



Scale: 5" / 100'
Measured Depth Log

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

Location SEC 11 T4S-R65W

State COLORADO

County ARAPAHOE

Country USA

Rig Number Nabors B16

API Number 0500507384

AFE # WAY.CDR.7025

Geographic Region DJ BASIN

Field WILDCAT

Spud Date 2/20/2019

Drilling Completed 3/7/2019

Surface Coordinates SL Lat: 39° 43' 2.99" (NAD83)

SL Long: 104° 38' 20.73" (NAD83)

Bottom Hole Coordinates PROPOSED BHL: 2166ft FSL 325ft FWL SEC 12 T 4S-R65W

Ground Elevation 5665

K.B. Elevation 5690

Logged Interval 6000 **To** 17,930'

Total Depth 17,930'

Formation Niobrara D 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

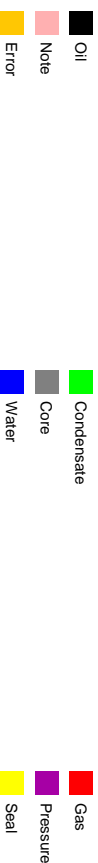
Geologists/Geosteers on Location: Todd Thiesse, Dustin Morgan

Gas Detection: Bloodhound chromatograph gas unit #311

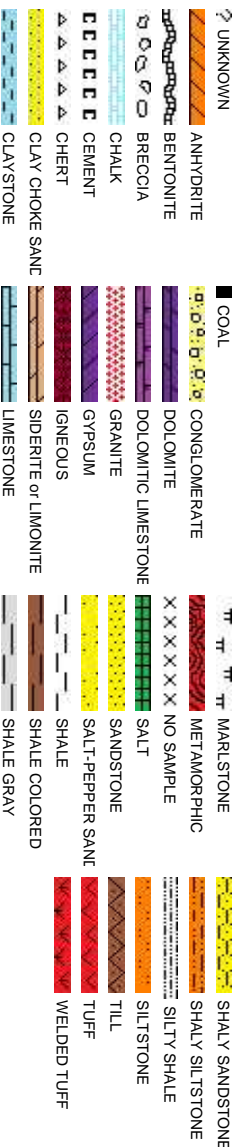
DD/MMWD: Baker Hughes

Columbine Computer 87A

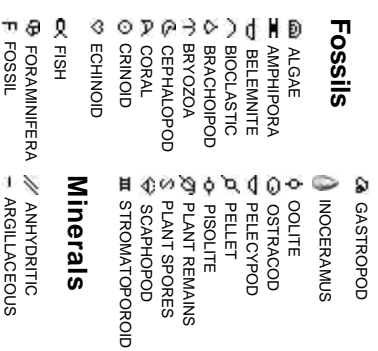
Color Coding



Rock Types



Fossils

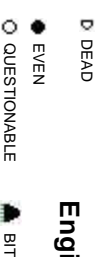


Minerals

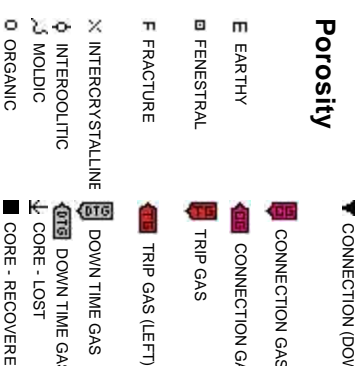
Oil Show



Engineering



Porosity







































Accessories

ARGILLITE GRAIN	➤ HEAVY MINERAL
BENTONITE	Ⓚ KAOLIN
BITUMENOUS SUBSTANCE	Ⓐ MARCASTITE
BRECCIA FRAGMENTS	Ⓣ MARLSTONE
CALCAREOUS	Ⓜ MICACEOUS
CARBONACEOUS FLAKES	Ⓜ MINERAL CRYSTALS
CHDND	● NODULES
CHLIT	● PHOSPHATE PELLETS
COAL - THIN BEDS	Ⓟ PYRITE
DOLOMITIC	Ⓣ MARLSTONE (DOL) STRG
FELDSPAR	Ⓛ SANDY
FERRUGINOUS PELLET	Ⓢ SIDERITE
FERRUGINOUS	➤ SILICEOUS
GLAUCONITE	➤ SILTY
GYPSIFEROUS	➤ TUFFACEOUS

Stringer

⚡ ANHYDRITE STRINGER
⚡ BENTONITE STRINGER
⚡ COAL STRINGER
⚡ DOLOMITIC STRINGER
⚡ GYPSUM STRINGER
⚡ LIMESTONE STRINGER
⚡ MARLSTONE (CALC) STRG
⚡ MARLSTONE (DOL) STRG
⚡ SANDSTONE STRINGER
— SHALE STRINGER
⚡ SILTSTONE STRINGER

Other Symbols

	DST INTERVAL		WIRELINE TESTED - LEFT		E EARTH
	FAULT		WIRELINE TESTED - RT		FX FINELYXLN
	FORMATION TOP		DRILL STEM TEST		GS GRAINSTONE
	GAS SHOW		MIN DEPTH		L LITHOGRAPHIC
	OIL SHOW				MX MICROXLN
	MIN DEPTH UP				MS MUDSTONE
	MIN DEPTH (DOWN)		A ANGULAR		PS PACKSTONE
	NORMAL FAULT		R ROUNDED		WS WACKSTONE
	OVERTURNED STRATA		B SUBANG		
	REVERSE FAULT		P SUBRND		
	CASING				
	SIDEWALL CORE (LEFT)				
	SIDEWALL CORE (RIGHT)		BS BOUNDSTONE		P POOR
	SLIDE		C CHALKY		W WELL
	SURVEY		CX CRYPTOXLN		

COLUMBINE LOGGING

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

Columbine Logging Inc. Rigged Up 2 man logging 3/1/2019 Chromatograph Gas Unit #0311, began logging from 6000' MD at 7:30 AM MDT on 3/2/19.

Gamma Data and Survey Data Provided by Baker Hughes

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

Total Gas & Chromatograph
GAS
C1
C2
C3
C4

Depth Labels

% Lith

Well Bore
TVD

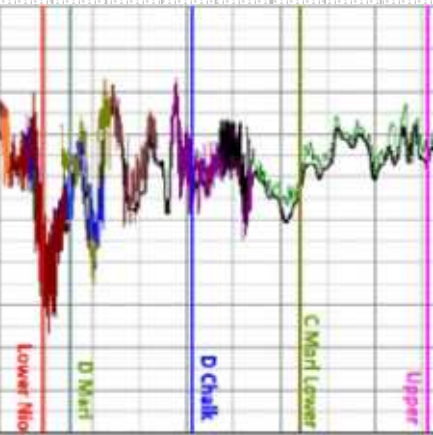
Bit Data
Bit #: 2
Type: HCC AT605F
Size: 8.5
Depth In: 2201'
Depth Out: 17,930'
Jets: 5x14s
S/N: 5289753

MUD WT IN: 9.4
MUD WT OUT:
VIS: 61

ROP: 100 ft/hr
RPM: 100
SPP: 2832 PSI
STRK 1: 103 SPM
STRK 2: 103 SPM
WOB: 2 klbs

272u
C1: 95.7%
C2: 1.4%
C3: 1.4%
C4: 1.5%

Target Formation/Member:
Niobrara D Chalk



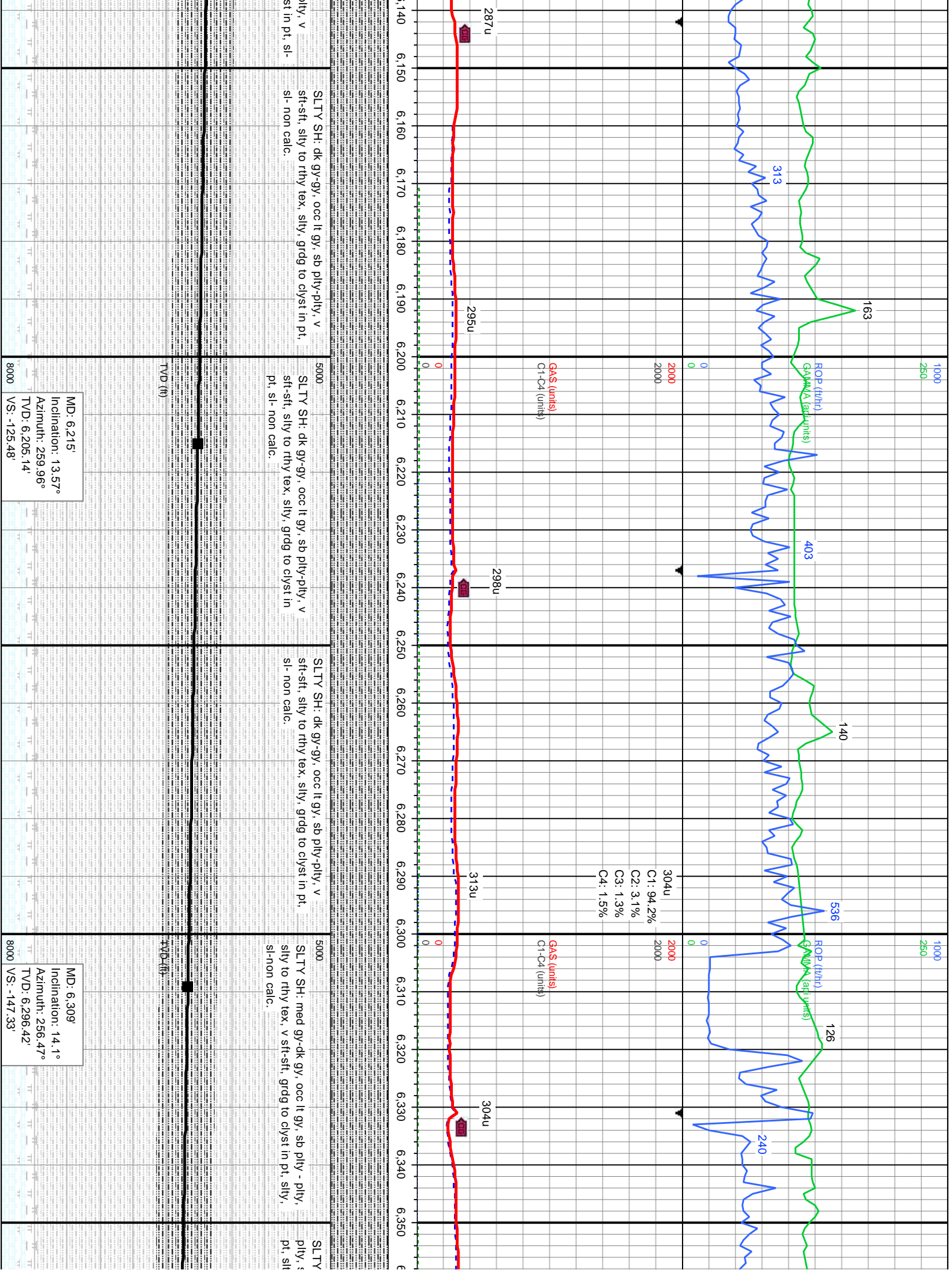
5000
SLTY SH: gy-dk gy, occ lt gy, v sft - sft, sb
ply-pty, silty to rthy tex, sl-non calc.

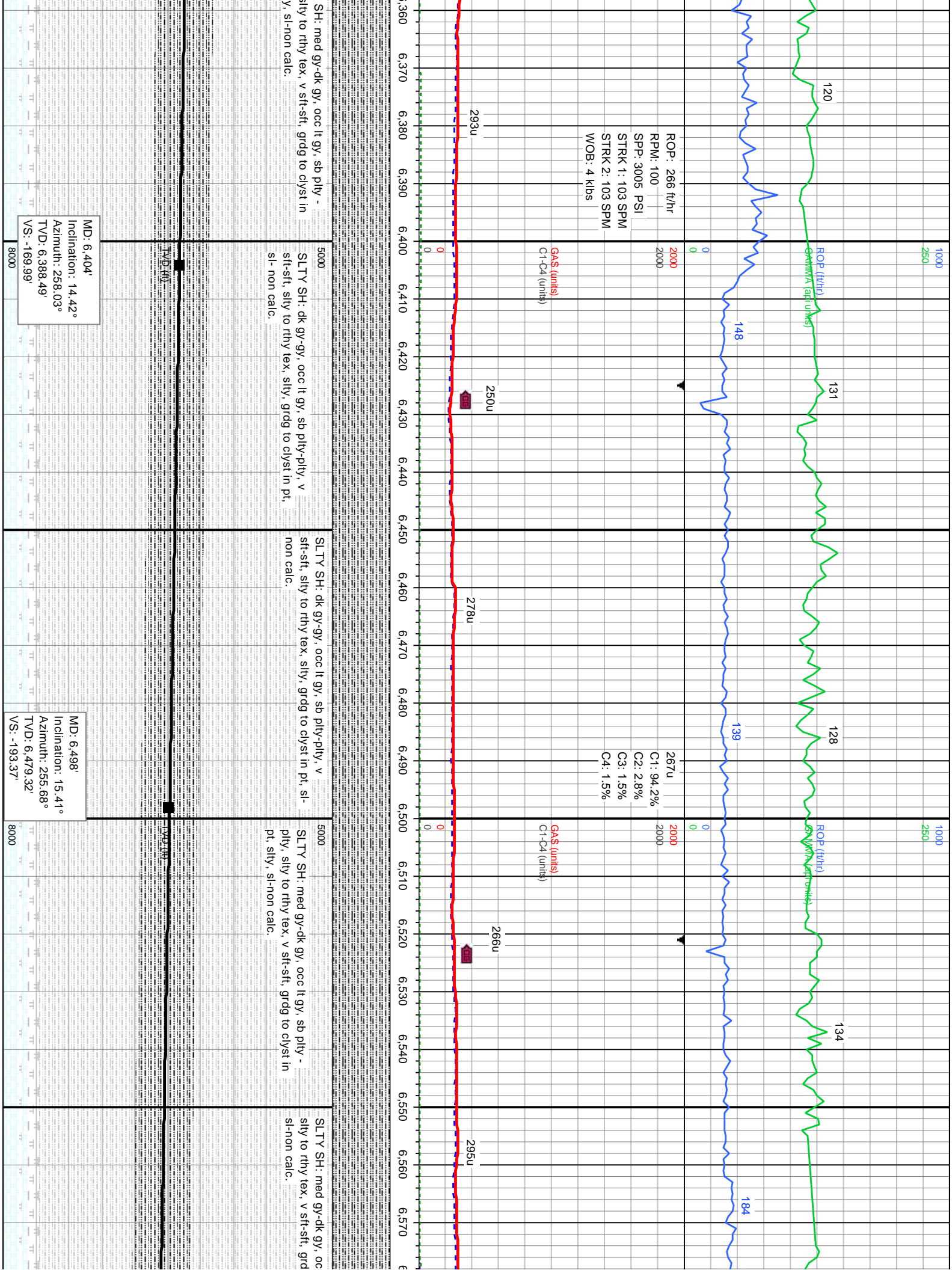
SLTY SH: gy-dk gy, occ lt gy, v sft - sft, sb
ply-pty, silty to rthy tex, sl-non calc.

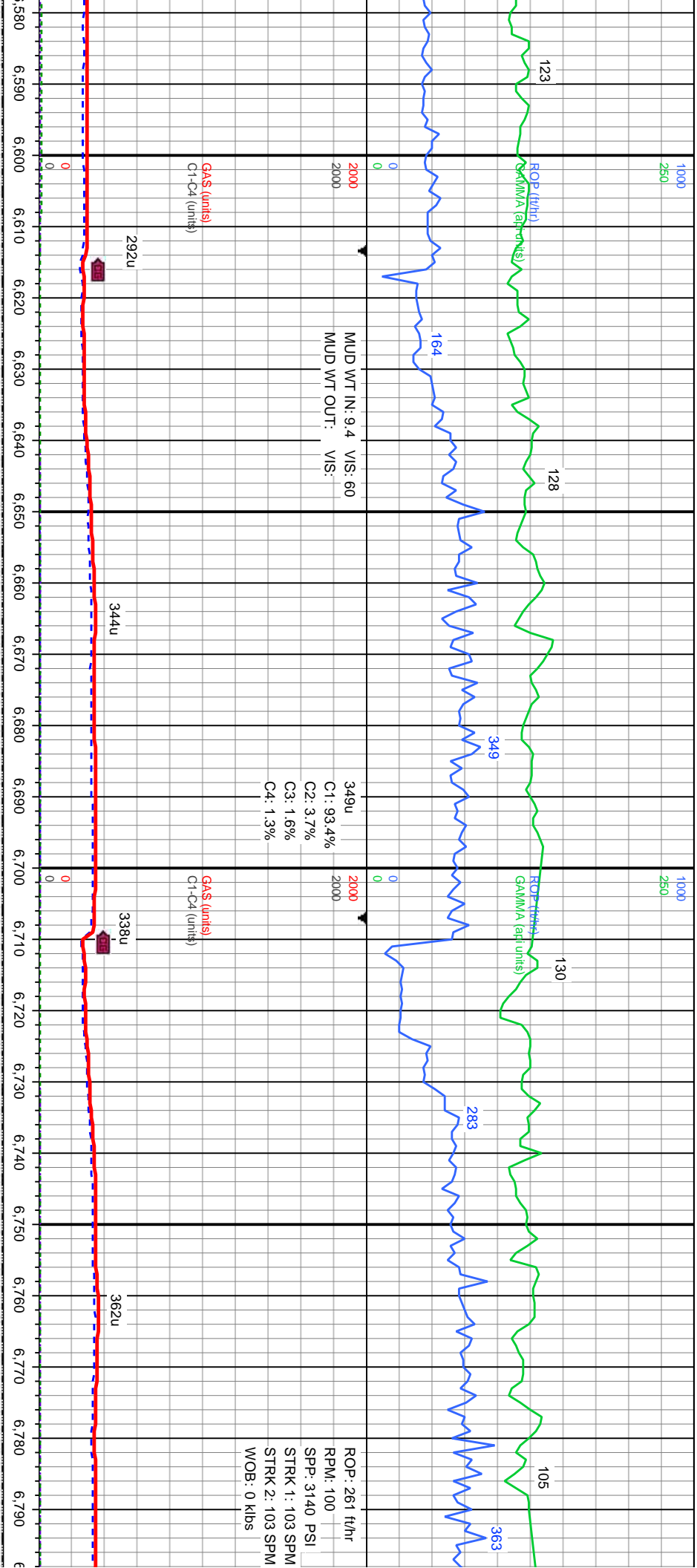
5000
SLTY SH: dk gy-gy, occ lt gy, sb ply-F-
sft-sft, silty to rthy tex, silty, grdg to cly
non calc.

MD: 6.026'
Inclination: 9.97°
Azimuth: 265.47°
TVD: 6.020.07'
VS: -87.72°

MD: 6.121'
Inclination: 11.56°
Azimuth: 264.29°
TVD: 6.113.4'
VS: -105.34°

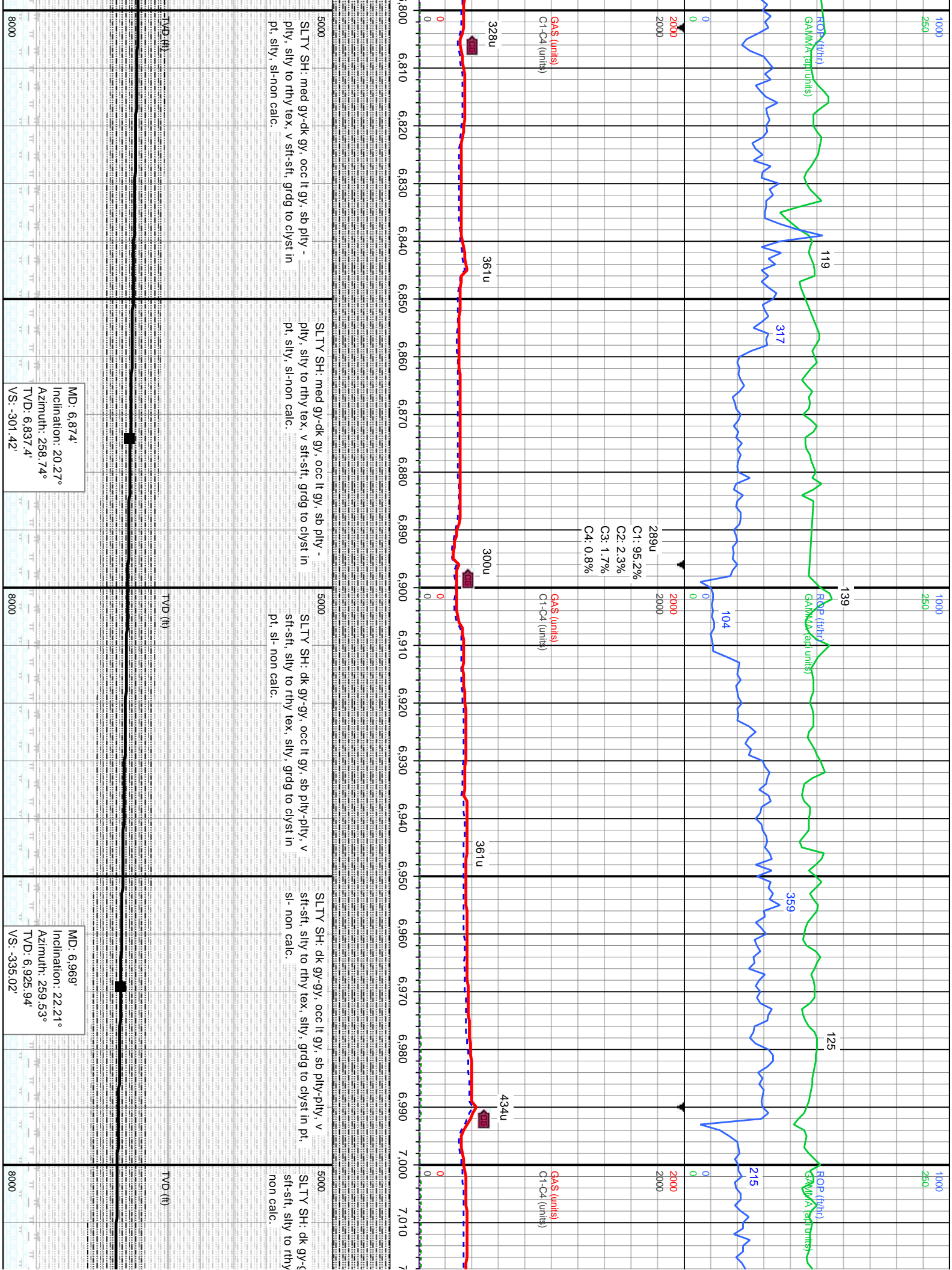




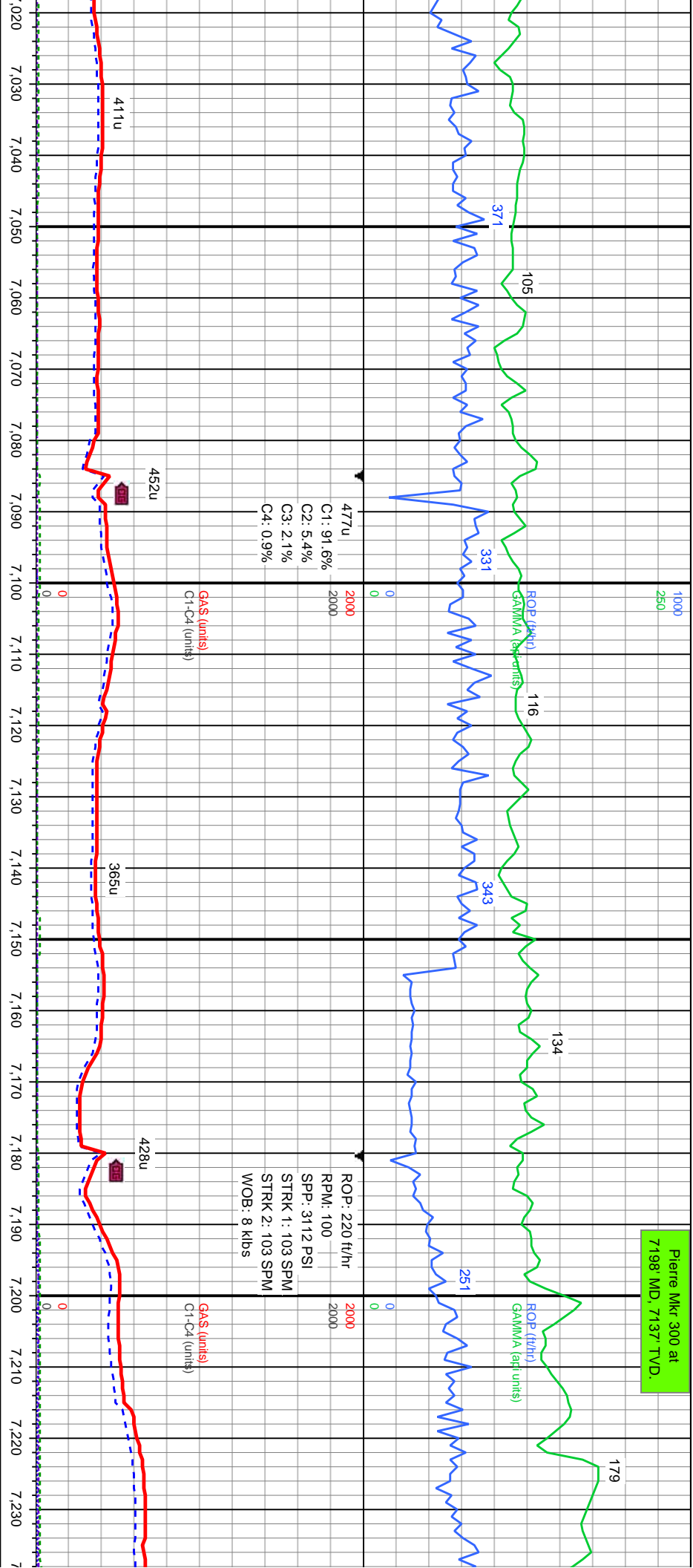


c lt gy, sb pily - pily, g to clyst in pt, slty,	5000	SLTY SH: med gy-dk gy, occ lt gy, sb pily - pily, slty to rthy tex, v sft-sft, grdg to clyst in pt, slty, sl-non calc.	5000	SLTY SH: dk gy-gy, occ lt gy, sb pily-pily, v sft-sft, slty to rthy tex, slty, grdg to clyst in pt, sl-non calc.	5000	SLTY SH: dk gy-gy, occ lt gy, sb pily-pily, v sft-sft, slty to rthy tex, slty, grdg to clyst in pt, sl-non calc.
	TVD (ft)					TVD (ft)
	8000					8000
	MD: 6.592' Inclination: 16.55° Azimuth: 251.45° TVD: 6.569.69' VS: -217.93'					MD: 6.687' Inclination: 17.6° Azimuth: 249.61° TVD: 6.660.5' VS: -243.94'

MD: 6.780'
Inclination: 18.9°
Azimuth: 252.36°
TVD: 6.748.83'
VS: -271.18'



Pierre Mkr 300 at
7198' MD, 7137' TVD.



gy, occ It gy, sb plty-plty, v
tex, slty, grdy to clyst in pt, sl-

SLTY SH: dk gy-gy, occ lt gy, sb plty-plty, v
sft-sft, silty to rthy tex, silty, gridg to clyst in
pt, sl- non calc.

5000
SLTY SH: dk gy-gy, occ lt gy, sb ply-ply, v
stft-stf, slty to rthy tex, slty, grdd to clyst in pt, sl-
non calc.

SLTY SH: dk gy-gy, occ lt gy, sb ply-pty, v
stf-stf, slty to rthy tex, slty, grgd to clyst in
pt, sl- non calc.

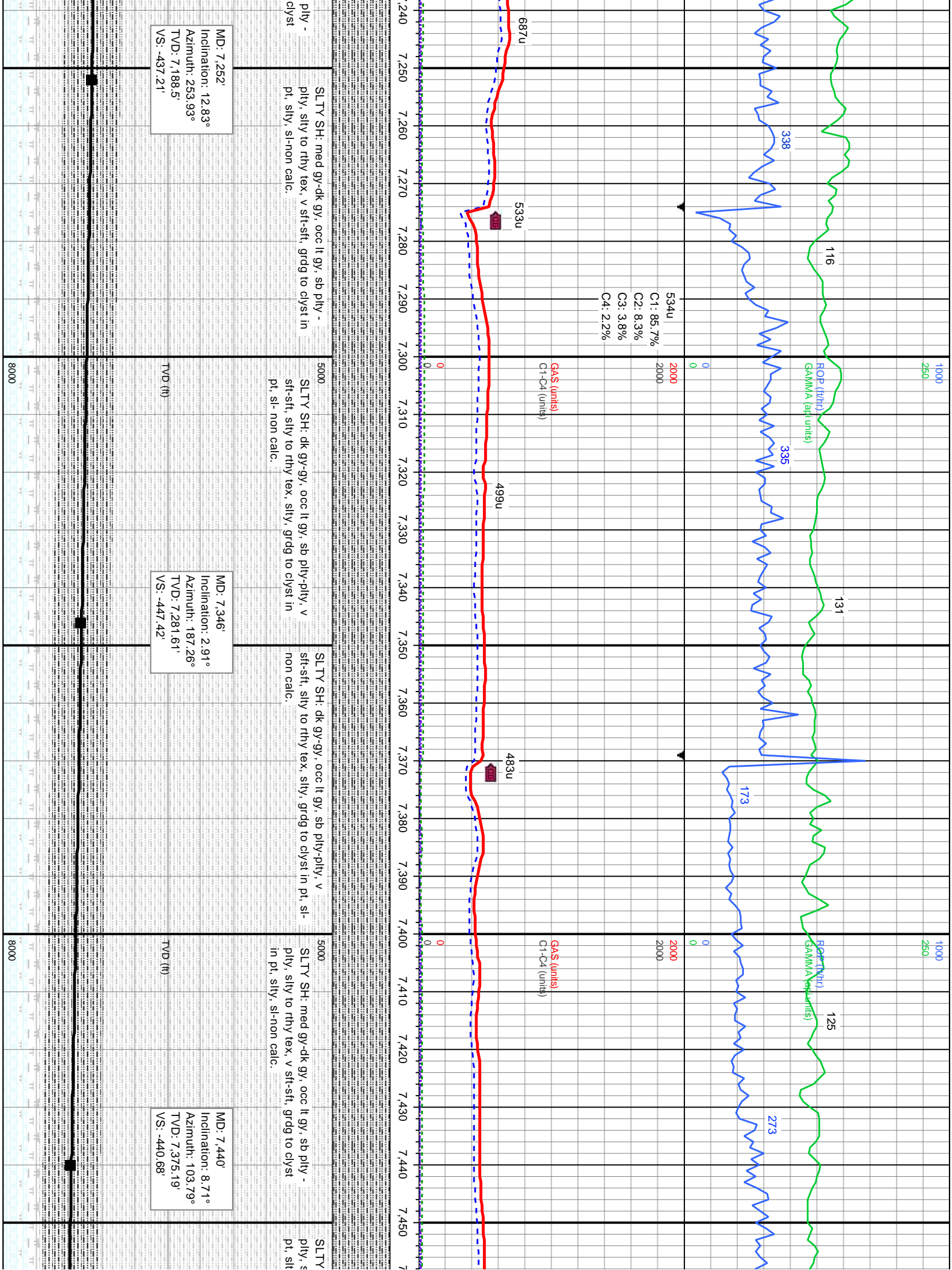
SLTY SH: med gy-dk gy, occ lt gy, sb
ply, silty to rthy tex, v sft-sft, grdg to
in pt, silty, sl-non calc.

MD: 7,063'
Inclination: 23.57°
Azimuth: 260.12°
TVD: 7,012.53'
VS: -370.8'

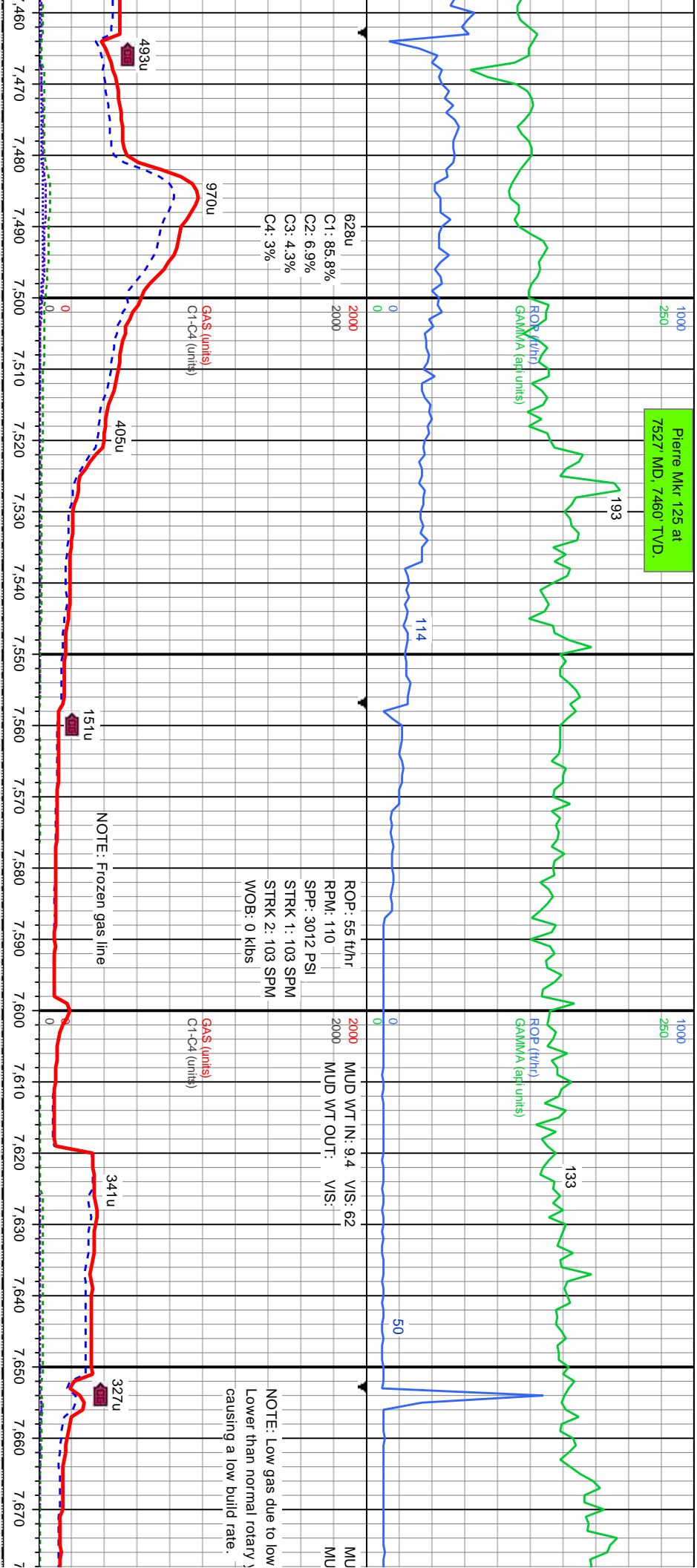
TVD (ft)

MD: 7,157'
Inclination: 24.08°
Azimuth: 260.76°
TVD: 7,098.52'
VS: -408.04'

TVD (ft)



Pierre Mkr 125 at 7527 MD, 7460' TVD.



628u
C1: 85.8%
C2: 6.9%
C3: 4.3%
C4: 3%

ROP: 55 ft/hr
RPM: 110
SPP: 3012 PSI
STRK 1: 103 SPM
STRK 2: 103 SPM
WOB: 0 kips

NOTE: Low gas due to low
Lower than normal rotary y
causing a low build rate.

SH: med gy-dk gy, occ lt gy, sb pily -
sily to rthy tex, v sft-sft, grdg to clyst in
y, si-non calc.

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

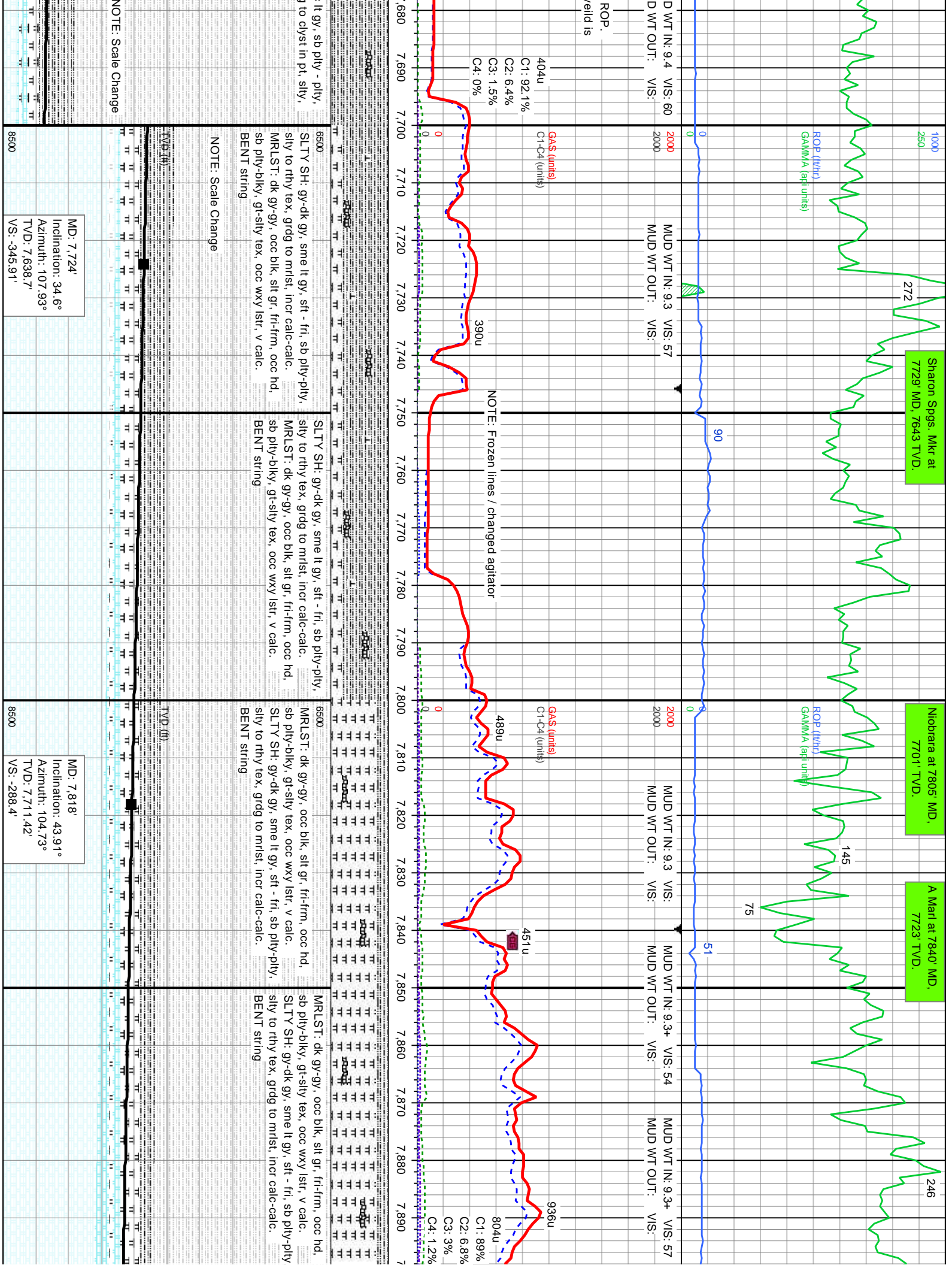
SLTY SH: med gy-dk gy, occ lt gy, sb pily - pily,
sily to rthy tex, v sft-sft, grdg to clyst in pt, sily,
si-non calc.

SLTY SH: med gy-dk gy, occ lt gy, sb pily - pily,
sily to rthy tex, v sft-sft, grdg to clyst in pt, sily,
si-non calc. BENT string

SLTY SH: med gy-dk gy, occ
sily to rthy tex, v sft-sft, grdg
si-non calc. BENT string

MD: 7.535'
Inclination: 16.05°
Azimuth: 109.46°
TVD: 7.467.92'
VS: -421.11'

MD: 7.629'
Inclination: 24.29°
Azimuth: 110.7°
TVD: 7.556.08'
VS: -390.4'





ROP (ft/hr)
GAMMA (api units)

MUD WT IN: 9.4+ VS: 71
MUD WT OUT: 9.3 VS: 72

ROP: 85 ft/hr
RPM: 110
SPP: 3358 PSI
STRK 1: 103 SPM
STRK 2: 103 SPM
WOB: 14 kls



GAS (units)
C1-C4 (units)

NOTE: Low gas due to rig

MRSLT: dk gy-gy, ooc blk, silt gr, fri-frn, ooc hd.
sb pily-biky, gt-sily tex, ooc wxy lst, v calc.
CHK: med-dk gy, dk brn, ooc crn-wh,mot, sb pily-biky, fri-frn, rthy tex, v calc.

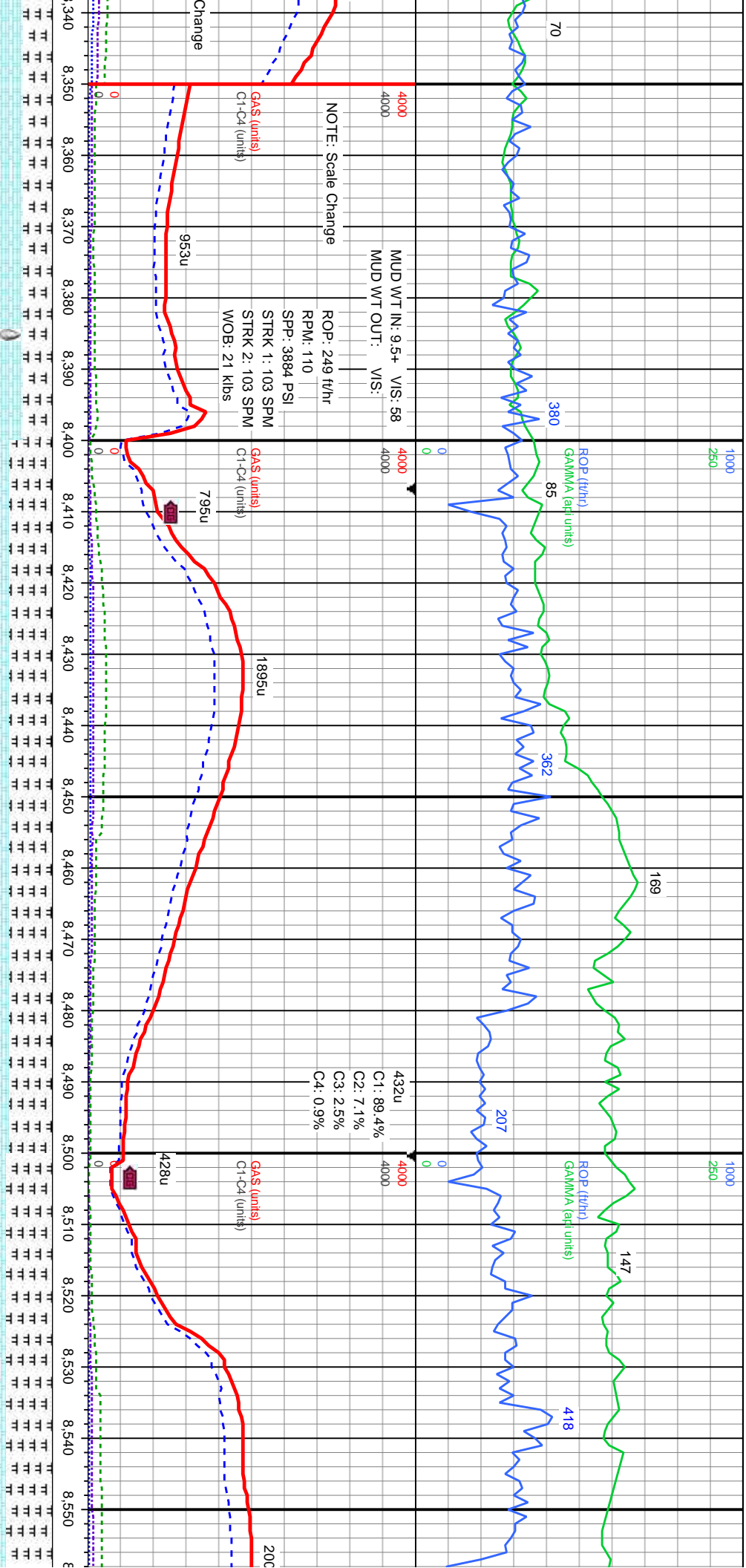
MRSLT: dk gy-gy, ooc blk, silt gr, fri-frn, ooc hd.
sb pily-biky, gt-sily tex, ooc wxy lst, v calc.
CHK: med-dk gy, dk brn, ooc crn-wh,mot, sb pily-biky, fri-frn, rthy tex, v calc.

MRSLT: dk gy-gy, ooc blk, silt gr, fri-frn, ooc hd.
sb pily-biky, gt-sily tex, ooc wxy lst, v calc.
CHK: med-dk gy, dk brn, ooc crn-wh,mot, sb pily-biky, fri-frn, rthy tex, v calc.

MD: 7,912'
Inclination: 53.56°
Azimuth: 101.57°
TVD: 7,773.35'
VS: -219.22'

MD: 8,007'
Inclination: 63.05°
Azimuth: 98.74°
TVD: 7,823.21'
VS: -139.36'

MD: 8,101'
Inclination: 72.82°
Azimuth: 95.86°
TVD: 7,858.49'
VS: -52.77'

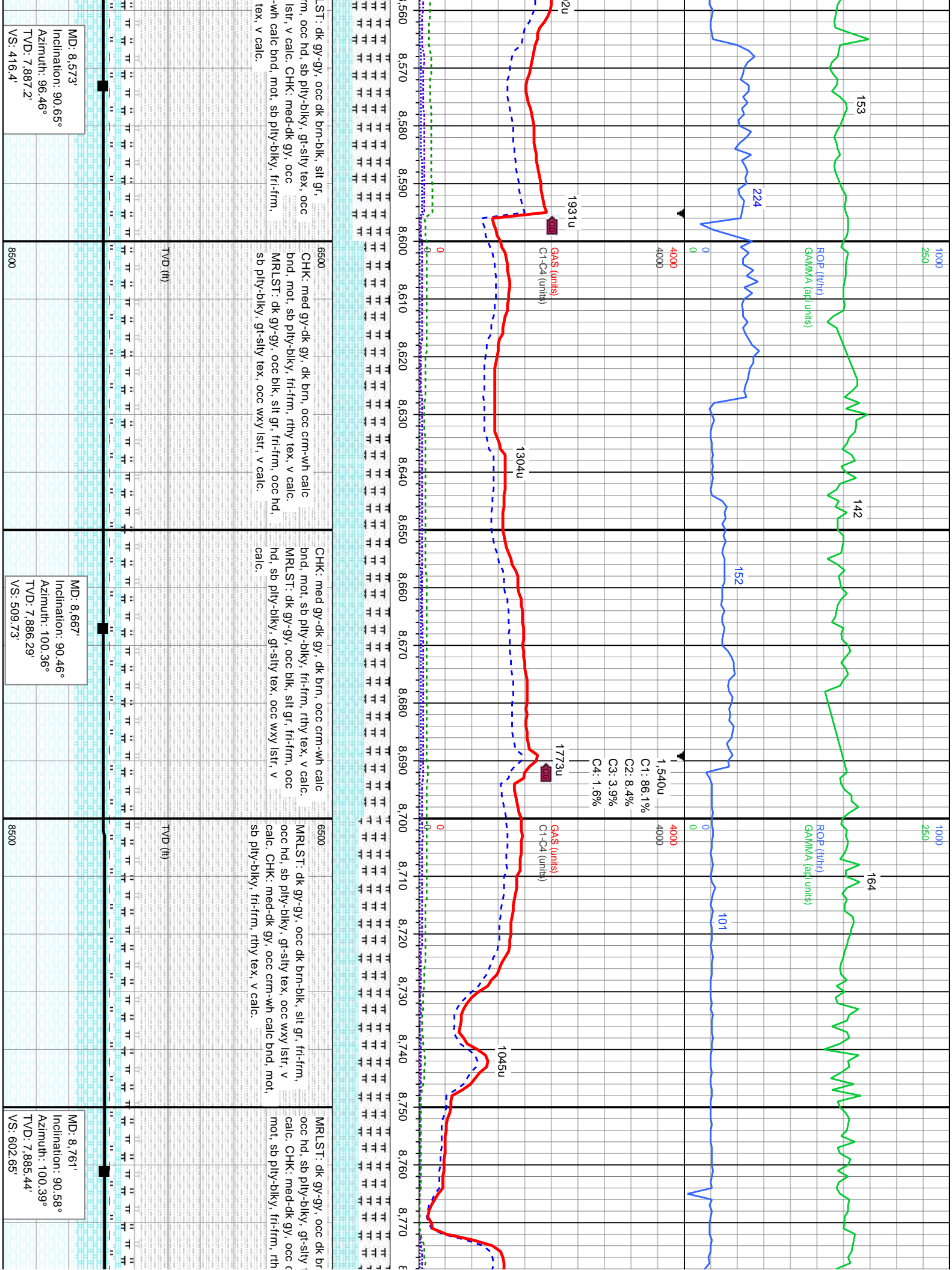


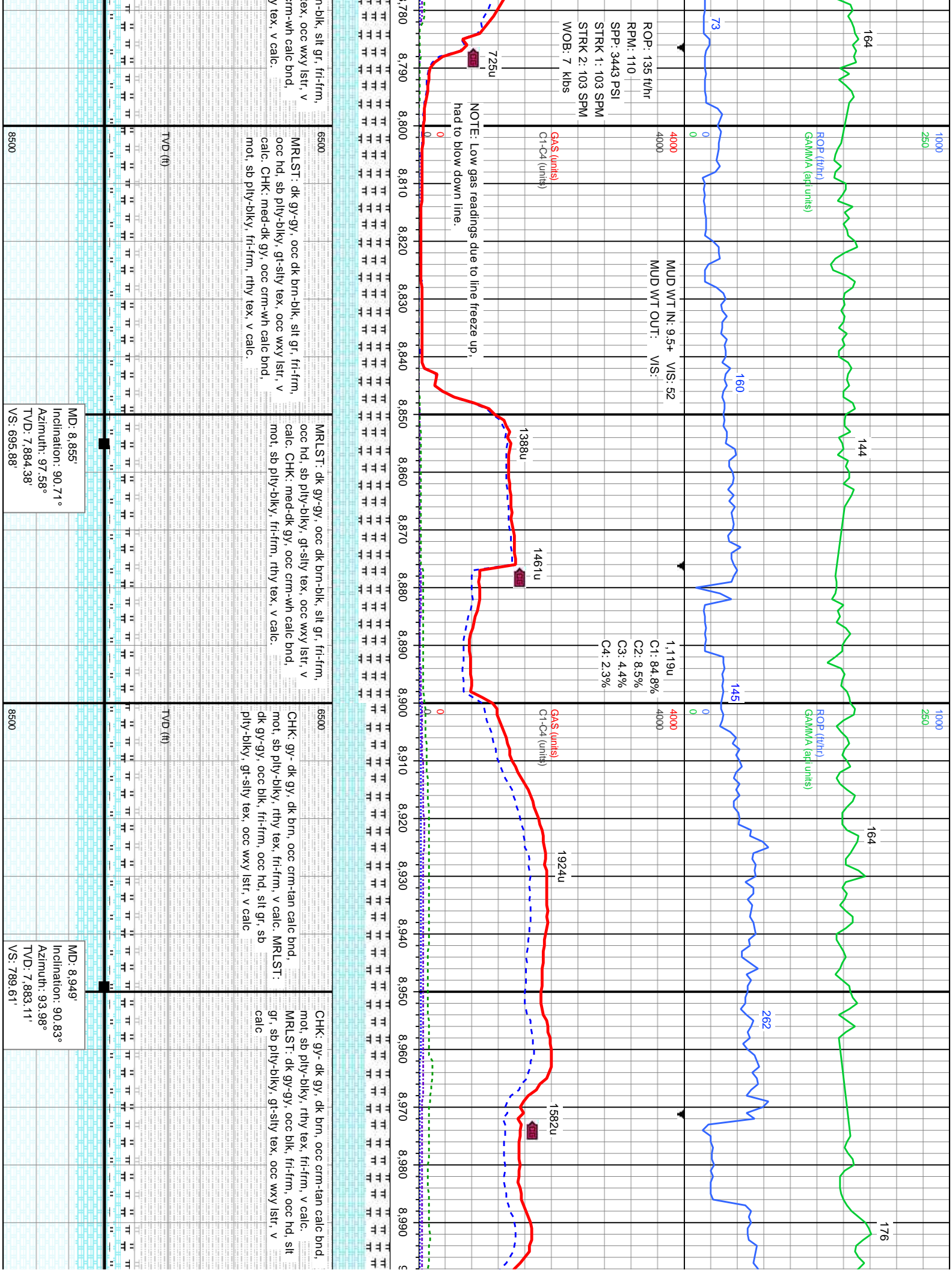
CHK: gy-dk gy, dk brn, occ crm-tan calc bnd, mot, sb pily-biky, rthy tex, fri-frn, v calc. MRLST: dk gy-gy, occ blk, fri-frn, occ hd, silt gr, sb pily-biky, gt-sily tex, occ wxy lsst, v calc. wi seat inoc foss.

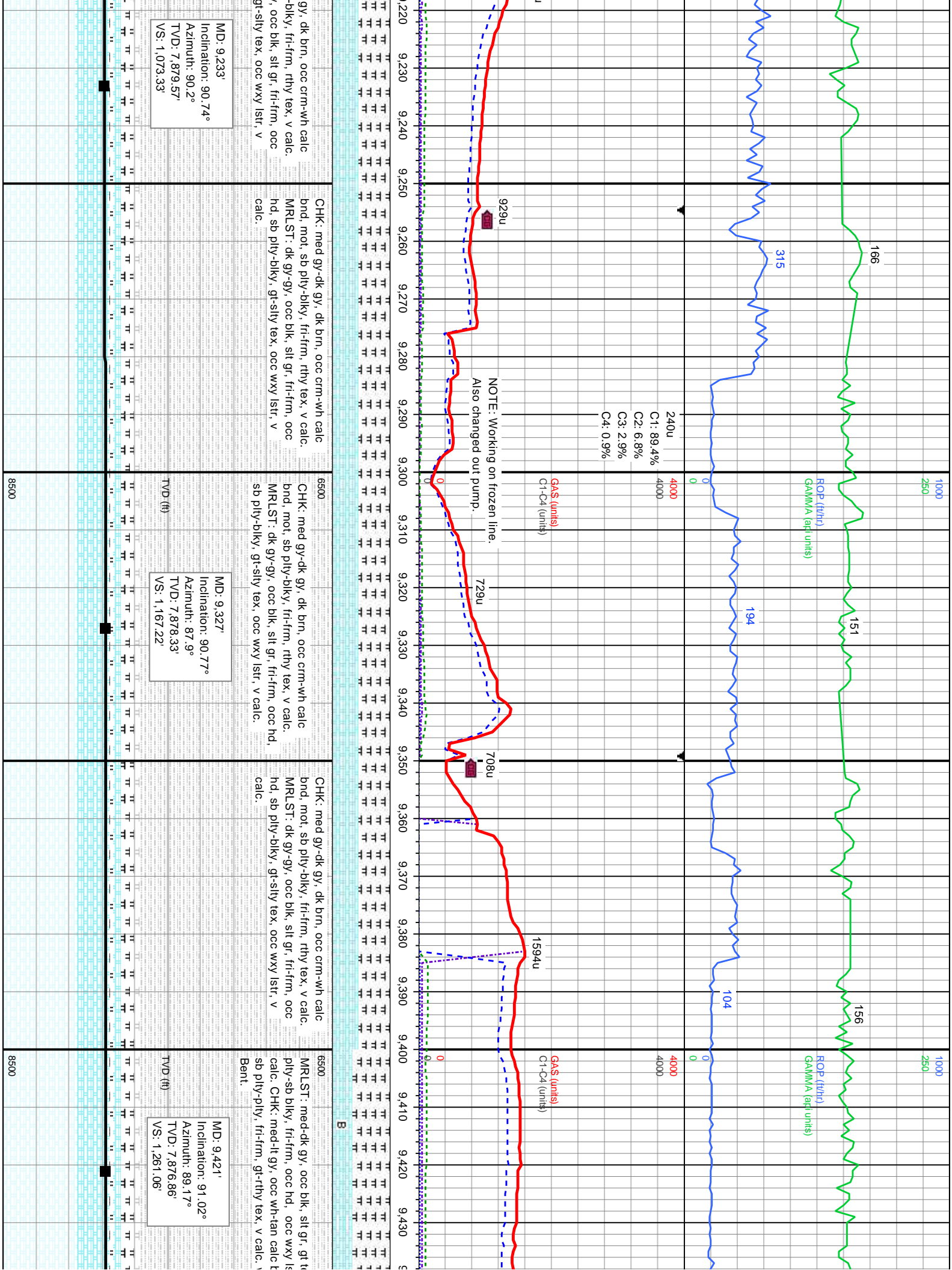
6500 MRLST: dk gy-gy, occ dk brn-blk, silt gr, fri-frn, occ hd, sb pily-biky, gt-sily tex, occ wxy lsst, v calc. CHK: med-dk gy, occ crm-wh calc bnd, mot, sb pily-biky, fri-frn, rthy tex, v calc.

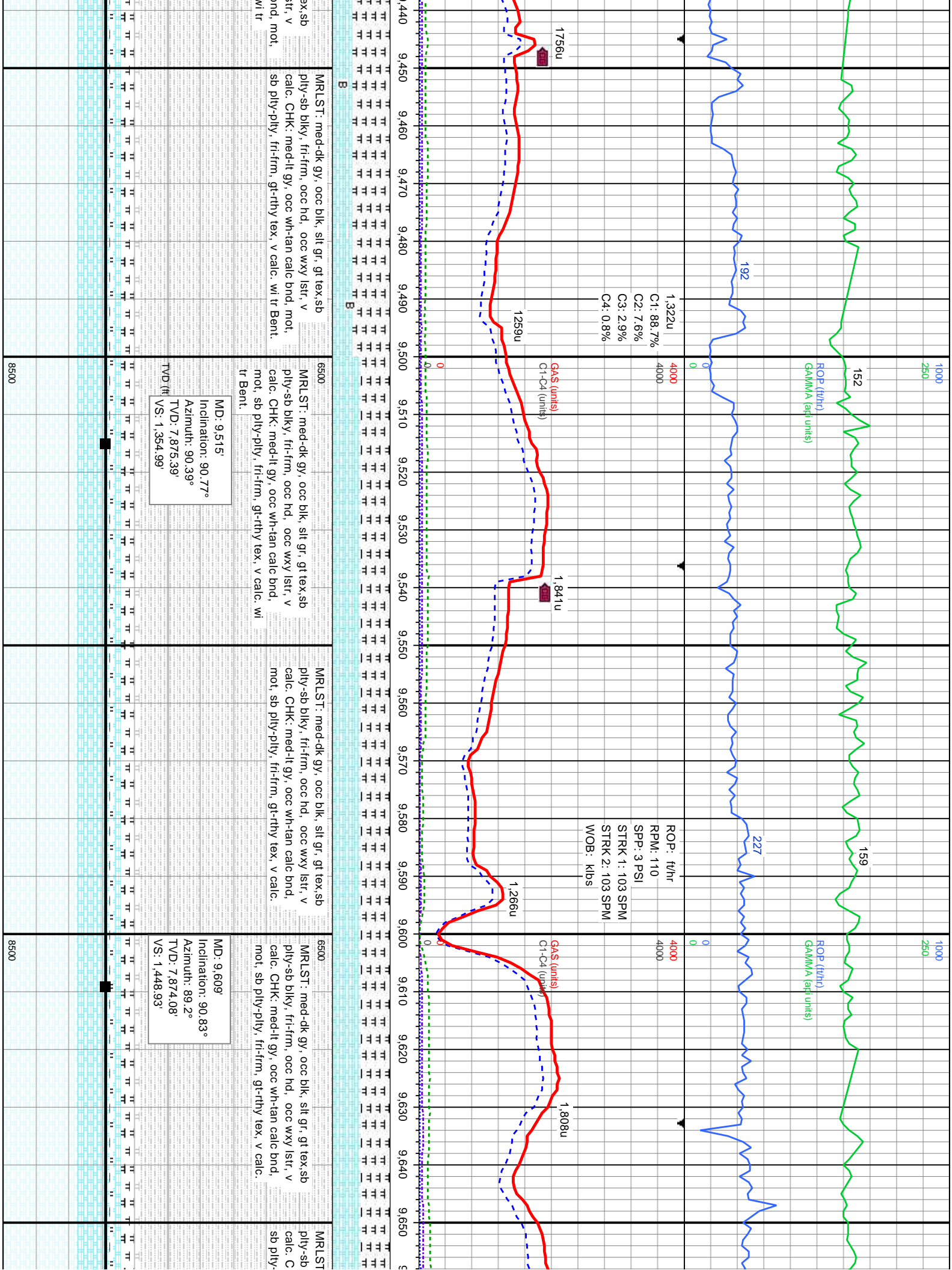
6500 MRLST: dk gy-gy, occ dk brn-blk, silt gr, fri-frn, fri-frn, occ hd, sb pily-biky, gt-sily tex, occ wxy lsst, v calc. CHK: med-dk gy, occ crm-wh calc bnd, mot, sb pily-biky, fri-frn, rthy tex, v calc.

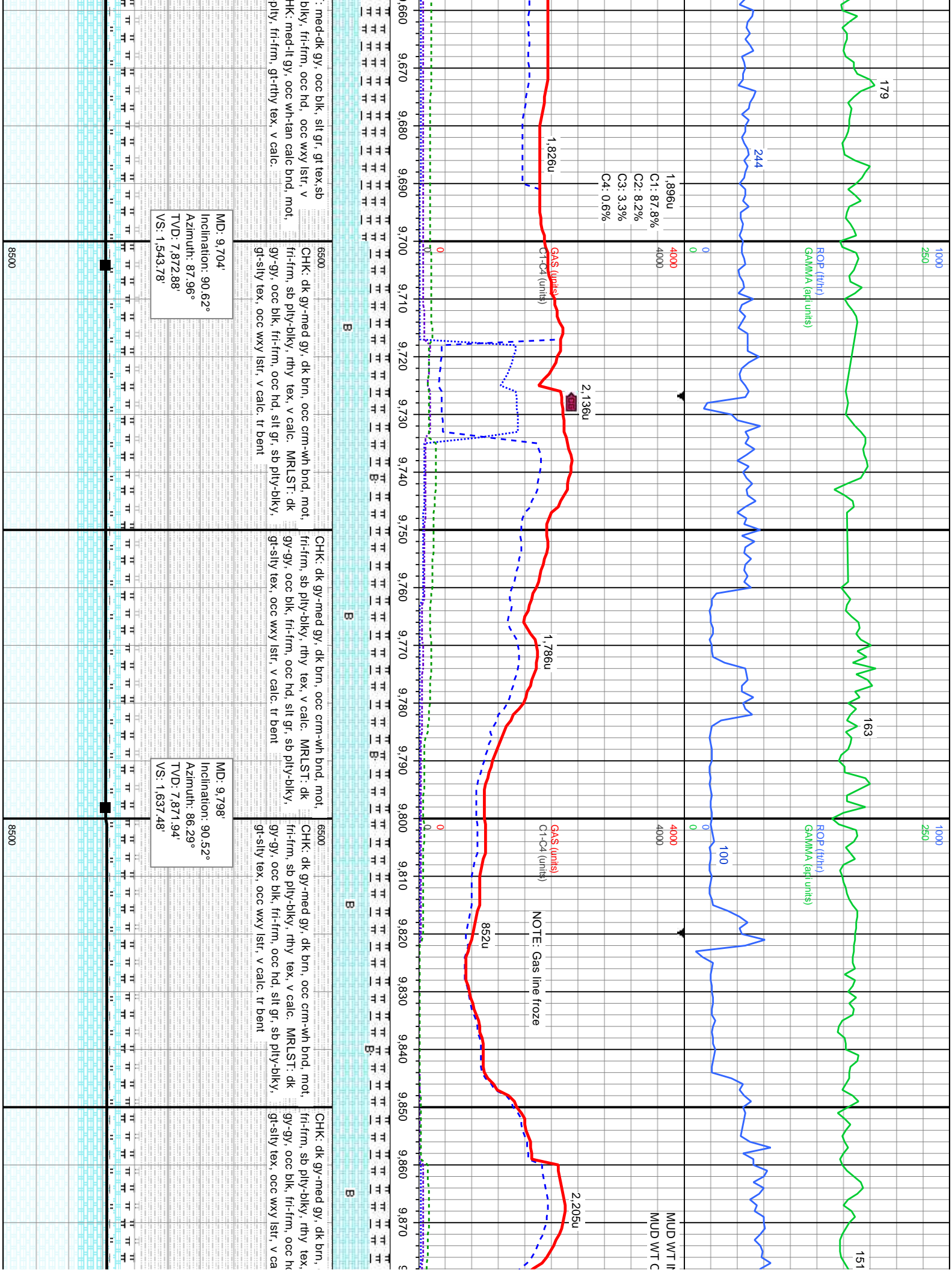
MD: 8.384' Inclin: 90.52° Azimuth: 92.22° TVD: 7.888.26' VS: 227.51'	MD: 8.478' Inclin: 90.06° Azimuth: 91.15° TVD: 7.887.79' VS: 321.5'
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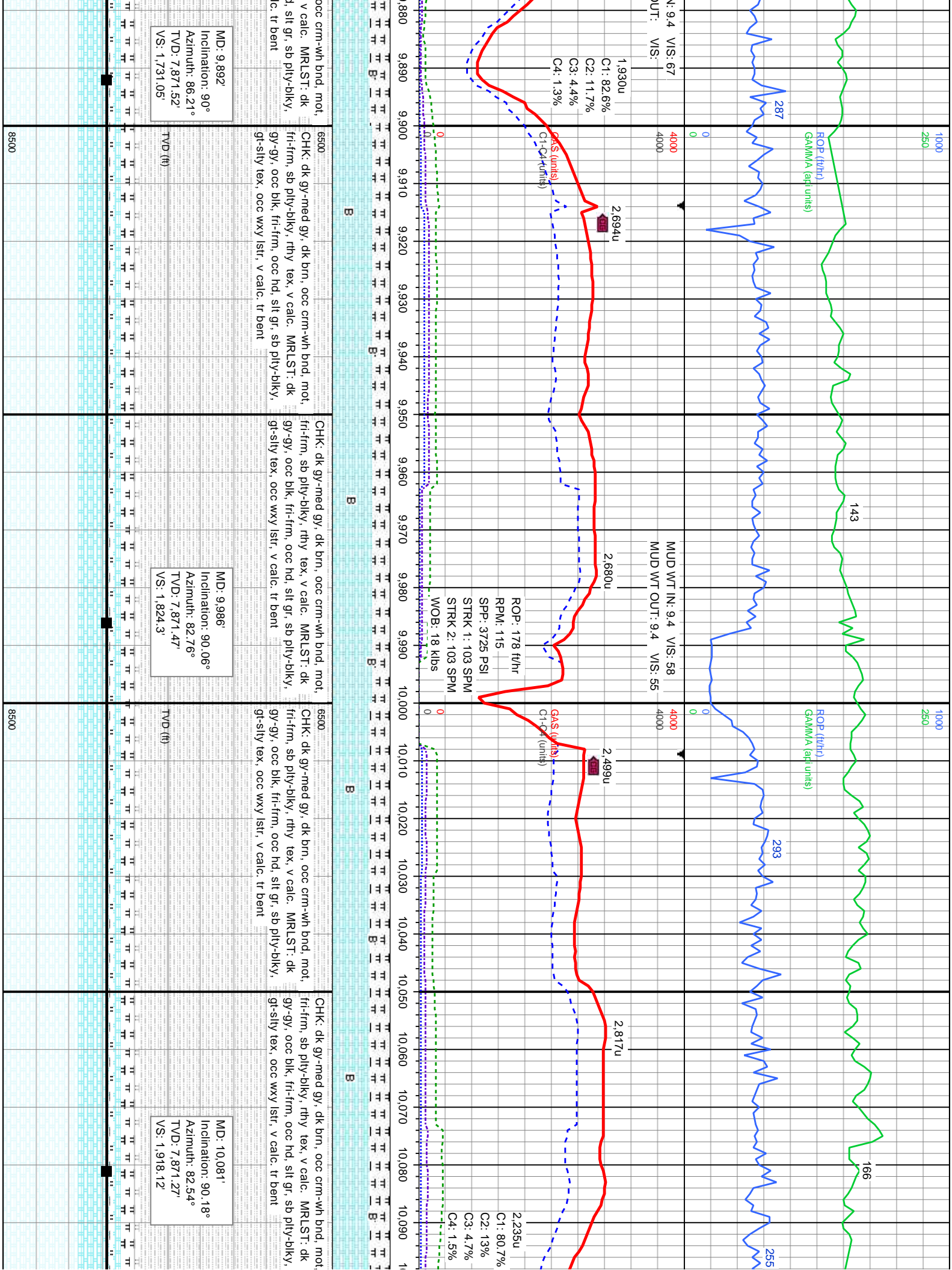


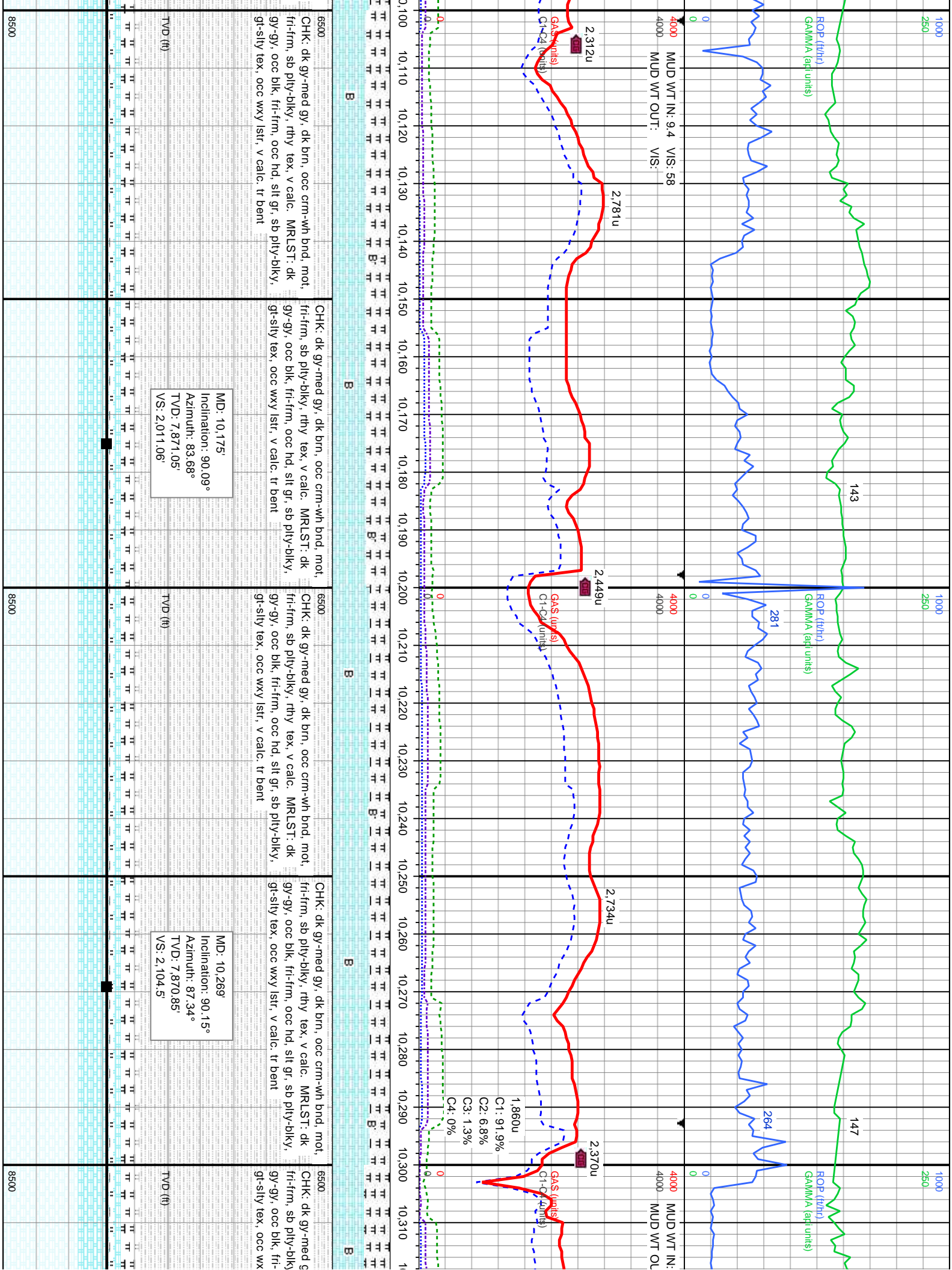


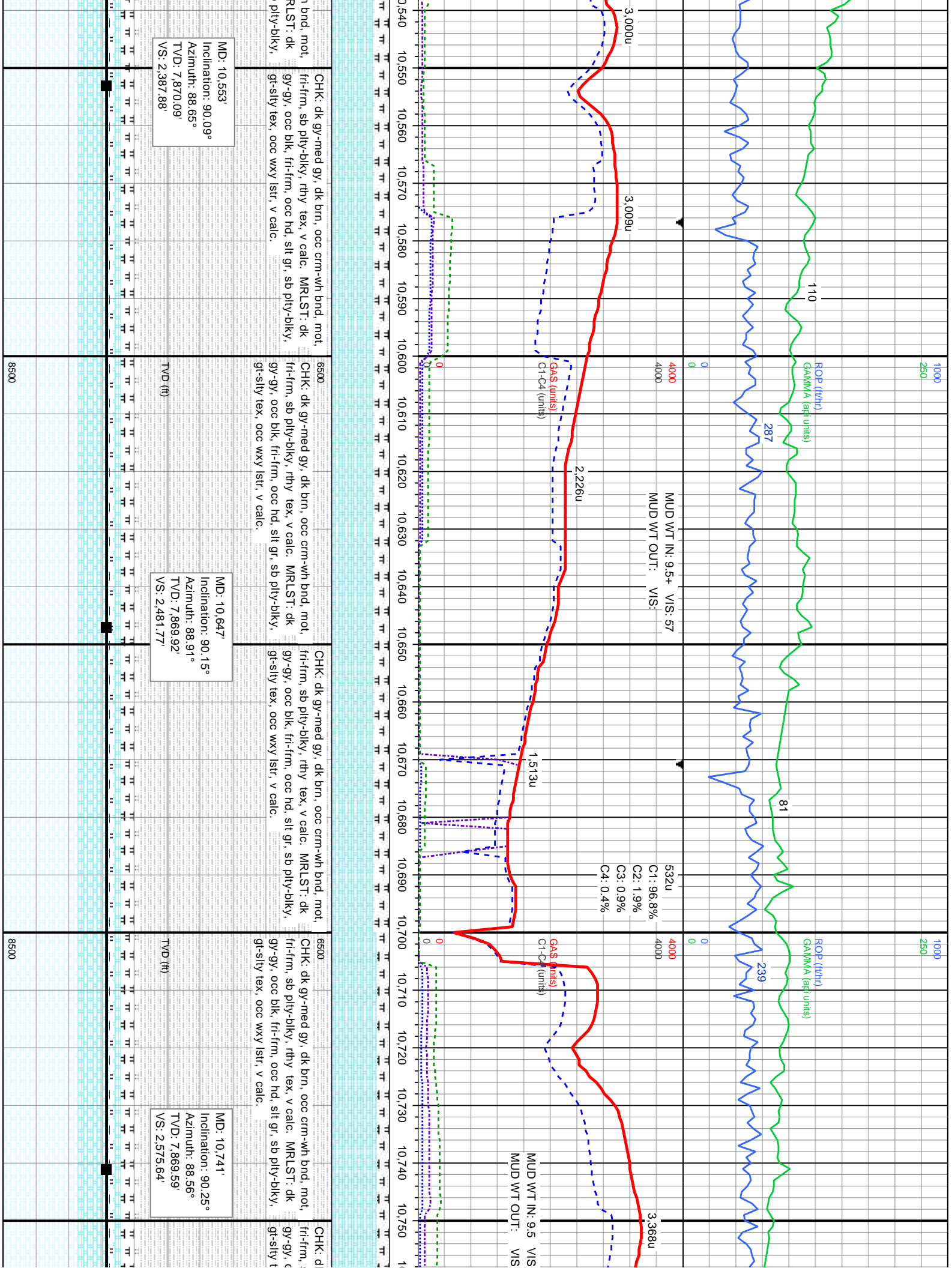












NOTE: Picked up OnTrac at 10952'

03/03/2019 03/04/2019

MINDEPTH

1000

250

0

ROP (ft/hr)

GAMMA (api units)

75

284

3,222u

4000

4000

0

0

ROP: 320 ft/hr

RPM: 100

SPP: 4174 PSI

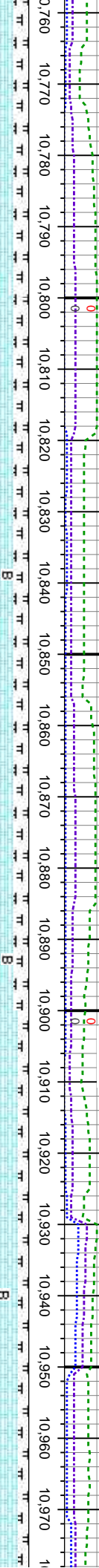
STRK 1: 103 SPM

STRK 2: 103 SPM

WOB: 20 klbs

GAS (units)

C1-C4 (units)



B

B

B

B

B

gy-med gy, dk brn, occ crm-wh bnd, mot, sb ply-bkly, rthy tex, v calc. MRSLST: dk fri-frm, sb ply-bkly, rthy tex, v calc. MRSLST: dk gy-gy, occ blk, fri-frm, occ hd, sit gr, sb ply-bkly, gt-sily tex, occ wxy istr, v calc.

6500
CHK: dk gy-med gy, dk brn, occ crm-wh bnd, mot, fri-frm, sb ply-bkly, rthy tex, v calc. MRSLST: dk gy-gy, occ blk, fri-frm, occ hd, sit gr, sb ply-bkly, gt-sily tex, occ wxy istr, v calc. tr bent

TV D (ft)

MD: 10,835'
Inclination: 90.03°
Azimuth: 87.59°
TV D: 7,869.36'
VS: 2,669.45'

6500
CHK: dk gy-med gy, dk brn, occ crm-wh bnd, mot, fri-frm, sb ply-bkly, rthy tex, v calc. MRSLST: dk gy-gy, occ blk, fri-frm, occ hd, sit gr, sb ply-bkly, gt-sily tex, occ wxy istr, v calc. tr bent

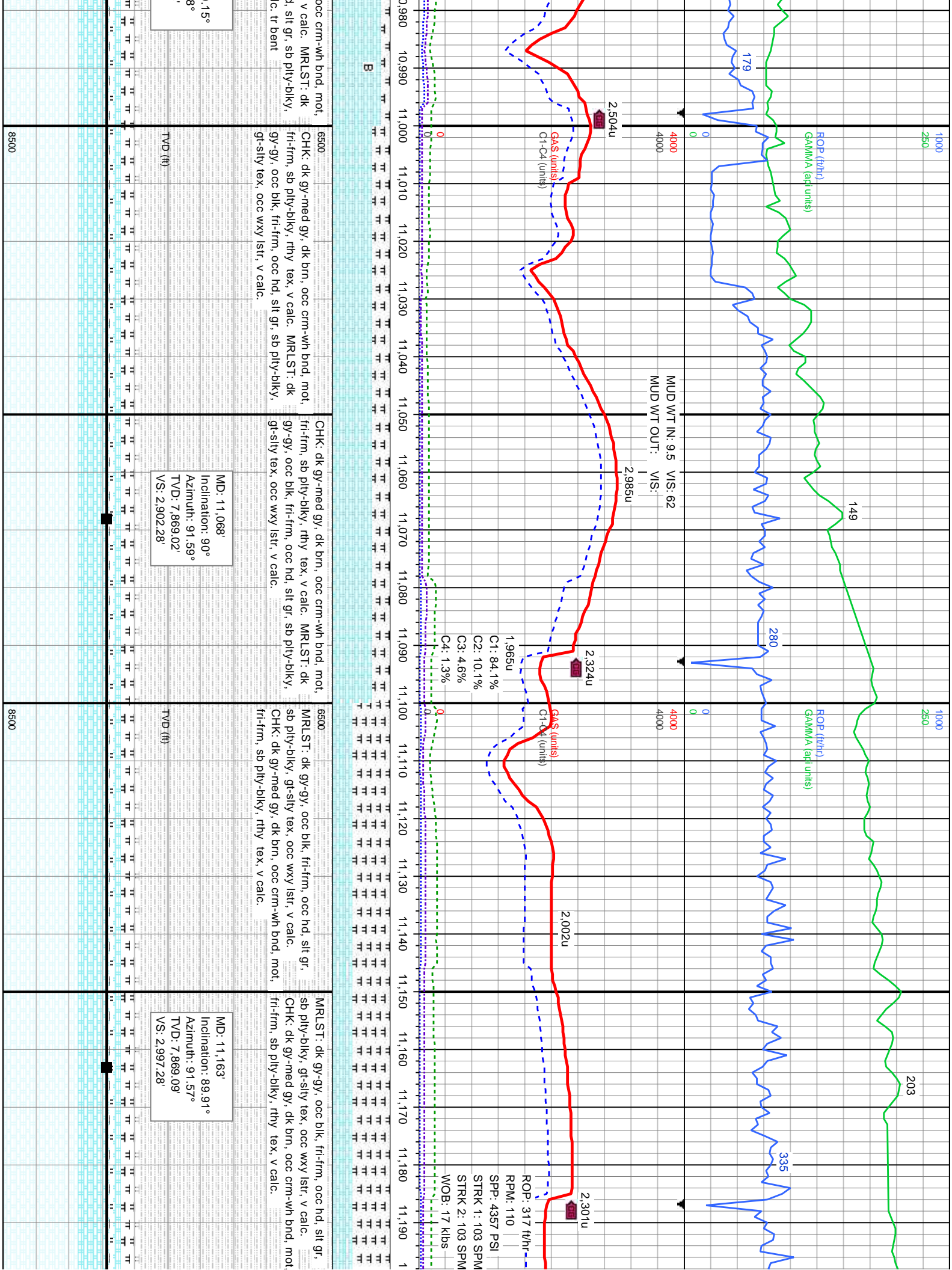
TV D (ft)

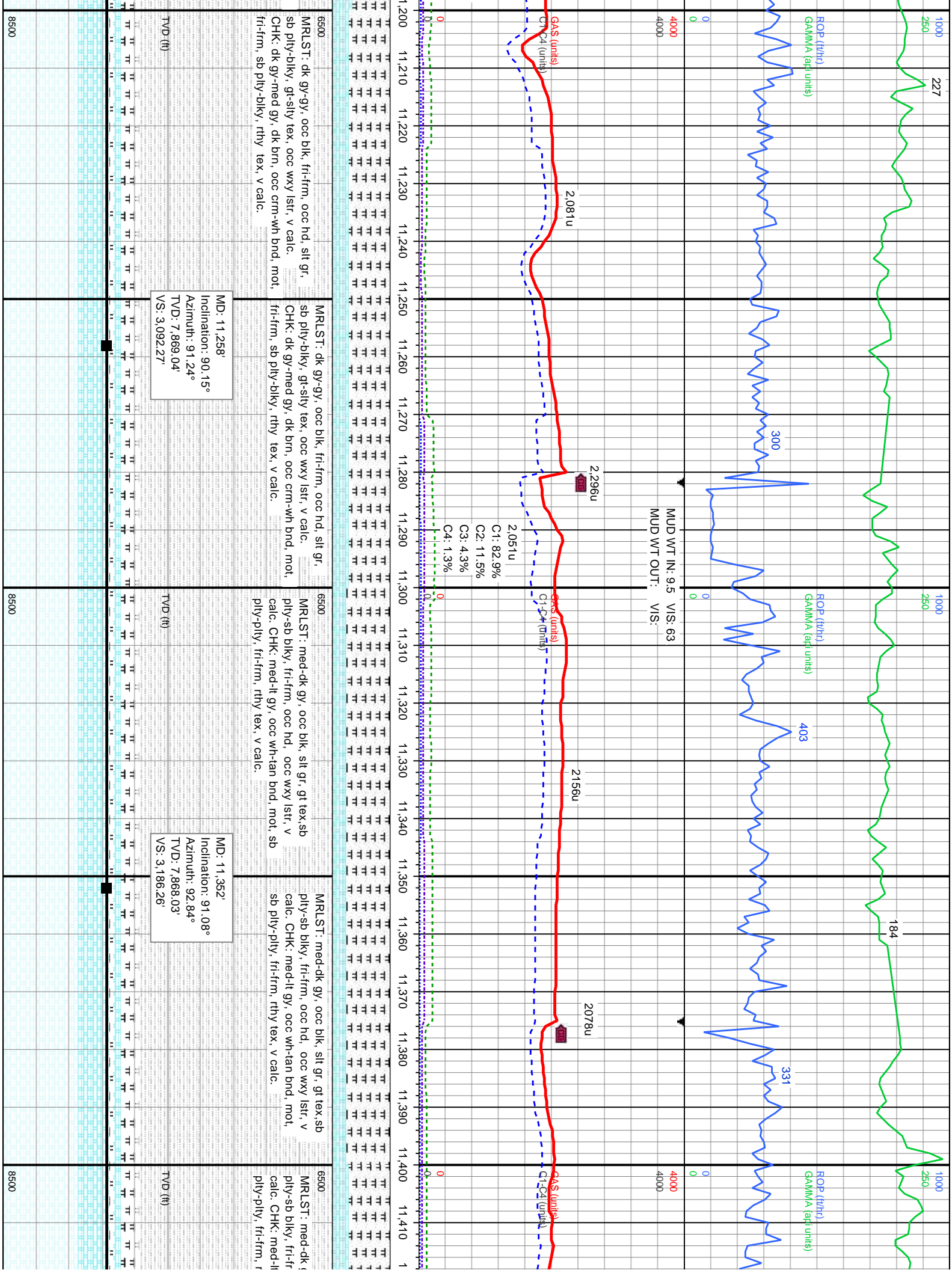
6500
CHK: dk gy-med gy, dk brn, occ crm-wh bnd, mot, fri-frm, sb ply-bkly, rthy tex, v calc. MRSLST: dk gy-gy, occ blk, fri-frm, occ hd, sit gr, sb ply-bkly, gt-sily tex, occ wxy istr, v calc. tr bent

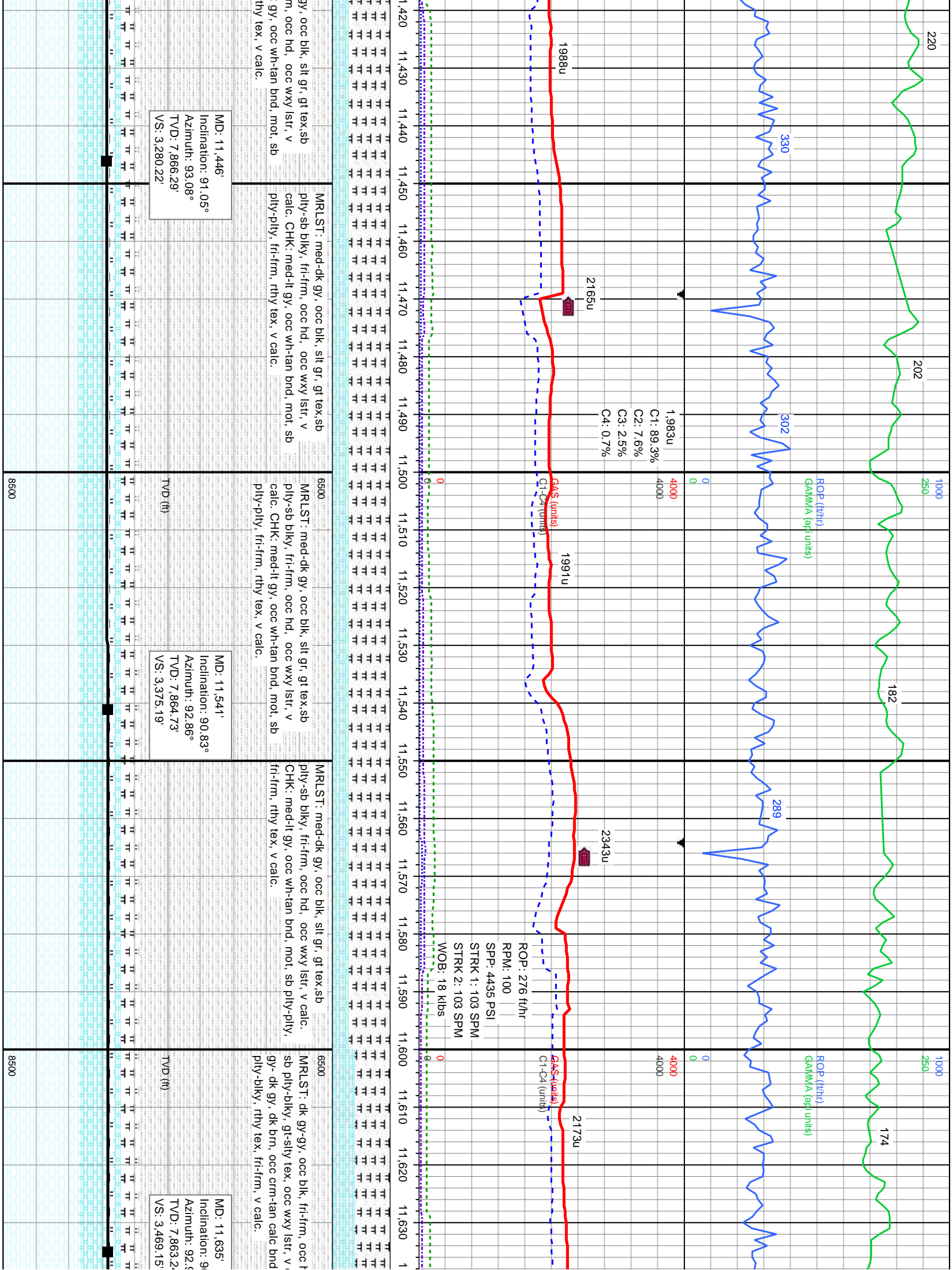
TV D (ft)

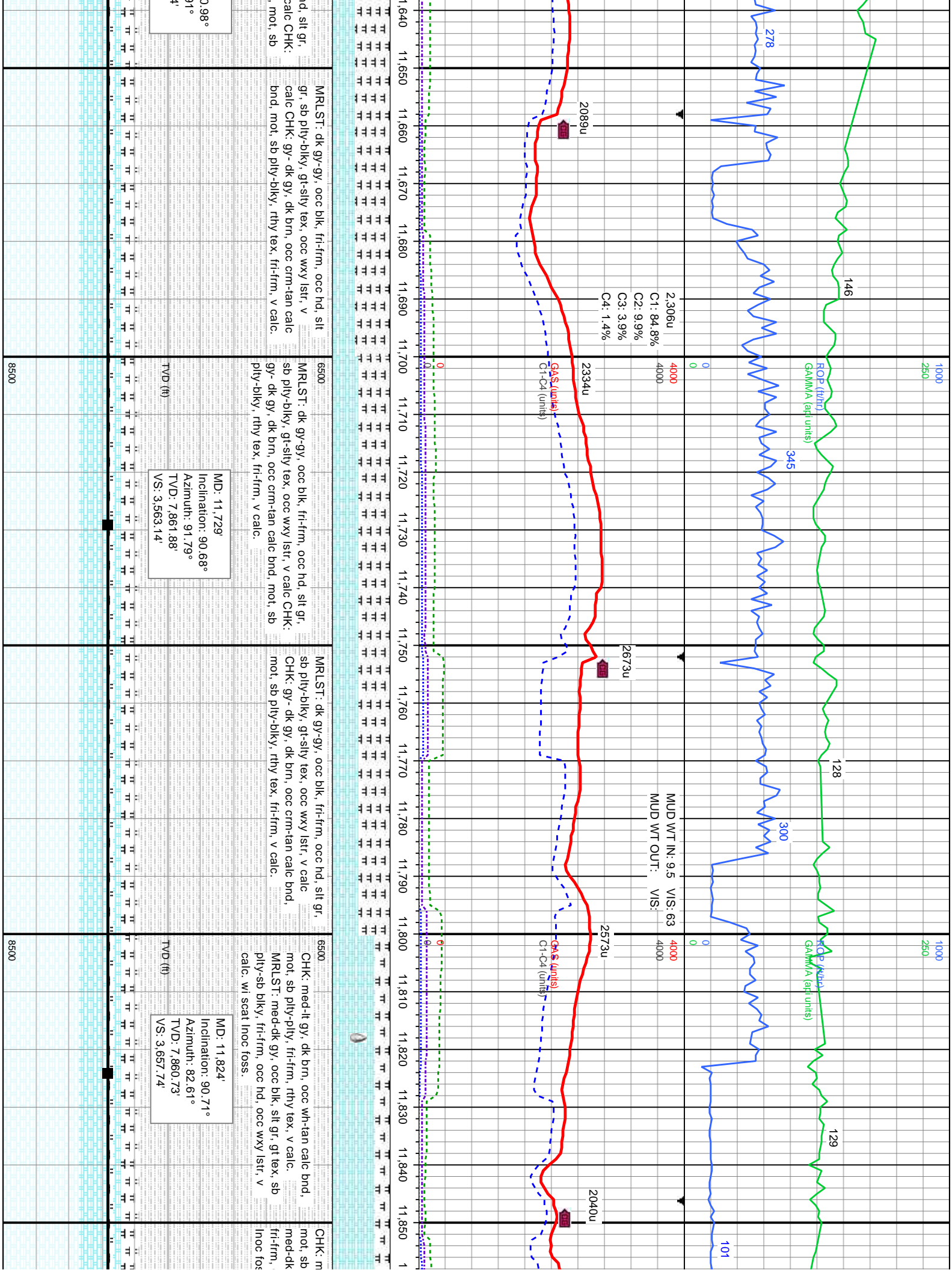
MD: 10,974'
Inclination: 90.3°
Azimuth: 90.3°
TV D: 7,869.14'
VS: 2,808.28'

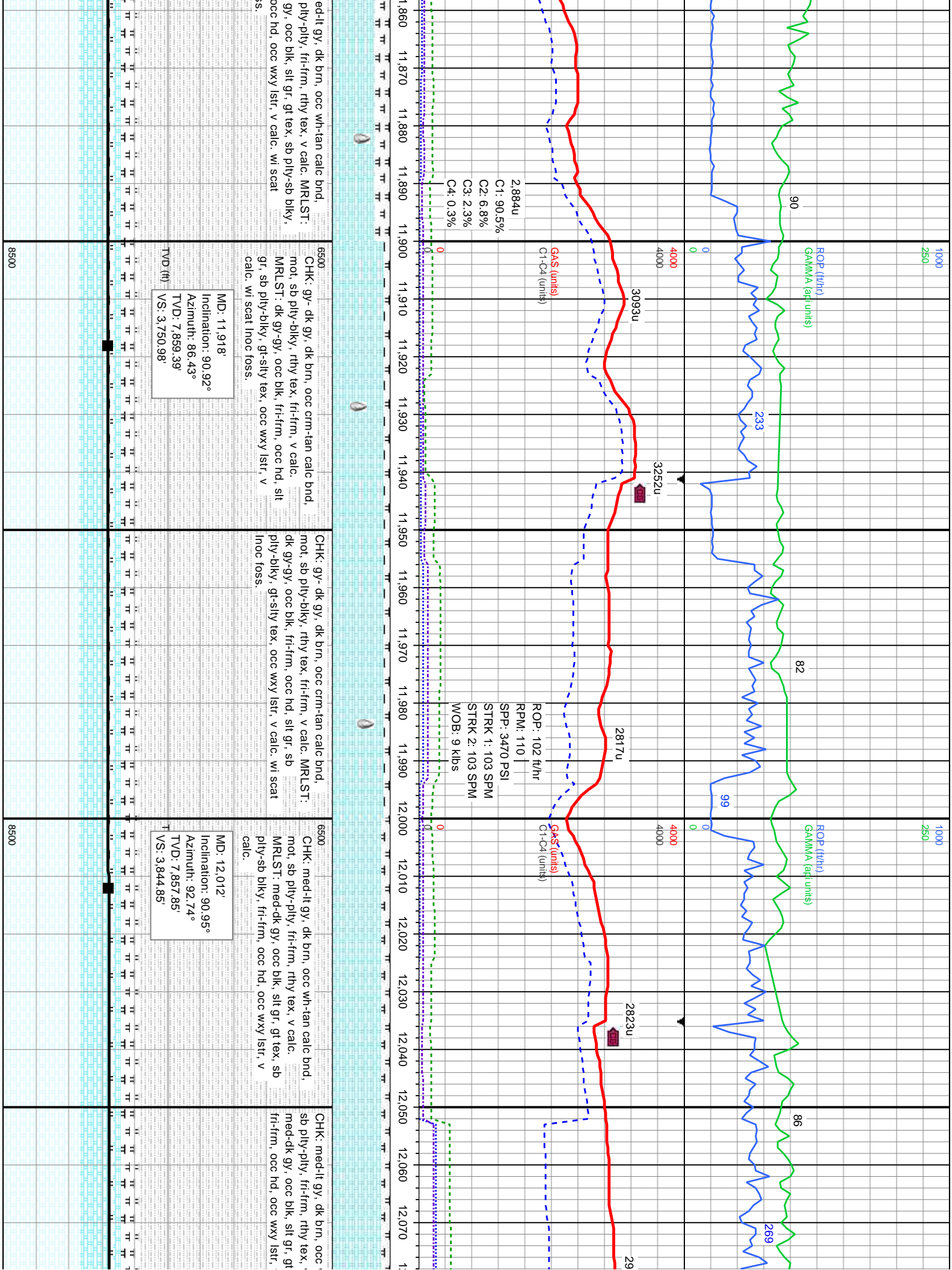
6500
CHK: dk gy-med gy, dk brn, occ crm-wh bnd, mot, fri-frm, sb ply-bkly, rthy tex, v calc. MRSLST: dk gy-gy, occ blk, fri-frm, occ hd, sit gr, sb ply-bkly, gt-sily tex, occ wxy istr, v calc.

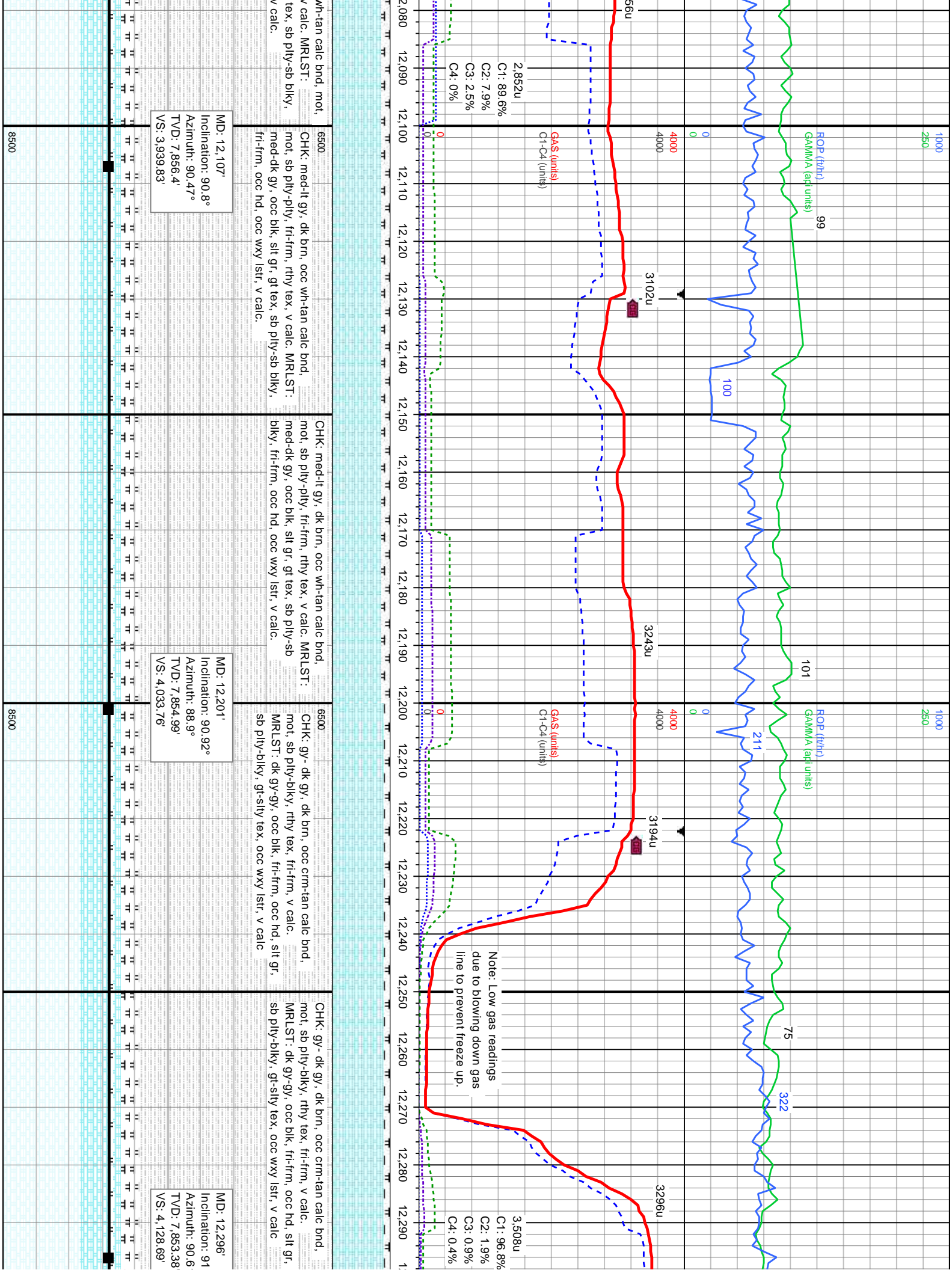


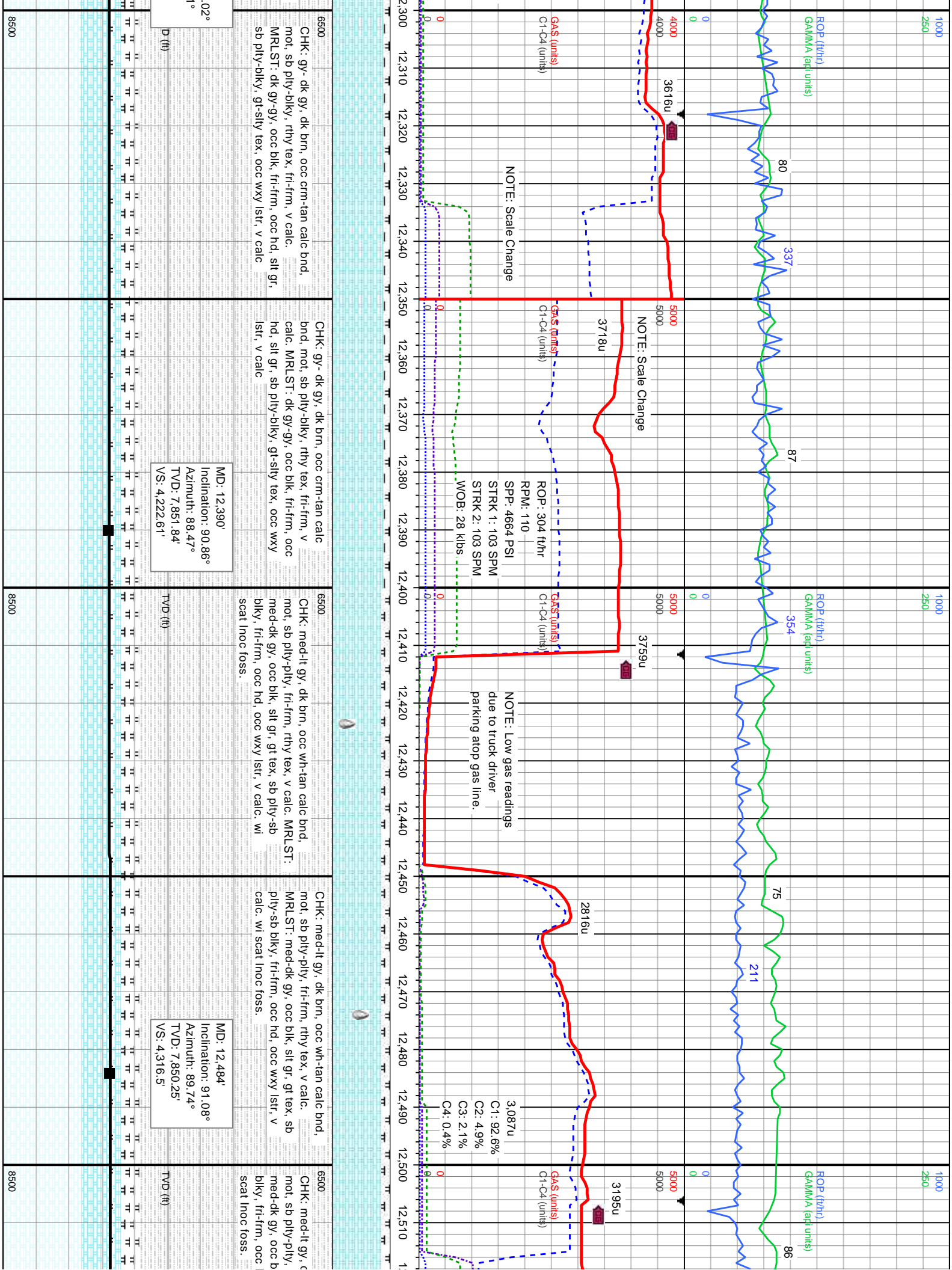


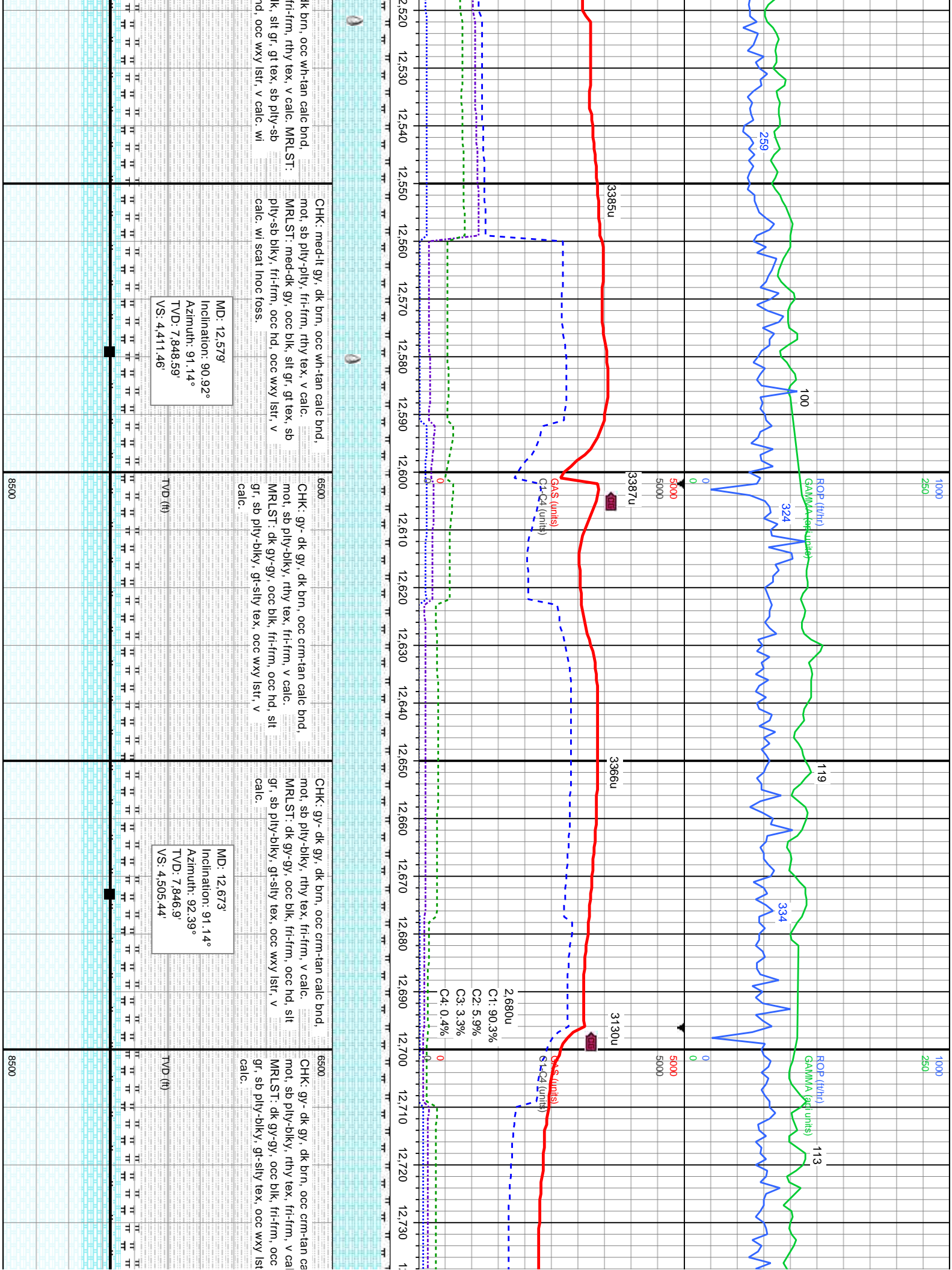


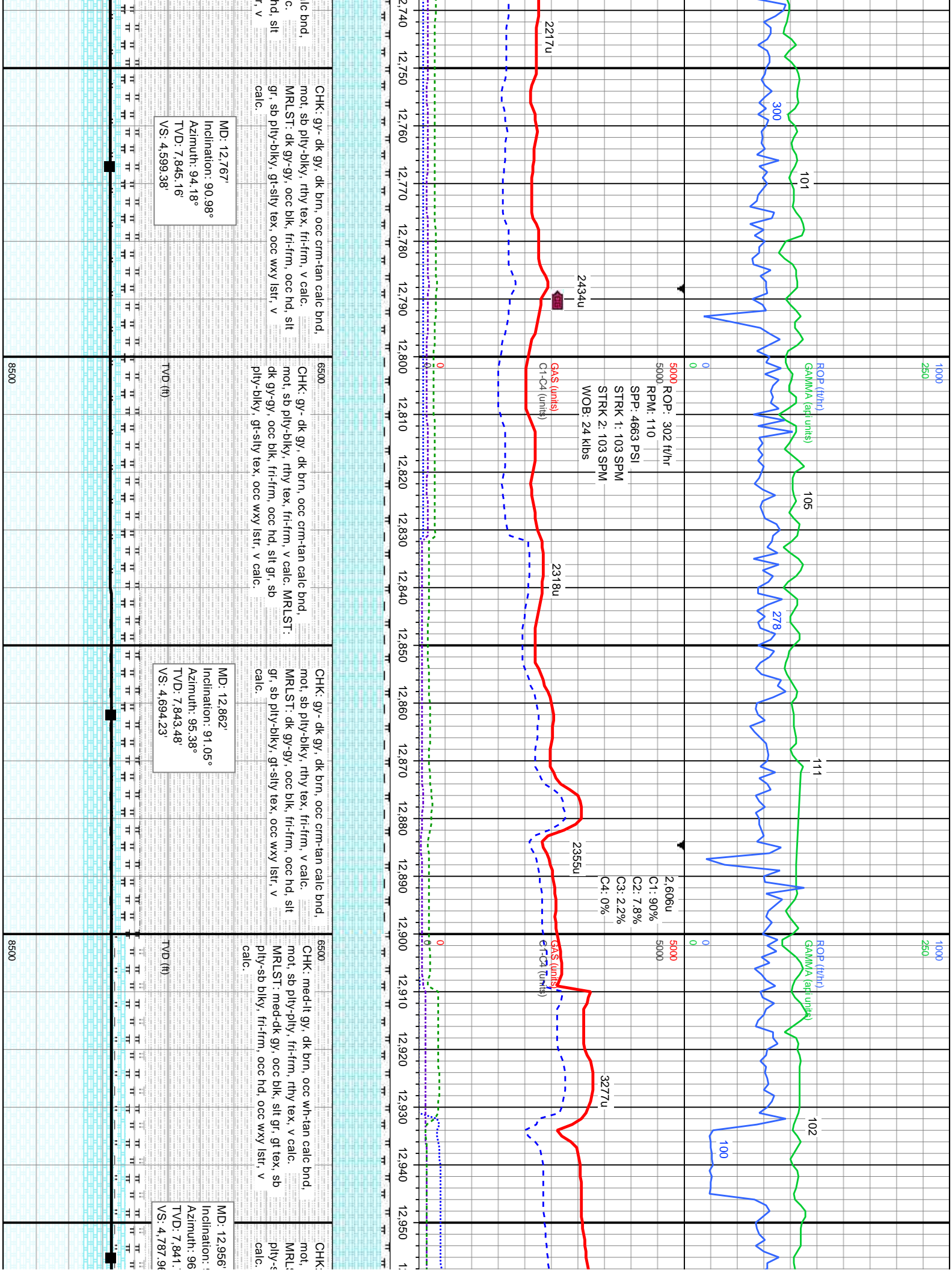


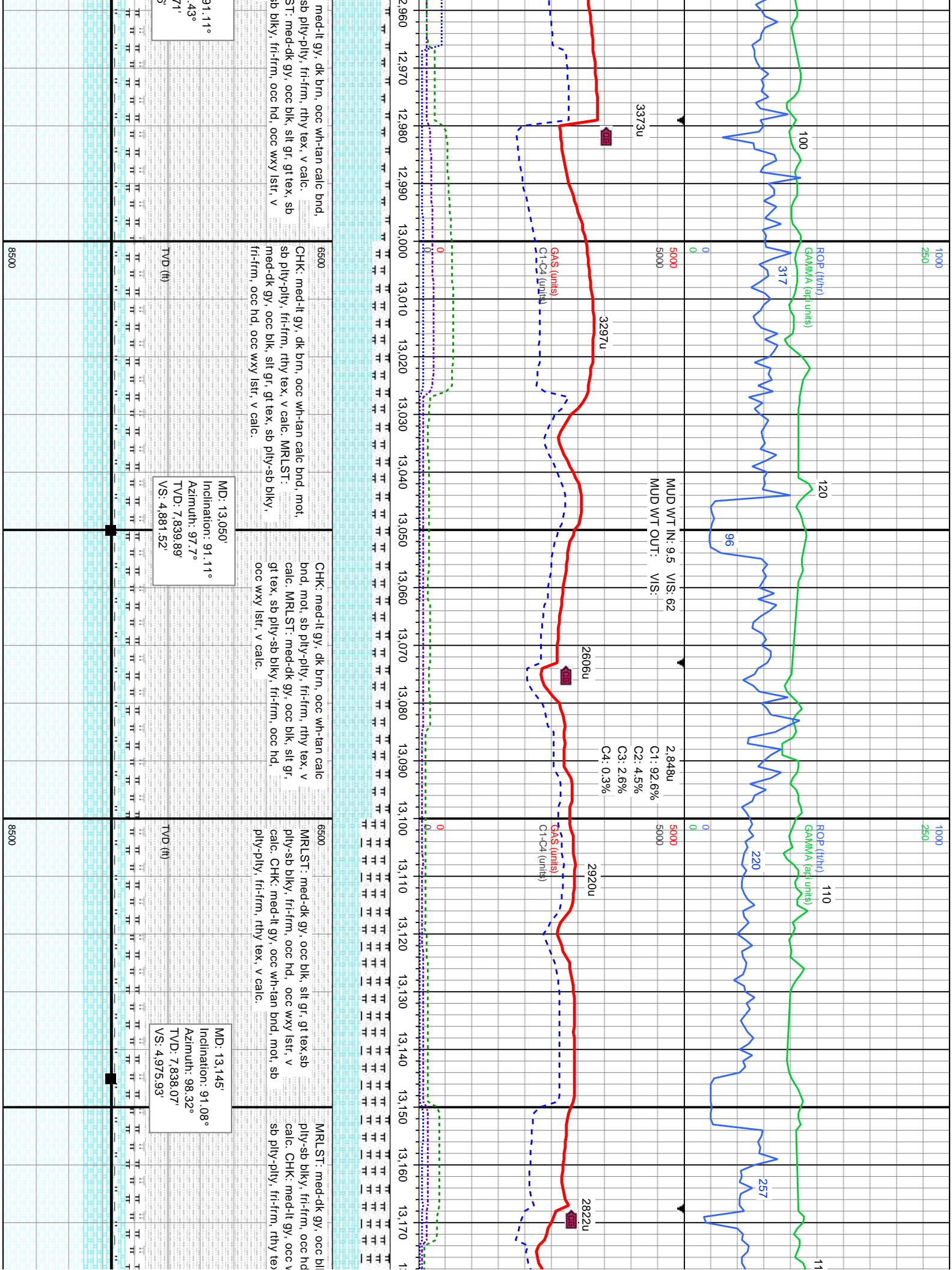


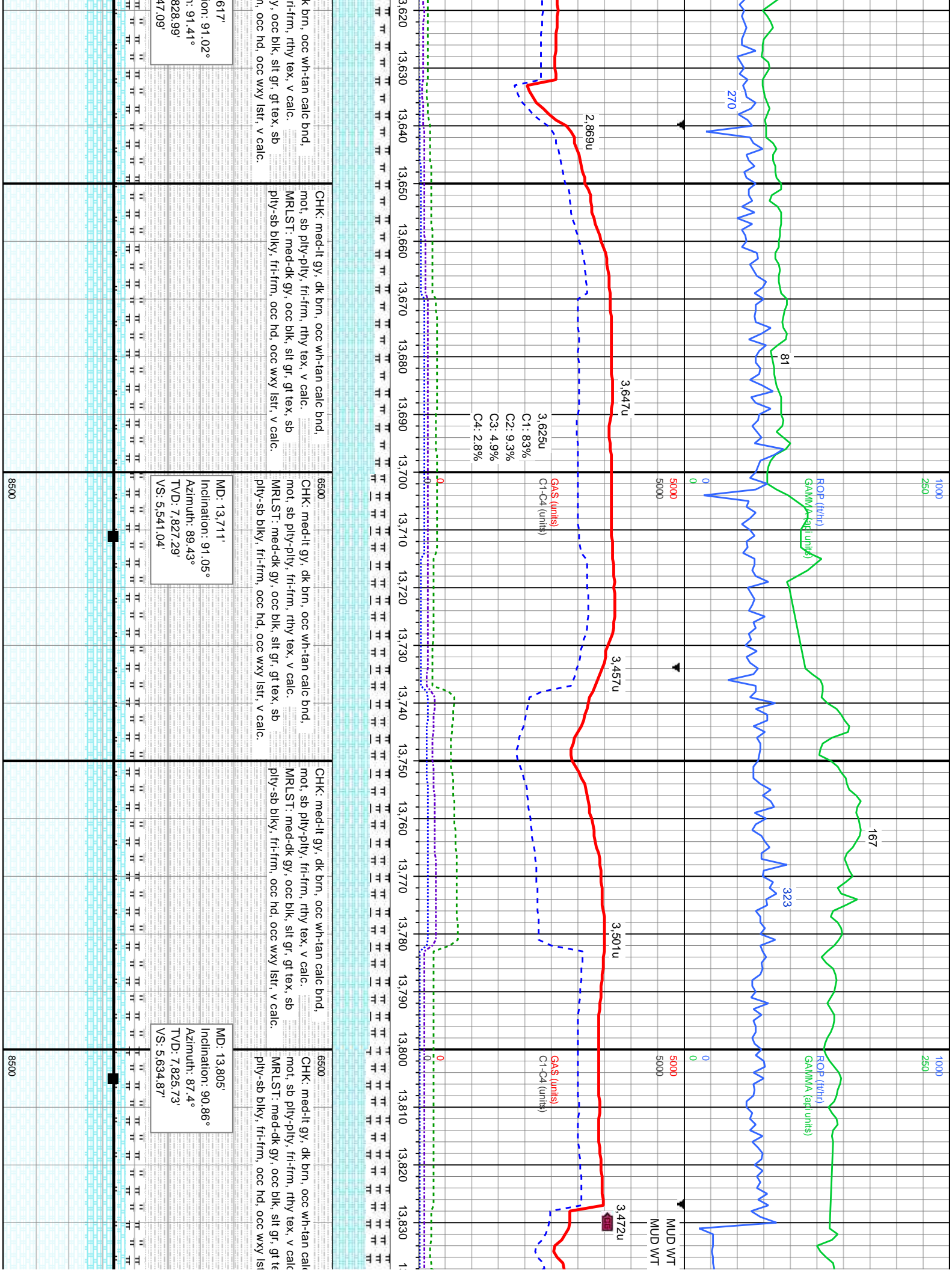


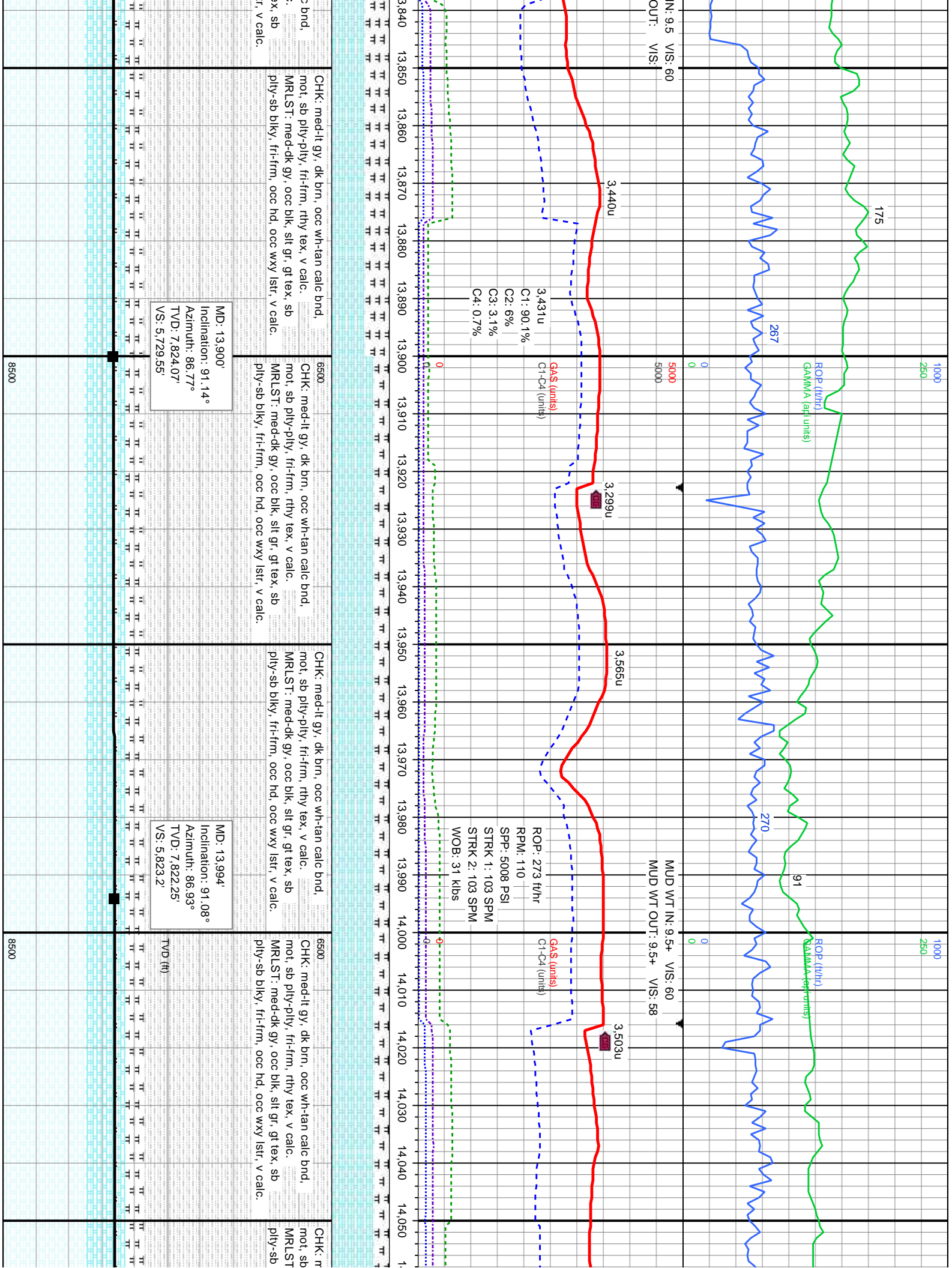


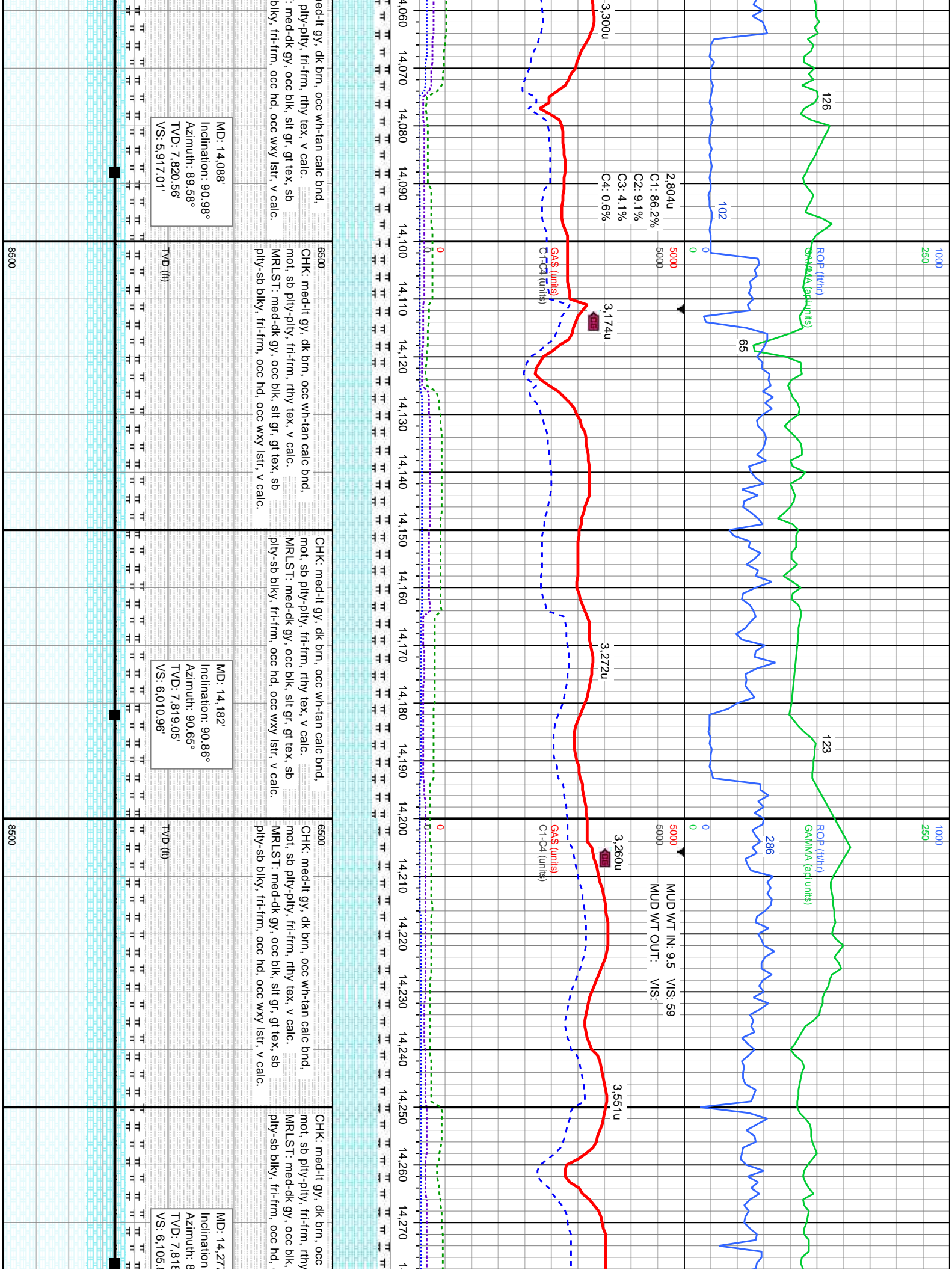


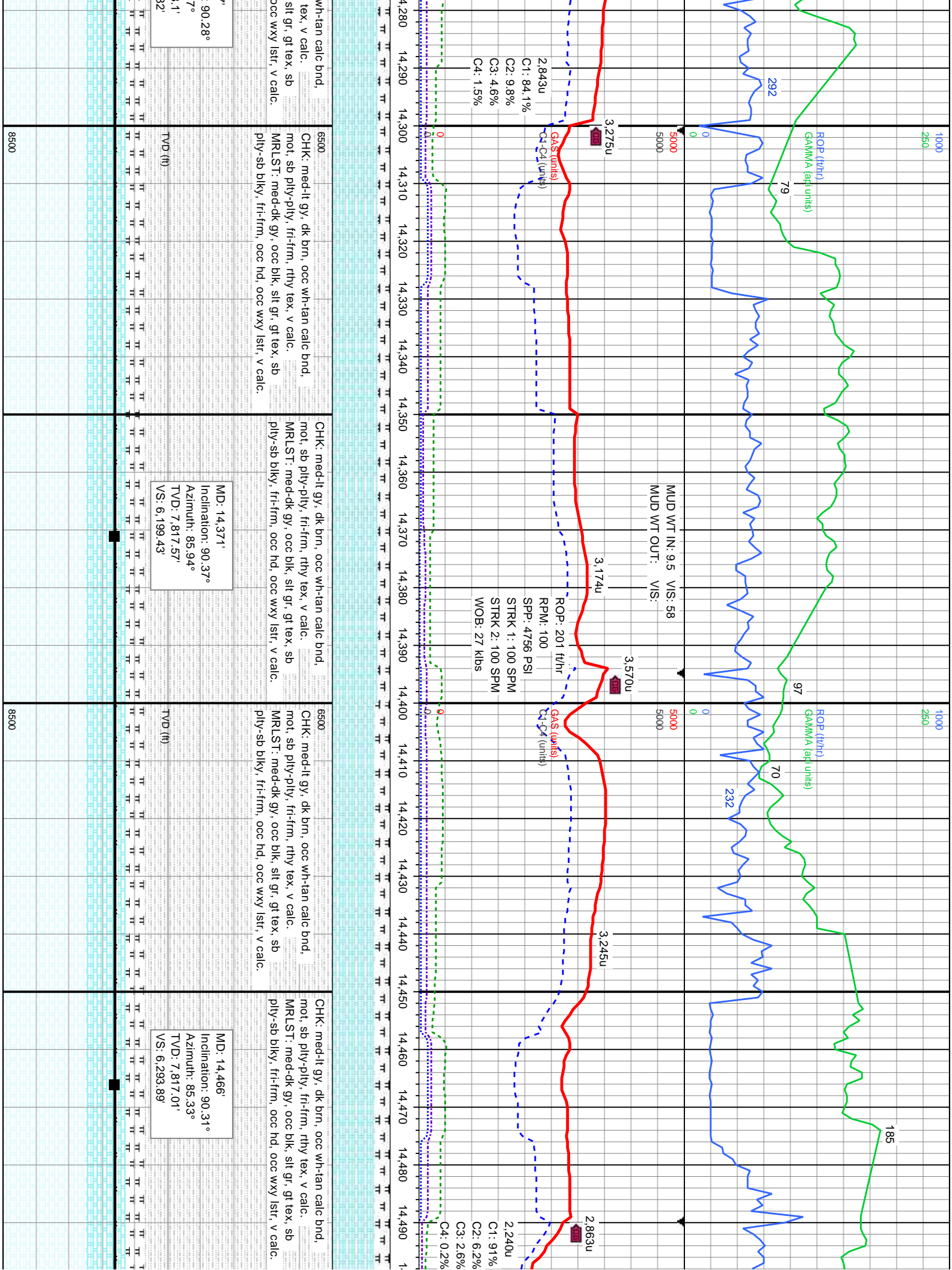












03/04/2019 - 03/05/2019

MINDEPTH

186

129

297

1000

250

1000

ROP (ft/hr)

ROP (ft/hr)

GAMMA (api units)

GAMMA (api units)

GAMMA (api units)

GAMMA (api units)

67

247

297

1000

250

1000

ROP (ft/hr)

ROP (ft/hr)

GAMMA (api units)

GAMMA (api units)

GAMMA (api units)

GAMMA (api units)

ROP: 205 ft/hr
RPM: 110
SPP: 5003 PSI
STRK 1: 103 SPM
STRK 2: 103 SPM
WOB: 30 klbs

MUD WT IN: 9
MUD WT OUT

3.348u

2.927u

3.245u

3.251u

3.271u

GAS (units)

GAS (units)

GAS (units)

C1-C4 (units)

C1-C4 (units)

C1-C4 (units)

C1: 69.3%

C2: 18.4%

C3: 8.1%

C4: 4.2%

0

0

0

14,720 14,730 14,740 14,750 14,760 14,770 14,780 14,790 14,800 14,810 14,820 14,830 14,840 14,850 14,860 14,870 14,880 14,890 14,900 14,910 14,920 14,930

dk brn, occ wh-tan calc bnd,

fr-frm, rthy tex, v calc.

y, occ blk, slit gr, gt tex, sb

n, occ hd, occ wxy istr, v calc.

CHK: med-it gy, dk brn, occ wh-tan calc bnd,

mot, sb ply-ply, fr-frm, rthy tex, v calc.

MRSLT: med-dk gy, occ blk, slit gr, gt tex, sb

ply-sb blk, fr-frm, occ hd, occ wxy istr, v calc.

6500

6500

6500

6500

CHK: med-it gy, dk brn, occ wh-tan calc bnd,

mot, sb ply-ply, fr-frm, rthy tex, v calc.

MRSLT: med-dk gy, occ blk, slit gr, gt tex, sb

ply-sb blk, fr-frm, occ hd, occ wxy istr, v calc.

CHK: med-it gy, dk brn, occ wh-tan calc bnd,

mot, sb ply-ply, fr-frm, rthy tex, v calc.

MRSLT: med-dk gy, occ blk, slit gr, gt tex, sb

ply-sb blk, fr-frm, occ hd, occ wxy istr, v calc.

6500

6500

CHK: med-it gy, dk brn, occ wh-tan calc bnd,

mot, sb ply-ply, fr-frm, rthy tex, v calc.

MRSLT: med-dk gy, occ blk, slit gr, gt tex, sb

ply-sb blk, fr-frm, occ hd, occ wxy istr, v calc.

MD: 14,748'

Inclination: 90.4°

Azimuth: 87.21°

TVD: 7,815.41'

VS: 6,574.71'

MD: 14,842'

Inclination: 90.52°

Azimuth: 87.76°

TVD: 7,814.65'

VS: 6,668.45'

MD: 14,930'

Inclination

Azimuth: 8

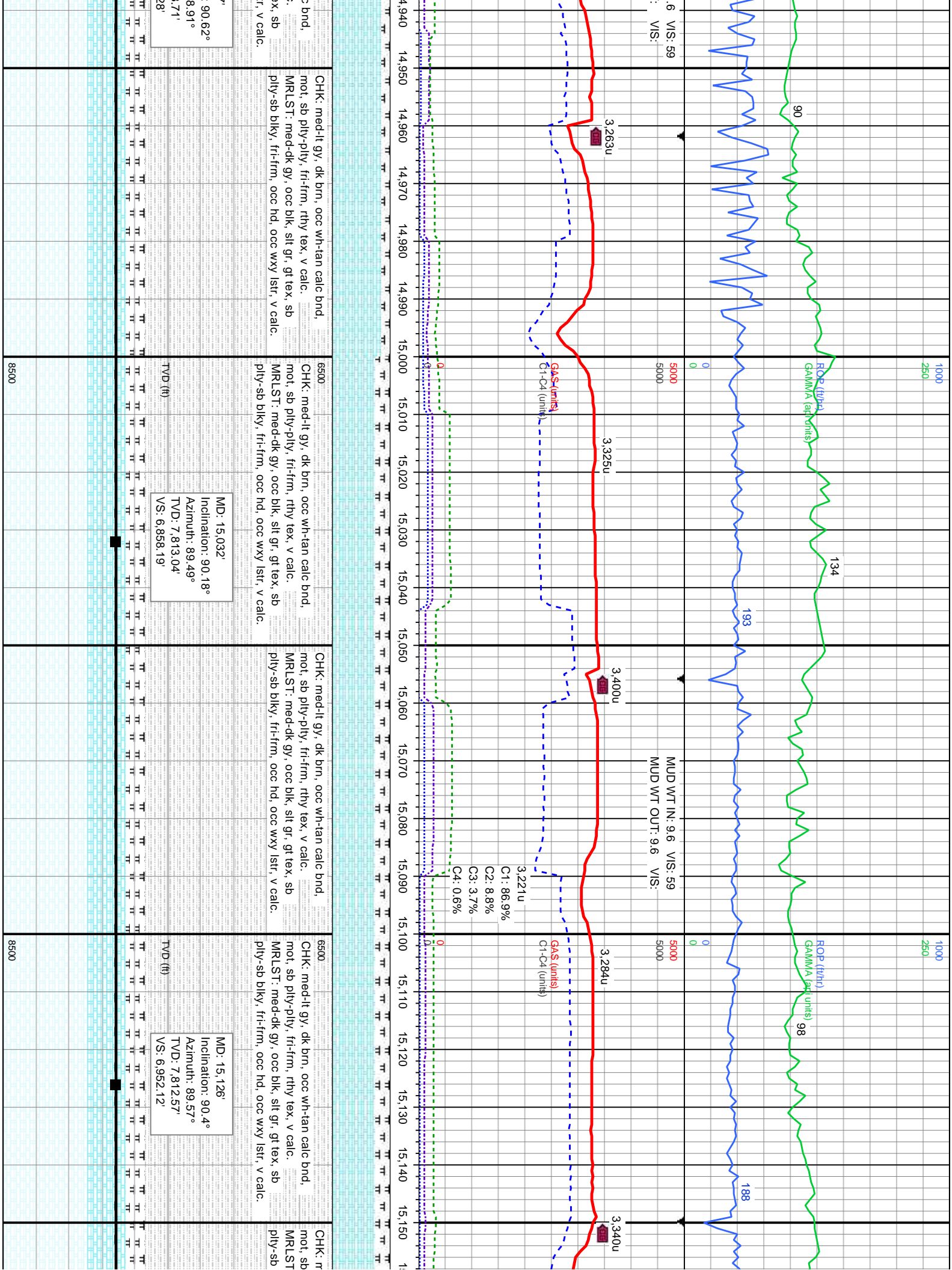
TVD: 7,813'

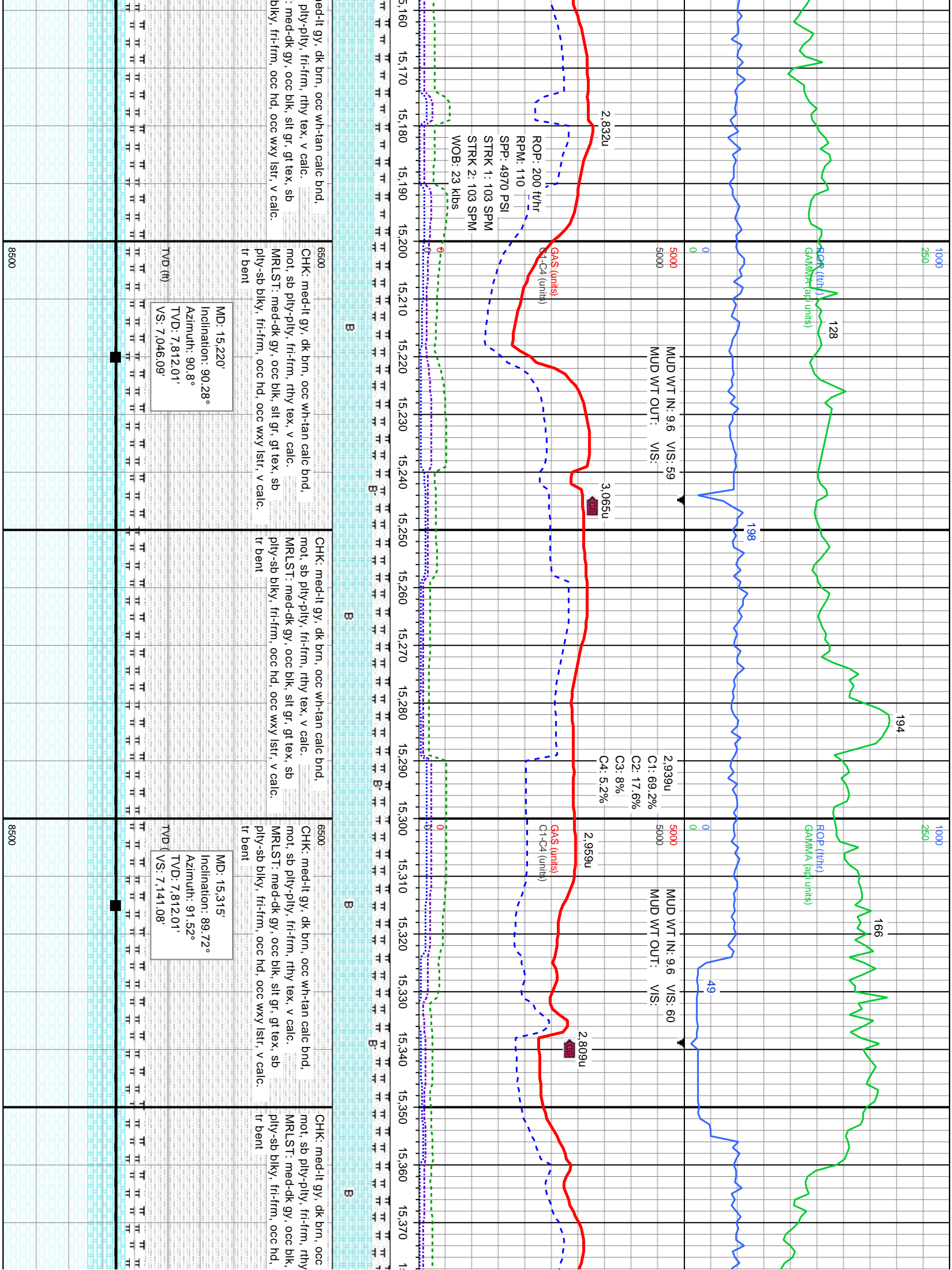
VS: 6,763.3'

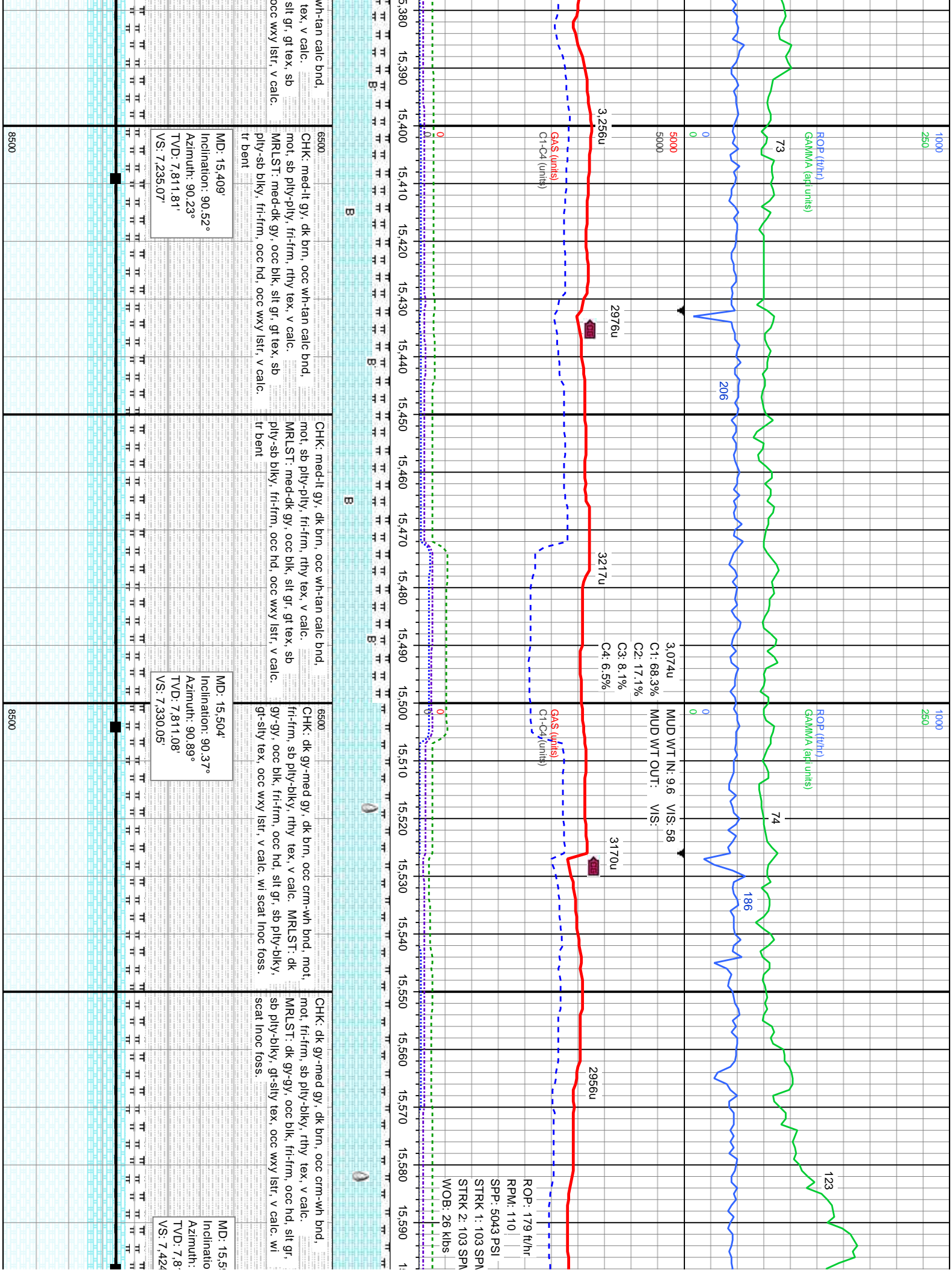
TVD (ft)

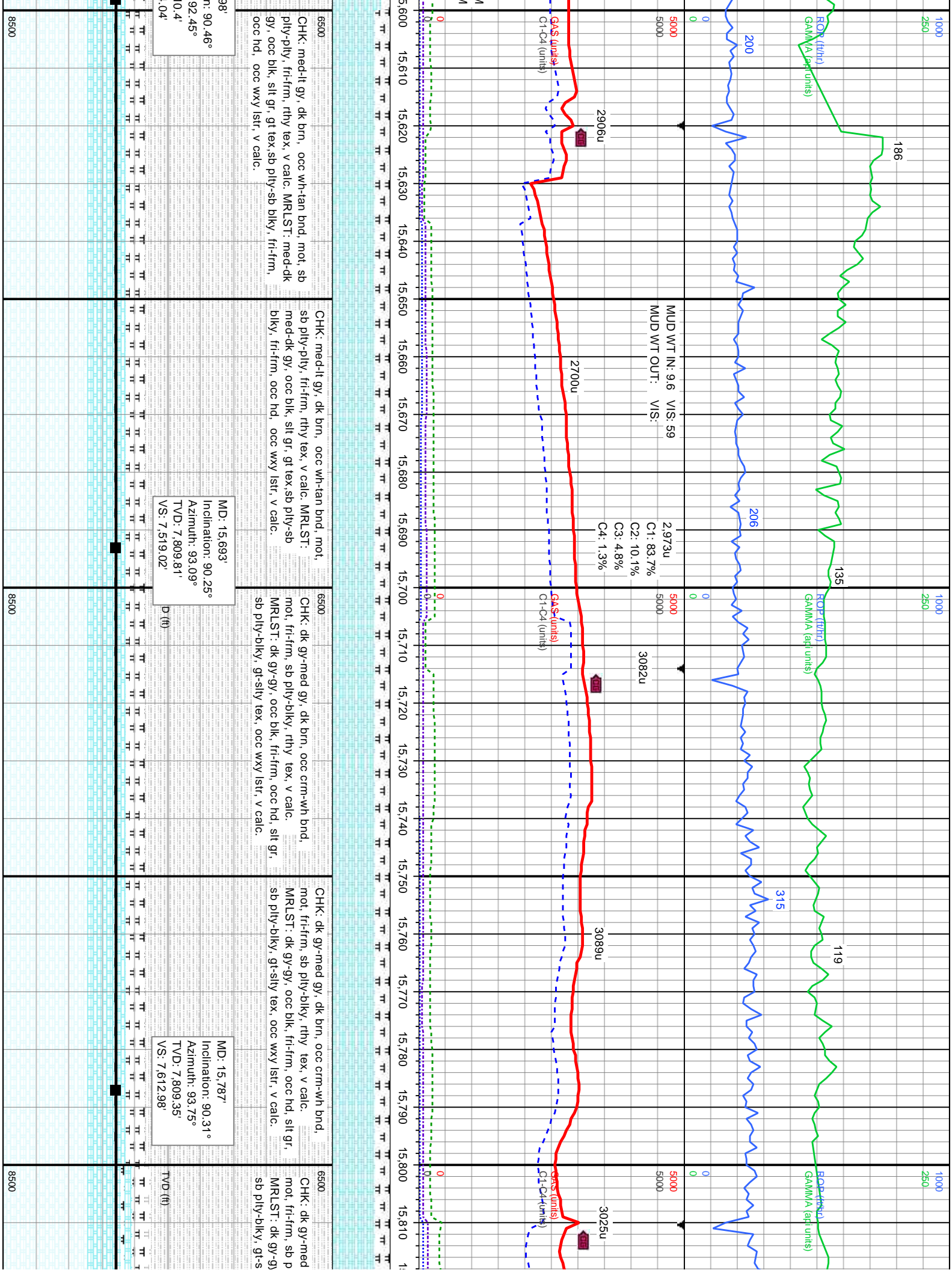
TVD (ft)

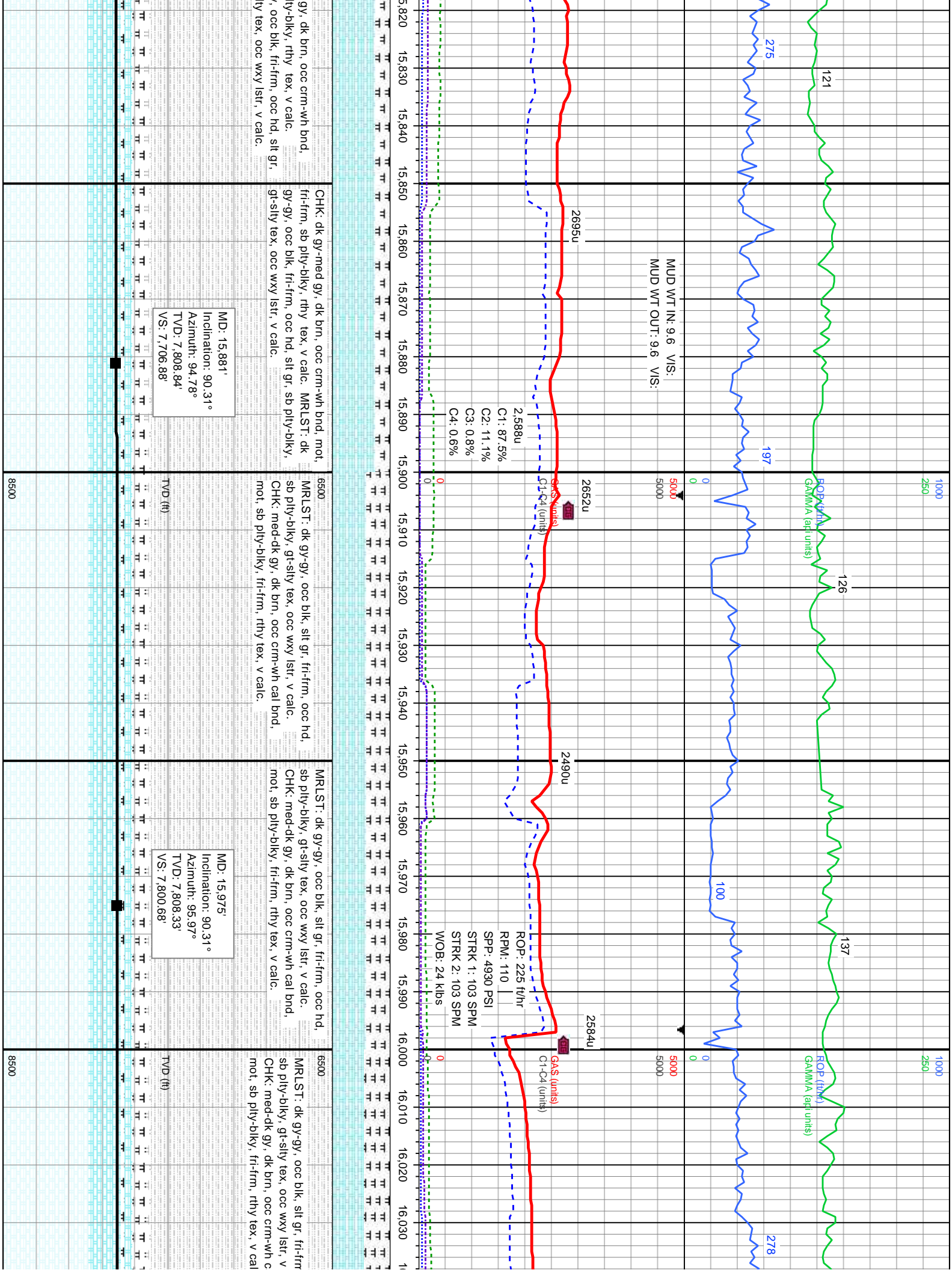
TVD (ft)

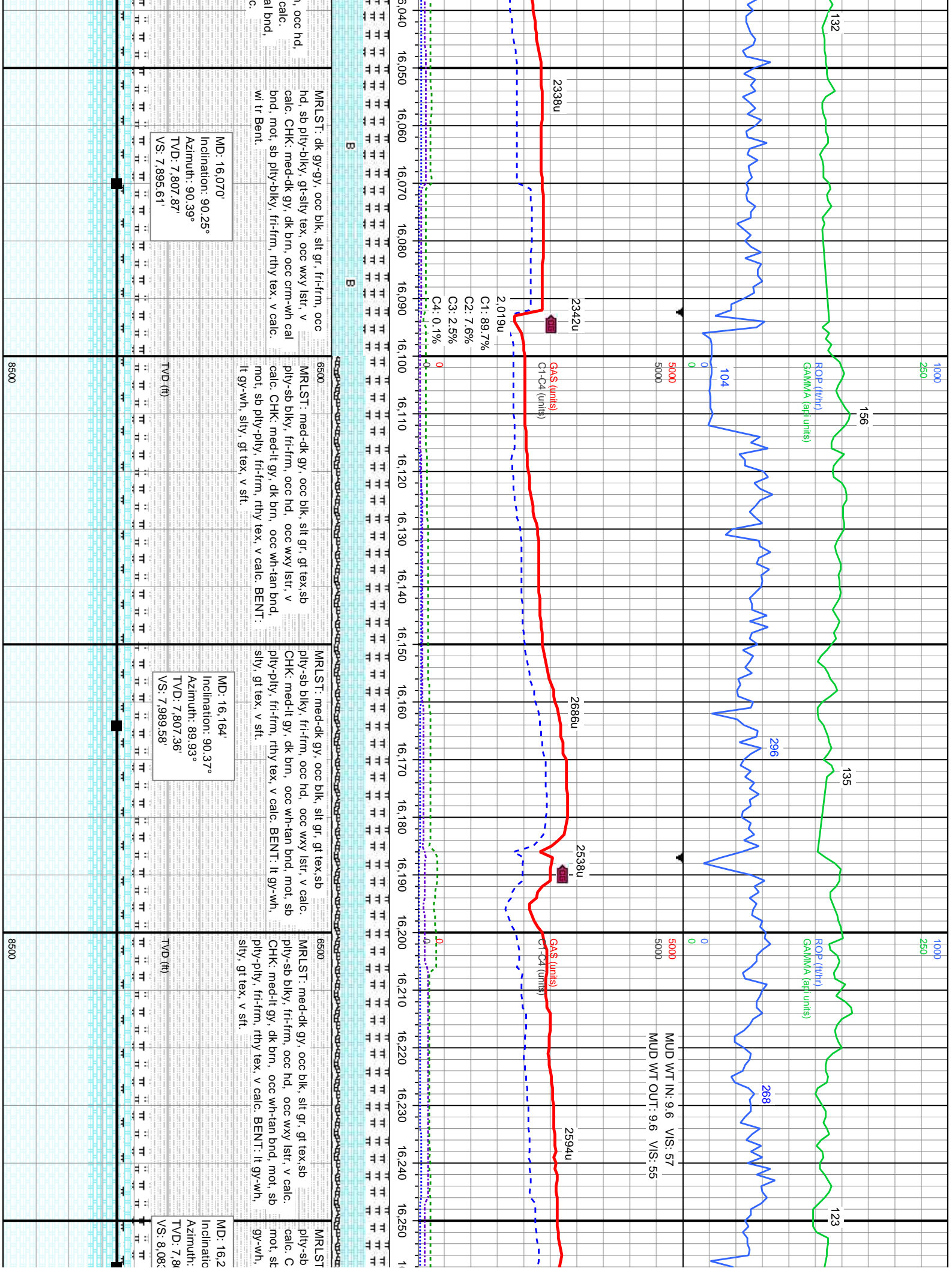


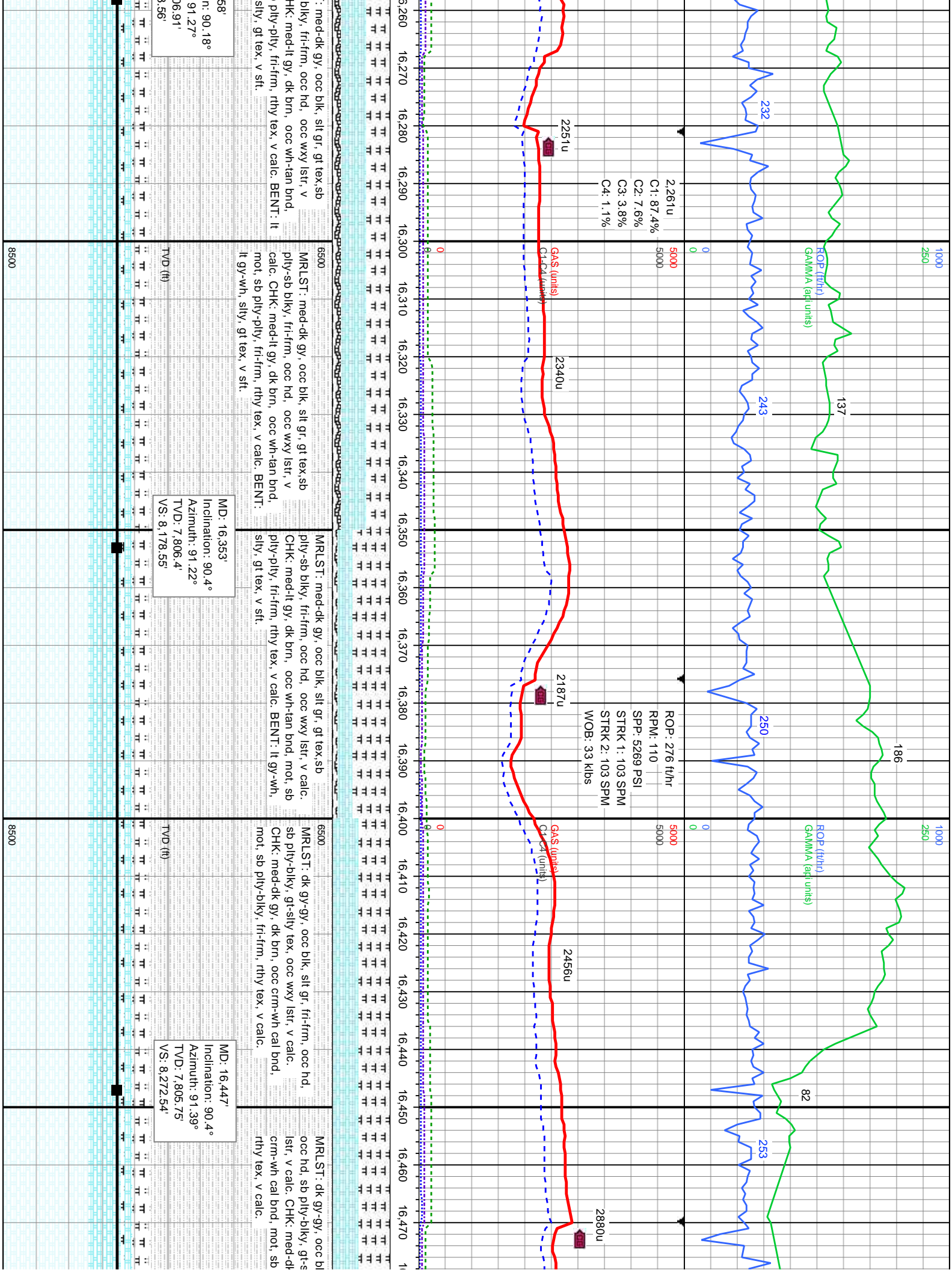


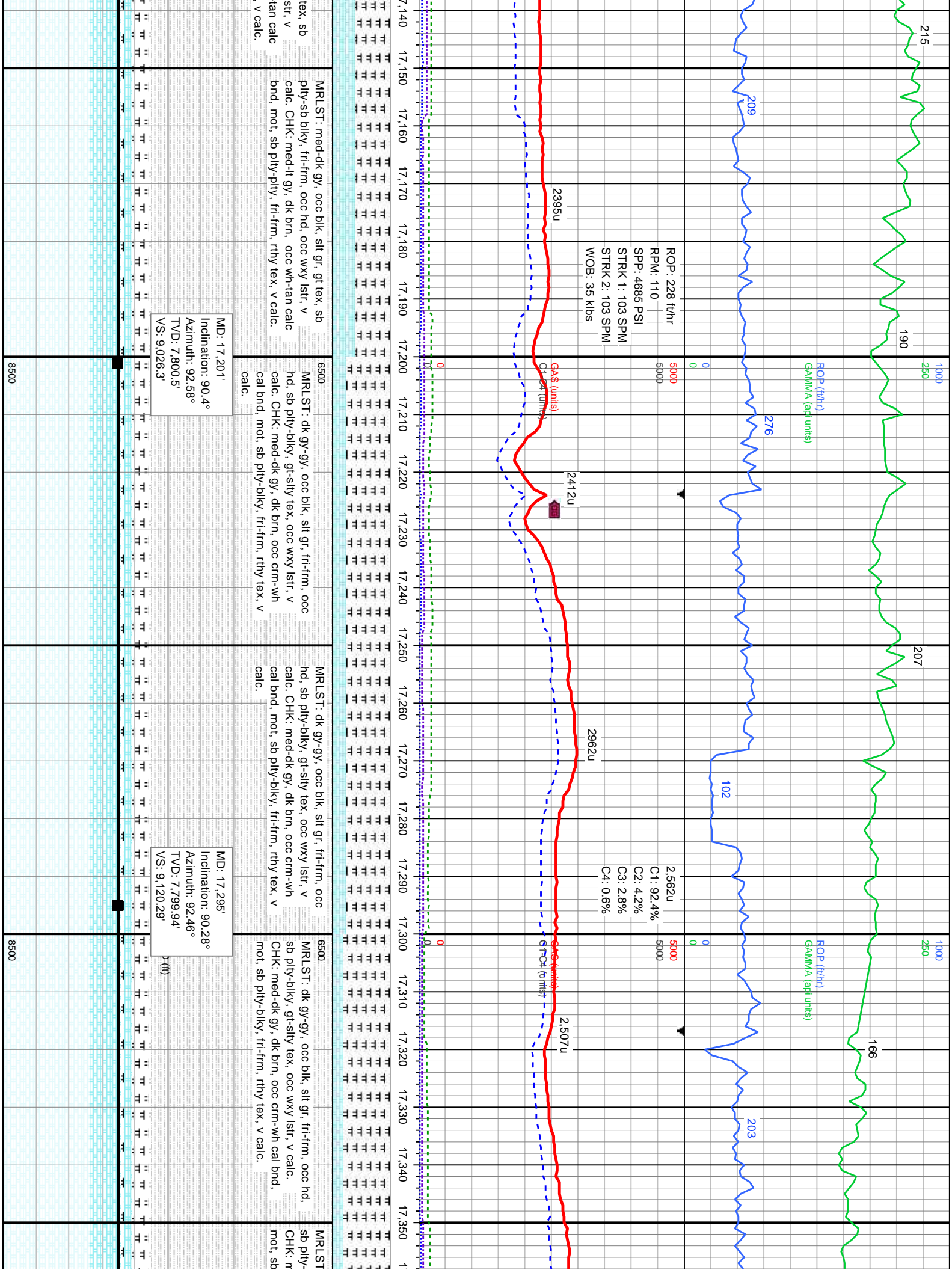


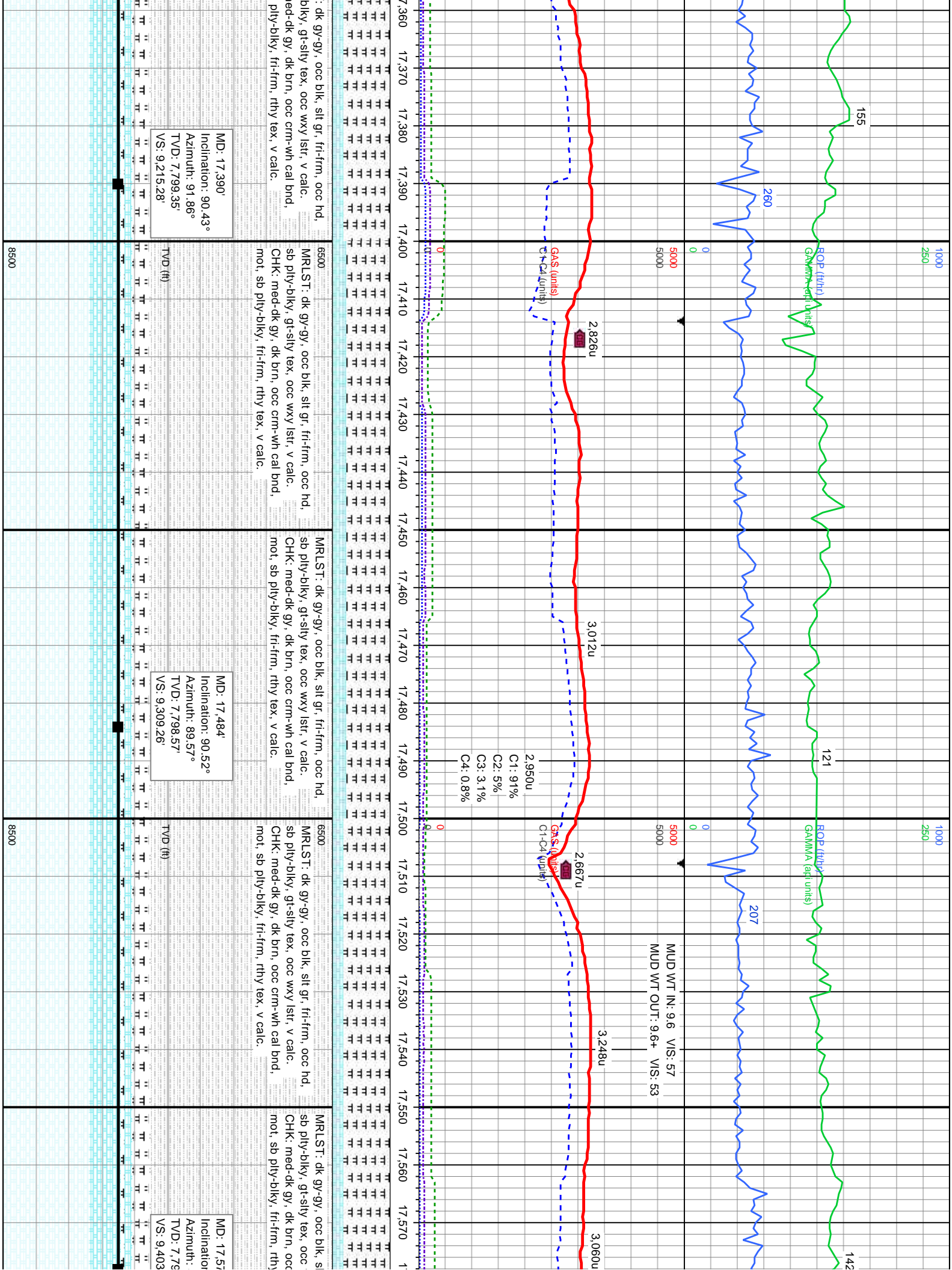


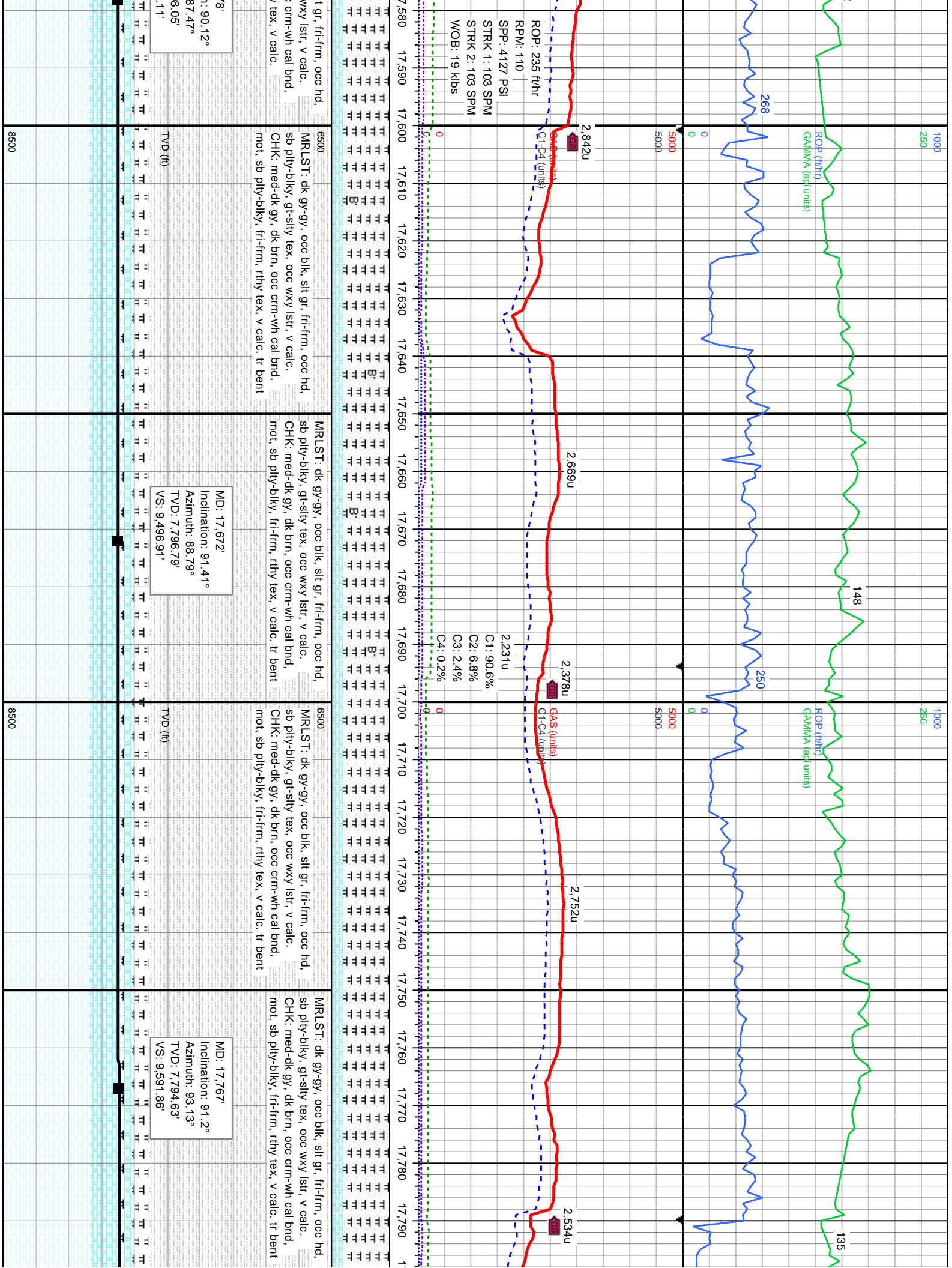




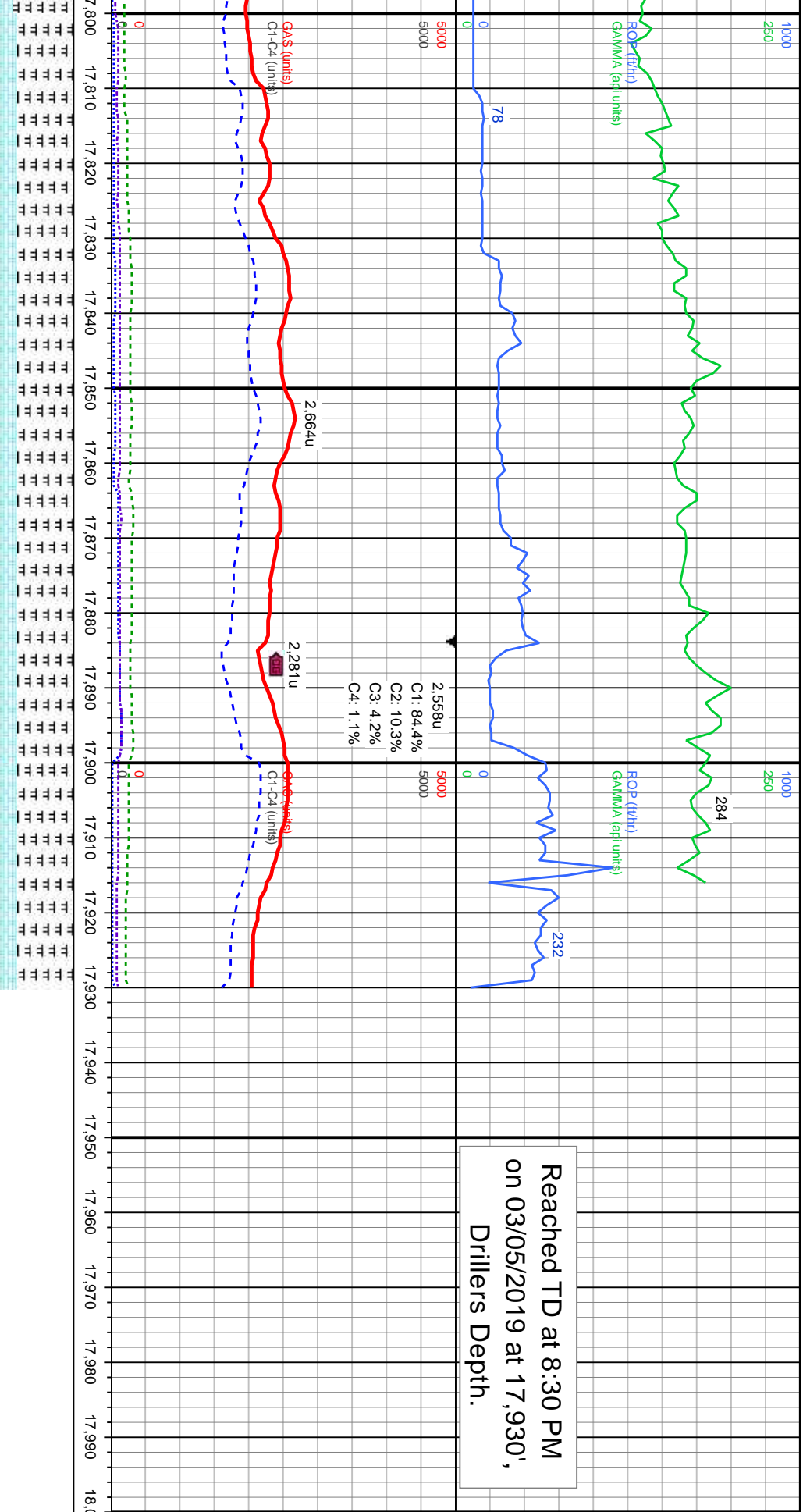








Reached TD at 8:30 PM
on 03/05/2019 at 17,930',
Drillers Depth.



6500		MR.LST: dk gy-gy, occ blk, slit gr, fri-fm, occ hd, sb pty-blky, gt-sltv tex, occ wxy lst, v calc.	6500	MR.LST: dk gy-gy, occ blk, slit gr, fri-fm, occ hd, sb pty-blky, gt-sltv tex, occ wxy lst, v calc.	
		CHK: med-dk gy, dk brn, occ crm-wh cal bnd, mot, sb pty-blky, fri-fm, rthy tex, v calc. tr bent			CHK: med-dk gy, dk brn, occ crm-wh cal bnd, mot, sb pty-blky, fri-fm, rthy tex, v calc. tr bent
MD: 17,861'		Inclination: 90.22°	MD: 17,906'		Inclination: 90.34°
Azimuth: 92.84°			Azimuth: 90.26°		
TVD: 7,793.46'			TVD: 7,793.24'		
VS: 9,685.83'			VS: 9,730.82'		
TVD (ft)			TVD (ft)		
8500			8500		
Projection to Bit Survey			MD: 17,930'		Inclination: 90.34°
			Azimuth: 90.26°		
			TVD: 7,793.1'		
			VS: 9,754.81'		