,053.86 ' MD: 8. ' TVD: 6,418.56 ' Inclination: 90.7 ° Azimuth: 181.8 ° VS: 1,084.86 ' TVD (ft)
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85% CHK: med-lt gy, med-dk gy brn, mot, sb blk-y-blky, sft - hd, rthy-wxy, mtx: v calc, tr bent 15%: MRLST: blk, dk gy, sb blk-y - blk-y, ooc sb pily, sl frm - hd, arg-sily tex, mtx; calc, ooc sec imbd cal, tr inoc fos, g od, bri wh-bl fst stmg cut, even v thk bri wh-yel ring, 8" thk yel-brn stn

80% CHK: med-lt gy, med-dk gy brn, mot, sb blk-y-blky, sft - hd, rthy-wxy, mtx: v calc, tr bent 20%: MRLST: blk, dk gy, sb blk-y - blk-y, ooc sb pily, sl frm - hd, arg-sily tex, mtx; calc, ooc sec imbd cal, tr inoc fos, g od, bri wh-bl mod-fst stmg cut, even thk bri wh-yel ring, thk yel-brn stn

85% CHK: calc, 15%: calc, tr sec





0'19' 418.33' ion: 90.1° h: 181.7° 85.86'

MD: 8,050' TVD: 6,418.52' Inclination: 89.2° Azimuth: 181.5° VS: 1,116.86'

MD: 8,081' TVD: 6,418.93' Inclination: 89.3° Azimuth: 181.1° VS: 1,147.85'

MD: 8,112' TVD: 6,419.06' Inclination: 90.2° Azimuth: 181.1° VS: 1,178.85'

MD: 8,144' TVD: 6,418.84' Inclination: 90.6° Azimuth: 181.5° VS: 1,210.85'

MD: 8,175' TVD: 6,418.38' Inclination: 91.1° Azimuth: 181.5° VS: 1,241.85'

MD: 8,206' TVD: 6,417.84' Inclination: 90.9° Azimuth: 181.8° VS: 1,272.84'

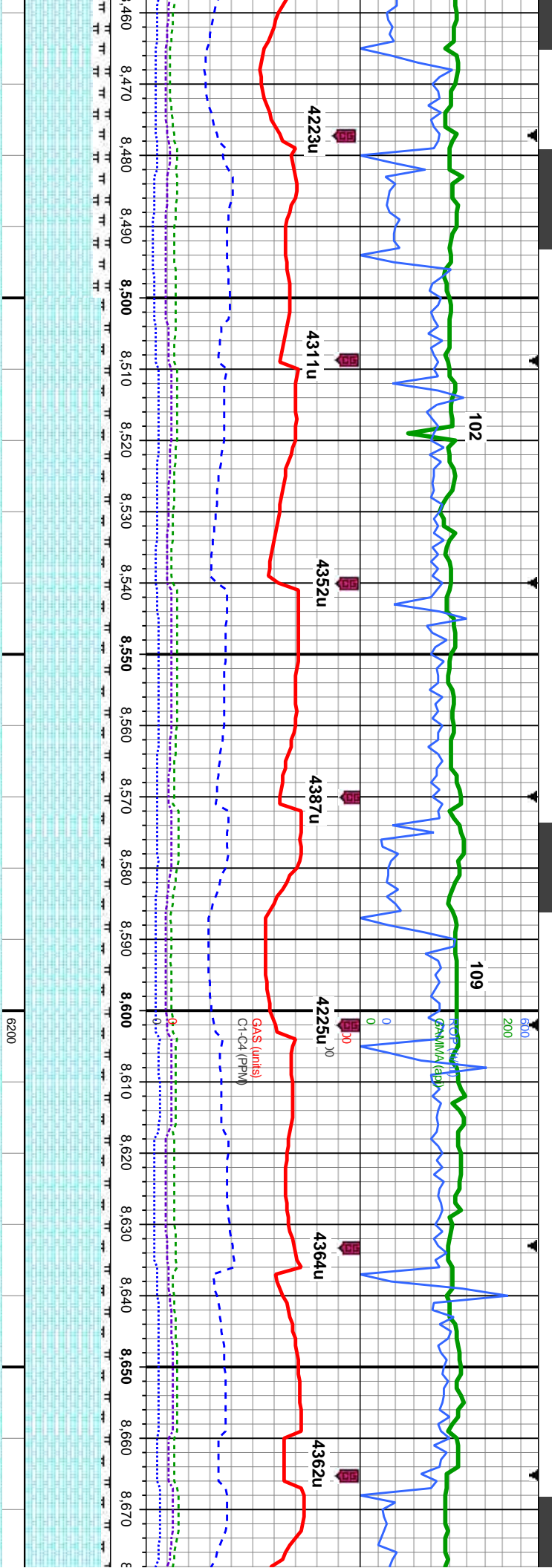
MD: 8,230' TVD: 6,417.84' Inclination: 90.9° Azimuth: 181.8° VS: 1,303.86'

med-lt gy, ooc med-dk gy brn, mot, sb blk-y-bkly, sft - hd, rthy-wxy, mtx; v
MRlST: blk, dk gy, sb blk-y - blk-y, ooc sb plty, sl frm - hd, arg-slty tex, mtx;
imbd cal, g od, med-fast bishwh stmg, no flor, med bri bi-gn ring, mod

90% CHK: med-lt gy, ooc med-dk gy brn, mot, sb blk-y-bkly, sft - hd, rthy-wxy, mtx; v
calc, 10%: MRlST: blk, dk gy, sb blk-y - blk-y, ooc sb plty, sl frm - hd, arg-slty tex, mtx;
calc, tr sec imbd cal, g od, med-fast bishwh stmg, no flor, med bri bi-gn ring, mod
stn

90% CHK: med-lt gy, med-dk, rthy-wxy, mtx; v calc, 10%: MRlST: blk, dk gy, sb blk-y - blk-y, ooc sb plty, sl frm - hd, arg-slty tex, mtx; calc, tr sec imbd cal, g od, med-fast bishwh stmg, no flor, med bri bi-gn ring, mod
stn





MD: 8.487 ' TVD: 6,418.24 ' Inclination: 89.6 ° Azimuth: 181 ° VS: 1,553.82 '	MD: 8.518 ' TVD: 6,418.38 ' Inclination: 89.9 ° Azimuth: 180.8 ° VS: 1,584.82 '	MD: 8.549 ' TVD: 6,418.38 ' Inclination: 90.1 ° Azimuth: 180.3 ° VS: 1,615.81 '	MD: 8.580 ' TVD: 6,418.54 ' Inclination: 89.3 ° Azimuth: 179.9 ° VS: 1,646.8 '	MD: 8.612 ' TVD: 6,418.68 ' Inclination: 90.2 ° Azimuth: 179.9 ° VS: 1,678.78 '	MD: 8.644 ' TVD: 6,418.37 ' Inclination: 90.9 ° Azimuth: 179.9 ° VS: 1,710.76 '	MD: 8.673 ' TVD: 6,418.37 ' Inclination: 90.9 ° Azimuth: 179.9 ° VS: 1,741.76 '
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MD: 8.487 '
TVD: 6,418.24 '
Inclination: 89.6 °
Azimuth: 181 °
VS: 1,553.82 '

MD: 8.518 '
TVD: 6,418.38 '
Inclination: 89.9 °
Azimuth: 180.8 °
VS: 1,584.82 '

MD: 8.549 '
TVD: 6,418.38 '
Inclination: 90.1 °
Azimuth: 180.3 °
VS: 1,615.81 '

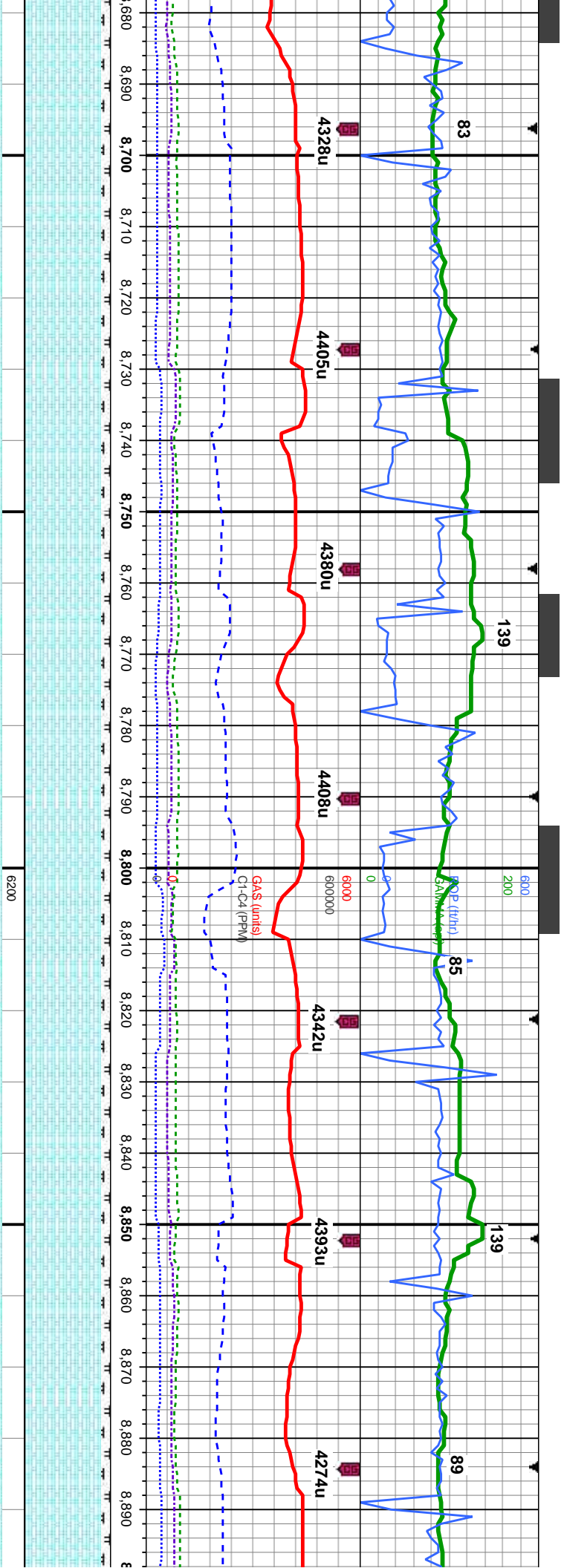
MD: 8.580 '
TVD: 6,418.54 '
Inclination: 89.3 °
Azimuth: 179.9 °
VS: 1,646.8 '

MD: 8.612 '
TVD: 6,418.68 '
Inclination: 90.2 °
Azimuth: 179.9 °
VS: 1,678.78 '

MD: 8.644 '
TVD: 6,418.37 '
Inclination: 90.9 °
Azimuth: 179.9 °
VS: 1,710.76 '

MD: 8.673 '
TVD: 6,418.37 '
Inclination: 90.9 °
Azimuth: 179.9 °
VS: 1,741.76 '





7.94' : 90.7° 80.6° 80.6° 7.75'

MD: 8,706' TVD: 6,417.4' Inclination: 91.3° Azimuth: 181° VS: 1,772.74'

MD: 8,737' TVD: 6,416.78' Inclination: 91° Azimuth: 181.1° VS: 1,803.73'

MD: 8,769' TVD: 6,416.58' Inclination: 89.7° Azimuth: 180.6° VS: 1,835.73'

MD: 8,800' TVD: 6,416.96' Inclination: 88.9° Azimuth: 180.4° VS: 1,866.72'

MD: 8,831' TVD: 6,417.53' Inclination: 89° Azimuth: 180.3° VS: 1,897.7'

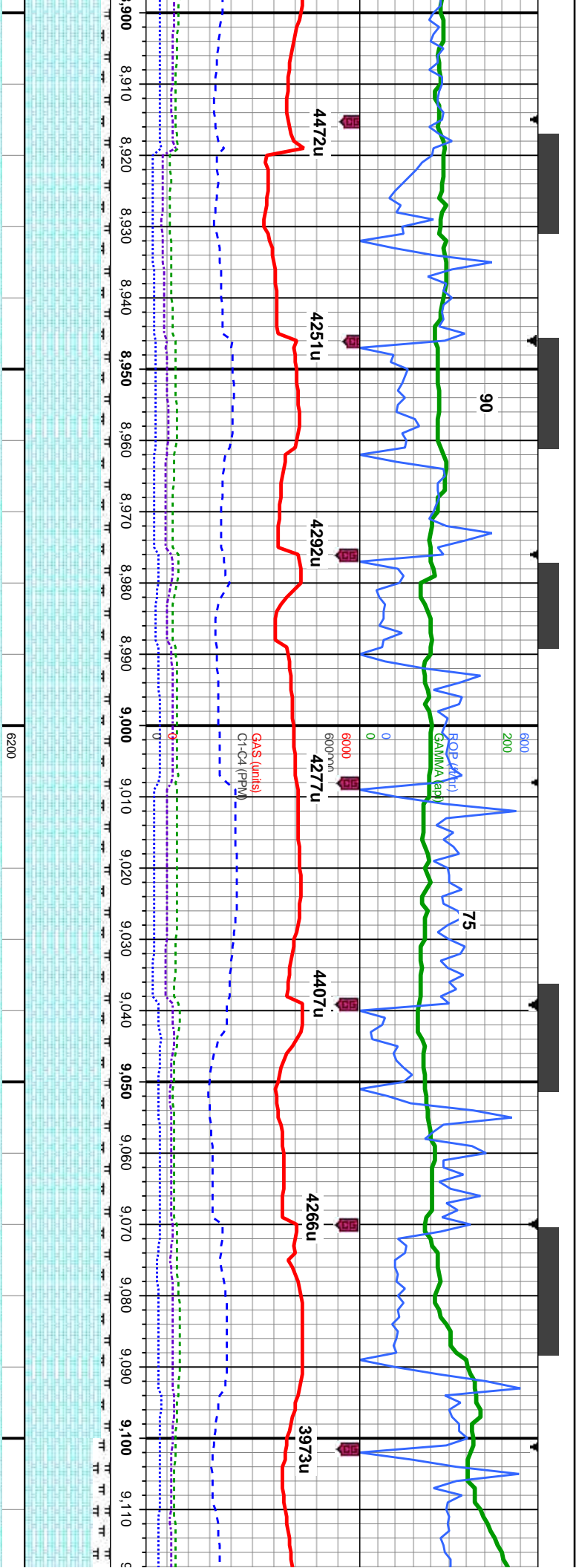
MD: 8,863' TVD: 6,417.89' Inclination: 89.7° Azimuth: 180.3° VS: 1,929.69'

MD: 8,894' TVD: 6,417' Inclination: 89.7° Azimuth: 180.3° VS: 1,960.6'

90% CHK: med-lt gy, occ med-dk gy brn, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtb; v calc 10%: MRLST: blk, dk gy, sb blk-y - biky, occ sb ply, sl frm - hd, arg-sily tex, mtb; calc, tr sec imbd cal, tr sec cal frags, g od, med-fast blshwh stmg, no flor, med yel ring, fr stn

90% CHK: med-lt gy, occ med-dk gy brn, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtb; v calc 10%: MRLST: blk, dk gy, sb blk-y - biky, occ sb ply, sl frm - hd, arg-sily tex, mtb; calc, tr sec imbd cal, g od, med-fast blshwh stmg, no flor, thk yel-wh sp ring, mod stn





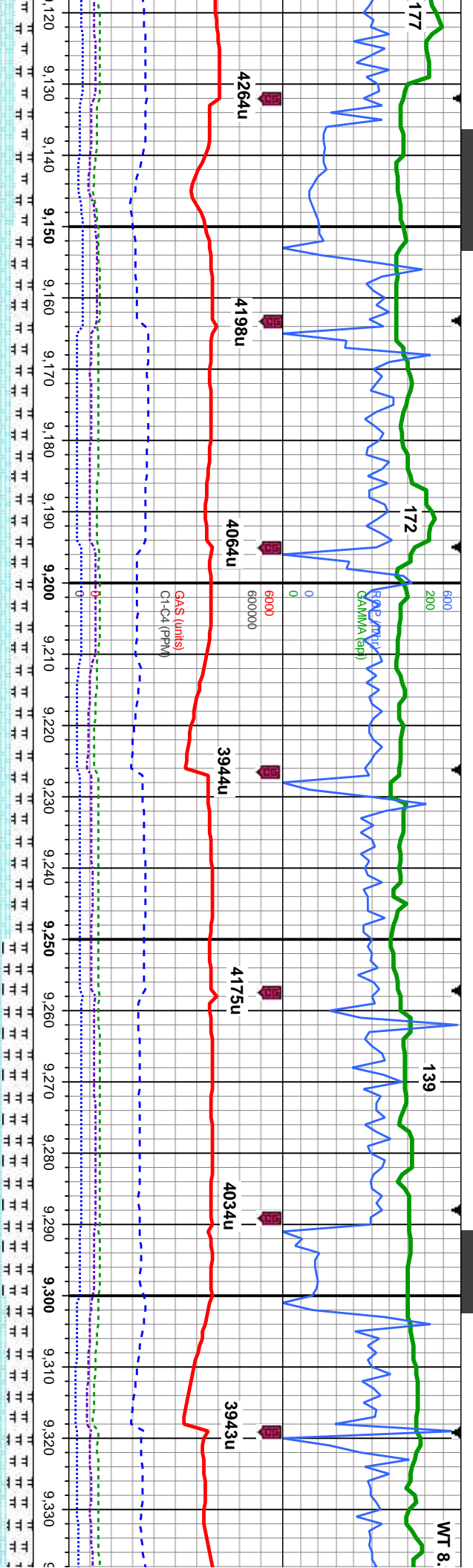
MD: 8,924 ' TVD: 6,417.47 ' Inclination: 90.5 ° Azimuth: 180.8 ° VS: 1,990.67 '	MD: 8,955 ' TVD: 6,417.31 ' Inclination: 90.1 ° Azimuth: 181.7 ° VS: 2,021.67 '	MD: 8,986 ' TVD: 6,417.36 ' Inclination: 89.7 ° Azimuth: 182.2 ° VS: 2,052.67 '	MD: 9,018 ' TVD: 6,417.53 ' Inclination: 89.7 ° Azimuth: 182.2 ° VS: 2,084.67 '	MD: 9,048 ' TVD: 6,417.61 ' Inclination: 90 ° Azimuth: 181.7 ° VS: 2,114.67 '	MD: 9,080 ' TVD: 6,417.66 ' Inclination: 89.8 ° Azimuth: 181.3 ° VS: 2,146.67 '	MD: 9,111 ' TVD: 6,417.88 ' Inclination: 89.9 ° Azimuth: 181.1 ° VS: 2,177.67 '
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90% CHK: med-lt gy, occ med-dk gy brn, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtx; v calc
10%: MRLST: blk, dk gy, sb blk-y - biky, occ sb pty, sl frm - hd, arg-sily tex, mtx; calc, tr
inoc foss, g od, med-fast blshwh strng, no flor, thk yel-wh ring, mod stn

90% CHK: med-lt gy, occ med-dk gy brn, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtx; v calc
10%: MRLST: blk, dk gy, sb blk-y - biky, occ sb pty, sl frm - hd, arg-sily tex, mtx; calc, tr sec
imbd cal, g od, med-fast blshwh strng, no flor, thk yel-wh ring, mod stn

80-75% CHK: m
20-25%: MRLST
dissm pyr, tr cl fr
ring, mod stn

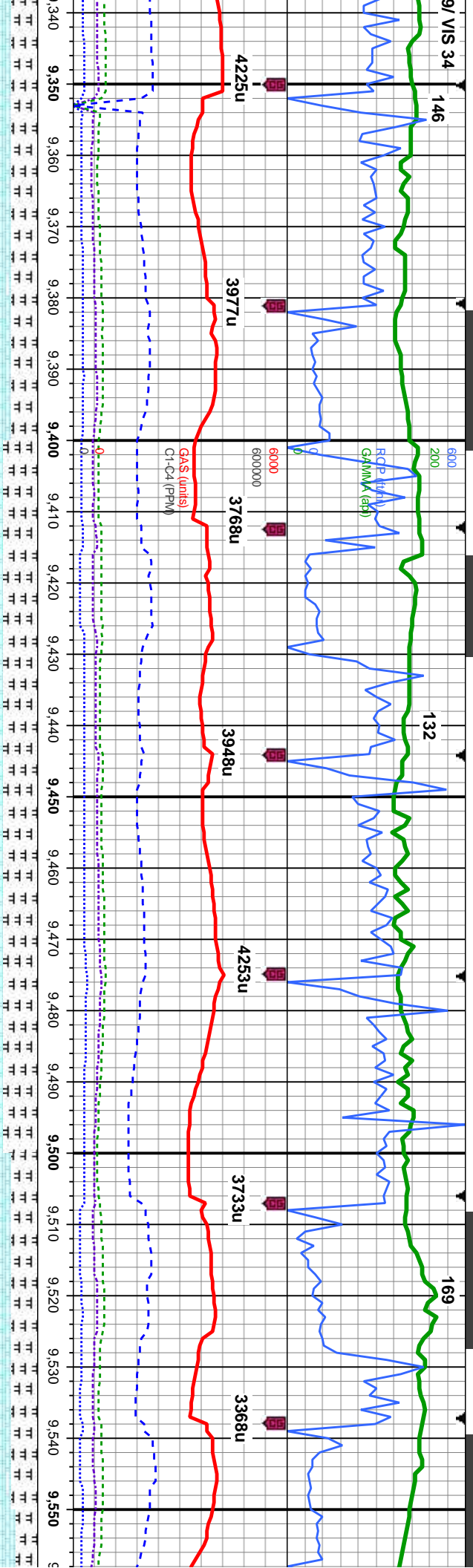




MD: 9,142 ' TVD: 6,418.28 ' Inclination: 89.1 ° Azimuth: 181.3 ° VS: 2,208.66 '	MD: 9,173 ' TVD: 6,418.96 ' Inclination: 88.4 ° Azimuth: 181 ° VS: 2,239.65 '	MD: 9,205 ' TVD: 6,419.71 ' Inclination: 88.9 ° Azimuth: 180.8 ° VS: 2,271.64 '	MD: 9,236 ' TVD: 6,420.09 ' Inclination: 89.7 ° Azimuth: 181 ° VS: 2,302.63 '	MD: 9,267 ' TVD: 6,420.25 ' Inclination: 89.7 ° Azimuth: 180.4 ° VS: 2,333.63 '	MD: 9,299 ' TVD: 6,420.39 ' Inclination: 89.8 ° Azimuth: 180.8 ° VS: 2,365.62 '	MD: 9,330 ' TVD: 6,420.31 ' Inclination: 90.5 ° Azimuth: 180.8 ° VS: 2,396.62 '
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med gy, occ med-dk gy brn, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtx; v calc
25-35%: MRLST: blk, dk gy, sb blk-y - biky, occ sb pily, sl frm - hd, arg-sily tex, mtx; calc, tr
dissem pyr, tr cl frags, tr sec imbd cal wi pyr incl, g od, bri wh-bl fst sling cut, even mod thk
ring, thk yel-brn stn





MD: 9,361 '
TVD: 6,419.8 '
Inclination: 91.4 °
Azimuth: 181 °
VS: 2,427.61 '

MD: 9,393 '
TVD: 6,419.19 '
Inclination: 90.8 °
Azimuth: 180.4 °
VS: 2,459.6 '

MD: 9,424 '
TVD: 6,418.97 '
Inclination: 90 °
Azimuth: 180.3 °
VS: 2,490.59 '

MD: 9,456 '
TVD: 6,418.83 '
Inclination: 90.5 °
Azimuth: 180.3 °
VS: 2,522.58 '

MD: 9,487 '
TVD: 6,418.32 '
Inclination: 91.4 °
Azimuth: 180.4 °
VS: 2,553.56 '

MD: 9,518 '
TVD: 6,417.67 '
Inclination: 91 °
Azimuth: 180.1 °
VS: 2,584.54 '

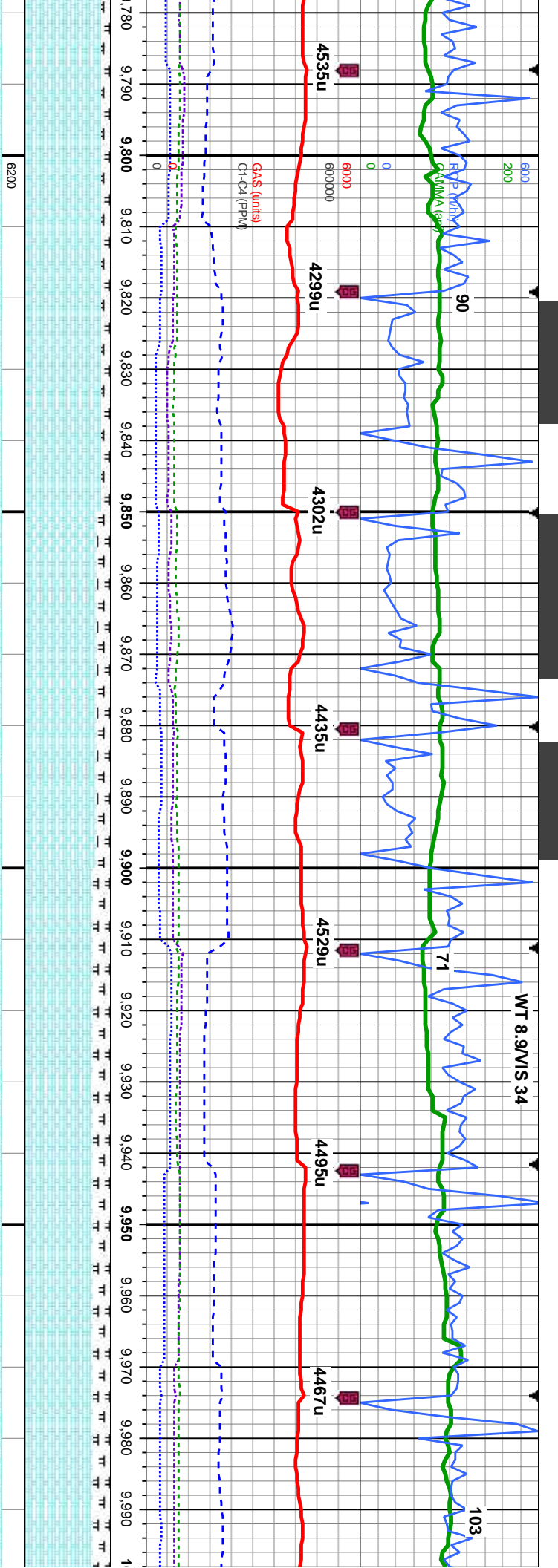
MD: 9,549 '
TVD: 6,417.58 '
Inclination: 89.3 °
Azimuth: 179.9 °
VS: 2,615.53 '

brn, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtk: v calc 30%:
occ sb pily, sl frm - hd, arg-sily tex, mtk: calc, tr diss pyr,
ccl, g od, bri wh-bl fst stmg cut, even thk bri wh-yel amb

60% CHK: med gy, occ med-dk gy brn, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtk: v calc 40%:
MRLST: blk, dk gy, sb blk-y - biky, occ sb pily, sl frm - hd, arg-sily tex, mtk: calc, tr diss pyr,
tr cl frags, tr sec imbd cal, g od, bri wh-bl mod stmg cut, even mod thk bri wh-yel amb ring,
thk yel-brn stn

70-75% CHK: med gy, occ med-dk gy brn, mot, sb b
30-25%: MRLST: blk, dk gy, sb blk-y - biky, occ sb pily
dissm pyr, tr cl frags, tr sec imbd cal, g od, bri wh-bl
wh-yel amb ring, thk yel-brn stn





MD: 9,798 '
TVD: 6,421.4 '
Inclination: 91.5 °
Azimuth: 178.7 °
VS: 2,864.28 '

MD: 9,829 '
TVD: 6,420.58 '
Inclination: 91.5 °
Azimuth: 179.4 °
VS: 2,895.24 '

MD: 9,860 '
TVD: 6,420.12 '
Inclination: 90.2 °
Azimuth: 180.3 °
VS: 2,926.21 '

MD: 9,890 '
TVD: 6,420.31 '
Inclination: 89.1 °
Azimuth: 181.7 °
VS: 2,956.21 '

MD: 9,921 '
TVD: 6,420.77 '
Inclination: 89.2 °
Azimuth: 181.7 °
VS: 2,987.21 '

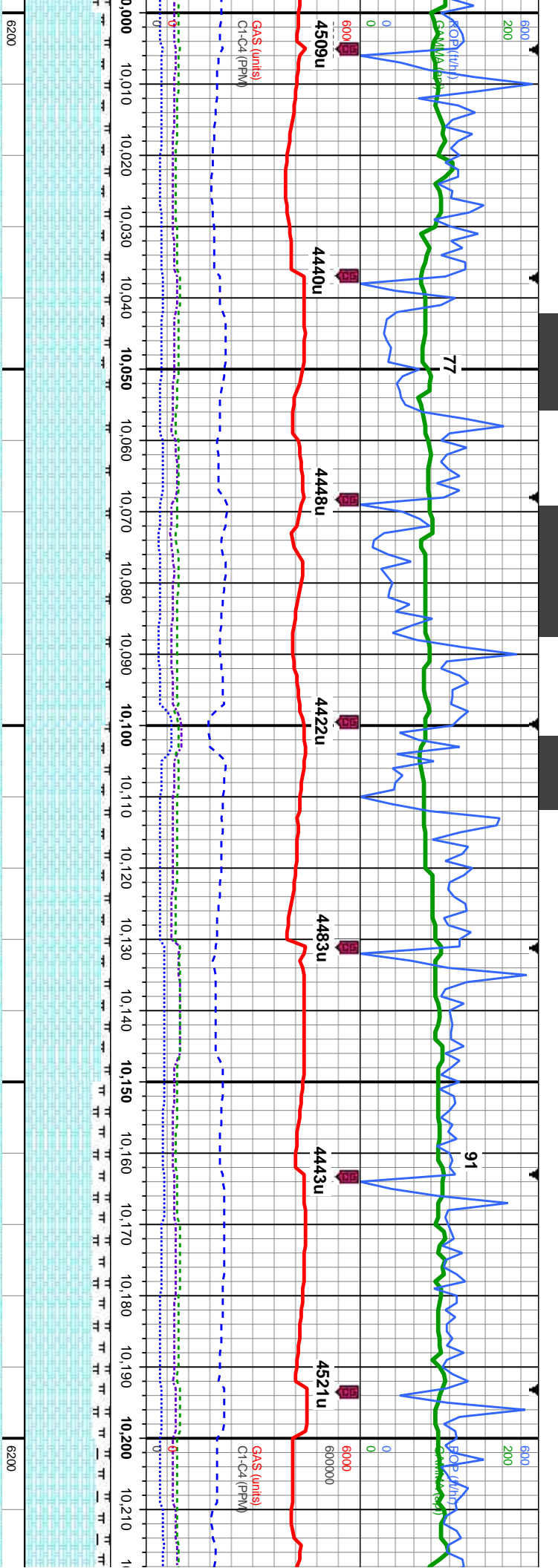
MD: 9,953 '
TVD: 6,421.05 '
Inclination: 89.8 °
Azimuth: 181.8 °
VS: 3,019.21 '

MD: 9,984 '
TVD: 6,420.91 '
Inclination: 90.7 °
Azimuth: 181.7 °
VS: 3,050.21 '

90-85% CHK: med-it gy, occ med-dk gy brn, wh-crm ip, mot, sb blk-y-blk, sft - hd, rthy-wxy, mty; v calc 10-15%: MRLST: blk, dk gy, sb blk, occ sb ply, sl frm - hd, arg-sily tex, mty; calc, tr dissim pyr, tr cl frags, tr sec imbd cal, g od, bri wh-bl fst stmg cut, even mod thk mod wh-yel brn ring, thk yel-brn stn

80% CHK: med-it gy, occ med-dk gy brn, wh-crm ip, mot, sb blk-y-blk, sft - hd, rthy-wxy, mty; v calc 20%: MRLST: blk, dk gy, sb blk, occ sb ply, sl frm - hd, arg-sily tex, mty; calc, tr dissim pyr, tr cl frags, tr sec imbd cal, g od, bri wh-bl fst stmg cut, even thk bri wh-yel amb ring, mod yel-brn stn





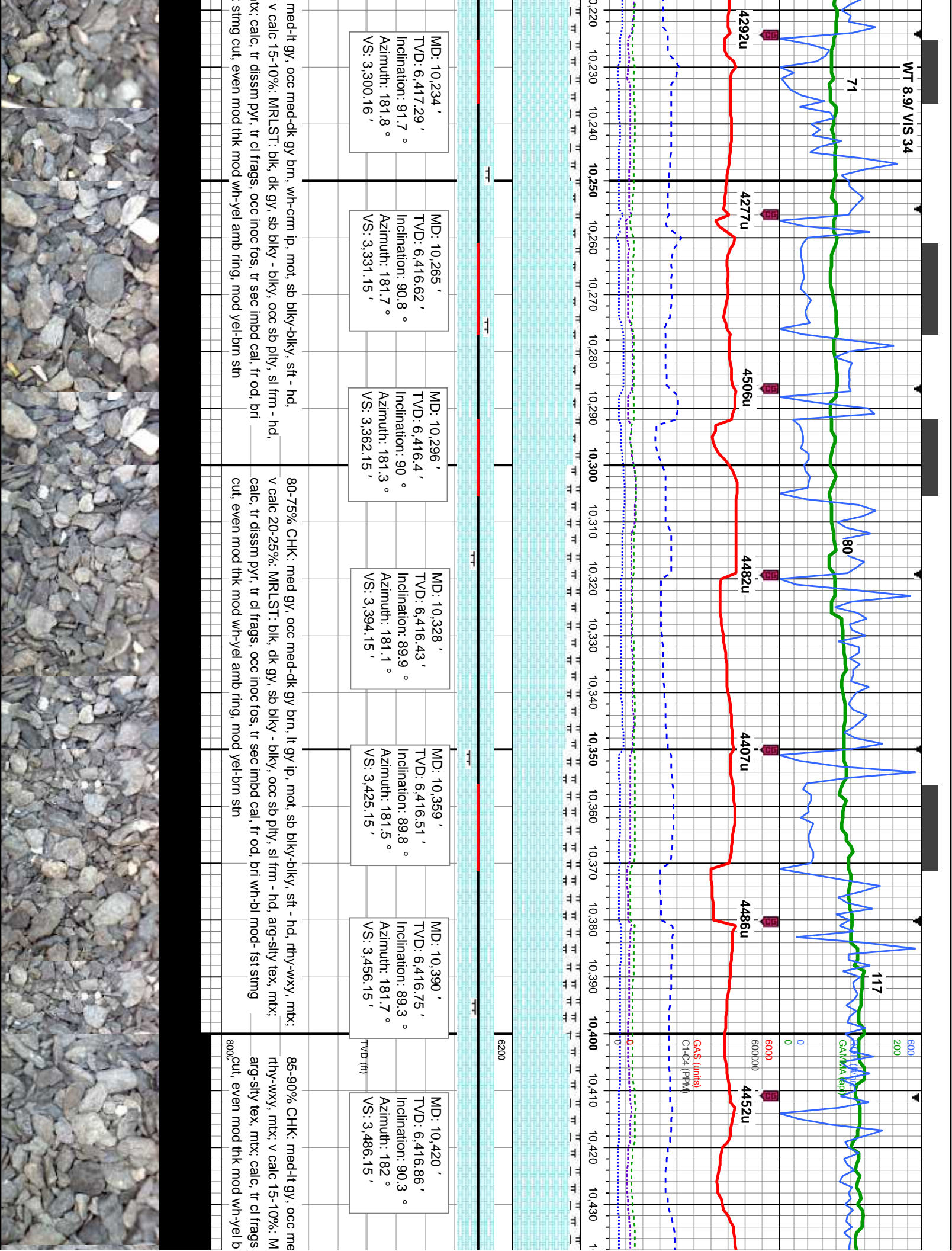
MD: 10,015 ' TVD: 6,420.23 ' Inclination: 91.8 ° Azimuth: 182 ° VS: 3,081.2 ' TVD:	MD: 10,047 ' TVD: 6,419.4 ' Inclination: 91.2 ° Azimuth: 181.5 ° VS: 3,113.19 ' TVD:	MD: 10,078 ' TVD: 6,418.94 ' Inclination: 90.5 ° Azimuth: 181.7 ° VS: 3,144.18 ' TVD:	MD: 10,109 ' TVD: 6,418.88 ' Inclination: 89.7 ° Azimuth: 181.8 ° VS: 3,175.18 ' TVD:	MD: 10,141 ' TVD: 6,418.99 ' Inclination: 89.9 ° Azimuth: 181.8 ° VS: 3,207.18 ' TVD:	MD: 10,171 ' TVD: 6,418.84 ' Inclination: 90.7 ° Azimuth: 182 ° VS: 3,237.18 ' TVD:	MD: 10,202 ' TVD: 6,418.22 ' Inclination: 91.6 ° Azimuth: 182 ° VS: 3,268.17 ' TVD:
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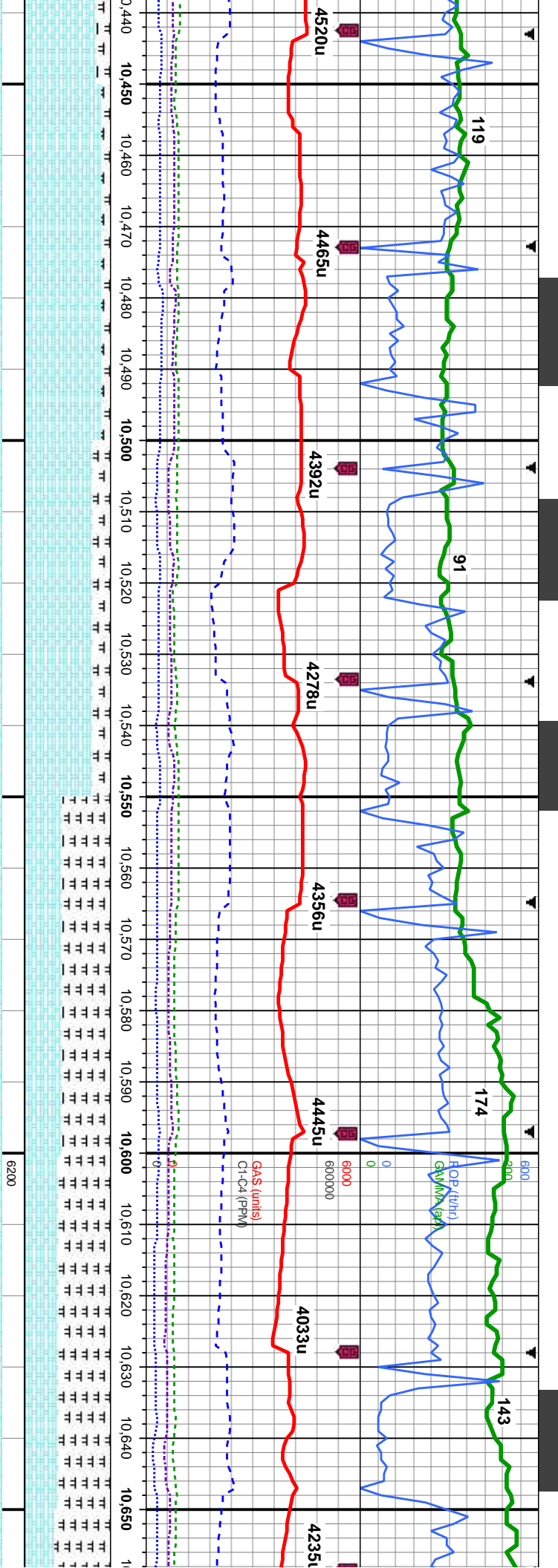
90-95% CHK: med-lt gy, occ med-dk gy brn, wh-crm ip, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtx; v calc 10-5%; MRLST: blk, dk gy, sb blk-y - biky, occ sb pily, sl frm - hd, arg-sily tex, mtx calc, tr dissim pyr, tr cl frags, tr sec imbd cal, g od, bri wh-bl fst- v fst string cut, even thk bri wh-yel amb ring, mod yel-brn sin

90-80% CHK: med-lt gy, occ med-dk gy brn, wh-crm ip, mot, sb blk-y-biky, sft - hd, rthy-wxy, mtx; v calc 10-20%; MRLST: blk, dk gy, sb blk-y - biky, occ sb pily, sl frm - hd, arg-sily tex, mtx; calc, tr dissim pyr, tr cl frags, tr sec imbd cal, g od, bri wh-bl fst string cut, uneven thk bri wh-yel amb ring, tr yel-brn sin

85-90% CHK: rthy-wxy, mtx; arg-sily tex, mtx; wh-bl mod- fst







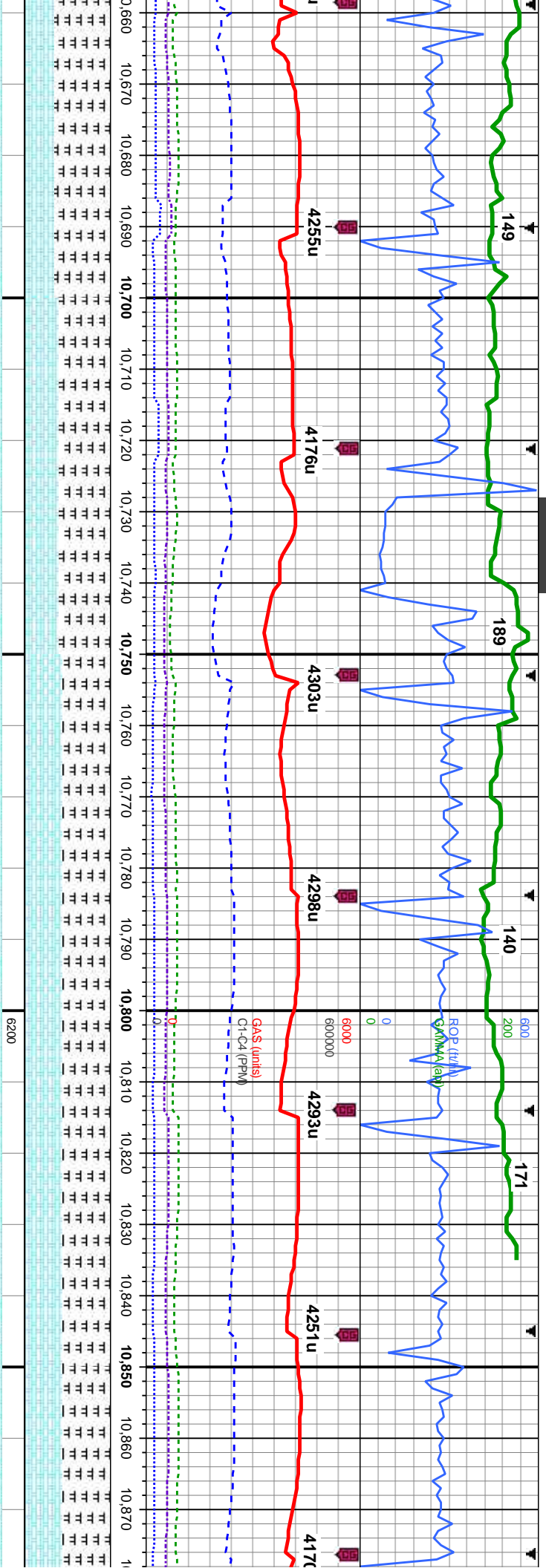
MD: 10,451 ' TVD: 6,416.37 ' Inclination: 91.5 ° Azimuth: 182.2 ° VS: 3,517.14 '	MD: 10,481 ' TVD: 6,415.64 ' Inclination: 91.3 ° Azimuth: 181.5 ° VS: 3,547.13 '	MD: 10,513 ' TVD: 6,415.22 ' Inclination: 90.2 ° Azimuth: 181.1 ° VS: 3,579.13 '	MD: 10,544 ' TVD: 6,415.46 ' Inclination: 88.9 ° Azimuth: 181 ° VS: 3,610.12 '	MD: 10,575 ' TVD: 6,416.06 ' Inclination: 88.9 ° Azimuth: 180.8 ° VS: 3,641.12 '	MD: 10,606 ' TVD: 6,416.55 ' Inclination: 89.3 ° Azimuth: 180.6 ° VS: 3,672.11 '	MD: 10,638 ' TVD: 6,417.02 ' Inclination: 89 ° Azimuth: 180.3 ° VS: 3,704.09 '
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md-dk gy brn, wht-crm ip, mot, sb blk-y-bkly, sft - hd,
MRLST: blk, dk gy, sb blk-y - blk-y, occ sb ply, sl frm - hd,
tr inoc fos, tr sec imbd cal, g od, bri wh-bl fst string
ring, thk yel-brn stn

80-40% CHK: med-lt gy, occ med-dk gy brn, wht-crm ip, mot, sb blk-y-bkly, sft -
hd, rthy-wxy, mtx; v calc 20-60%; MRLST: blk, dk gy, sb blk-y - blk-y, occ sb ply, sl
frm - hd, ang-sily tex, mtx; calc, g od, med-fast blshw stng, no flor, med yel-wh
ring, fr stn

60-65% MRLST: blk, dk gy, sb blk-y - blk-y, occ sb
mtx; calc, 40-35% CHK: med gy, occ med-dk gy
rthy-wxy, mtx; v calc, fr od, med-fast blshw stim
stn





MD: 10,669 ' TVD: 6,417.56 ' Inclination: 89 ° Azimuth: 179.7 ° VS: 3,735.08 '	MD: 10,700 ' TVD: 6,418.02 ' Inclination: 89.3 ° Azimuth: 179.7 ° VS: 3,766.05 '	MD: 10,732 ' TVD: 6,418.5 ' Inclination: 89 ° Azimuth: 179.7 ° VS: 3,798.03 '	MD: 10,762 ' TVD: 6,419.1 ' Inclination: 88.7 ° Azimuth: 179.9 ° VS: 3,828 '	MD: 10,792 ' TVD: 6,419.67 ' Inclination: 89.1 ° Azimuth: 179.4 ° VS: 3,857.98 '	MD: 10,824 ' TVD: 6,420.09 ' Inclination: 89.4 ° Azimuth: 179.6 ° VS: 3,889.95 '
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o pty, sl frm - hd, arg-sily tex, brn, mot, sb blk-y-biky, sft - hd, g, no flor, med yel-wh ring, fr	60-55% MRLST: blk, dk gy, sb biky - biky, occ sb pty, sl frm - hd, arg-sily tex, mt; calc, 40-45% CHK: med gy, occ med-dk gy brn, mot, sb biky-biky, sft - hd, rthy-wxy, mt; v calc, tr sec imbd cal, fr od, br wh-bl mod- fst string cut, even mod thk mod wh-yel amb ring, mod yel-brn stn	55% MRLST: blk, dk gy, sb biky - biky, occ sb pty, sl frm - hd, arg-sily tex, mt; calc, 45% CHK: med gy, occ med-dk gy brn, mot, sb biky-biky, hd, rthy-wxy, mt; v calc, tr sec imbd cal, fr od, br wh-bl mod- fst string cut, even mod thk mod wh-yel amb ring, mod yel-brn stn
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