



Scale: 5" / 100'
Measured Depth Log

Well Name Carlson E-15-16HC

Location NENE Section 15 T5N R65W

State Colorado

County Weld

Country United States

Rig Number Frontier (Utah) 8

API Number 05-123-41713

AFE # 41713

Region DJ Basin

Field Wattenberg

Spud Date 7/14/2015

Drilling Completed 9/18/2015

Surface Coordinates Section 15:

1056' FNL x 294' FEL

Bottom Hole Coordinates Section 16:

1078' FNL x 233' FWL

Ground Elevation 4621'

K.B. Elevation 4635'

Logged Interval 6000' To 14785'

Total Depth 14785'

Formation Codell

Type of Drilling Fluid FWLSND

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 Lead Wellsite Geologist

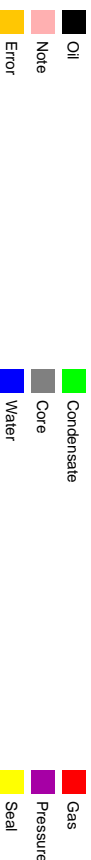
Joey Luce Senior Wellsite Geologist

Bloodhound Unit 298

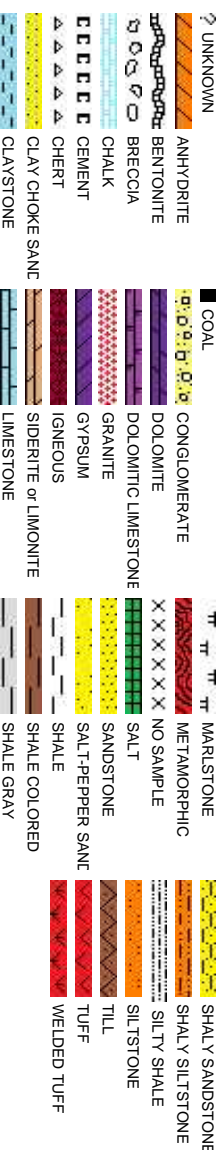
Brad Wilson Senior Wellsite Geologist

Columbine Logging Computer 148

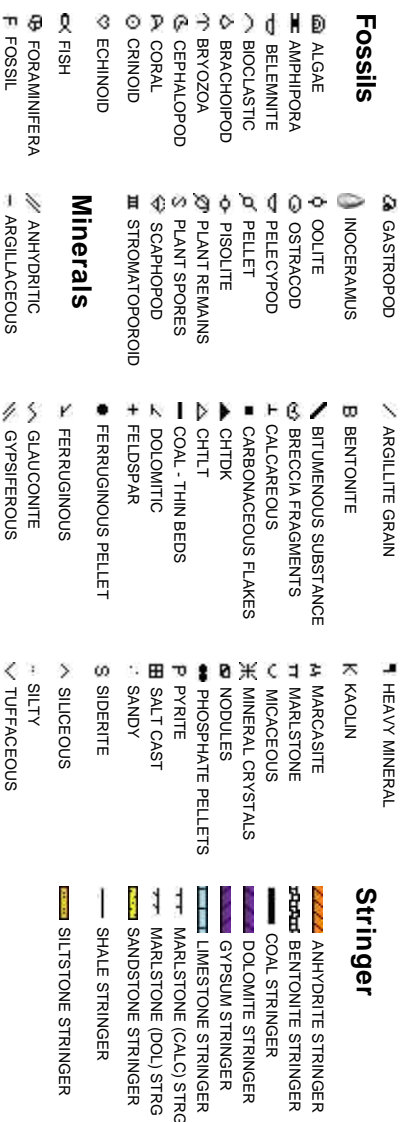
Zone Color Coding



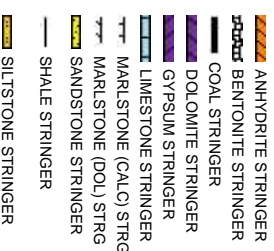
Rock Types



Accessories



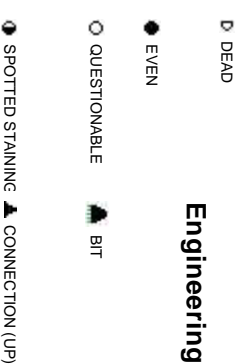
Stringer



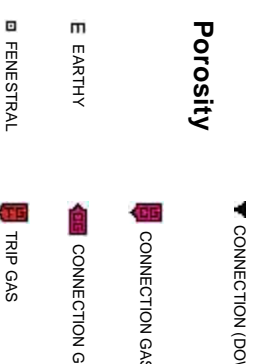
Oil Show



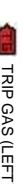
Engineering



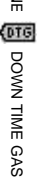
Porosity



FRACTURE



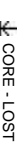
INTERCRYSTALLINE



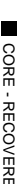
INTEROOLITIC



MOLDIC



ORGANIC




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** MN DEPTH UP **MS** MUDSTONE

Rounding

 **MINDEPTH** MN DEPTH (DOWN) **A** ANGULAR **PS** PACKSTONE

 NORMAL FAULT **R** ROUNDED **WS** WACKSTONE

 **(LEFT)** OVERTURNED STRATA **B** SUBANG

 REVERSE FAULT **R** SUBRND

Sorting

 CASING **M** MODERATE

Textures

 SIDEWALL CORE (LEFT) **P** POOR

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

 SLIDE **C** CHALKY

 **DST** SURVEY **CX** CRYPTOXLN

Slide/Rotate

ROP

ROP

Total Gas & Chromatograph

- GAS
- C1
- C2
- C3
- C4

COLUMBINE LOGGING RIGGED UP
ON 7/28/2015 MANNED 2-PERSON
LOGGING WITH BLOODHOUND GAS
CHROMATOGRAPH #0298

Depth Labels

% Lith

GAMMA

GAMMA

Well Bore
TVD

Oil Show

Images

BEGIN LOGGING F/ 6000' MD @
09:52 hrs MST ON 7/28/2015

Bit Data
Bit #: 2
Type: VS513HG
Size: 8.75"
Depth In: 850'
Depth Out: 7,388'
Jets: 7x13
S/N: 4008558

MD: 6,018'
TVD: 6,004.75'
Inclination: 0.1°
Azimuth: 224.1°
VS: -246.04'

TVD (ft)

SLTY SH: med-dk gy, slt-mic gr, sl frm, sb pty-ply, rthy-sb rthy tex, mot ip; SHY
SLTST: lt-med gy, slt-vf gr, sl frm-hd, sb pty-sb blkly, gt tex, arg cnt, sh incl, non
calc; slow difse, mod stmg, bri bl cut

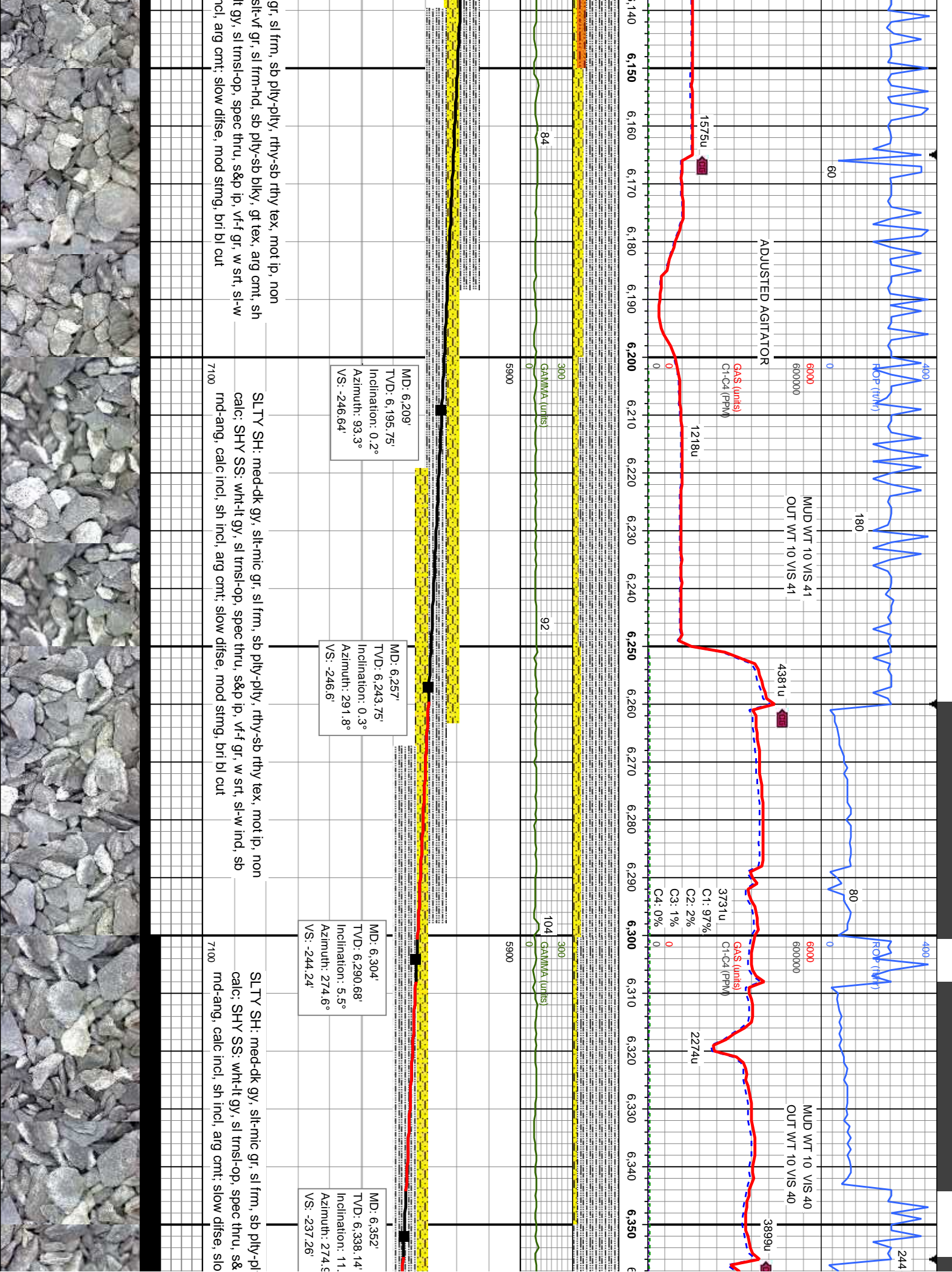
TVD (ft)

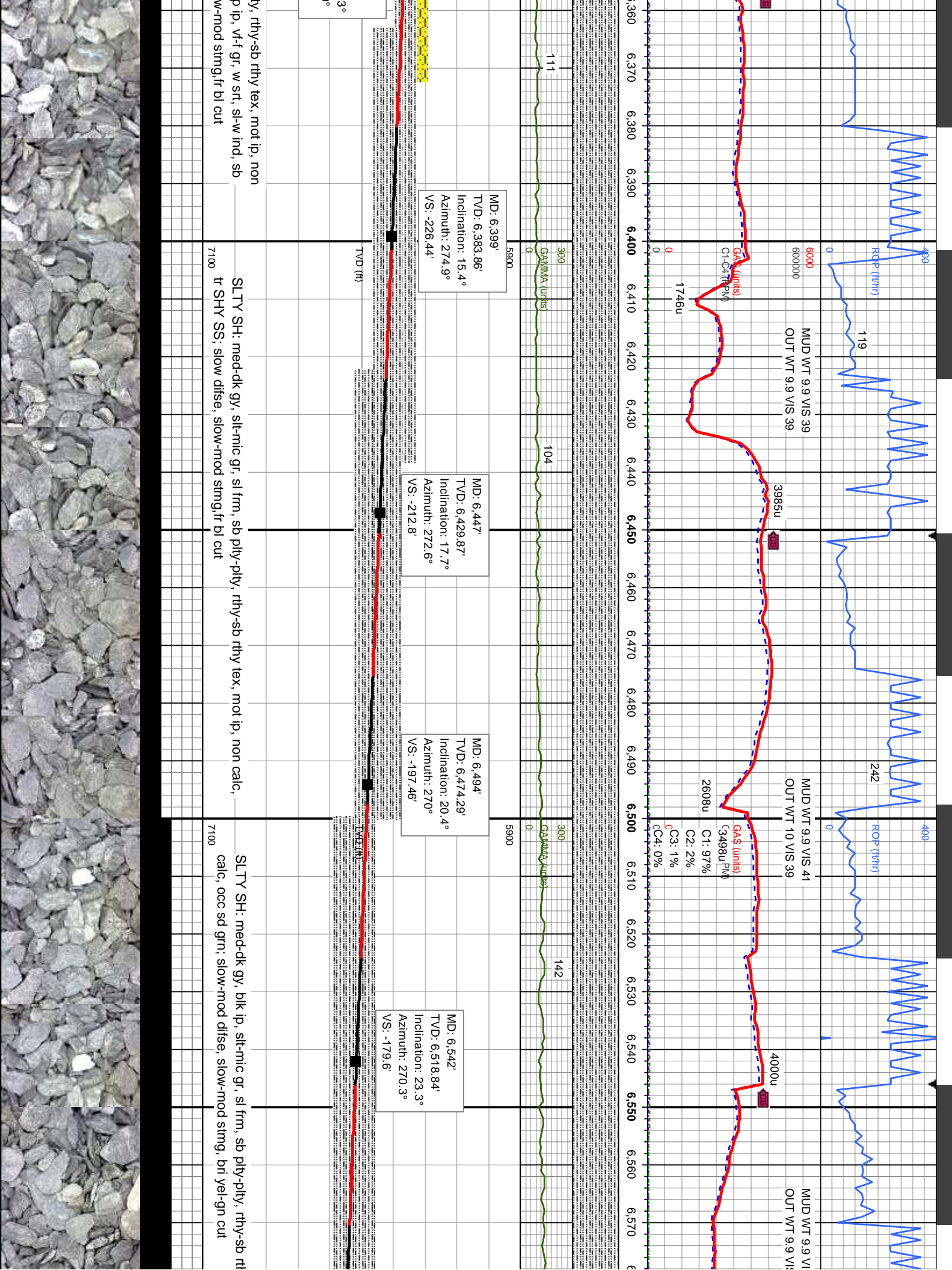
MD: 6,113'
TVD: 6,099.75'
Inclination: 0.3°
Azimuth: 104.1°
VS: -246.23'

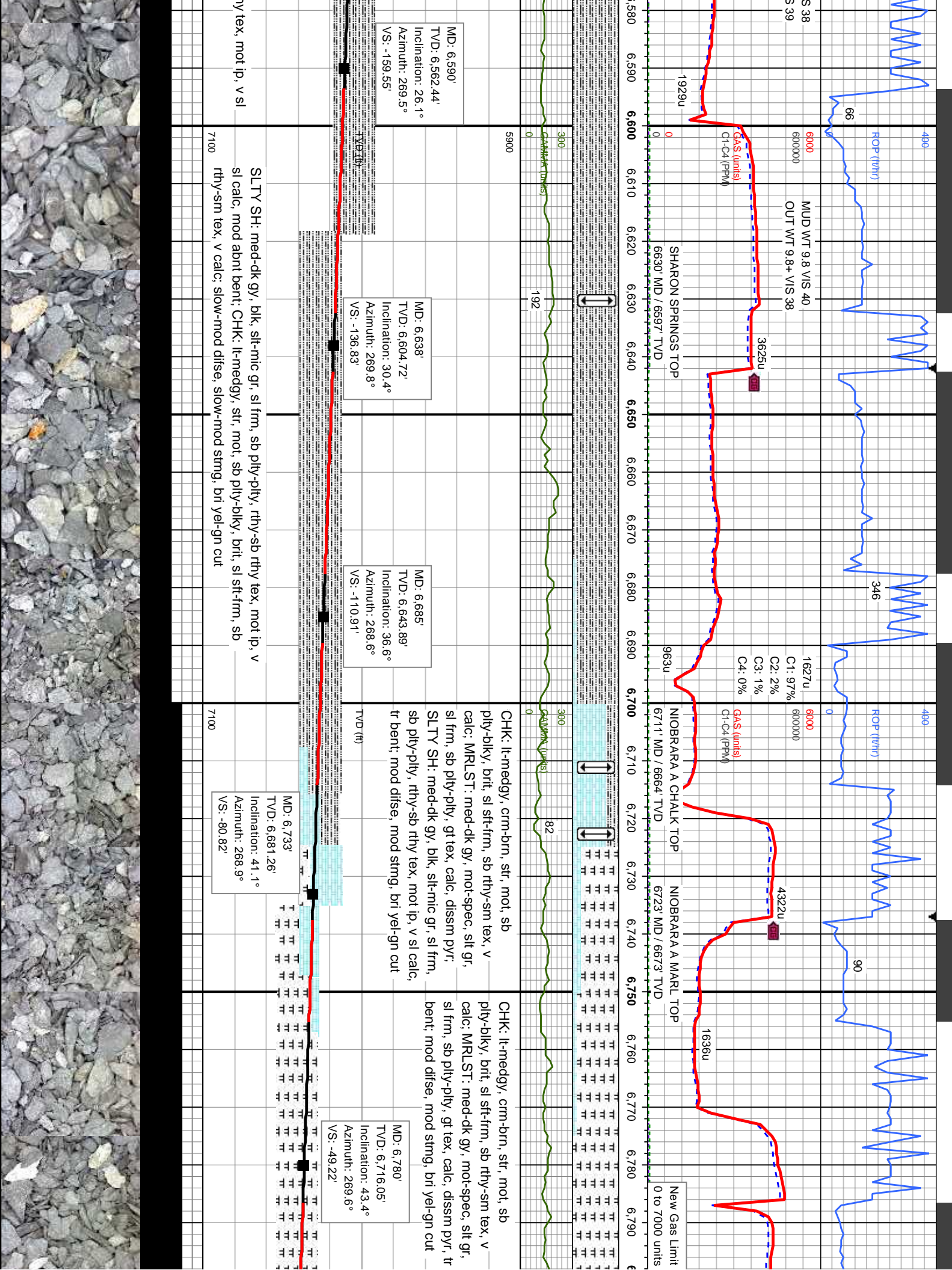
SLTY SH: med-dk gy, slt-mic
calc; SHY SLTST: lt-med gy, slt-mic
incl, non calc; SHY SS: wht-l
ind, sb rnd-ang, calc incl, sh it

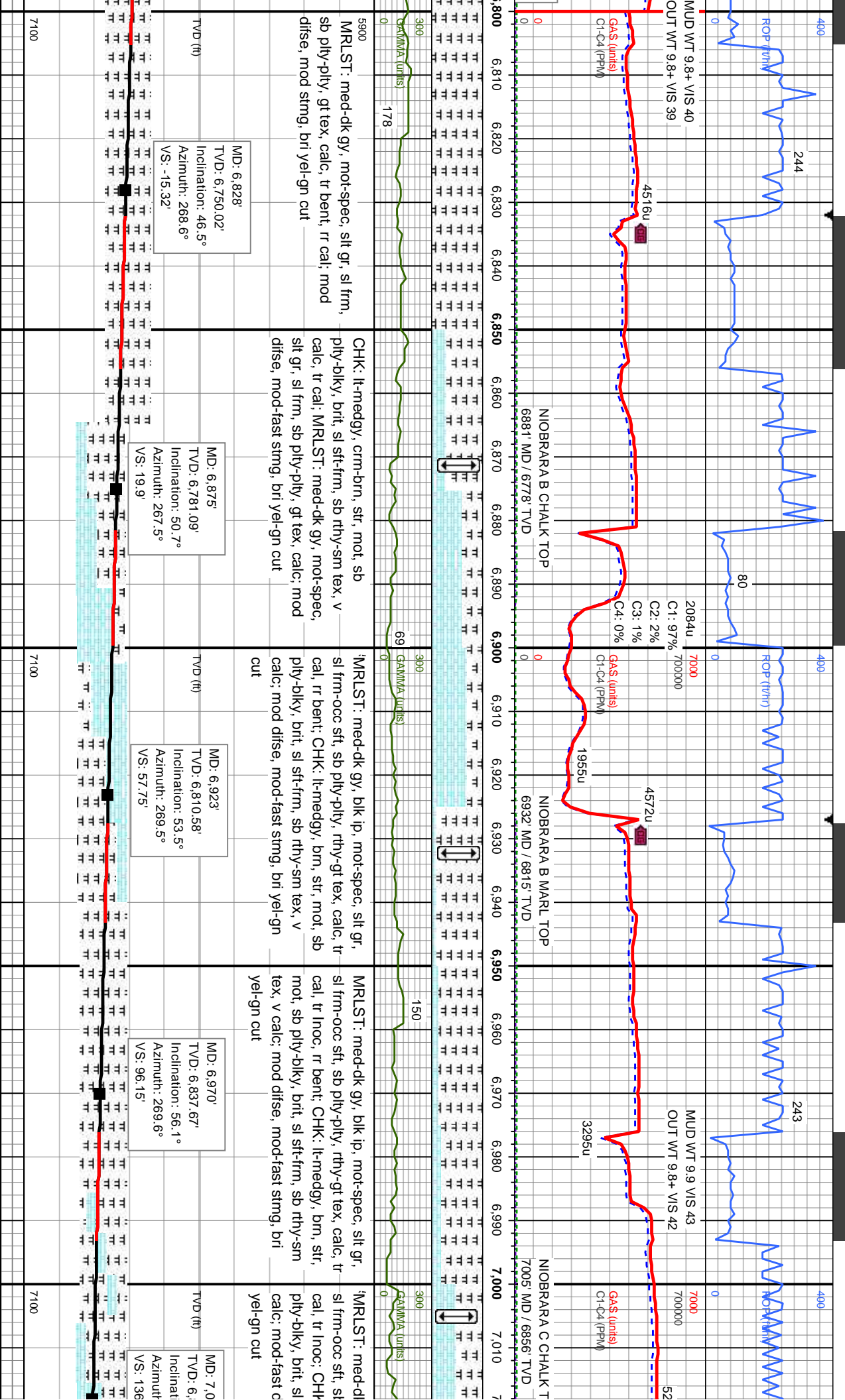
EGMFTS











7/28/2015 7/29/2015

MINDEPTH

ROP (ft)

55

63

243

MUD WT 10 VIS 40

7000

7000000

4965u

GAS (units)

C1-C4 (PPM)

FORT HAYS TOP

7196 MD / 6933 TVD

7200

7210

7220

7230

7240

7250

7260

7270

7280

7290

7300

7310

7320

7330

7340

7350

7360

7370

7380

7390

7400

7410

7420

7430

7440

7450

7460

7470

7480

7490

7500

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7950

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7970

7980

7990

8000

8010

8020

8030

8040

8050

8060

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8080

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10370

10380

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7/29/2015

9/15/2015

ROP Imported from Pason EDR 206

ROP (ft/hr)

Pason EDR Failure

MUD WT 10 VIS 44

MUD WT 10+ VIS 41

Gas Data Imported from
Bloodhound via iBall Software;
BH # 0298, Database File
"Carlson E_15_16HC
lateral.mdb"

CODELL TOP

7400' MD / 6964' TVD

5144u
C1: 97%
C2: 2%
C3: 1%
C4: 0%

Gas (units)
C1-C4 (PPM)

Landed Curve @ MD 7388'
7/29/2015 @ 03:58 hrs MST
Drilling Resumed
9/13/2015 @ 03:02 hrs MST

300
GAMMA (units)

300
GAMMA (units)

85

LMST: off wh-crm-tan, lt-medgy, sb
blky-blky-ireg, brit, sl frm, mict-mcxlh tex,
chky ip; MRLST: dk gy, blk, mot-spec, slt
gr, sl frm-occ sft, sb ply-ply, rthy-gt tex,
calc, tr cal; mod-slow difse, mod-slow
stimg, fr yel cut

LMST: off wh-crm-tan, lt-medgy, sb
blky-blky-ireg, brit, sl frm, mict-mcxlh tex,
chky ip, tr marl frags; mod-slow difse, slow
stimg, fr yel cut

LMST: off wh-crm-tan, lt-medgy, sb
blky-blky-ireg, brit, sl frm, mict-mcxlh tex,
chky ip, tr marl frags; mod-slow difse, slow
stimg, fr yel cut

TVD Scale Change

MD: 7,256'
TVD: 6,948.02'
Inclination: 77.7°
Azimuth: 270.5°
VS: 358.17'

MD: 7,304'
TVD: 6,956.52'
Inclination: 81.9°
Azimuth: 269.3°
VS: 405.4'

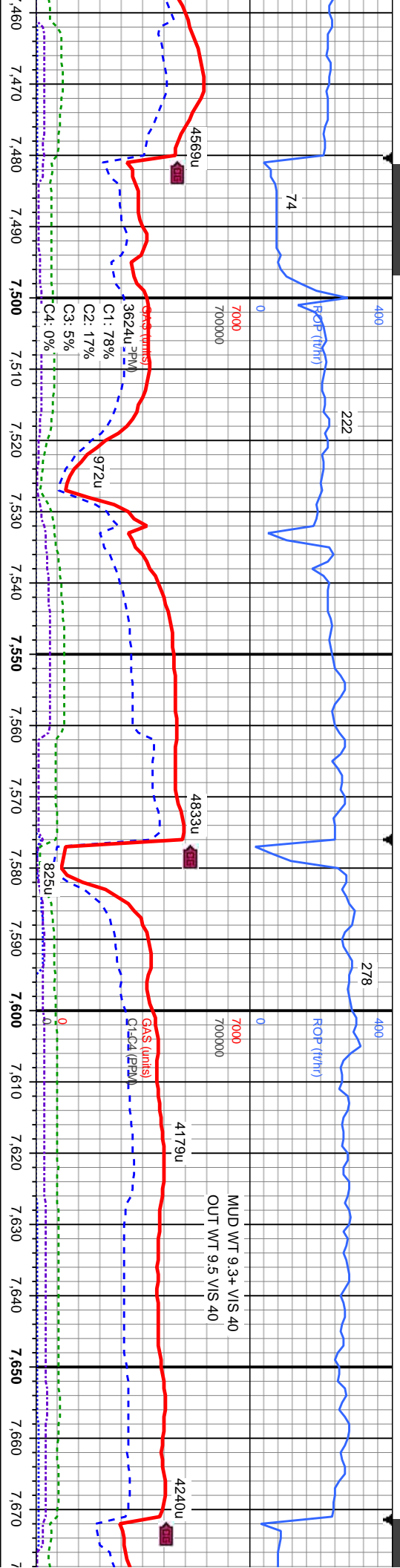
MD: 7,335'
TVD: 6,959.9'
Inclination: 85.6°
Azimuth: 268.8°
VS: 436.21'

Bit Data
Bit #: 3
Type: SK516M
Size: 6.125"
Depth In: 7.388'
Depth Out: 14.837'
Jets: 3x16 2x18
S/N: A21778

MD: 7,402'
TVD: 6,964.29'
Inclination: 86.88°
Azimuth: 270.25°
VS: 503.05'

Halliburton Mud Report 5:00A
Weight 9.7
Yield Point 10
Filtrate 6.8
Chlorides 1900





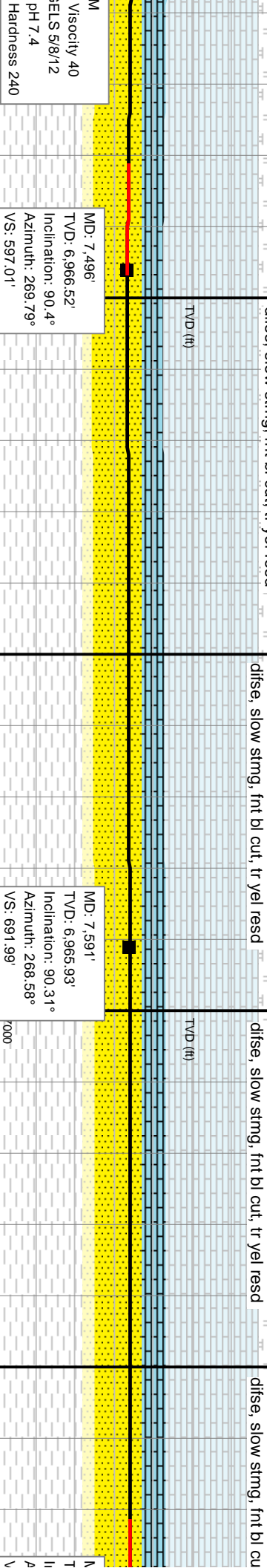
med-dk gy- gysbhn - dk brn wi occ
sl m gr lse qtz sand, pred cons, sl
cl, brit clus, v-f gr, sb ang-sr, p strd,
arg cmt; occ ls, occ cmt, occ casing
difse, slow stmg, fnt bl cut, tr yel

SS: med-dk gy- gysbhn - dk brn wi occ
cl-trnsi m gr lse qtz sand, pred cons, sl
frm-hd, brit clus, v-f gr, sb ang-sr, p strd,
arg calc cmt; occ ls, occ casing cmt; slow
difse, slow stmg, fnt bl cut, tr yel resd

SS: gysbhn - lygy- brn wi occ cl-trnsi m gr
lse qtz sand, pred cons, sl frm-hd, brit
clus, v-f gr, sb ang-sr, p strd, arg calc cmt
LMST: off wh-tan, lt-medgy, sb blkyl-blky, sl
frm - sl sft, mcxln, v calc, no mnrl flor; slow
difse, slow stmg, fnt bl cut, tr yel resd

SS: gysbhn - lygy- brn wi occ cl-trnsi m gr
lse qtz sand, pred cons, sl frm-hd, brit
clus, v-f gr, sb ang-sr, p strd, arg calc cmt;
LMST: off wh-tan, lt-medgy, sb blkyl-blky, sl
frm - sl sft, mcxln, v calc, no mnrl flor; slow
difse, slow stmg, fnt bl cut, tr yel resd

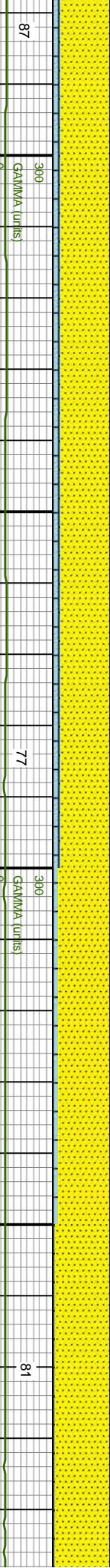
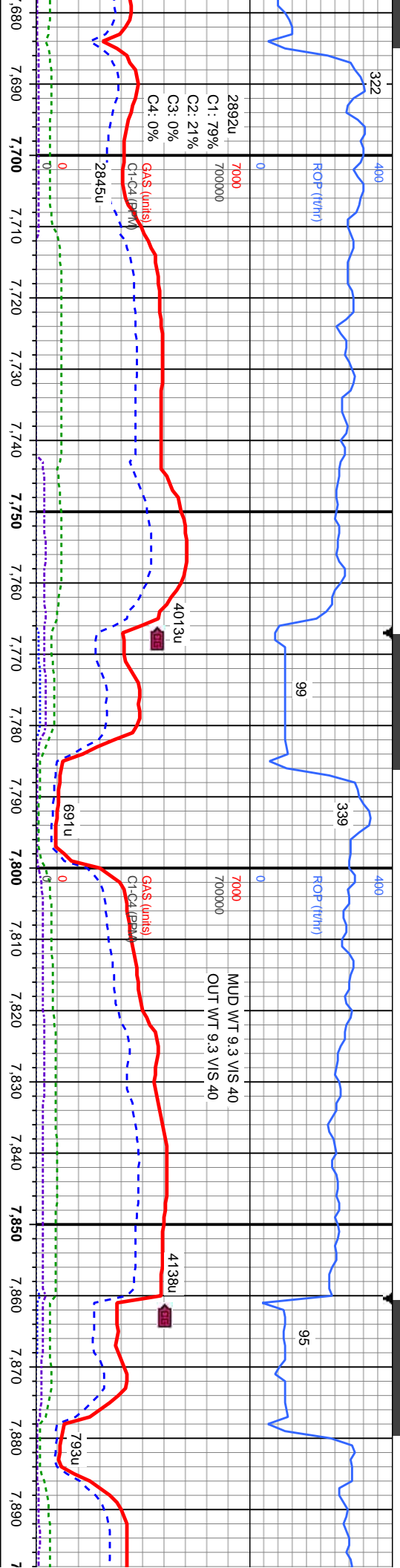
SS: gysbhn - lygy- brn wi
lse qtz sand, pred cons, s
clus, v-f gr, sb ang-sr, p :
LMST: off wh-tan, lt-med
frm - sl sft, mcxln, v calc,
difse, slow stmg, fnt bl cu



MD: 7,496'
TVD: 6,966.52'
Inclination: 90.4°
Azimuth: 269.79°
VS: 597.01'

MD: 7,591'
TVD: 6,965.93'
Inclination: 90.31°
Azimuth: 268.58°
VS: 691.99'

N
T
I
A
V



occ cl-trnsl m gr
sil frm-hd, brit
strnd, arg calc cnt
gy, sb biky-biky, sl
no mnrl flr; slow
frn - sl sft, mckln, v calc, no mnrl flr; slow
dise, slow sting, fnt bl cut, tr yel resd

SS: gysbhn - lgy- bm, occ wh wi occ
cl-trnsl m gr lse qtz sand, pred cons, sl
frm-hd, brit clus, vf-f gr, sb ang-sr, p strd,
arg calc cnt
LMST: off wh-tan, lt-medgy, sb biky-biky, sl
frm - sl sft, mckln, v calc, no mnrl flr; slow
dise, slow sting, fnt bl cut, tr yel resd

SS: lt gysbhn - lgy- bm, occ wh, wi occ
cl-trnsl m gr lse qtz sand, predy cons, sl
frm-hd, brit clus, vf-f gr, sb ang-sr, p strd,
arg calc cnt
LMST: off wh-tan, lt-medgy, sb biky-biky, sl
frm - sl sft, mckln, v calc, no mnrl flr; slow
dise, slow sting, fnt bl cut, tr yel resd

SS: lt gysbhn - lgy- bm, occ wh, wi occ
cl-trnsl m gr lse qtz sand, predy cons, sl
frm-hd, brit clus, vf-f gr, sb ang-sr, p strd,
arg calc cnt; LMST: off wh-tan, lt-medgy,
sb biky-biky, sl frm - sl sft, mckln, v calc, no
mnrl flr; slow dise, slow sting, fnt bl cut,
tr yel resd

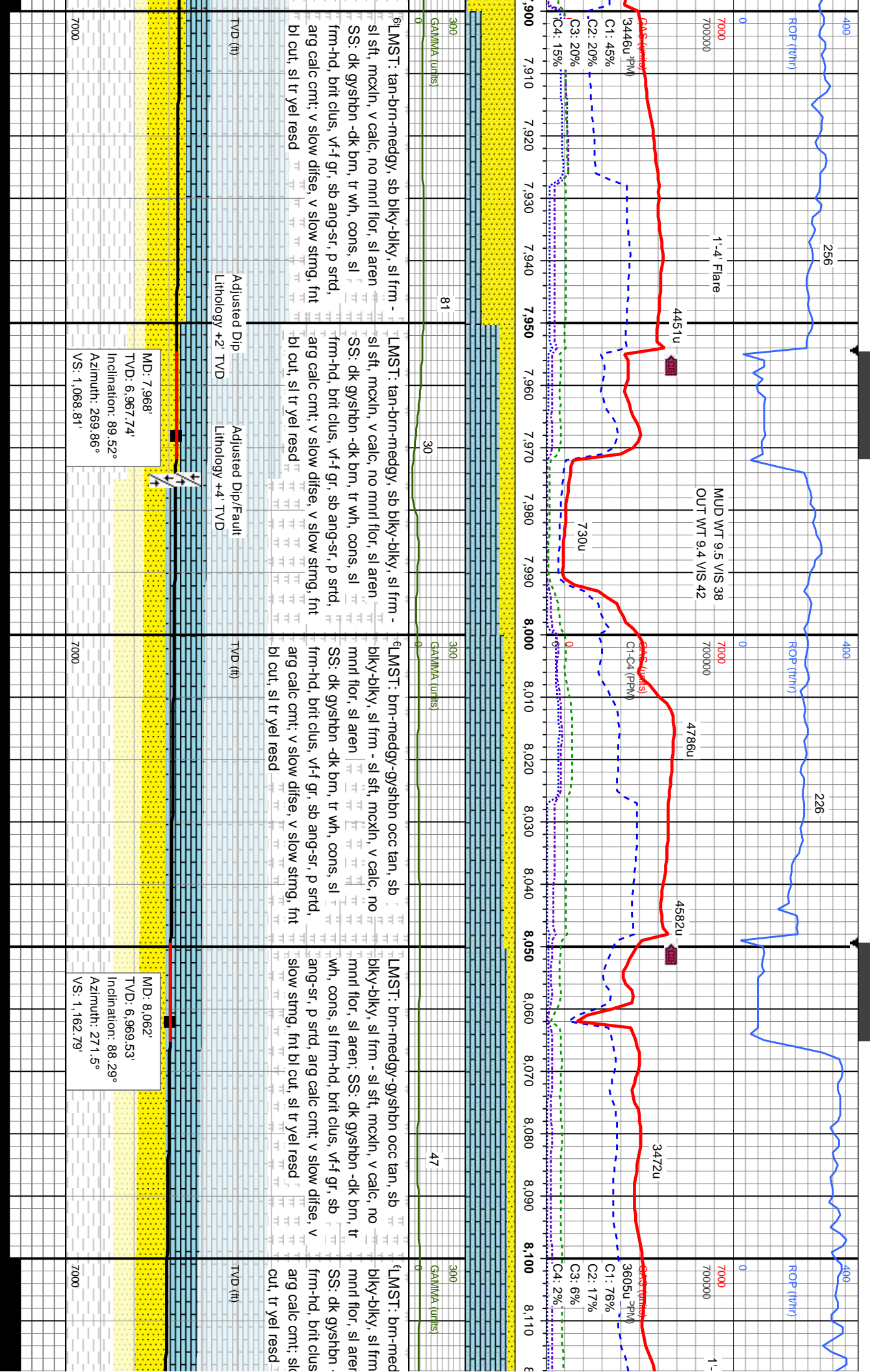
TVD (ft)

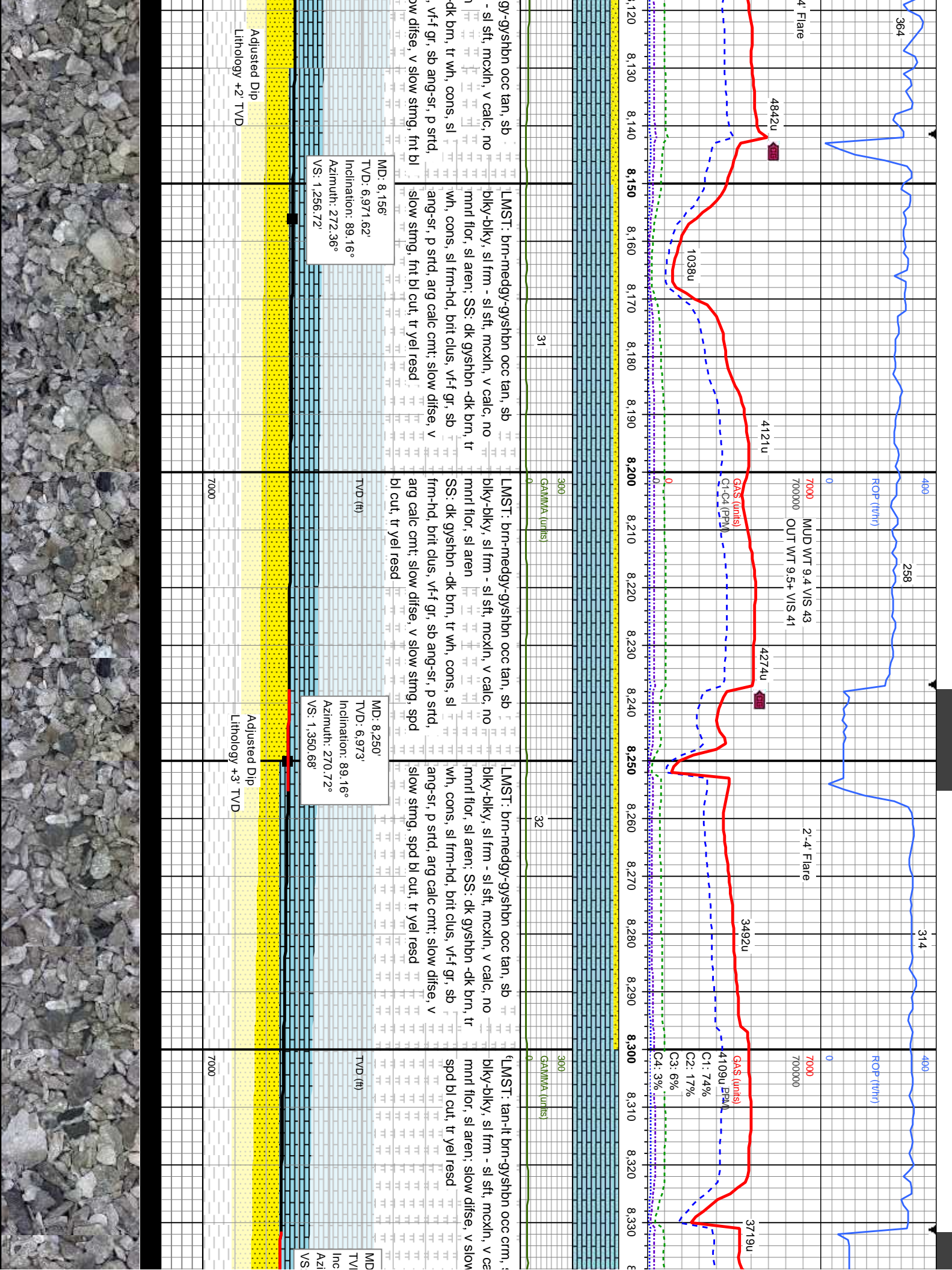
ID: 7.685'
VD: 6.965.93'
Inclination: 89.69°
Azimuth: 267.38°
VS: 785.92'

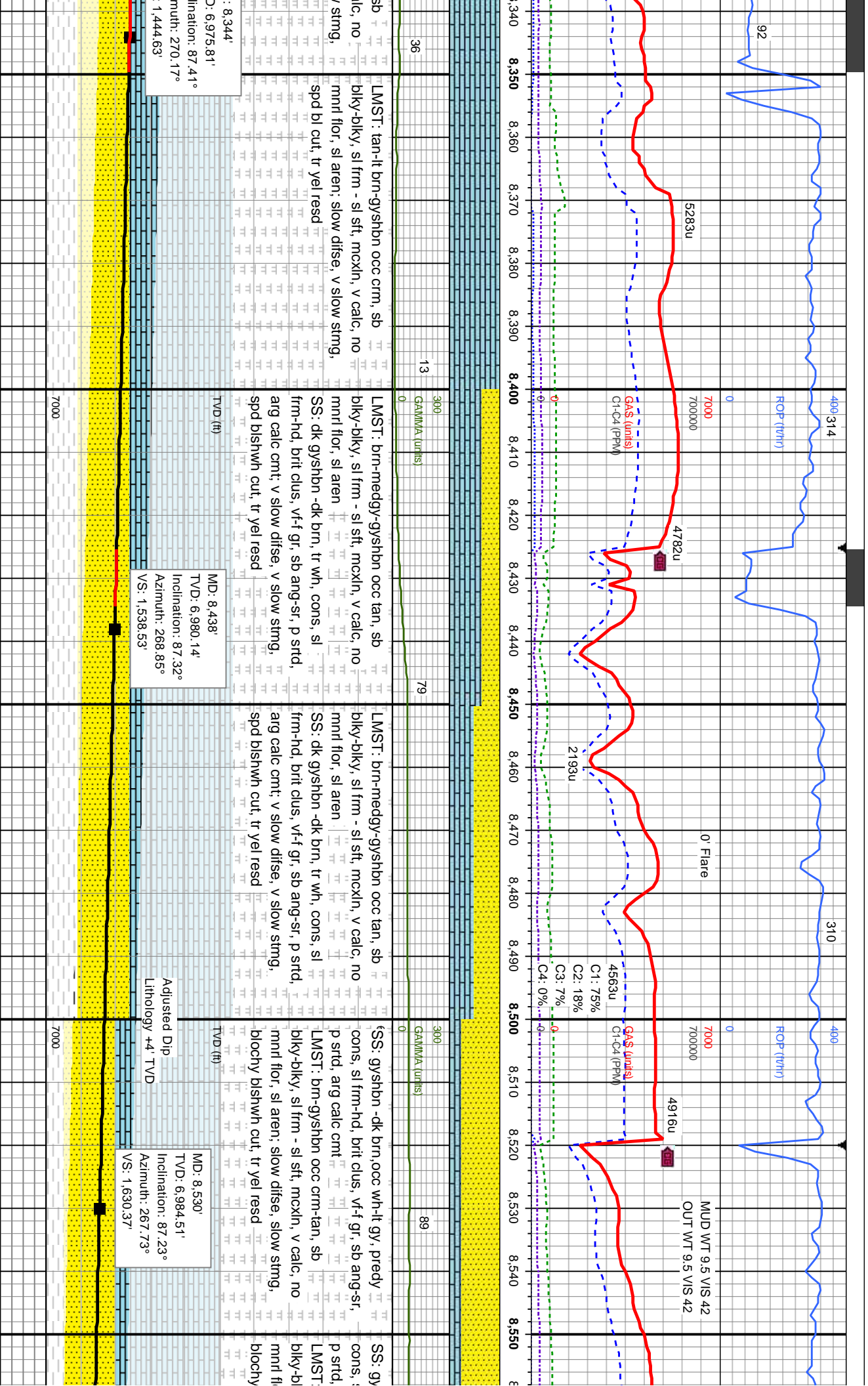
MD: 7.779'
TVD: 6.966.01'
Inclination: 90.22°
Azimuth: 268.65°
VS: 879.85'

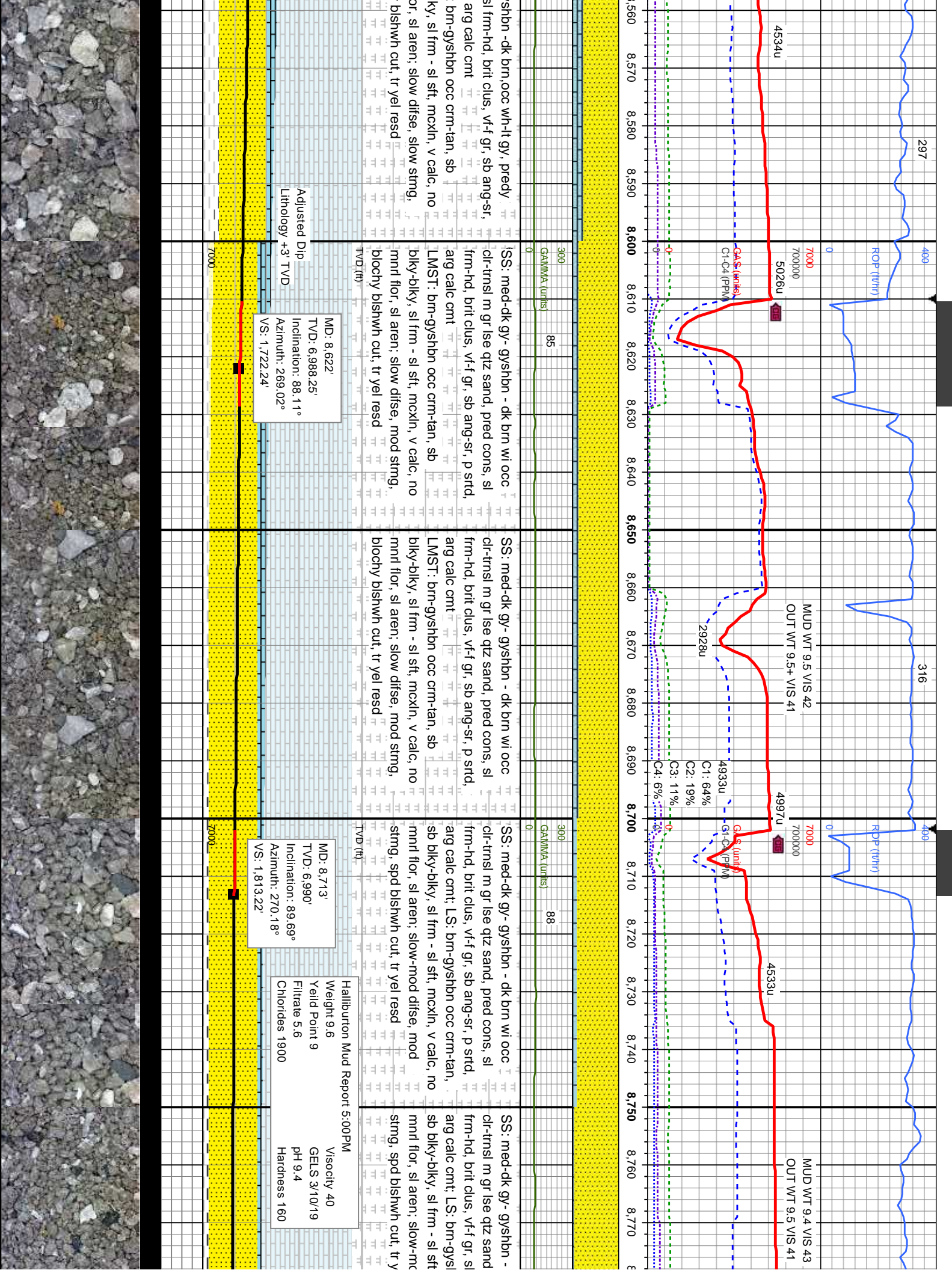
MD: 7.874'
TVD: 6.966.59'
Inclination: 89.08°
Azimuth: 269.36°
VS: 974.83'

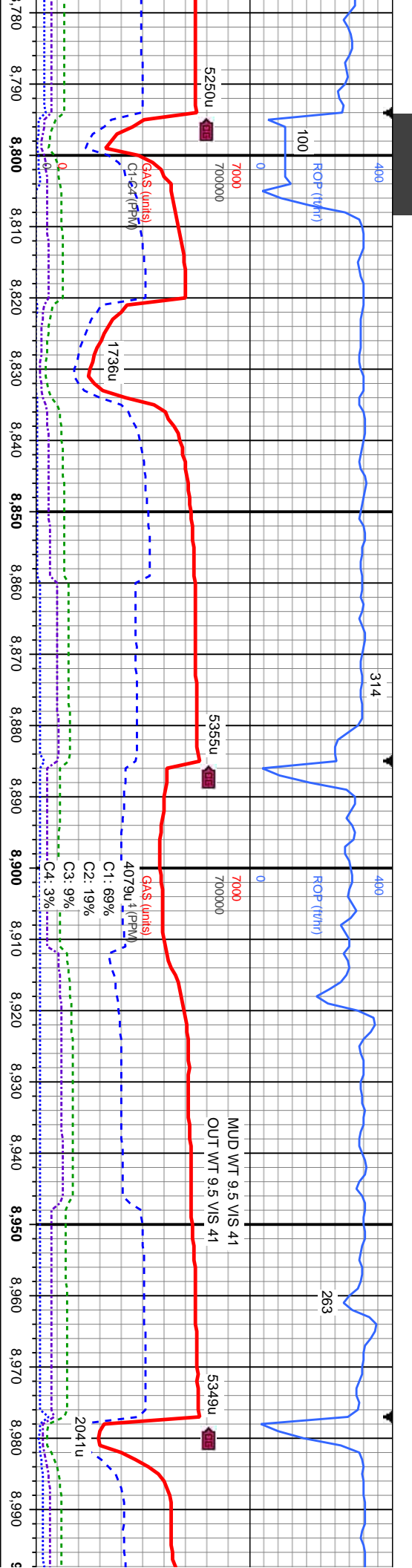












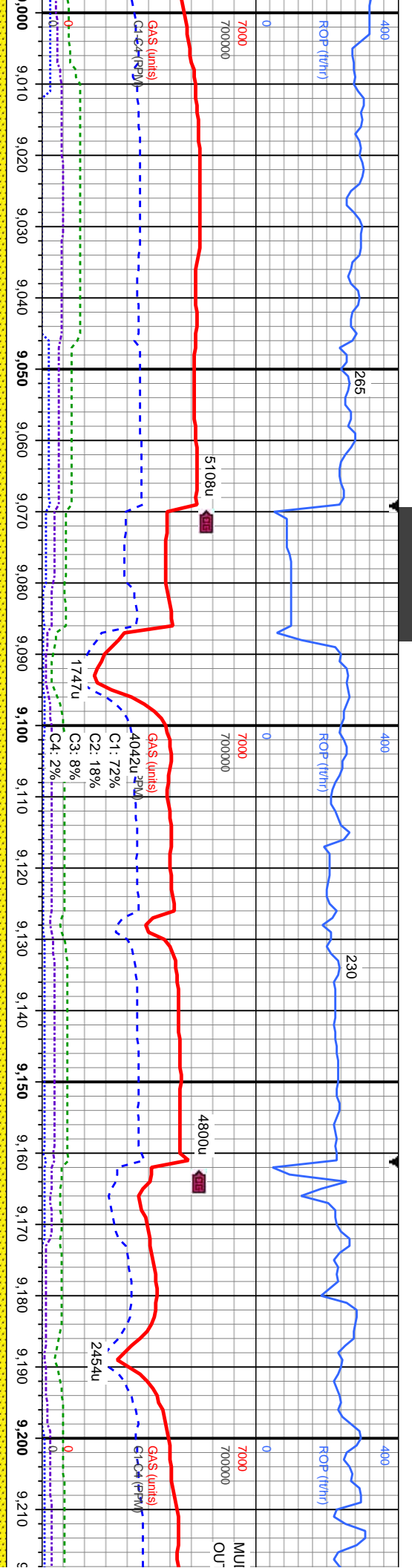
SS: med-dk gy, gysbhn, dk brn, clr-trnsl, occ lse f-med qtz grms, pred cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cmt; LS: brn-gysbhn, occ crm-tan, bf, sb blk-y-blky, sb fis, sl frm-sl sft, mcxln, v calc, no mnrl flor, slow difse, mod stng, even blshwh cut, tr yel resd	SS: med-dk gy, gysbhn, dk brn, clr-trnsl, occ lse f-med qtz grms, pred cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cmt; LS: brn-gysbhn, occ crm-tan, bf, sb blk-y-blky, sb fis, sl frm-sl sft, mcxln, v calc, no mnrl flor, slow difse, mod stng, even blshwh cut, tr yel resd	SS: med-dk gy, gysbhn, dk brn, clr-trnsl, occ lse f-med qtz grms, pred cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cmt; LS: brn-gysbhn, occ crm-tan, bf, sb blk-y-blky, sb fis, sl frm-sl sft, mcxln, v calc, no mnrl flor, slow difse, slow stng, even blshwh cut, tr yel resd
TVD (ft)	TVD (ft)	TVD (ft)
87	88	
GAMMA (units)	GAMMA (units)	GAMMA (units)
0	0	0

MD: 8,804'
TVD: 6,990.91'
Inclination: 89.16°
Azimuth: 270.59°
VS: 1,904.21'

MD: 8,896'
TVD: 6,991.91'
Inclination: 89.6°
Azimuth: 269.78°
VS: 1,996.21'

MD: 8,987'
TVD: 6,991.7'
Inclination: 90.66°
Azimuth: 269.08°
VS: 2,087.19'





SS: med-dk gy, gysbhn, dk brn, s&p, cl-trnsl, occ lse f-med qtz grns, pred-cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cmt, rr pyr, tr ls; slow disse, string, even blshwh cut, tr yel resd

SS: med-dk gy, gysbhn, dk brn, s&p, cl-trnsl, occ lse f-med qtz grns, pred-mod cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cmt, rr pyr, tr ls; slow disse, slow string, even blshwh cut, tr yel resd

SS: med-dk gy, gysbhn, dk brn, s&p, cl-trnsl, occ lse f-med qtz grns, pred-mod cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cmt, rr pyr, tr ls; slow disse, slow-mod string, thn blshwh cut, tr yel resd

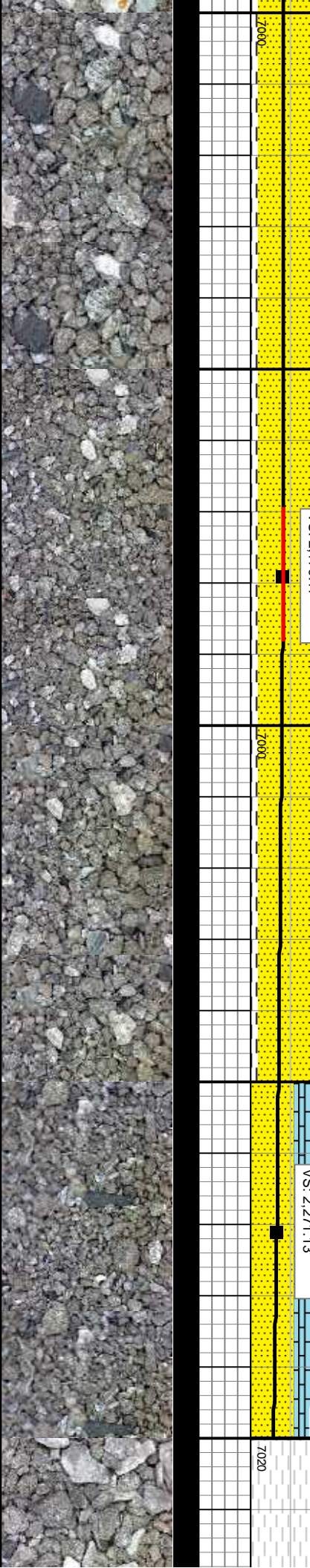
SS: med-dk gy, gysbhn, dk brn, s&p, cl-trnsl, occ lse f-med qtz grns, pred-mod cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cmt, rr pyr, tr ls; slow disse, slow-mod string, thn blshwh cut, tr yel resd

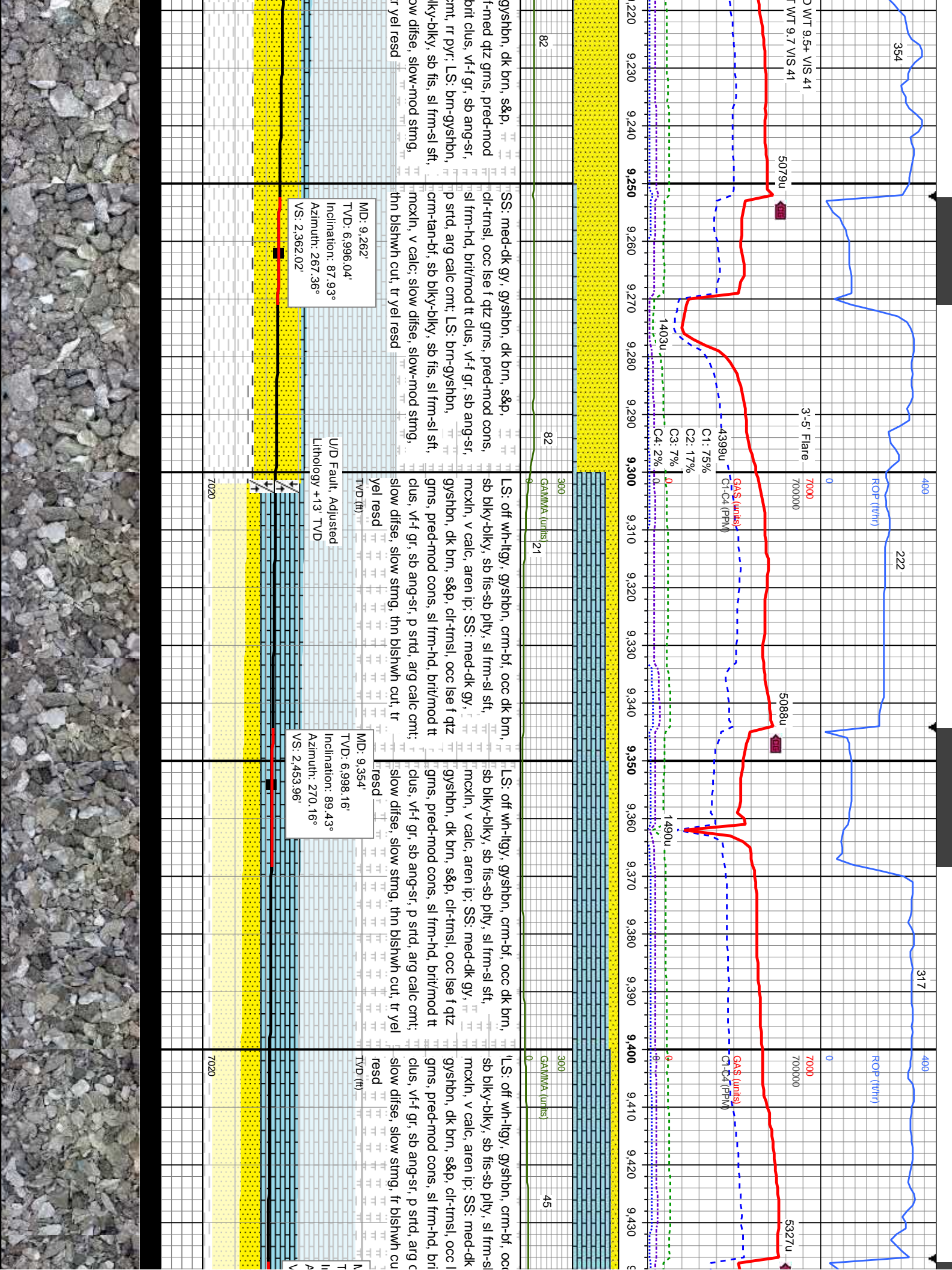
MD: 9.079'
TVD: 6,991.63'
Inclination: 89.43°
Azimuth: 269.02°
VS: 2,179.17'

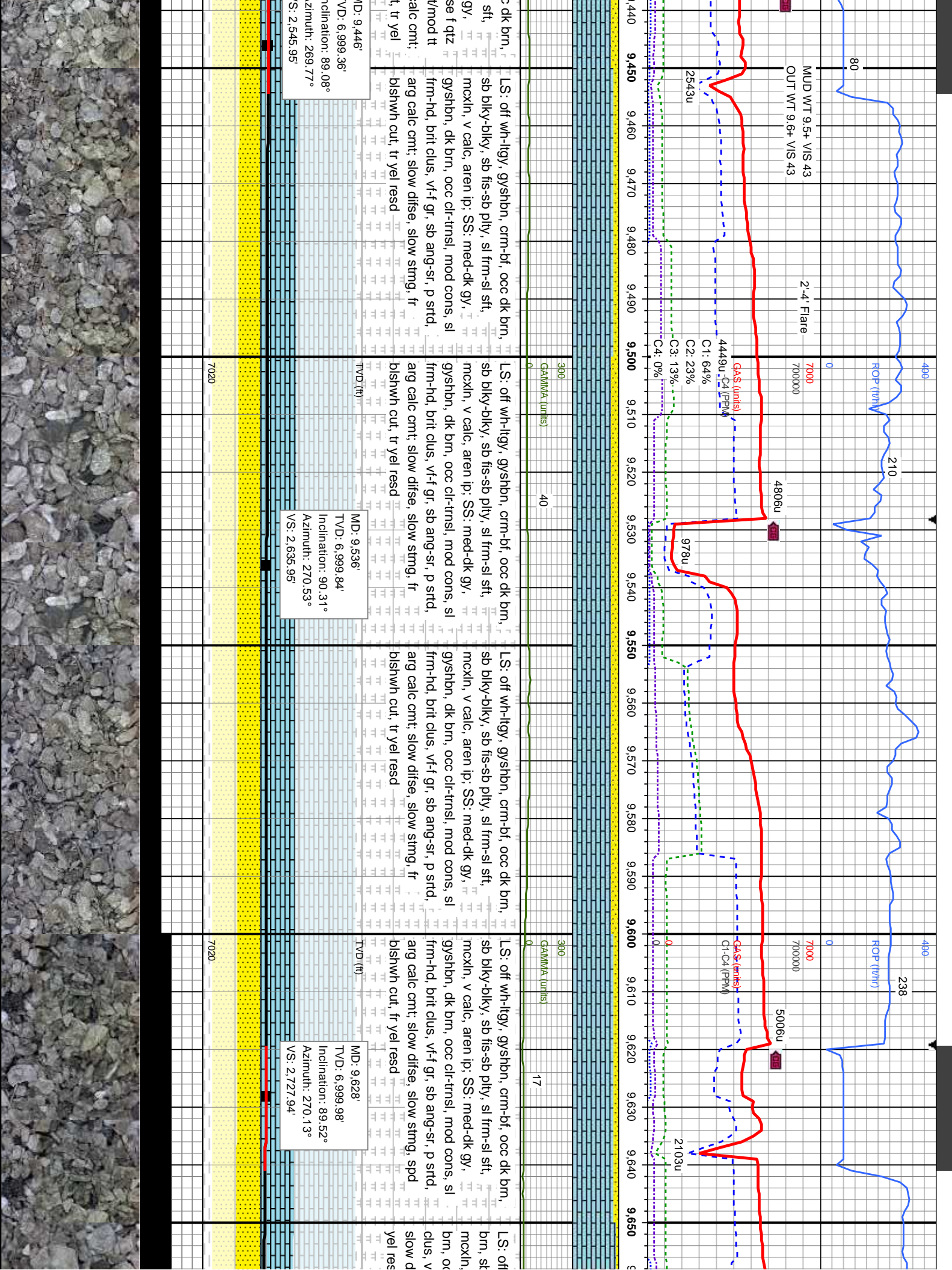
MD: 9.171'
TVD: 6,993.25'
Inclination: 88.55°
Azimuth: 268.71°
VS: 2,271.13'

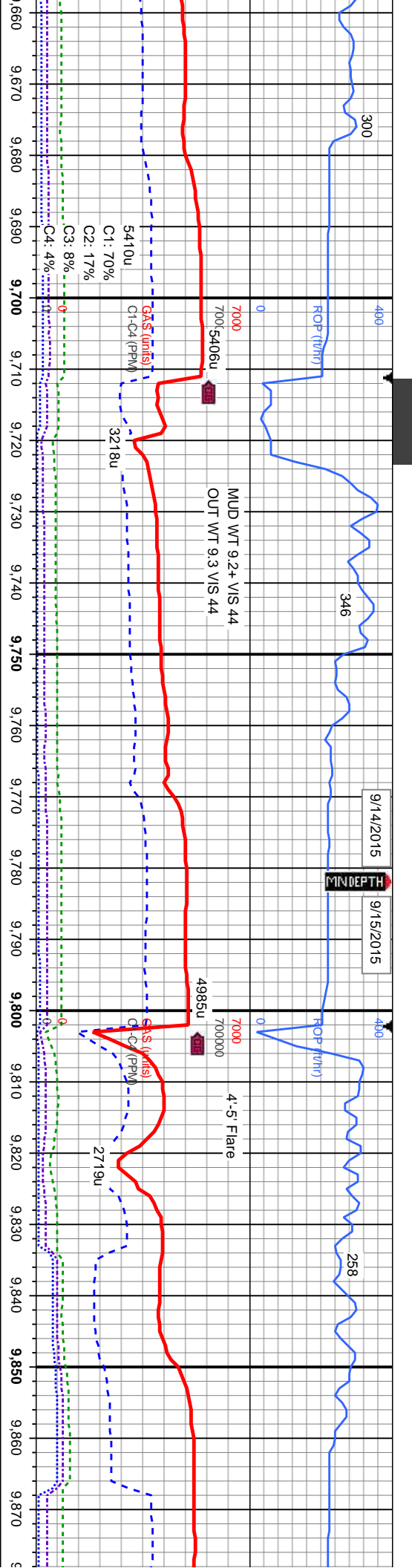
NEW TVD SCALE

Adjusted Dip
Lithology +6' TVD









wh-lty, gyshbn, crm-bf, occ bnnd dk
blky-blky, sb fls-sb pty, sl frm-sl sft,
v calc, SS: med-dk gy, gyshbn, dk
occ cl-trns, mod cons, sl frm-hd, brit
f-f gr, sb ang-sr, p srd, ang calc cnt;
dise, slow sting, spd bishwh cut, fr

L.S: off wh-lty, gyshbn, crm-bf, occ bnnd dk
brn, sb blky-blky, sb fls-sb pty, sl frm-sl sft,
mexln, v calc, tr sd grns; slow dise, slow
stimg, spd bishwh cut, fr sl grn-yel mod
even resd

L.S: off wh-lty, gyshbn, crm-bf, occ bnnd dk
brn, sb blky-blky, sb fls-sb pty, sl frm-sl sft,
mexln, v calc, SS: med-dk gy, gyshbn, dk
brn, occ cl-trns, mod cons, sl frm-hd, brit
clns, v-f gr, sb ang-sr, p srd, ang calc cnt;
slow dise, slow sting, spd bishwh cut, fr sl
grn-yel mod even resd

L.S: off wh-lty, gyshbn, crm-bf, occ bnnd dk
brn, sb blky-blky, sb fls-sb pty, sl frm-sl sft,
mexln, v calc, v rr sd grns
stimg, spd bishwh cut, fr s
even resd

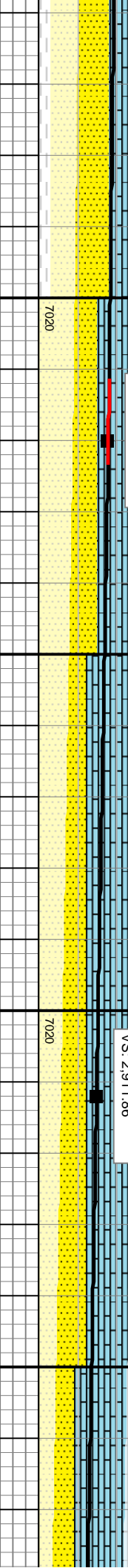
Adjusted Dip
Lithology +3' TVD

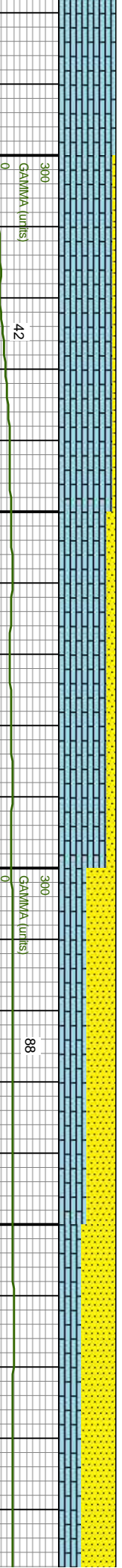
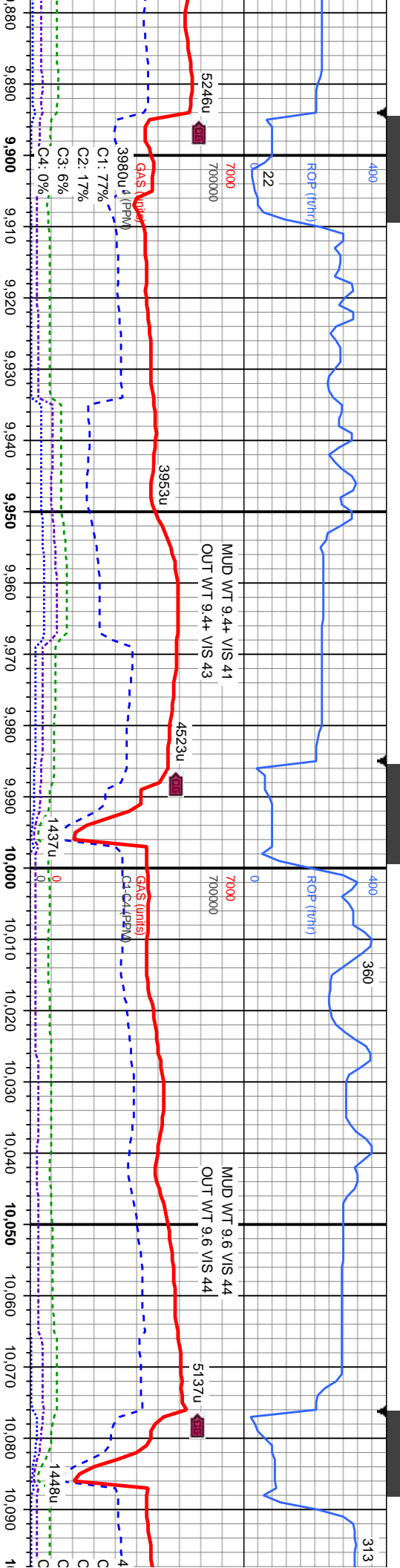
MD: 9,720'
TVD: 7,002.09'
Inclination: 87.85°
Azimuth: 270.22°
VS: 2,819.92'

Adjusted Dip
Lithology +3' TVD

Adjusted Dip
Lithology +3' TVD

MD: 9,812'
TVD: 7,005.12'
Inclination: 88.37°
Azimuth: 271.21°
VS: 2,911.86'





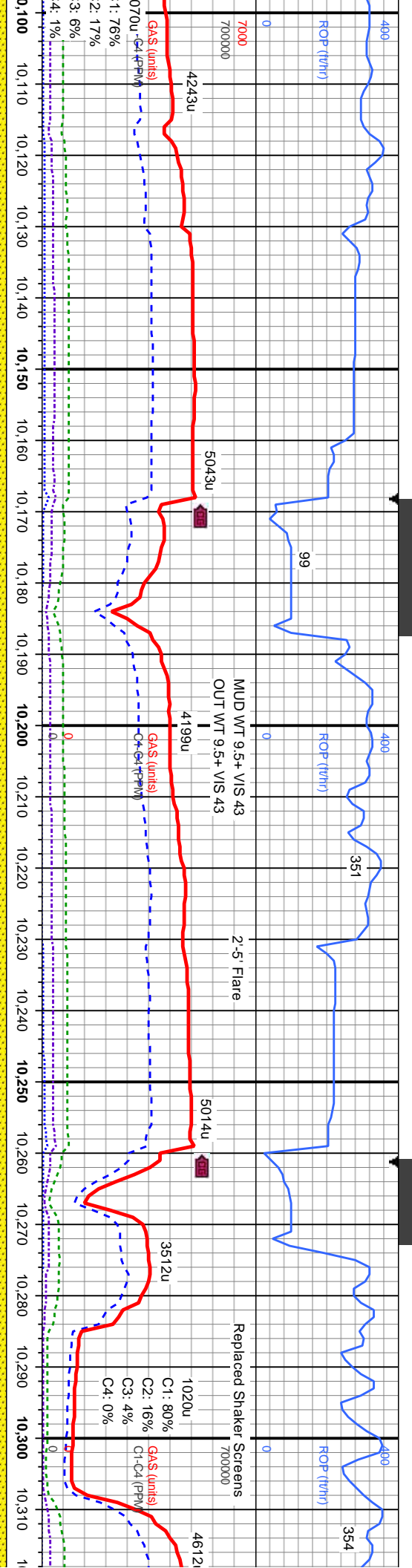
L.S: off wh-llgy, gysbhn, crm-bf, occ brdd dk brn, sb blk-y-bkly, sb fis-sb ply, sl frm-sl sft, mexln, v calc; SS: med-dk gy, gysbhn, dk brn, occ clr-trnsl, mod cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cnt; slow difse, slow stmg, spd bishwh cut, fr sl grn-yel mod even resd		300 GAMMA (units)	42
L.S: off wh-llgy, gysbhn, crm-bf, occ brdd dk brn, sb blk-y-bkly, sb fis-sb ply, sl frm-sl sft, mexln, v calc; SS: med-dk gy, gysbhn, dk brn, occ clr-trnsl, mod cons, sl frm-hd, brit clus, vf-f gr, sb ang-sr, p strd, arg calc cnt; slow difse, slow stmg, spd bishwh cut, fr sl grn-yel mod even resd		300 GAMMA (units)	88
L.S: med-dk gy, gysbhn, dk brn, clr-trnsl, lse f sd grns, mod-pred cons, sl frm-hd, brittt clus, vf-f gr, sb ang-sr, p strd, arg calc cnt; L.S: off wh-llgy, gysbhn, crm-bf, occ brdd dk brn, sb blk-y-bkly, sb fis-sb ply, sl frm-sl sft, mexln, v calc; slow difse, slow stmg, spd bishwh cut, fr sl grn-yel mod even resd		300 GAMMA (units)	

MD: 9,904'
TVD: 7,008.16'
Inclination: 87.85°
Azimuth: 269.01°
VS: 3,003.81'

MD: 9,996'
TVD: 7,011.33'
Inclination: 88.2°
Azimuth: 269.02°
VS: 3,095.73'

MD: 10,088'
TVD: 7,012.74'
Inclination: 90.04°
Azimuth: 268.43°
VS: 3,187.69'





300	88	300	81	300	0
GAMA (units)		GAMA (units)		GAMA (units)	

SS: med-dk gy, gysbhn, dk brn, cl-trnsl, lse m sd grms, mod-pred cons, sl frm-hd, brit, vf-f gr, sb ang-sr, p strd, arg calc cnt; L.S: tan-ityg, gysbhn, crm-bf dk brn, sb biky-biky occ sb ply, sl frm-sl sft, mcln, v calc; slow difse, slow strng, spd bishwh cut, fr sl gm-yel mod even resd

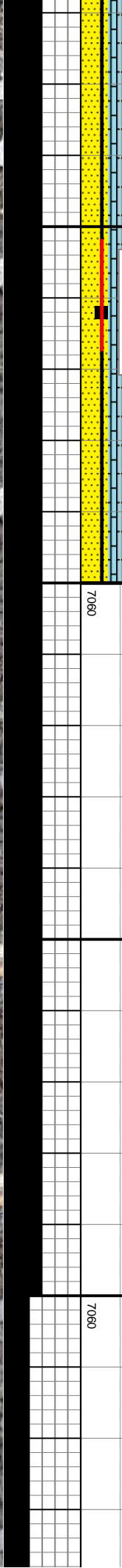
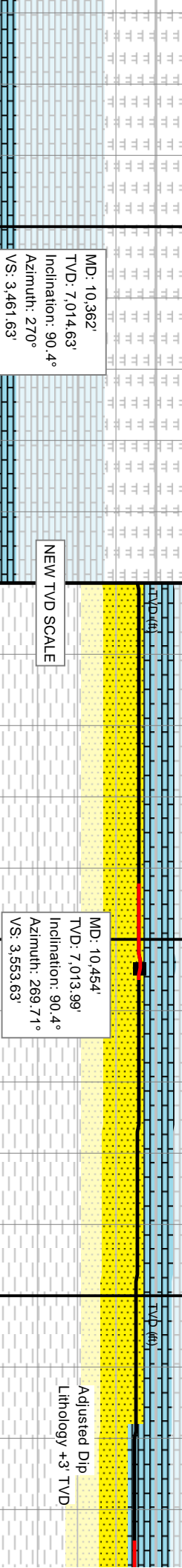
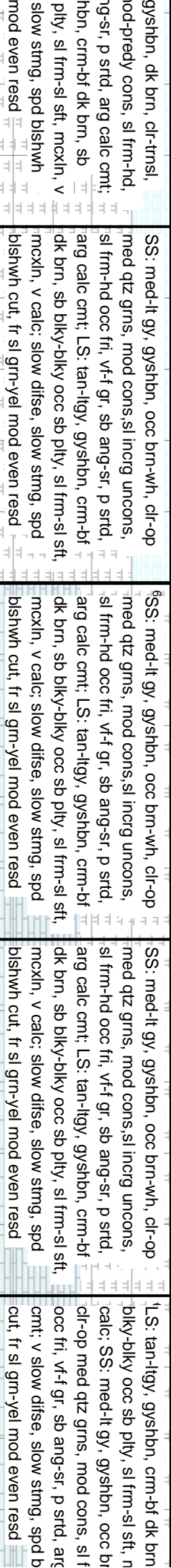
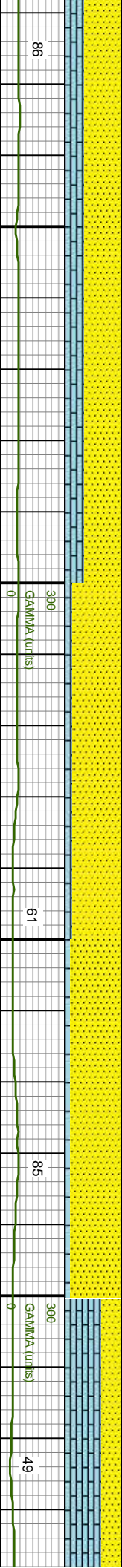
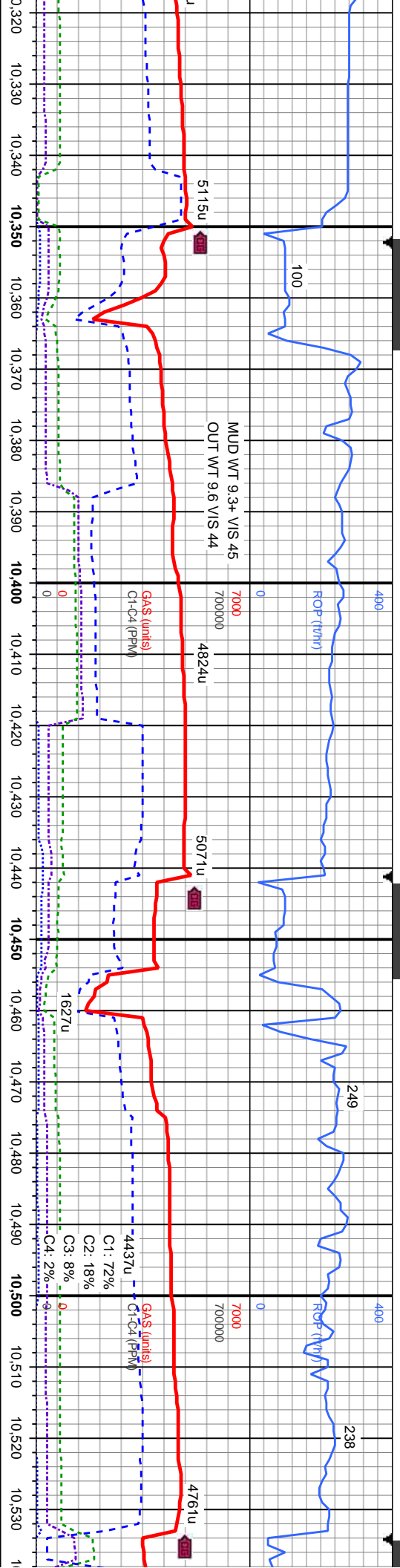
SS: med-dk gy, gysbhn, dk brn, cl-trnsl, lse m sd grms, mod-pred cons, sl frm-hd, brit, vf-f gr, sb ang-sr, p strd, arg calc cnt; L.S: tan-ityg, gysbhn, crm-bf dk brn, sb biky-biky occ sb ply, sl frm-sl sft, mcln, v calc; slow difse, slow strng, spd bishwh cut, fr sl gm-yel mod even resd

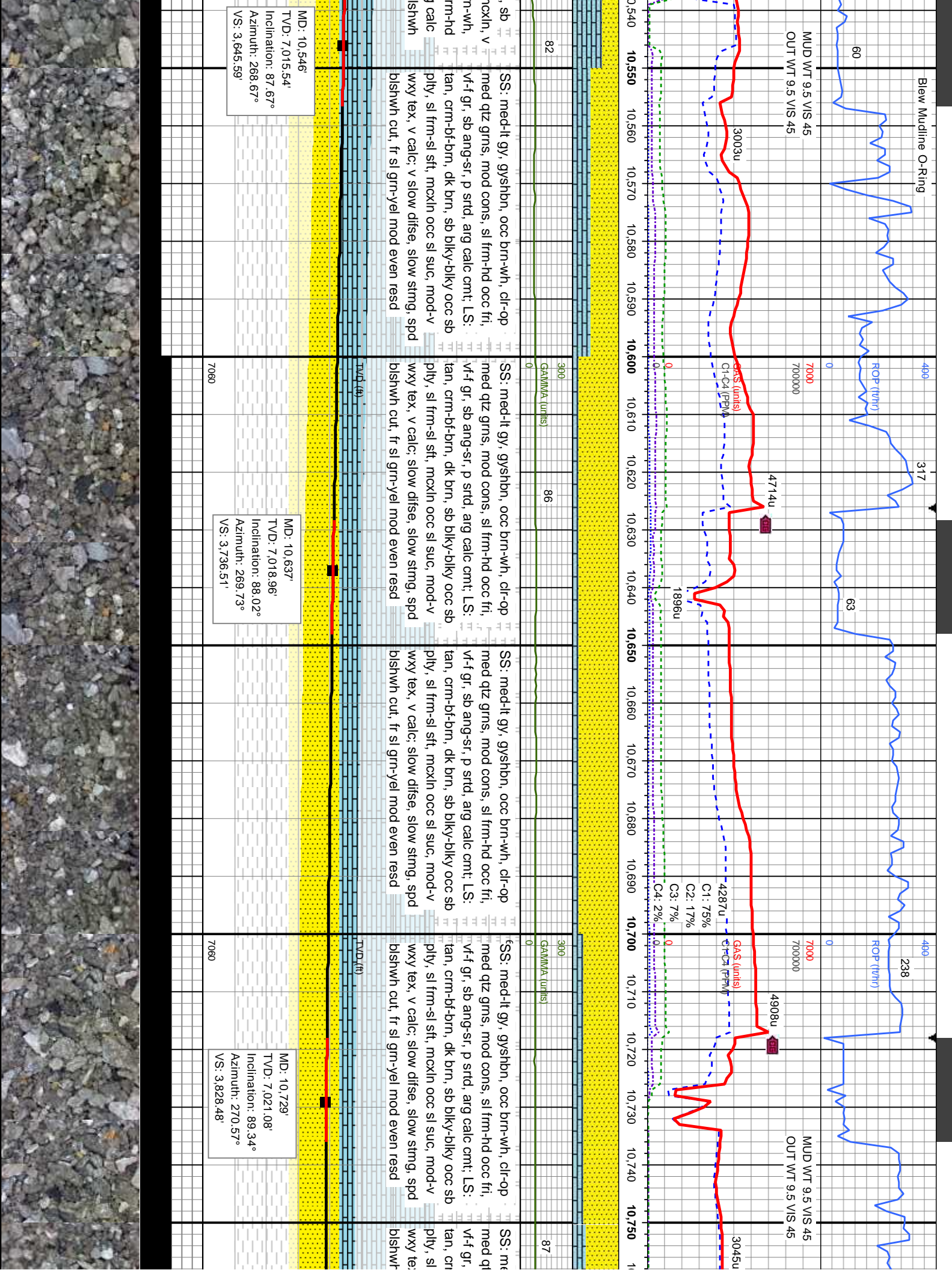
SS: med-dk gy, gysbhn, dk brn, cl-trnsl, lse m sd grms, mod-pred cons, sl frm-hd, brit, vf-f gr, sb ang-sr, p strd, arg calc cnt; L.S: tan-ityg, gysbhn, crm-bf dk brn, sb biky-biky occ sb ply, sl frm-sl sft, mcln, v calc; slow difse, slow strng, spd bishwh cut, fr sl gm-yel mod even resd

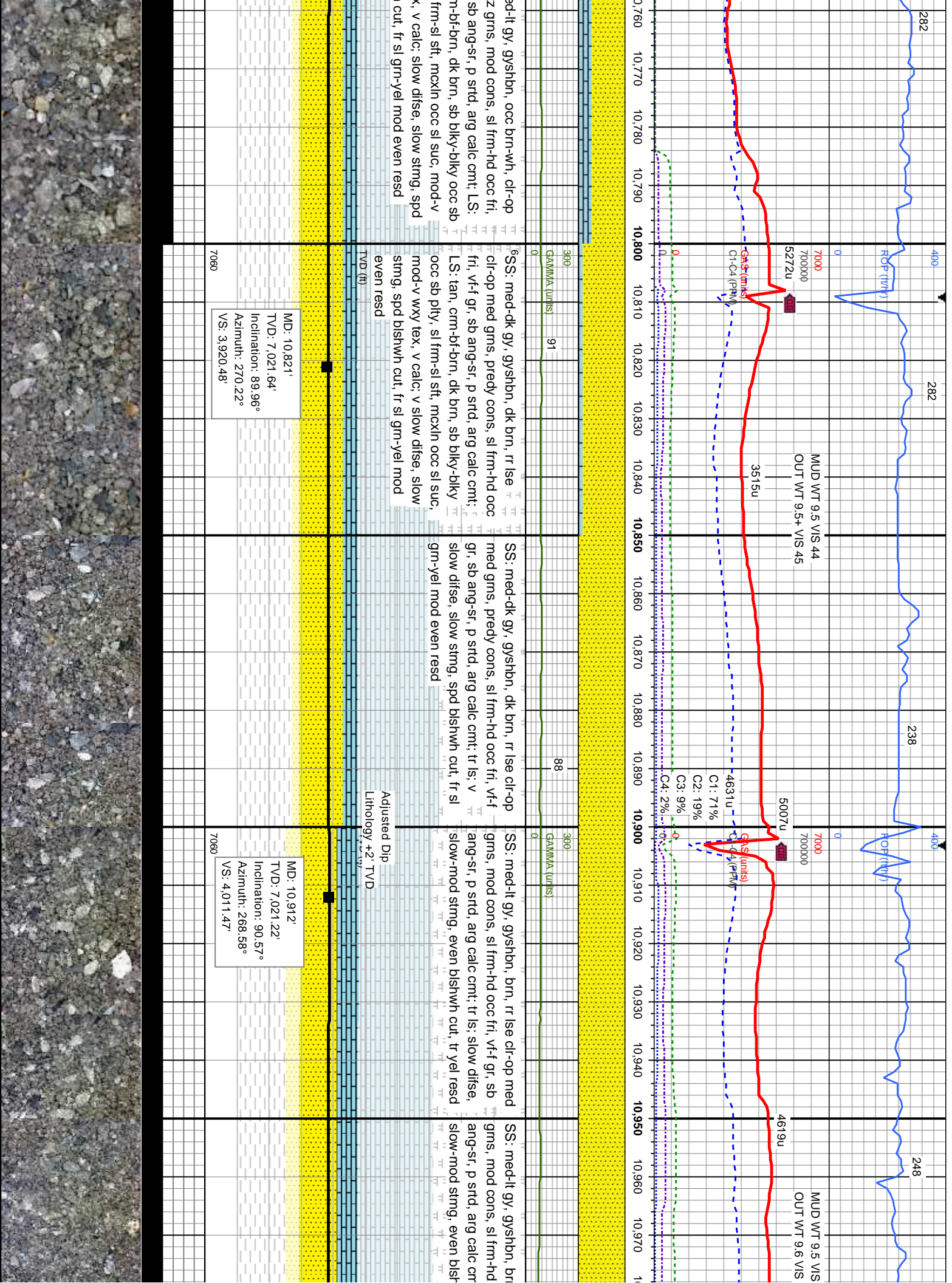
Weight 9.6	Viscosity 44	MD: 10.179'	MD: 10.270'
Yield Point 12	GELS 4/12/22	TVD: 7,013.16'	TVD: 7,014.28'
Filtrate 5.8	pH 9.8	Inclination: 89.43°	Inclination: 89.16°
Chlorides 1800	Hardness 120	Azimuth: 268.95°	Azimuth: 269.88°
		VS: 3,278.65'	VS: 3,369.64'

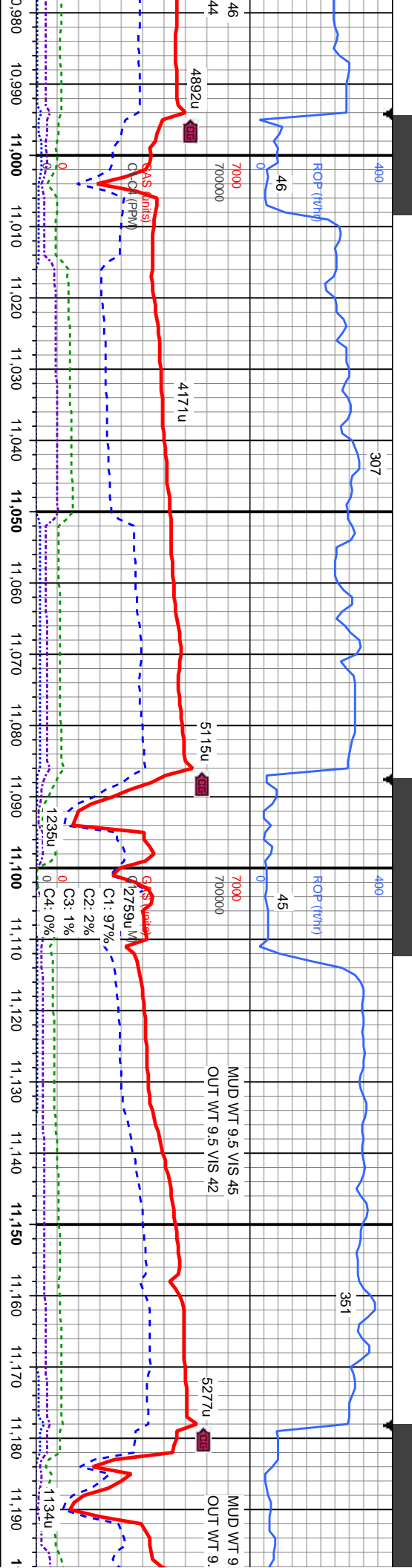
7026	7020	7020	7020











83	SS: med-it gy, gysbhn, occ brn-wh, cl-op med qtz grns, mod cons, sl frm-hd occ fti, vf-f gr, sb ang-sr, p strd, arg calc cnt; LS: tan, crm-bf-brn, dk brn, sb biky-biky occ sb ply, sl frm-sl sft, mcxh occ sl suc, mod-v wxy tex, v calc; slow difse, slow-mod string, even bishwh cut, tr yel resd	81	SS: med-it gy, gysbhn, occ brn-wh, cl-op med qtz grns, mod cons, sl frm-hd occ fti, vf-f gr, sb ang-sr, p strd, arg calc cnt; LS: tan, crm-bf-brn, dk brn, sb biky-biky occ sb ply, sl frm-sl sft, mcxh occ sl suc, mod-v wxy tex, v calc; slow difse, slow-mod string, even bishwh cut, tr yel resd	87	SS: med-it gy, gysbhn, occ brn-wh, cl-op med qtz grns, mod cons, sl frm-hd occ fti, vf-f gr, sb ang-sr, p strd, arg calc cnt; slow difse, mod string, spd bishwh cut, fnt yel resd
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MD: 11,004'
TVD: 7,021.44'
Inclination: 89.16°
Azimuth: 266.97°
VS: 4,103.38'

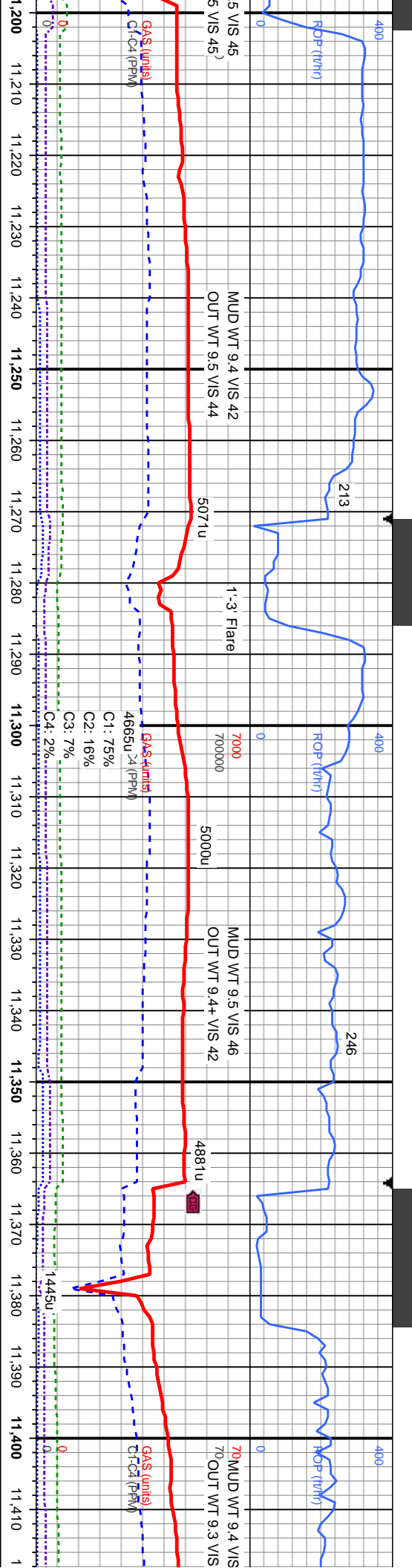
MD: 11,095'
TVD: 7,022.77'
Inclination: 89.16°
Azimuth: 266.8°
VS: 4,194.22'

Halliburton Mud Report 5:00PM
Weight 9.5
Yield Point 13
Filtrate 7.0
Chlorides 1800

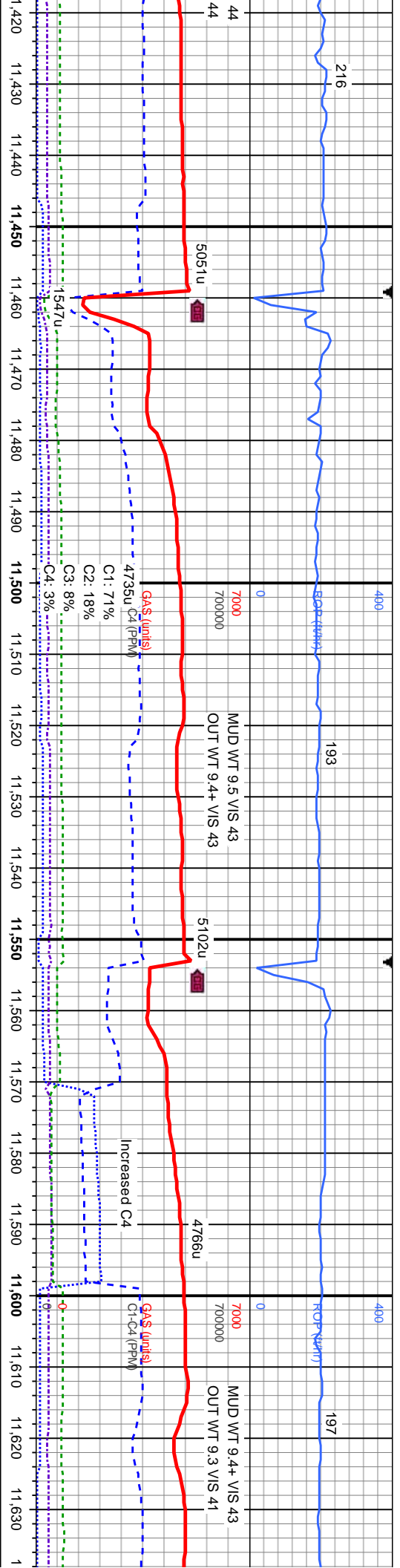
Viscosity 45
GELS 10/21/38
pH 9.5
Hardness 280

MD: 11,187'
TVD: 7,023.83'
Inclination: 89.52°
Azimuth: 269.21°
VS: 4,286.14'





SS: med-lt gy, gysbhn, occ brn-wh, clr-op med qtz gms, mod cons, sl frm-hd occ fit, vf-f gr, sb ang-sr, p strd, arg calc cnt; LS: tan, crm-bf-brn, dk brn, sb biky-biky occ sb ply, sl frm-sl sft, mckln occ sl suc, mod-v wxy tex, v calc, slow dfse, mod sting, spd blshwh cut, fnt yel resd		SS: med-ltgy, gysbhn, brn-wh, clr-tnsl, f qtz gms, mod cons, bit, sl frm-hd occ fit, vf-f gr, sb ang-sr, p strd, arg calc cnt; slow dfse, mod sting, spd blshwh cut, fnt yel resd		SS: med-ltgy, gysbhn, brn-wh, clr-tnsl, f qtz gms, mod cons, bit, sl frm-hd occ fit, vf-f gr, sb ang-sr, p strd, arg calc cnt; slow dfse, slow sting, even wh cut, v fnt yel resd		SS: med-ltgy, gysbhn, brn-wh, clr-tnsl, f qtz gms, mod cons, bit, sl frm-hd occ fit, vf-f gr, sb ang-sr, p strd, arg calc cnt, tr ls, slow dfse, slow sting, even wh cut, v fnt yel resd		SS: med-ltgy, gy gms, mod cons, sb ang-sr, p strd slow dfse, slow resd	
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
7060		7060		7060		7060		7060	
		MD: 11,284' TVD: 7,024.88' Inclination: 89.25° Azimuth: 269.9° VS: 4,383.12'				MD: 11,378' TVD: 7,026.89' Inclination: 88.29° Azimuth: 270.39° VS: 4,477.1'			



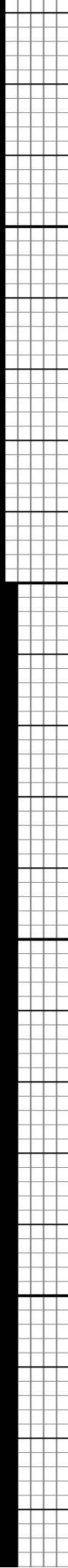
SS: med-lyg, gysbhn, brn-wh, clr-trnsl, f qtz
bit, sl frm-hd occ fri, vf-f gr,
arg calc cnt, tr ls, r sh,
stimg, even wh cut, v fnt yel
cut, v fnt yel resd

SS: med-lyg, gysbhn, brn-wh, clr-trnsl, lse
med-c qtz grns, mod-pred cons, bit clus, sl
frm-hd occ fri, vf-f gr, sb ang-sr, p strd, arg
calc cnt, slow difse, slow stimg, even wh
cut, v fnt yel resd

SS: med-lyg, gysbhn, brn-wh, clr-trnsl, lse
med-c qtz grns, mod-pred cons, bit clus, sl
frm-hd occ fri, vf-f gr, sb ang-sr, p strd, arg
calc cnt, slow difse, slow stimg, blotchy
blshwh cut, fnt yel resd

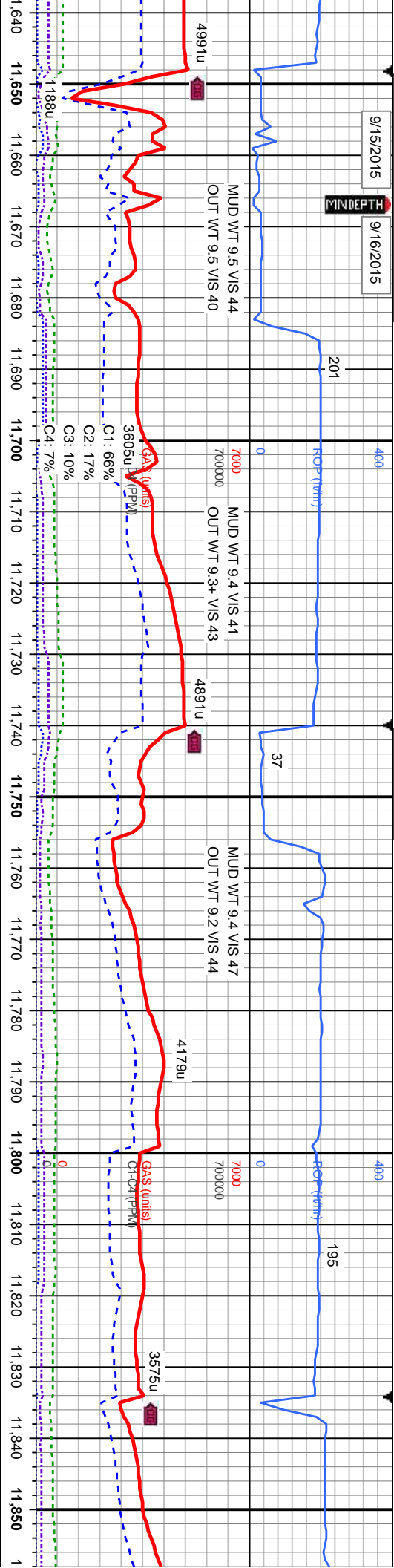
SS: med-lyg, gysbhn-brn, wh, clr-trnsl, lse
c qtz grns, mod-pred cons, sl frm-hd occ
fri, vf-f gr, sb ang-sr, p strd, arg calc cnt,
LS: tan, crm-bl-brn, dk brn, bndd brn ip, sb
blky-blky, occ sb ply, sl frm-sl sft, mexln
occ sl suc, mod-v wxy tex, v calc: slow
difse, slow stimg, blotchy blshwh cut, fnt yel
resd

SS: med-lyg, gysbhn-brn, wh, clr-trnsl, lse
c qtz grns, mod-pred cons, sl frm-hd occ
fri, vf-f gr, sb ang-sr, p strd, arg calc cnt,
LS: tan, crm-bl-brn, dk brn, bndd brn ip, sb
blky-blky, occ sb ply, sl frm-sl sft, mexln
occ sl suc, mod-v wxy tex, v calc: slow
difse, slow stimg, blotchy blshwh cut, fnt yel
resd



9/15/2015 9/16/2015

MINDEPTH



85

300
GAMMA (units)

88

300
GAMMA (units)

SS: med-lt gy, gysbhn-brn, s&p, clr-tmsl, lse c qtz grns, mod-pred cons, sl frm-hd occ fri, vf-f gr, sb ang-sr, p strd, arg calc cnt, tr ls: slow difse, v slow stmg, spd bishwh cut, fnt yel resd

SS: med-lt gy, gysbhn-bm, s&p, clr-tmsl, lse c qtz grns, mod-pred cons, sl frm-hd occ fri, vf-f gr, sb ang-sr, p strd, arg calc cnt, tr ls: slow difse, v slow stmg, spd bishwh cut, fnt yel resd

SS: med-lt gy, gysbhn-bm, wh, clr-tmsl, occ lse f-med qtz grns, mod cons, brit clus, sl frm-hd occ fri, vf-f gr, sb ang-sr, p strd, arg calc cnt, LS: tan, crm-bf-brn, dk brn lp, sb blkly-bkly, occ sb ply, sl frm-sl sft, mcnln, mod wxy tex, v calc; slow difse, v slow stmg, spd bishwh cut, fnt yel resd

SS: med-lt gy, gysbhn-bm, occ wh clr-tmsl, abnt clr-op lse med qtz grns, mod cons, sl frm-hd occ fri, vf-f gr, sb ang-sr, p strd, arg calc cnt, slow difse, v slow stmg, spd bishwh cut, fnt yel resd

SS: m... abnt c... frm-hd... calc c... bishwh...

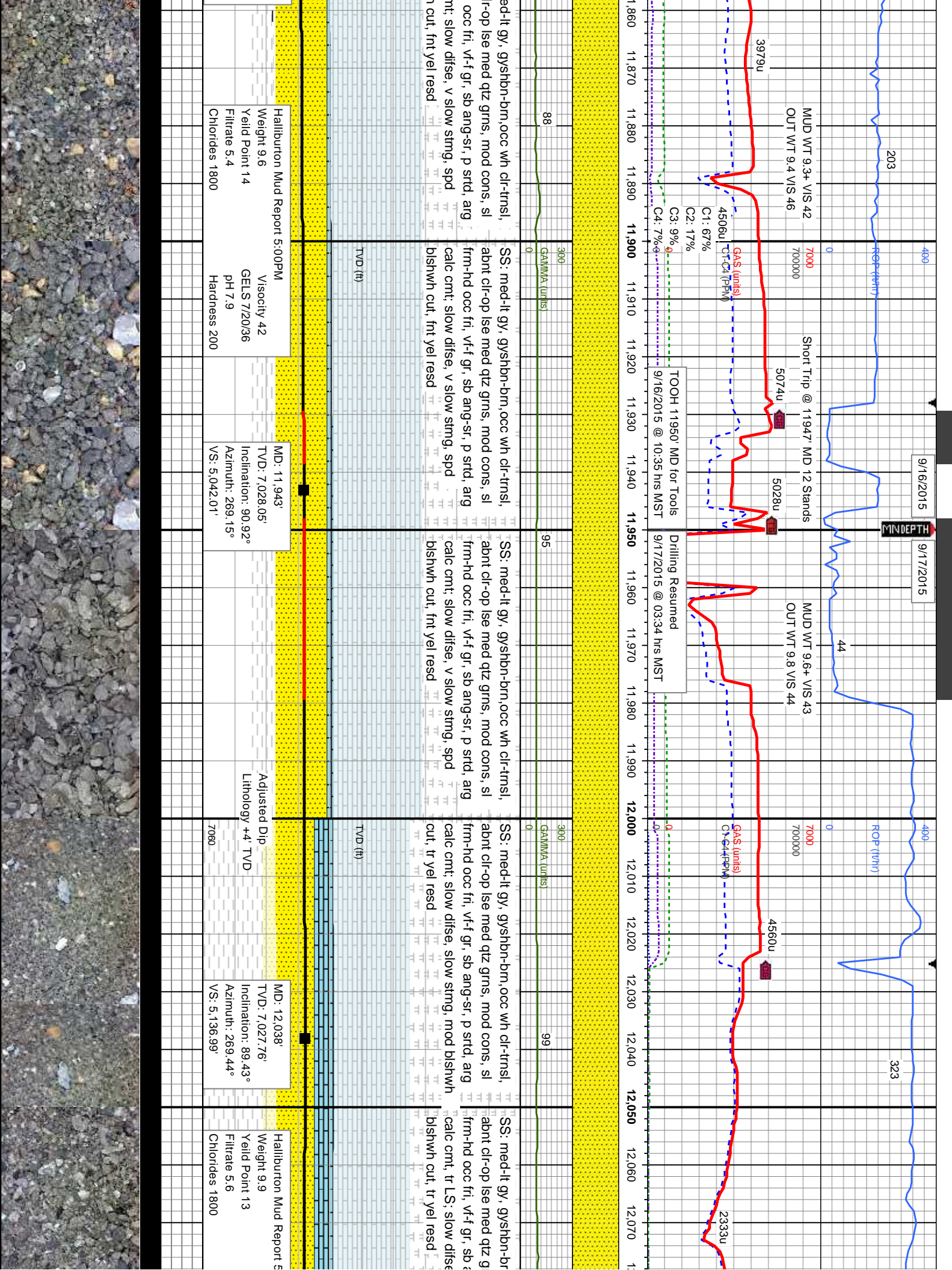
MD: 11,661'
TVD: 7,028.19'
Inclination: 90.31°
Azimuth: 268.43°
VS: 4,760.05'

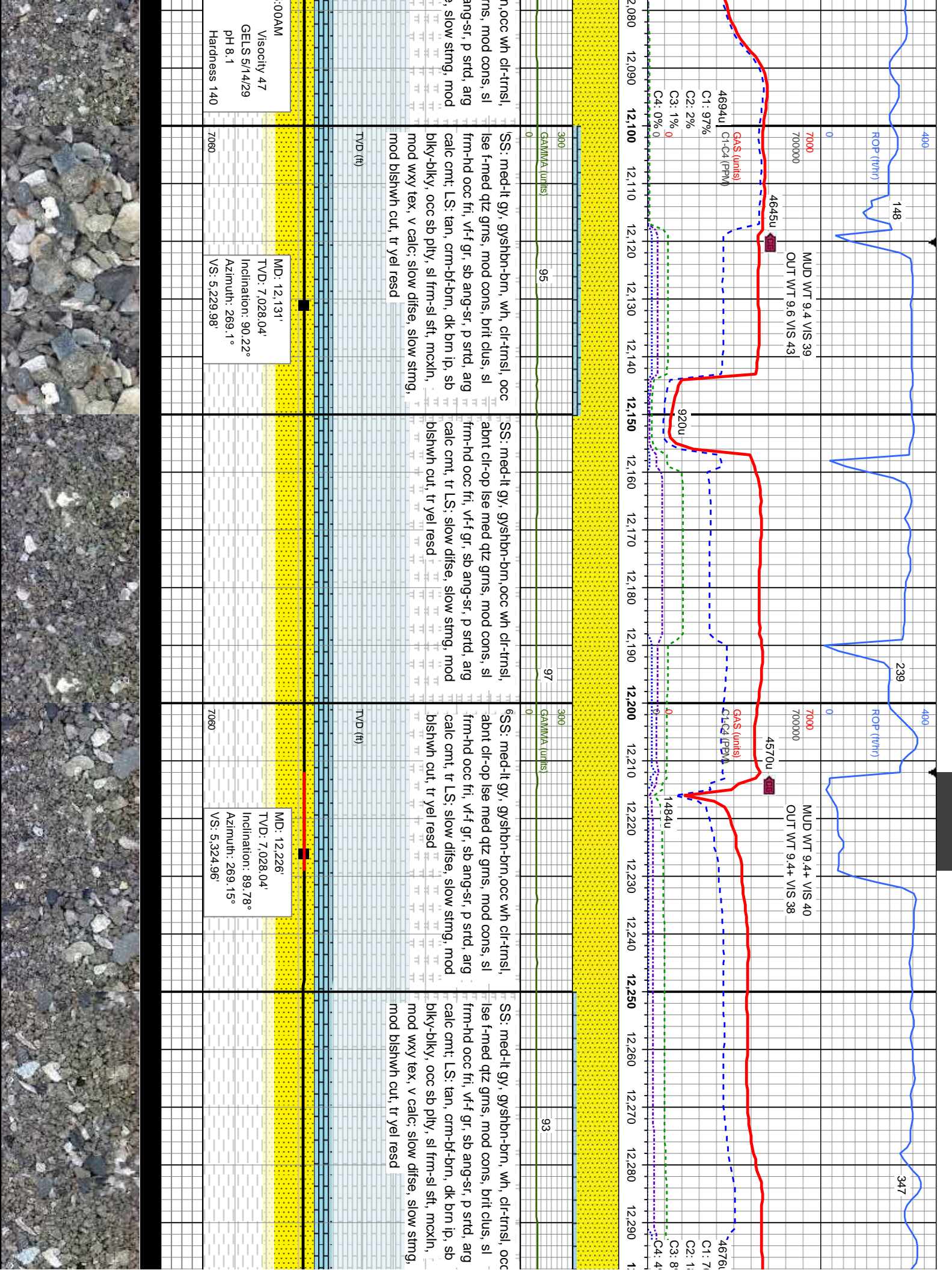
Halliburton Mud Report 5:00AM
Weight 9.4
Yield Point 12
Filtrate 6.0
Chlorides 1800
Viscosity 42
GELS 9/24/42
pH 9.4
Hardness 200

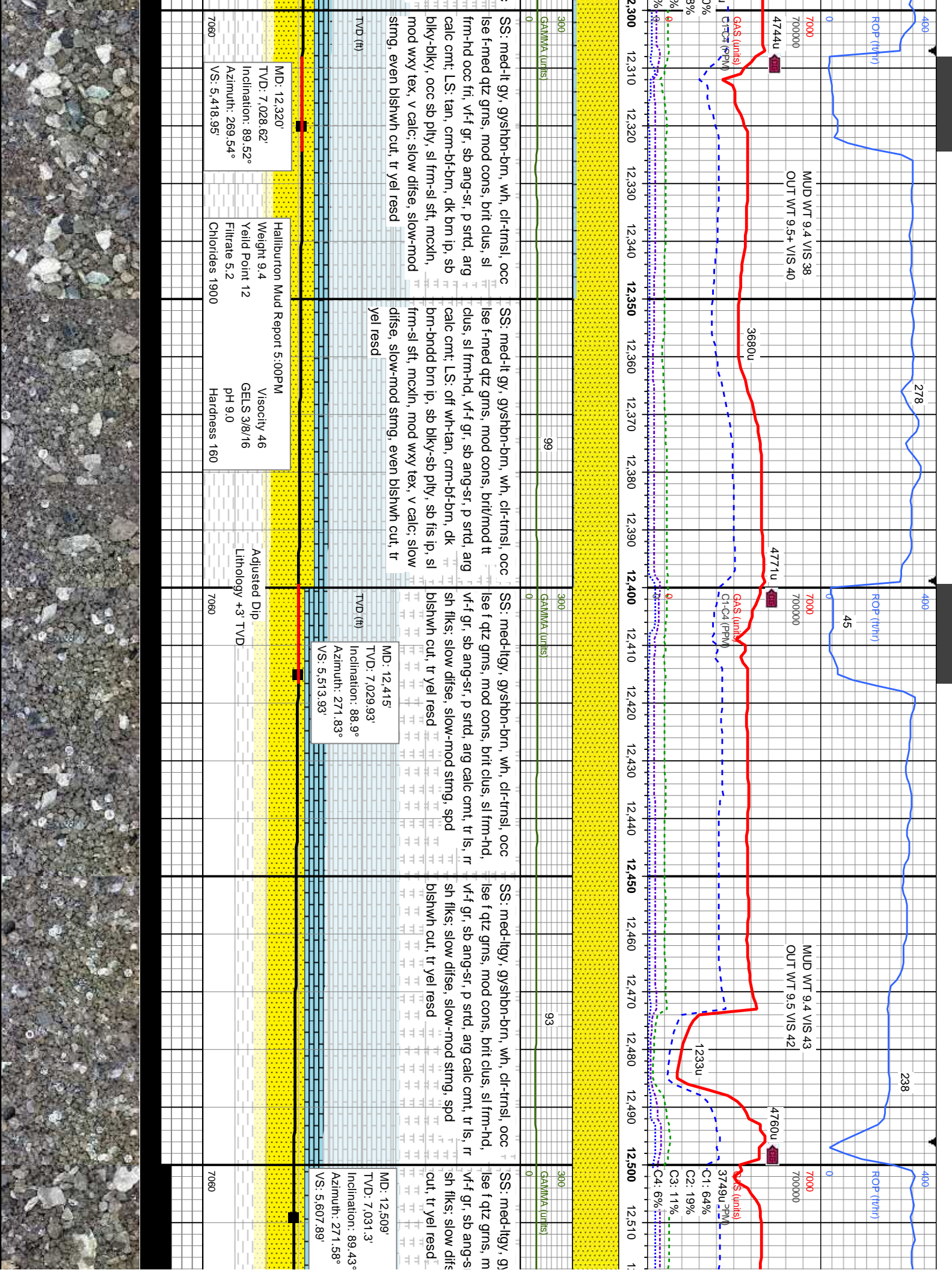
MD: 11,755'
TVD: 7,028.63'
Inclination: 89.16°
Azimuth: 270.31°
VS: 4,854.03'

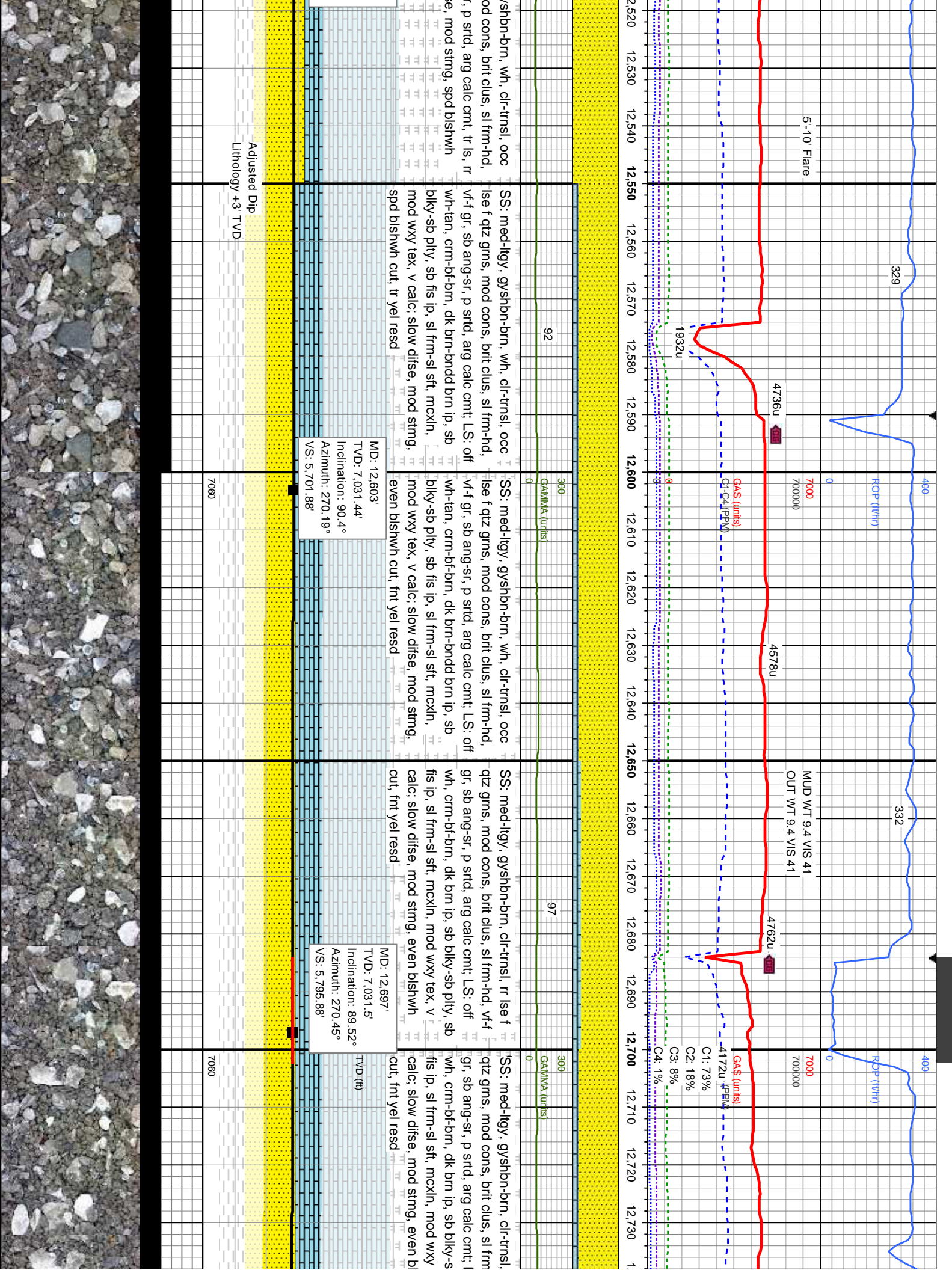
MD: 11,849'
TVD: 7,029.06'
Inclination: 90.31°
Azimuth: 269.54°
VS: 4,948.02'

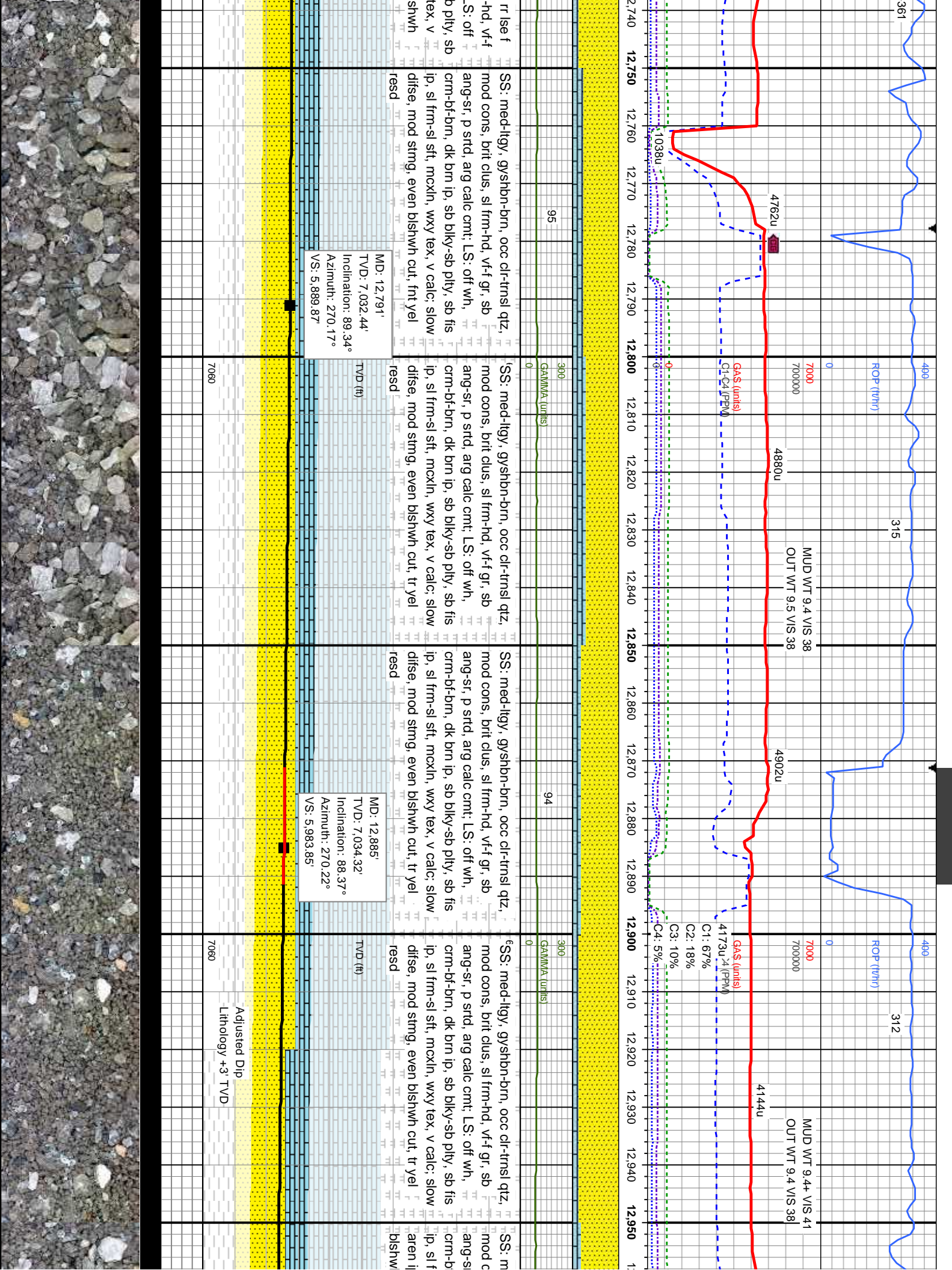


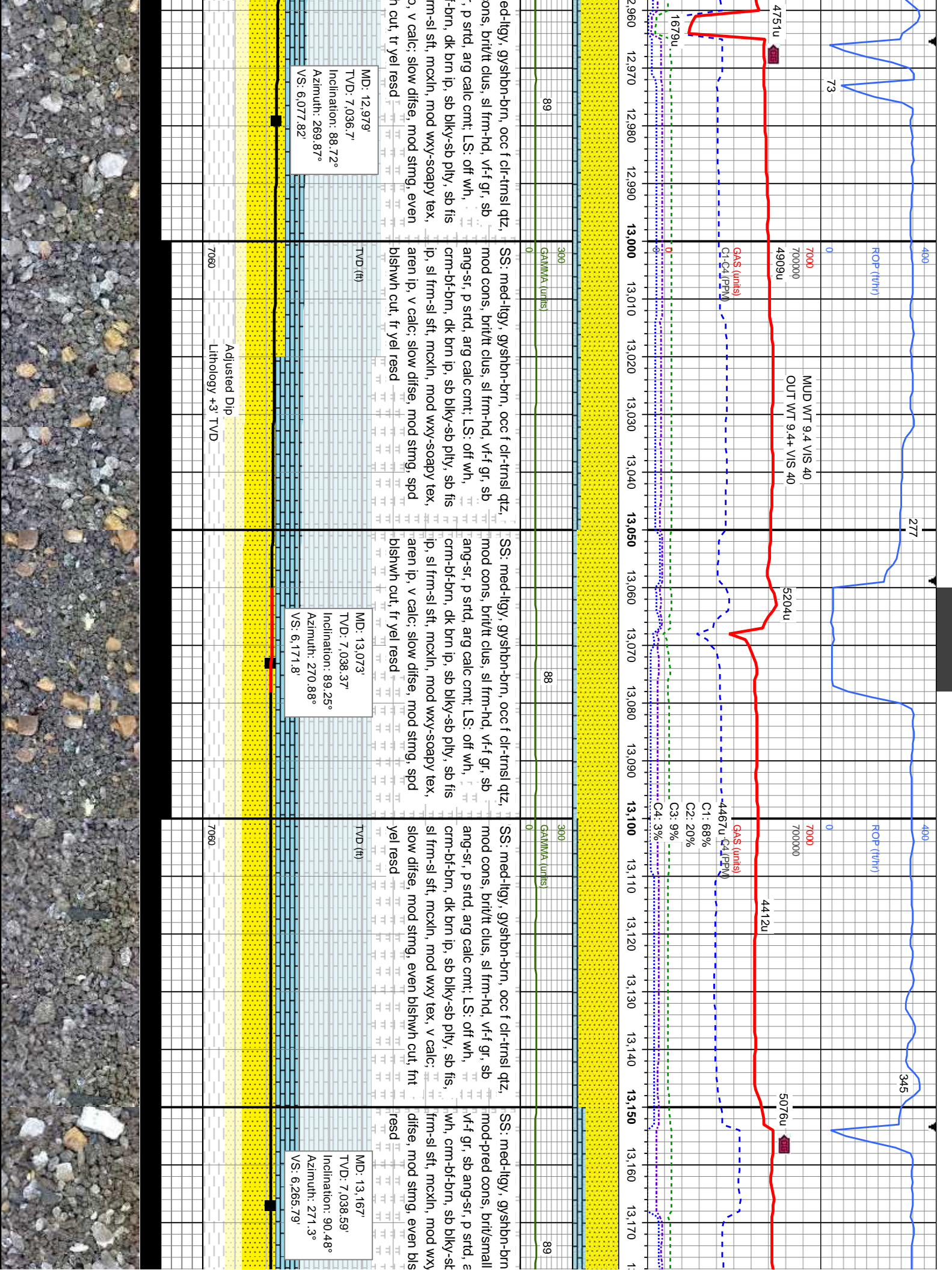


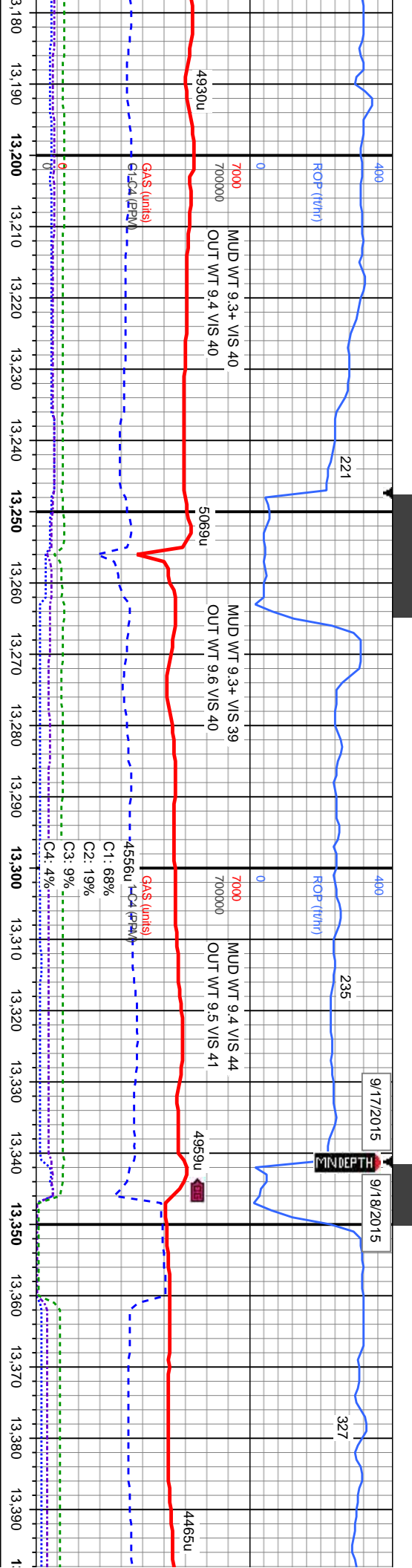






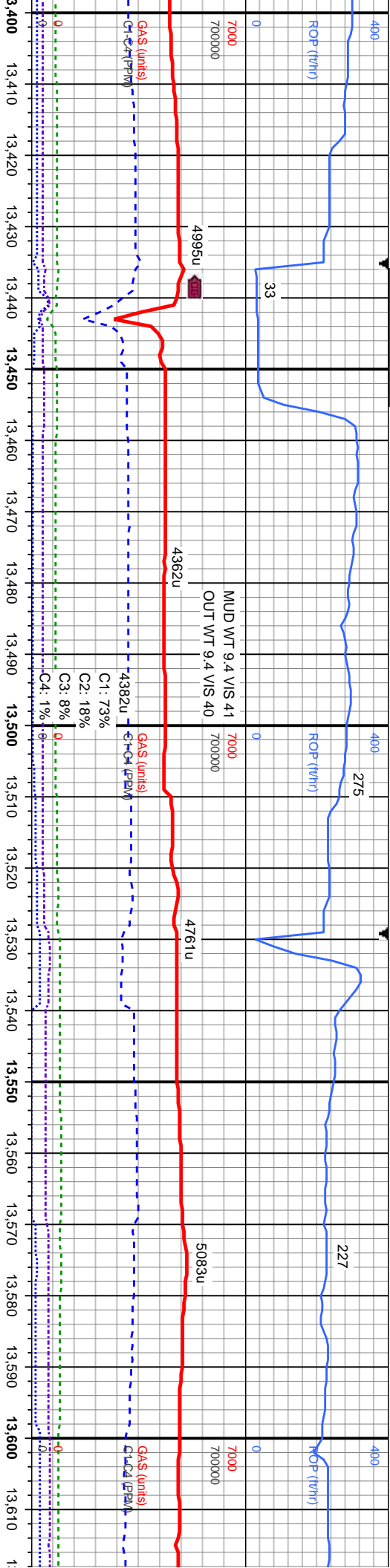




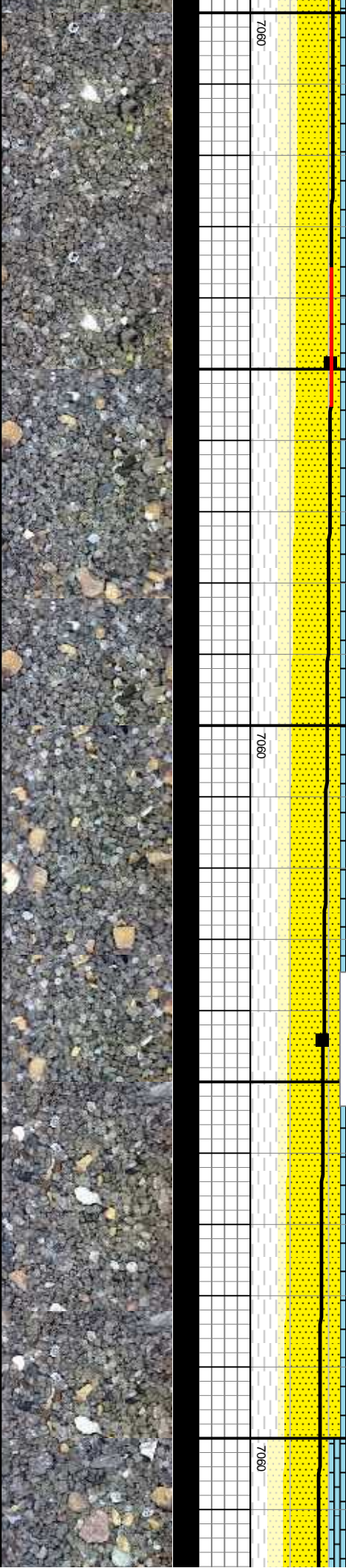


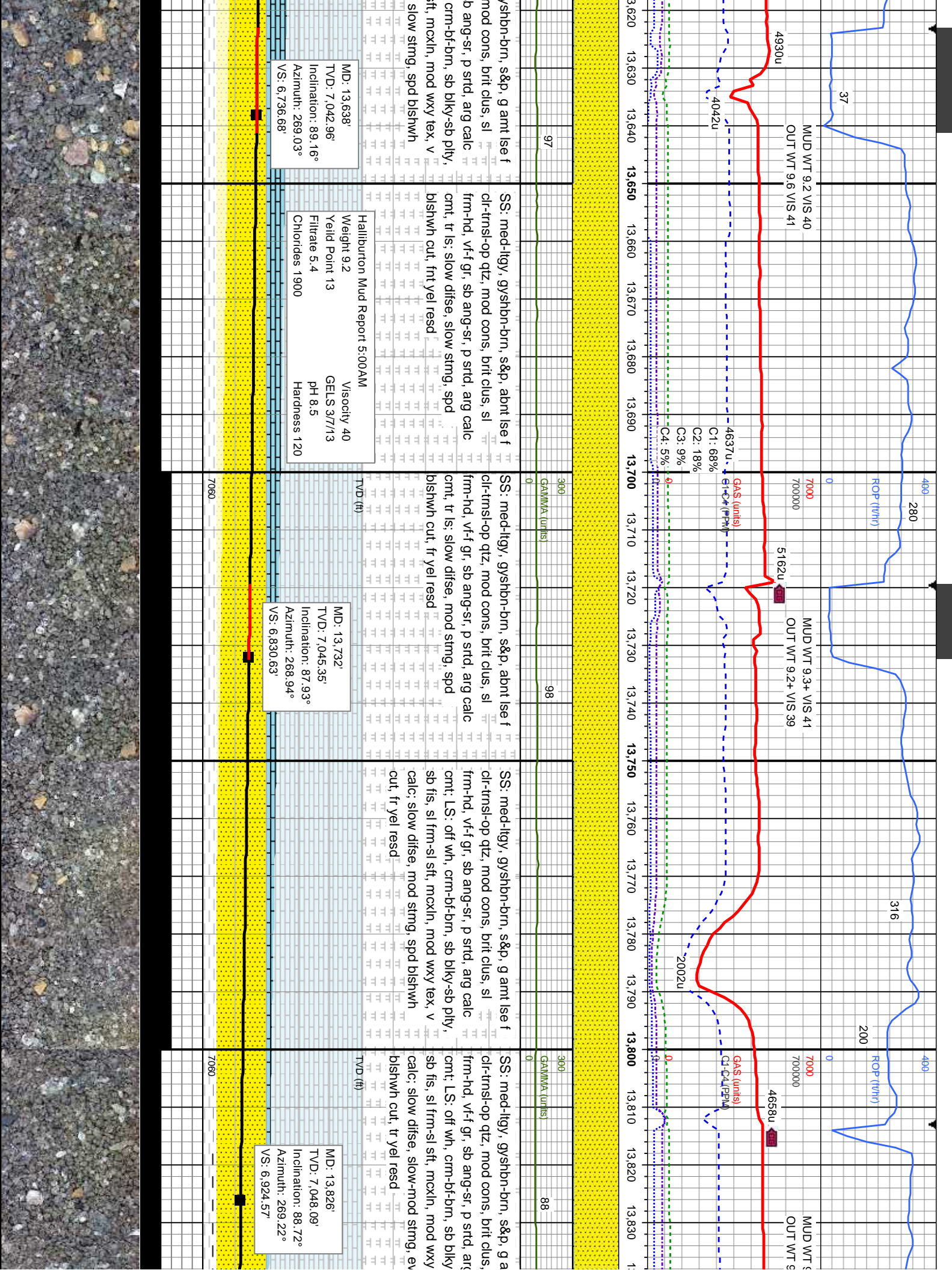
SS: med-lyg, gysbhn-brn, s&p, lse f clt-trnsf qtz, mod-pred cons, brit/small tt clus, sl frm-hd, vf-f gr, sb ang-sr, p strd, arg calc cnt; LS: off wh, crm-bf-brn, sb blkly-sb ply, sb fis, sl frm-sl sft, mckln, mod wxy tex, v calc; slow difse, mod stimg, spd bishwh cut, tr yel resd	SS: med-lyg, gysbhn-brn, s&p, mod amt lse f clt-trnsf qtz, mod-pred cons, brit, small tt clus, sl frm-hd, vf-f gr, sb ang-sr, p strd, arg calc cnt; LS: off wh, crm-bf-brn, sb blkly-sb ply, sb fis, sl frm-sl sft, mckln, mod wxy tex, v calc; slow difse, mod stimg, spd bishwh cut, tr yel resd	SS: med-lyg, gysbhn-brn, s&p, mod amt lse f clt-trnsf qtz, mod-pred cons, brit, small tt clus, sl frm-hd, vf-f gr, sb ang-sr, p strd, arg calc cnt; LS: off wh, crm-bf-brn, sb blkly-sb ply, sb fis, sl frm-sl sft, mckln, mod wxy tex, v calc; slow difse, slow-mod stimg, blochy bishwh cut, tr yel resd	SS: med-lyg, gysbhn-brn, s&p, abnt lse f clt-trnsf qtz, pred cons, brit, tt clus, sl frm-hd, vf-f gr, sb ang-sr, p strd, arg calc cnt; LS: off wh, crm-bf-brn, sb blkly-sb ply, sb fis, sl frm-sl sft, mckln, sl wxy tex, v calc; slow difse, slow-mod stimg, blochy bishwh cut, tr yel resd
TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)
MD: 13,261' TVD: 7,038.3' Inclination: 89.87° Azimuth: 270.79° VS: 6,359.78'	MD: 13,365' TVD: 7,038.38' Inclination: 90.04° Azimuth: 270.22° VS: 6,463.78'		

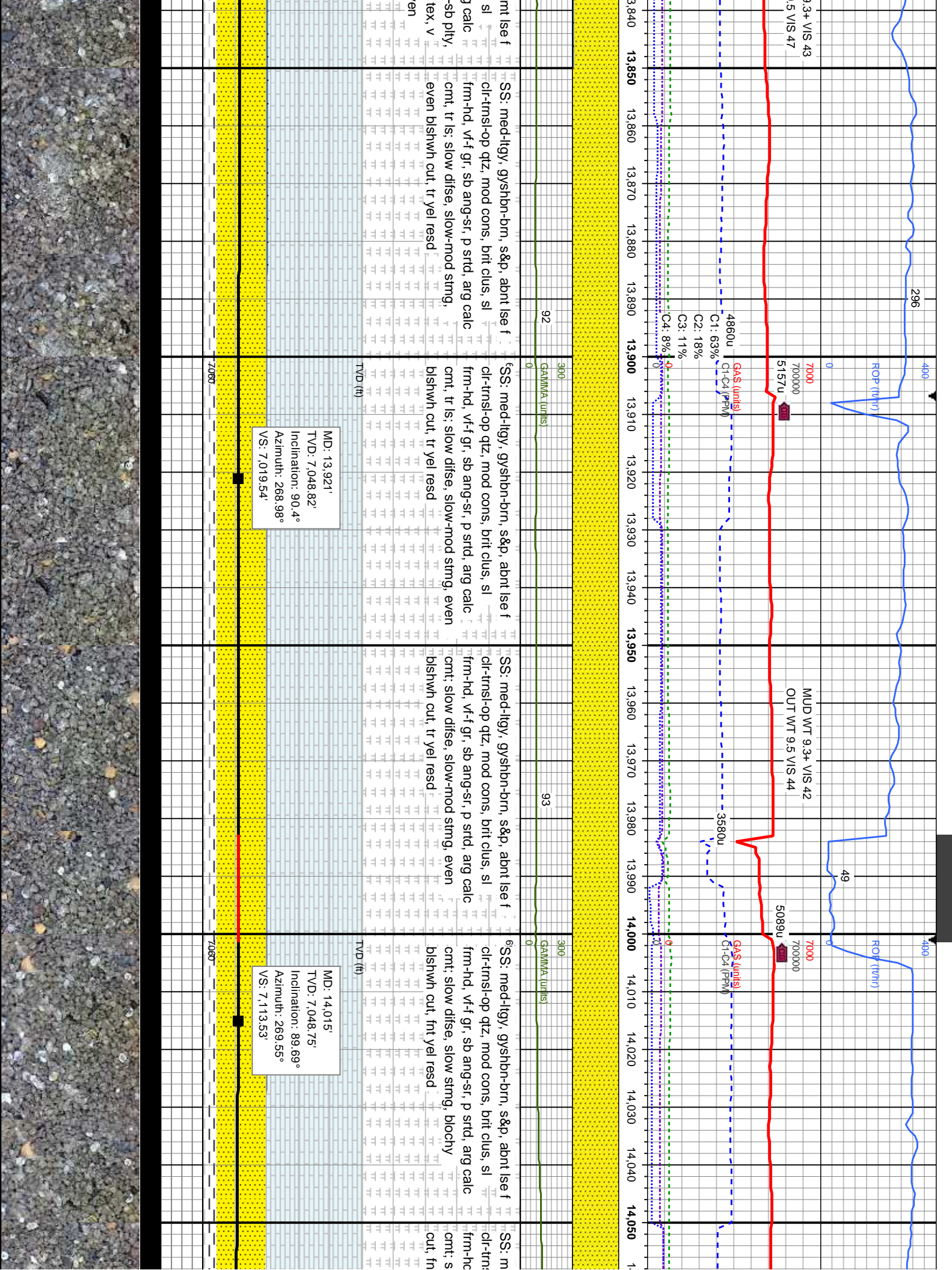


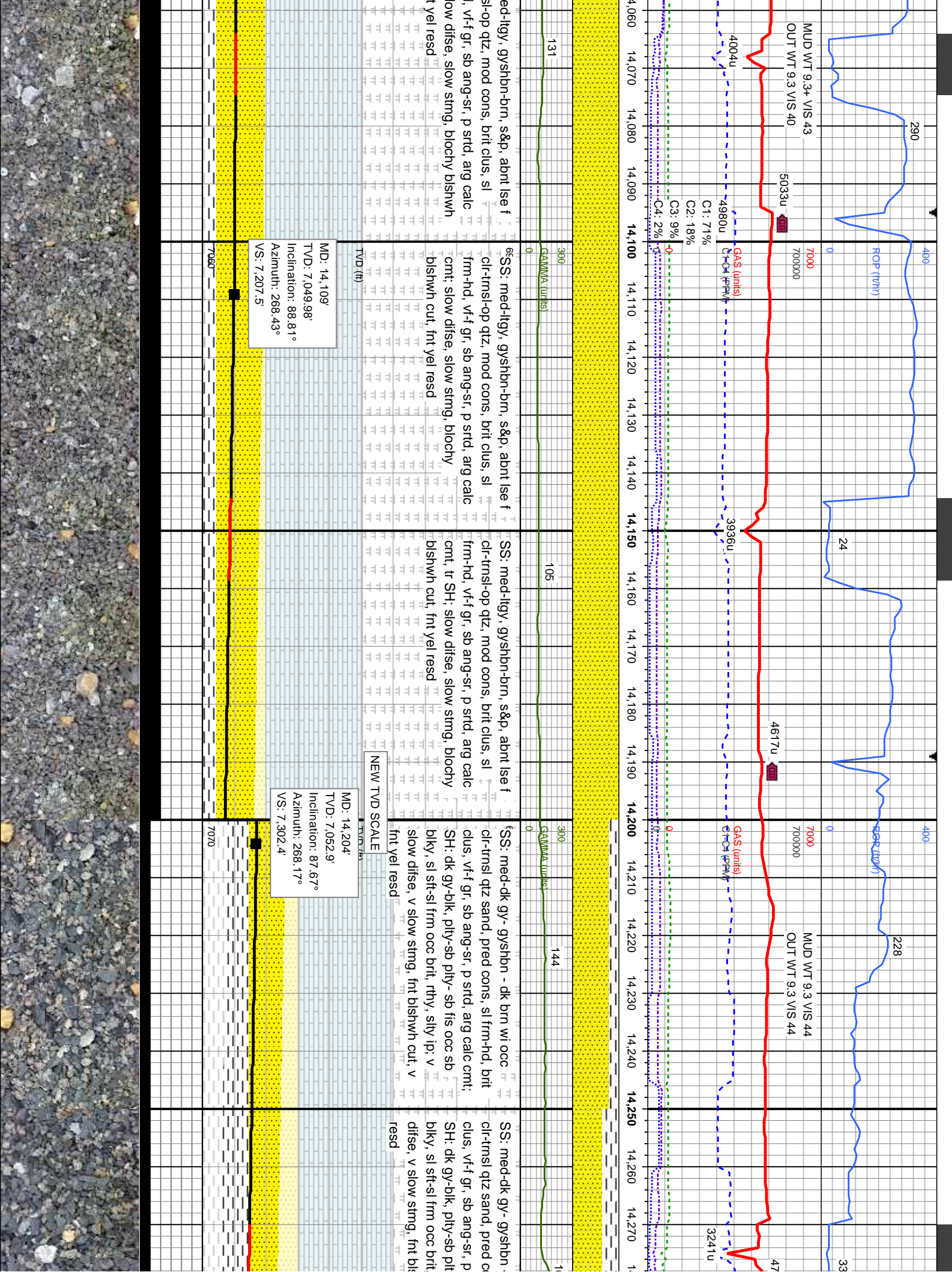


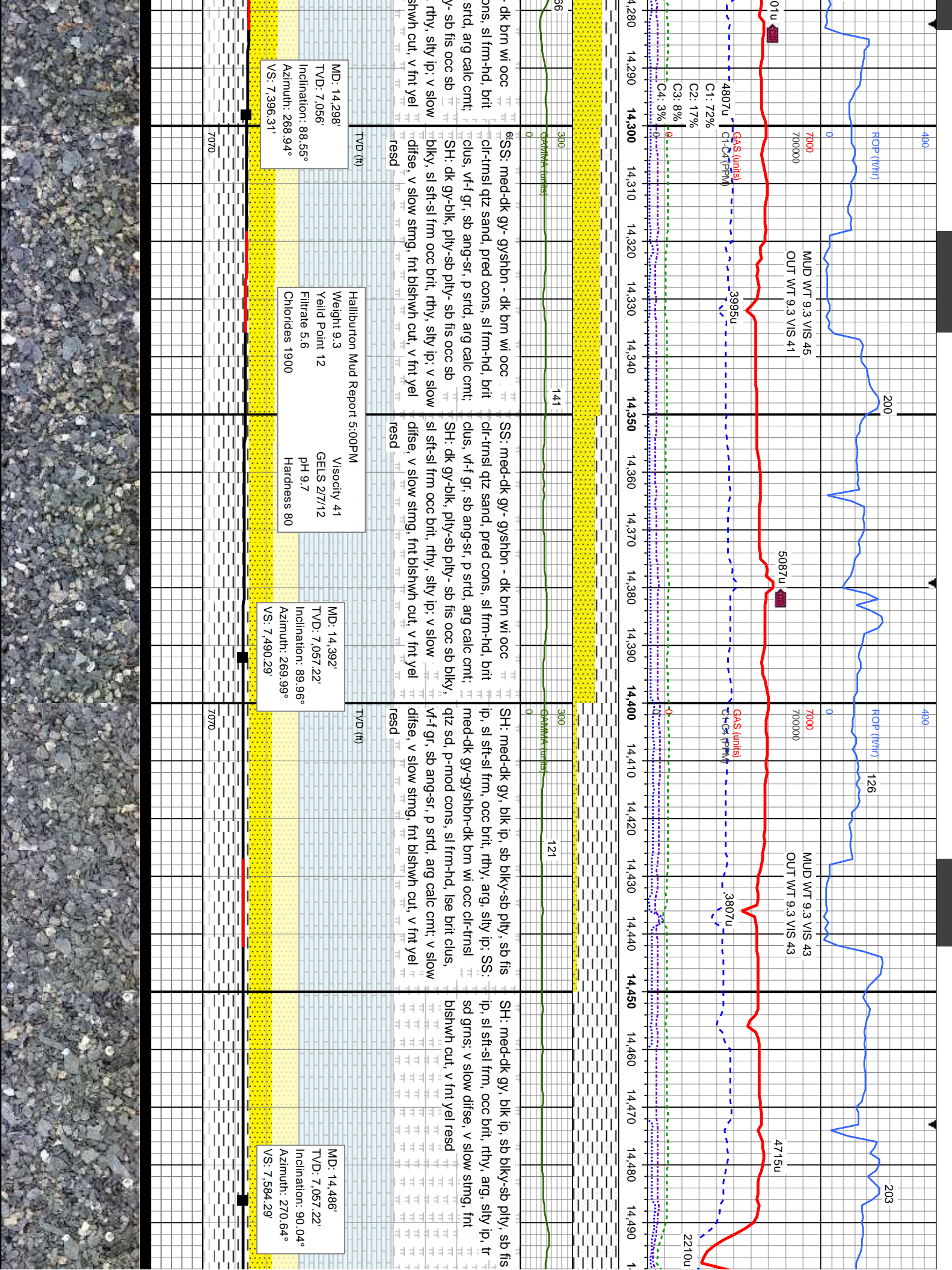
SS: med-lyg, gysbhn-bm, s&p, abnt lse f cl-trnsl-op qtz, pred cons, brit, tt clus, sl frm-hd, vf-i gr, sb ang-sr, p strd, arg calc cmnt, LS: off wh, crm-bf-brn, sb bkly-sb ply, sb fis, sl frm-sl sft, mcxln, sl wxy tex, v calc; slow difse, slow-mod stmg, even bishwh cut, fnt yel resd	SS: med-lyg, gysbhn-bm, s&p, abnt lse f cl-trnsl-op qtz, mod cons, brit clus, sl frm-hd, vf-i gr, sb ang-sr, p strd, arg calc cmnt, tr ls: slow difse, slow-mod stmg, even bishwh cut, fnt yel resd	SS: med-lyg, gysbhn-bm, s&p, abnt lse f cl-trnsl-op qtz, mod cons, brit clus, sl frm-hd, vf-i gr, sb ang-sr, p strd, arg calc cmnt, LS: off wh, crm-bf-brn, sb bkly-sb ply, sb fis, sl frm-sl sft, mcxln, sl wxy tex, v calc; slow difse, slow stmg, spd bishwh cut, fnt yel resd	SS: med-lyg, gysbhn-bm, s&p, abnt lse f cl-trnsl-op qtz, mod cons, brit clus, sl frm-hd, vf-i gr, sb ang-sr, p strd, arg calc cmnt, LS: off wh, crm-bf-brn, sb bkly-sb ply, sb fis, sl frm-sl sft, mcxln, sl wxy tex, v calc; slow difse, slow stmg, spd bishwh cut, fnt yel resd
MD: 13.449' TVD: 7,039.32' Inclination: 88.81° Azimuth: 269.39° VS: 6,547.77'	MD: 13.544' TVD: 7,041.29' Inclination: 88.81° Azimuth: 268.53° VS: 6,642.72'	MD: 13.544' TVD: 7,041.29' Inclination: 88.81° Azimuth: 268.53° VS: 6,642.72'	Adjusted Dip Lithology +4' TVD

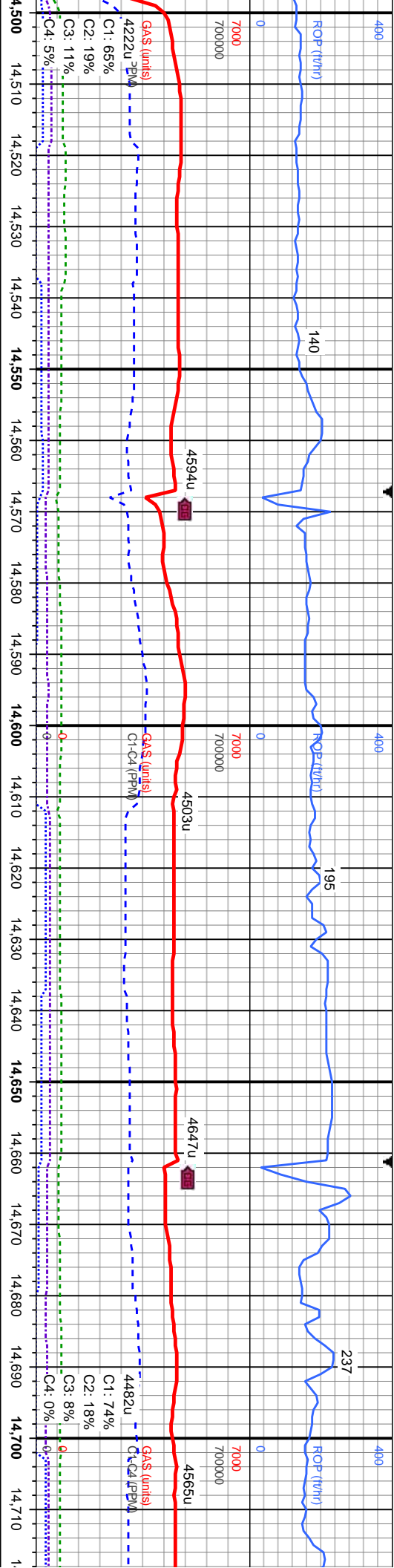












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