

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name Albrighton G-10HN

Location S10 T6N R64W

State Colorado

Country United States

API Number 05-123-42497

Geographic Region DJ Basin

Spud Date 1/28/2016

Surface Coordinates 40.496612/ - 104.541529
1170 FSL, 1167 FWL

Bottom Hole Coordinates 470 FFNLL, 1540 FFWLL

County Weld

Rig Number Frontier (Utah) 8

AFE # 42497

Field Wattenberg

Drilling Completed 2/23/2016

Ground Elevation 4806'

K.B. Elevation 4829'

Logged Interval 6000' **To** 11635'

Total Depth 11635'

Formation Niobrara

Type of Drilling Fluid WBM

Operator

Company Bayswater Exploration & Production, LLC.

Address 730 17th St.
Denver, CO 80202



Geologist

Name Mark E. Brown

Company Bayswater Exploration & Production, LLC.

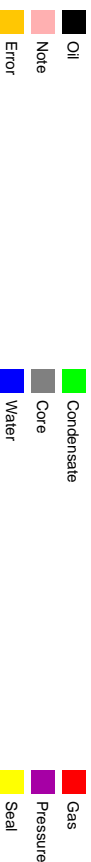
Address 730 17th St.
Denver, CO 80202

Other

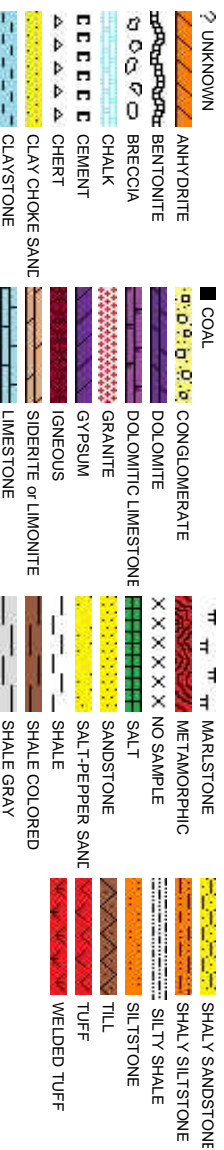
Robert Davis Senior Lead Wellsite Geologist
Andrew Martens Wellsite Geologist

Columbine Logging Computer 148
Bloodhound Unit 331

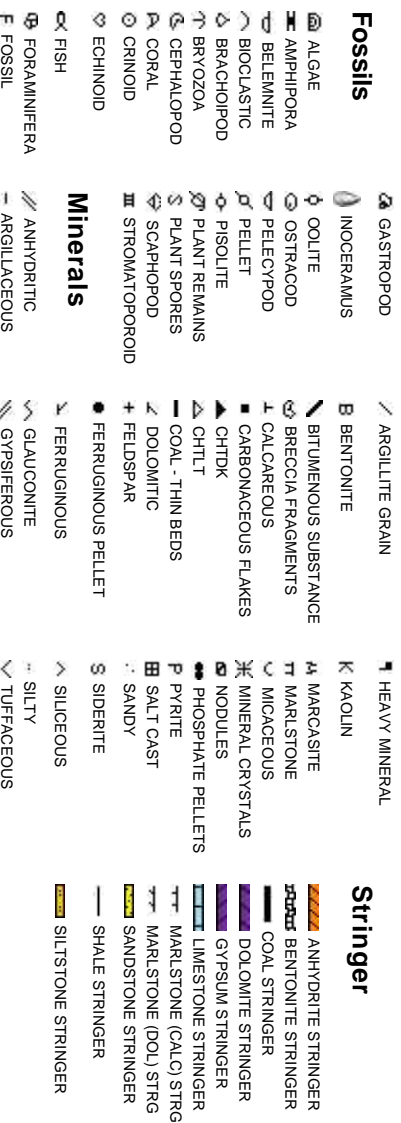
Zone Color Coding



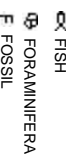
Rock Types



Accessories



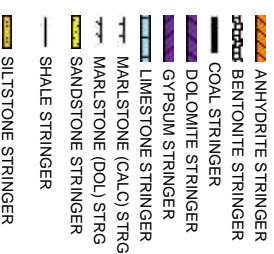
Fossils



Minerals



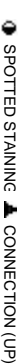
Stringer



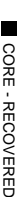
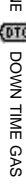
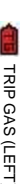
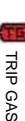
Oil Show



Engineering



Porosity



Other Symbols

 DST INTERVAL  WIRELINE TESTED - LEFT **E** EARTHY

 FAULT  WIRELINE TESTED - RT **FX** FINELYXLN

 FORMATION TOP  DRILL STEM TEST **GS** GRAINSTONE

 GAS SHOW  MINDEPTH MIN DEPTH **L** LITHOGRAPHIC

 OIL SHOW **MX** MICROXLN


 MINDEPTH UP **MIS** MUDSTONE

Rounding

 MIN DEPTH (DOWN) **A** ANGULAR **PS** PACKSTONE

 NORMAL FAULT **R** ROUNDED **WIS** WACKSTONE

(LEFT)  OVERTURNED STRATA **B** SUBANG


 REVERSE FAULT **F** SUBRND

Sorting

 CASING **M** MODERATE

Textures

 SIDEWALL CORE (LEFT) **P** POOR

 SIDEWALL CORE (RIGHT) **B\$** BOUNDSTONE **W** WELL

 SLIDE **C** CHALKY

 SURVEY **CX** CRYPTOXLN

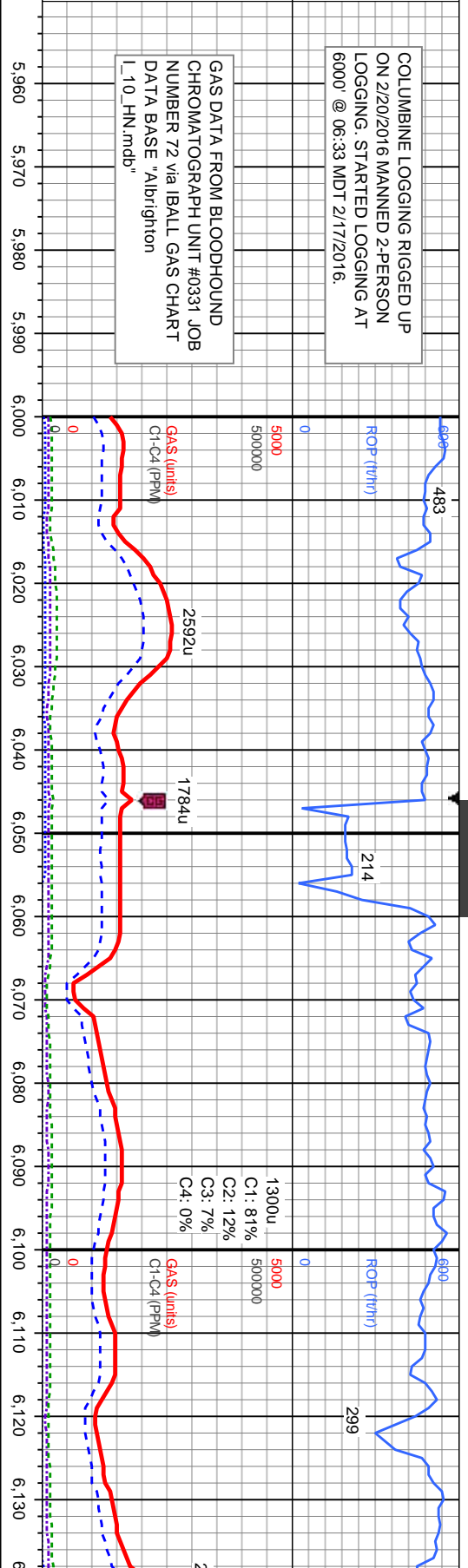
Slide/Rotate

ROP
ROP

COLUMBINE LOGGING RIGGED UP
ON 2/20/2016 MANNED 2-PERSON
LOGGING. STARTED LOGGING AT
6000' @ 06:33 MDT 2/17/2016.

GAS DATA FROM BLOODHOUND
CHROMATOGRAPH UNIT #0331 JOB
NUMBER 72 via IBALL GAS CHART
DATA BASE "Abrighton
L_10_HN.mdb"

Total Gas & Chromatograph
GAS
C1
C2
C3
C4



% Lith

Gamma
GAMMA

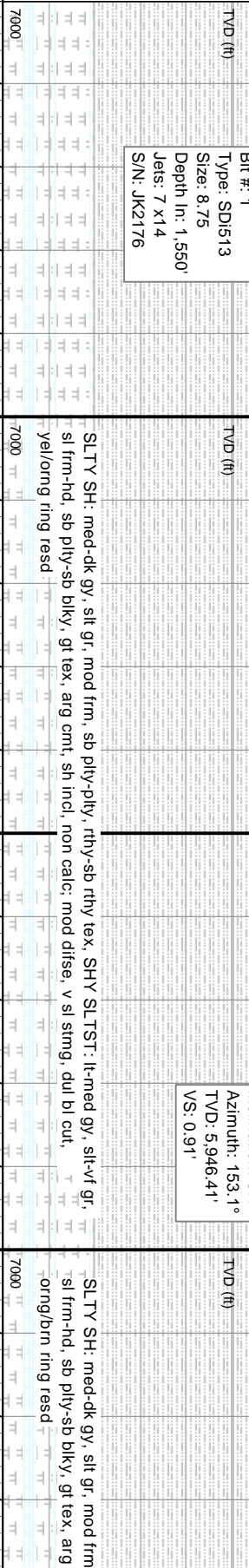
SURVEY, GAMMA, and ROP DATA
PROVIDED BY BAKER HUGHES



Well Bore
TVD

Bit Data
Bit #: 1
Type: SD1513
Size: 8.75
Depth In: 1,550'
Jets: 7 x14
S/N: JK2176

MD: 6.087'
Inclination: 5.1°
Azimuth: 153.1°
TVD: 5,946.41'
VS: 0.91'



SLTY SH: med-dk gy, slt gr, mod frm, sb pily-pily, rthy-sb rthy tex, SHY SLTST: lk-med gy, slt-vf gr,
sl frm-hd, sb pily-sb blkly, gf tex, arg cmt, sh incl, non calc, mod disse, v sl stmg, dul bl cut,
yellow ring resd

SLTY SH: med-dk gy, slt gr, mod frm
sl frm-hd, sb pily-sb blkly, gf tex, arg
orange ring resd

Oil Show

E
G
M
F
T
S

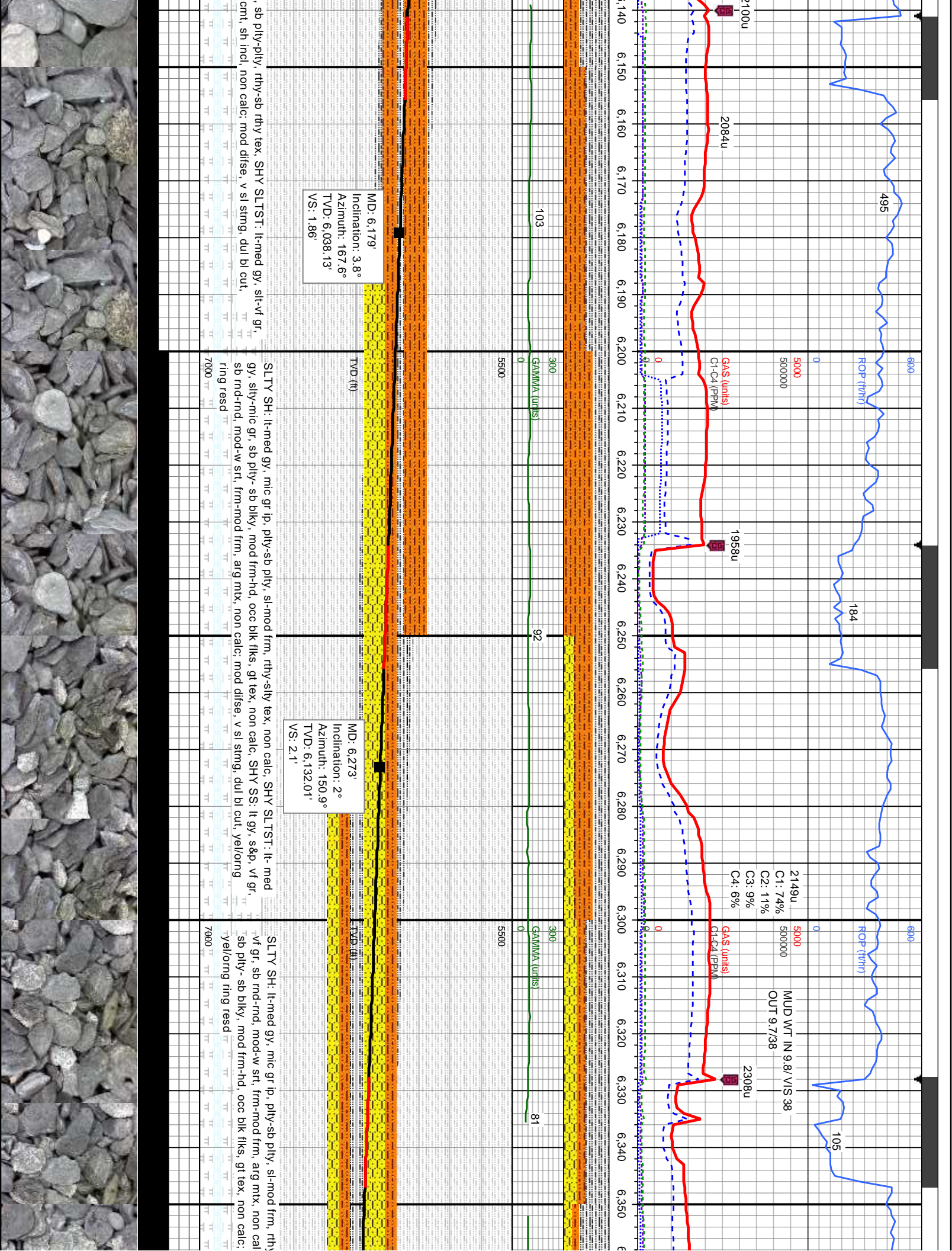
Oil show log table with columns for depth and show type.

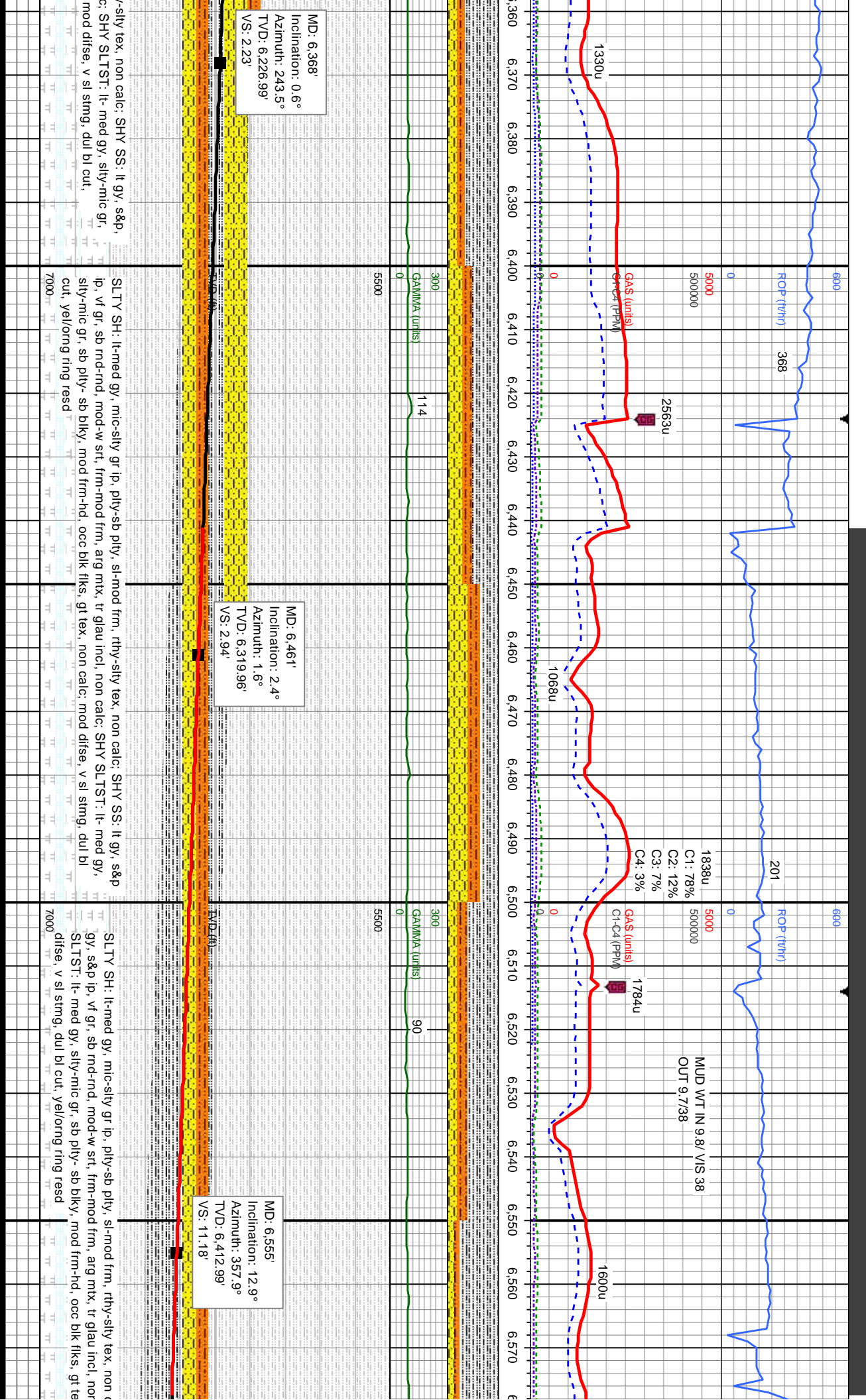
Oil show log table with columns for depth and show type.

Oil show log table with columns for depth and show type.

Images



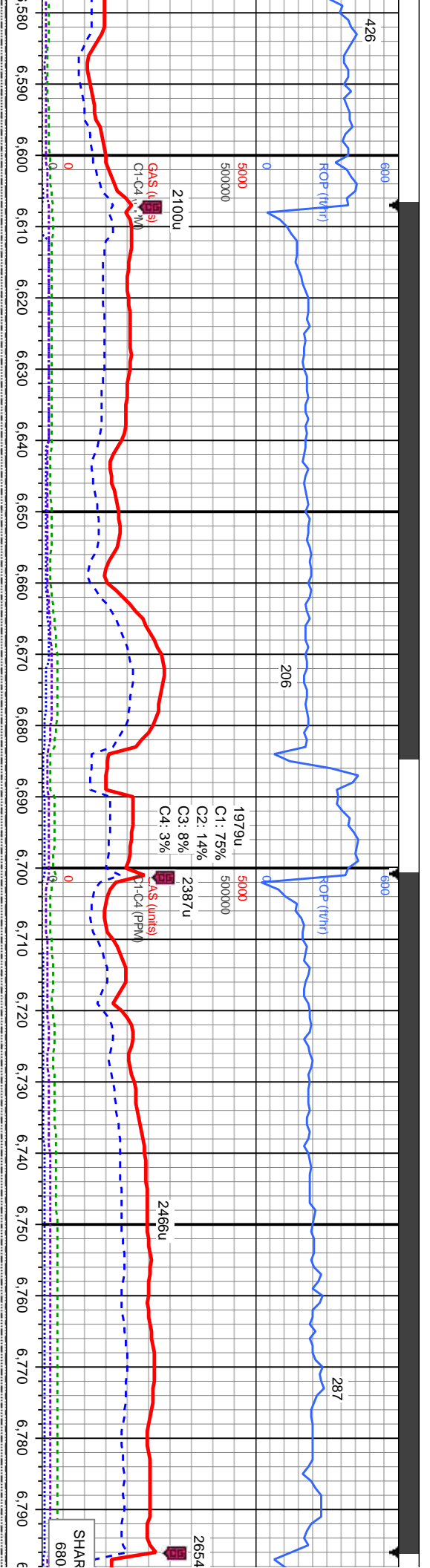




MD: 6.368'
 Inclination: 0.6°
 Azimuth: 243.5°
 TVD: 6,226.99'
 VS: 2.23'

MD: 6.461'
 Inclination: 2.4°
 Azimuth: 1.6°
 TVD: 6,319.96'
 VS: 2.94'

MD: 6.555'
 Inclination: 12.9°
 Azimuth: 357.9°
 TVD: 6,412.99'
 VS: 11.18'



SLTY SH: lt-med gy, mic-silty gr ip, pty-sb pty, sl-mod frm, rthy-silty tex, non calc, tr shy ss, tr shy slst; mod disse, v sl stmg, dul bl cut, yellowng ring resd

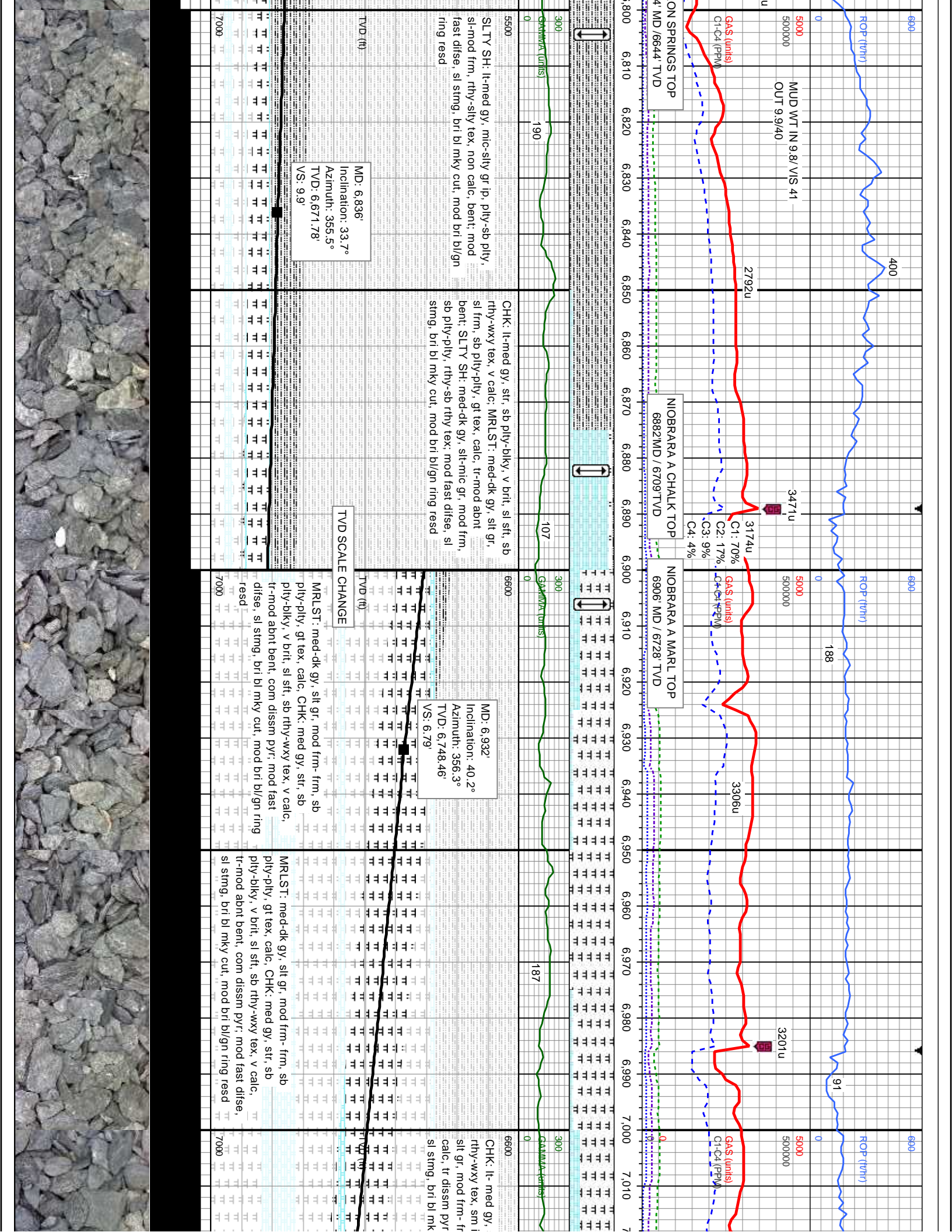
MD: 6.649'
 Inclination: 18.5°
 Azimuth: 0.9°
 TVD: 6.503.45'
 VS: 6.02'

SLTY SH: lt-med gy, mic-silty gr ip, pty-sb pty, sl-mod frm, rthy-silty tex, non calc, tr bent; mod disse, v sl stmg, dul bl cut, yellowng ring resd

MD: 6.743'
 Inclination: 24.9°
 Azimuth: 1.1°
 TVD: 6.590.75'
 VS: 6.81'

Depth (ft)	ROP (ft/hr)	GAs (lb/s)	Cl-C4 (ppm)	GAMMA (units)	Notes
6,580	426	0	0	0	
6,590	690	0	0	0	
6,600	2100u	0	0	0	GAs (lb/s) Cl-C4 (ppm)
6,610	206	0	0	0	1979u, C1: 75%, C2: 14%, C3: 8%, C4: 3%
6,620	206	0	0	0	
6,630	206	0	0	0	
6,640	206	0	0	0	
6,650	206	0	0	0	
6,660	206	0	0	0	
6,670	206	0	0	0	
6,680	206	0	0	0	
6,690	206	0	0	0	
6,700	2387u	0	0	0	GAs (lb/s) Cl-C4 (ppm)
6,710	2466u	0	0	0	
6,720	2466u	0	0	0	
6,730	2466u	0	0	0	
6,740	2466u	0	0	0	
6,750	2466u	0	0	0	
6,760	2466u	0	0	0	
6,770	2466u	0	0	0	
6,780	2466u	0	0	0	
6,790	2466u	0	0	0	
6,800	2466u	0	0	0	
6,810	2466u	0	0	0	
6,820	2466u	0	0	0	
6,830	2466u	0	0	0	
6,840	2466u	0	0	0	
6,850	2466u	0	0	0	
6,860	2466u	0	0	0	
6,870	2466u	0	0	0	
6,880	2466u	0	0	0	
6,890	2466u	0	0	0	
6,900	2466u	0	0	0	
6,910	2466u	0	0	0	
6,920	2466u	0	0	0	
6,930	2466u	0	0	0	
6,940	2466u	0	0	0	
6,950	2466u	0	0	0	
6,960	2466u	0	0	0	
6,970	2466u	0	0	0	
6,980	2466u	0	0	0	
6,990	2466u	0	0	0	





6900 6800 6700 6600 6500 6400 6300 6200 6100 6000 5900

ROP (t/h) 400 188 91

MUD WT IN 9.8 / VIS 41
 5000000 5000000 5000000

GAS (units)
 Cl-C4 (PPM)

ON SPRINGS TOP
 4 MD / 6644' TVD

NIOBRARA A CHALK TOP
 6882 MD / 6709' TVD

NIOBRARA A MARL TOP
 6906 MD / 6728' TVD

SLTY SH: lt-med gy, mic-sily gr ip, ply-sb ply, sl-mod frm, rthy-sily tex, non calc, bent; mod fast difse, sl stmg, bri bl mky cut, mod bri bl/gn ring resd

CHK: lt-med gy, str, sb ply-biky, v brit, sl sft, sb rthy-wxy tex, v calc; MRLST: med-dk gy, silt gr, sl frm, sb ply-pty, gt tex, calc, tr-mod abnt bent; SLTY SH: med-dk gy, silt-mic gr, mod frm, sb ply-pty, rthy-sb rthy tex, mod fast difse, sl stmg, bri bl mky cut, mod bri bl/gn ring resd

MD: 6.836'
 Inclination: 33.7°
 Azimuth: 355.5°
 TVD: 6,671.78'
 VS: 9.9'

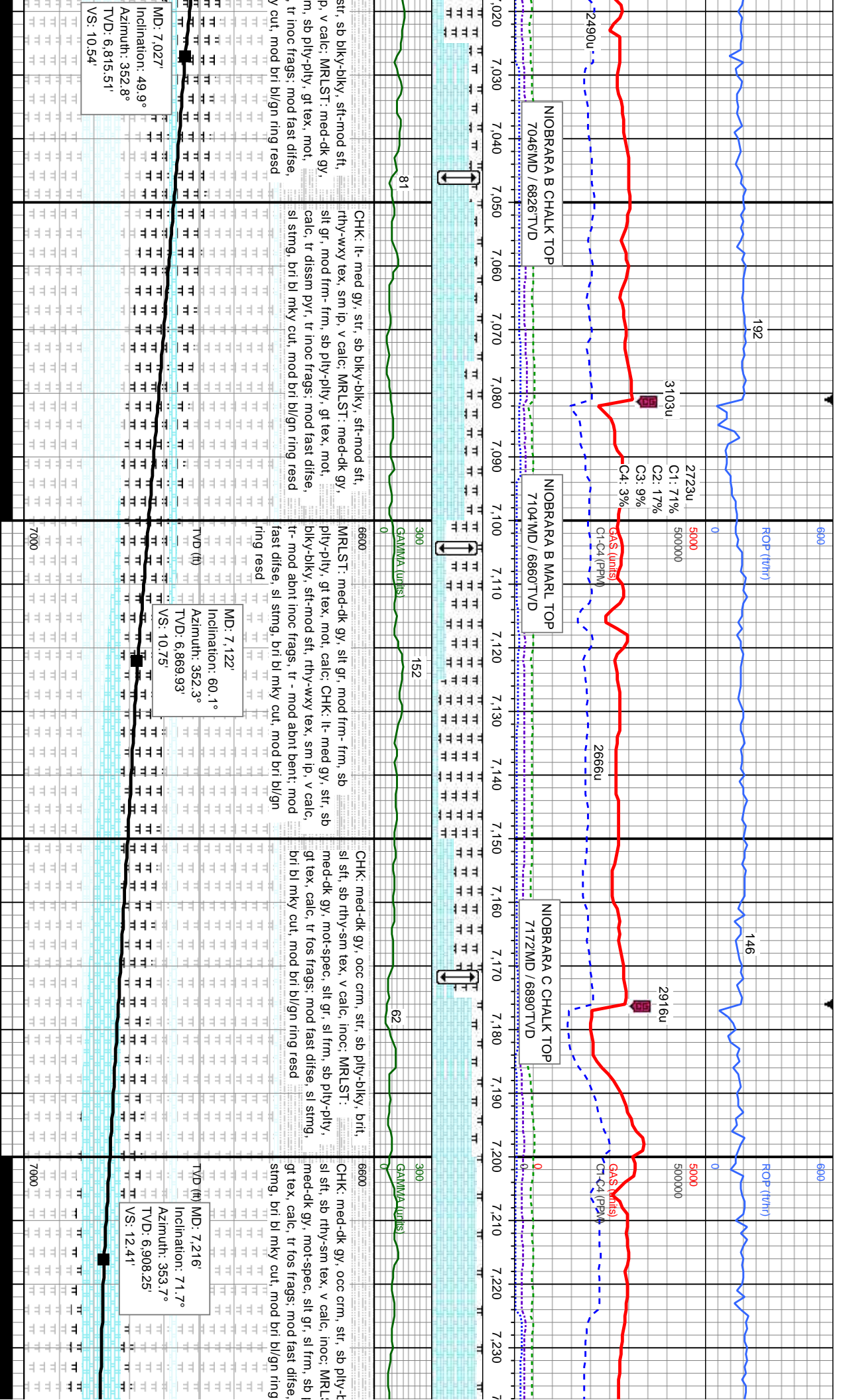
TVD SCALE CHANGE

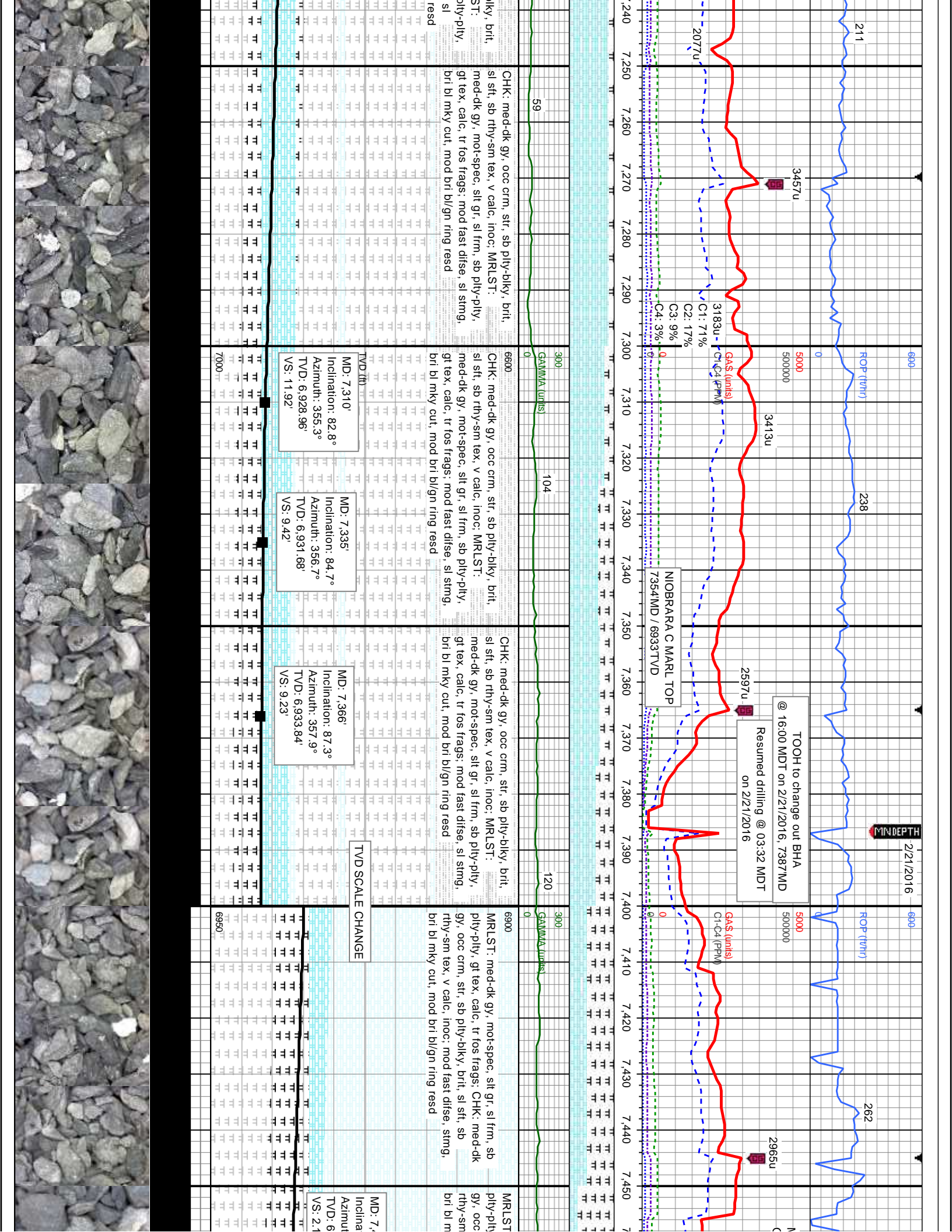
MD: 6.932'
 Inclination: 40.2°
 Azimuth: 356.3°
 TVD: 6,748.46'
 VS: 6.79'

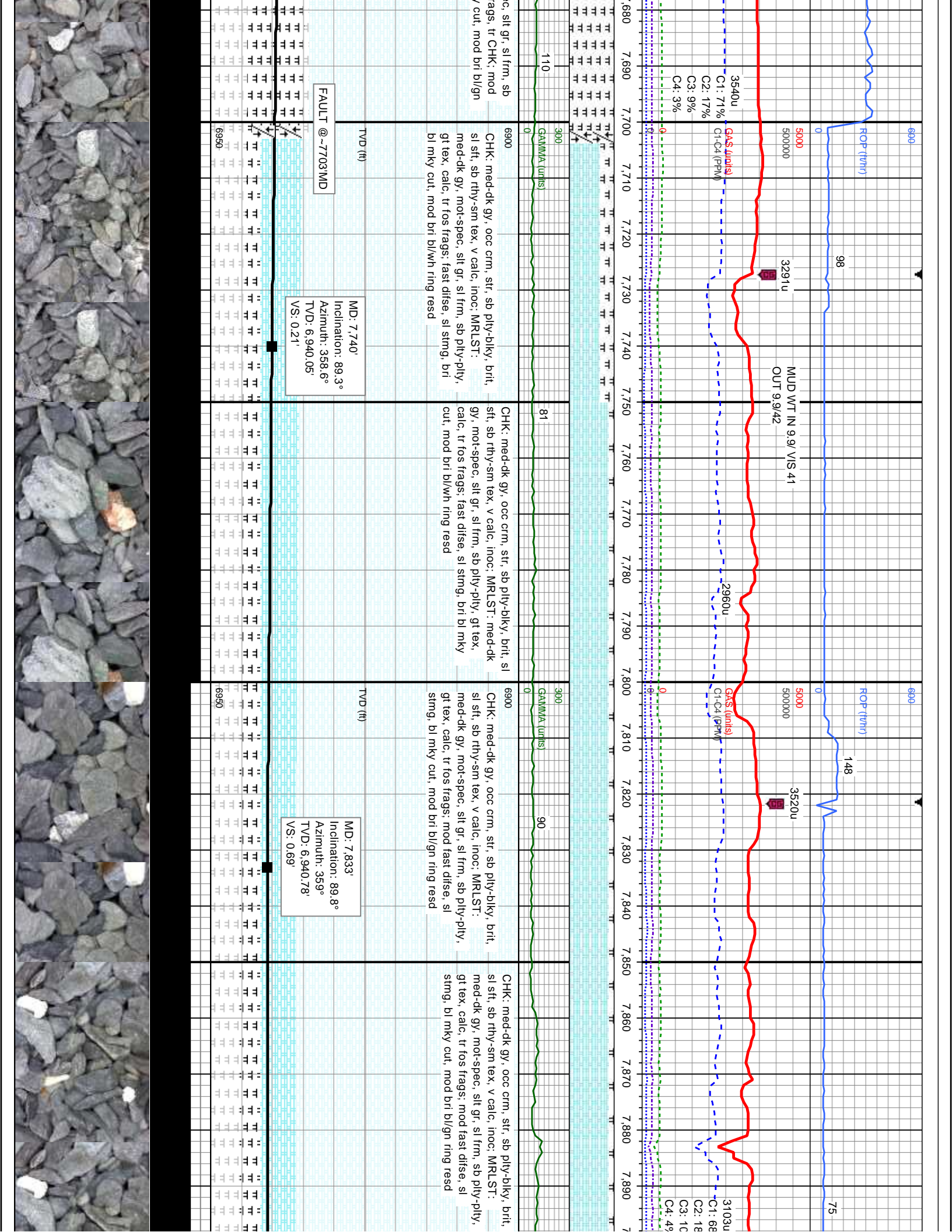
MRLST: med-dk gy, silt gr, mod frm-frm, sb ply-pty, gt tex, calc, CHK: med gy, str, sb ply-biky, v brit, sl sft, sb rthy-wxy tex, v calc, tr-mod abnt bent, com diss pyr, mod fast difse, sl stmg, bri bl mky cut, mod bri bl/gn ring resd

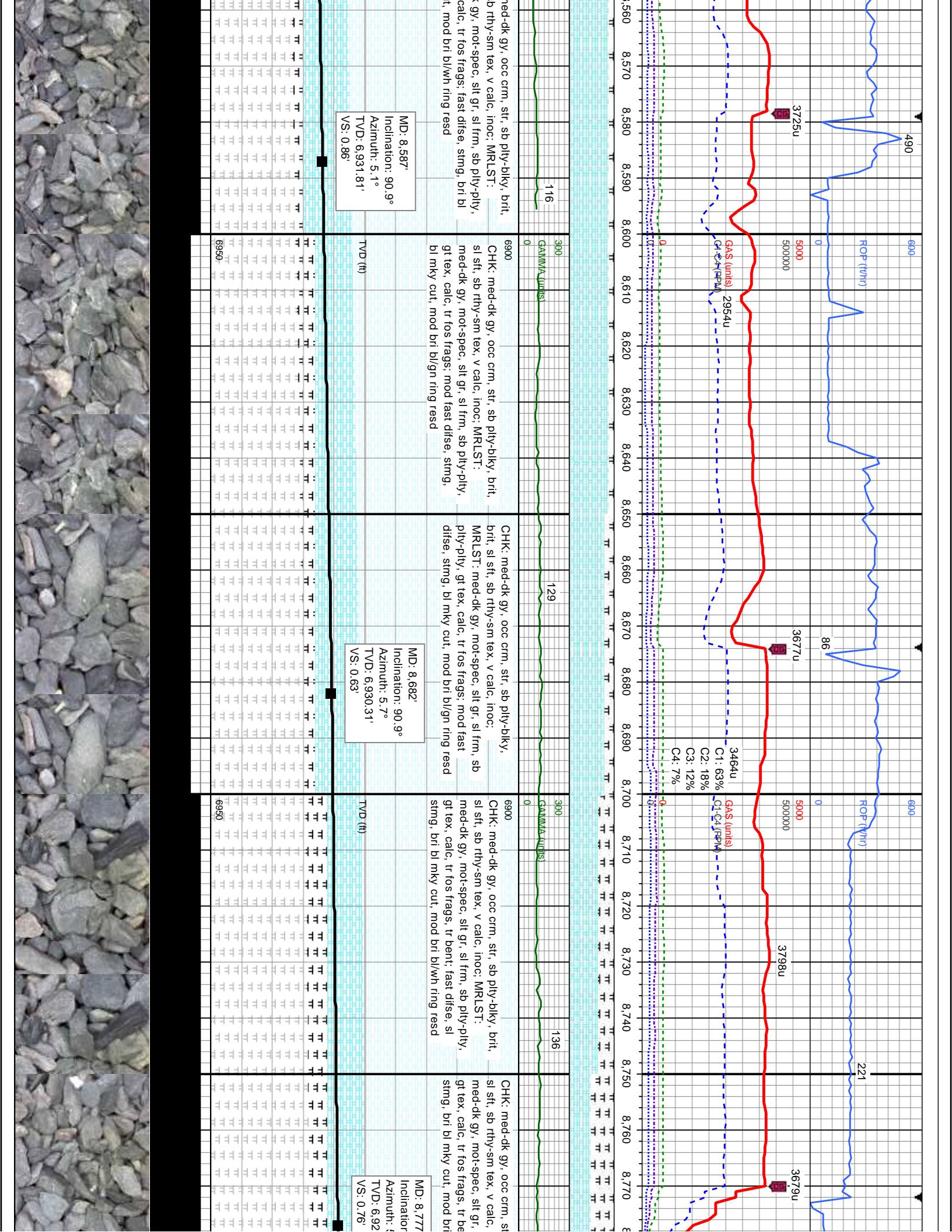
MRLST: med-dk gy, silt gr, mod frm-frm, sb ply-pty, gt tex, calc, CHK: med gy, str, sb ply-biky, v brit, sl sft, sb rthy-wxy tex, v calc, tr-mod abnt bent, com diss pyr, mod fast difse, sl stmg, bri bl mky cut, mod bri bl/gn ring resd

CHK: lt-med gy, rthy-wxy tex, sm i silt gr, mod frm-frm, calc, tr diss pyr sl stmg, bri bl mk









MD: 8.587'
 Inclination: 90.9°
 Azimuth: 5.1°
 TVD: 6.931.81'
 VS: 0.86'

MD: 8.682'
 Inclination: 90.9°
 Azimuth: 5.7°
 TVD: 6.930.31'
 VS: 0.63'

MD: 8.777'
 Inclination:
 Azimuth: 4
 TVD: 6.92
 VS: 0.76'

med-dk gy, occ crm, str, sb pily-blky, brit;
 rhy-sm tex, v calc, inoc; MRLST:
 mot-spec, silt gr, sl frm, sb pily-pily,
 calc, tr fos frags; fast disse, stmg, bri bl
 mod bri bl/wlh ring reed

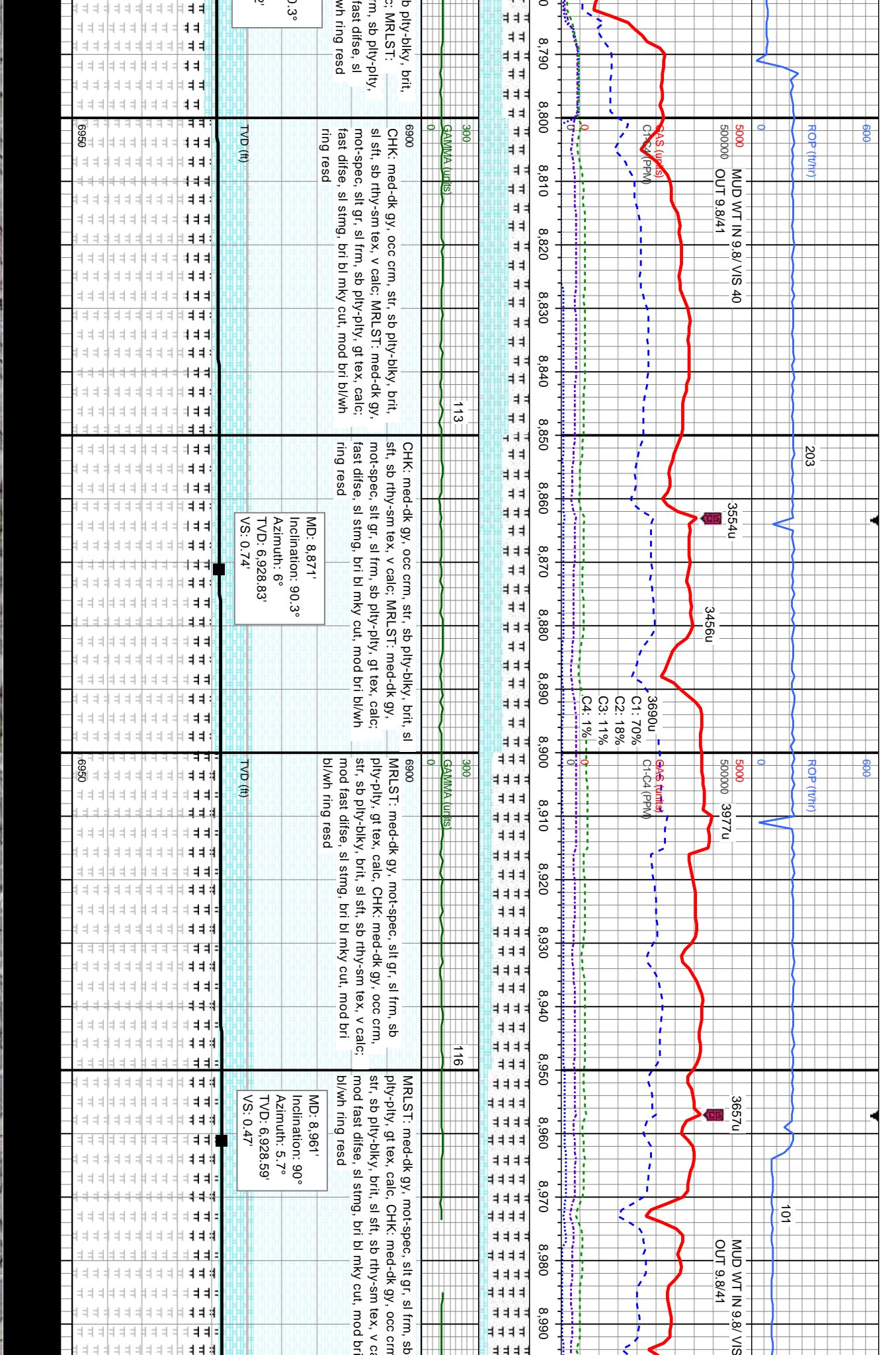
CHK: med-dk gy, occ crm, str, sb pily-blky, brit,
 silt, sb rhy-sm tex, v calc, inoc; MRLST:
 med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily,
 gt tex, calc, tr fos frags; mod fast disse, stmg,
 bl mky cut, mod bri bl/gn ring reed

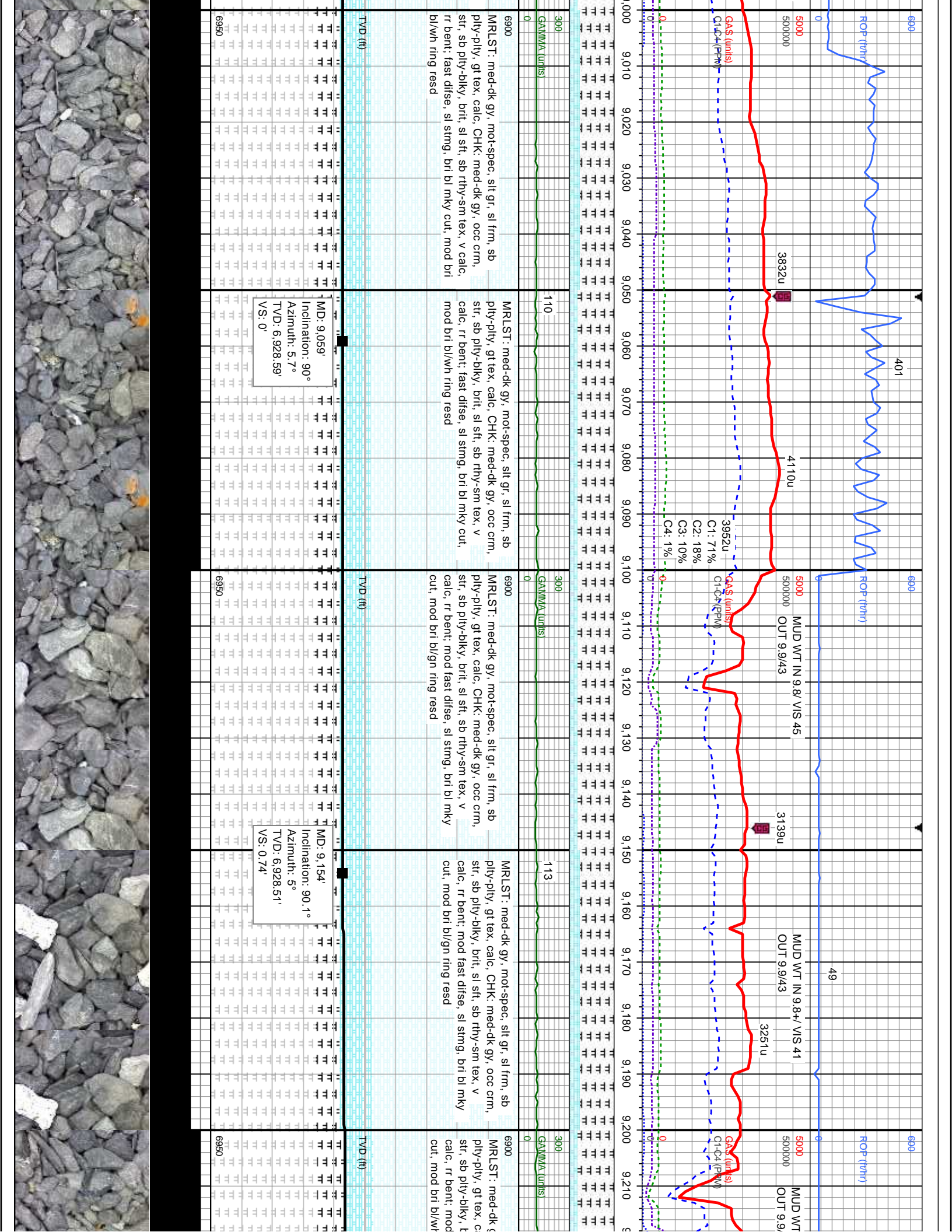
CHK: med-dk gy, occ crm, str, sb pily-blky,
 brit, silt, sb rhy-sm tex, v calc, inoc;
 MRLST: med-dk gy, mot-spec, silt gr, sl frm, sb
 pily-pily, gt tex, calc, tr fos frags; mod fast
 disse, stmg, bl mky cut, mod bri bl/gn ring reed

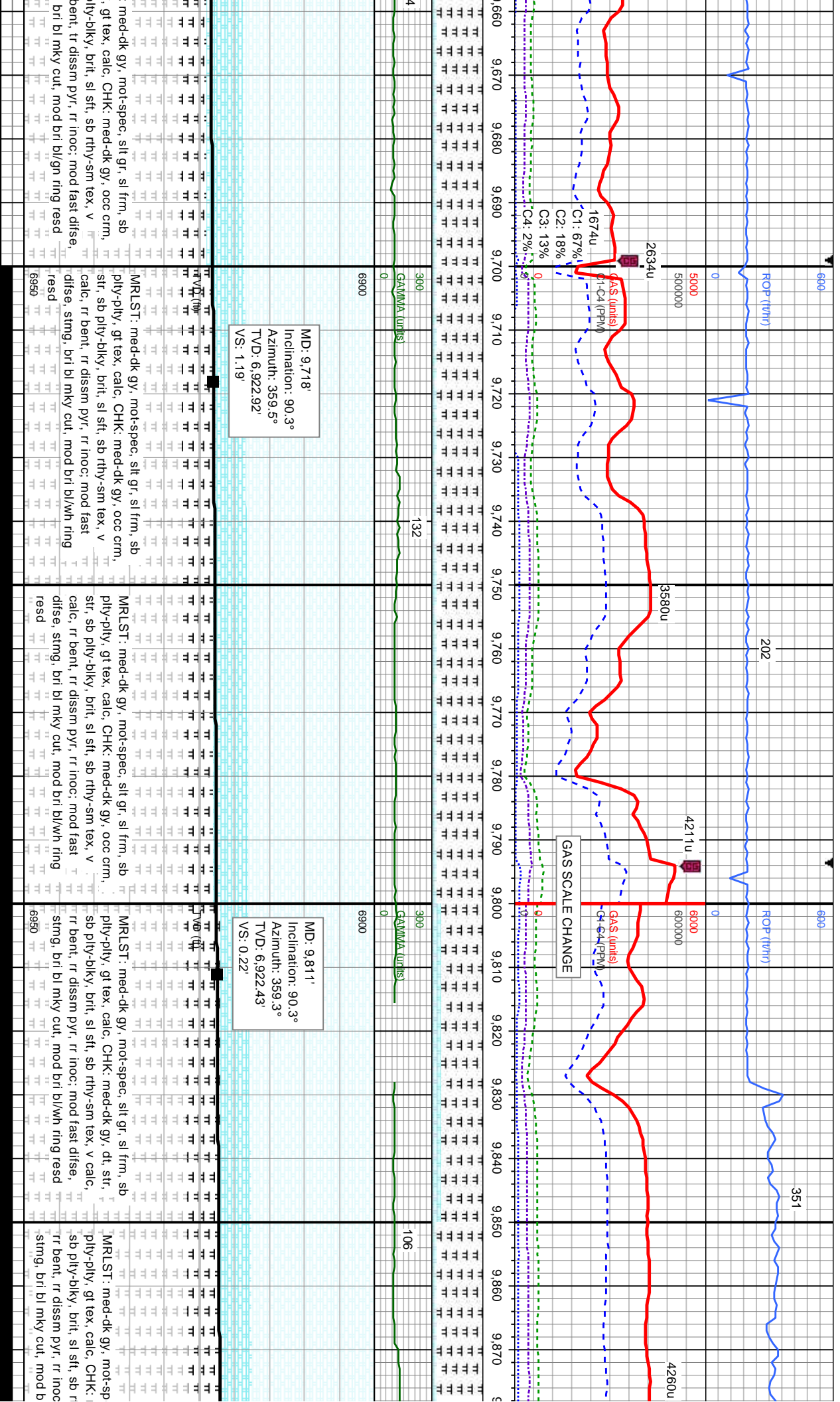
CHK: med-dk gy, occ crm, str, sb pily-blky, brit,
 silt, sb rhy-sm tex, v calc, inoc; MRLST:
 med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily,
 gt tex, calc, tr fos frags, tr bent; fast disse, sl
 stmg, bri bl mky cut, mod bri bl/wlh ring reed

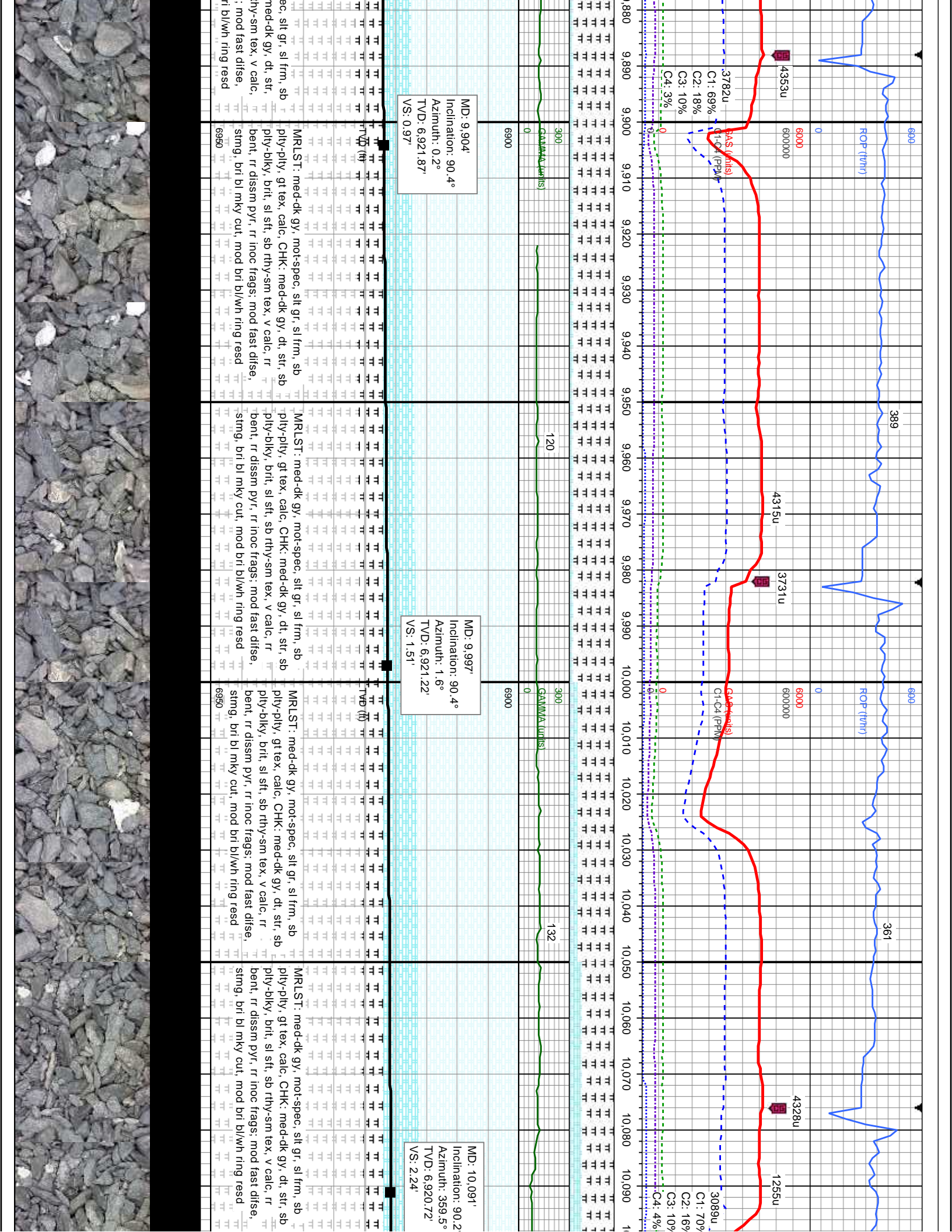
CHK: med-dk gy, occ crm, str,
 silt, sb rhy-sm tex, v calc,
 med-dk gy, mot-spec, silt gr,
 gt tex, calc, tr fos frags, tr bent
 stmg, bri bl mky cut, mod bri

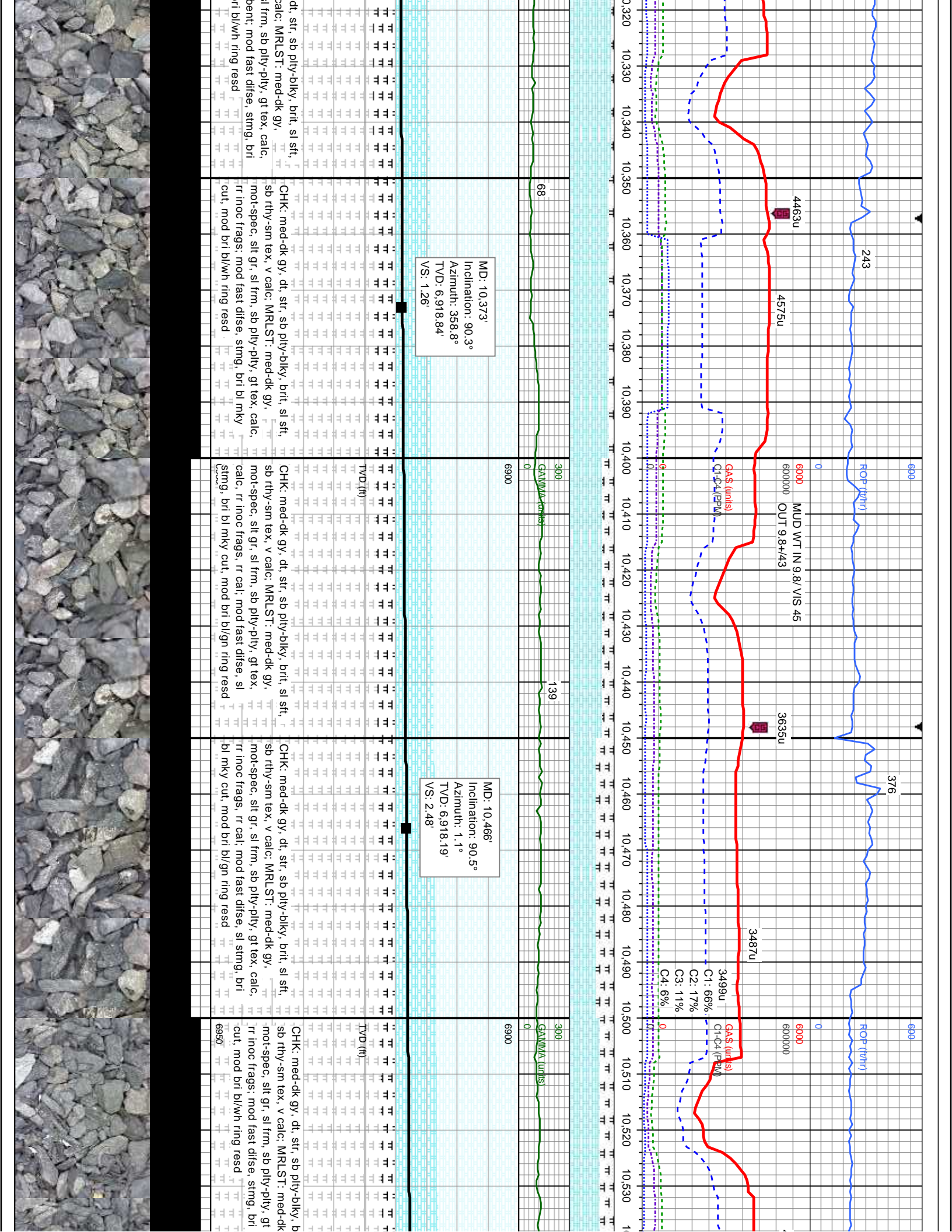
Depth (ft)	ROP (T/M/H)	Gas (units)	Gammma (units)	Lithology
8,560	490	3725u	116	med-dk gy, occ crm, str, sb pily-blky, brit;
8,570				rhy-sm tex, v calc, inoc; MRLST:
8,580				mot-spec, silt gr, sl frm, sb pily-pily,
8,590				calc, tr fos frags; fast disse, stmg, bri bl
8,600				mod bri bl/wlh ring reed
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				

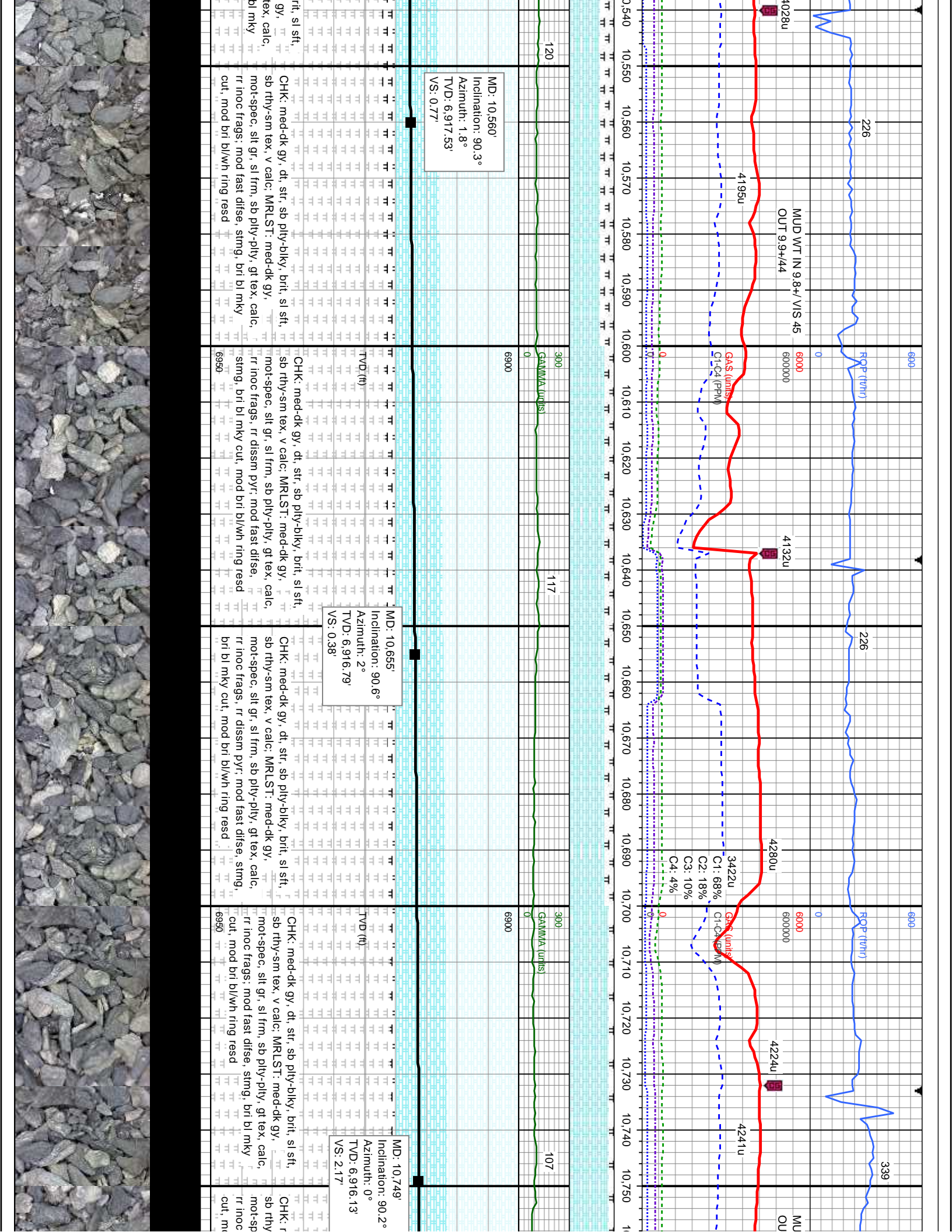












MD: 10.560'
 Inclination: 90.3°
 Azimuth: 1.8°
 TVD: 6.917.53'
 VS: 0.77'

MD: 10.655'
 Inclination: 90.6°
 Azimuth: 2°
 TVD: 6.916.79'
 VS: 0.38'

MD: 10.749'
 Inclination: 90.2°
 Azimuth: 0°
 TVD: 6.916.13'
 VS: 2.17'

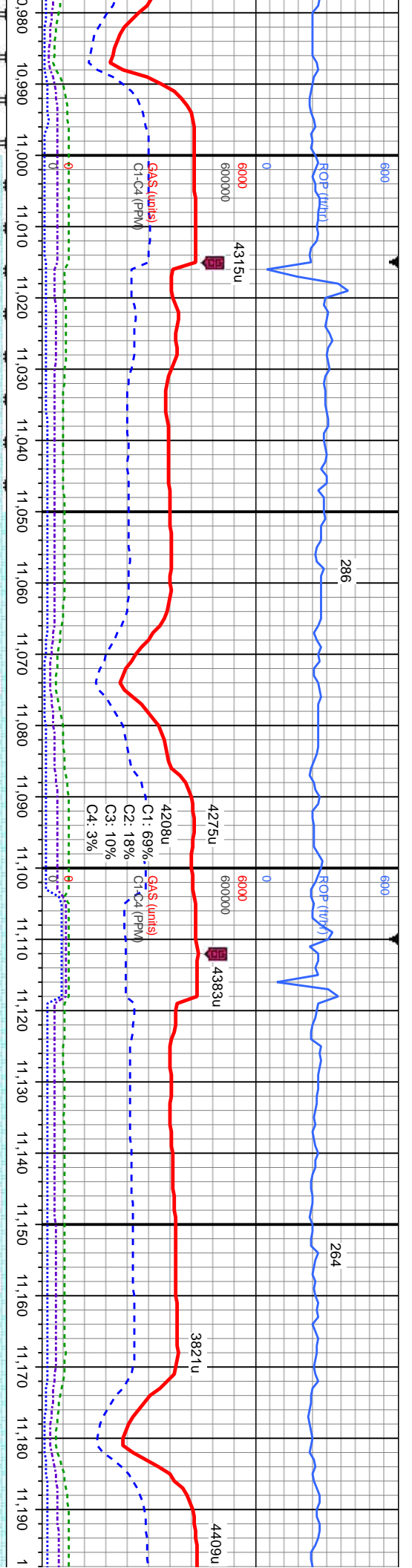
ri, sl sft.
 gy, text, calc.
 bl mky
 CHK: med-dk gy, dt, str, sb pily-blky, brit, sl sft.
 sb rthy-sm tex, v calc: MRLST: med-dk gy,
 mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc,
 rr inoc frags, mod fast dfse, stmg, bri bl mky
 cut, mod bri bl/w/h ring resd

TVD (ft)
 CHK: med-dk gy, dt, str, sb pily-blky, brit, sl sft.
 sb rthy-sm tex, v calc: MRLST: med-dk gy,
 mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc,
 rr inoc frags, rr dissn pyr: mod fast dfse,
 stmg, bri bl mky cut, mod bri bl/w/h ring resd

TVD (ft)
 CHK: med-dk gy, dt, str, sb pily-blky, brit, sl sft.
 sb rthy-sm tex, v calc: MRLST: med-dk gy,
 mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc,
 rr inoc frags, rr dissn pyr: mod fast dfse, stmg,
 bri bl mky cut, mod bri bl/w/h ring resd

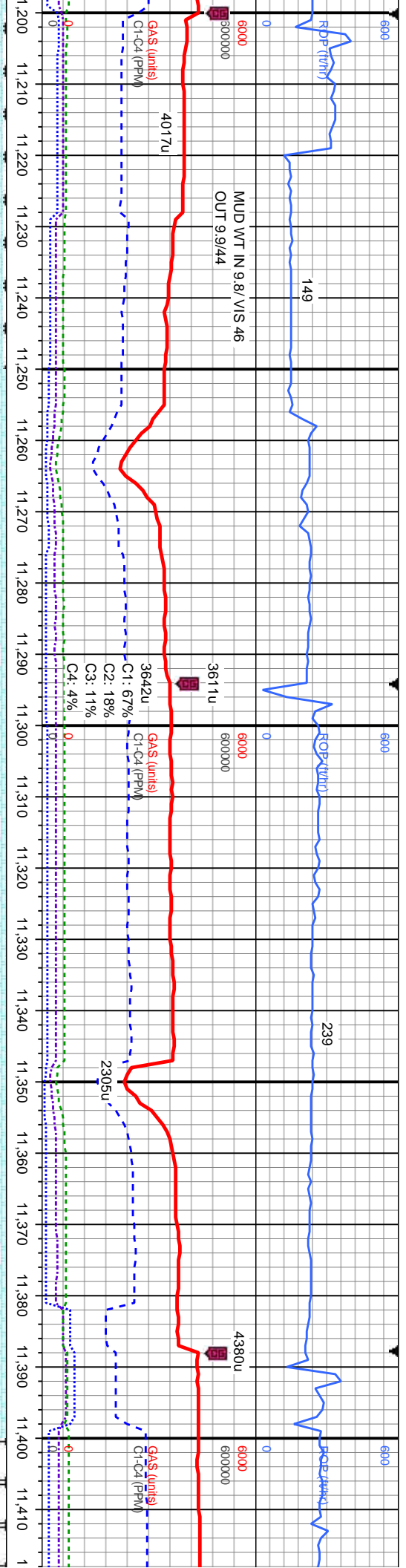
TVD (ft)
 CHK: med-dk gy, dt, str, sb pily-blky, brit, sl sft.
 sb rthy-sm tex, v calc: MRLST: med-dk gy,
 mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc,
 rr inoc frags, mod fast dfse, stmg, bri bl mky
 cut, mod bri bl/w/h ring resd

CHK: r
 sb rthy
 mot-sp
 rr inoc
 cut, m



Depth (ft)	ROP (ft/hr)	Gamma (cpm)	Gas (units)	Notes
6900	0	0	0	
6000000	0	0	0	
4315u				Marker
11,020				MD: 11,030' Inclination: 90.5° Azimuth: 2.1° TVD: 6,914.74' VS: 0.57'
100				
6900				
11,050				
286				
11,070				
4275u				Marker
4208u				Marker
11,090				C1: 69% C2: 18% C3: 10% C4: 3%
4383u				Marker
11,110				
6900				
11,120				
11,130				
11,140				
11,150				
264				
11,160				
97				
11,170				
3821u				Marker
11,180				
11,190				
4409u				Marker





MD: 11,218'
 Inclination: 90.4°
 Azimuth: 2°
 TVD: 6,913.84'
 VS: 0.32'

CHK: med-dk gy, dt, occ crm, str, sb ply-blky, brit, sl sft, sb rhy-sm tex, v calc, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-illy, gf tex, calc, tr bent, rr inoc frags: mod fast difse, stmg, bri bl mky cut, mod bri bl/w/h ring read

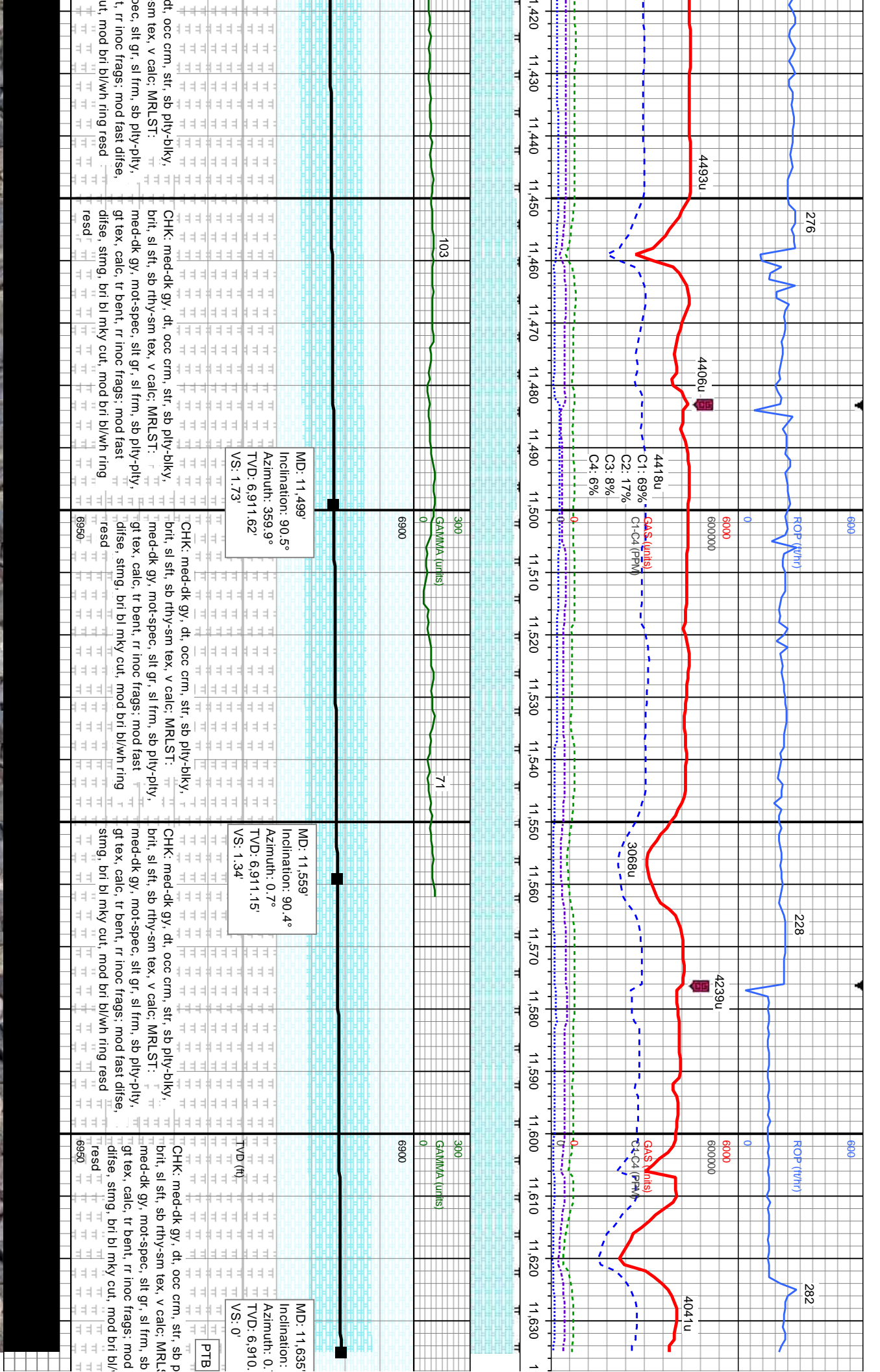
MD: 11,312'
 Inclination: 90.6°
 Azimuth: 0.6°
 TVD: 6,913.02'
 VS: 1.5'

CHK: med-dk gy, dt, occ crm, str, sb ply-blky, brit, sl sft, sb rhy-sm tex, v calc, tr mist, tr inoc frags, rr bent: mod fast difse, stmg, bri bl mky cut, mod bri bl/w/h ring read

MD: 11,406'
 Inclination: 90.3°
 Azimuth: 358.3°
 TVD: 6,912.28'
 VS: 2.47'

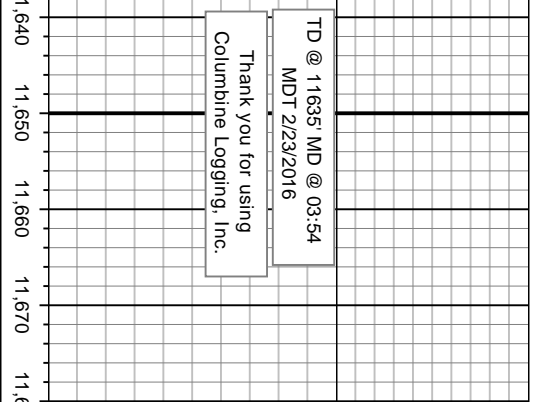
CHK: med-dk gy, brit, sl sft, sb rhy-sm tex, v calc, tr bent: mod fast difse, stmg, bri bl mky cut, mod bri bl/w/h ring read





TD @ 11635 MD @ 03:54
MDT 2/23/2016

Thank you for using
Columbine Logging, Inc.



90.4°
7°
62'

