

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name Prosper Farms 4-65 11-12 3AH

Location SEC 11 T4S-R65W

State COLORADO

County ARAPAHOE

Country USA

Rig Number Nabors B16

API Number 0500507383

AFE # WAY.CDR.7024

Geographic Region DJ BASIN

Field WILDCAT

Spud Date 2/21/2019

Drilling Completed 2/27/2019

Surface Coordinates 2356ft FSL 490ft FWL SEC 11 T4S-R65W

SL Lat: 39° 43' 3.38" (NAD83)

SL Long: 104° 38' 20.72" (NAD83)

Bottom Hole Coordinates Proposed BHL: 2483ft FSL 325ft FWL SEC 12 T 4S-R65W

Ground Elevation 5664

K.B. Elevation 5689

Logged Interval 6000 To 17,827

Total Depth 17,827

Formation Niobrara C Chalk

Type of Drilling Fluid OBM

Operator

Company Conoco Phillips

Address 600 N. Dairy Ashford Rd.
Houston, TX 77079-1175



Geologist

Name Dave Aldridge

Company Conoco Phillips Central Rockies Implementation

Address Dave.E.Aldridge@conocophillips.com
Office:(832)486-3983
600 N Dairy Ashford EC3 14-W134
Houston, TX 77079



Other

Columbine Logging Inc. Mud Logging Company

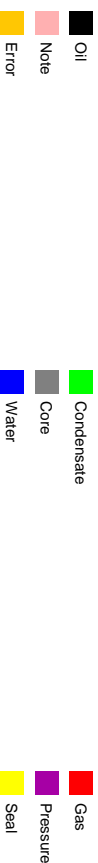
Geologists/Geosteers on Location: Todd Thiesse, Dustin Morgan

Gas Detection: Bloodhound chromatograph gas unit #311

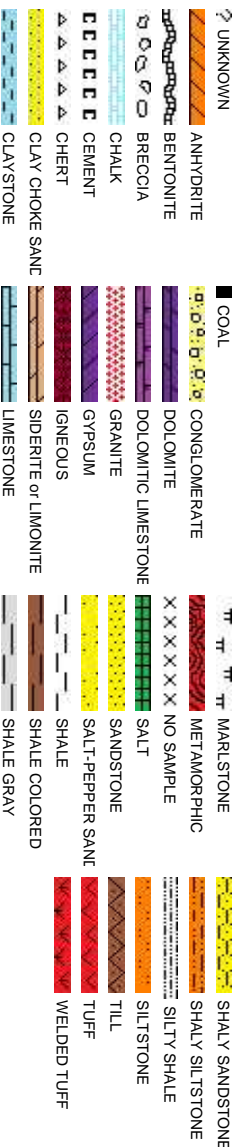
DD/MMWD: Baker Hughes

Columbine Computer 87A

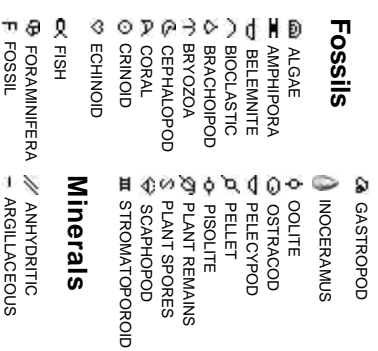
Color Coding



Rock Types



Fossils

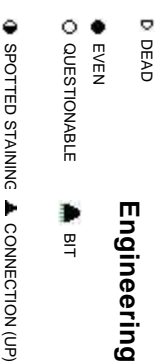


Minerals

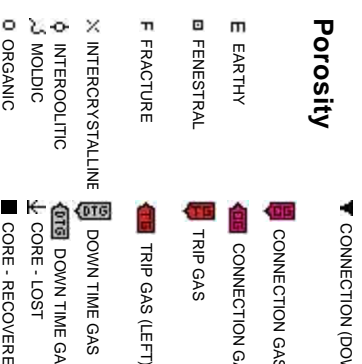
Oil Show



Engineering


























Porosity



Accessories

[illegible]

Other Symbols

| | |
|---|---|
|  DST INTERVAL  FAULT  FORMATION TOP  GAS SHOW  OIL SHOW  MN DEPTH UP  MN DEPTH (DOWN)  NORMAL FAULT  OVERTURNED STRATA  REVERSE FAULT  CASING  SIDEWALL CORE (LEFT)  SLIDE  SURVEY |  WIRELINE TESTED - LEFT  WIRELINE TESTED - RT  DRILL STEM TEST  MN DEPTH  MN DEPTH  MN DEPTH  MN DEPTH  MN DEPTH  MN DEPTH  MN DEPTH  MN DEPTH  MN DEPTH  MN DEPTH  MN DEPTH |
|---|---|

COLUMBINE LOGGING

ROP
ROP (ft/hr)
GAMMA (api units)

Columbine Logging Inc. Rigged Up 2 man logging 2/22/2019 Chromatograph Gas Unit #0311, began logging from 6000' MD at 5:30 AM MDT on 2/24/19.

Gamma Data and Survey Data Provided by Baker Hughes

Total Gas & Chromatograph

GAS
C1
C2
C3
C4

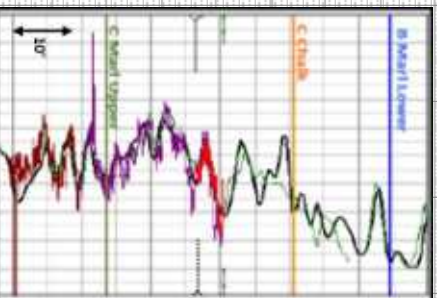
Gas Data From Bloodhound Unit #0311, data imported via Rig Watch and Gaschart

Depth Labels

% Lith

Well Bore
TVD

Target Formation/Member:
Niobrara C Chalk



Bit Data
Bit #: 2
Type: HCC AT605F
Size: 8.5
Depth In: 2250'
Depth Out: 17,827'

Jets: 5x14s

S/N: 5288323

127

ROP: 163 ft/hr
RPM: 110
SPM: 2995 PSI
STRK 1: 103 SPM
STRK 2: 103 SPM
WOB: 4 klbs

MUD WT IN: 9.0
MUD WT OUT: VIS:
VIS: 64

127u
C1: 96.8%
C2: 1.9%
C3: 0.9%
C4: 0.4%

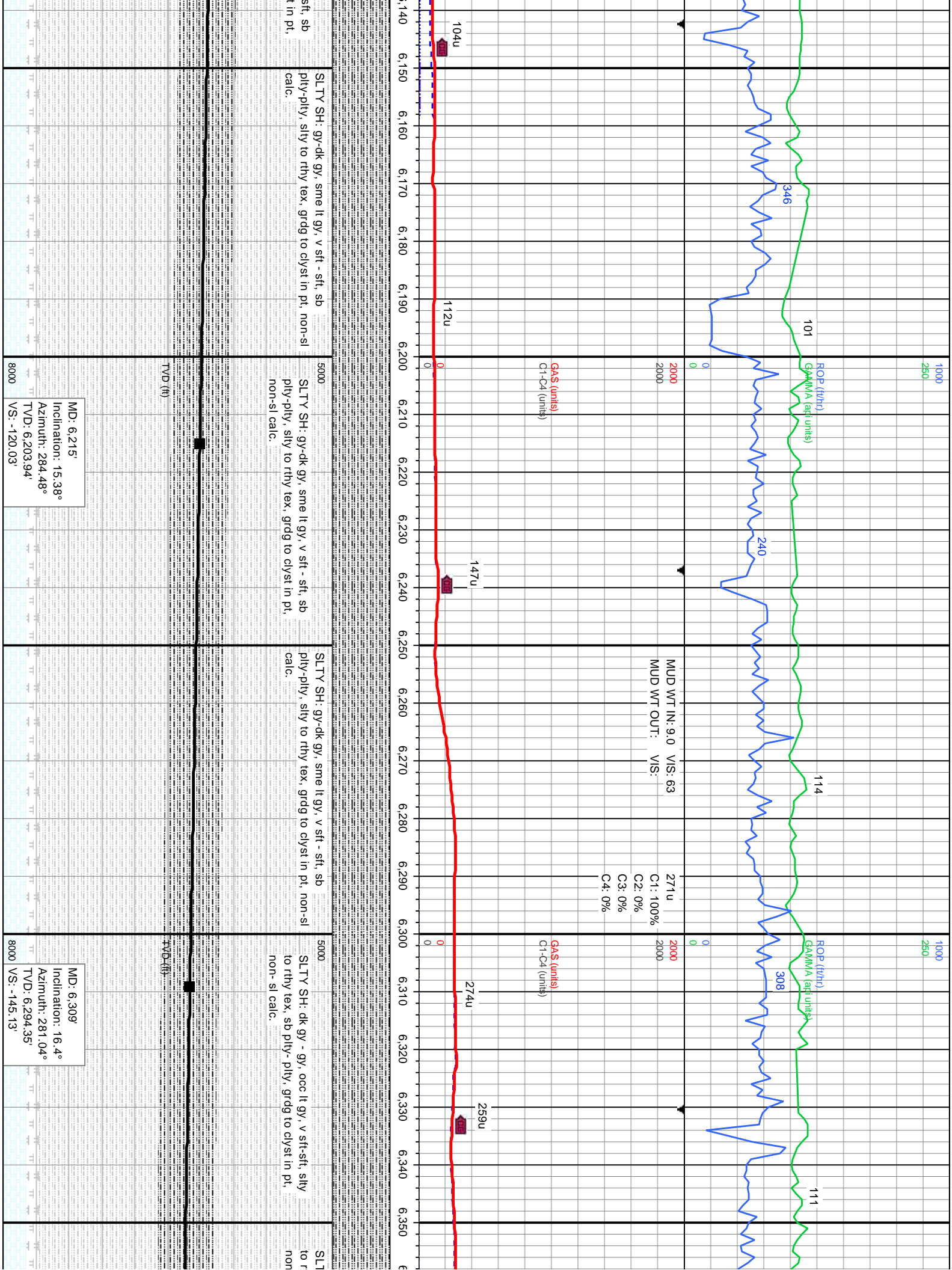
SLTY SH: gy-dk gy, occ lt gy, v sft - sft, sb
ply-ply, silty to rthy tex, sl-non calc.

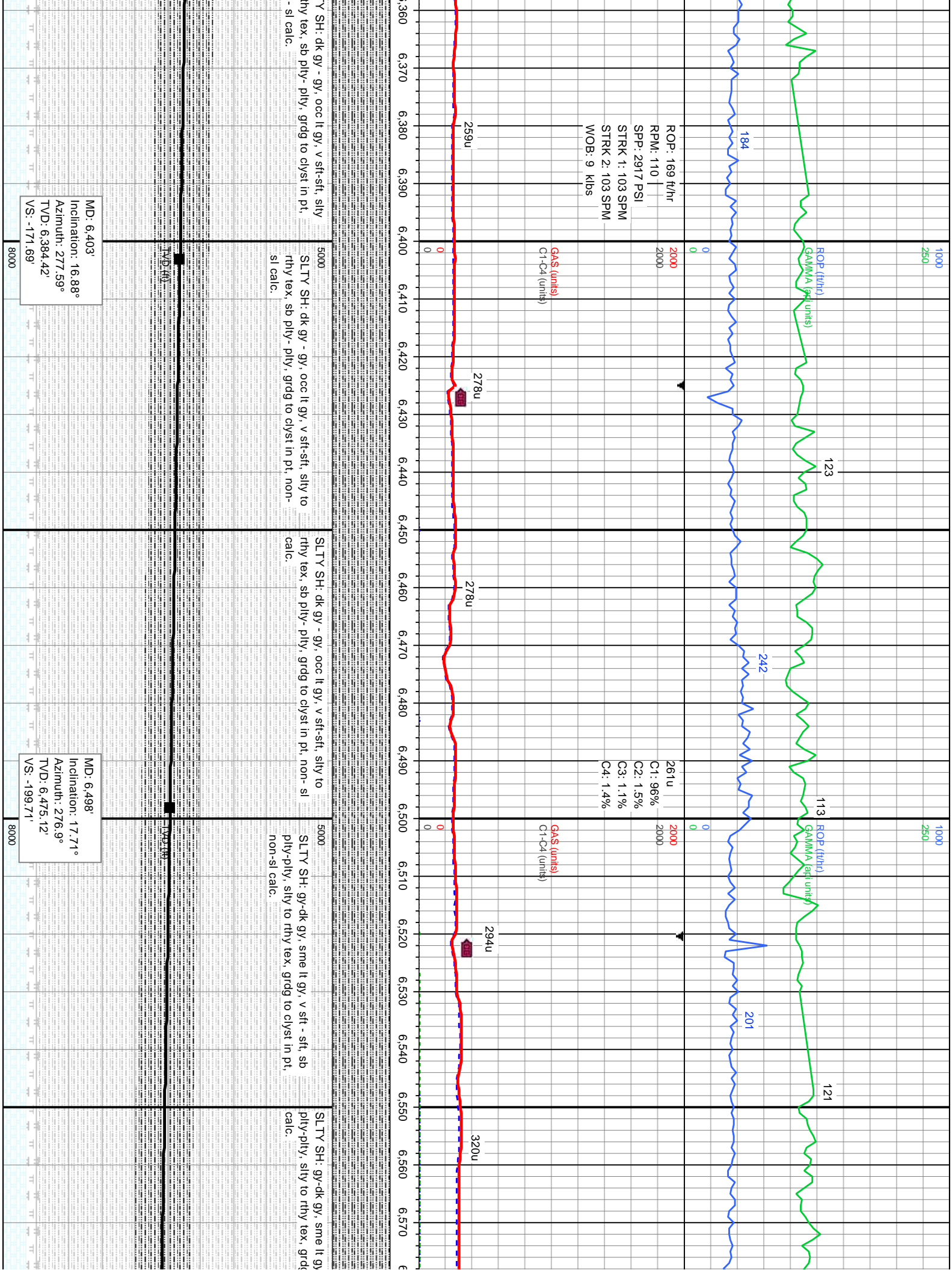
SLTY SH: gy-dk gy, occ lt gy, v sft - sft, sb
ply-ply, silty to rthy tex, sl-non calc.

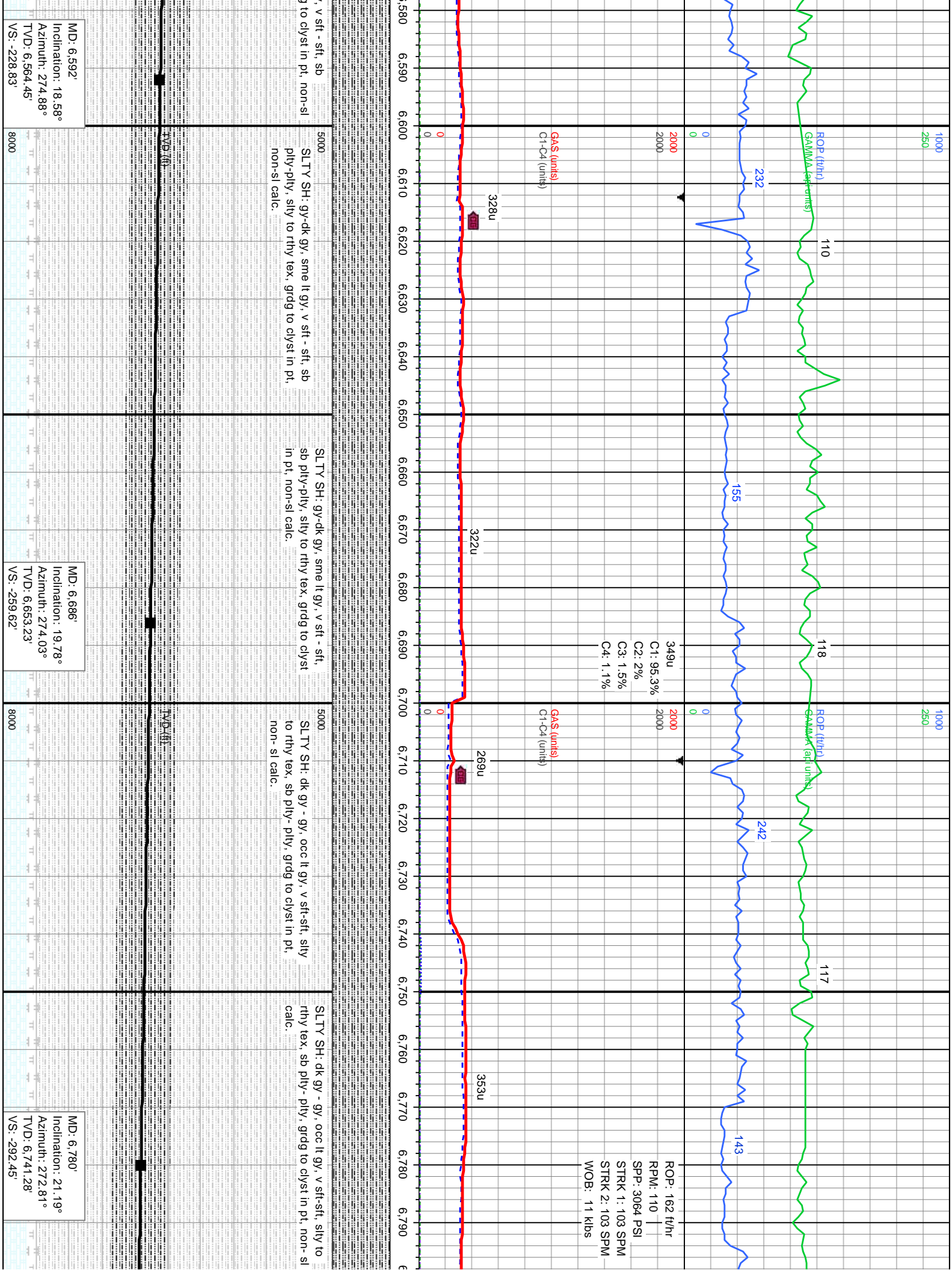
5000
SLTY SH: gy-dk gy, sme lt gy, v sft -
ply-ply, silty to rthy tex, grdg to clys
non-sl calc.

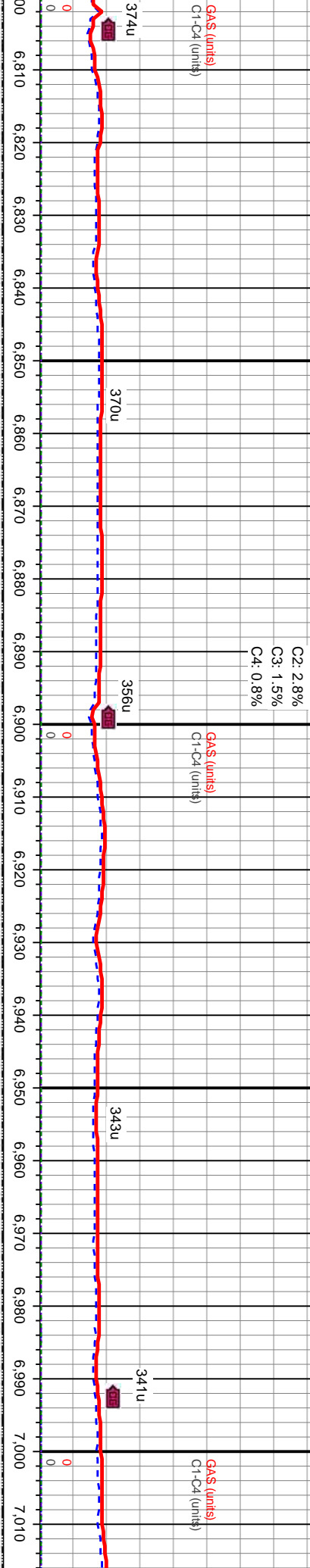
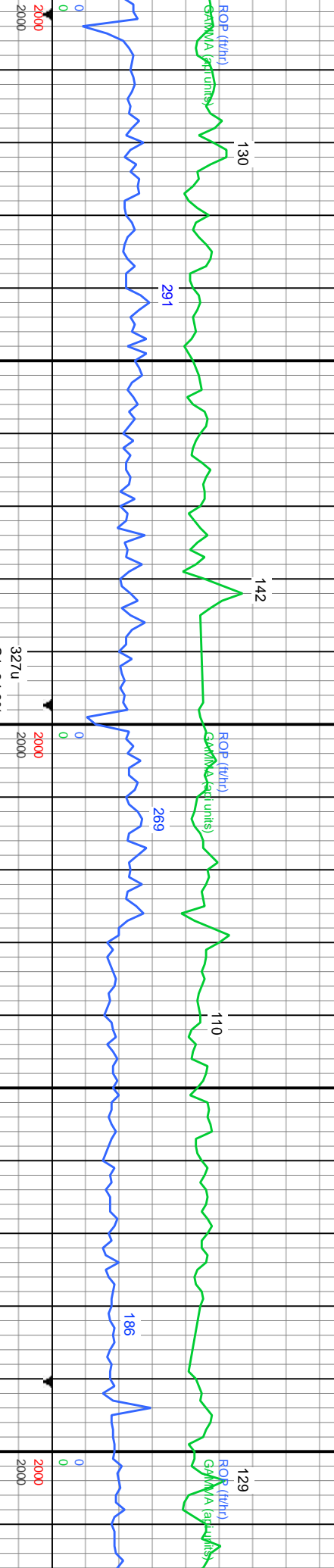
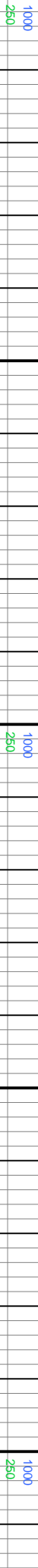
MD: 6,026'
Inclination: 11.09°
Azimuth: 285.53°
TVD: 6,019.86'
VS: -78.88'

MD: 6,120'
Inclination: 12.83°
Azimuth: 285.47°
TVD: 6,111.81'
VS: -97.65'







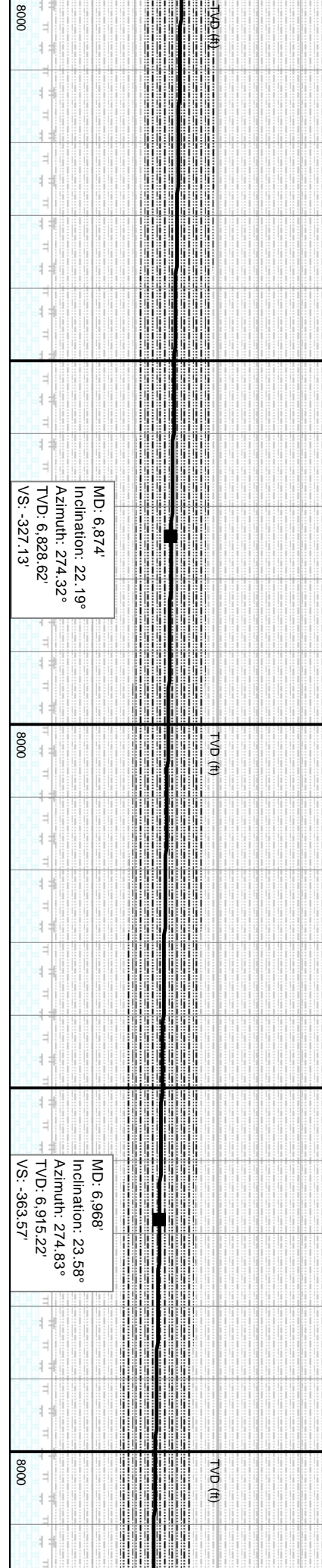


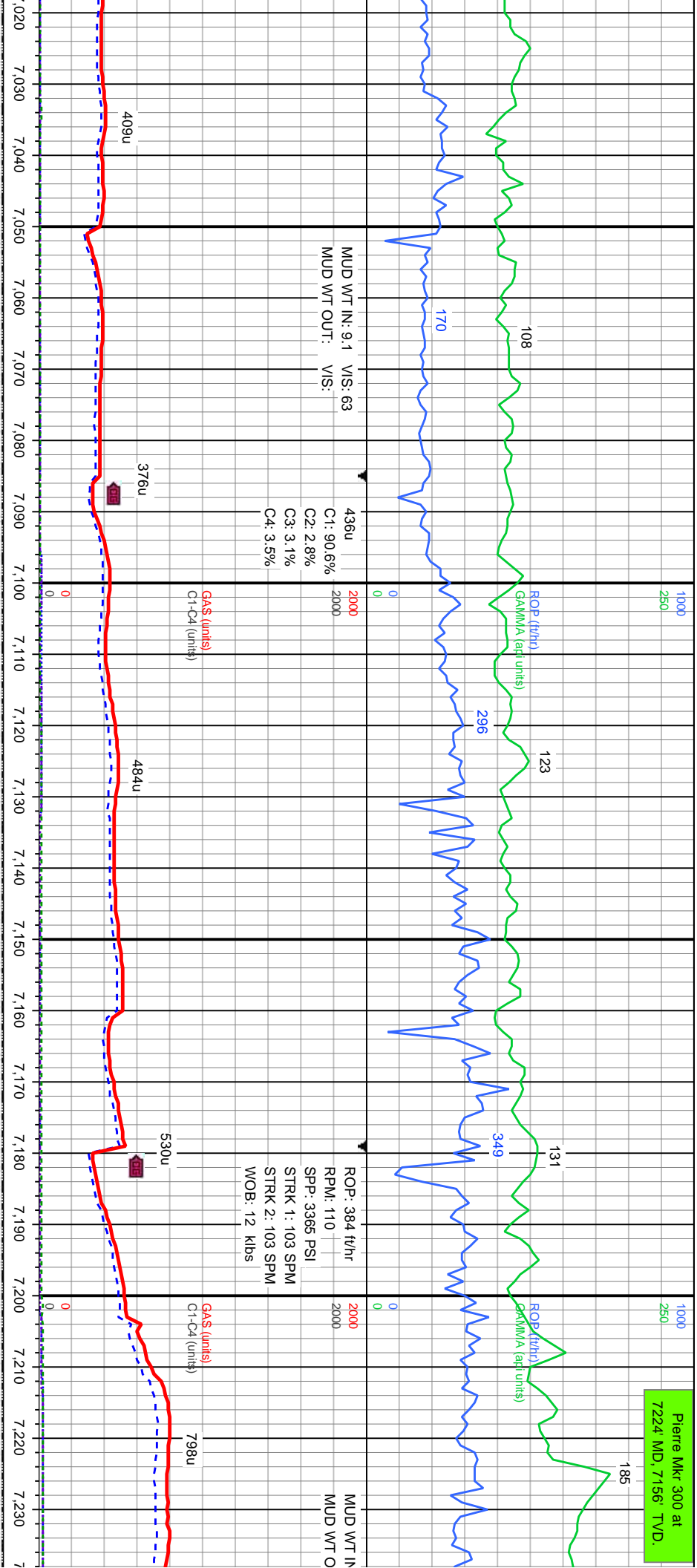
5000
SLTY SH: dk gy - gy, occ lt gy, v sft-sft, slty to rthy tex, sb plty- plty, grdg to clyst in pt, non-si calc.

5000
SLTY SH: dk gy - gy, occ lt gy, v sft-sft, slty to rthy tex, sb plty- plty, grdg to clyst in pt, non-si calc.

5000
SLTY SH: gy-dk gy, sme lt gy, v sft - sft, sb plty-plty, slty to rthy tex, grdg to clyst in pt, non-si calc.

5000
SLTY SH: gy-dk gy, sme lt gy, v sft - sft, sb plty-plty, slty to rthy tex, grdg to clyst in pt, non-si calc.





MUD WT IN: 9.1
MUD WT OUT: V/S:

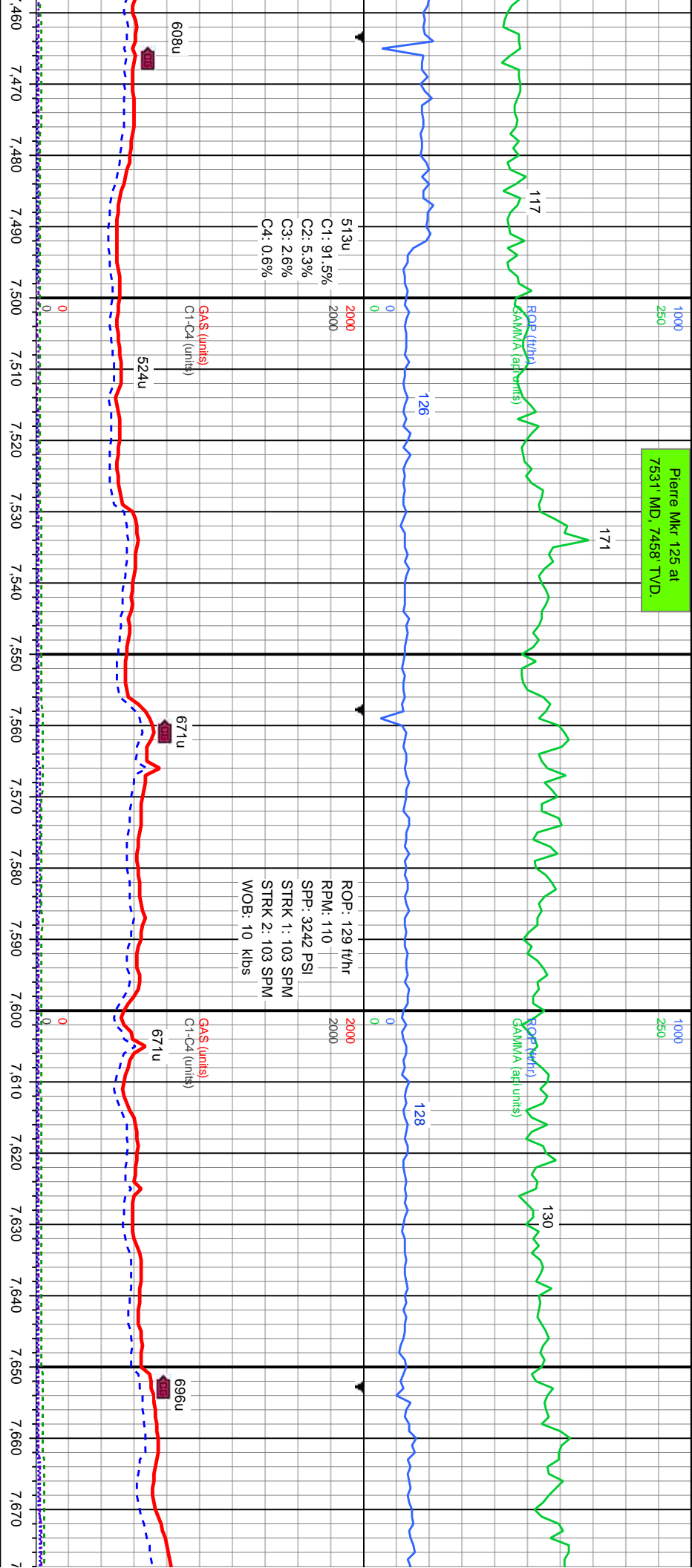
436u
C1: 90.6%
C2: 2.8%
C3: 3.1%
C4: 3.5%

ROP: 384 ft/hr
RPM: 110
SPR: 3365 PSI
STRK 1: 103 SPM
STRK 2: 103 SPM
WOB: 12 klbs

MUD WT IN
MUD WT O

| MD (ft) | TVD (ft) | SLTY SH: gy-dk gy, sme lt gy, v sft - sft, sb ply-ply, slty to rthy tex, grdg to clyst in pt, non-sl calc. | SLTY SH: gy-dk gy, sme lt gy, v sft - sft, sb ply-ply, slty to rthy tex, grdg to clyst in pt, non-sl calc. | SLTY SH: gy-dk gy, sme lt gy, v sft - sft, sb ply-ply, slty to rthy tex, grdg to clyst in pt, non-sl calc. | SLTY SH: dk gy - gy, occ lt gy, v sft-s to rthy tex, sb ply- ply, grdg to clyst non-sl calc. |
|---------|----------|--|--|--|--|
| 7,063' | ~7,040 | Inclination: 24.15° Azimuth: 276.71° TVD: 7,002.1' VS: -401.81' | 5000 | 5000 | 5000 |
| 7,157' | ~7,130 | Inclination: 14.39° Azimuth: 276.22° TVD: 7,090.73' VS: -432.59' | 5000 | 5000 | 5000 |

Pierre Mkr 125 at
7531' MD, 7458' TVD.



SLTY SH: dk gy - gy, v sft-sft, silty to rthy tex, sb pily- pily, grdg to clyst in pt, non-sil calc.

SLTY SH: dk gy - gy, occ lt gy, v sft-sft, silty to rthy tex, sb pily- pily, grdg to clyst in pt, non-sil calc.

SLTY SH: dk gy - gy, occ lt gy, v sft-sft, silty to rthy tex, sb pily- pily, grdg to clyst in pt, non-sil calc.

SLTY SH: dk gy - gy, occ lt gy, v sft-sft, silty to rthy tex, sb pily- pily, grdg to clyst in pt, non-sil calc.

SLTY SH: dk gy - gy, occ lt gy, v sft-sft, silty to rthy tex, sb pily- pily, grdg to clyst in pt, non-sil calc.

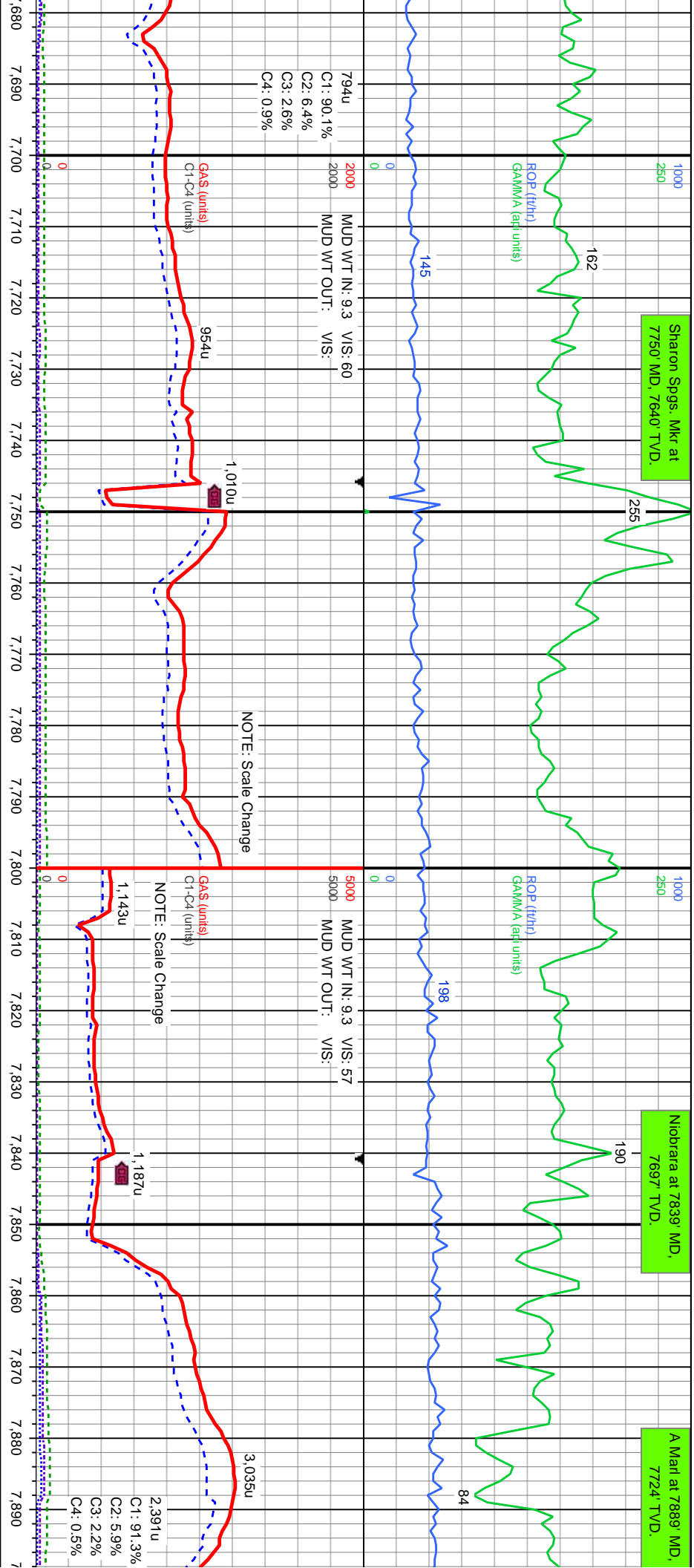
MD: 7,534'
Inclination: 21.03°
Azimuth: 89.62°
TVD: 7,461.32'
VS: -413.88'

MD: 7,629'
Inclination: 31.74°
Azimuth: 86.1°
TVD: 7,546.31'
VS: -371.78'

Sharon Spgs. Mkr at
7750 MD, 7640 TVD.

Niobrara at 7839 MD,
7697 TVD.

A Marl at 7889 MD,
7724 TVD.



Y, v sft-sft, silty to rhy
at in pt, non-si calc.
tex, v sft.

6500 SLTY SH: gy-dk gy, sme lt gy, sft - fri, sb pily-pily,
silty to rhy tex, grdg to mlst, incr calc-calc.
tr bent

NOTE: Scale Change

6500 SLTY SH: gy-dk gy, sme lt gy, sft - fri, sb pily-pily,
silty to rhy tex, grdg to mlst, incr calc-calc.
tr bent

NOTE: Scale Change

6500 SLTY SH: gy-dk gy, sme lt gy, sft - fri, sb pily-pily,
silty to rhy tex, grdg to mlst, incr calc-calc.
MRST: dk gy-gy, occ blk, sft gr, fri-frn, occ hd,
sb pily-biky, gt-sily tex, occ wxy lst, v calc.
tr bent

NOTE: Scale Change

6500 SLTY SH: gy-dk gy, sme lt gy, sft - fri, sb pily-pily,
silty to rhy tex, grdg to mlst, incr calc-calc.
MRST: dk gy-gy, occ blk, sft gr, fri-frn, occ hd,
sb pily-biky, gt-sily tex, occ wxy lst, v calc.
tr bent

NOTE: Scale Change

NOTE: Scale Change

TVD (ft)

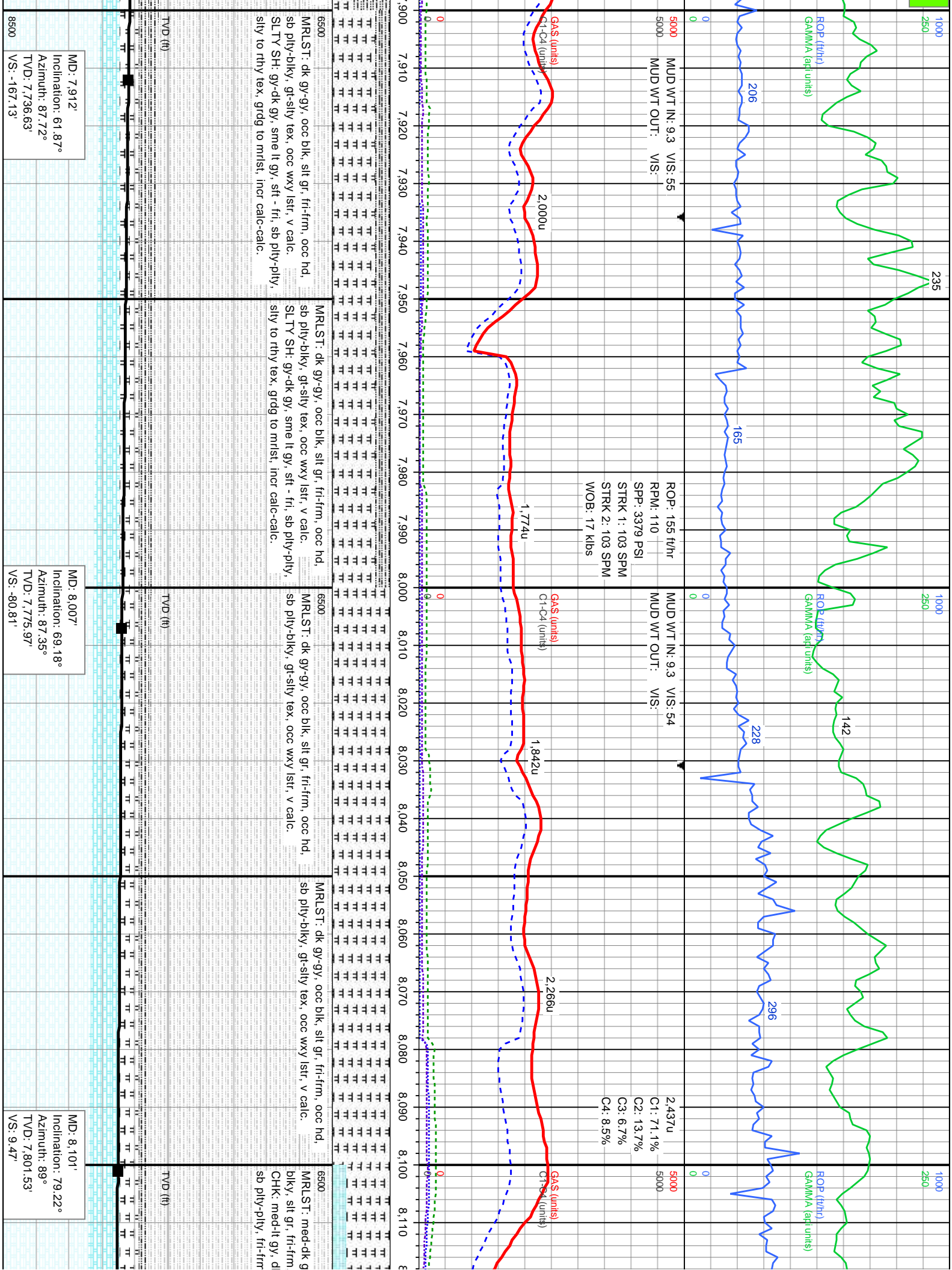
TVD (ft)

TVD (ft)

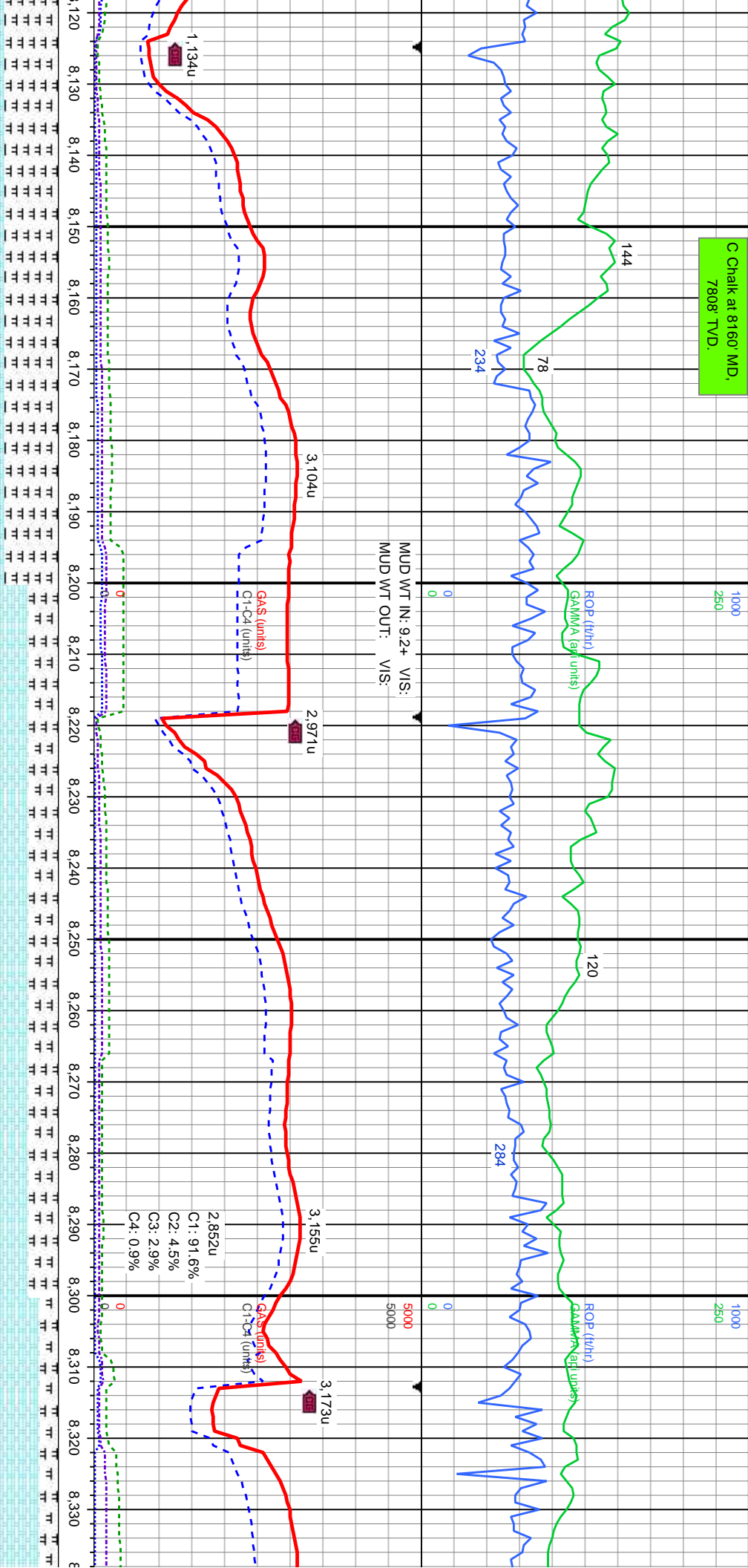
TVD (ft)

MD: 7,723'
Inclination: 42.24°
Azimuth: 85.79°
TVD: 7,621.29'
VS: -315.45'

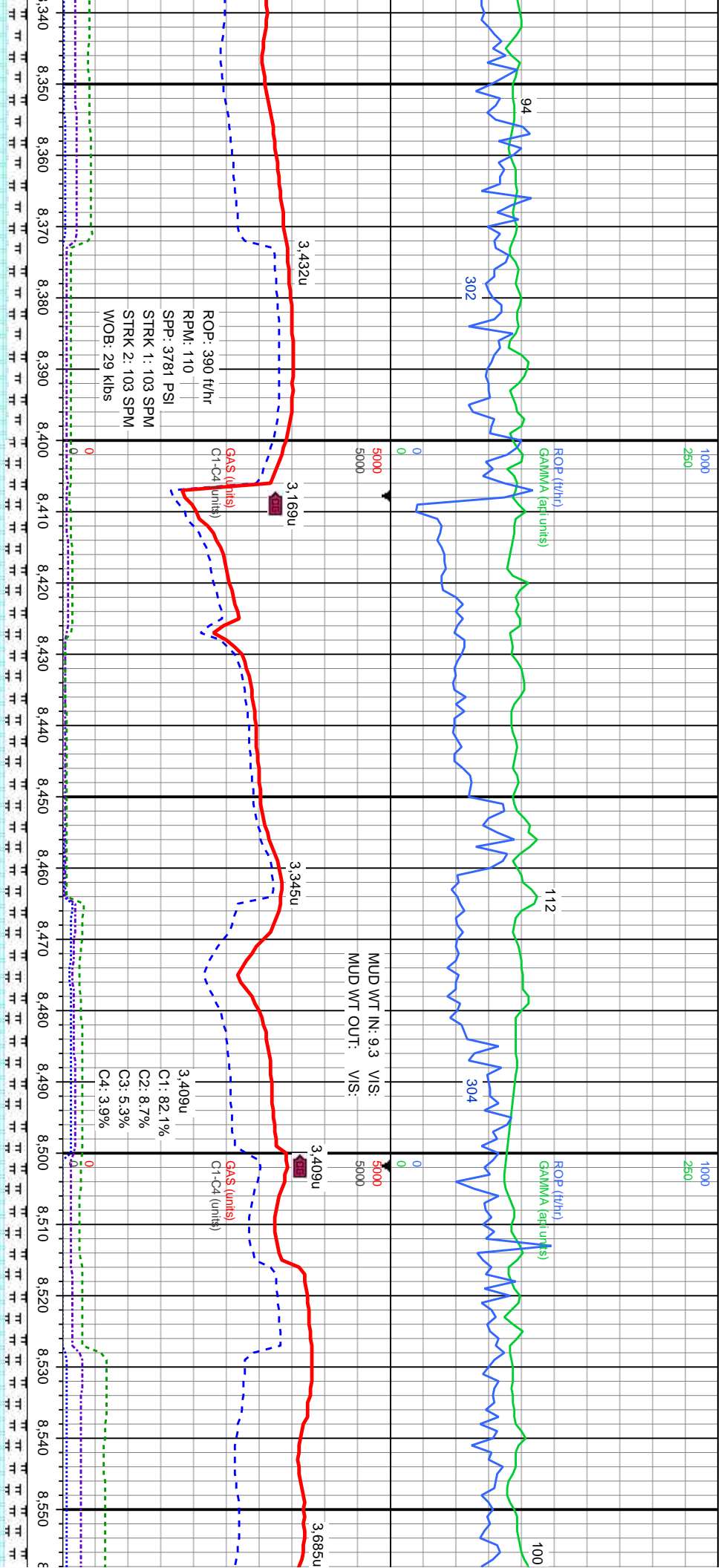
MD: 7,818'
Inclination: 52.34°
Azimuth: 86.85°
TVD: 7,685.64'
VS: -245.88'



C Chalk at 8160' MD,
7808' TVD.



| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| y, occ blk, silt-gr tex, sb pily-sb occ wxy lsir, v calc. k brn, occ wh-tan calc bnd, mot, rthy tex, v calc. | | MRSLT: med-dk gy, occ blk, silt-gr tex, sb pily-sb biky, silt gr, fri-frn, occ wxy lsir, v calc. CHK: med-it gy, dk brn, occ wh-tan calc bnd, mot, sb pily-pily, fri-frn, rthy tex, v calc. | | 6500 CHK: med-it gy, dk brn, occ wh-tan calc bnd, mot, sb pily-pily, fri-frn, rthy tex, v calc. MRSLT: med-dk gy, occ blk, silt-gr tex, sb pily-sb biky, silt gr, fri-frn, occ wxy lsir, v calc. | | CHK: med-it gy, dk brn, occ wh-tan calc bnd, mot, sb pily-pily, fri-frn, rthy tex, v calc. MRSLT: med-dk gy, occ blk, silt-gr tex, sb pily-sb biky, silt gr, fri-frn, occ wxy lsir, v calc. | | 6500 CHK: med-it gy, dk brn, occ wh-tan calc bnd, mot, sb pily-pily, fri-frn, rthy tex, v calc. MRSLT: med-dk gy, occ blk, silt-gr tex, sb pily-sb biky, silt gr, fri-frn, occ wxy lsir, v calc. | |
| | | | | TVD (ft) | | | | TVD (ft) | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |



02/24/2019
02/25/2019

MINDEPTH

1000
250

1000
250

149

147

ROP (ft/hr)
GAMMA (api units)

ROP (ft/hr)
GAMMA (api units)

283

306

172

0

0

5000 MUD WT IN: 9.4 VIS: .54
5000 MUD WT OUT: 9.3 VIS:

5000
5000

3,369u

3,368u

2,626u

2,927u

GAS (units)
G-C4 (units)

GAS (units)
G-C4 (units)

2,406u

C1: 90%

C2: 5.9%

C3: 3.9%

C4: 0.2%

0

0

8,560 8,570 8,580 8,590 8,600 8,610 8,620 8,630 8,640 8,650 8,660 8,670 8,680 8,690 8,700 8,710 8,720 8,730 8,740 8,750 8,760 8,770

ed-it gy, dk brn, occ wh-tan calc bnd, mot.
ply, fri-frn, rthy tex, v calc.

med-dk gy, occ blk, silt-gt tex, sb ply-sb
gr, fri-frn, occ wxy lst, v calc.

6500
CHK: med-it gy, dk brn, occ wh-tan calc bnd, mot.
sb ply-ply, fri-frn, rthy tex, v calc.
MRST: med-dk gy, occ blk, silt-gt tex, sb ply-sb
biky, silt gr, fri-frn, occ wxy lst, v calc.

CHK: med-it gy, dk brn, occ wh-tan calc bnd, mot.
sb ply-ply, fri-frn, rthy tex, v calc.
MRST: med-dk gy, occ blk, silt-gt tex, sb ply-sb
biky, silt gr, fri-frn, occ wxy lst, v calc.

6500
MRST: med-dk gy, occ blk, silt-gt tex, sb ply-sb
biky, silt gr, fri-frn, occ wxy lst, v calc.
CHK: med-it gy, dk brn, occ wh-tan calc bnd, mot.
sb ply-ply, fri-frn, rthy tex, v calc.

MRST: med-dk gy, occ blk,
biky, silt gr, fri-frn, occ wxy l
CHK: med-it gy, dk brn, occ
sb ply-ply, fri-frn, rthy tex,

TV D (ft)

TV D (ft)

MD: 8,572'

Inclination: 90.22°

Azimuth: 86.68°

TV D: 7,809.59'

VS: 479.5'

MD: 8,667'

Inclination: 90.03°

Azimuth: 86.61°

TV D: 7,809.38'

VS: 574.33'

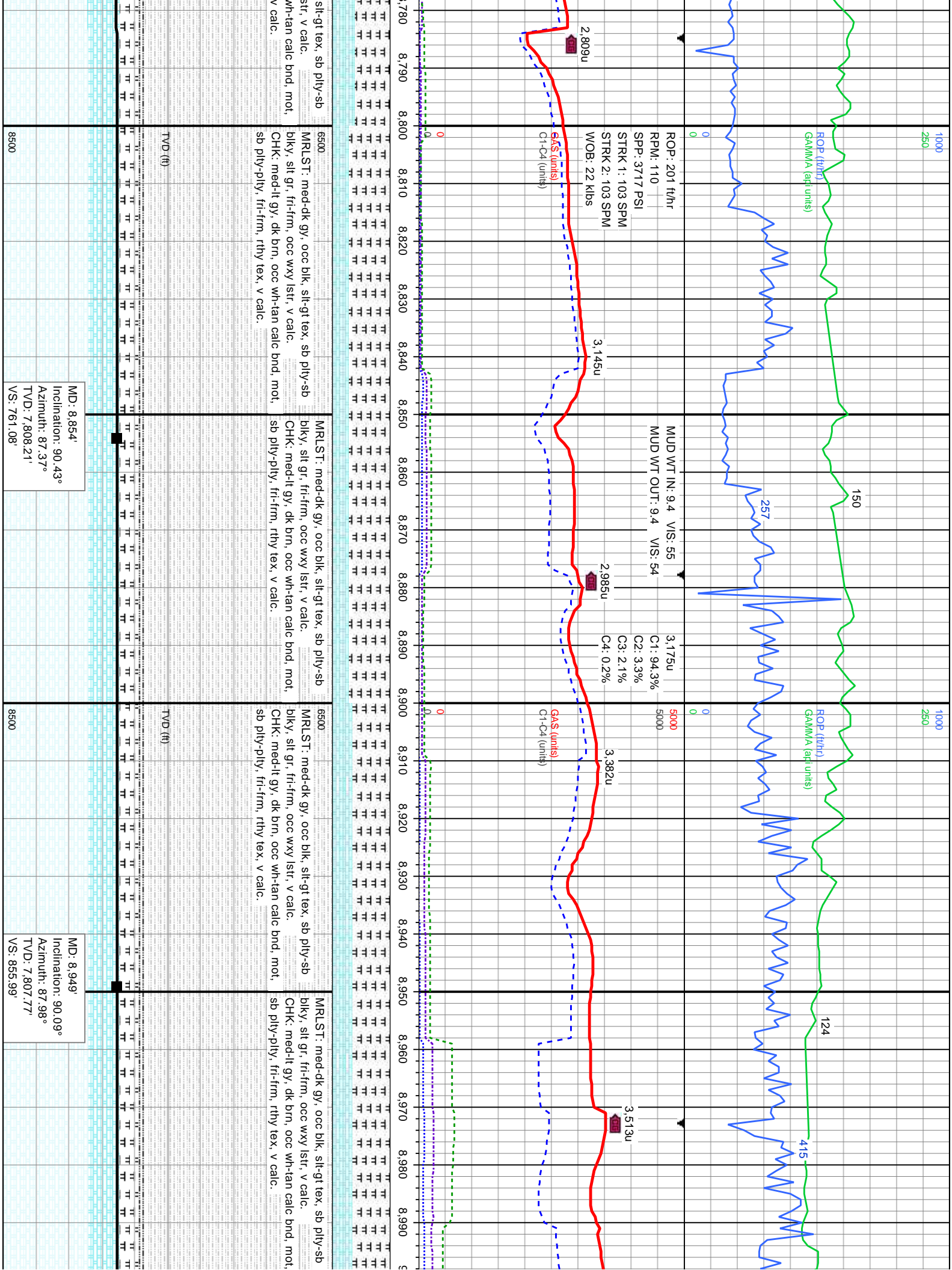
MD: 8,761'

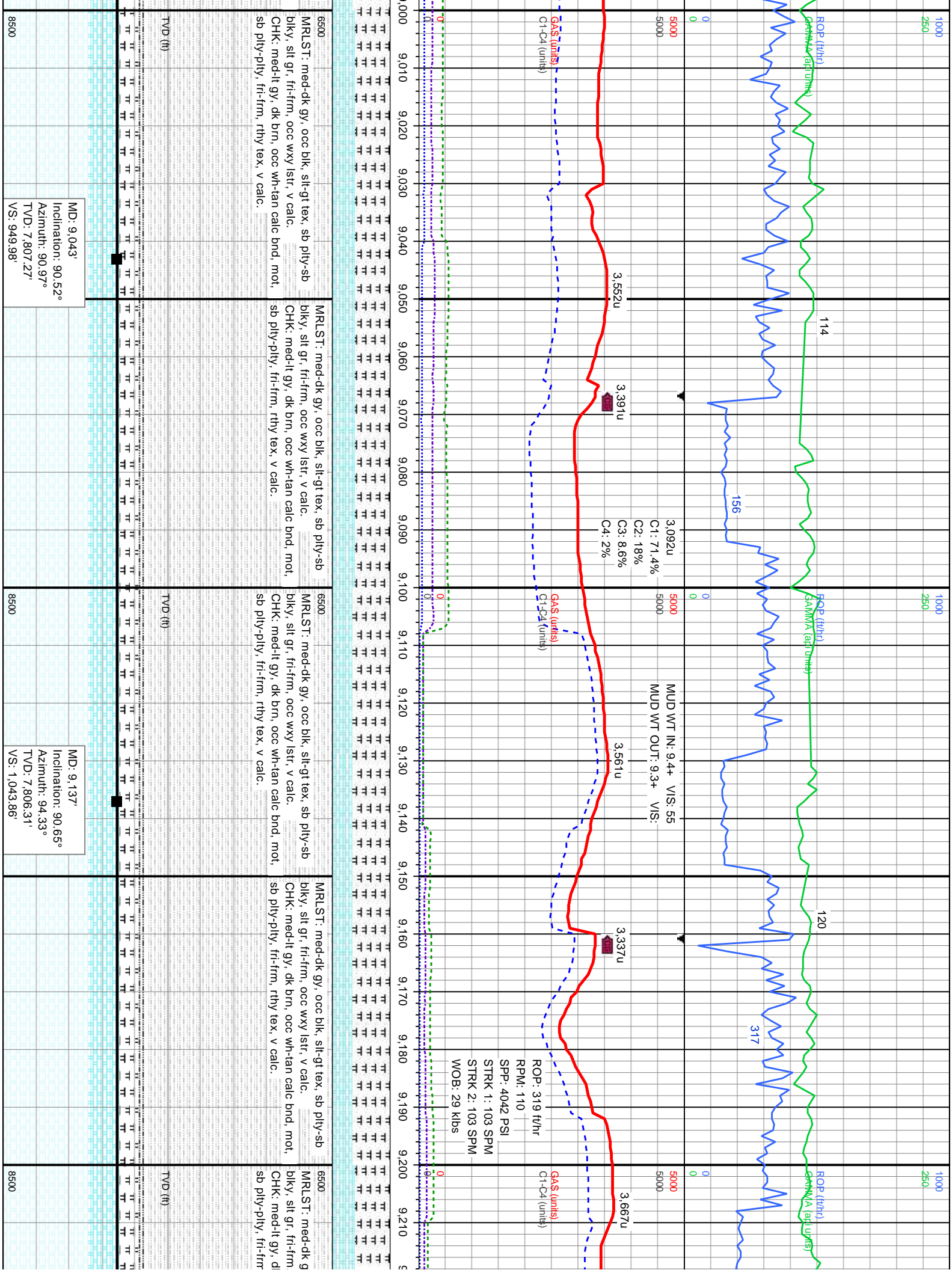
Inclination: 90.49°

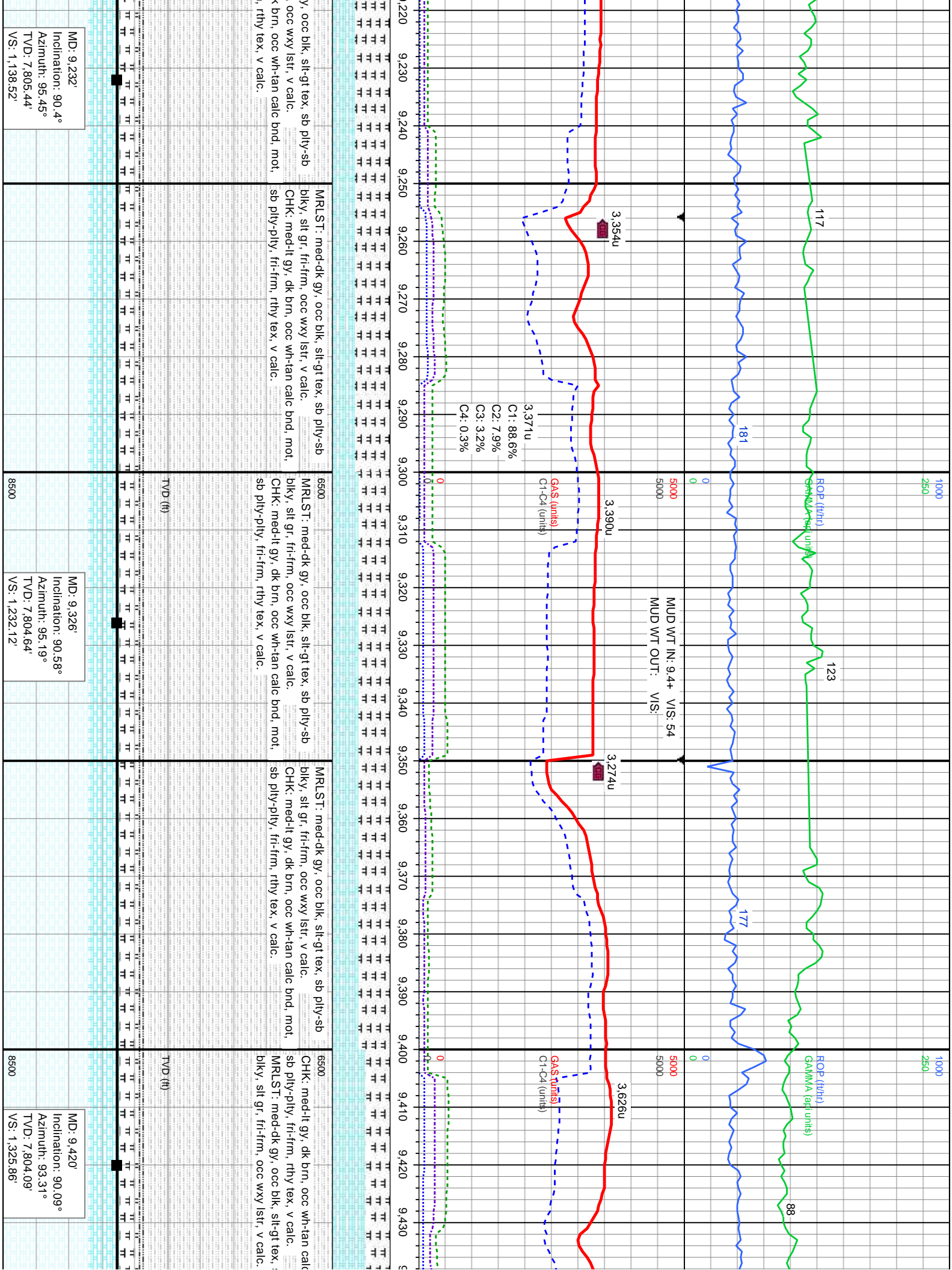
Azimuth: 87.23°

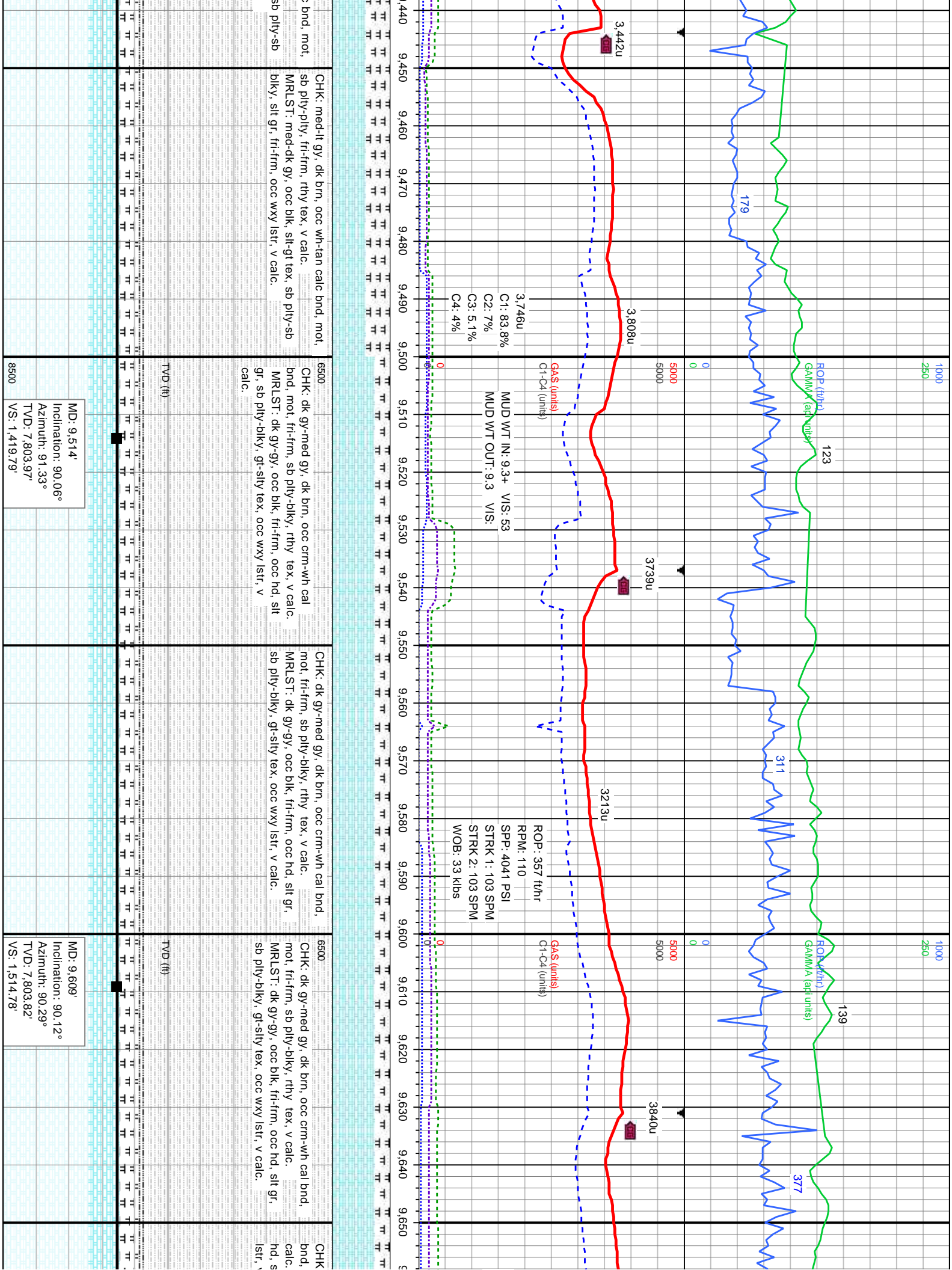
TV D: 7,808.95'

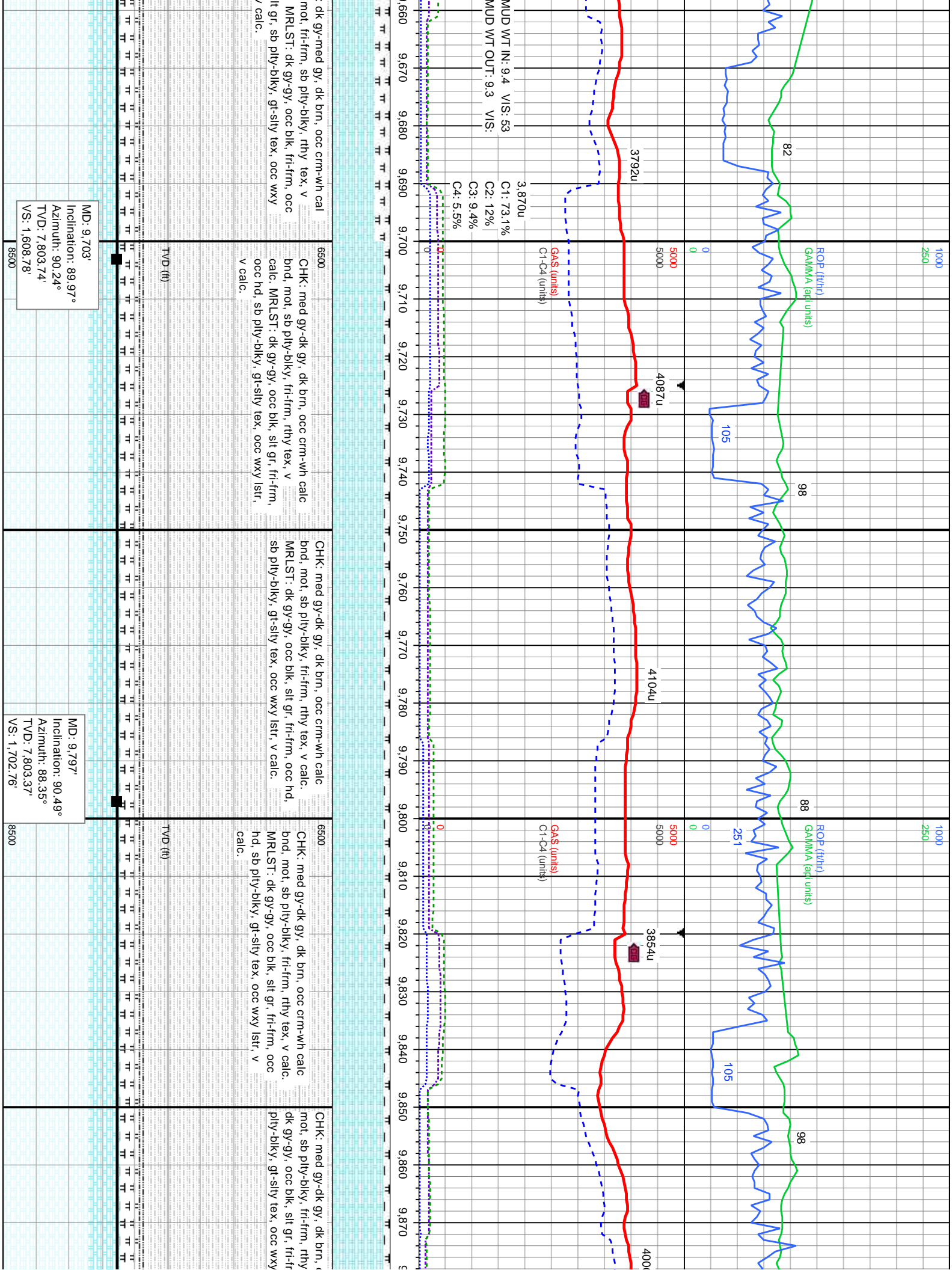
VS: 668.19'

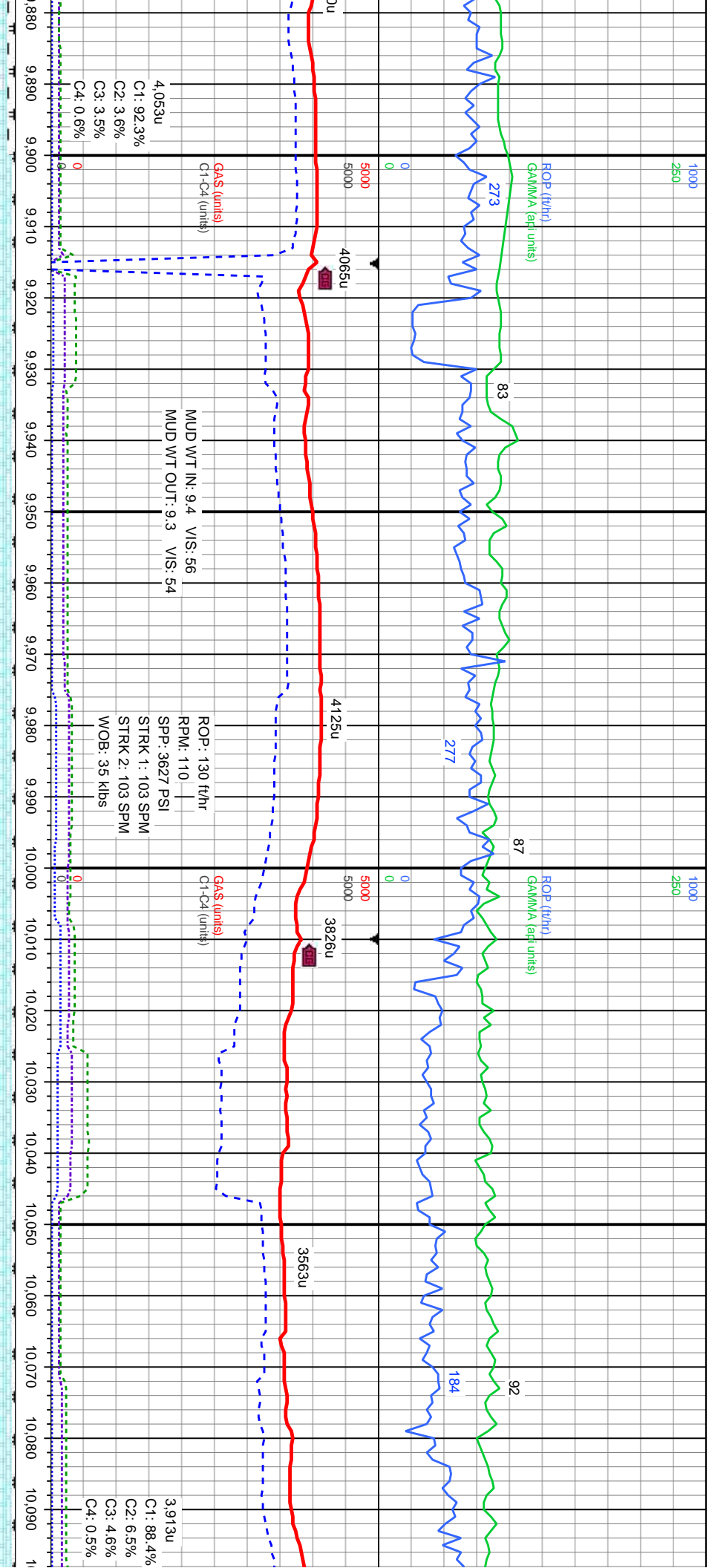




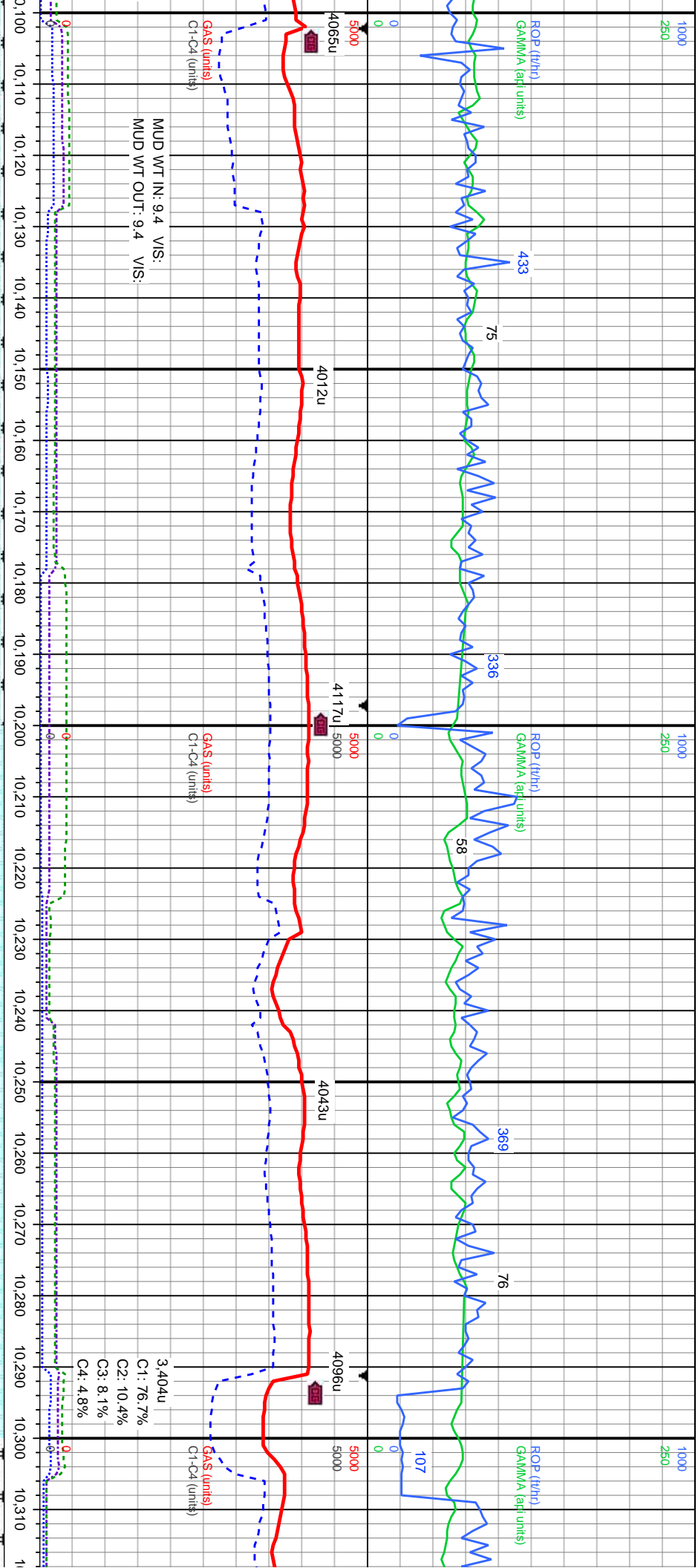




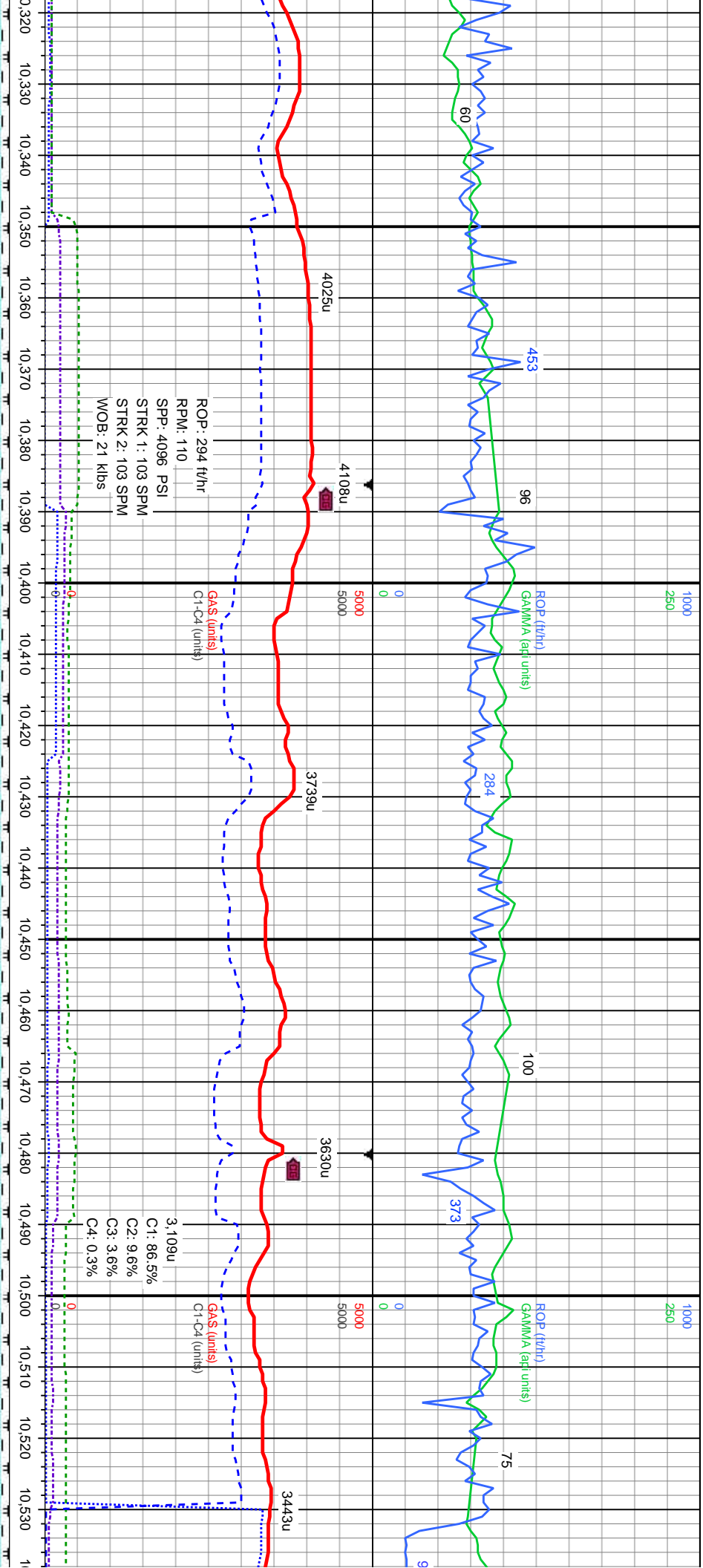




| | | | | | | | |
|--|--|------|--|---|------|--|--|
| occ crm-wh calc bnd. tex, v calc. MRLST: um, occ hd, sb lstr, v calc. | | 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd, mot, sb ply-biky, fri-frm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slt gr, fri-frm, occ hd, sb ply-biky, gr-sily tex, occ wxy lstr, v calc. | CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd, mot, sb ply-biky, fri-frm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slt gr, fri-frm, occ hd, sb ply-biky, gr-sily tex, occ wxy lstr, v calc. | 6500 | CHK: dk gy-med gy, dk brn, occ crm-wh cal bnd, mot, fri-frm, sb ply-biky, rthy tex, v calc. MRLST: dk gy-gy, occ blk, fri-frm, occ hd, slt gr, sb ply-biky, gr-sily tex, occ wxy lstr, v calc. wi scat inoc foss and tr Pyr. | CHK: dk gy-med gy, dk brn, occ crm-wh cal bnd, mot, fri-frm, sp ply-biky, rthy tex, v calc. MRLST: dk gy-gy, occ blk, fri-frm, occ hd, slt gr, sb ply-biky, gr-sily tex, occ wxy lstr, v calc. wi scat inoc foss and tr Pyr. |
| MD: 9.891' Inclination: 90.34° Azimuth: 86.29° TVD: 7.802.69' VS: 1.736.65' | | 8500 | TVD (ft) | | 8500 | TVD (ft) | |
| MD: 9.986' Inclination: 90.52° Azimuth: 86.77° TVD: 7.801.97' VS: 1.891.46' | | 8500 | TVD (ft) | | 8500 | TVD (ft) | |
| MD: 10.080' Inclination: 90.28° Azimuth: 88.17° TVD: 7.801.32' VS: 1.985.36' | | 8500 | TVD (ft) | | 8500 | TVD (ft) | |



| | | | | | | | | | | | | |
|----------|------|--|----------|------|--|----------|------|--|----------|------|--|------|
| P | | P | | P | | P | | P | | | | |
| 8500 | 6500 | CHK: dk gy-med gy, dk brn, occ crm-wh cal bnd, mot, fri-frn, sb pily-biky, rthy tex, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ hd, slt gr, sb pily-biky, gt-sily tex, occ wxy lstr, v calc. wi scat inoc foss and tr Pyr. | 8500 | 6500 | CHK: dk gy-med gy, dk brn, occ crm-wh cal bnd, mot, fri-frn, sb pily-biky, rthy tex, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ hd, slt gr, sb pily-biky, gt-sily tex, occ wxy lstr, v calc. wi scat inoc foss and tr Pyr. | 8500 | 6500 | CHK: dk gy-med gy, dk brn, occ crm-wh cal bnd, mot, fri-frn, sb pily-biky, rthy tex, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ hd, slt gr, sb pily-biky, gt-sily tex, occ wxy lstr, v calc. wi scat inoc foss and tr Pyr. | 8500 | 6500 | CHK: med gy-dk bnd, mot, sb pily MRLST: dk gy-gy hd, sb pily-biky, calc. | 8500 |
| TVD (ft) | | | TVD (ft) | | | TVD (ft) | | | TVD (ft) | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | </ |



gy, dk brn, occ crm-wh calc
biky, fri-frn, rthy tex, v calc,
, occ blk, sit gr, fri-frn, occ
gt-sily tex, occ wxy lstr, v

CHK: med gy-dk gy, dk brn, occ crm-wh calc
bnd, mot, sb pily-biky, fri-frn, rthy tex, v calc.
MRLST: dk gy-gy, occ blk, sit gr, fri-frn, occ
hd, sb pily-biky, gt-sily tex, occ wxy lstr, v
calc.

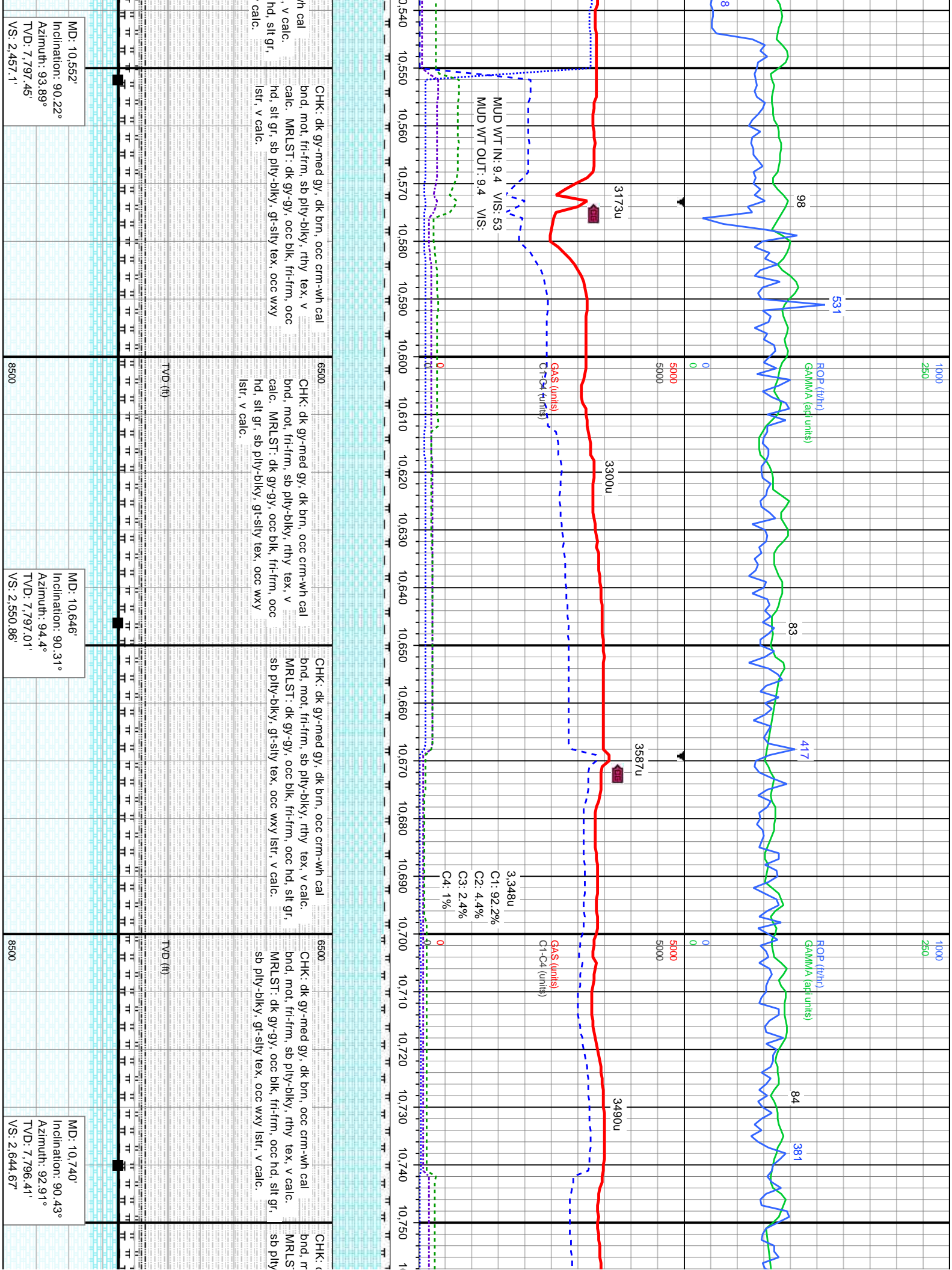
6500
CHK: med gy-dk gy, dk brn, occ crm-wh calc
bnd, mot, sb pily-biky, fri-frn, rthy tex, v
calc. MRLST: dk gy-gy, occ blk, sit gr,
fri-frn, occ hd, sb pily-biky, gt-sily tex, occ
wxy lstr, v calc.

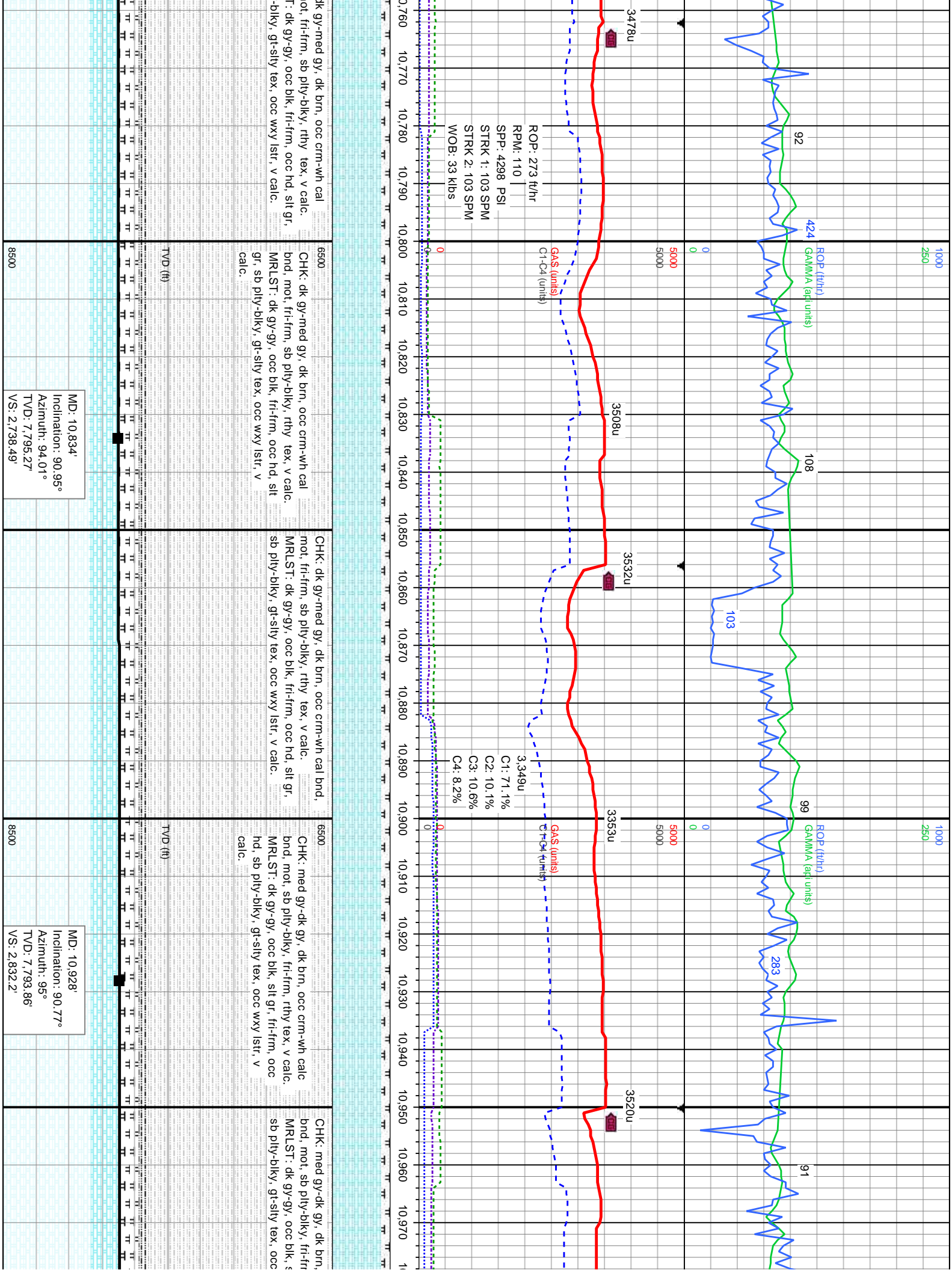
6500
CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd,
mot, sb pily-biky, fri-frn, rthy tex, v calc. MRLST:
dk gy-gy, occ blk, sit gr, fri-frn, occ hd, sb
pily-biky, gt-sily tex, occ wxy lstr, v calc.

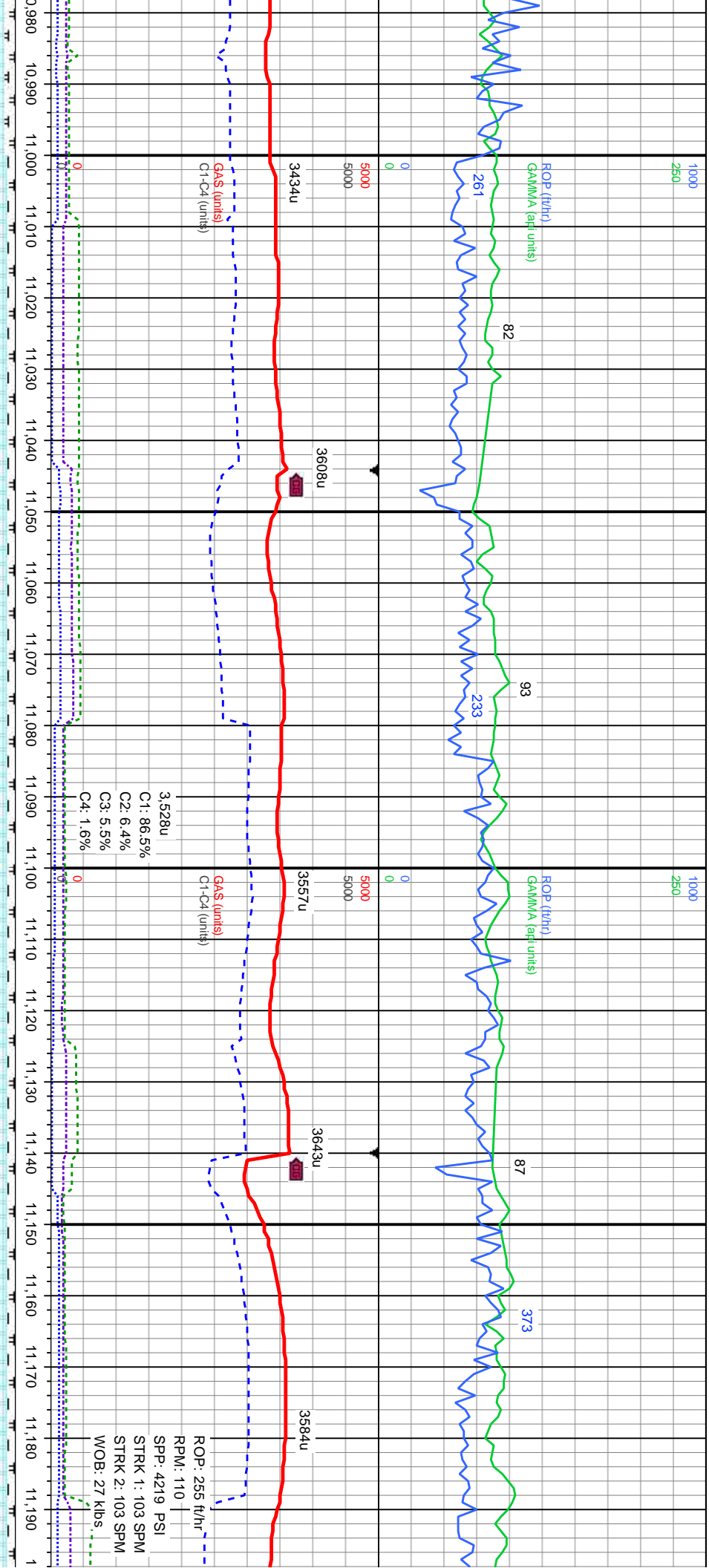
6500
CHK: dk gy-med gy, dk brn, occ crm-w
bnd, mot, fri-frn, sb pily-biky, rthy tex
MRLST: dk gy-gy, occ blk, fri-frn, occ
sb pily-biky, gt-sily tex, occ wxy lstr, v

MD: 10,363'
Inclination: 90.43°
Azimuth: 91.08°
TVD: 7,799.2'
VS: 2,268.3'

MD: 10,457'
Inclination: 90.74°
Azimuth: 92.61°
TVD: 7,798.24'
VS: 2,362.25'

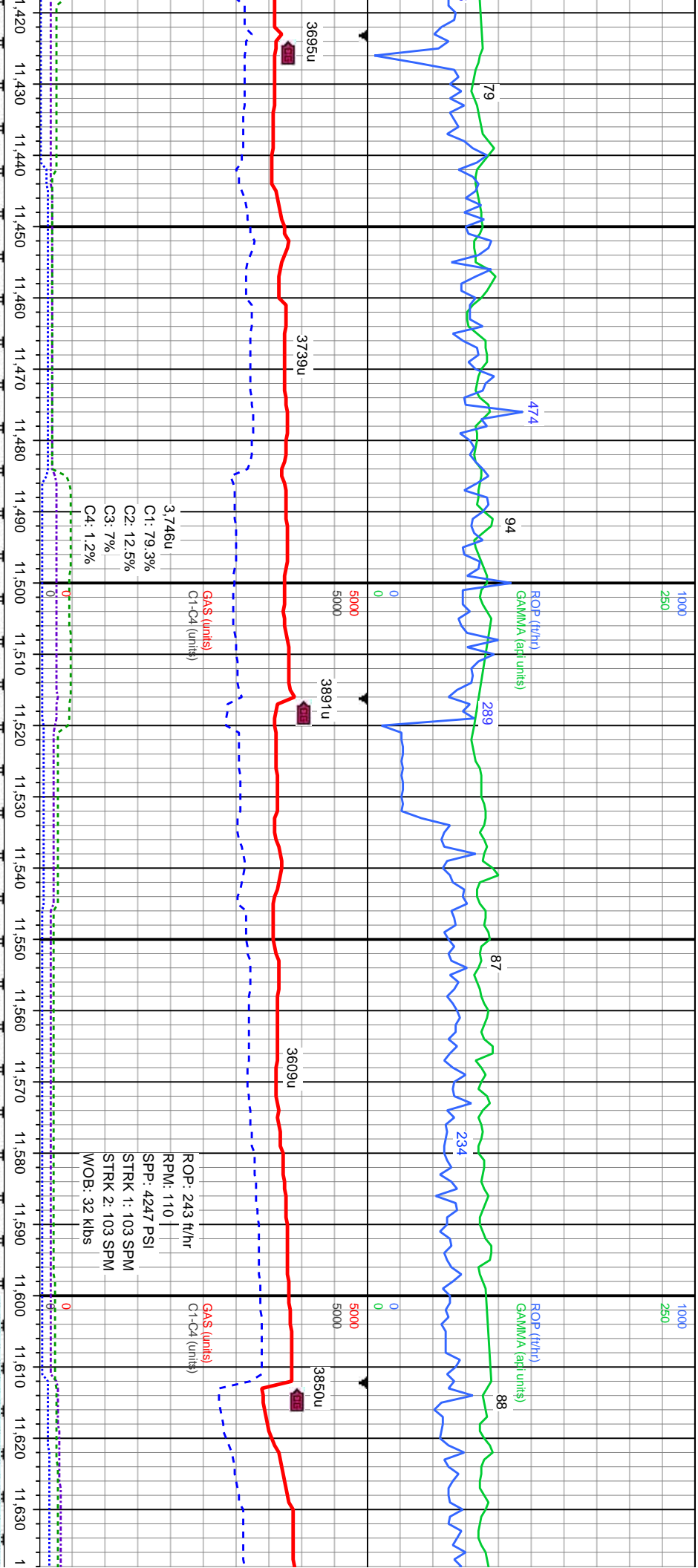






| | | | | |
|---|---|--|---|---|
| occ crm-wh calc n, rthy tex, v calc. slt gr, fri-firm, occ hd, wxy lstf, v calc. | 6500 CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd, mot, sb pily-blky, fri-firm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slt gr, fri-firm, occ hd, sb pily-blky, gt-sily tex, occ wxy lstf, v calc. | 6500 CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd, mot, sb pily-blky, fri-firm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slt gr, fri-firm, occ hd, sb pily-blky, gt-sily tex, occ wxy lstf, v calc. | 6500 CHK: dk gy-med gy, dk brn, occ crm-wh cal bnd, mot, fri-firm, sb pily-blky, rthy tex, v calc. MRLST: dk gy-gy, occ blk, fri-firm, occ hd, slt gr, sb pily-blky, gt-sily tex, occ wxy lstf, v calc. | 6500 CHK: dk gy-med gy, dk brn, occ crm-wh cal bnd, mot, fri-firm, sb pily-blky, rthy tex, v calc. MRLST: dk gy-gy, occ blk, fri-firm, occ hd, slt gr, sb pily-blky, gt-sily tex, occ wxy lstf, v calc. |
|---|---|--|---|---|

| | | | | | | | | | |
|--|--|--|--|--|---|--|--|--|--|
| MD: 11,023' Inclination: 90.62° Azimuth: 93.06° TVD: 7,792.71' VS: 2,926.96' | | | | | MD: 11,117' Inclination: 90.52° Azimuth: 93.1° TVD: 7,791.78' VS: 3,020.82' | | | | |
| TVD (ft) | | | | | TVD (ft) | | | | |



gy, dk brn, occ crm-wh cal brnd,
y-bkly, rthy tex, v calc.
occ blk, fri-frn, occ hd, slt gr,
y tex, occ wxy lstr, v calc.

CHK: dk gy-med gy, dk brn, occ crm-wh cal
brnd, mot, fri-frn, sb ply-bkly, rthy tex, v
calc. MRLST: dk gy-gy, occ blk, fri-frn, occ
hd, slt gr, sb ply-bkly, gt-sly tex, occ wxy
lstr, v calc.

6500
CHK: dk gy-med gy, dk brn, occ crm-wh cal
brnd, mot, fri-frn, sb ply-bkly, rthy tex, v calc.
MRLST: dk gy-gy, occ blk, fri-frn, occ hd, slt
gr, sb ply-bkly, gt-sly tex, occ wxy lstr, v
calc. wi scat lnoo foss.

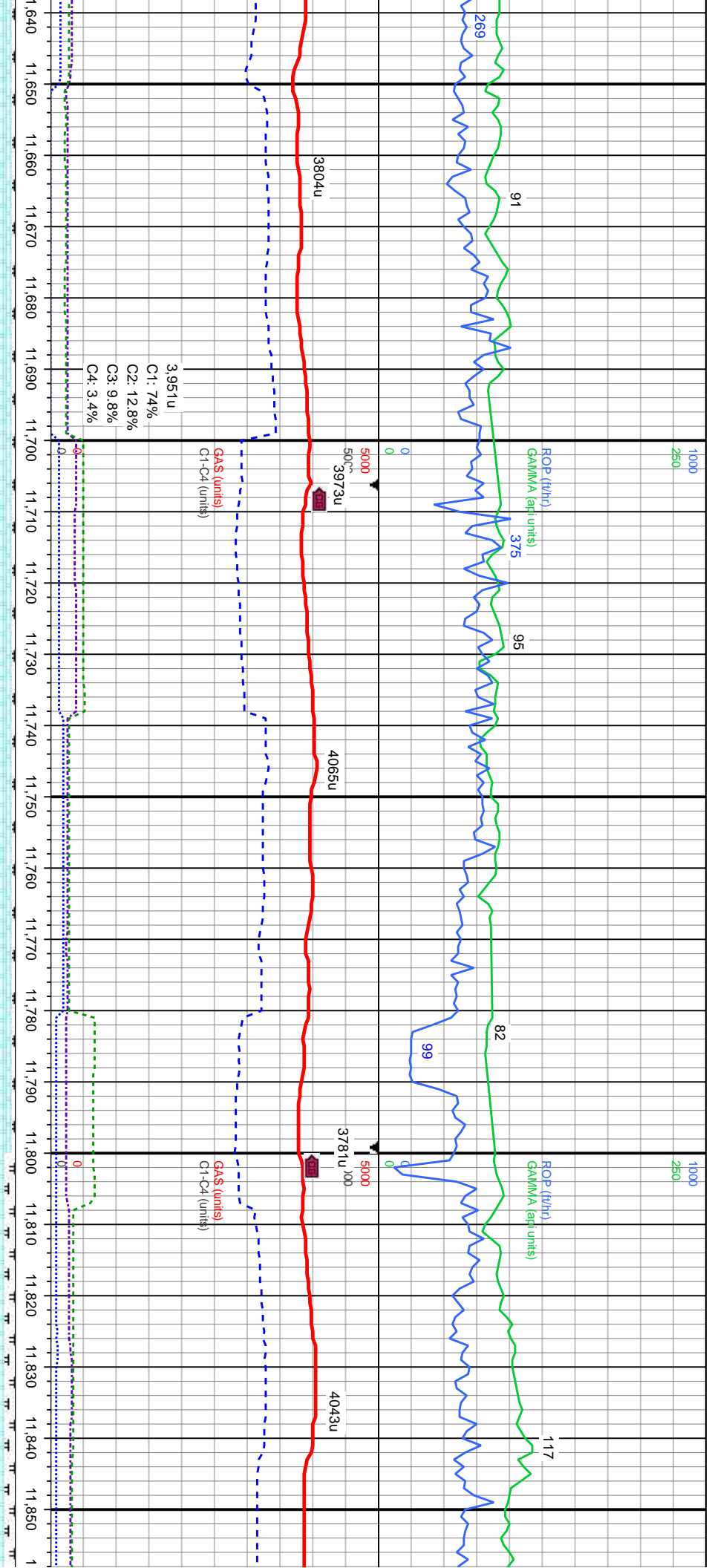
CHK: dk gy-med gy, dk brn, occ crm-wh cal
brnd, mot, fri-frn, sb ply-bkly, rthy tex, v
calc. MRLST: dk gy-gy, occ blk, fri-frn, occ
hd, slt gr, sb ply-bkly, gt-sly tex, occ wxy
lstr, v calc. wi scat lnoo foss.

6500
CHK: med gy-dk gy, dk brn, occ crm-w
brnd, mot, sb ply-bkly, fri-frn, rthy tex,
MRLST: dk gy-gy, occ blk, slt gr, fri-frn
hd, sb ply-bkly, gt-sly tex, occ wxy lstr
calc.

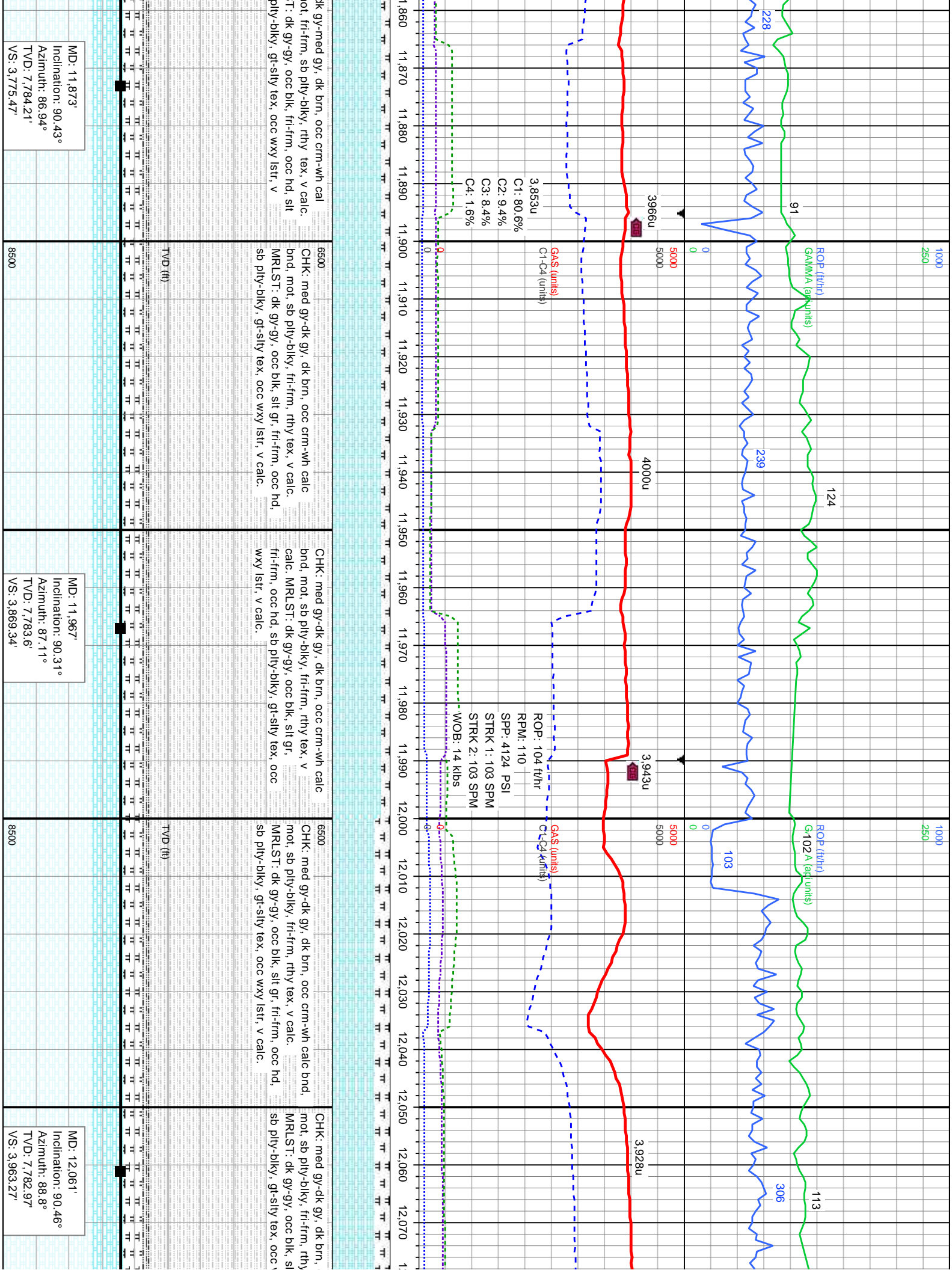
MD: 11,495'
Inclination: 90.55°
Azimuth: 86.69°
TVD: 7,787.39'
VS: 3,398.16'

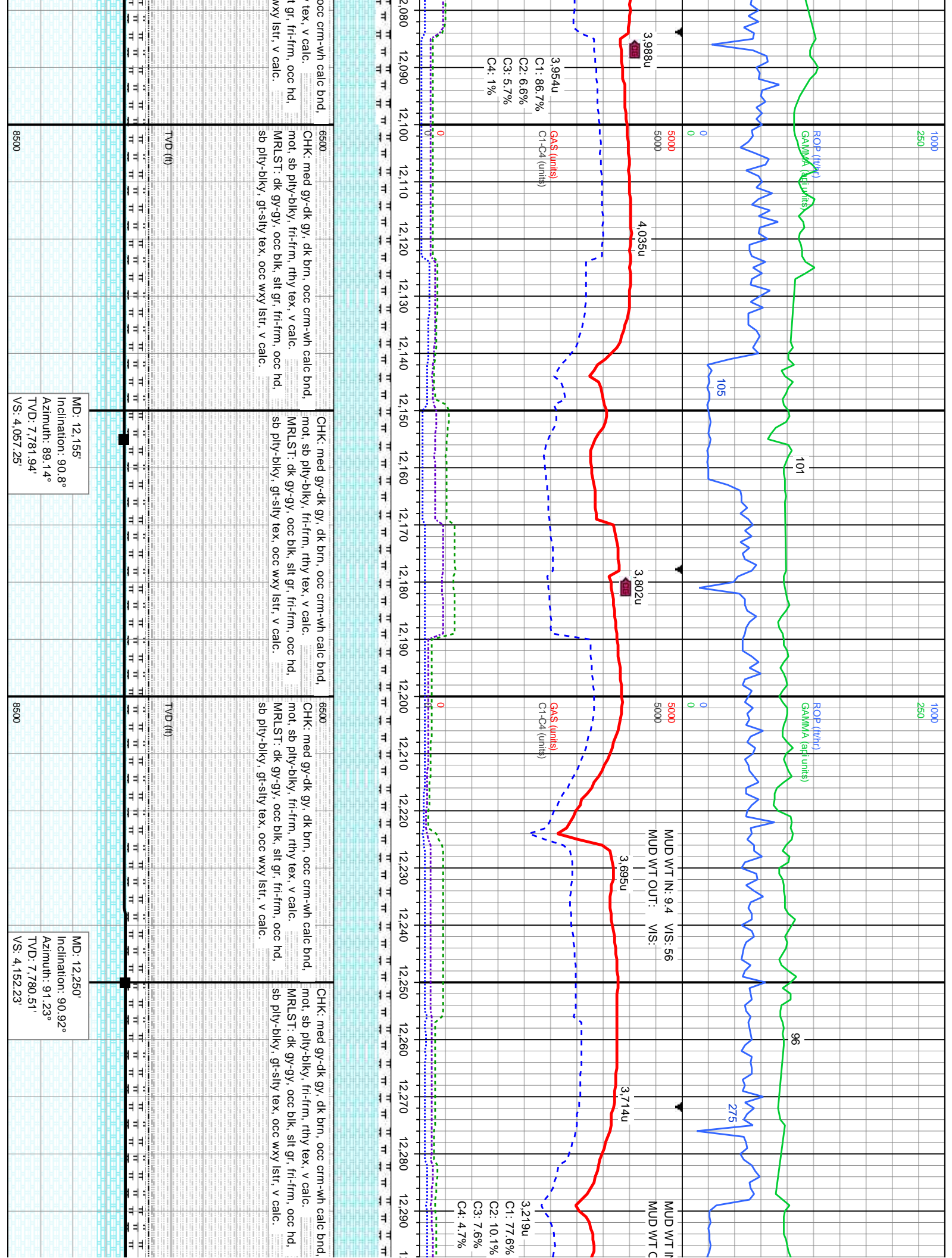
TVD (ft)

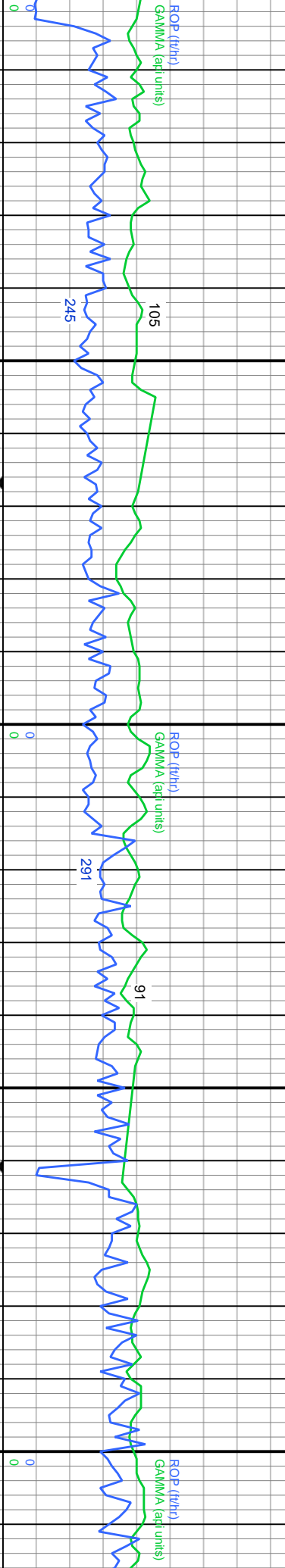
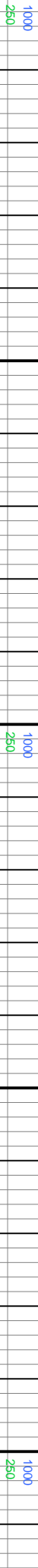
MD: 11,590'
Inclination: 90.43°
Azimuth: 85.71°
TVD: 7,786.58'
VS: 3,492.94'



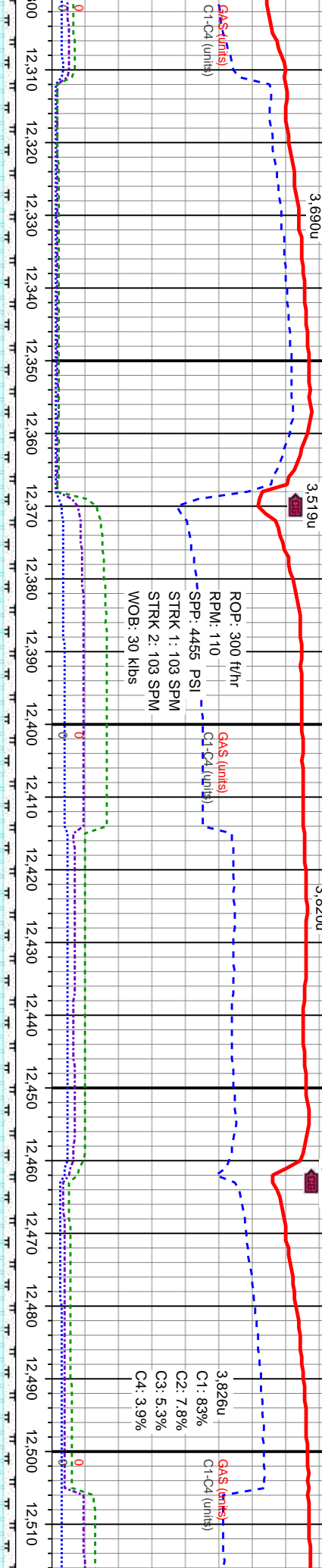
| | | | | | | | | | | | |
|--------------------------------------|--|---|----------|--|------|---|----------|---|------|--|---|
| h calc v calc. n, occ fr, v | CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd, mot, sb ply-biky, fri-frm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slit gr, fri-frm, occ hd, sb ply-biky, gt-sily tex, occ wxy lstr, v calc. | 6500 CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd, mot, sb ply-biky, fri-frm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slit gr, fri-frm, occ hd, sb ply-biky, gt-sily tex, occ wxy lstr, v calc. wi scat Inoc foss. | TVD (ft) | MD: 11,684' Inclination: 90.49° Azimuth: 88.38° TVD: 7,785.83' VS: 3,586.79' | 8500 | 6500 CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd, mot, sb ply-biky, fri-frm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slit gr, fri-frm, occ hd, sb ply-biky, gt-sily tex, occ wxy lstr, v calc. wi scat Inoc foss. | TVD (ft) | MD: 11,778' Inclination: 90.52° Azimuth: 85.97° TVD: 7,785' VS: 3,680.66' | 8500 | 6500 CHK: dk gy-med gy, dk brn, occ crm-wh cal bnd, mot, fri-frm, sb ply-biky, rthy tex, v calc. MRLST: dk gy-gy, occ blk, fri-frm, occ hd, slit gr, sb ply-biky, gt-sily tex, occ wxy lstr, v calc. | CHK: c bnd, r MRLST: gr, sb calc. |
|--------------------------------------|--|---|----------|--|------|---|----------|---|------|--|---|



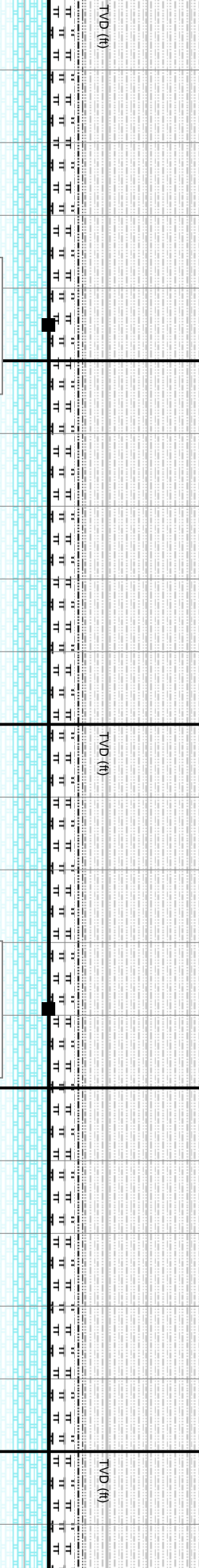




IN: 9.4 VIS: 56
OUT: VS:

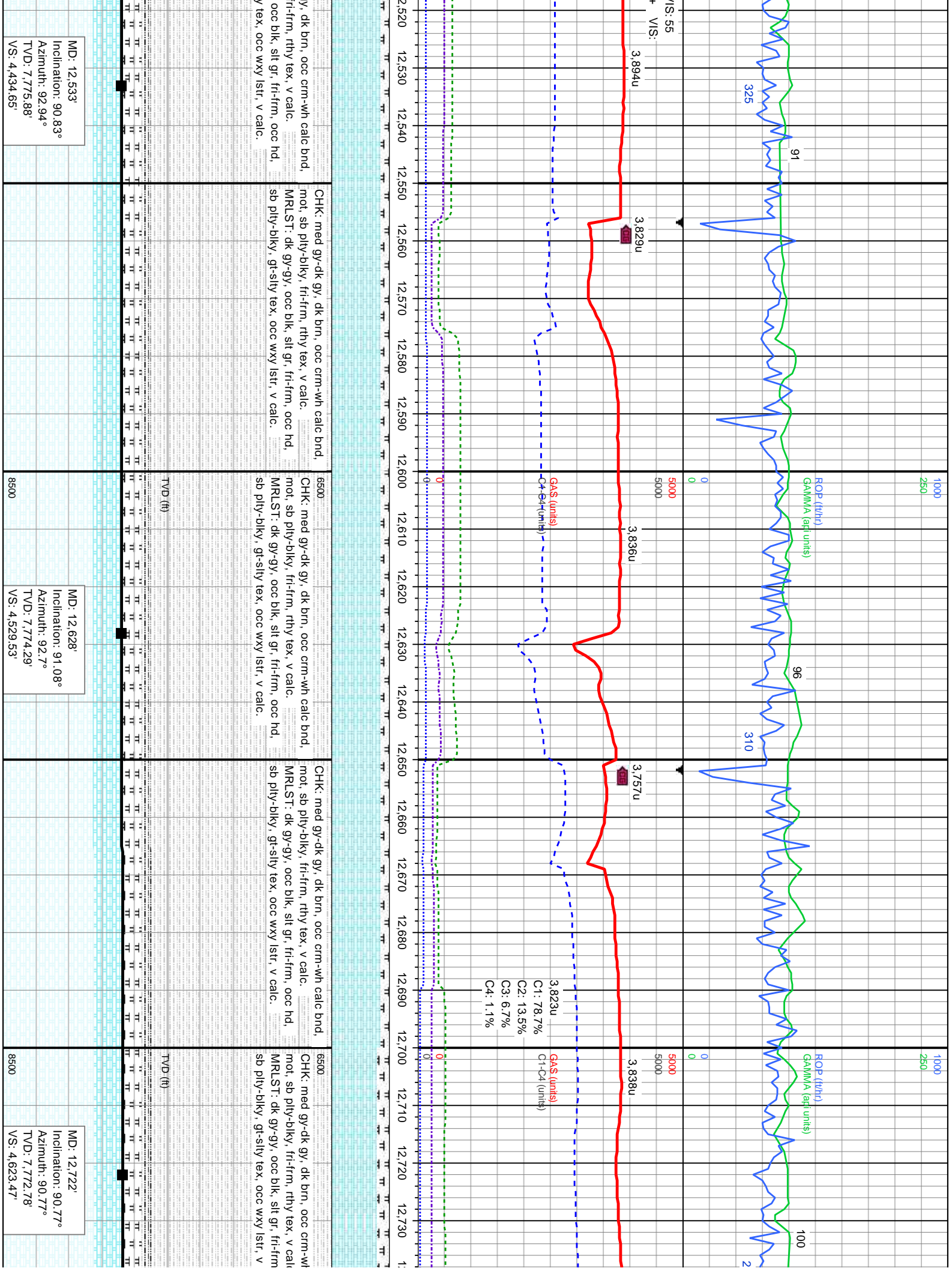


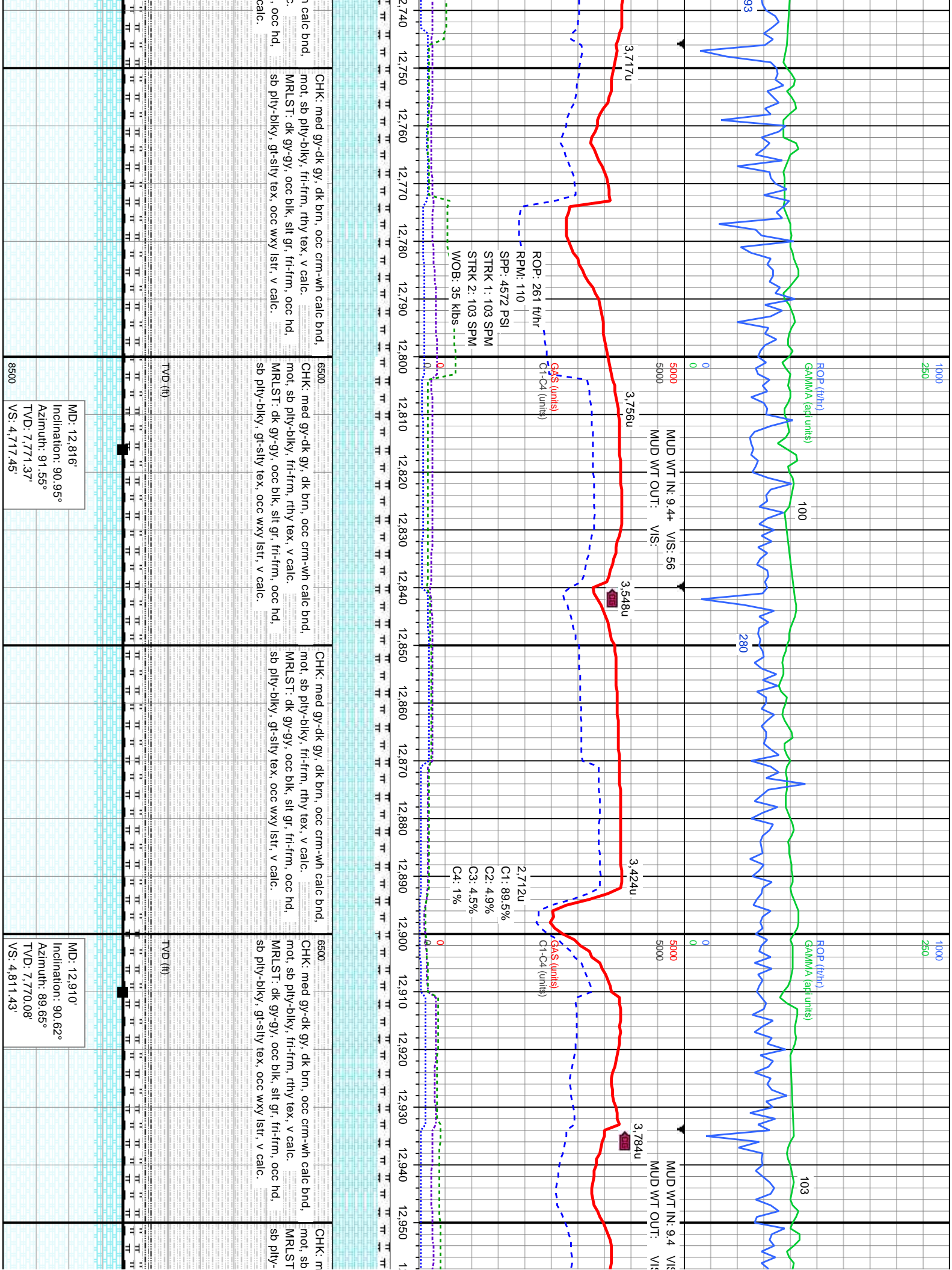
6500
CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd.
mot, sb pily-biky, fri-frn, rthy tex, v calc.
MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd.
sb pily-biky, gt-sily tex, occ wxy lst, v calc.

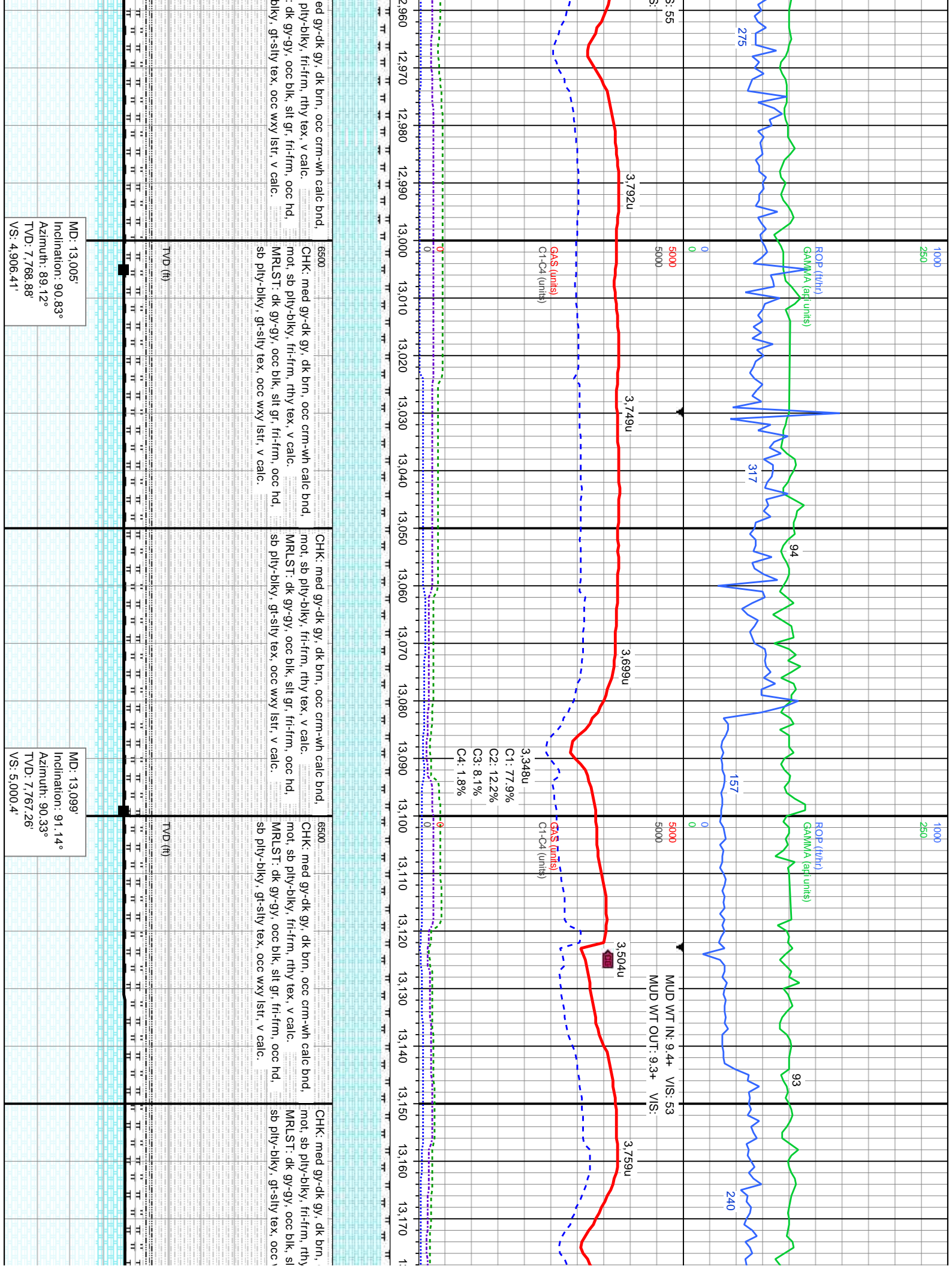


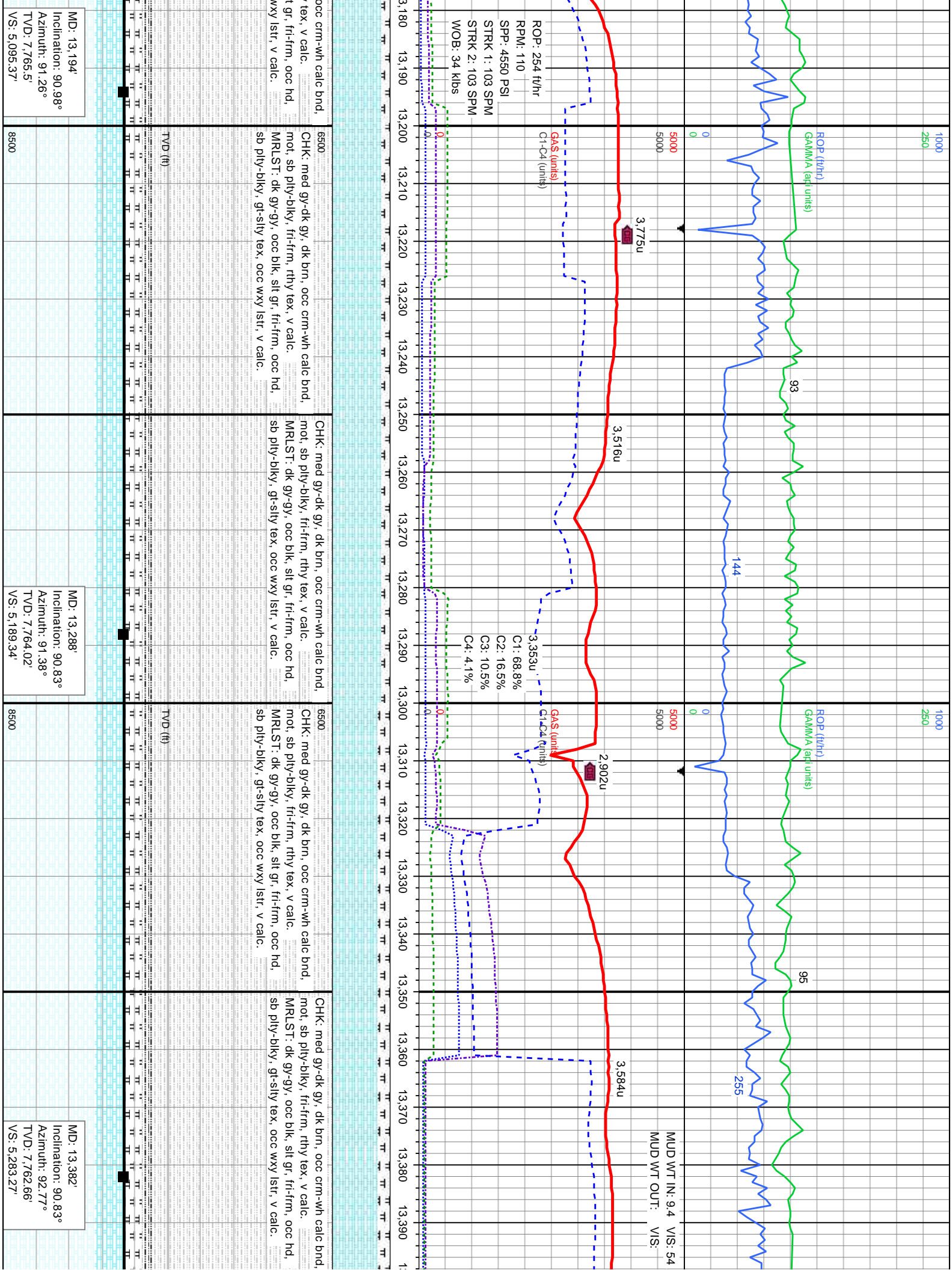
MD: 12,345'
Inclination: 90.83°
Azimuth: 93.82°
TVD: 7,779.06
VS: 4,247.12

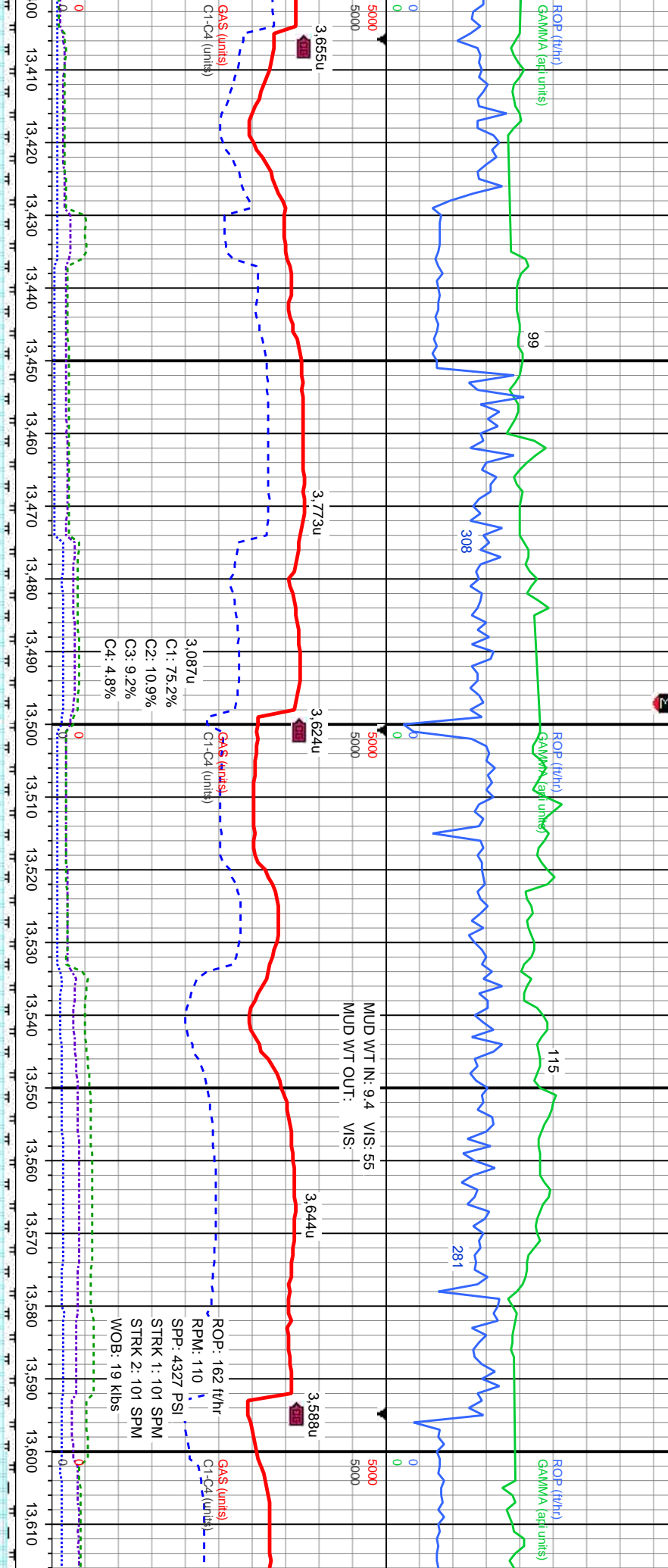
MD: 12,439'
Inclination: 91.11°
Azimuth: 94.55°
TVD: 7,777.47'
VS: 4,340.87'







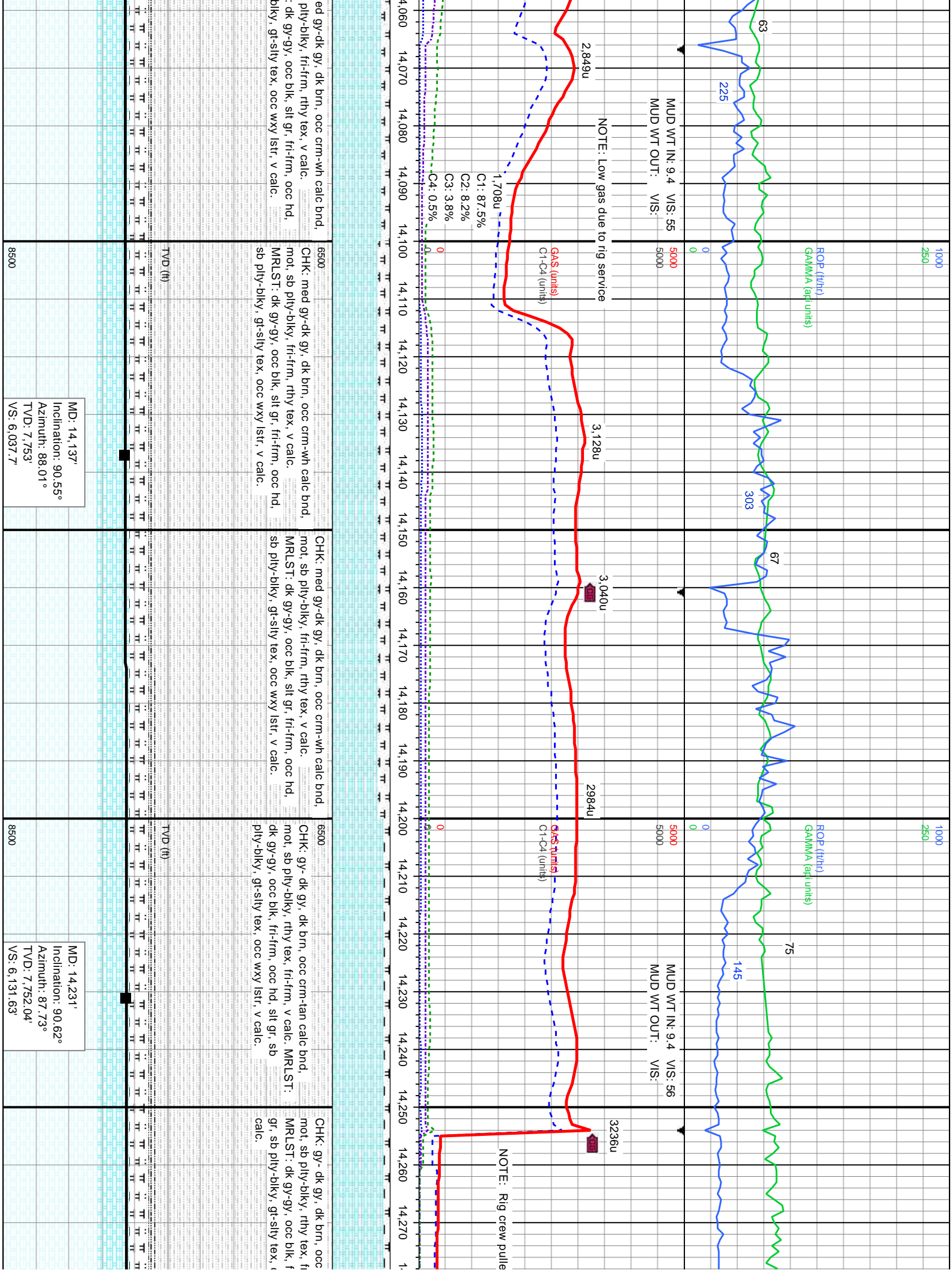




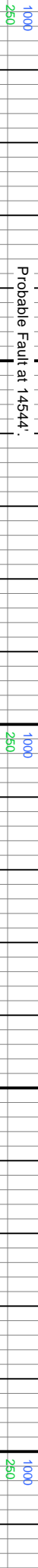
| | | | | | | | |
|----------|---|----------|---|----------|---|----------|---|
| 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd. mot, sb pily-biky, fri-frn, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd. sb pily-biky, gt-sily tex, occ wxy lst, v calc. | 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd. mot, sb pily-biky, fri-frn, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd. sb pily-biky, gt-sily tex, occ wxy lst, v calc. | 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd. mot, sb pily-biky, fri-frn, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd. sb pily-biky, gt-sily tex, occ wxy lst, v calc. | 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh calc bnd. mot, sb pily-biky, fri-frn, rthy tex, v calc. MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd. sb pily-biky, gt-sily tex, occ wxy lst, v calc. |
| TVD (ft) | | TVD (ft) | | TVD (ft) | | TVD (ft) | |
| 8500 | | 8500 | | 8500 | | 8500 | |

MD: 13,477'
Inclination: 90.58°
Azimuth: 92.08°
TVD: 7,761.49'
VS: 5,378.18'

MD: 13,571'
Inclination: 90.68°
Azimuth: 89.93°
TVD: 7,760.45'
VS: 5,472.15'



Probable Fault at 14544'.



ROP (ft/hr)
GAMMA (api units)

GAS (units)
C1-C4 (units)

4087u
3987u
4083u
4103u

4.165u
C1: 86.9%
C2: 7%
C3: 5.1%
C4: 1%

B

B

6500
CHK: gy- dk gy, dk brn, occ crm-tan calc bnd, mot, sb pty-biky, rthy tex, fri-frn, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ nd, slt gr, sb pty-biky, gt-sily tex, occ wxy lstr, v calc.
lstr, v calc.

6500
CHK: gy- dk gy, dk brn, occ crm-tan calc bnd, mot, sb pty-biky, rthy tex, fri-frn, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ nd, slt gr, sb pty-biky, gt-sily tex, occ wxy lstr, v calc. wi tr Bent.

6500
CHK: gy- dk gy, dk brn, occ crm-tan calc bnd, mot, sb pty-biky, rthy tex, fri-frn, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ nd, slt gr, sb pty-biky, gt-sily tex, occ wxy lstr, v calc. wi tr Bent.

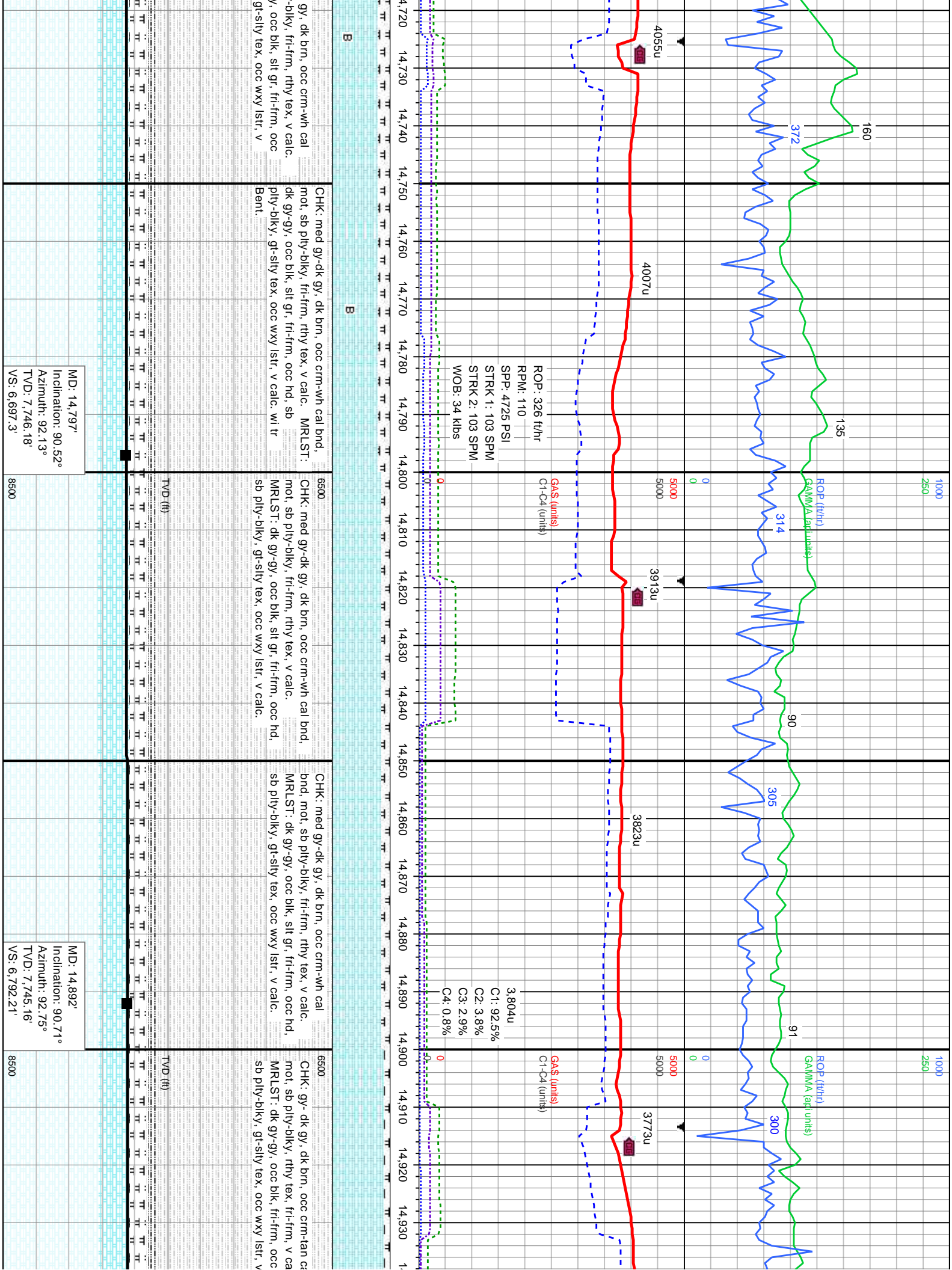
6500
CHK: med gy-dk bnd, mot, sb pty MRLST: dk gy-g nd, sb pty-biky, calc. wi tr Bent.

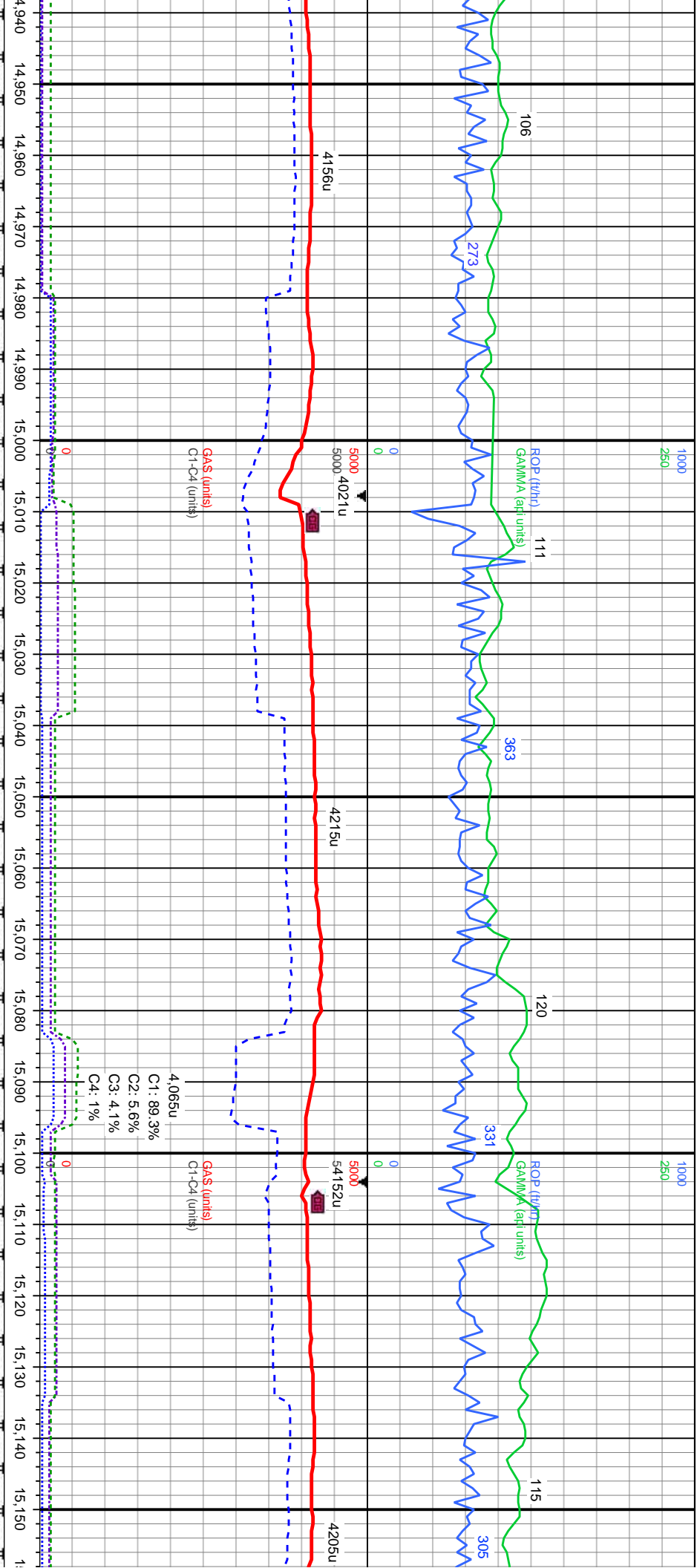
TV D (ft)

MD: 14,514'
Inclination: 90.34°
Azimuth: 91.86°
TVD: 7,749.07'
VS: 6,414.52'

MD: 14,608'
Inclination: 90.68°
Azimuth: 92.36°
TVD: 7,748.24'
VS: 6,508.46'

MD: 14,703'
Inclination: 90.65°
Azimuth: 92.42°
TVD: 7,747.14'
VS: 6,603.37'





CHK: gy- dk gy, dk brn, occ crm-tan calc bnd, mot, sb pily-biky, rthy tex, fri-frm, v calc. MRLST: dk gy-gy, occ blk, fri-frm, occ hd, silt gr, sb pily-biky, gt-sily tex, occ wxy lstr, v calc. calc.

CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, mot, sb pily-biky, fri-frm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, silt gr, fri-frm, occ hd, sb pily-biky, gt-sily tex, occ wxy lstr, v calc.

CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, mot, sb pily-biky, fri-frm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, silt gr, fri-frm, occ hd, sb pily-biky, gt-sily tex, occ wxy lstr, v calc.

CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, mot, sb pily-biky, fri-frm, rthy tex, v calc. MRLST: dk gy-gy, occ blk, silt gr, fri-frm, occ hd, sb pily-biky, gt-sily tex, occ wxy lstr, v calc.

CHK: bnd, calc. fri-fr wxy

MD: 14,986'
Inclination: 90.55°
Azimuth: 92.63°
TVD: 7,744.12'
VS: 6,886.11'

TVD (ft)

TVD (ft)

TVD (ft)

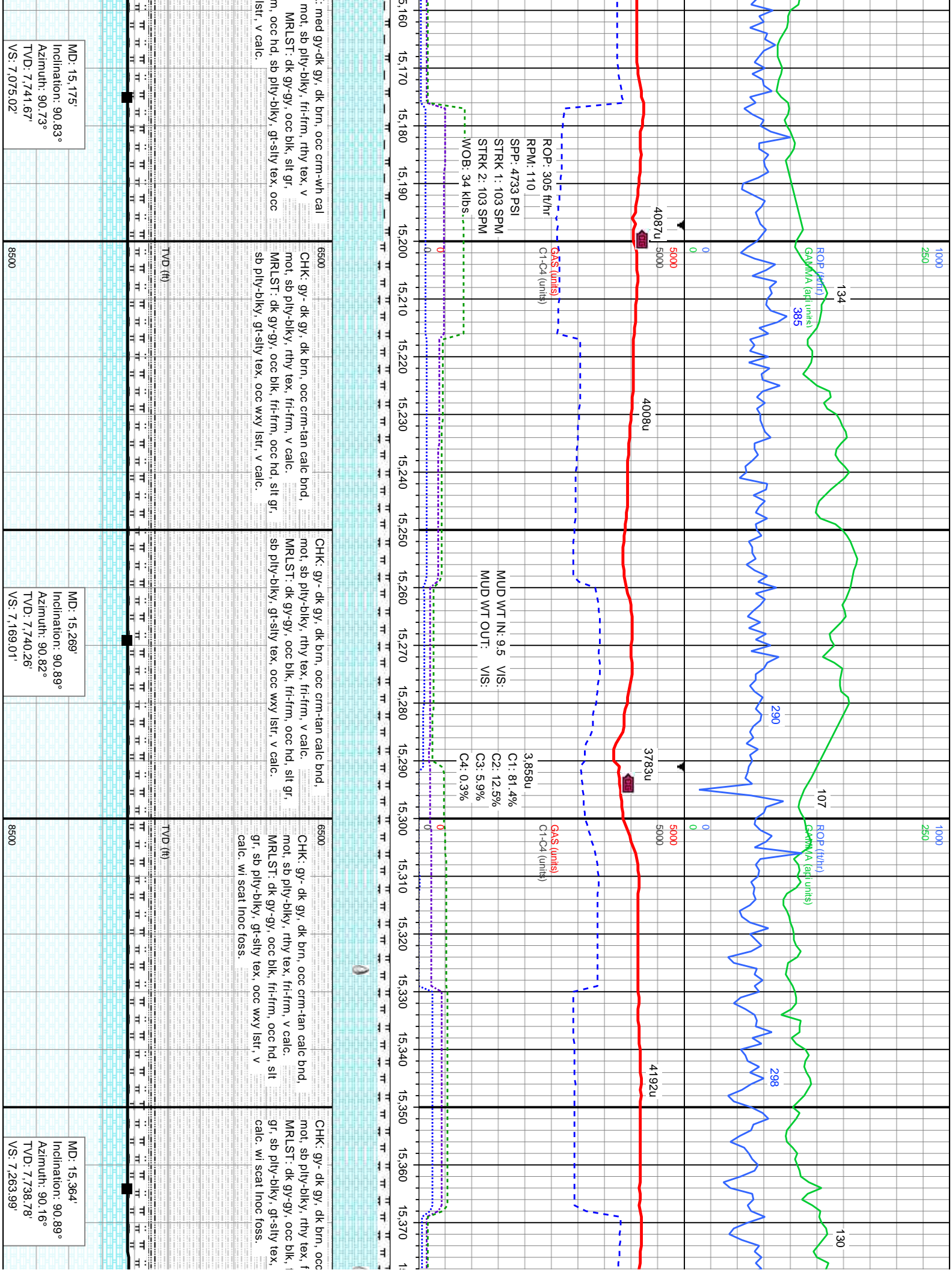
TVD (ft)

MD: 14,986'
Inclination: 90.55°
Azimuth: 92.63°
TVD: 7,744.12'
VS: 6,886.11'

8500

MD: 15,081'
Inclination: 90.8°
Azimuth: 91.27°
TVD: 7,743'
VS: 6,981.05'

8500



: med gy-dk gy, dk brn, occ crm-wh cal
mot, sb ply-biky, fri-firm, rthy tex, v
MRLST: dk gy-gy, occ blk, silt gr,
m, occ hd, sb ply-biky, gt-sily tex, occ
lstr, v calc.

6500
CHK: gy-dk gy, dk brn, occ crm-tan calc bnd,
mot, sb ply-biky, rthy tex, fri-firm, v calc.
MRLST: dk gy-gy, occ blk, fri-firm, occ hd, silt gr,
sb ply-biky, gt-sily tex, occ wxy lstr, v calc.

6500
CHK: gy-dk gy, dk brn, occ crm-tan calc bnd,
mot, sb ply-biky, rthy tex, fri-firm, v calc.
MRLST: dk gy-gy, occ blk, fri-firm, occ hd, silt gr,
sb ply-biky, gt-sily tex, occ wxy lstr, v calc.

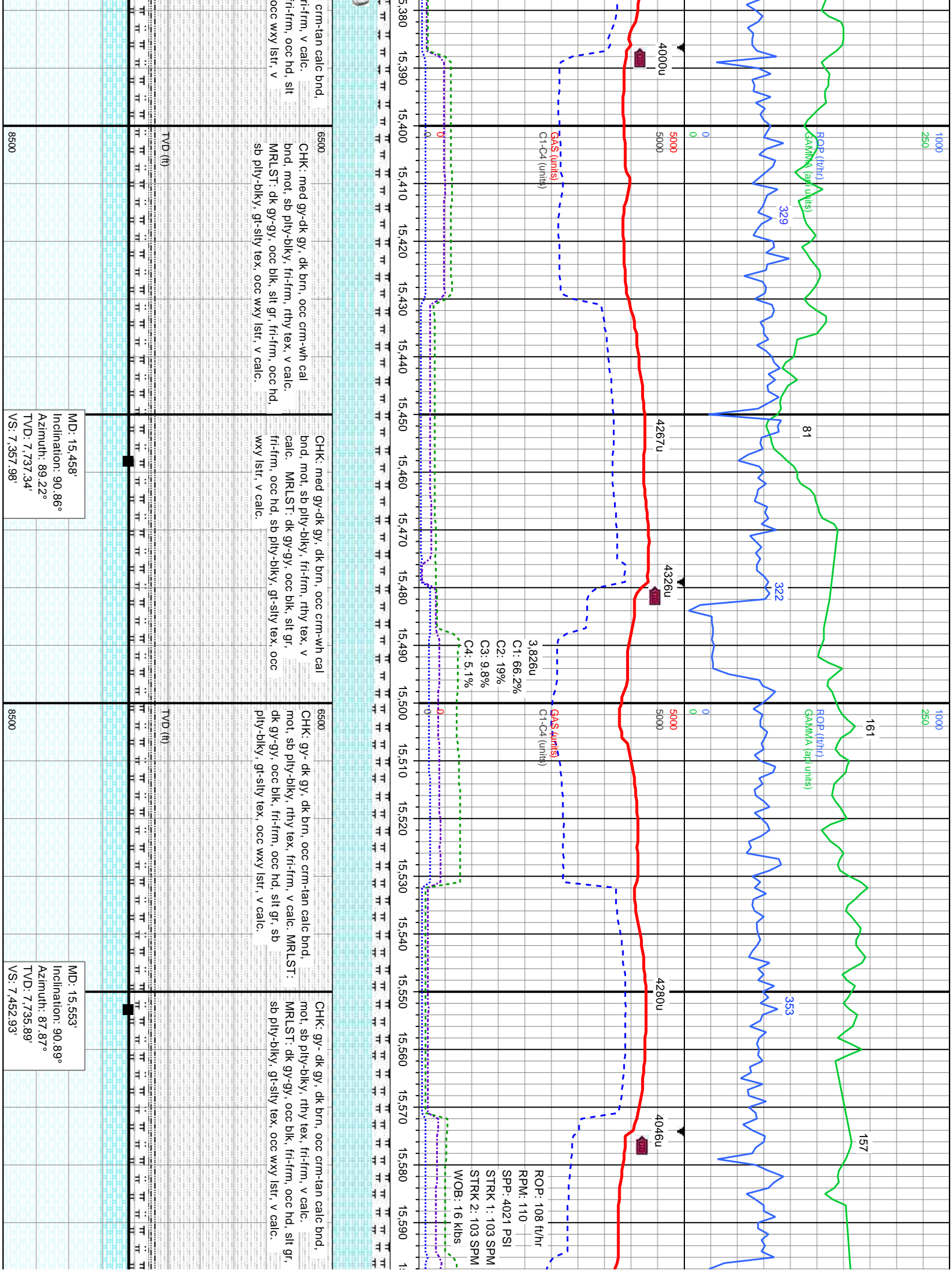
6500
CHK: gy-dk gy, dk brn, occ crm-tan calc bnd,
mot, sb ply-biky, rthy tex, fri-firm, v calc.
MRLST: dk gy-gy, occ blk, fri-firm, occ hd, silt
gr, sb ply-biky, gt-sily tex, occ wxy lstr, v
calc, wi scat inoc foss.

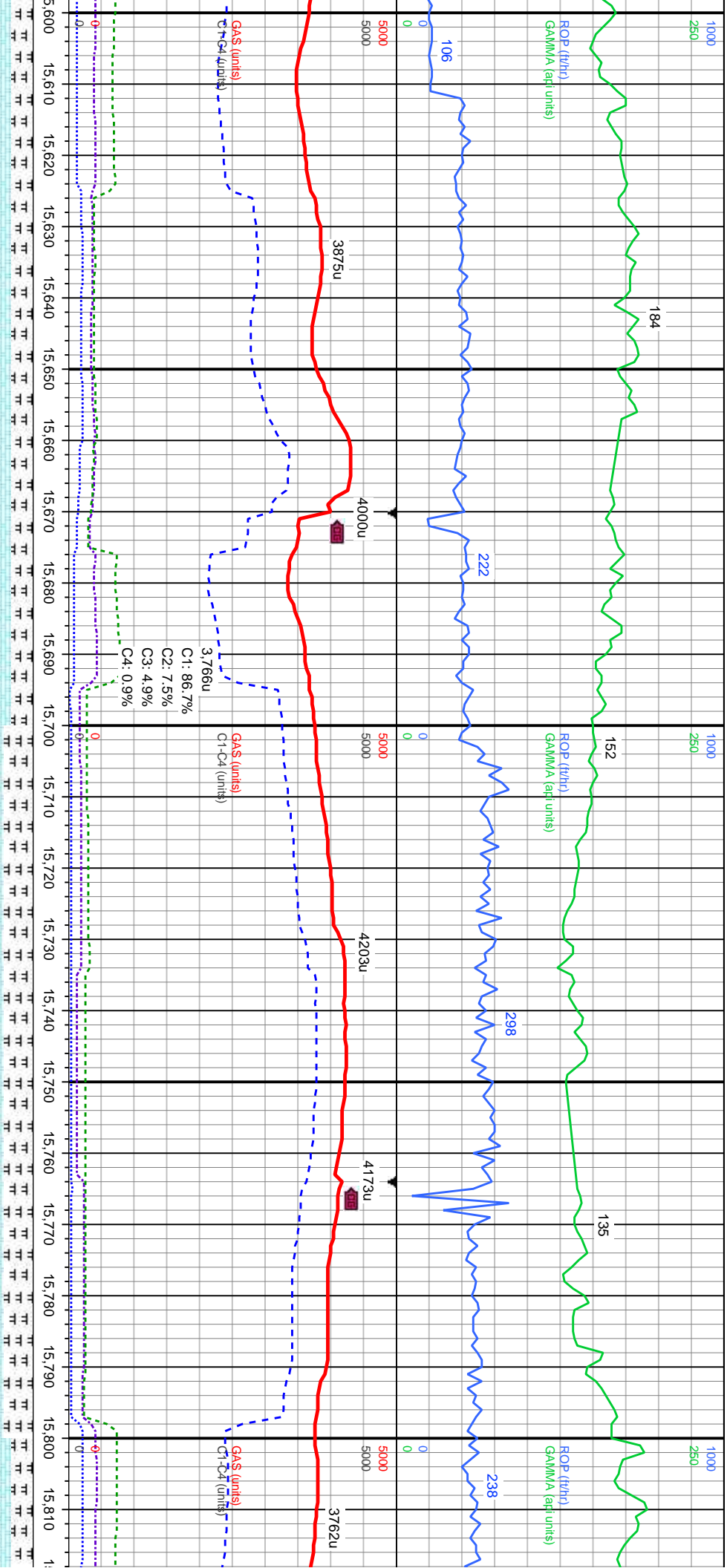
6500
CHK: gy-dk gy, dk brn, occ
mot, sb ply-biky, rthy tex, f
MRLST: dk gy-gy, occ blk, f
gr, sb ply-biky, gt-sily tex,
calc, wi scat inoc foss.

MD: 15,175'
Inclination: 90.83°
Azimuth: 90.73°
TVD: 7,741.67'
VS: 7,075.02'

MD: 15,269'
Inclination: 90.89°
Azimuth: 90.82°
TVD: 7,740.26'
VS: 7,169.01'

MD: 15,364'
Inclination: 90.89°
Azimuth: 90.16°
TVD: 7,738.78'
VS: 7,263.99'

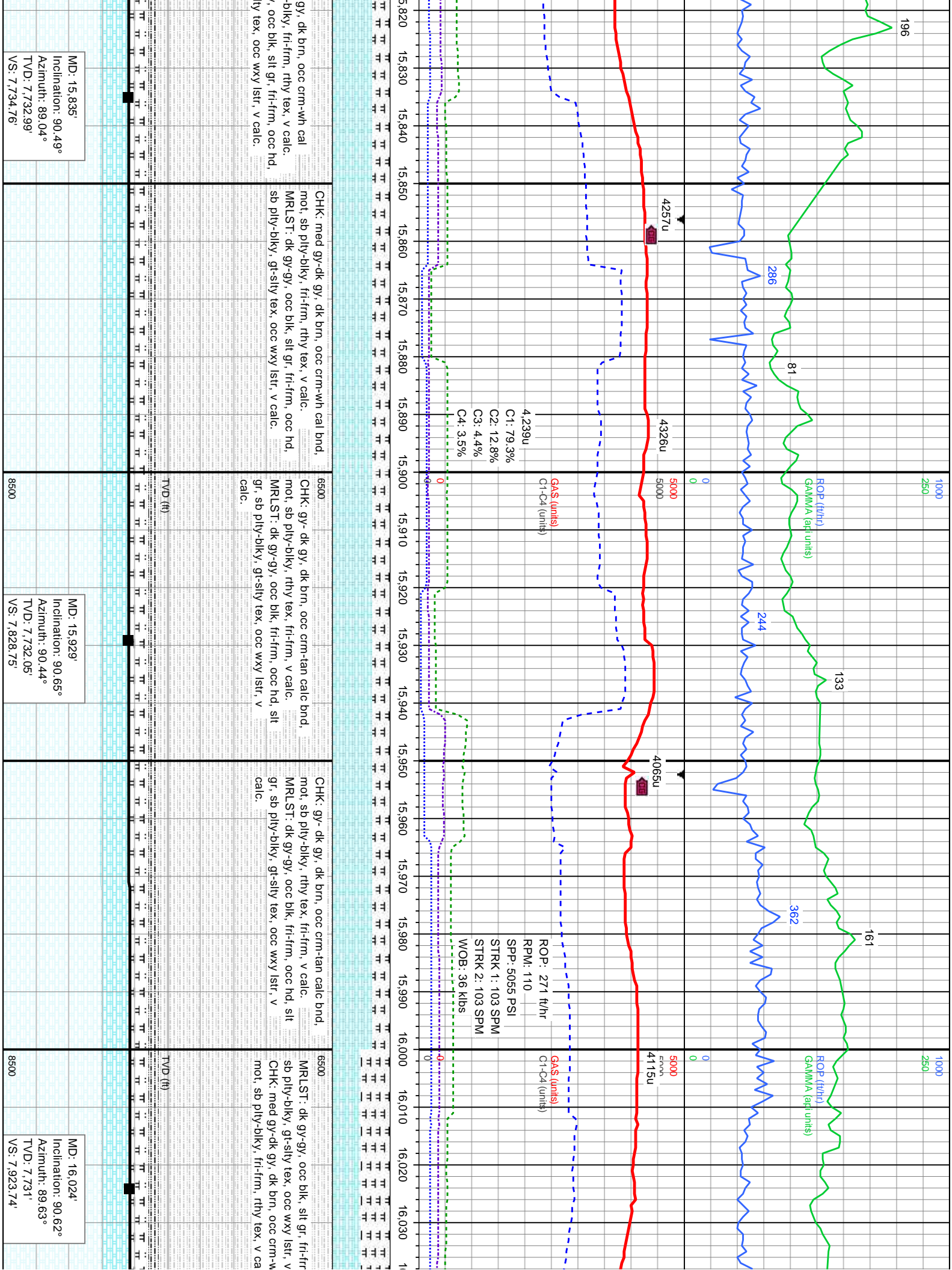


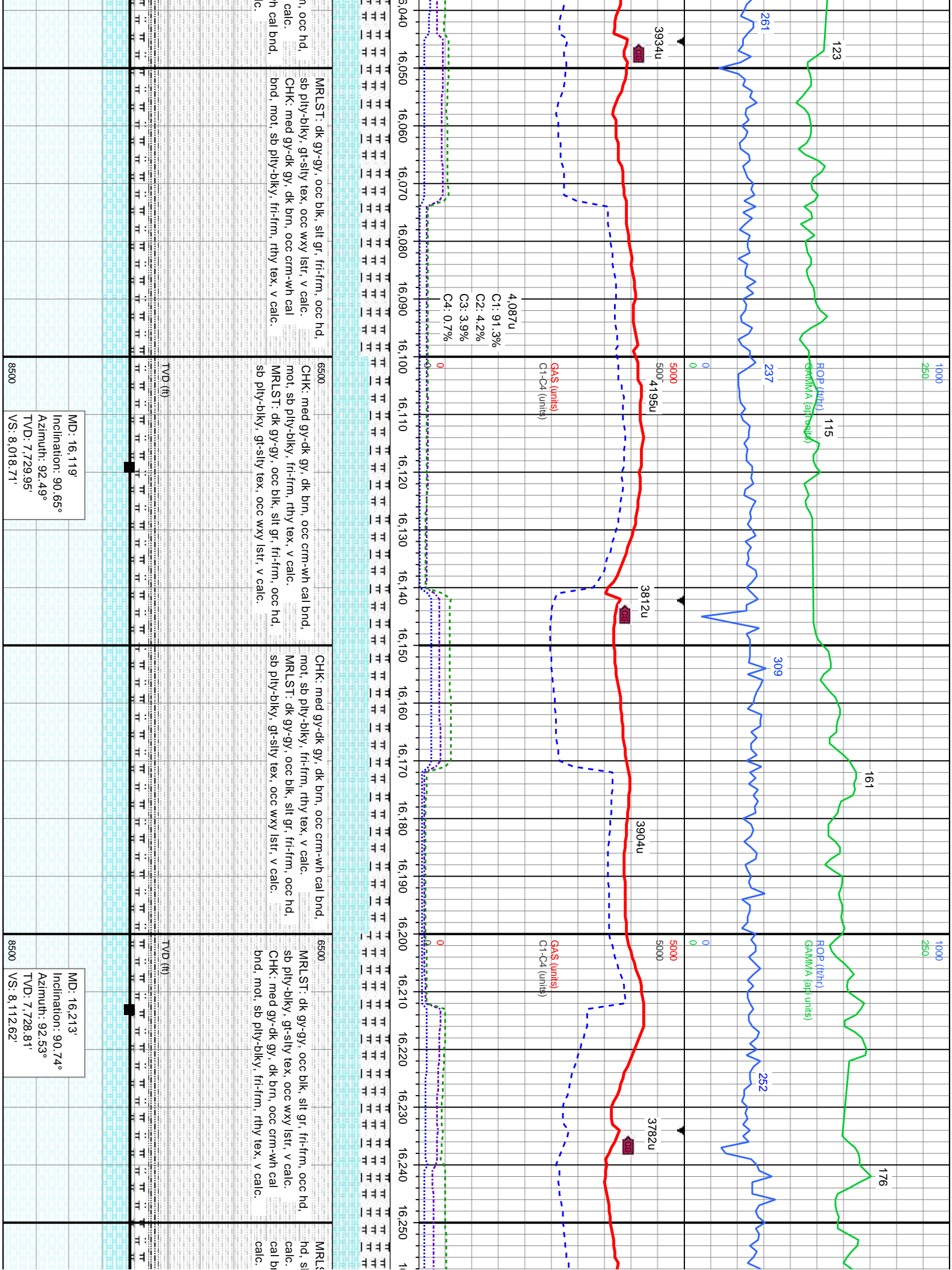


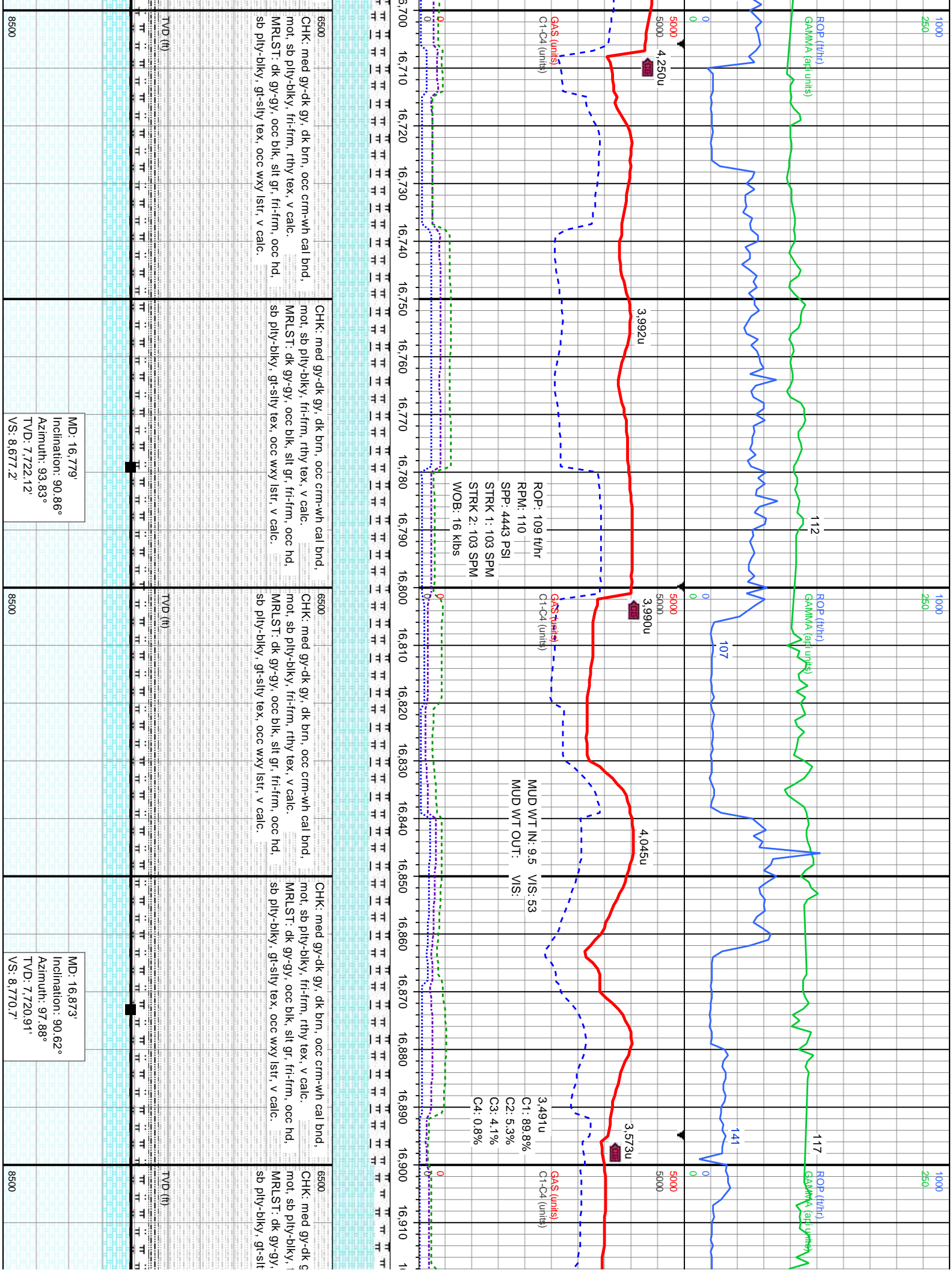
| | | | | | | | | | |
|------|--|------|--|------|--|------|--|------|--|
| 6500 | CHK: gy - dk gy, dk brn, occ crm-tan calc bnd, mot, sb ply-biky, rthy tex, fri-frn, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ hd, sit gr, sb ply-biky, gt-sily tex, occ wxy lstr, v calc. | 6500 | CHK: gy - dk gy, dk brn, occ crm-tan calc bnd, mot, sb ply-biky, rthy tex, fri-frn, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ hd, sit gr, sb ply-biky, gt-sily tex, occ wxy lstr, v calc. | 6500 | MRLST: dk gy-gy, occ blk, sit gr, fri-frn, occ hd, sb ply-biky, gt-sily tex, occ wxy lstr, v calc. CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, mot, sb ply-biky, fri-frn, rthy tex, v calc. | 6500 | MRLST: dk gy-gy, occ blk, sit gr, fri-frn, occ hd, sb ply-biky, gt-sily tex, occ wxy lstr, v calc. CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, mot, sb ply-biky, fri-frn, rthy tex, v calc. | 6500 | CHK: med gy-dk bnd, mot, sb ply MRLST: dk gy-gy, sb ply-biky, gt-s |
| 8500 | | 8500 | | 8500 | | 8500 | | 8500 | |

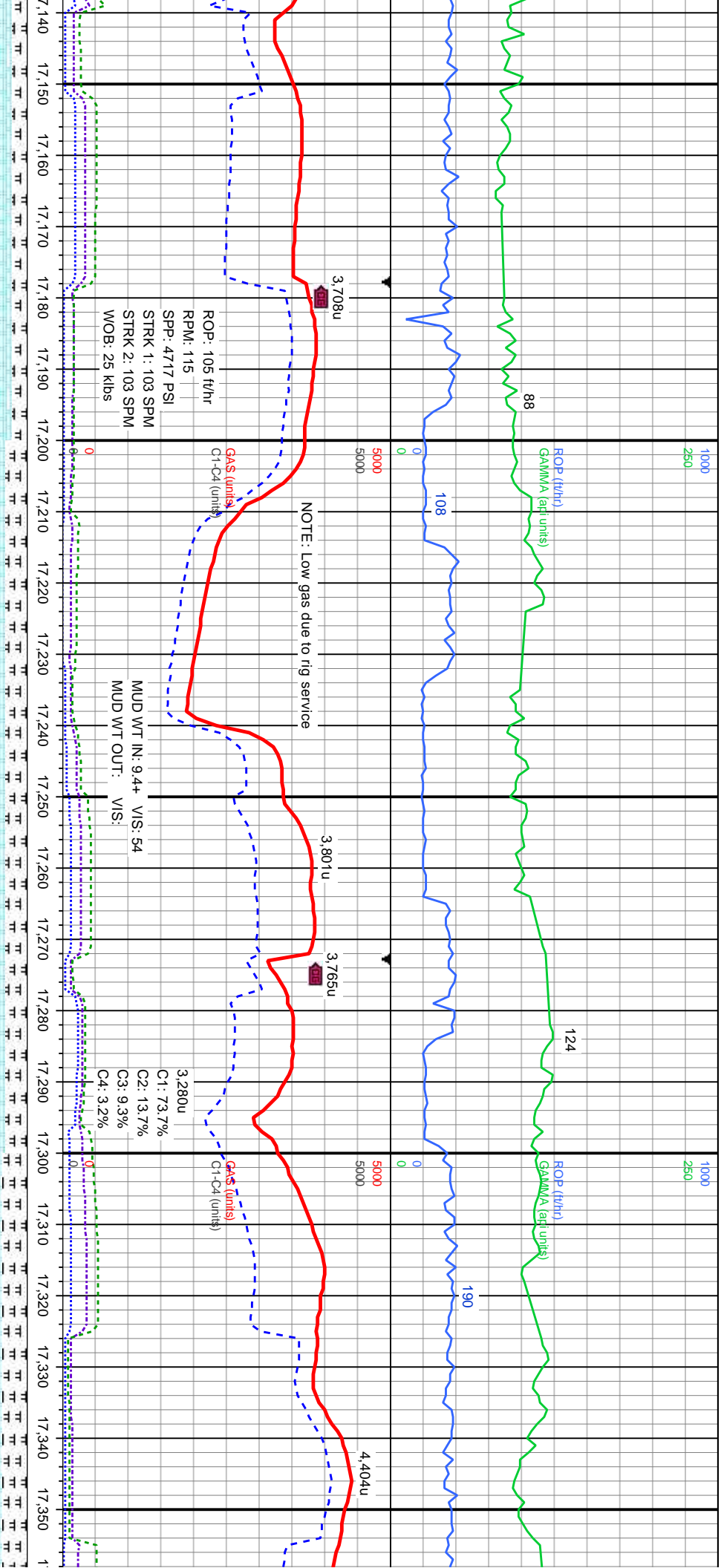
MD: 15.647'
Inclination: 90.46°
Azimuth: 87.9°
TVD: 7.734.79'
VS: 7.546.86'

MD: 15.741'
Inclination: 90.62°
Azimuth: 88.22°
TVD: 7.733.9'
VS: 7.640.79'









| Cal bnd, | CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, | 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, | 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, |
|--|--|--|--|--|--|
| mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb |
| MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST |
| sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply- |



| Cal bnd, | CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, | 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, | 6500 | CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd, |
|--|--|--|--|--|--|
| mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb ply-bkly, fri-frn, rthy tex, v calc. | mot, sb |
| MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd, | MRLST |
| sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply-bkly, gt-sily tex, occ wxy lst, v calc. | sb ply- |

MD: 17,156'

Inclination: 90.52°

Azimuth: 90.3°

TVD: 7,717.63'

VS: 9.052.81'

MD: 17,250'

Inclination: 90.71°

Azimuth: 89.5°

TVD: 7,716.62'

VS: 9.146.8'

MD: 17,344'

Inclination: 90.71°

Azimuth: 89.81°

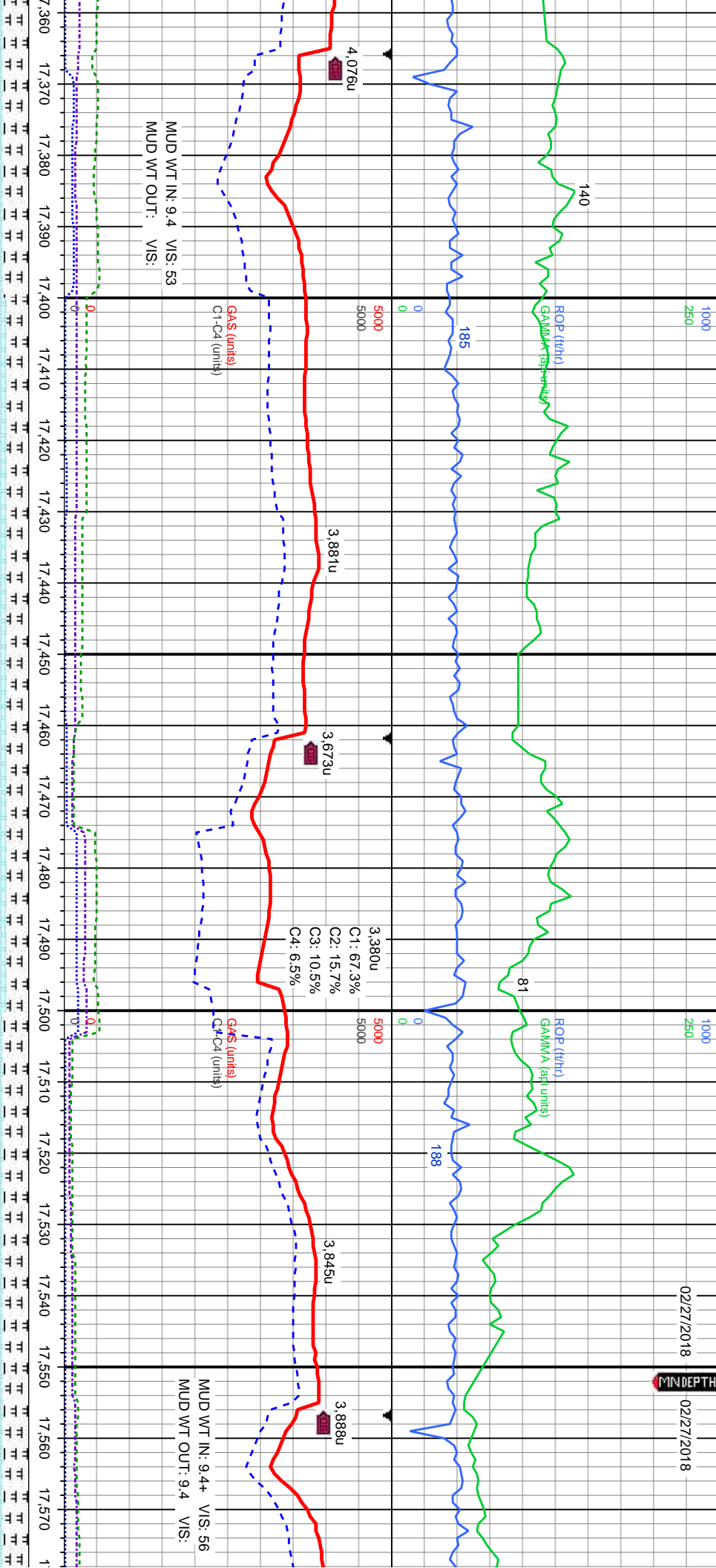
TVD: 7,715.46'

VS: 9.240.79'

02/27/2018

02/27/2018

MINDDEPTH



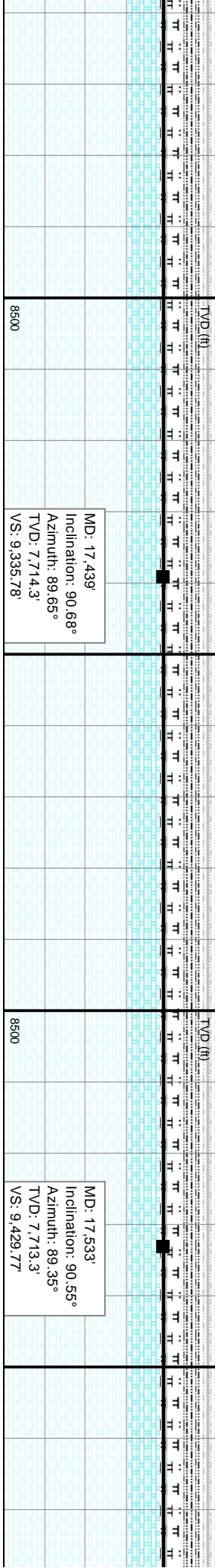
ed gy-dk gy, dk brn, occ crm-wh cal bnd,
ply-bkly, fri-frn, rthy tex, v calc.
dk gy-gy, occ blk, slt gr, fri-frn, occ hd,
gt-slty tex, occ wxy lst, v calc.

6500
CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd,
mot, sb ply-bkly, fri-frn, rthy tex, v calc.
MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd,
sb ply-bkly, gt-slty tex, occ wxy lst, v calc.

CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd,
mot, sb ply-bkly, fri-frn, rthy tex, v calc.
MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd,
sb ply-bkly, gt-slty tex, occ wxy lst, v calc.

6500
CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd,
mot, sb ply-bkly, fri-frn, rthy tex, v calc.
MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd,
sb ply-bkly, gt-slty tex, occ wxy lst, v calc.

CHK: med gy-dk gy, dk brn, occ crm-wh cal bnd,
mot, sb ply-bkly, fri-frn, rthy tex, v calc.
MRLST: dk gy-gy, occ blk, slt gr, fri-frn, occ hd,
sb ply-bkly, gt-slty tex, occ wxy lst, v calc.



MD: 17,439'

Inclination: 90.68°

Azimuth: 89.65°

TVD: 7,714.3'

VS: 9,335.78'

MD: 17,533'

Inclination: 90.55°

Azimuth: 89.35°

TVD: 7,713.3'

VS: 9,429.77'

