

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name Albrighton H-10HC

Location S10 T6N R64W

State Colorado

Country United States

API Number 05-123-42494

Geographic Region DJ Basin

Spud Date 1/29/2016

Surface Coordinates 40.496613/- 104.541475
1170 FSL, 1182 FWL

Bottom Hole Coordinates 470 FFNLL, 1680 FFWLL

Ground Elevation 4806'

Logged Interval 6000' **To** 11553'

Formation Codell

Type of Drilling Fluid WBM

K.B. Elevation 4829'

Total Depth 11553'

County Weld

Rig Number Frontier (Utah) 8

AFE # 42494

Field Wattenberg

Drilling Completed 2/28/2016

Operator

Company Bayswater Exploration & Production, LLC.

Address 730 17th St.
Denver, CO 80202



BAYSWATER
EXPLORATION & PRODUCTION

Geologist

Name Mark E. Brown

Company Bayswater Exploration & Production, LLC.

Address 730 17th St.
Denver, CO 80202

Other

Robert Davis Senior Lead Wellsite Geologist

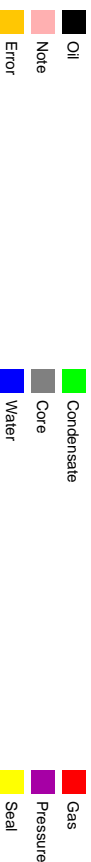
Andrew Martens Wellsite Geologist

Columbine Logging Computer 148

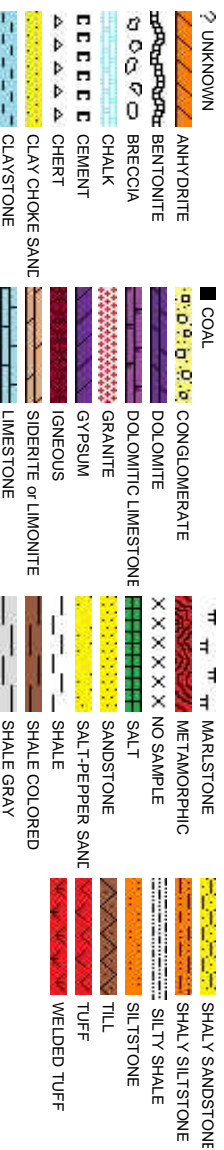
Bloodhound Unit 331

Tracy Lawson Wellsite Geologist

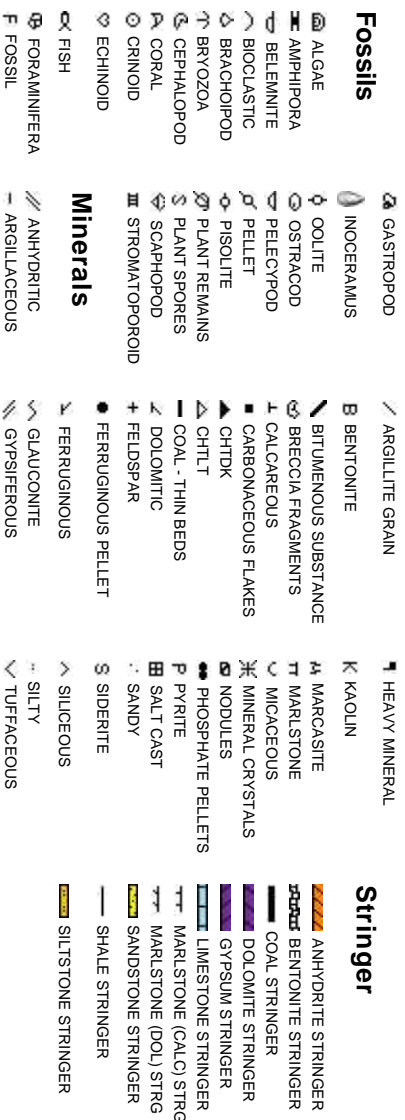
Zone Color Coding



Rock Types



Accessories

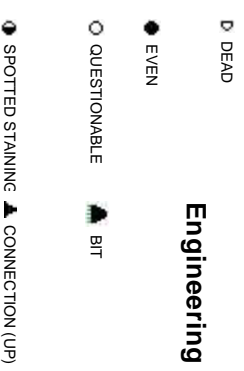


gist

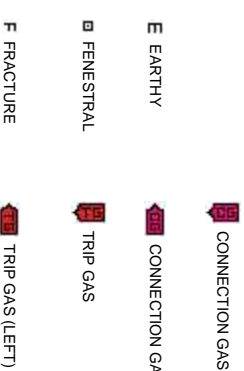
Oil Show



Engineering



Porosity



Stringer



Down Time Gas



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 MN DEPTH **L** LITHOGRAPHIC


 OIL SHOW **MX** MICROXLN

 MINDEPTH UP **MJS** MUDSTONE

 MINDEPTH (DOWN) **PS** PACKSTONE

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

(LEFT)  OVERTURNED STRATA **B** SUBANG

 REVERSE FAULT **rn** SUBRND

Sorting

 CASING **M** MODERATE

Textures

 SIDEWALL CORE (LEFT) **P** POOR

(LEFT)  SIDEWALL CORE (RIGHT) **BS** BOUNDSTONE **W** WELL

 SLIDE **C** CHALKY

 SURVEY **CX** CRYPTOXLN

Slide/Rotate

ROP
ROP —

COLUMBINE LOGGING RIGGED UP ON
2/25/2016 MANNED 2-PERSON
LOGGING. STARTED LOGGING AT 6000'
@ 02:06 MDT 2/26/2016.

GAS DATA FROM BLOODHOUND
CHROMATOGRAPH UNIT #0331 JOB
NUMBER 73 via IBALL GAS CHART DATA
BASE "Albrighton_H_10_HC.mdb"

Total Gas & Chromatograph
GAS —
C1 - - - -
C2 - - - -
C3 - - - -
C4 - - - -

Depth Labels

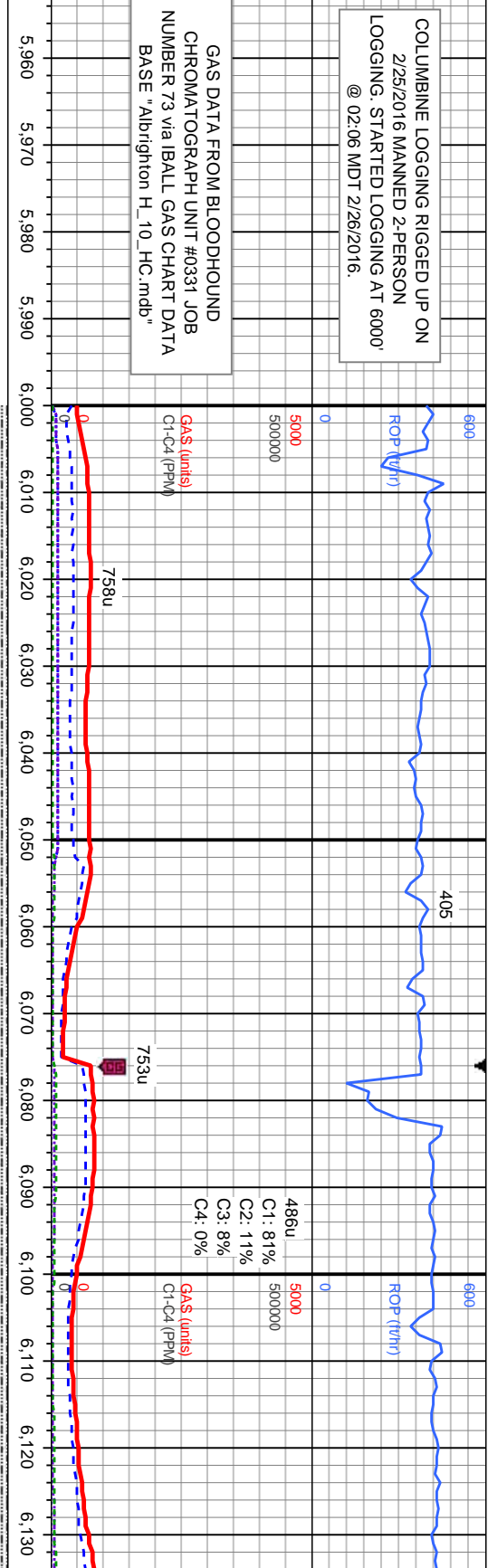
% Lith

Gamma
GAMMA —

Well Bore
TVD —

Oil Show

Images



SURVEY, GAMMA, and ROP DATA
PROVIDED BY BAKER HUGHES

Bit Data
Bit #: 1
Type: SD1513
Size: 8.75
Depth In: 1.560'
Jets: 7x14
S/N: JK9947

MD: 6.030'
Inclination: 0.8°
Azimuth: 155.6°
TVD: 5.869.61'
VS: 0.16'

MD: 6.124'
Inclination: 0.9°
Azimuth: 135.4°
TVD: 5.963.6'
VS: 0.33'

TVD (ft)

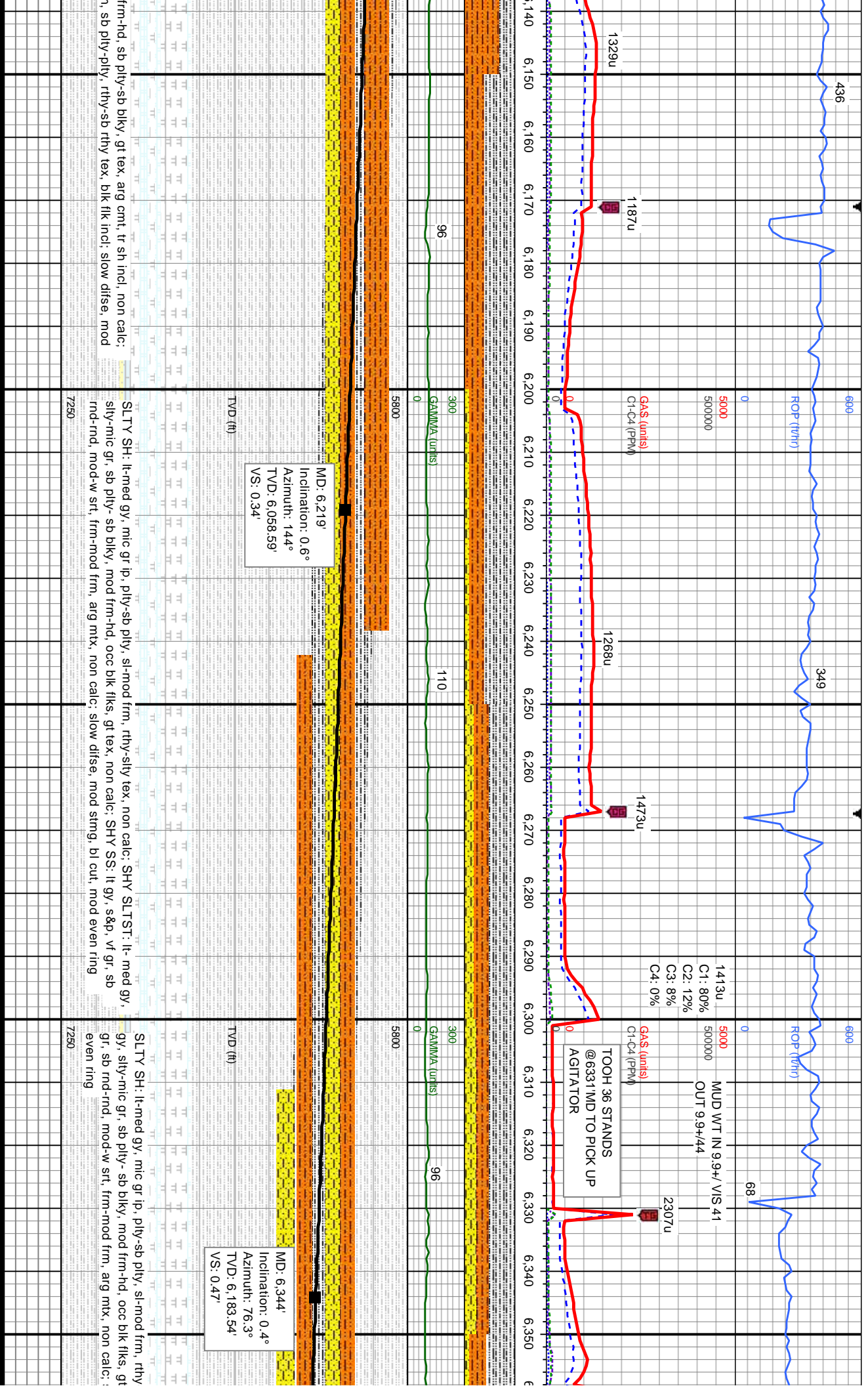
SLTY SH: med-dk gy, silt gr, mod frm, sb pty-pty, rthy-sb rthy tex, SHY SLTST: lt-med gy, silt-vf gr, silt frn-hd, sb pty-sb blkly, gt tex, arg cmt, sh incl, non calc, slow difse, mod stmg, bl cut, mod even ring

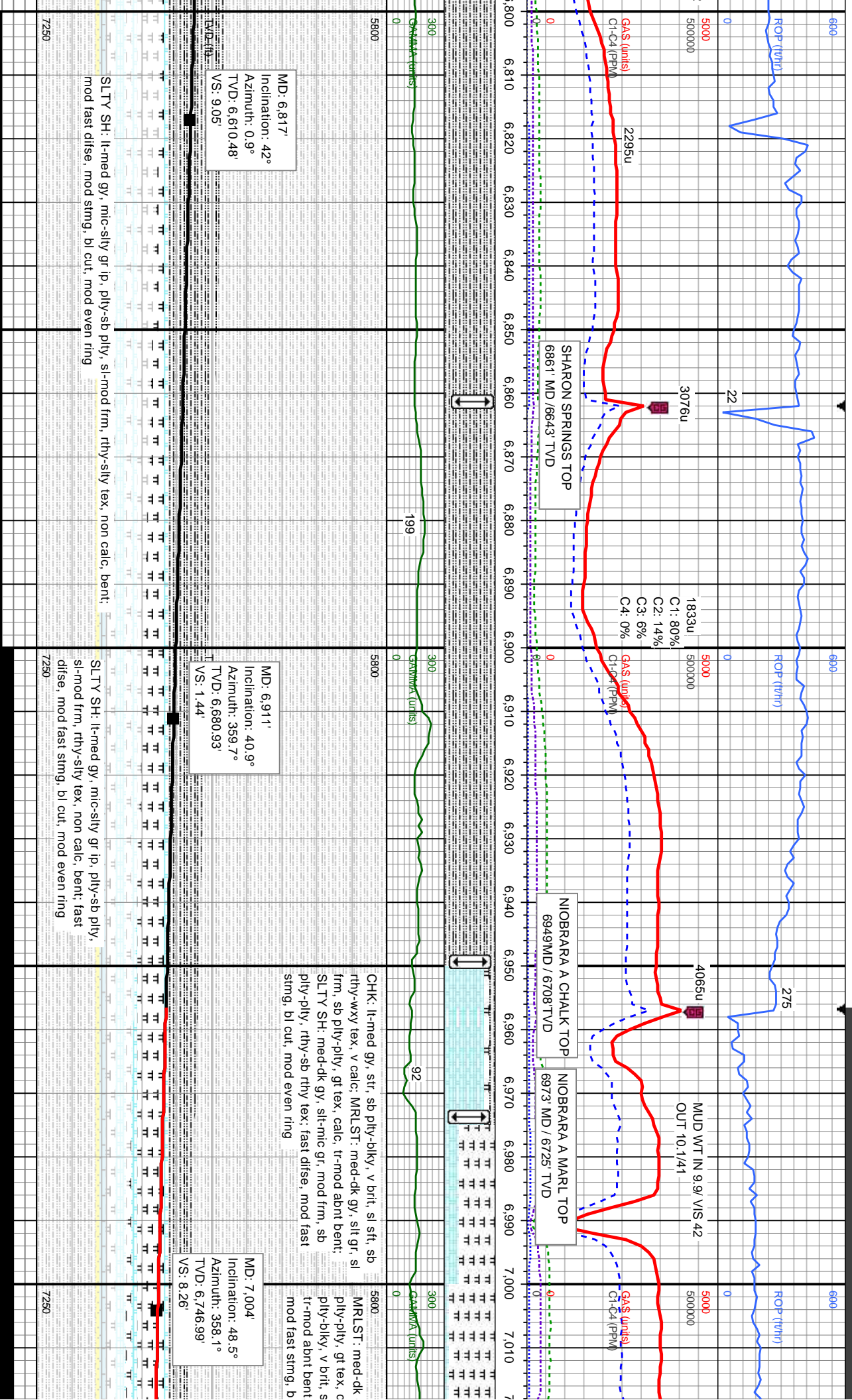
TVD (ft)

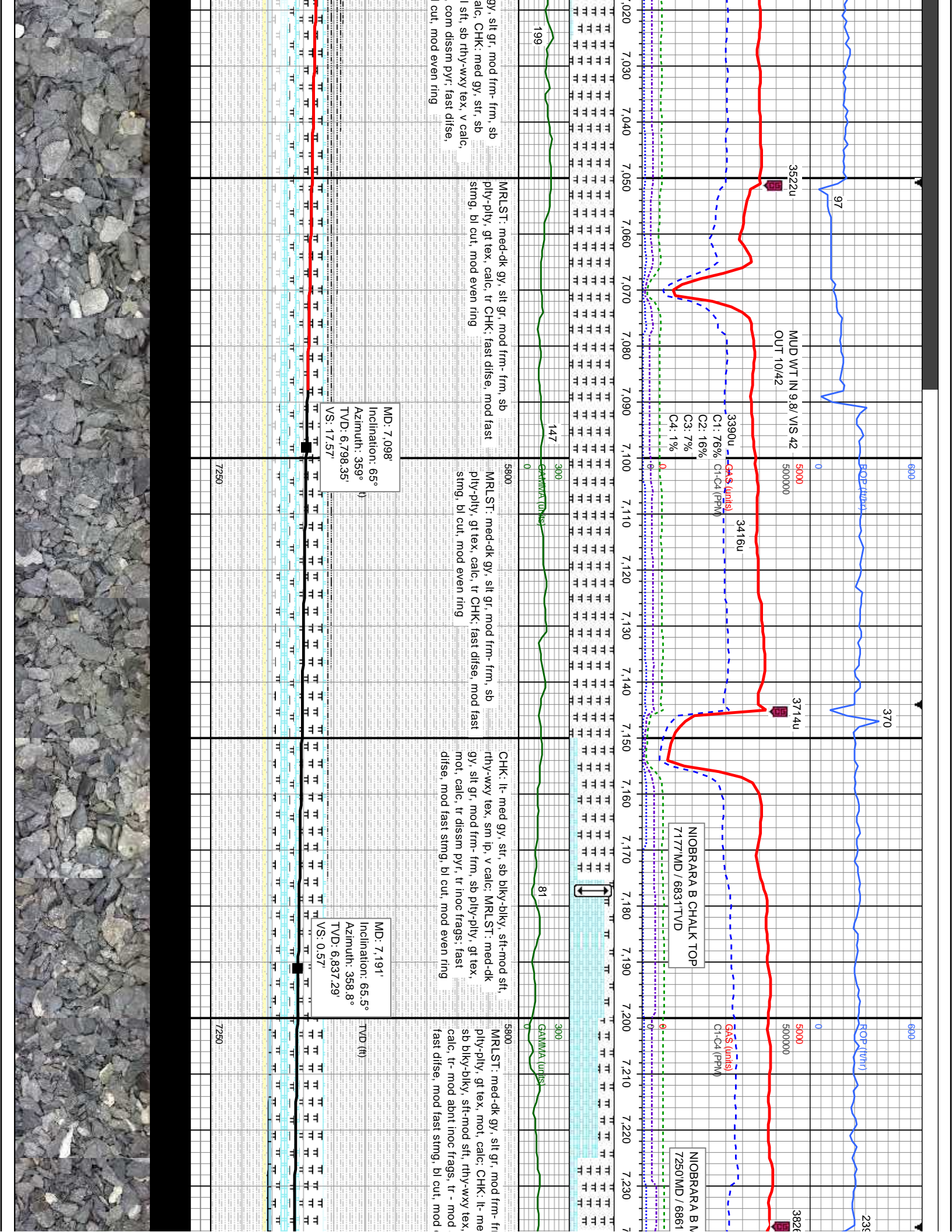
SHY SLTST: lt-med gy, silty-vf gr, sl
SLTY SH: med-dk gy, silt gr, mod frm
stmg, bl cut, mod even ring

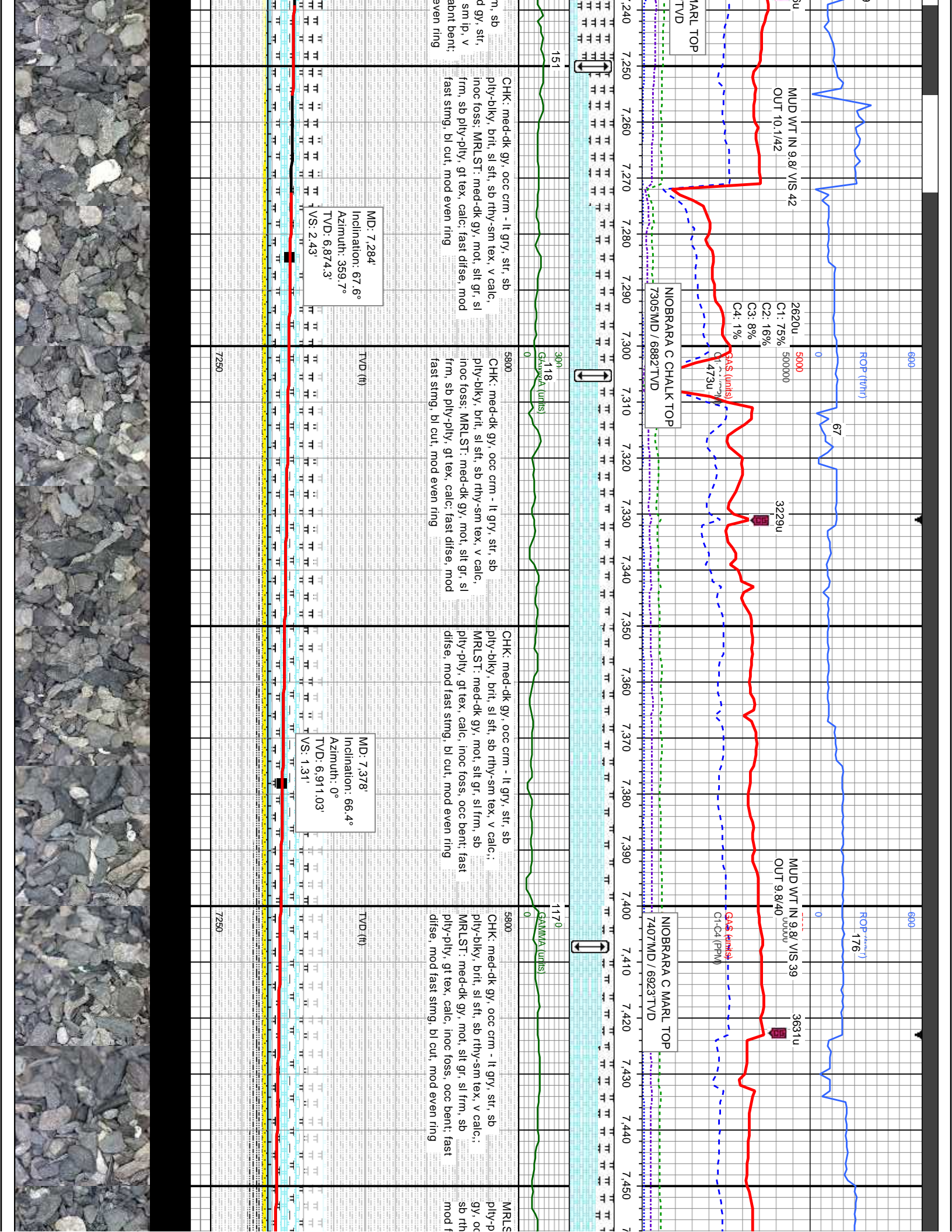
EMFTS











MUD WT IN 9.8 VIS 42
OUT 10.1/42

2620u
C1: 75%
C2: 16%
C3: 8%
C4: 1%

NIORARA C CHALK TOP
7305MD / 6882 TVD

NIORARA C MARL TOP
7407MD / 6923 TVD

MD: 7.284'
Inclination: 67.6°
Azimuth: 359.7°
TVD: 6.8743'
VS: 2.43'

MD: 7.378'
Inclination: 66.4°
Azimuth: 0°
TVD: 6.911.03'
VS: 1.31'

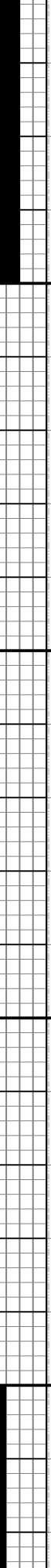
CHK: med-dk gy, occ crm - lt gry, str, sb
ply-bilky, brit, sl sft, sb rthy-sm tex, v calc,
inoc foss: MRLST: med-dk gy, mot, silt gr, sl
frm, sb ply-pty, gt tex, calc; fast difse, mod
fast stmg, bl cut, mod even ring

CHK: med-dk gy, occ crm - lt gry, str, sb
ply-bilky, brit, sl sft, sb rthy-sm tex, v calc,
inoc foss: MRLST: med-dk gy, mot, silt gr, sl
frm, sb ply-pty, gt tex, calc; fast difse, mod
fast stmg, bl cut, mod even ring

CHK: med-dk gy, occ crm - lt gry, str, sb
ply-bilky, brit, sl sft, sb rthy-sm tex, v calc,;
MRLST: med-dk gy, mot, silt gr, sl frm, sb
ply-pty, gt tex, calc, inoc foss, occ bent; fast
difse, mod fast stmg, bl cut, mod even ring

CHK: med-dk gy, occ crm - lt gry, str, sb
ply-bilky, brit, sl sft, sb rthy-sm tex, v calc,;
MRLST: med-dk gy, mot, silt gr, sl frm, sb
ply-pty, gt tex, calc, inoc foss, occ bent; fast
difse, mod fast stmg, bl cut, mod even ring

MRLS
ply-p
gy, oc
sb rth
mod f



T: med-dk gy, mot, slit gr, sl frm, sb
 lty, gt tex, calc: moc foss; CHK: med-dk
 crm - lt gry, str, sb ply-blky, brit, sl sft,
 aast stmg, bl cut, mod even ring

LMST: off wh - crm - tan, lt - med gy, sb blky -
 blky - ireg, brit, sl frm, mict - mckln
 tex, chky ip; MRLST: med-dk gy, mot-spec, slit gr, sl frm, sb
 ply-pty, gt tex, calc: CHK: med-dk gy, occ crm -
 lt gry, str, sb ply-blky, brit, sl sft, sb rthy-sm tex,
 v calc: mod difse, mod stmg, bl cut, mod even
 ring

LMST: off wh - crm - tan, lt - med gy, sb
 blky - blky - ireg, brit, sl frm, mict - mckln
 tex, chky ip; MRLST: med-dk gy, mot-spec,
 slit gr, sl frm, sb ply-pty, gt tex, calc: mod
 difse, mod stmg, bl cut, mod even ring

LMST: off wh - crm, lt - med gy, sb blky - blky,
 brit, sl frm, mckln, wxy tex, v calc: SS: med
 gy-brn, sb rnd-rnd, vf-f gr, mod-w str, mod
 frm-frm, brit ip, sl spec, sl calc: mod difse, mod
 stmg, bl cut, mod even ring

LMST: off wh - crm, lt - med
 brit, sl frm, mckln, wxy tex, v
 gy-brn, sb rnd-rnd, vf-f gr, r
 frm-frm, brit ip, sl spec, sl c
 mod stmg, bl cut, mod even

MD: 7.473'
 Inclination: 65.9°
 Azimuth: 0.2°
 TVD: 6.949.44'
 VS: 0.56'

MD: 7.565'
 Inclination: 79.3°
 Azimuth: 0.6°
 TVD: 6.976.89'
 VS: 14.57'

MD: 7.660'
 Inclination: 82.7°
 Azimuth: 0.4°
 TVD: 6.991.75'
 VS: 3.58'

3005u
 GAS (units)
 C1: 43%
 C2: 21%
 C3: 25%
 C4: 11%
 C1-C4 (PPM)

3268u
 FORT HAYS TOP
 7530MD / 6966 TVD

3269u
 698u
 GAS (units)
 C1-C4 (PPM)

3723u
 3687u
 CODELL TOP
 7660MD / 6992 TVD

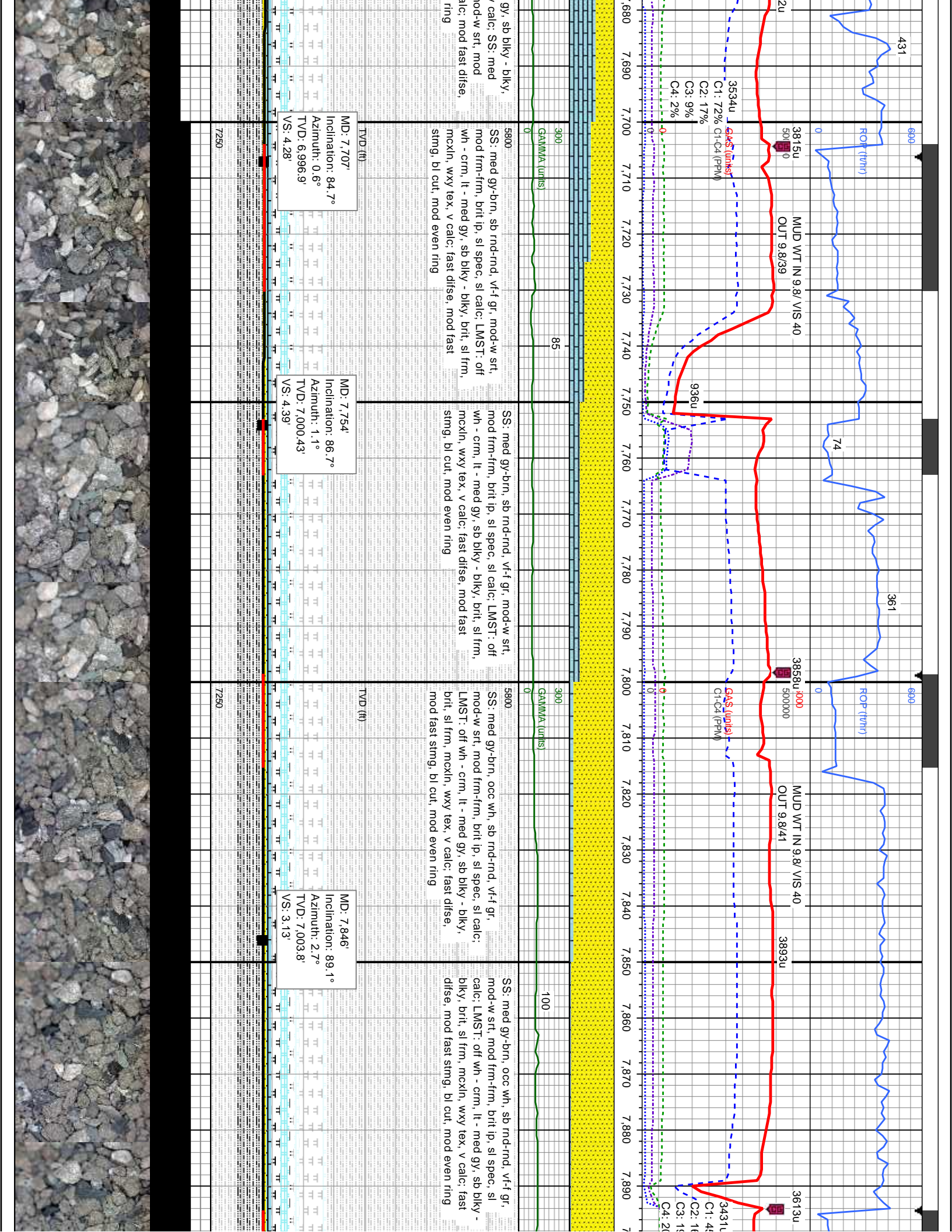
464u
 381

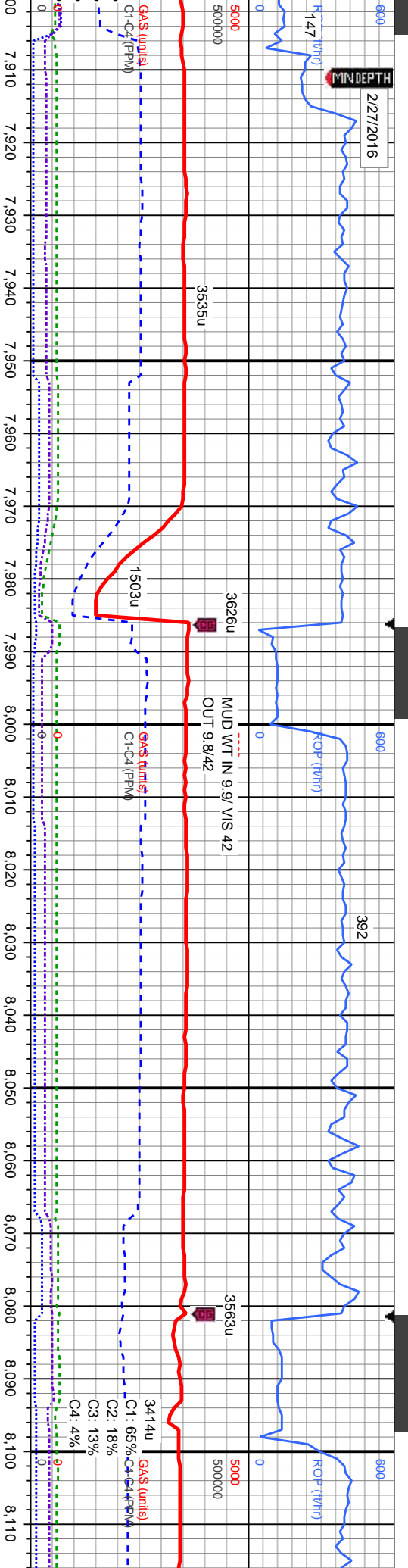
ROP (ft/hr)
 224
 101

MUD WT IN 9.8/ VIS 39
 OUT 9.8/39

5800
 5000
 5000000

TVD (ft)
 7250





SS: med gy-brn, sb rnd-rnd, f-vf gr, mod-w srt, mod frm-frm, brit ip, spec ip, sl calc, tr shy strg; fast difse, mod fast stmg, bl cut, mod even ring

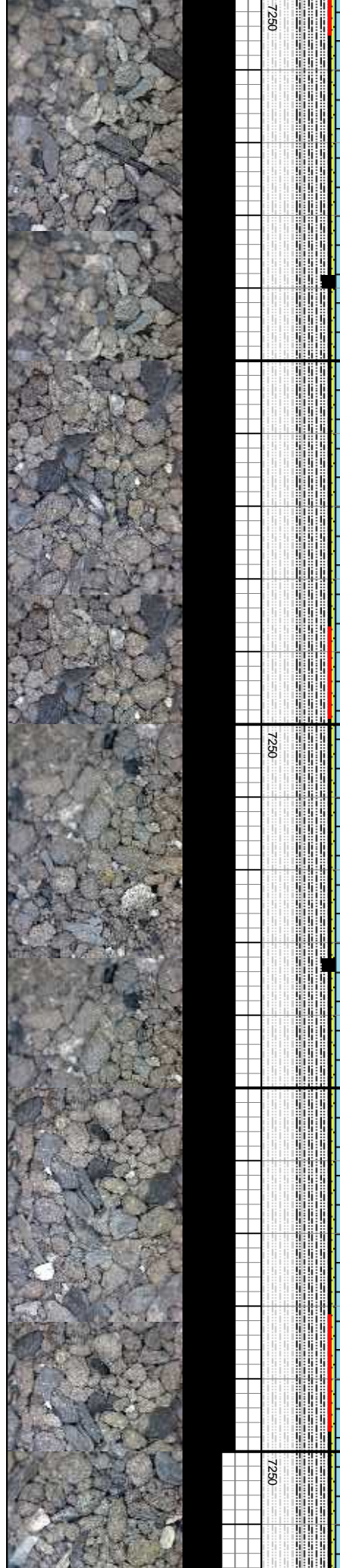
SS: med gy-brn, sb rnd-rnd, f-vf gr, mod-w srt, mod frm-frm, brit ip, spec ip, sl calc, tr shy strg; fast difse, mod fast stmg, bl cut, mod even ring

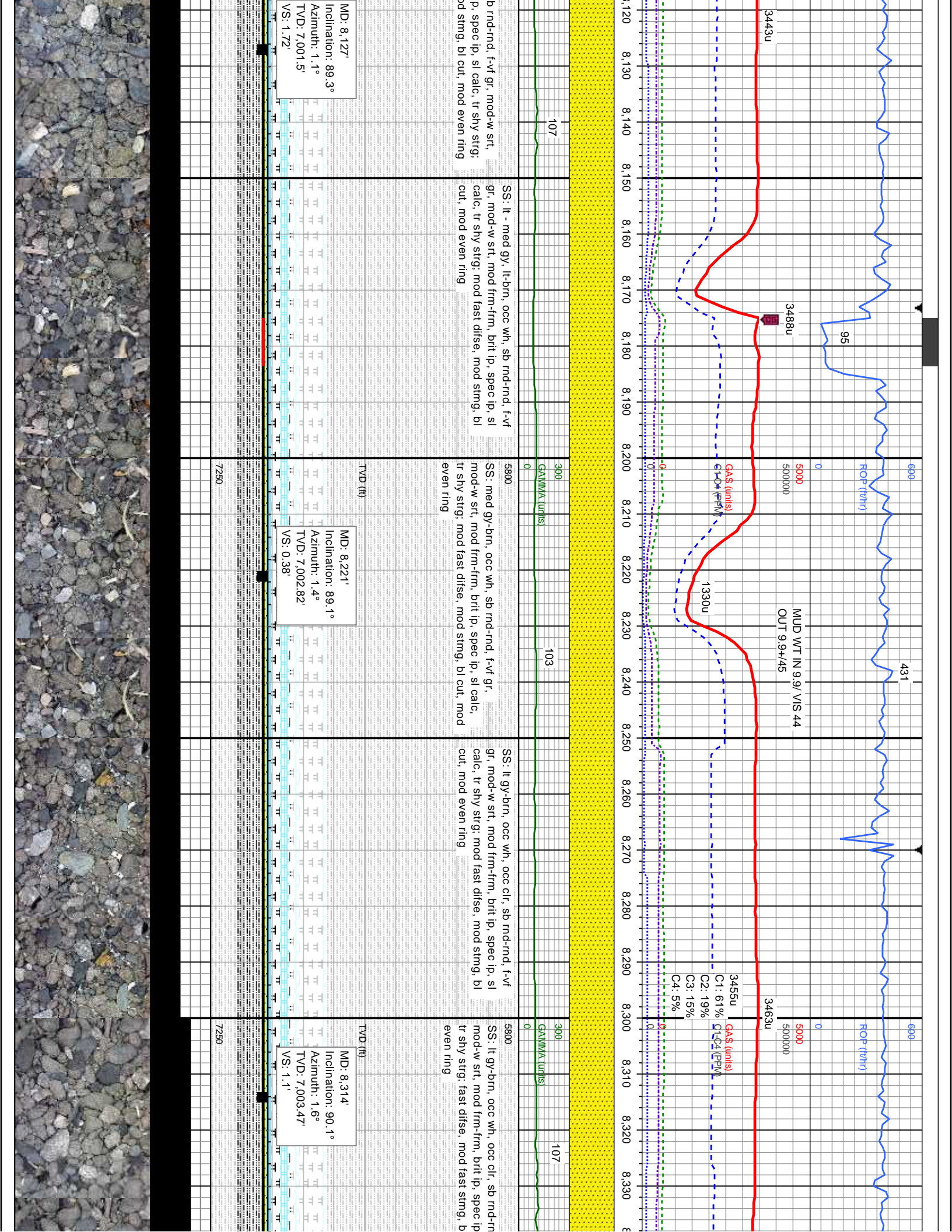
SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; LMST: off wh - crn, lt - med gy, sb blkly - blkly, brit, sl frm, mcoln, wxy tex, v calc; fast difse, mod fast stmg, bl cut, mod even ring

SS: med gy-brn, s mod frm-frm, brit mod fast difse, m

MD: 7.939'
Inclination: 91.3°
Azimuth: 1.8°
TVD: 7,003.47'
VS: 2.56'

MD: 8.033'
Inclination: 90.9°
Azimuth: 0.9°
TVD: 7,001.67'
VS: 1.05'





MD: 8.127'
 Inclination: 89.3°
 Azimuth: 1.1°
 TVD: 7,001.5'
 VS: 1.72'

b rnd-rnd, f-vf gr, mod-w srt,
 p, spec ip, sl calc, tr shy strg;
 cut, mod even ring

SS: lt - med gy, lt-brn, occ wh, sb rnd-rnd, f-vf
 gr, mod-w srt, mod frm-frm, brit lp, spec ip, sl
 calc, tr shy strg; mod fast difse, mod stmg, bl
 cut, mod even ring

SS: med gy-brn, occ wh, sb rnd-rnd, f-vf gr,
 mod-w srt, mod frm-frm, brit lp, spec ip, sl calc,
 tr shy strg; mod fast difse, mod stmg, bl cut, mod
 even ring

SS: lt gy-brn, occ wh, occ clr, sb rnd-rnd, f-vf
 gr, mod-w srt, mod frm-frm, brit lp, spec ip, sl
 calc, tr shy strg; mod fast difse, mod stmg, bl
 cut, mod even ring

SS: lt gy-brn, occ wh, occ clr, sb rnd-rnd,
 mod-w srt, mod frm-frm, brit lp, spec ip,
 tr shy strg; fast difse, mod fast stmg, b
 even ring

MD: 8.221'
 Inclination: 89.1°
 Azimuth: 1.4°
 TVD: 7,002.82'
 VS: 0.38'

MD: 8.314'
 Inclination: 90.1°
 Azimuth: 1.6°
 TVD: 7,003.47'
 VS: 1.1'

3443u
 3488u

1330u
 MUD WT IN 9.9/ VIS 44
 OUT 9.9+/45

3455u
 GAS (units)
 C1: 61%
 C2: 19%
 C3: 15%
 C4: 5%

3463u

GAS (units)
 C1: 61%
 C2: 19%
 C3: 15%
 C4: 5%

3463u

GAS (units)
 C1: 61%
 C2: 19%
 C3: 15%
 C4: 5%

3463u

95

0

5000

5000000

0

6900

ROP (T/Hr)

431

0

5000

5000000

0

6900

ROP (T/Hr)

431

0

5000

5000000

0

6900

ROP (T/Hr)

431

0

5000

5000000

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5000000

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6900

ROP (T/Hr)

431

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ROP (T/Hr)

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ROP (T/Hr)

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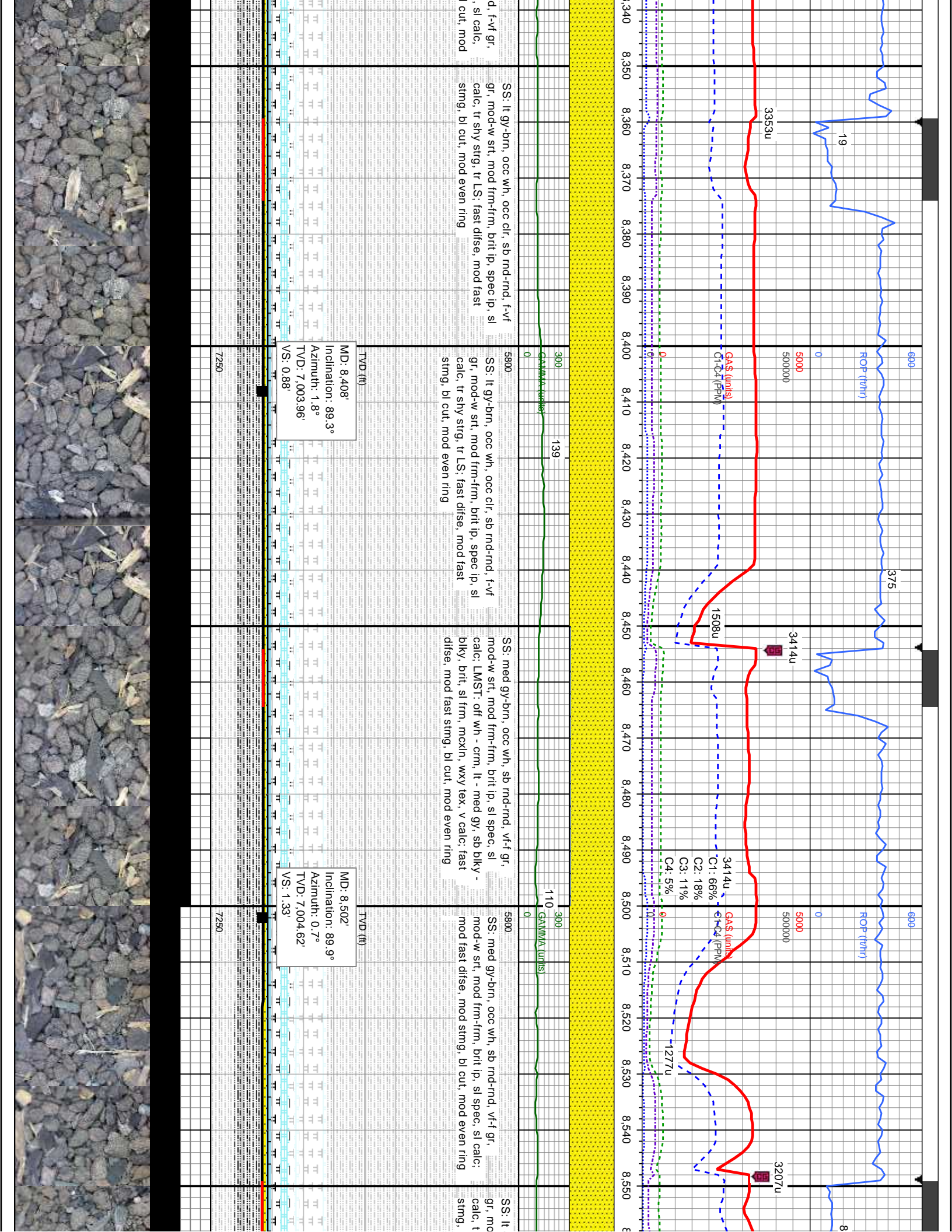
ROP (T/Hr)

431

0

5000

50



MD: 8,408'
 Inclination: 89.3°
 Azimuth: 1.8°
 TVD: 7,003.96'
 VS: 0.88'

MD: 8,502'
 Inclination: 89.9°
 Azimuth: 0.7°
 TVD: 7,004.62'
 VS: 1.33'

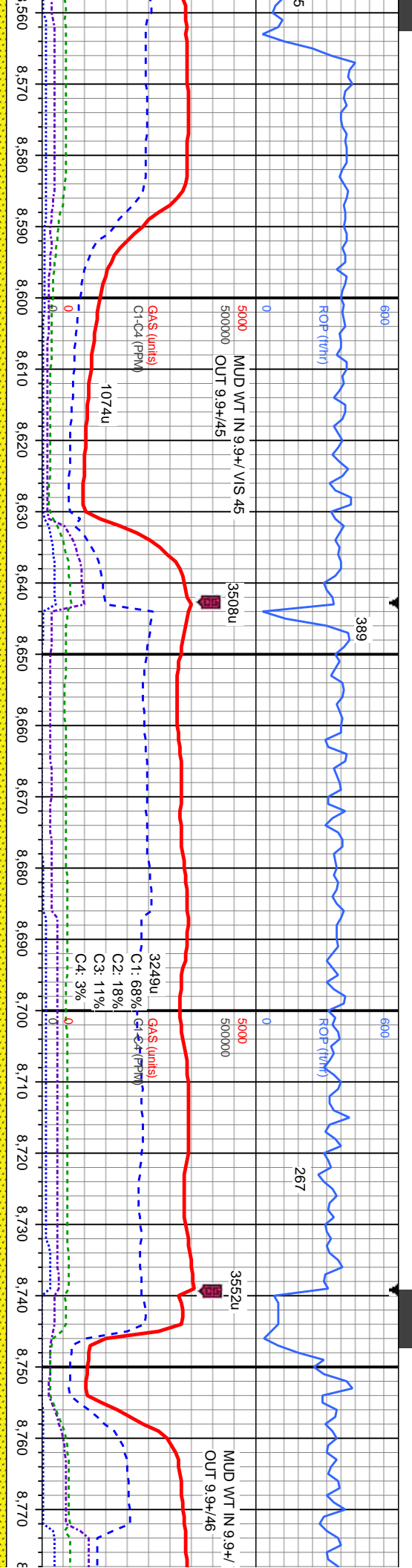
SS: lt gy-brn, occ wh, occ clt, sb rnd-rnd, f-vf gr, mod-w srt, mod frm-frm, brit lp, spec ip, sl calc, tr shy strg, tr LS; fast difse, mod fast stmg, bl cut, mod even ring

SS: lt gy-brn, occ wh, occ clt, sb rnd-rnd, f-vf gr, mod-w srt, mod frm-frm, brit lp, spec ip, sl calc, tr shy strg, tr LS; fast difse, mod fast stmg, bl cut, mod even ring

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; LMST: off wh - crm, lt - med gy, sb blkly - blkly, brit, sl frm, mckln, wxy tex, v calc; fast difse, mod fast stmg, bl cut, mod even ring

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; mod fast difse, mod stmg, bl cut, mod even ring

SS: lt gy-brn, occ wh, occ clt, sb rnd-rnd, f-vf gr, mod-w srt, mod frm-frm, brit ip, spec ip, sl calc, tr shy strg, tr LS; fast difse, mod fast stmg, bl cut, mod even ring



gy-brn, occ wh, occ clr, sb rnd-rnd, f-vf
 mod-w-srt, mod frm-frm, brit lp, spec ip, sl
 shy stmg, tr LS, mod fast difse, mod
 bl cut, mod even ring

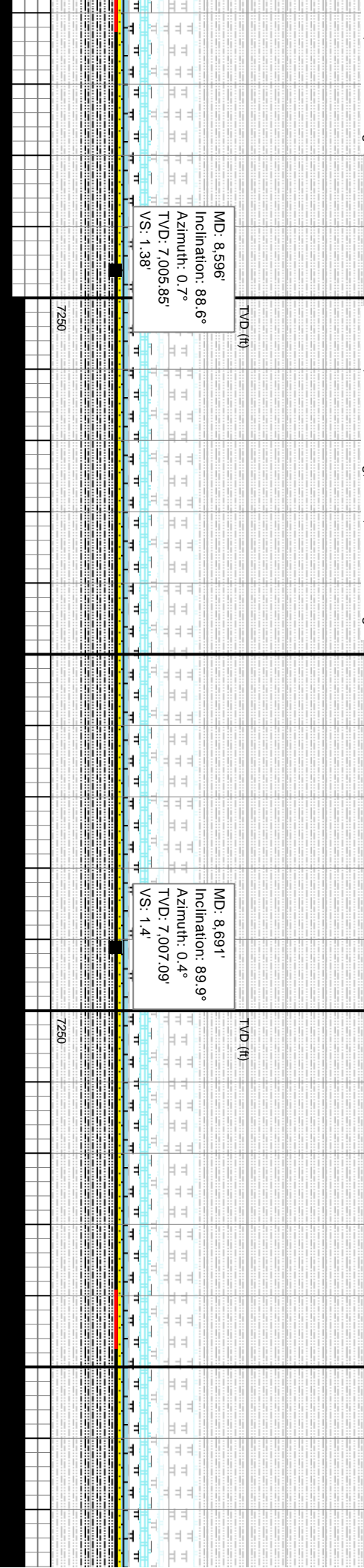
SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brit lp, sl spec, sl calc;
 fast difse, mod fast stmg, bl cut, mod even ring

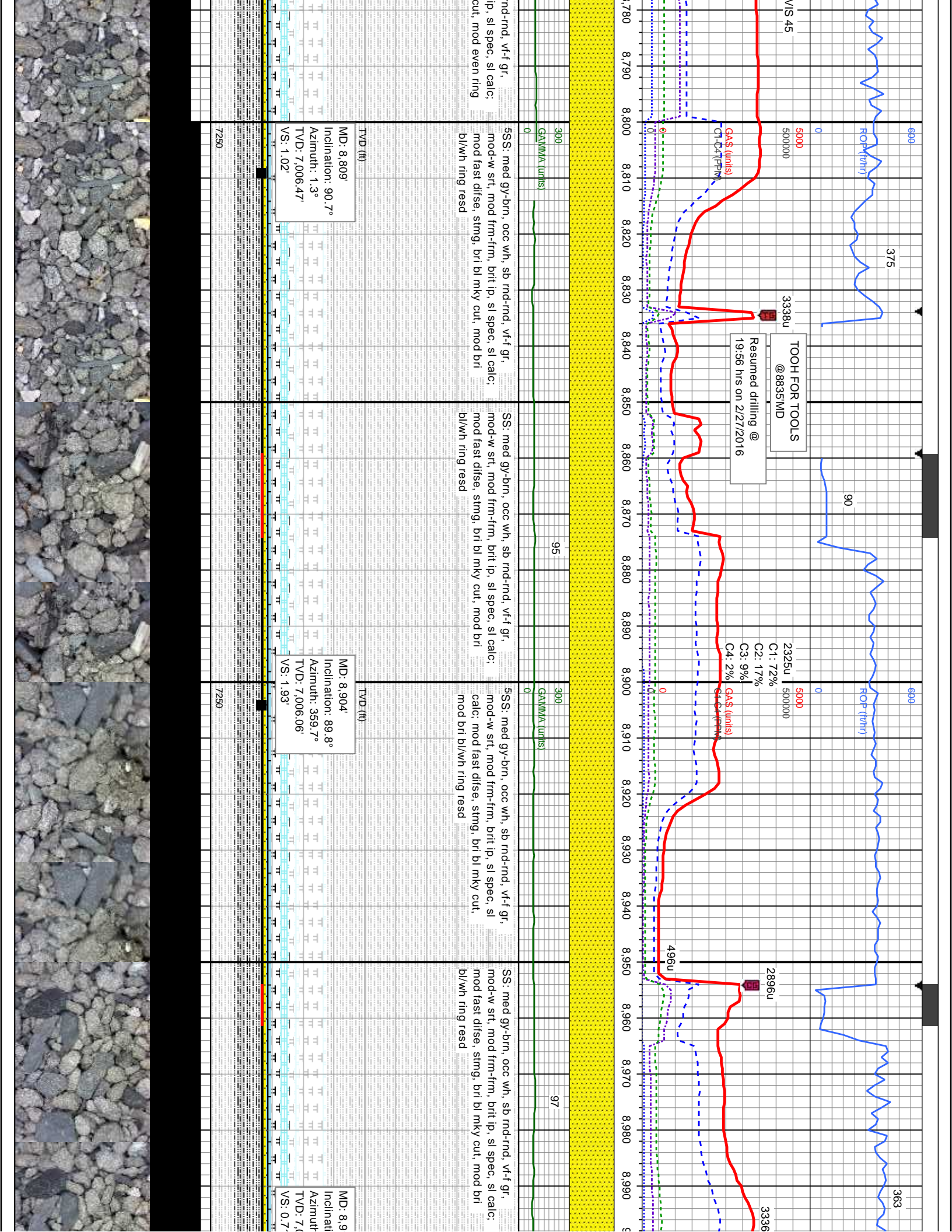
SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brit lp, sl spec, sl calc;
 fast difse, mod fast stmg, bl cut, mod even ring

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brit lp, sl spec, sl calc;
 fast difse, mod fast stmg, bl cut, mod even ring

MD: 8,596'
 Inclination: 88.6°
 Azimuth: 0.7°
 TVD: 7,005.85'
 VS: 1.38'

MD: 8,691'
 Inclination: 89.9°
 Azimuth: 0.4°
 TVD: 7,007.09'
 VS: 1.4'





TOOH FOR TOOLS
@ 8835MD

Resumed drilling @
19:56 hrs on 2/27/2016

2325u
5000000
C1: 72%
C2: 17%
C3: 9%
C4: 2%

MD: 8.809'
Inclination: 90.7°
Azimuth: 1.3°
TVD: 7,006.47'
VS: 1.02'

MD: 8.904'
Inclination: 89.8°
Azimuth: 359.7°
TVD: 7,006.06'
VS: 1.93'

MD: 8.9
Inclination:
Azimuth:
TVD: 7,006.06'
VS: 0.7'

5SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
mod-w srt, mod frm-frm, brit lp, sl spec, sl calc;
mod fast disse, stmg, bri bl mky cut, mod bri
bl/wh ring resd

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
mod-w srt, mod frm-frm, brit lp, sl spec, sl calc;
mod fast disse, stmg, bri bl mky cut, mod bri
bl/wh ring resd

5SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
mod-w srt, mod frm-frm, brit lp, sl spec, sl
calc; mod fast disse, stmg, bri bl mky cut,
mod bri bl/wh ring resd

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
mod-w srt, mod frm-frm, brit lp, sl spec, sl calc;
mod fast disse, stmg, bri bl mky cut, mod bri
bl/wh ring resd

690

375

90

690

496u

363

3338u

2896u

3336

VIS 45

2325u

496u

3336

5000000

5000000

5000000

5000000

GAS (units)

GAS (units)

GAS (units)

GAS (units)

CH-C4 (PPM)

CH-C4 (PPM)

CH-C4 (PPM)

CH-C4 (PPM)

300

95

300

97

GAMMA (units)

GAMMA (units)

GAMMA (units)

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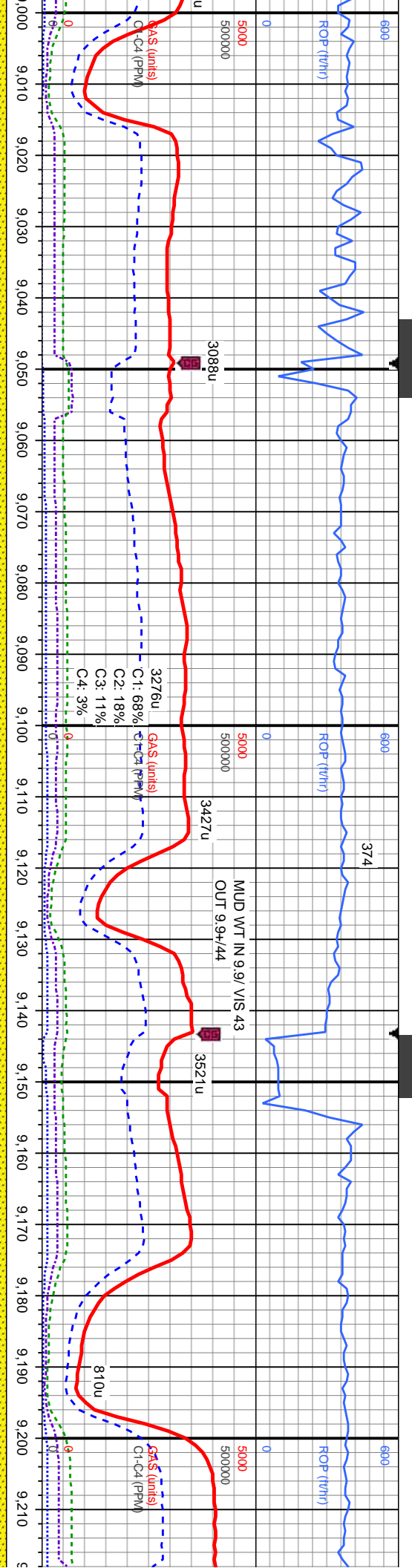
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SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brt lp, sl spec, sl calc:
 mod fast disse, stmg, bri bl mky cut, mod bri
 bl/wh ring resd

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brt lp, sl spec, sl calc:
 mod fast disse, mod stmg, bl cut, mod even ring

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brt lp, sl spec, sl calc:
 mod fast disse, mod stmg, bl cut, mod even ring

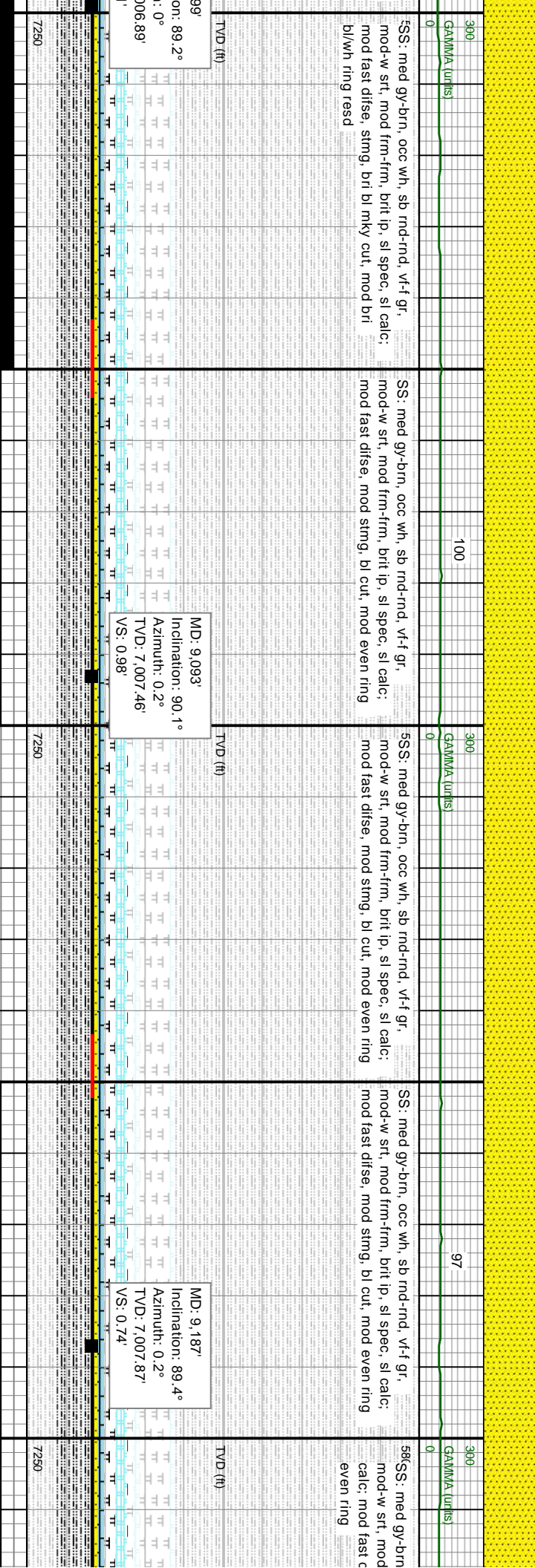
SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brt lp, sl spec, sl calc:
 mod fast disse, mod stmg, bl cut, mod even ring

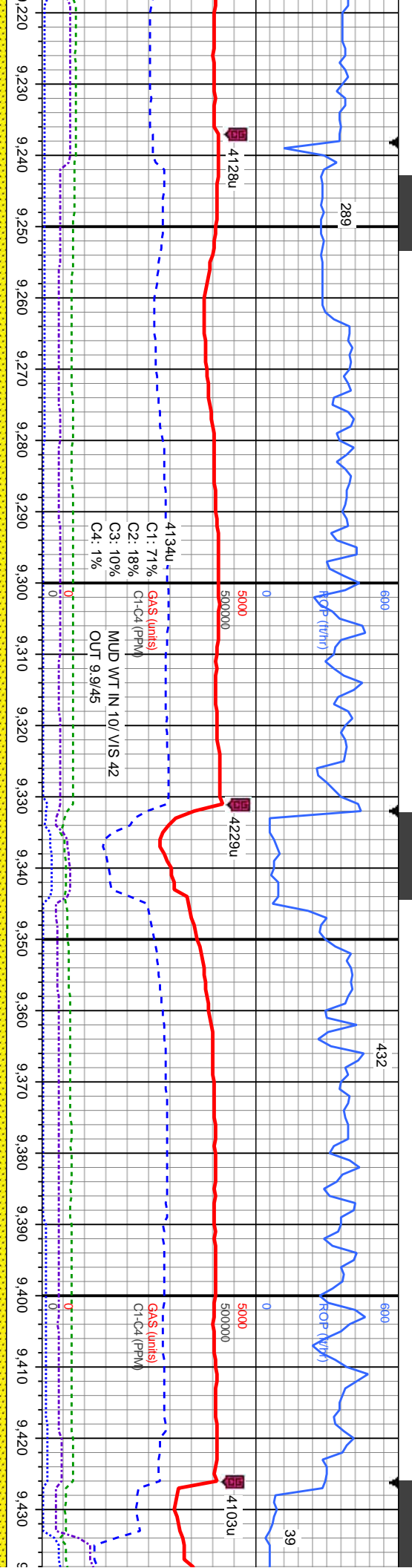
SS: med gy-brn,
 mod-w srt, mod
 calc: mod fast c
 even ring

MD: 9.093'
 Inclination: 90.1°
 Azimuth: 0.2°
 TVD: 7,007.46'
 VS: 0.98'

MD: 9.187'
 Inclination: 89.4°
 Azimuth: 0.2°
 TVD: 7,007.87'
 VS: 0.74'

MD: 9.187'
 Inclination: 89.4°
 Azimuth: 0.2°
 TVD: 7,007.87'
 VS: 0.74'





SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; mod fast difse, mod stmg, bl cut, mod even ring

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; fast difse, mod fast stmg, bl cut, mod even ring

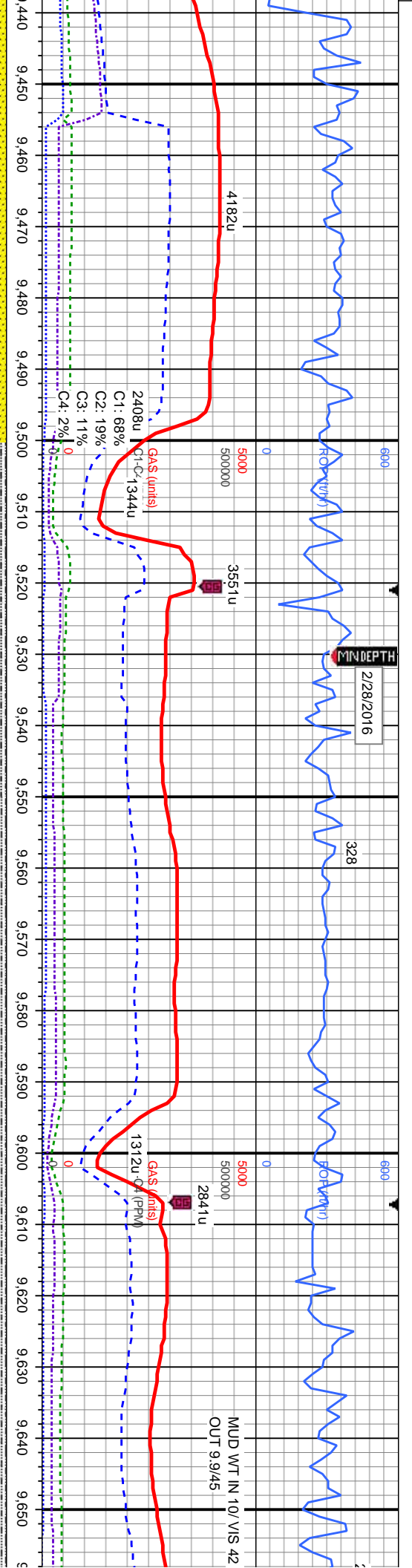
SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; fast difse, mod fast stmg, bl cut, mod even ring

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl spec; fast difse, mod fast stmg, bl cut, mod e

MD: 9.281'
 Inclination: 90.2°
 Azimuth: 359.5°
 TVD: 7.008.2'
 VS: 1.13'

MD: 9.376'
 Inclination: 89.9°
 Azimuth: 0.9°
 TVD: 7.008.12'
 VS: 1.51'





2/28/2016

328

690

MUD WT IN 10' VIS 42
OUT 9.9/45

f gr, SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit lp, sl spec, sl calc: fast difse, mod fast stmg, bl cut, mod even ring

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit lp, sl spec, sl calc: SLTY SH: med gy - gy: occ dk gy, silty gr, pty-sb pty, frm - mod hd, rthy tex, non calc: SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit lp, sl spec, sl calc: fast difse, mod fast stmg, bl cut, mod even ring

SLTY SH: med gy - gy: occ dk gy, silty gr, pty-sb pty, frm - mod hd, rthy tex, non calc: SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt, mod frm-frm, brit lp, sl spec, sl calc: mod difse, mod stmg, bl cut, mod even ring

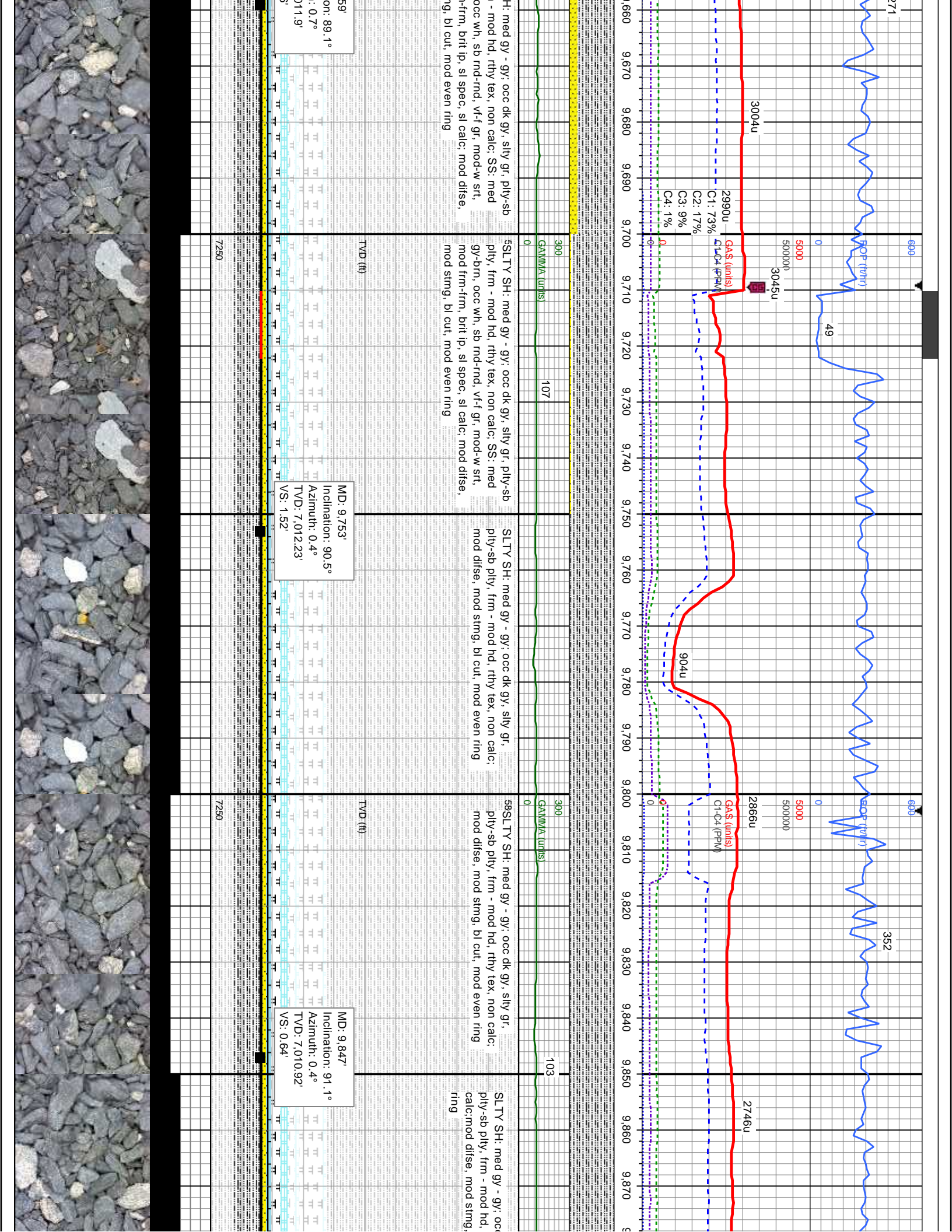
SLTY S pty, frm gy-brn, mod frm mod str

MD: 9.470'
Inclination: 88.9°
Azimuth: 2.1°
TVD: 7.009, 1'
VS: 1.66'

MD: 9.563'
Inclination: 89.3°
Azimuth: 1.6°
TVD: 7.010, 56'
VS: 0.69'

Depth (ft)	Gamma Ray (GR)	Gas (GAS)	C1 (%)	C2 (%)	C3 (%)	C4 (%)
9,440	157	0	68%	19%	11%	2%
9,450	157	0	68%	19%	11%	2%
9,460	157	0	68%	19%	11%	2%
9,470	157	4182u	68%	19%	11%	2%
9,480	157	4182u	68%	19%	11%	2%
9,490	157	4182u	68%	19%	11%	2%
9,500	157	4182u	68%	19%	11%	2%
9,510	157	4182u	68%	19%	11%	2%
9,515	157	3551u	68%	19%	11%	2%
9,520	157	3551u	68%	19%	11%	2%
9,530	157	3551u	68%	19%	11%	2%
9,540	157	3551u	68%	19%	11%	2%
9,550	157	3551u	68%	19%	11%	2%
9,560	157	3551u	68%	19%	11%	2%
9,570	157	3551u	68%	19%	11%	2%
9,580	157	3551u	68%	19%	11%	2%
9,590	157	3551u	68%	19%	11%	2%
9,600	157	1312u	68%	19%	11%	2%
9,610	157	1312u	68%	19%	11%	2%
9,620	157	1312u	68%	19%	11%	2%
9,630	157	1312u	68%	19%	11%	2%
9,640	157	1312u	68%	19%	11%	2%
9,650	157	1312u	68%	19%	11%	2%





690

690

352

FOP (TVH)

FOP (TVH)

3004u

3045u

2866u

2746u

GAS (units)
C1: 73%
C2: 17%
C3: 9%
C4: 1%

GAS (units)
C1-C4 (PPM)

GAMMA (units)

GAMMA (units)

103

H: med gy - gy: occ dk gy, silty gr, pily-sb
- mod hd, rthy tex, non calc: SS: med
occ wh, sb md-rnd, v-f gr, mod-w srt,
mod frm-firm, brit lp, sl spec, sl calc: mod difse,
ng, bl cut, mod even ring

SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
pily, frm - mod hd, rthy tex, non calc: SS: med
gy-brn, occ wh, sb md-rnd, v-f gr, mod-w srt,
mod frm-firm, brit lp, sl spec, sl calc: mod difse,
mod stmg, bl cut, mod even ring

SLTY SH: med gy - gy: occ dk gy, silty gr,
pily-sb pily, frm - mod hd, rthy tex, non calc:
mod difse, mod stmg, bl cut, mod even ring

58SLTY SH: med gy - gy: occ dk gy, silty gr,
pily-sb pily, frm - mod hd, rthy tex, non calc:
mod difse, mod stmg, bl cut, mod even ring

SLTY SH: med gy - gy: occ
pily-sb pily, frm - mod hd,
calc:mod difse, mod stmg,
ring

on: 89.1°
: 0.7°
111.9'

MD: 9.753'
Inclination: 90.5°
Azimuth: 0.4°
TVD: 7.01223'
VS: 1.52'

MD: 9.847'
Inclination: 91.1°
Azimuth: 0.4°
TVD: 7.01092'
VS: 0.64'

TVD (ft)

TVD (ft)

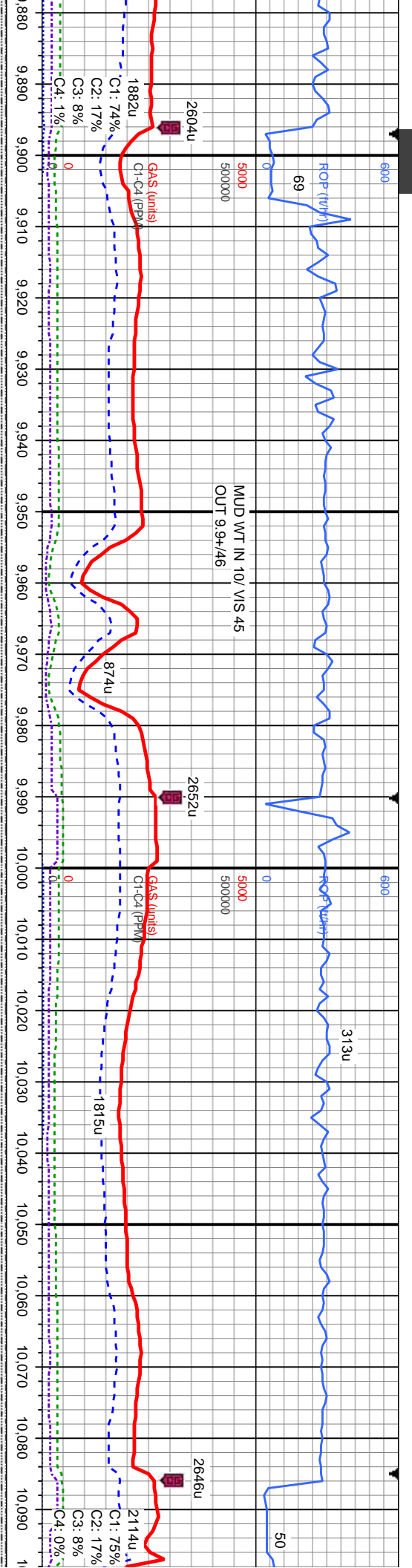
TVD (ft)

7250

7250

7250





9,880 9,890 9,900 9,910 9,920 9,930 9,940 9,950 9,960 9,970 9,980 9,990 10,000 10,010 10,020 10,030 10,040 10,050 10,060 10,070 10,080 10,090 10,100

300
 GAMMA (units)
 103

58 SL TY SH: med gy - gy: occ dk gy, silty gr, pty-sb pty, frm - mod hd, rthy tex, non calc: mod difse, mod stmg, bl cut, mod even ring

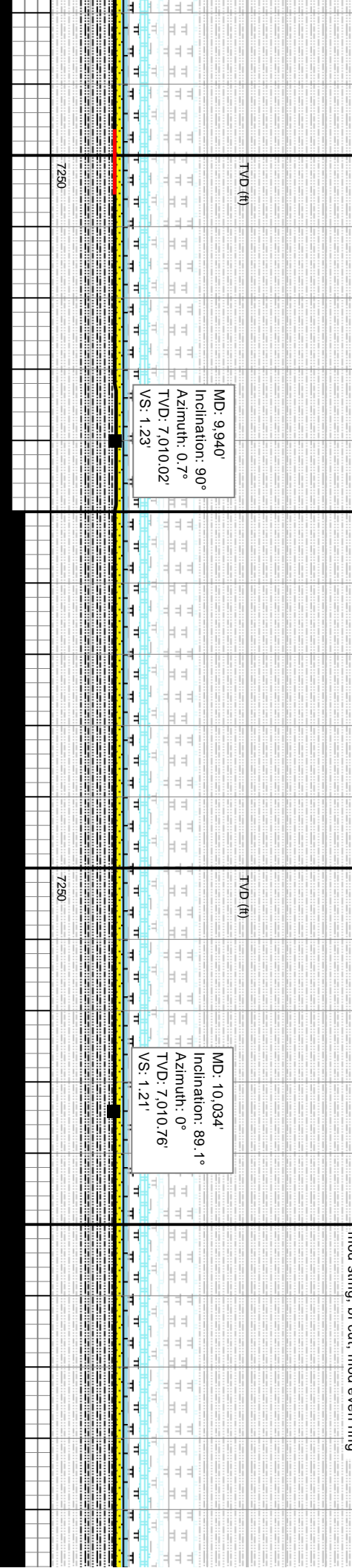
SL TY SH: med gy - gy: occ dk gy, silty gr, pty-sb pty, frm - mod hd, rthy tex, non calc: Tr SHY SS: mod difse, mod stmg, bl cut, mod even ring

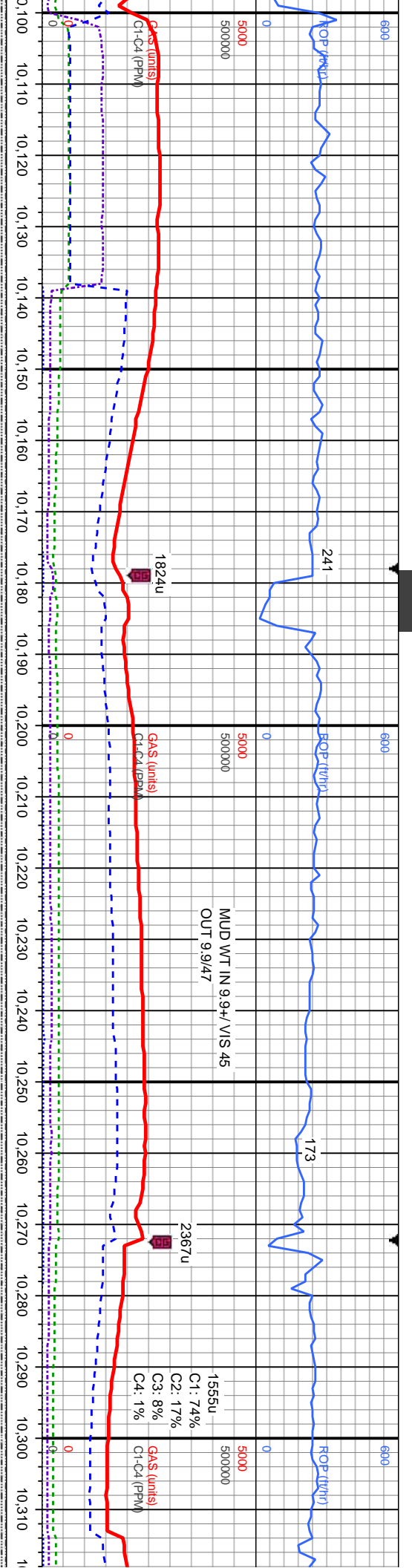
59^{SP} SL TY SH: med gy - gy: occ dk gy, silty gr, pty-sb pty, frm - mod hd, rthy tex, non calc: Tr SHY SS: mod difse, mod stmg, bl cut, mod even ring

SL TY SH: med gy - gy: occ dk gy, silty gr, pty, frm - mod hd, rthy tex, non calc: SS: med gy-brn, occ wh, sb rnd-rnd, v-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc: mod difse, mod stmg, bl cut, mod even ring

MD: 9,940'
 Inclination: 90°
 Azimuth: 0.7°
 TVD: 7,010.02'
 VS: 1.23

MD: 10,034'
 Inclination: 89.1°
 Azimuth: 0°
 TVD: 7,010.76'
 VS: 1.21





5800
 SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
 pily, frm - mod hd, rthy tex, non calc. SS: med
 gy-brn, occ wh, sb nd-rnd, vf-f gr, mod-w srt,
 mod frm-frm, brit lp, sl spec, sl calc; mod difse,
 mod stmg, bl cut, mod even ring

SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
 pily, frm - mod hd, rthy tex, non calc, tr SS; fast
 difse, mod stmg, br bl cut, mod even ring

SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
 pily, frm - mod hd, rthy tex, non calc, tr SS; mod
 difse, mod stmg, bl cut, mod even ring

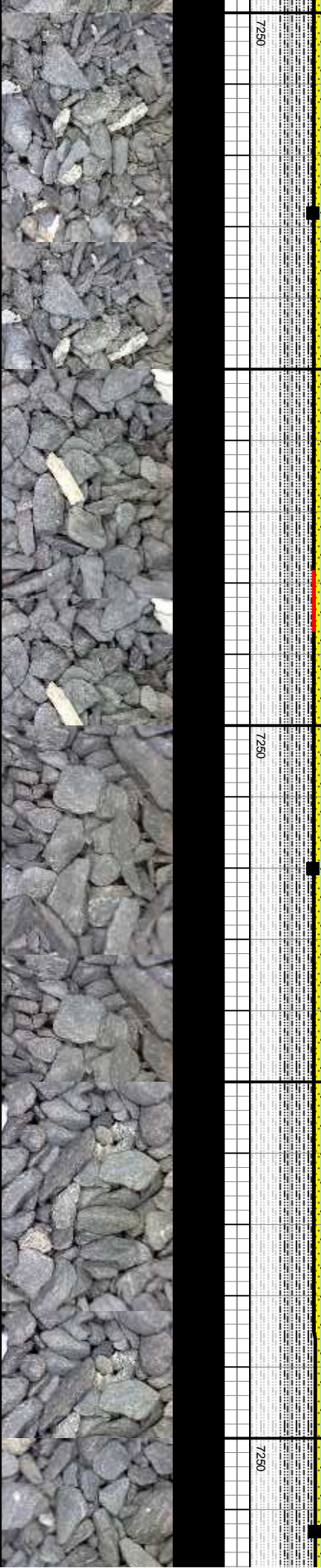
SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
 pily, frm - mod hd, rthy tex, non calc; SS: med
 gy-brn, occ wh, sb nd-rnd, vf-f gr, mod-w srt,
 mod frm-frm, brit lp, sl spec, sl calc; mod difse,
 mod stmg, bl cut, mod even ring

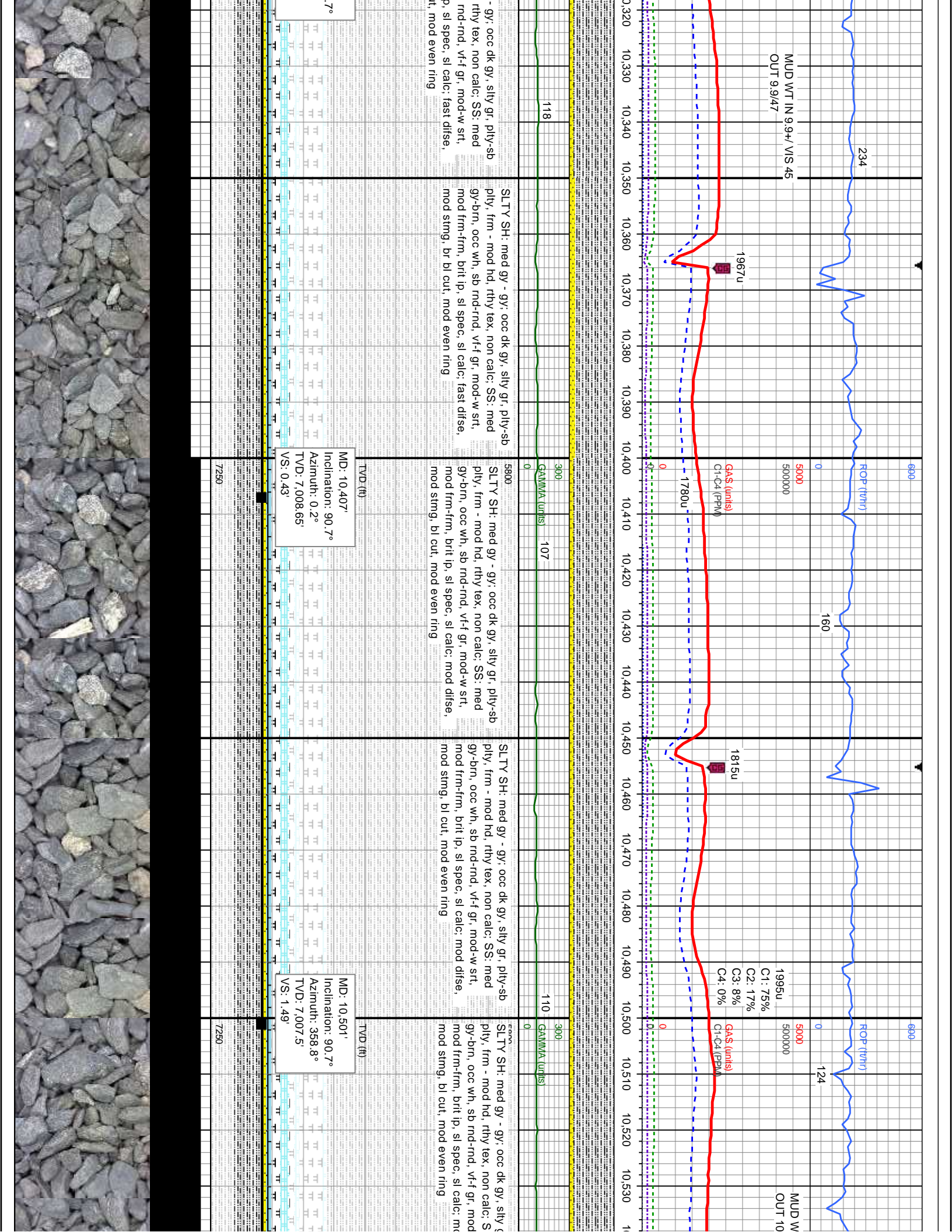
5800
 SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
 pily, frm - mod hd, rthy tex, non calc; SS: med
 gy-brn, occ wh, sb nd-rnd, vf-f gr, mod-w srt,
 mod frm-frm, brit lp, sl spec, sl calc; mod difse,
 mod stmg, bl cut, mod even ring

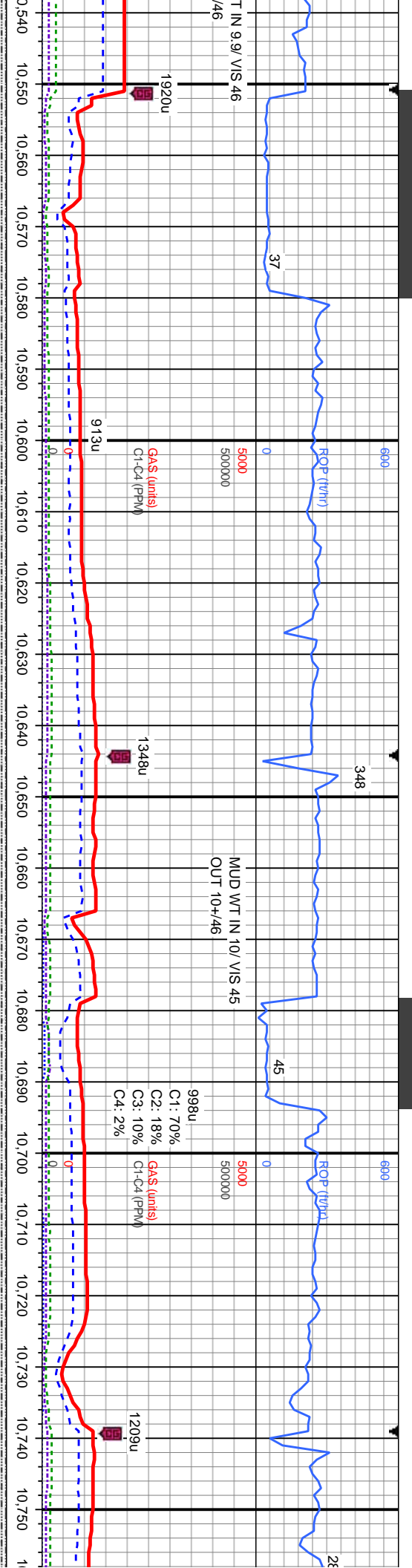
MD: 10.128'
 Inclination: 90.2°
 Azimuth: 0.9°
 TVD: 7.011.34'
 VS: 1.51'

MD: 10.220'
 Inclination: 90.5°
 Azimuth: 0.9°
 TVD: 7.010.77'
 VS: 0.33'

MD: 10.313'
 Inclination: 90°
 Azimuth: 0.6°
 TVD: 7.009.8'
 VS: 0.39'



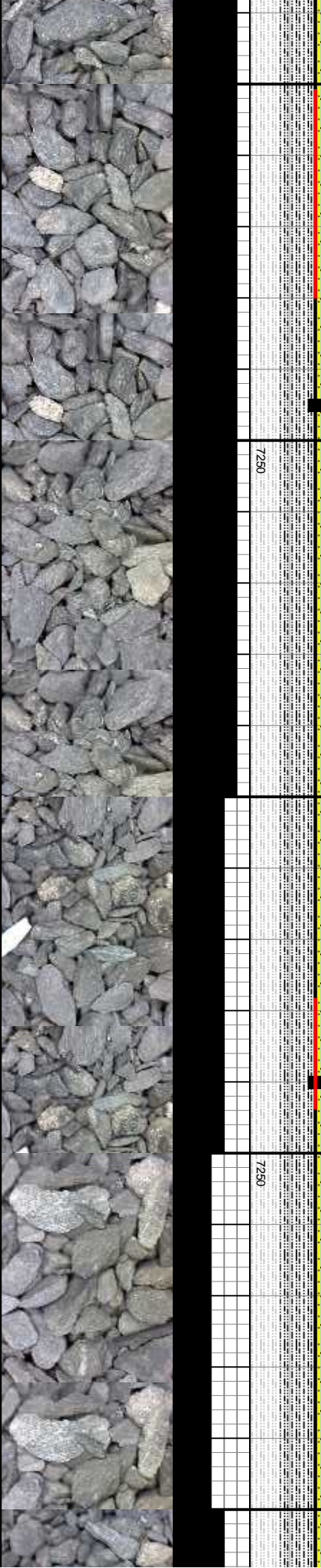


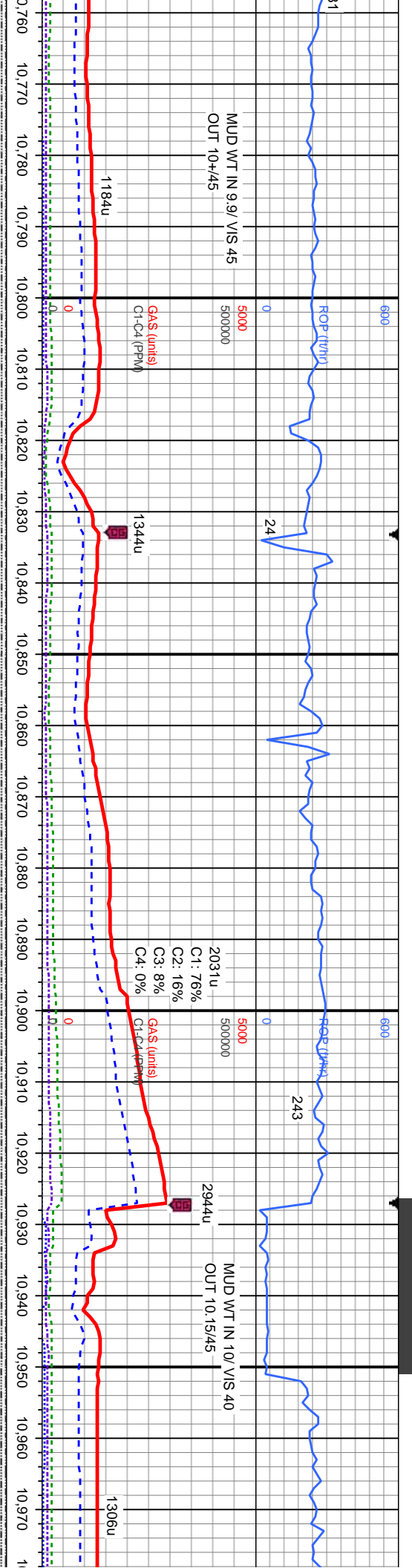


10,540	10,550	10,560	10,570	10,580	10,590	10,600	10,610	10,620	10,630	10,640	10,650	10,660	10,670	10,680	10,690	10,700	10,710	10,720	10,730	10,740	10,750		
		107				5800			116						126	5800						123	
		SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc, tr SS; mod difse, mod string, bl cut, mod even ring				SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc, tr SS; mod difse, mod string, bl cut, mod even ring			SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc, tr SS; mod difse, mod string, bl cut, mod even ring						SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc, tr SS; mod difse, mod string, bl cut, mod even ring								SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc, tr SS; mod difse, mod string, bl cut, mod even ring

MD: 10,595'
 Inclination: 89.5°
 Azimuth: 1.4°
 TVD: 7,007.34'
 VS: 3.05'

MD: 10,690'
 Inclination: 90.8°
 Azimuth: 1.4°
 TVD: 7,007.09'
 VS: 1.37'





SH: med gy - gy: occ dk gy, silty gr, pily-sb
 n - mod hd, rthy tex, non calc; SS: med
 occ wh, sb rnd-rnd, vf-f gr, mod-w srt,
 m-frm, brit ip, sl spec, sl calc; mod dtlse,
 mng, bl cut, mod even ring

SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
 pily, frm - mod hd, rthy tex, non calc; SS: med
 gy-brn, occ wh, sb rnd-rnd, vf-f gr, mod-w srt,
 mod frm-frm, brit ip, sl spec, sl calc

SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brit ip, sl spec, sl calc;
 SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
 pily, frm - mod hd, rthy tex, non calc

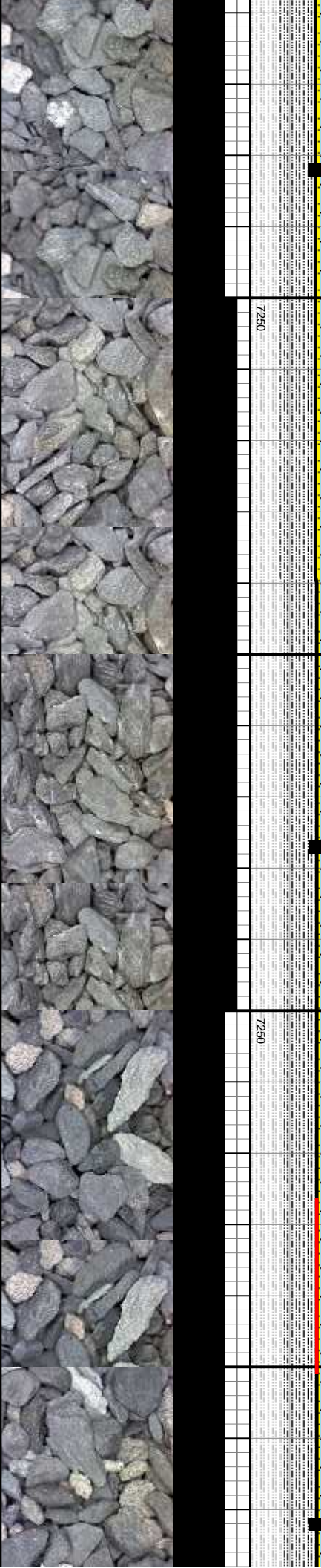
SS: med gy-brn, occ wh, sb rnd-rnd, vf-f gr,
 mod-w srt, mod frm-frm, brit ip, sl spec, sl calc;
 SLTY SH: med gy - gy: occ dk gy, silty gr, pily-sb
 pily, frm - mod hd, rthy tex, non calc

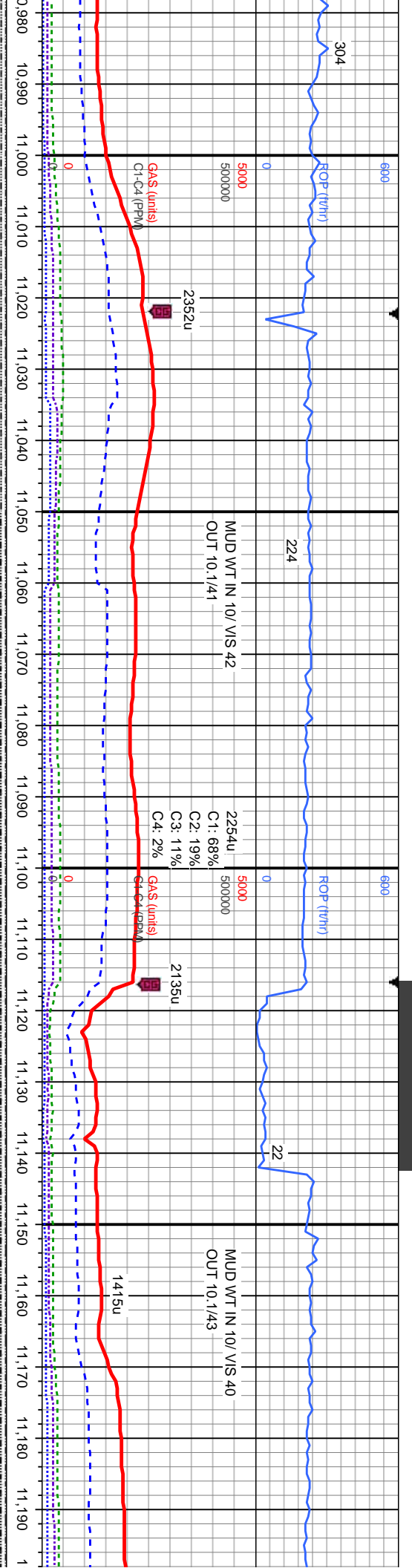
SS: med gy-brn, occ wh, sb
 mod-w srt, mod frm-frm, brit
 SLTY SH: med gy - gy: occ c
 pily, frm - mod hd, rthy tex,

MD: 10.782'
 Inclination: 90.9°
 Azimuth: 0.4°
 TVD: 7,005.73'
 VS: 1.09'

MD: 10.877'
 Inclination: 90.9°
 Azimuth: 359.2°
 TVD: 7,004.23'
 VS: 1.26'

MD: 10.972'
 Inclination: 90.4°
 Azimuth: 1.8°
 TVD: 7,002.99'
 VS: 2.75'





SS: med gy-brn, occ wh, sb md-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; SLTY SH: med gy - gy; occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc

SS: med gy-brn, occ wh, sb md-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; SLTY SH: med gy - gy; occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc

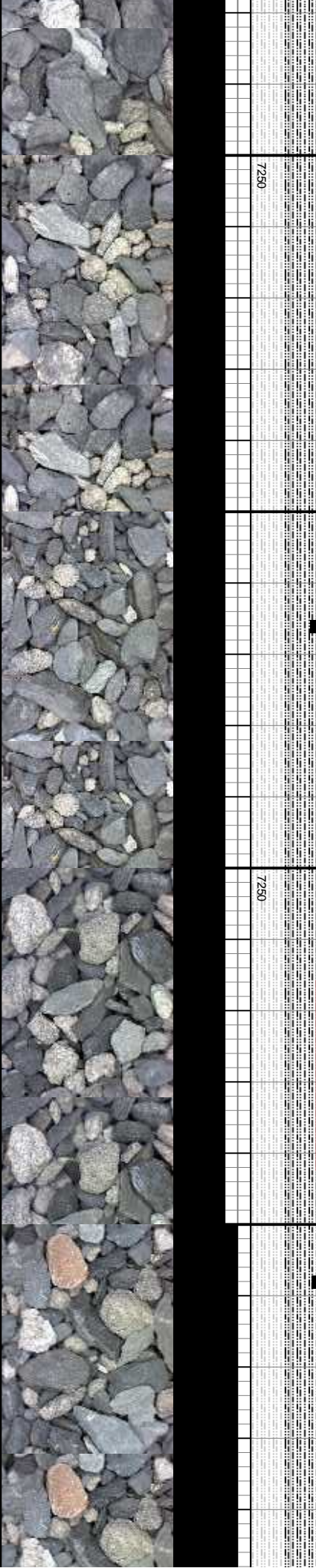
SS: med gy-brn, occ wh, sb md-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; SLTY SH: med gy - gy; occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc; fast difse, mod fast stmg, br bl cut, mod even ring

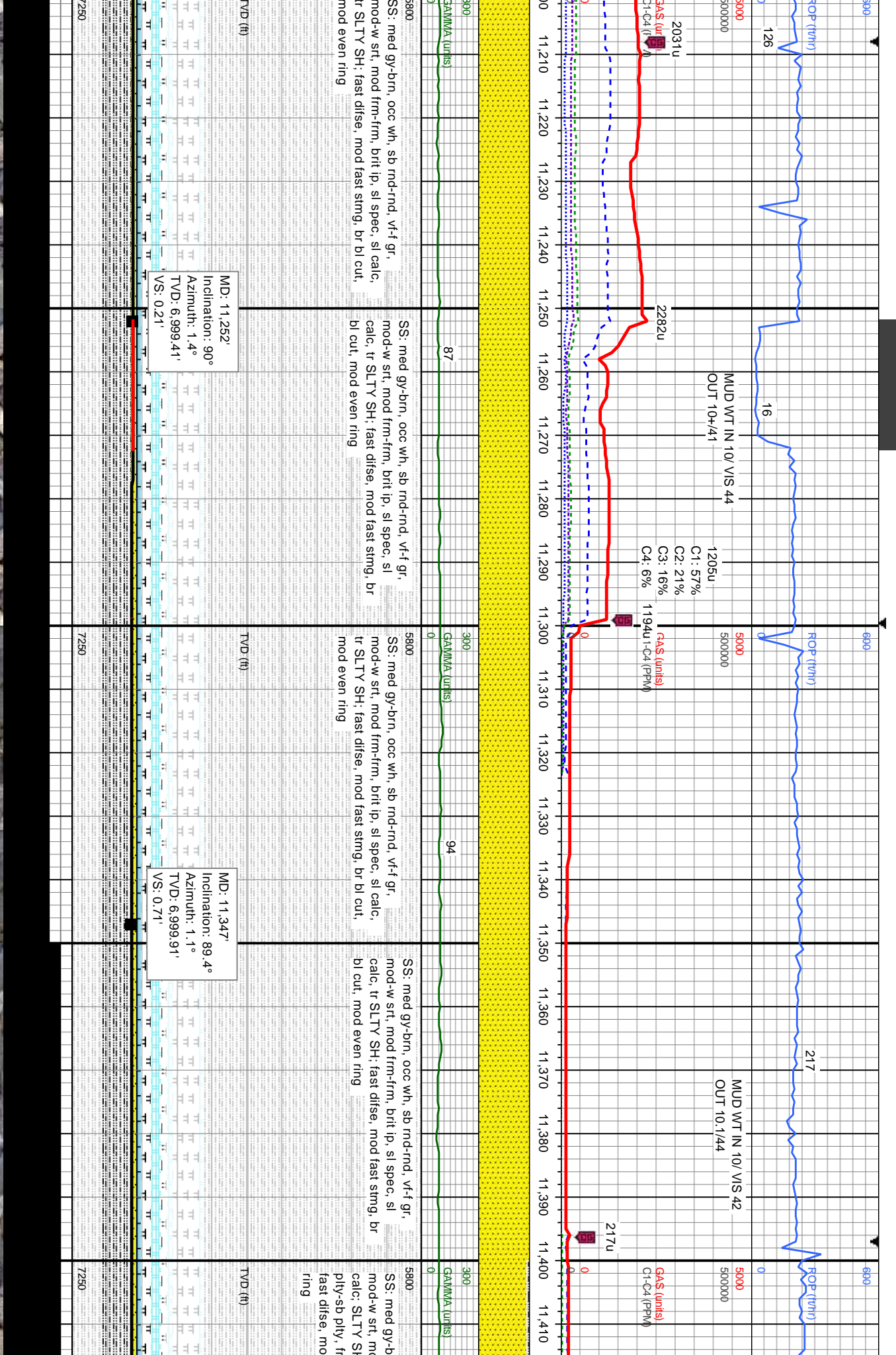
SS: med gy-brn, occ wh, sb md-rnd, vf-f gr, mod-w srt, mod frm-frm, brit ip, sl spec, sl calc; SLTY SH: med gy - gy; occ dk gy, silty gr, pily-sb pily, frm - mod hd, rthy tex, non calc; fast difse, mod fast stmg, bl cut, mod br even ring

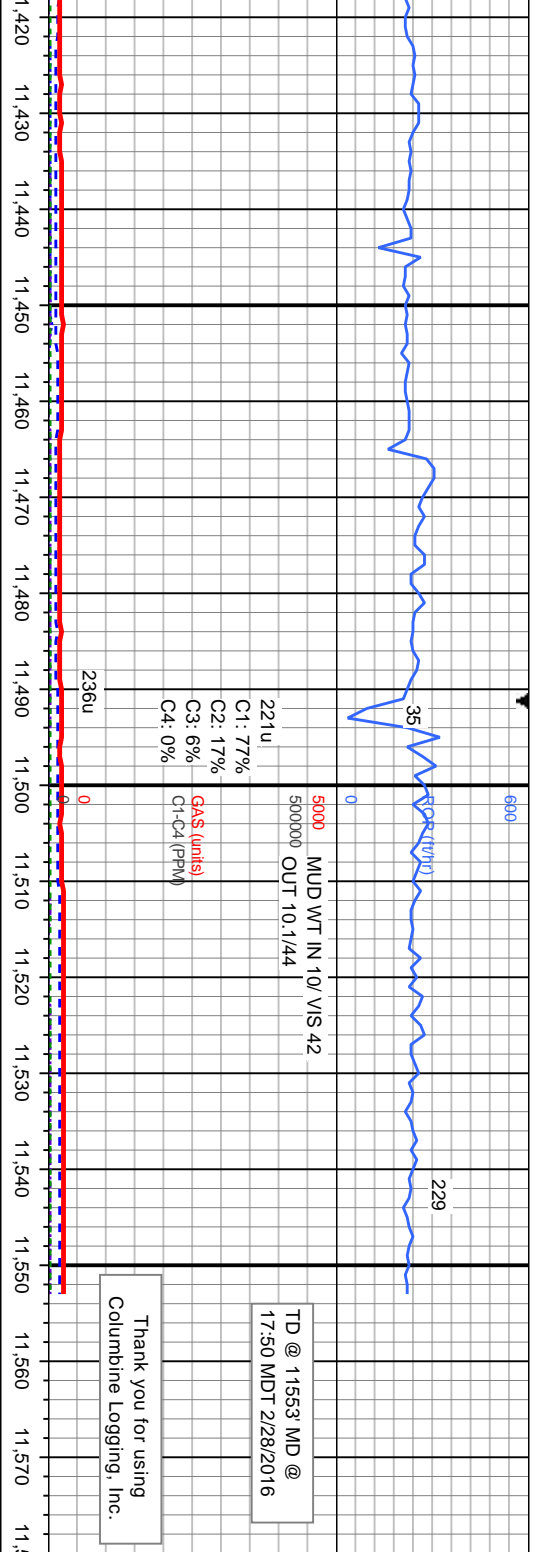
Depth (ft)	Gamma (units)
5800	300
97	97
88	88
94	94

MD: 11,066'
Inclination: 91.9°
Azimuth: 1.1°
TVD: 7,000.94'
VS: 1.57

MD: 11,158'
Inclination: 90°
Azimuth: 1.6°
TVD: 6,999.41'
VS: 2.14







Thank you for using
Columbine Logging, Inc.

TD @ 11553' MD @
17:50 MDT 2/28/2016



MD: 11,441'
Inclination: 90.6°
Azimuth: 0.4°
TVD: 6,999.91'
VS: 1.48'

TVD (ft)

MD: 11,553'
Inclination: 91.5°
Azimuth: 0°
TVD: 6,997.47'
VS: 0'

PTB

7250

