



Scale: 5" / 100'
Measured Depth Log

Well Name Arellano R-10-9HC

Location SEC 10 T5N R65W

State Colorado

County Weld

Country United States

Rig Number Frontier (Utah) 8

API Number 05-123-41105

AFE # 41105

Region DJ Basin

Field Wattenberg

Spud Date 4/1/2015

Drilling Completed 6/7/2015

Surface Coordinates N 40.410773 W 104.641189

Ground Elevation 4616'

K.B. Elevation 4640'

Logged Interval 6000' To 13880'

Total Depth 13880'

Formation C Chalk

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 Wellsite Geologist

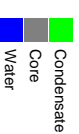
Ben Katka Wellsite Geologist

Jason Beach Wellsite Geologist

Columbine Logging Computer 148

Bloodhound Unit 298

Zone Color Coding



Rock Types

UNKNOWN	COAL	MARLSTONE	SHALY SANDSTONE
ANHYDRITE	CONGLOMERATE	METAMORPHIC	SHALY SILTSTONE
BENTONITE	DOLOMITE	NO SAMPLE	SILTY SHALE
BRECCIA	DOLOMITIC LIMESTONE	SALT	SILTSTONE
CHALK	GRANITE	SANDSTONE	TILL
CEMENT	GYPSUM	SALT-PEPPER SANC	TUFF
CHERT	IGNEOUS	SHALE	WELDED TUFF
CLAY CHOKE SANC	SIDERITE or LIMONITE	SHALE COLORED	
CLAYSTONE	LIMESTONE	SHALE GRAY	

Accessories

GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL	
INOCERAMUS	B BENTONITE	K KAOLIN	
ALGAE	BITUMENOUS SUBSTANCE	M MARCASITE	ANHYDRITE STRINGER
AMPHIPORA	BRECCIA FRAGMENTS	M MARLSTONE	BENTONITE STRINGER
BELEMNITE	C CALCAREOUS	M MICACEOUS	COAL STRINGER
BIOCLASTIC	P PELLET	CARBONACEOUS FLAKES	DOLOMITE STRINGER
BRACHIOPOD	P PISOLITE	MINERAL CRYSTALS	GYPSUM STRINGER
BRYOZOA	PLANT REMAINS	N NODULES	LIMESTONE STRINGER
CEPHALOPOD	PLANT SPORES	PHOSPHATE PELLETS	MARLSTONE (GALC) STRG
CORAL	SCAPHOPOD	COAL - THIN BEDS	MARLSTONE (DOL) STRG
CRINOID	STROMATOPOROID	D DOLOMITIC	SANDSTONE STRINGER
ECHINOID	F FELDSPAR	S SANDY	SHALE STRINGER
FISH	FERRUGINOUS PELLETT	S SIDERITE	
FORAMINIFERA	ANHYDRITIC	S SILICEOUS	SILTSTONE STRINGER
F FOSSIL	ARGILLACEOUS	G GLAUCONITE	
		S SILTY	
		T TUFFACEOUS	

Oil Show

P PINPOINT
V VUGGY




































Engineering

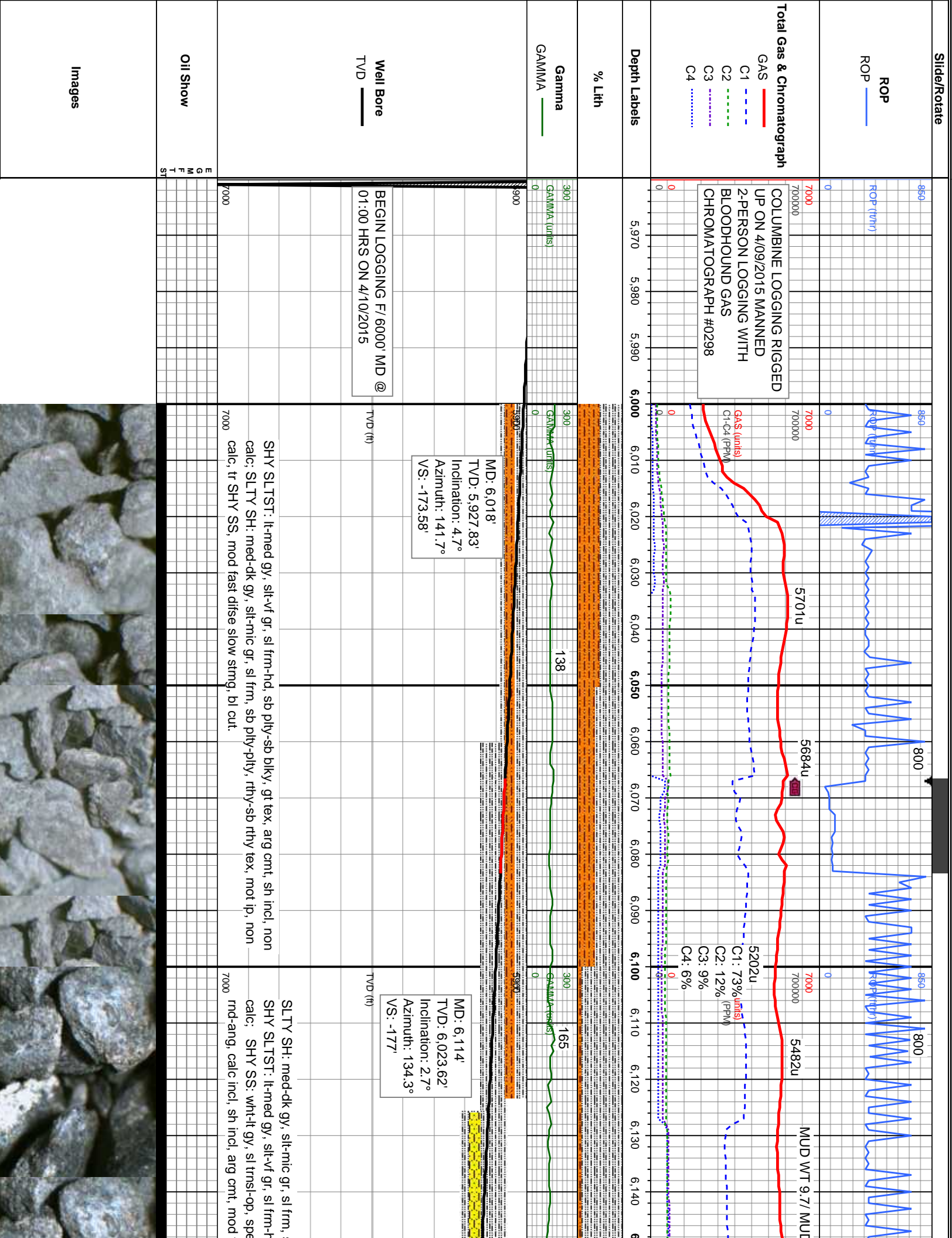
D DEAD
E EVEN
Q QUESTIONABLE
B BIT
S SPOTTED STAINING
C CONNECTION (UP)

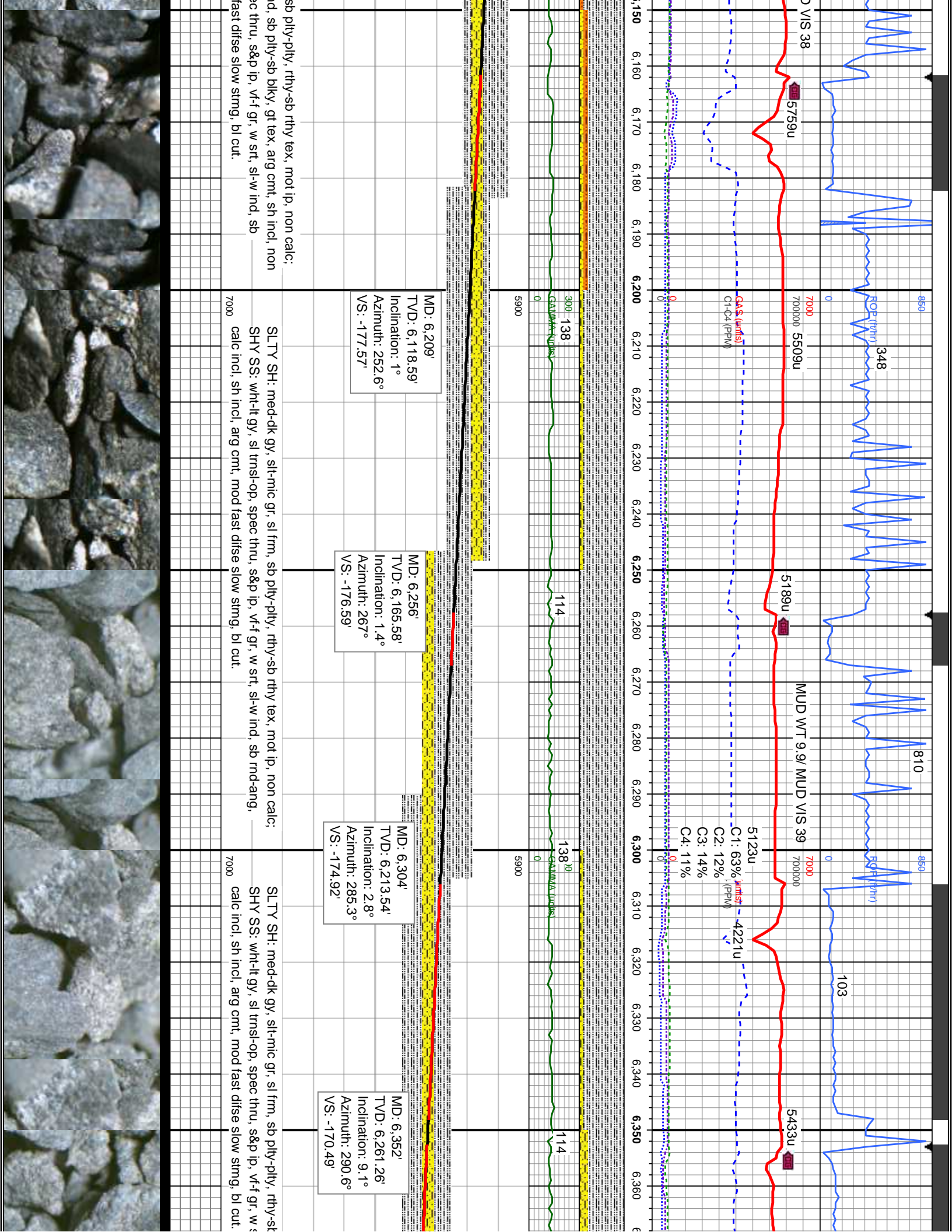
Porosity

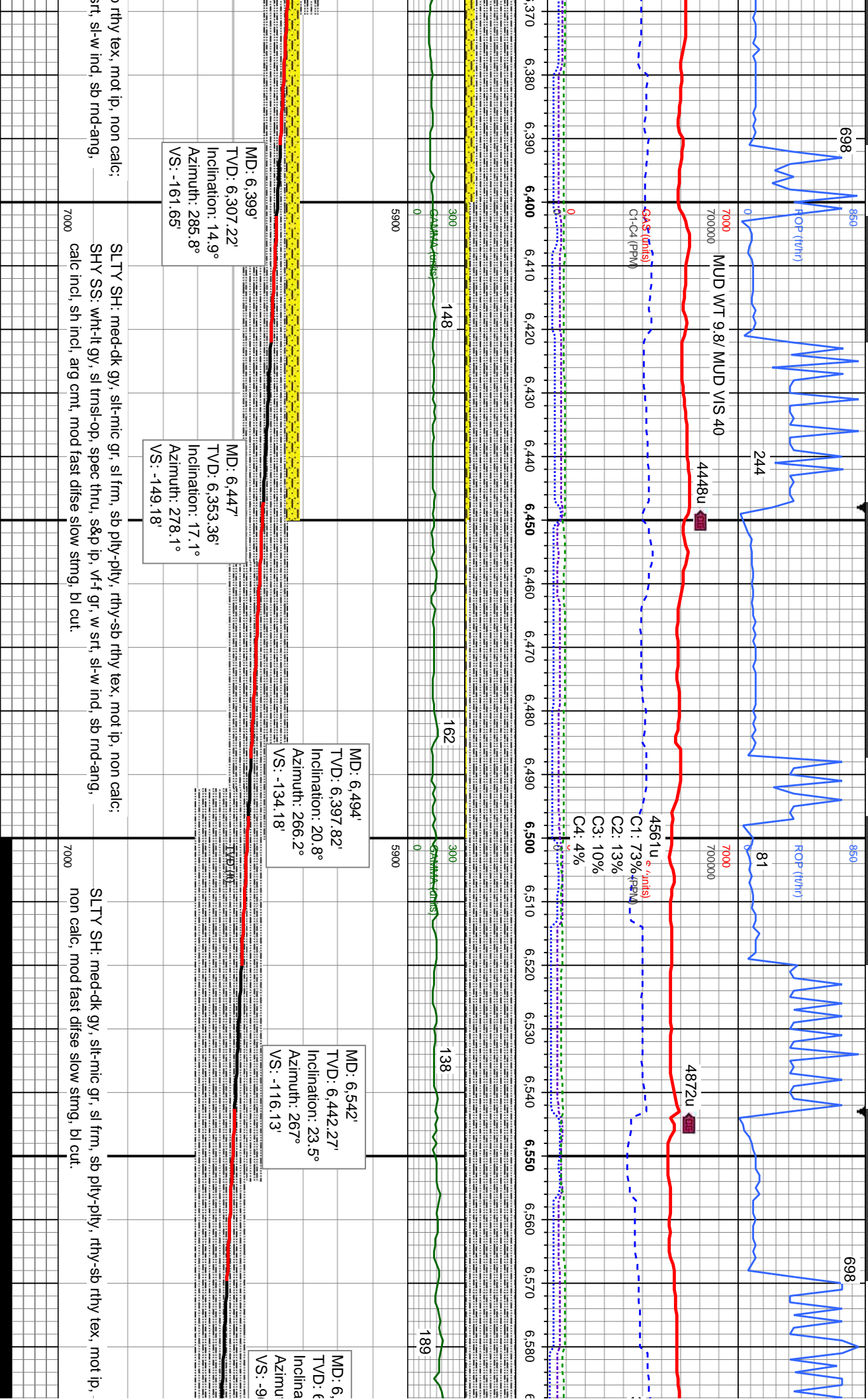
C CONNECTION (DOWN)	CONNECTION GAS
E EARTHY	CONNECTION GAS (LEFT)
F FENESTRAL	TRIP GAS
F FRACTURE	TRIP GAS (LEFT)
I INTERCRYSTALLINE	DOWN TIME GAS
I INTEROOLITIC	DOWN TIME GAS (LEFT)
M MOLDIC	CORE - LOST
O ORGANIC	CORE - RECOVERED

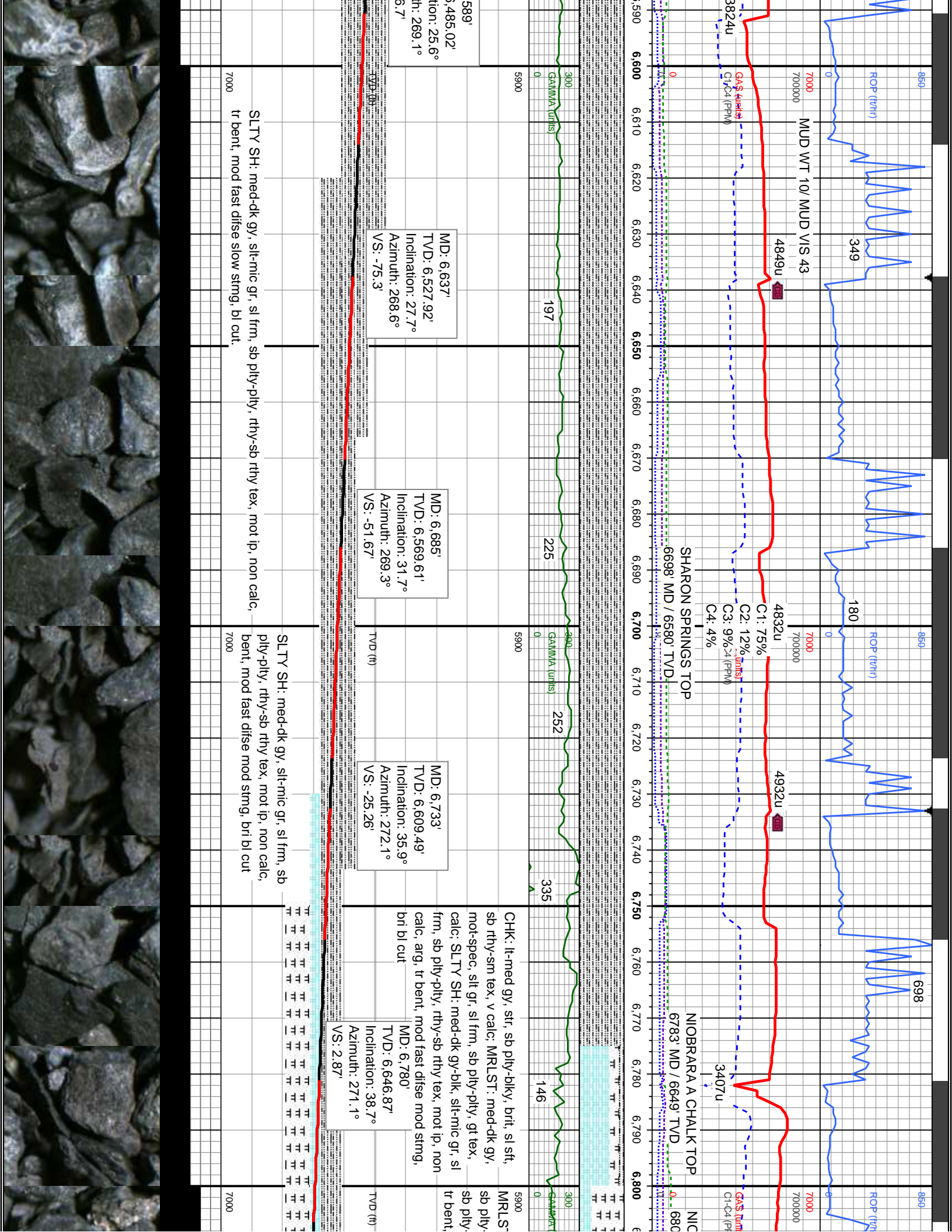
Other Symbols

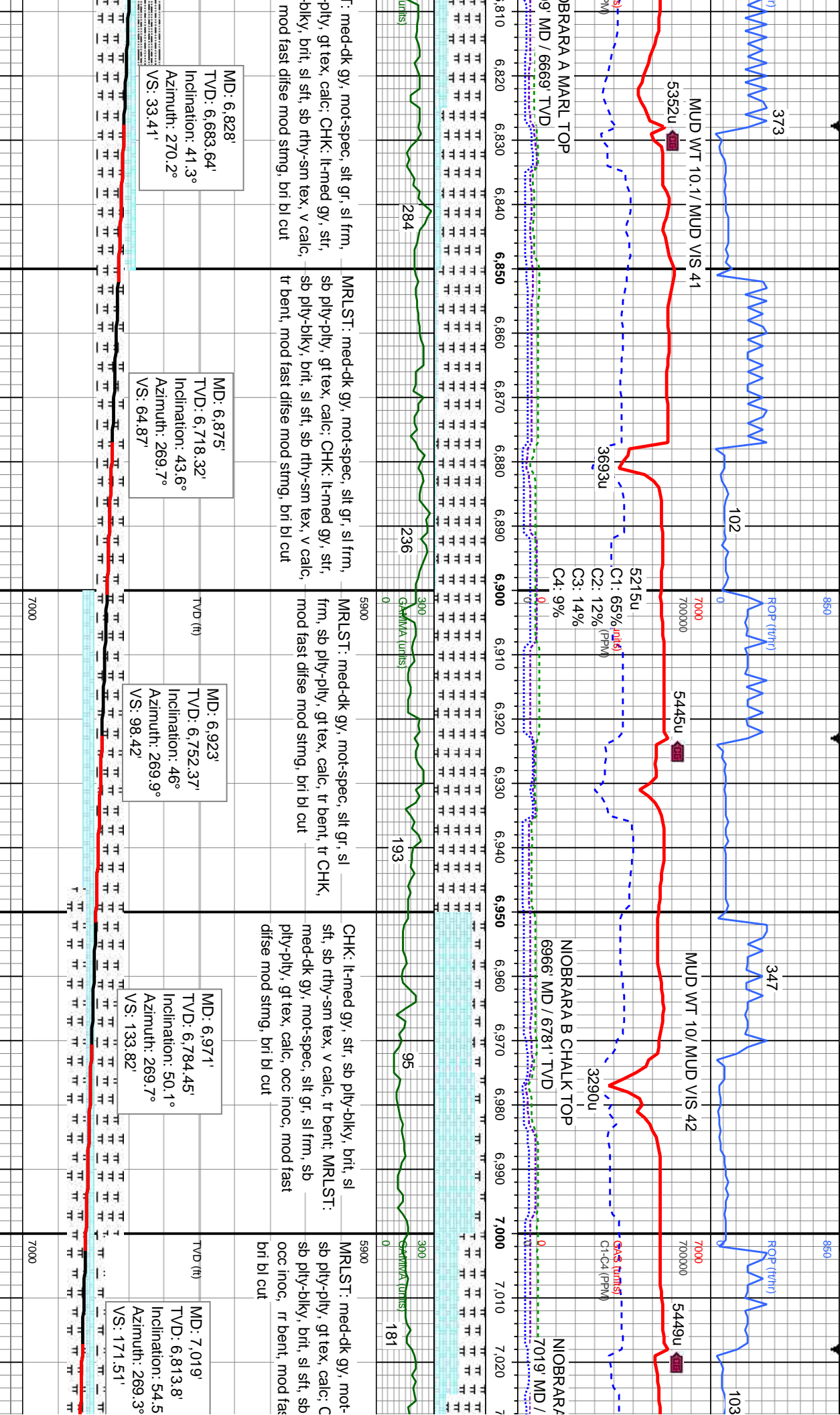
	DST INTERVAL		WIRELINE TESTED - LEFT		E EARTHY
	FAULT		WIRELINE TESTED - RT		FX FINELYXLN
	FORMATION TOP		DRILL STEM TEST		BS GRAINSTONE
	GAS SHOW		MINDEPTH MN DEPTH		L LITHOGRAPHIC
	OIL SHOW				MX MICROXLN
	MINDEPTH UP				MS MUDSTONE
Rounding					
	MINDEPTH (DOWN)		A ANGULAR		PS PACKSTONE
	NORMAL FAULT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

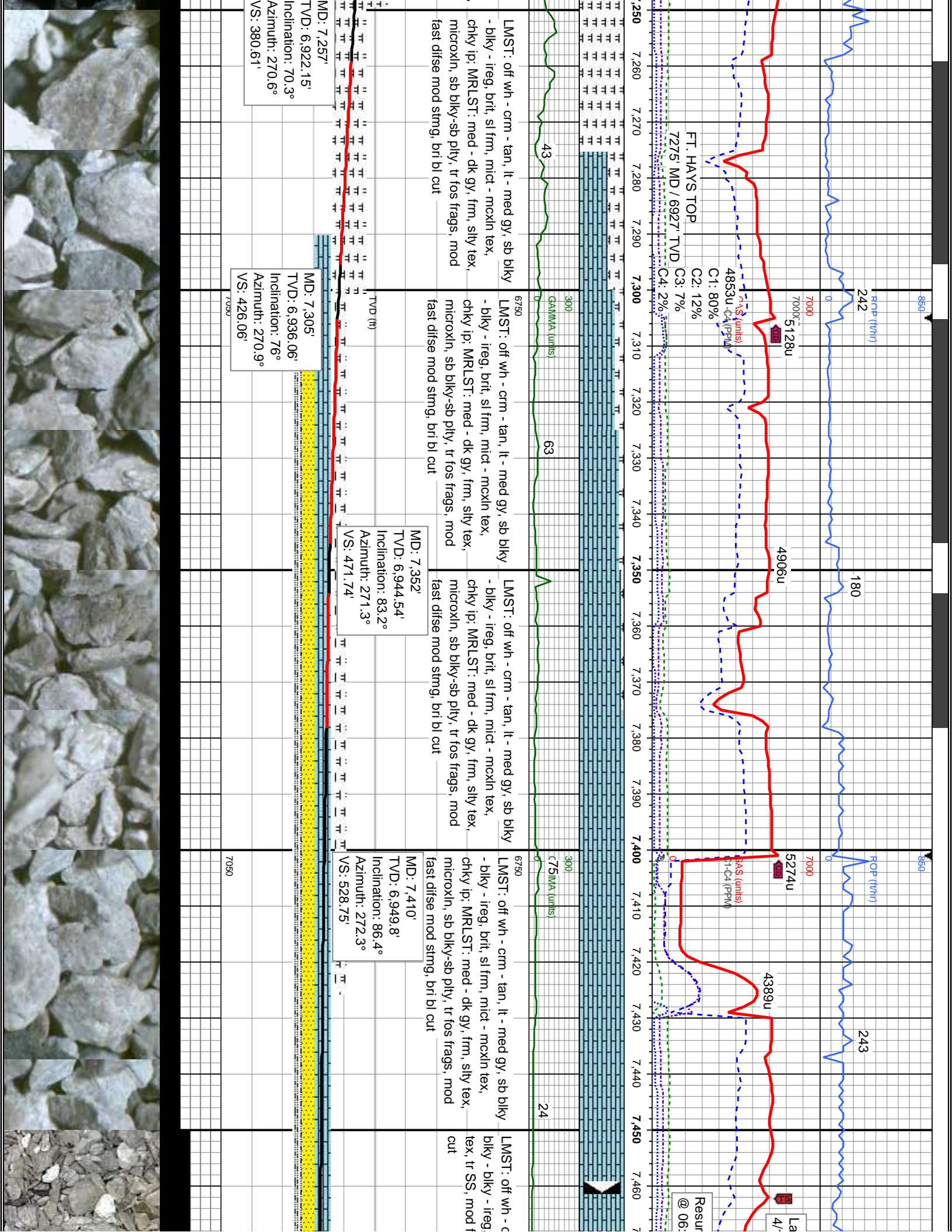


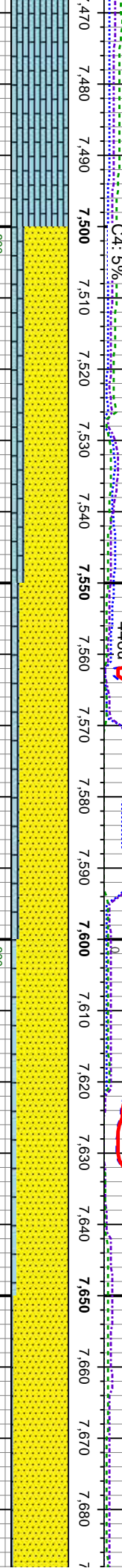
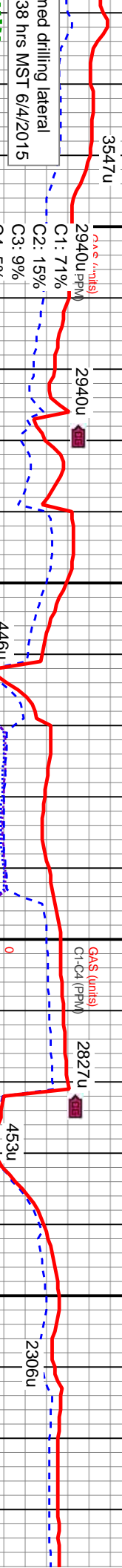
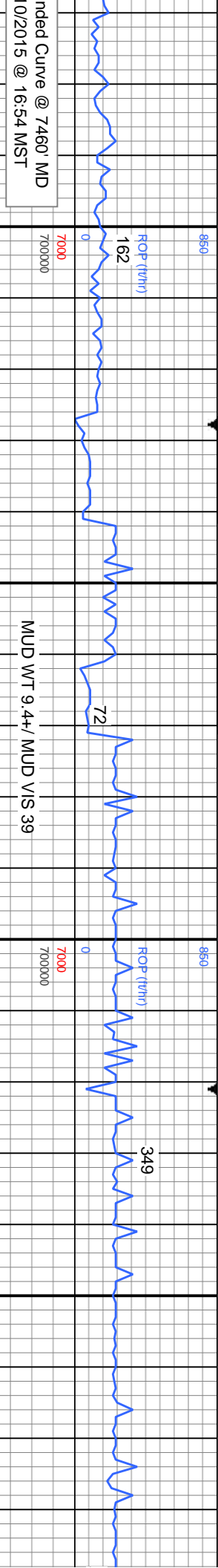






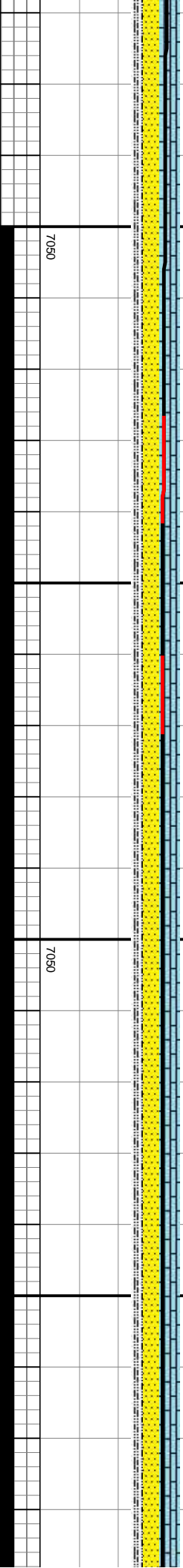


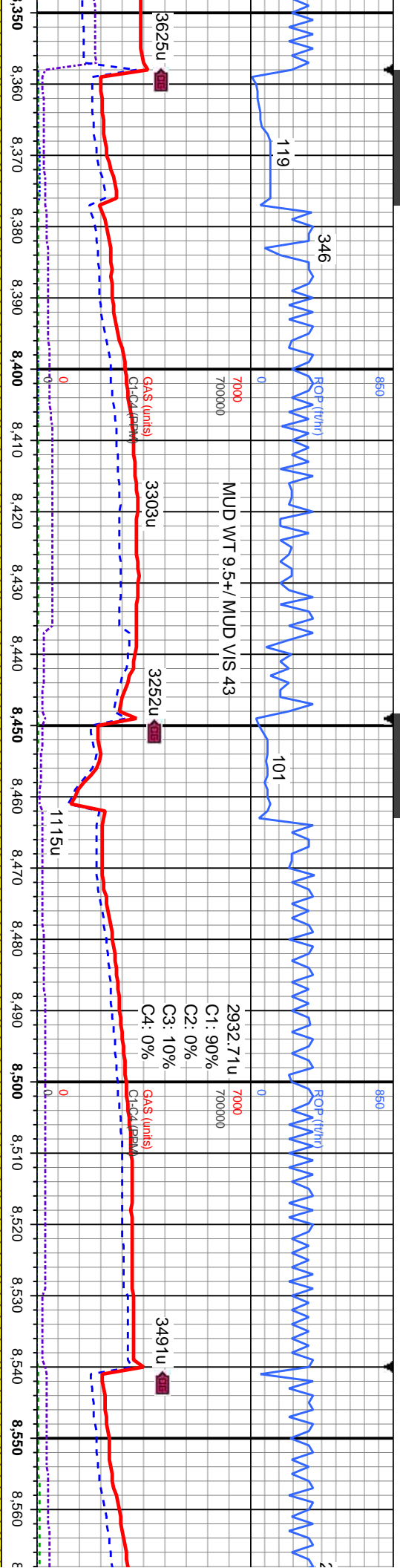




SS: med-dk gy, brn-dk brn, sl frm-hd, brit, vf-f gr, ang-sr, p strd, arg calc cmt; LMST: wh, crm-tan, lt-medgy, sb blk-y-blky-ireg, ply ip, brit, sl frm, sm tex, mict-mcxln, fast difse mod stimg, bri bl cut

MD: 7.479'
TVD: 6,953.63'
Inclination: 87.23°
Azimuth: 271.89°
VS: 596.68'





SS: med-dk gy, brn-dk brn, sl frm-hd, brit,
vf-f gr, ang-sr, p strd, arg calc cnt, fast
difse mod stmg, bri bl cut

6750
SS: med-dk gy, brn-dk brn, sl frm-hd, brit,
vf-f gr, ang-sr, p strd, arg calc cnt, fast
difse mod stmg, bri bl cut

SS: med-dk gy, brn-dk brn, sl frm-hd, brit,
vf-f gr, ang-sr, p strd, arg calc cnt, fast difse
mod stmg, bri bl cut

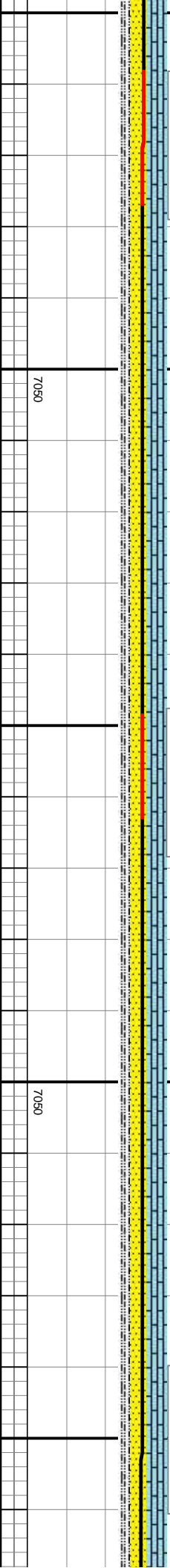
6750
SS: med-dk gy, brn-dk brn, sl frm-hd, brit,
vf-f gr, ang-sr, p strd, arg calc cnt, fast
difse mod stmg, bri bl cut

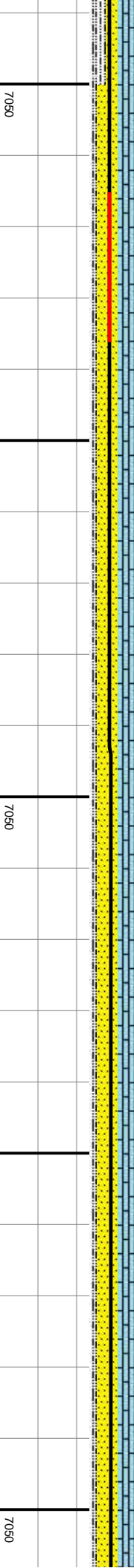
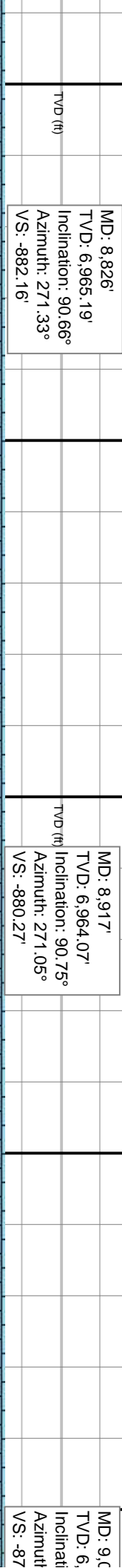
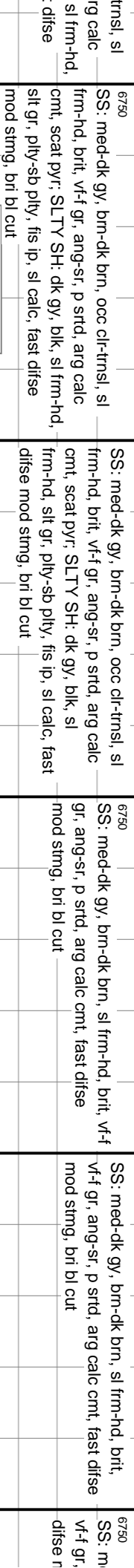
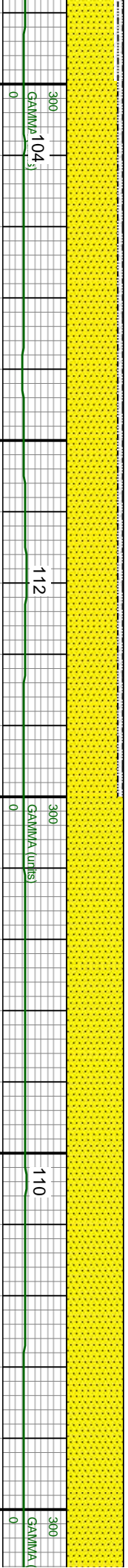
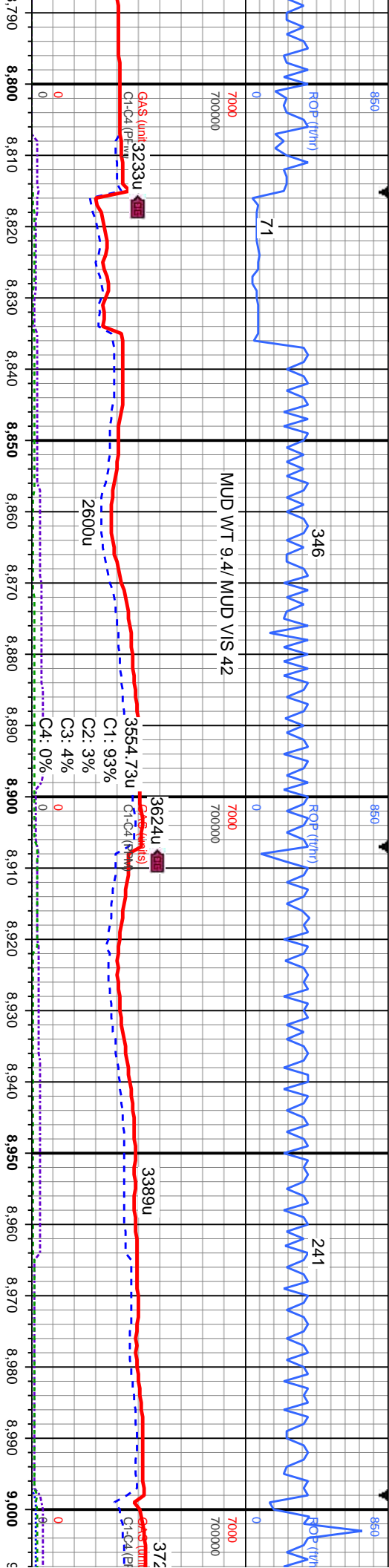
SS: med-dk gy,
vf-f gr, ang-sr, f
difse mod stmg

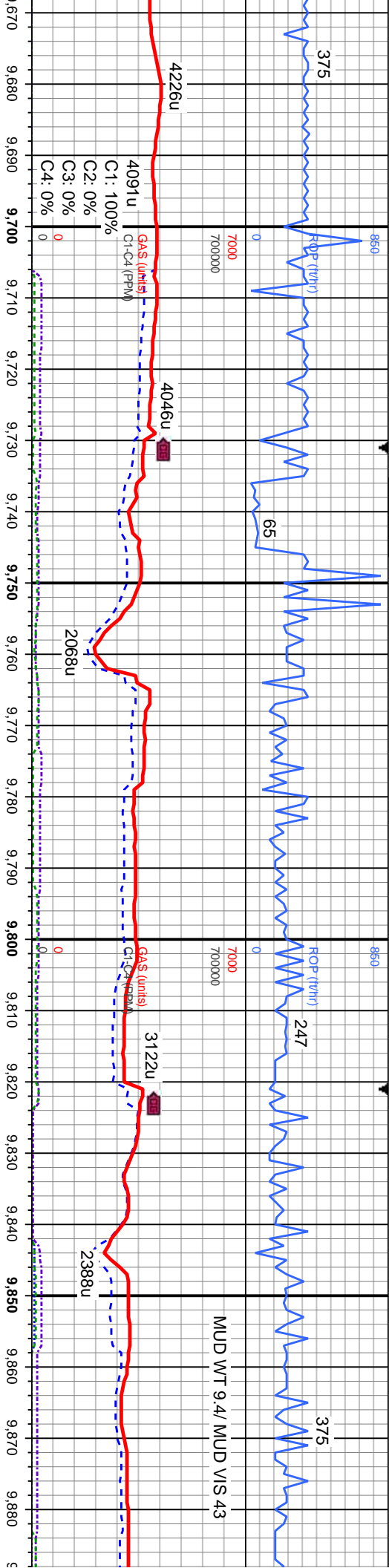
MD: 8,368'
TVD: 6,961.09'
Inclination: 89.34°
Azimuth: 269.14°
VS: -884.64'

MD: 8,459'
TVD: 6,961.59'
Inclination: 90.04°
Azimuth: 270.85°
VS: -884.65'

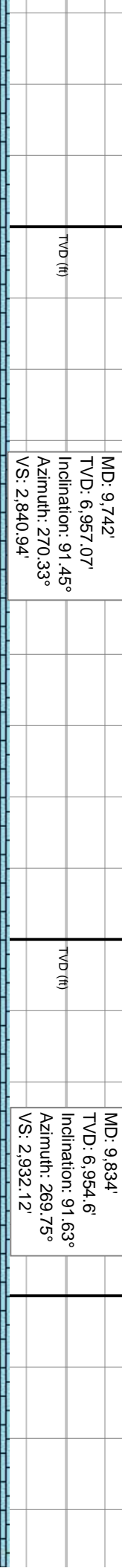
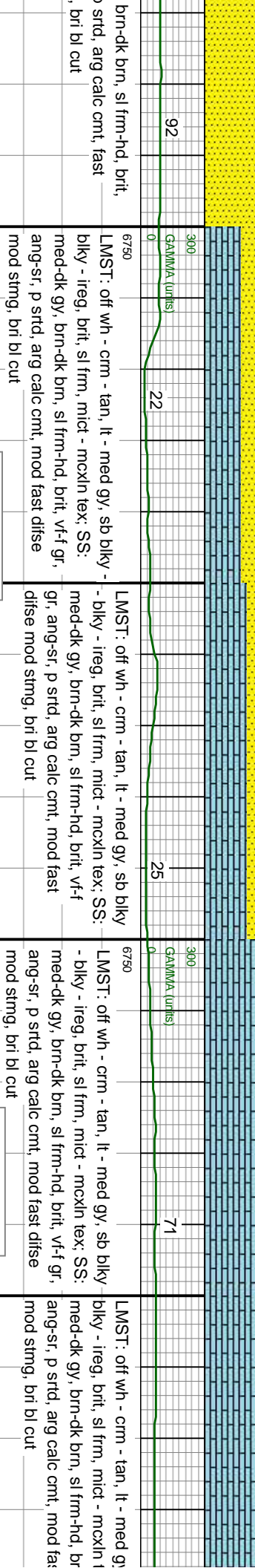
MD: 8,550'
TVD: 6,962.15'
Inclination: 89.25°
Azimuth: 270.5°
VS: -883.58'





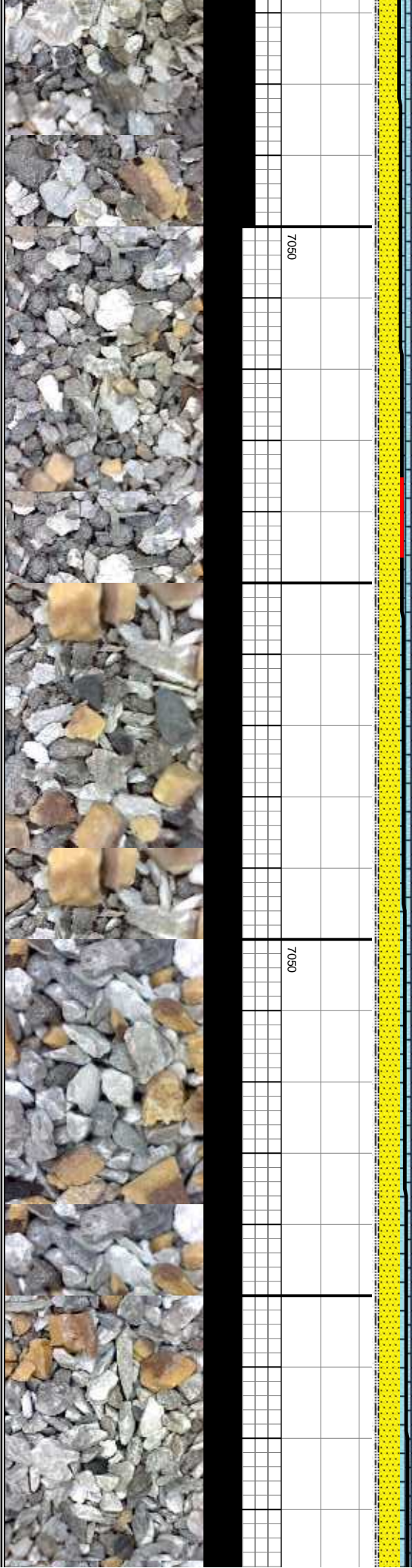


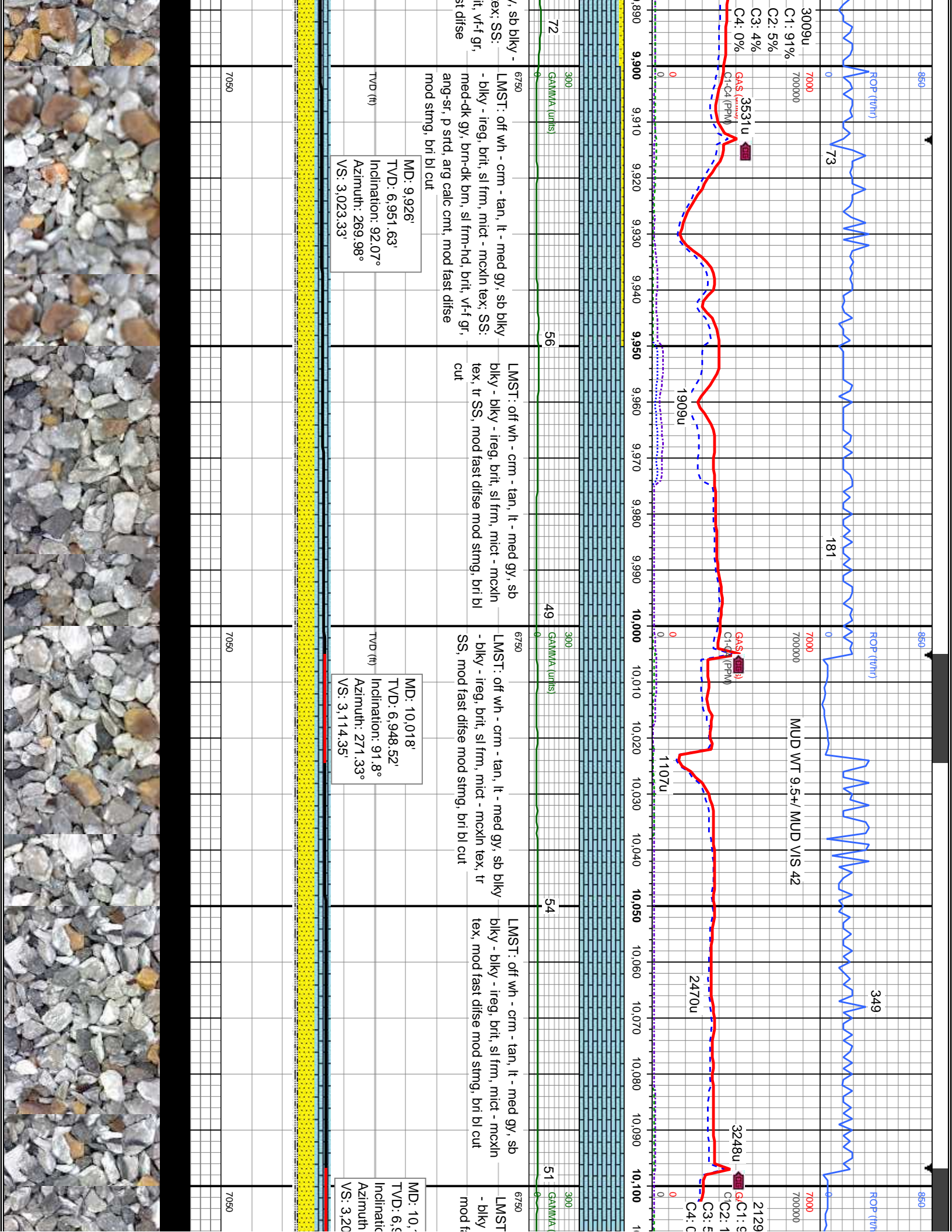
MUD WT 9.4/ MUD VIS 43

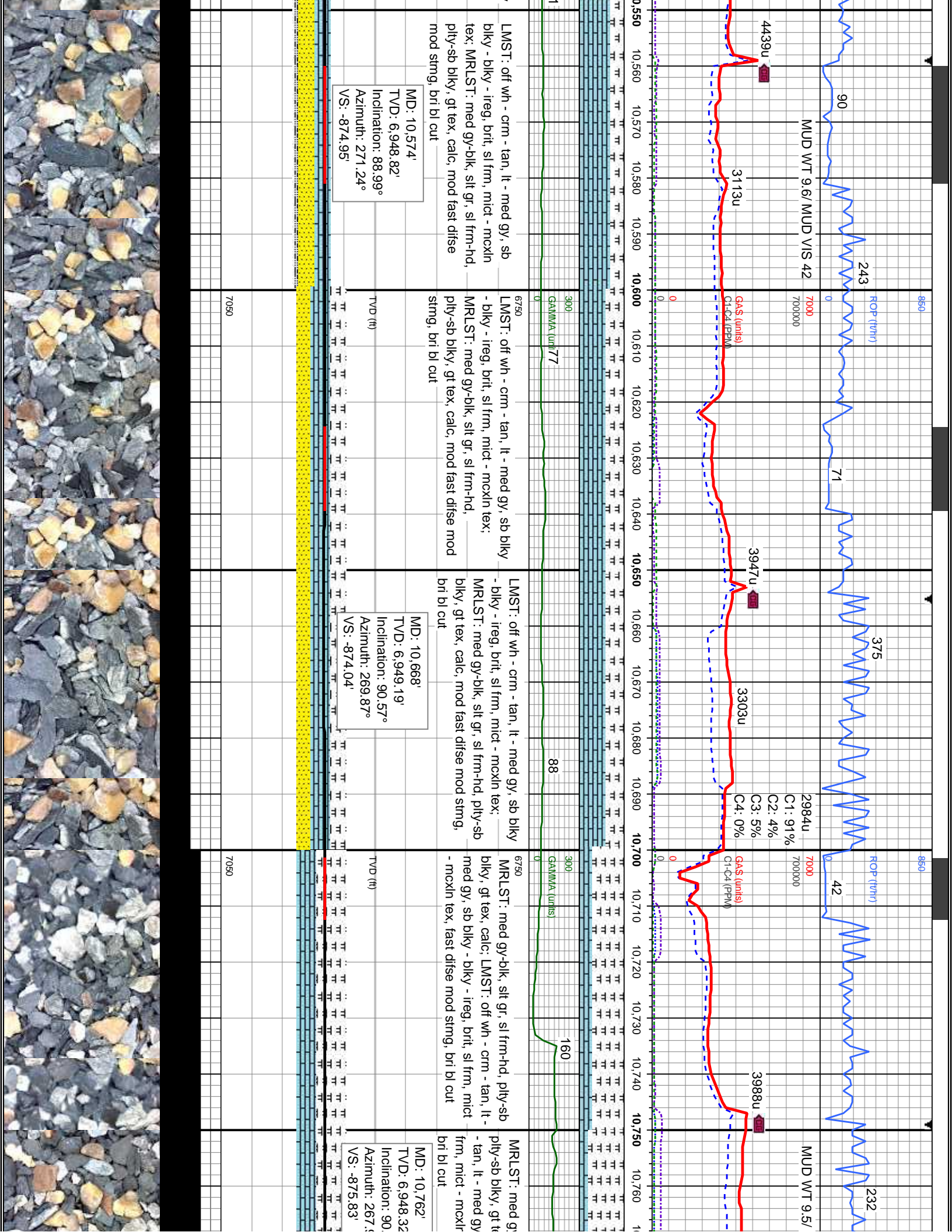


MD: 9,742'
TVD: 6,957.07'
Inclination: 91.45°
Azimuth: 270.33°
VS: 2,840.94'

MD: 9,834'
TVD: 6,954.6'
Inclination: 91.63°
Azimuth: 269.75°
VS: 2,932.12'







6/6/2015

MINDEPTH

MUD WT 9.4/ MUD VIS 42

30

ROP (ft/hr)

MUD WT 9.4/ MUD VIS 43

31

ROP (ft/hr)

3344u

3029u

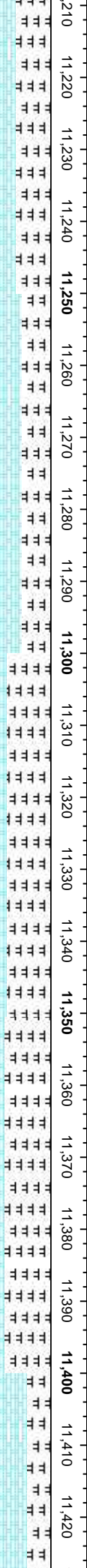
3530u

3603u

3352u

3211u
C1: 81%
C2: 3%
C3: 13%
C4: 3%

7000
7000000



112

120

185

300

300

T: med gy-blk, slt gr, sl frm-hd, blk, gt tex, calc; CHK: med-dk gy, sm, brit, sb ply-sb blk, sm tex, mot, fast difse mod stmg, bri bl cut

MRLST: med gy-blk, slt gr, sl frm-hd, ply-sb blk, gt tex, calc; CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blk, sm tex, mot, v calc, fast difse mod stmg, bri bl cut

MRLST: med gy-blk, slt gr, sl frm-hd, ply-sb blk, gt tex, calc; CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blk, sm tex, mot, v calc, fast difse mod stmg, bri bl cut

MRLST: med gy-blk, slt gr, sl frm-hd, ply-sb blk, gt tex, calc; CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blk, sm tex, mot, v calc, fast difse mod stmg, bri bl cut

CHK: med-dk gy, sft-sl frm, blk, sm tex, mot, v calc; gy-blk, slt gr, sl frm-hd, ply-sb blk, fast difse, mod fas s bl-wh cut

MD: 11,234'
TVD: 6,944.4'
Inclination: 90.4°
Azimuth: 269.3°
VS: -884.96'

MD: 11,329'
TVD: 6,942.65'
Inclination: 91.71°
Azimuth: 271.43°
VS: -884.35'

MD: 11,423'
TVD: 6,940.78'
Inclination: 90°
Azimuth: 270°
VS: -882.52'

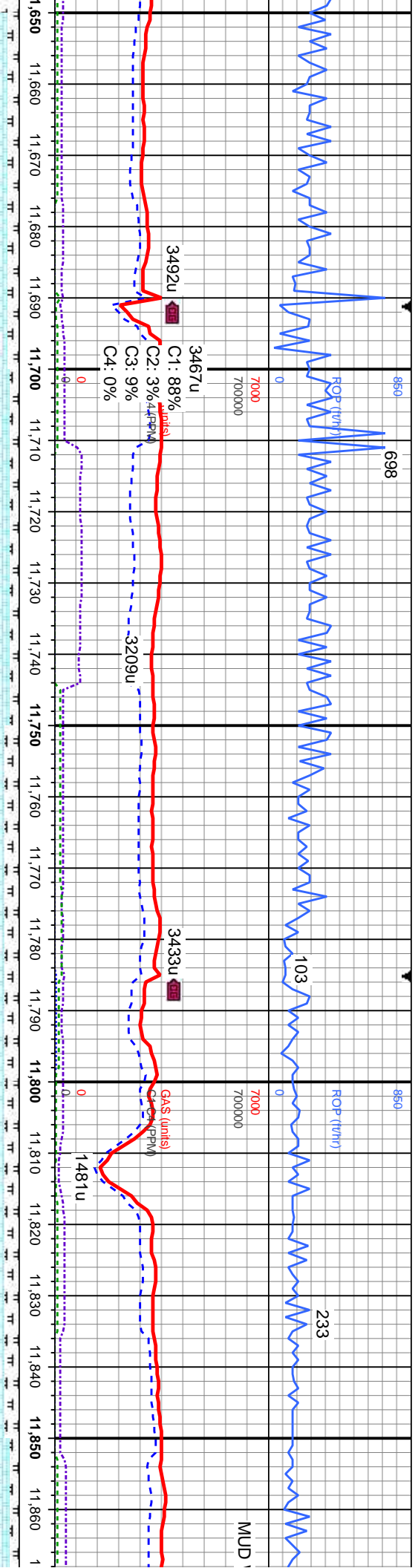
TVD (ft)

TVD (ft)

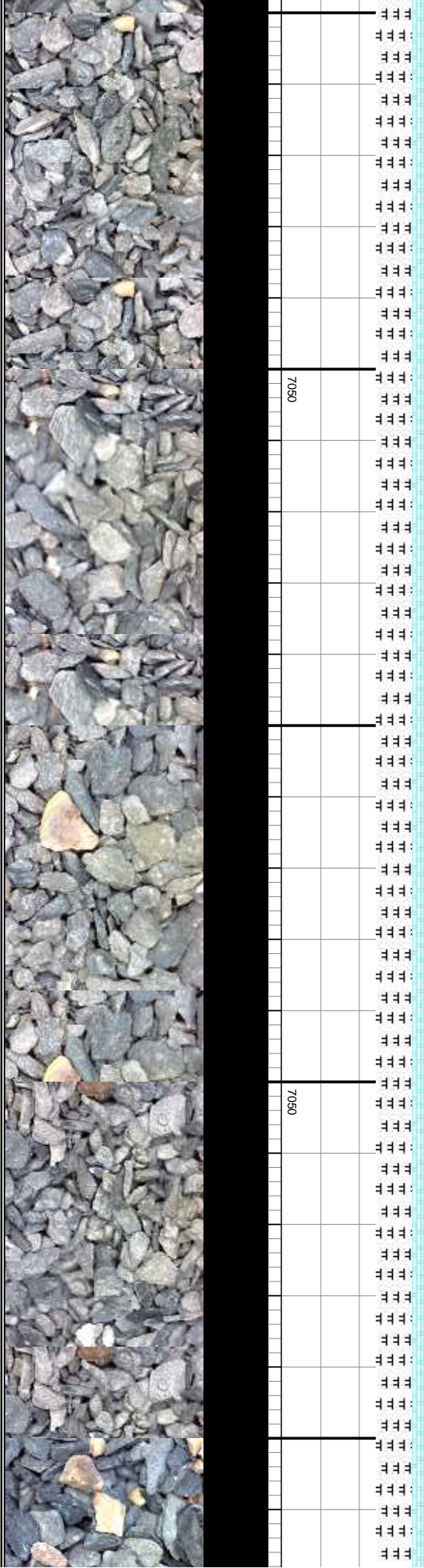
7050

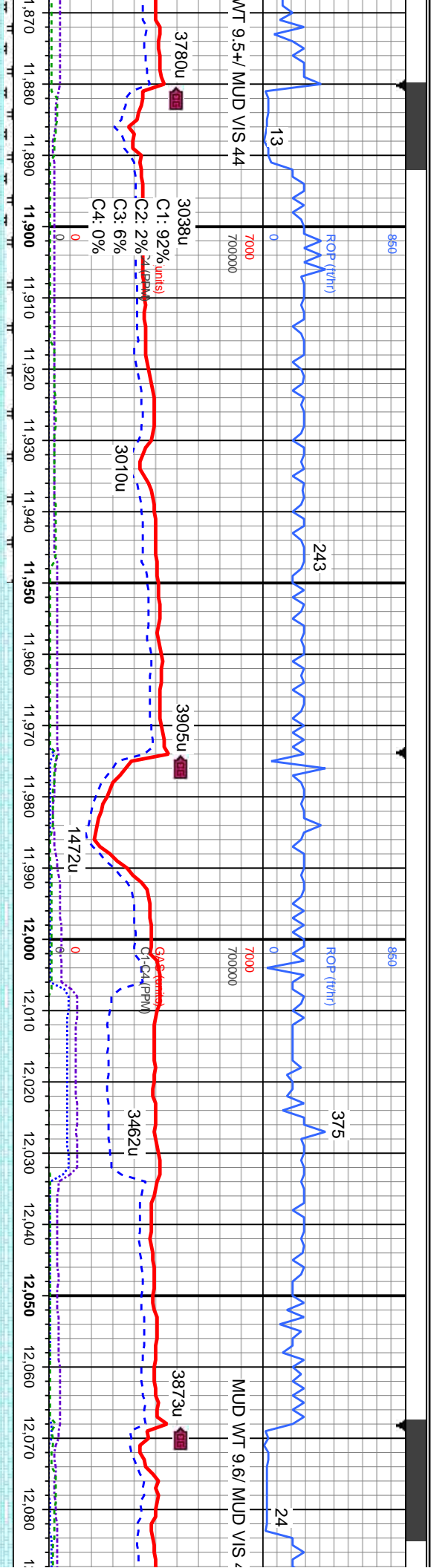
7050





CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blkly, sm tex, mot, v calc; MRLST: med gy-blk, slt gr, sl frm-hd, ply-sb blkly, gt tex, calc, tr bent, fast difse, mod fas string-milky, bri bl-wh cut	CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blkly, sm tex, mot, v calc; MRLST: med gy-blk, slt gr, sl frm-hd, ply-sb blkly, gt tex, calc, tr bent, fast difse, mod fas string-milky, bri bl-wh cut	CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blkly, sm tex, mot, v calc; MRLST: med gy-blk, slt gr, sl frm-hd, ply-sb blkly, gt tex, calc, tr bent, fast difse, mod fas string-milky, bri bl-wh cut	CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blkly, sm tex, mot, v calc; MRLST: med gy-blk, slt gr, sl frm-hd, ply-sb blkly, gt tex, calc, tr bent, fast difse, mod fas string-milky, bri bl-wh cut
MD: 11,706' TVD: 6,938.32' Inclination: 90.48° Azimuth: 269.74° VS: 4,787.54'	MD: 11,800' TVD: 6,937.38' Inclination: 90.66° Azimuth: 269.15° VS: 4,880.86'		





7, sft-sl frm, brit, sb ply-sb
t, v calc; MRLST: med
frm-hd, ply-sb blkly, gt tex,
t difse, mod fas string-milky,

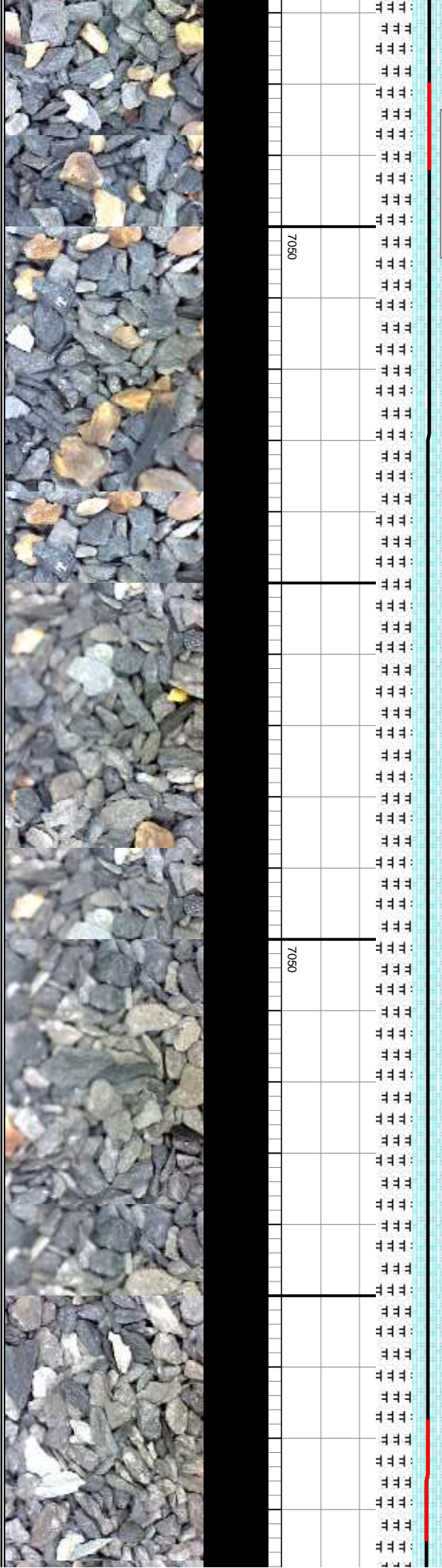
CHK: med-dk gy, sft-sl frm, brit, sb ply-sb
blkly, sm tex, mot, v calc; MRLST: med gy-blk,
slr gr, sl frm-hd, ply-sb blkly, gt tex, calc, tr
bent, fast difse, mod fas string-milky, bri
bl-wh cut

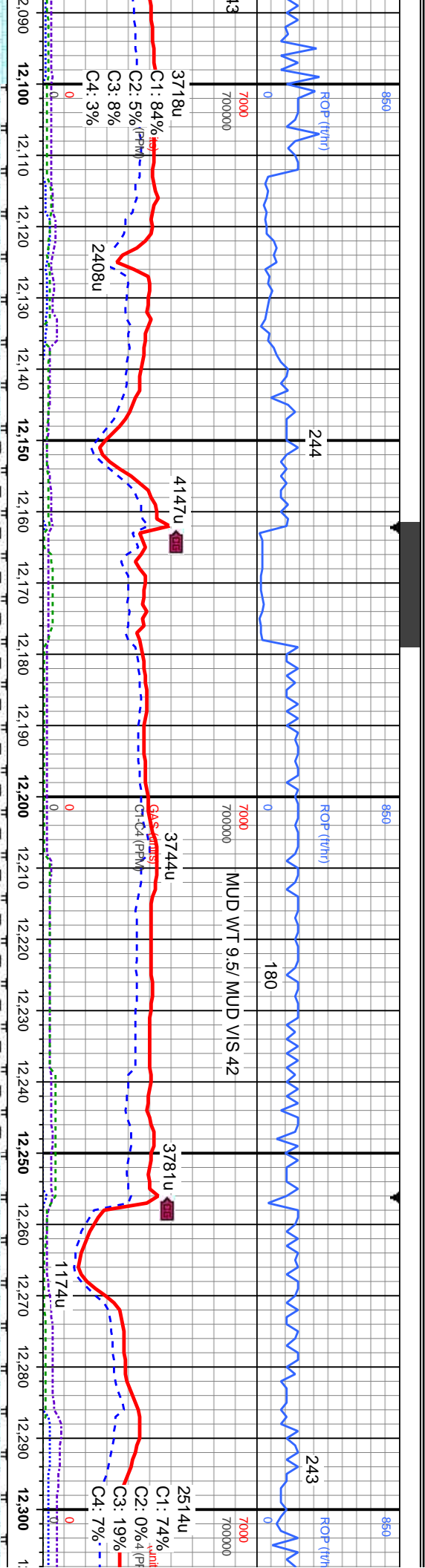
CHK: med-dk gy, sft-sl frm, brit, sb ply-sb
blkly, sm tex, mot, v calc, tr MRLST, tr bent,
fast difse, mod fas string-milky, bri bl-wh
cut

CHK: med-dk gy, sft-sl frm, brit, sb ply-sb
blkly, sm tex, mot, v calc, tr MRLST, tr bent,
fast difse, mod fas string-milky, bri bl-wh
cut

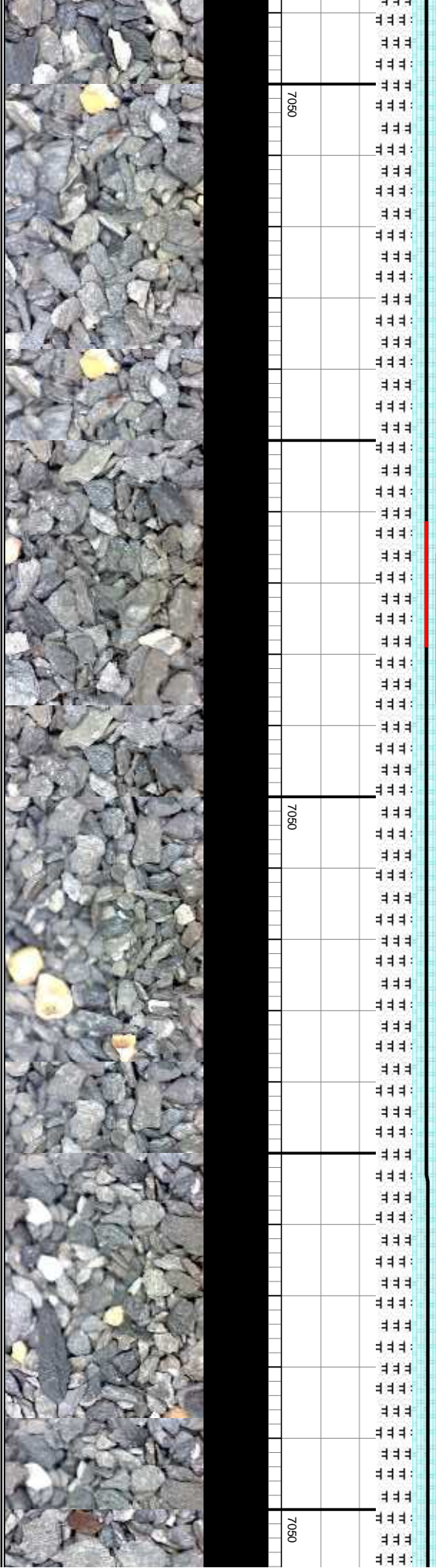
CHK: med-dk gy, sft-sl frm, brit, sb ply-sb
blkly, sm tex, mot, v calc, tr MRLST
fast difse, mod fas string-milky, bri
cut

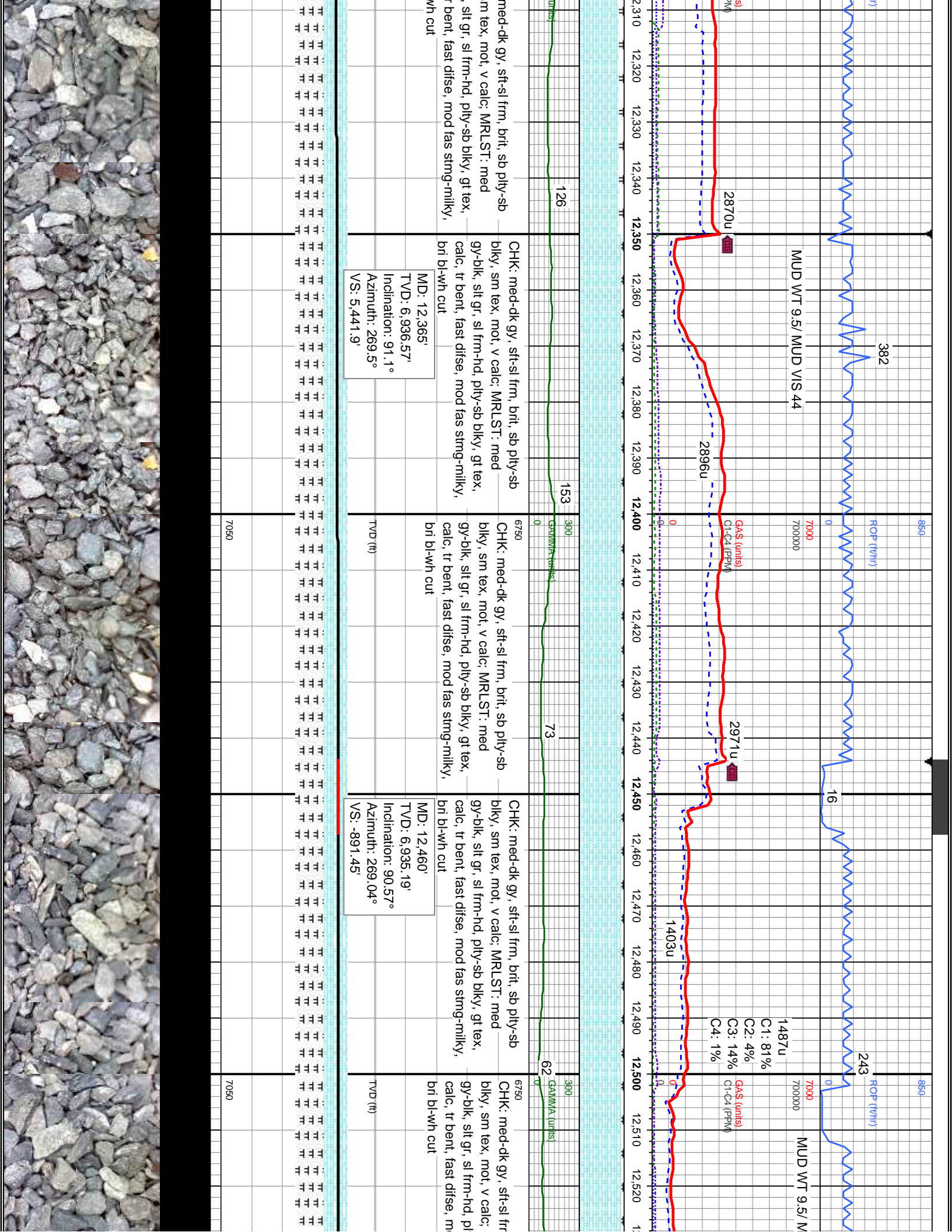
MD: 11,894'	MD: 11,988'	MD: 12,082'
TVD: 6,936.87'	TVD: 6,937.45'	TVD: 6,938.24'
Inclination: 89.96°	Inclination: 89.34°	Inclination: 89.1°
Azimuth: 269.36°	Azimuth: 268.72°	Azimuth: 268.3°
VS: 4,974.21'	VS: 5,067.61'	VS: 5,161.09'





ply-sb , tr bent, bl-wb	67/50 CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blky, sm tex, mot, v calc, MRLST: med gy-blk, sft gr, sl frm-hd, ply-sb blky, gt tex, calc, tr bent, fast difse, mod fas string-milky, brit bl-wb cut	67/50 CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blky, sm tex, mot, v calc, MRLST: med gy-blk, sft gr, sl frm-hd, ply-sb blky, gt tex, calc, tr bent, fast difse, mod fas string-milky, brit bl-wb cut	67/50 CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blky, sm tex, mot, v calc, MRLST: med gy-blk, sft gr, sl frm-hd, ply-sb blky, gt tex, calc, tr bent, fast difse, mod fas string-milky, brit bl-wb cut	67/50 CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blky, sm tex, mot, v calc, MRLST: med gy-blk, sft gr, sl frm-hd, ply-sb blky, gt tex, calc, tr bent, fast difse, mod fas string-milky, brit bl-wb cut
39° 9°	TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)
	MD: 12,176' TVD: 6,938.6' Inclination: 89.87° Azimuth: 269.86° VS: 5,254.47'		MD: 12,271' TVD: 6,938.09' Inclination: 90.75° Azimuth: 270.1° VS: 5,348.67'	





6/7/2015

MINDEPTH

ROP (W/H)

7000

700000

MUD WT 9.3/ MUD VIS 44

ROP (W/H)

7000

700000

349

241

4236u

3737u

3810u

1626u

3642u

C1: 85%

C2: 3%

C3: 12%

C4: 0%

GAS (units)

Cl-C4 (PPM)

GAS (units)

Cl-C4 (PPM)

300

GAMMA (uBq/s)

216

300

GAMMA (uBq/s)

183

y-bk, slt gr, sl frm-hd,
ex, calc; CHK: med-dk gy,
b ply-sb blkly, sm tex, mot,
v calc, tr bent, fast difse mod stmg, bri bl

MRLST: med gy-bk, slt gr, sl frm-hd,
ply-sb blkly, gt tex, calc; CHK: med-dk gy,
sft-sl frm, brit, sb ply-sb blkly, sm tex, mot,
v calc, tr bent, fast difse mod stmg, bri bl cut

MRLST: med gy-bk, slt gr, sl frm-hd,
ply-sb blkly, gt tex, calc; CHK: med-dk gy,
sft-sl frm, brit, sb ply-sb blkly, sm tex, mot,
v calc, tr bent, fast difse mod stmg, bri bl cut

MRLST: med gy-bk, slt gr, sl frm-hd,
ply-sb blkly, gt tex, calc; CHK: med-dk gy,
sft-sl frm, brit, sb ply-sb blkly, sm tex, mot, v
calc, tr bent, fast difse mod stmg, bri bl cut

MRLST: med gy-bk, slt gr, sl frm-h
blkly, gt tex, calc; CHK: med-dk gy,
brit, sb ply-sb blkly, sm tex, mot, v c
bent, fast difse mod stmg, bri bl cut

TVD (ft)

MD: 13,026'
TVD: 6,943.8'
Inclination: 89.6°
Azimuth: 270.89°
VS: -906.9'

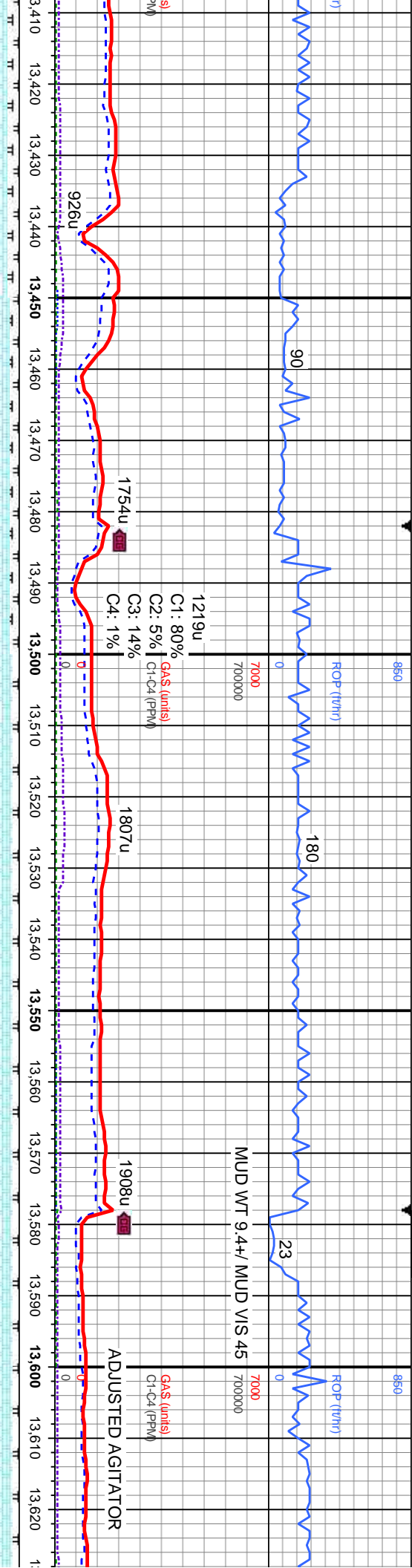
TVD (ft)

MD: 13,121'
TVD: 6,944.39'
Inclination: 89.69°
Azimuth: 271.13°
VS: 6,193.05'

7050

7050





med-dk gy, sft-sl frm, brit, sb ply-sb tex, mot, v calc; MRLST: med sft gr, sl frm-hd, ply-sb blk, gt tex, calc, bent, fast difse, mod fas string-milky, h cut	CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blk, sm tex, mot, v calc; MRLST: med gy-blk, sft gr, sl frm-hd, ply-sb blk, gt tex, calc, bent, fast difse, mod fas string-milky, bri bl-wh cut	<div>MD: 13,499' TVD: 6,938.38' Inclination: 90.66° Azimuth: 270.78° VS: 6,566.93'</div>	med-dk gy, sft-sl frm, brit, sb ply-sb blk, sm tex, mot, v calc; MRLST: med gy-blk, sft gr, sl frm-hd, ply-sb blk, gt tex, calc, tr bent, fast difse, mod fas string-milky, bri bl-wh cut	CHK: med-dk gy, sft-sl frm, brit, sb ply-sb blk, sm tex, mot, v calc; MRLST: med gy-blk, sft gr, sl frm-hd, ply-sb blk, gt tex, calc, tr bent, fast difse, mod fas string-milky, bri bl-wh cut	<div>MD: 13,593' TVD: 6,936.93' Inclination: 91.1° Azimuth: 270.67° VS: 6,659.97'</div>
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