



Scale: 5" / 100'
Measured Depth Log

Well Name Carlson J-15-16HN

Location SEC15, T5N, R65W

State Colorado

County Weld

Country United States

Rig Number Frontier 8

API Number 05-123-41709

Field Wattenberg

Geographic Region DJ Basin

Drilling Completed 11/14/2015

Spud Date 10/7/2015

Surface Coordinates Lat/Long: 40.403697/-104.641293

SEC15, T5N, R65W
1054' FNL, 369' FEL

Bottom Hole Coordinates SEC16, T5N, R65W
2260' FNL, 2337' FWL

Ground Elevation 4621'

K.B. Elevation 4643.5'

Logged Interval 6000' To 14898'

Total Depth 14898'

Formation Niobrara

Type of Drilling Fluid LSND

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

Well Site Logging Company Columbine Logging, INC.

Senior Wellsite Geologist Brad Wilson

Wellsite Geologist Tracy Lawson

Lead Senior Wellsite Geologist Robert Davis

Second Wellsite Geologist John Sabroske

Zone Color Coding

Oil

Note

Error

Condensate

Core

Water

Gas

Pressure

Seal

Oil Show

P PINPOINT

V VUGGY

Engineering

D DEAD

E EVEN

Q QUESTIONABLE

BIT

S SPOTTED STAINING

C CONNECTION (UP)

Porosity

C CONNECTION (DOWN)

C CONNECTION GAS

F FENESTRAL

T TRIP GAS

F FRACTURE

T TRIP GAS (LEFT)

I INTERCRYSTALLINE

D DOWN TIME GAS

Accessories

GASTROPOD

ARGILLITE GRAIN

HEAVY MINERAL

K KAOLIN

Stringer

INOCERAMUS

O OOLITE

BITUMENOUS SUBSTANCE

BRECCIA FRAGMENTS

C CALCAREOUS

CARBONACEOUS FLAKES

P PISOLITE

PLANT REMAINS

PLANT SPORES

S SCAPHOPOD

STROMATOPOROID

F FISH

FORAMINIFERA

ARGILLACEOUS

CORAL

CRINOID

ECHINOID

Minerals

ANHYDRITIC

GYPSIFEROUS

F FOSSIL

ALGAE

AMPHIPORA

BELEMNITE

BIOCLASTIC

BRACHIOPOD

BRYOZOA

CEPHALOPOD

PELLET

D DOLOMITIC

F FELDSPAR

FERRUGINOUS PELLET

FERRUGINOUS

GLAUCONITIC

GYPSIFEROUS

SILTY

TUFFACEOUS

M MARCASITE

M MICACEOUS

MINERAL CRYSTALS

N NODULES

PHOSPHATE PELLETS

P PYRITE

S SALT CAST

S SANDY

S SIDERITE

SILICEOUS

SILTY

TUFFACEOUS

M MARLSTONE

M MICACEOUS

MINERAL CRYSTALS

N NODULES

PHOSPHATE PELLETS

P PYRITE

S SALT CAST

S SANDY

S SIDERITE

SILICEOUS

SILTY

TUFFACEOUS

M MARLSTONE

M MICACEOUS

MINERAL CRYSTALS

N NODULES

PHOSPHATE PELLETS

P PYRITE

S SALT CAST

S SANDY

S SIDERITE

SILICEOUS

SILTY

TUFFACEOUS

Rock Types

UNKNOWN

ANHYDRITE

BENTONITE

BRECCIA

CHALK

CEMENT

CHERT

CLAY CHOKE SANC

CLAYSTONE

COAL

CONGLOMERATE

DOLOMITIC

DOLOMITIC LIMESTONE

GRANITE

GYPSUM

IGNEOUS

SIDERITE or LIMONITE

LIMESTONE

MARLSTONE

METAMORPHIC

NO SAMPLE

SALT

SANDSTONE

SALT-PEPPER SANC

SHALE

SHALE COLORED

SHALE GRAY

SHALY SANDSTONE

SHALY SILTSTONE

SILTY SHALE

SILTSTONE

TILL

TUFF

WELDED TUFF

D DEAD

E EVEN

Q QUESTIONABLE

BIT

S SPOTTED STAINING

C CONNECTION (UP)

C CONNECTION (DOWN)

C CONNECTION GAS

F FENESTRAL

T TRIP GAS

F FRACTURE

T TRIP GAS (LEFT)

I INTERCRYSTALLINE

D DOWN TIME GAS

I INTEROOLITIC

M MOLDIC

O ORGANIC

C CORE - LOST

C CORE - RECOVERED

Other Symbols

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

 FAULT  WIRELINE TESTED - RT **FX** FINELYXLN

 FORMATION TOP  DRILL STEM TEST **GS** GRAINSTONE

 GAS SHOW  MIN DEPTH **L** LITHOGRAPHIC


 OIL SHOW **MX** MICROXLN


 MIN DEPTH UP **MS** MUDSTONE

Rounding

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

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


 OVERTURNED STRATA **B** SUBANG

 REVERSE FAULT **R** SUBRND

Sorting

 CASING **M** MODERATE

Textures

 SIDEWALL CORE (LEFT) **P** POOR

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

 SLIDE **C** CHALKY

 SURVEY **CX** CRYPTOXLN

Slide/Rotate

COLUMBINE LOGGING RIGGED UP ON
10/16/2015 MANNED 2-PERSON LOGGING.

STARTED LOGGING AT 6000' @ 8:05 PM MDT
10/16/2015.

ROP DATA IMPORTED FROM PASON EDR

ROP —

as & Chromatograph

C1
C2
C3
C4

GAS DATA FROM BLOODHOUND
CHROMATOGRAPH UNIT #0331 JOB
NUMBER 55 via IBALL GAS CHART DATA

Depth Labels

% Lith

Gamma
GAMMA

**SURVEY AND GAMMA DATA PROVIDED
BY ENSIGN DIRECTIONAL SERVICES**

Well Bore
TV D —

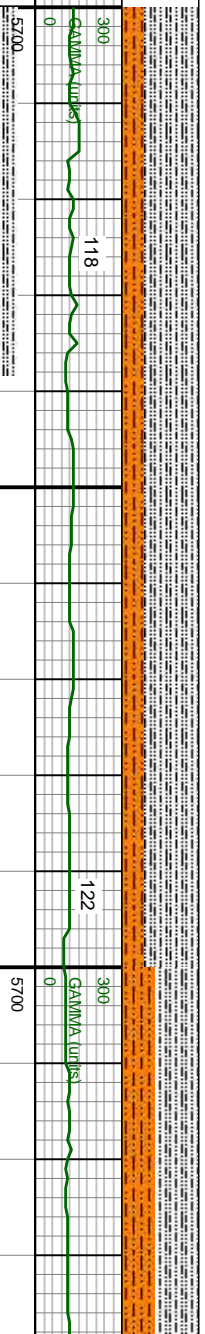
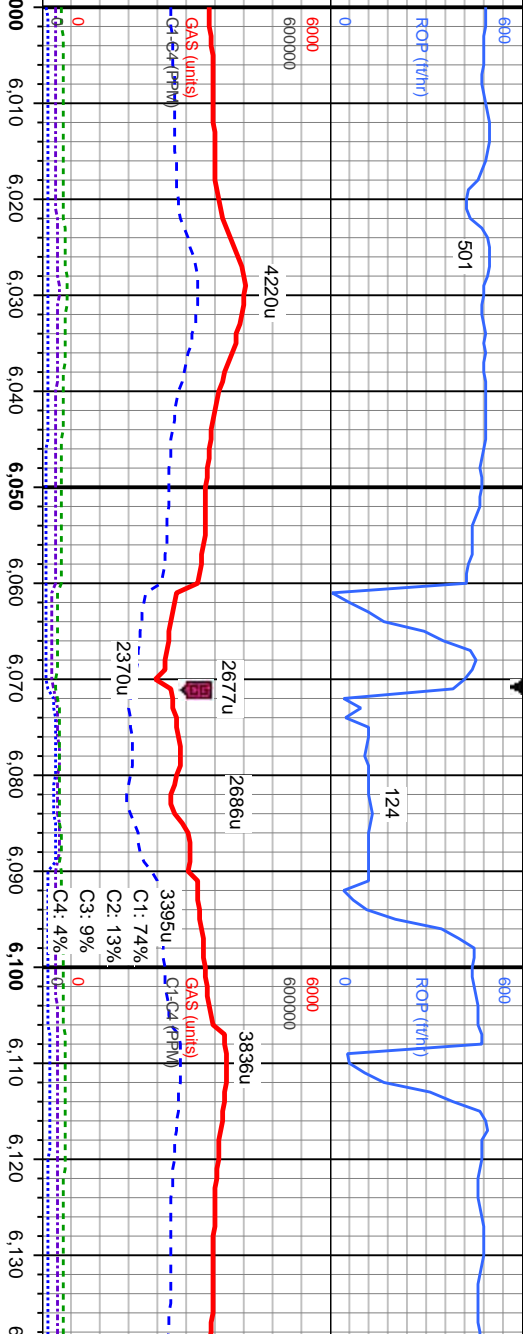
TV D (ft)

Bit Data
Bit #: 2
Type: U519S
Size: 8.75
Depth In: 848'
Depth Out: 7,440'
Jets: 3x18,2x16
S/N: 29253

Oil Show

5-17567

Images

[illegible]

MD: 6.017'
TVD: 5,863.81'
Inclination: 4.9°
Azimuth: 175.2°
VS: -121.65'

Halliburton Mud Report 5:00PM	
Fluid Set LSND	Temp 120F
Weight 9.9	Viscosity 43
Yield Point 10	GELS 4.9/16
Filtrate 5.4	pH 9.0
Chlorides 1500	Hardness 80

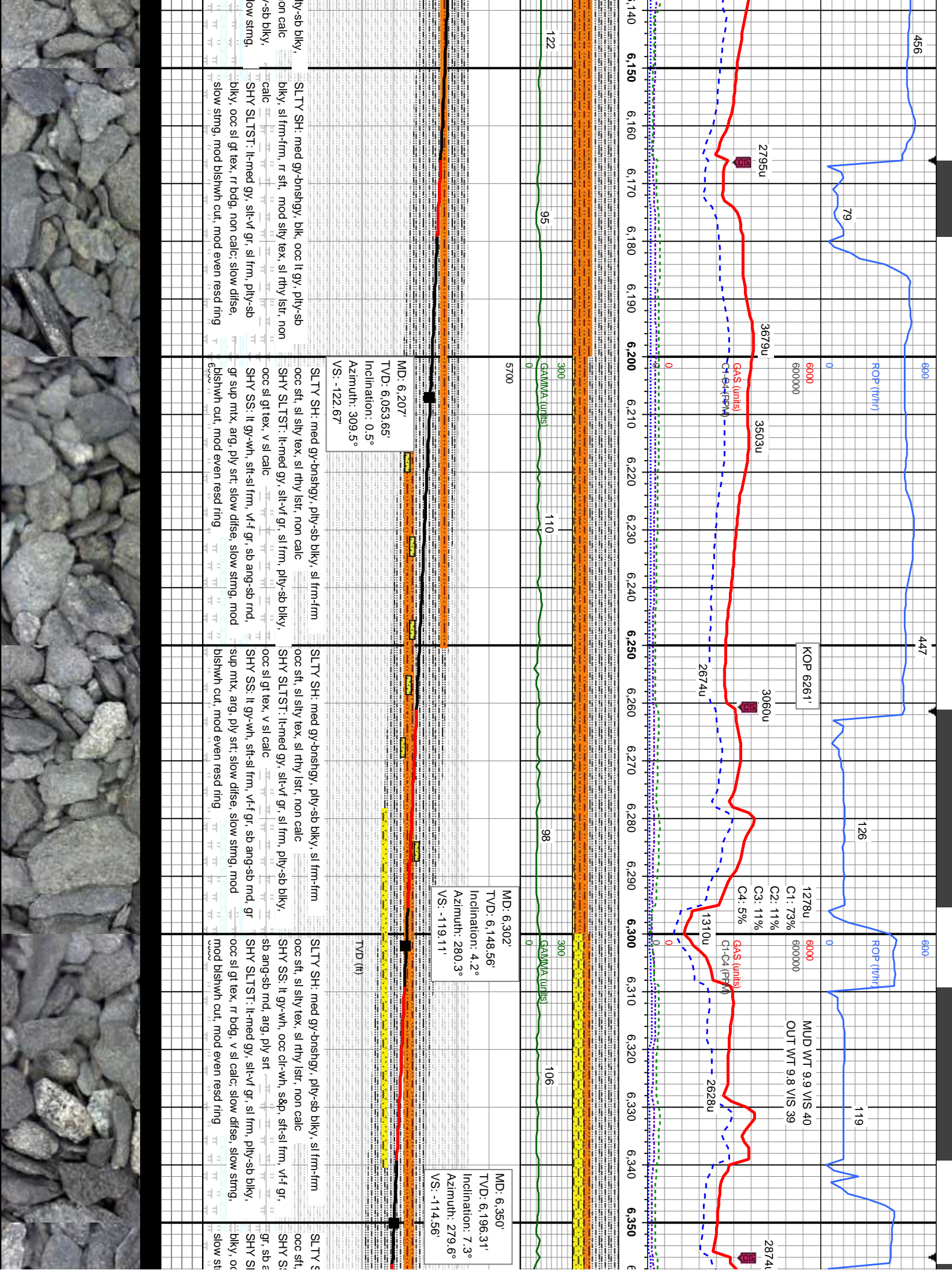
SHY SLTST: lt med gy, slt-vl gr, sl frm, ply-sb
biky, occ sl gt tex, r bdg, non calc; slow diffe,
slow sting, mod bishkn cut, mod even resd ring
calc

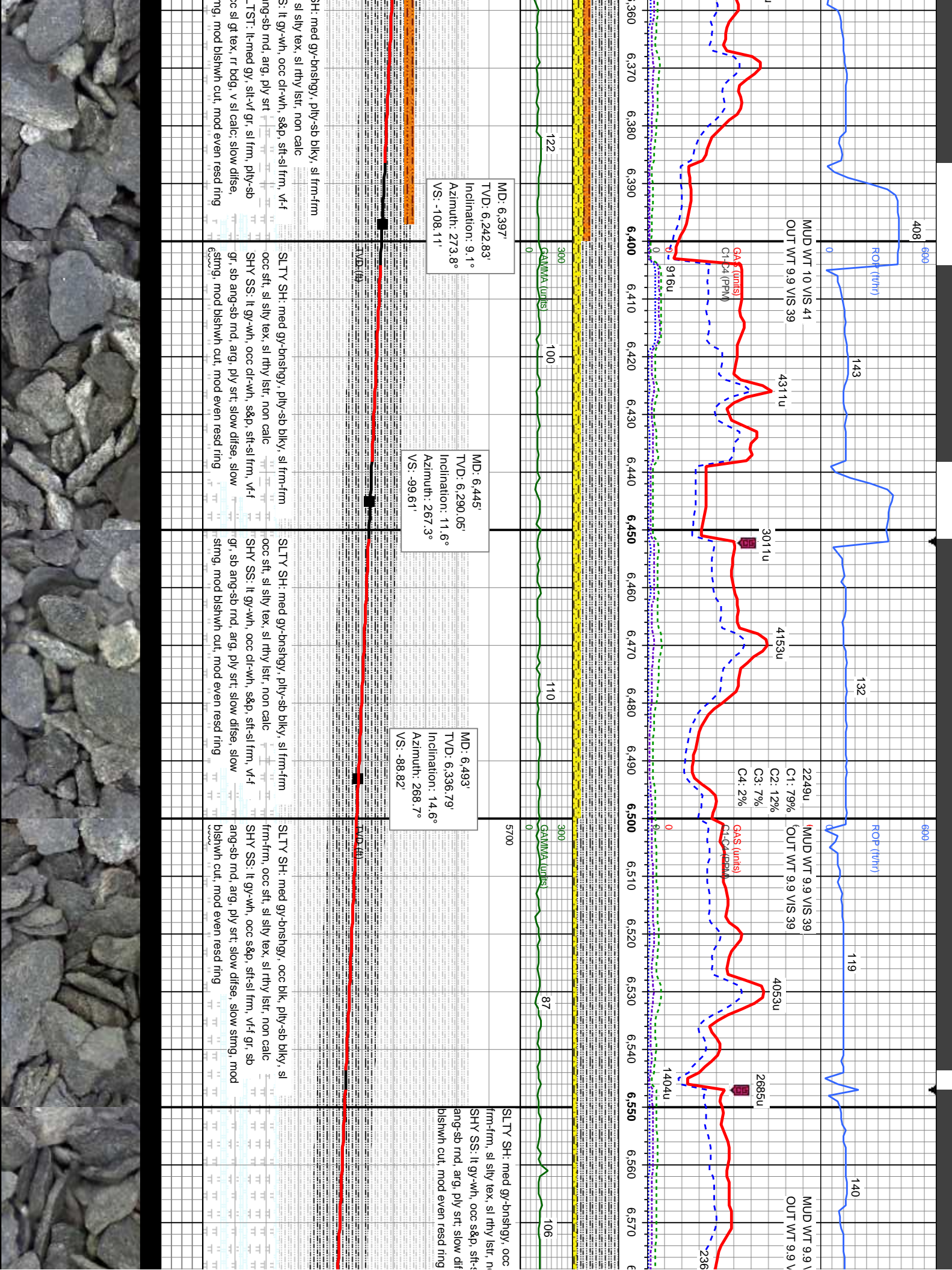
SH.SLT.ST: It-med gy, slt-vf gr, sl frm, ply-sb
 bily, ooc sl gr tex, rr bdg, non calc; slow disse,
 slow sting, mod bishwn cut, mod even read ring

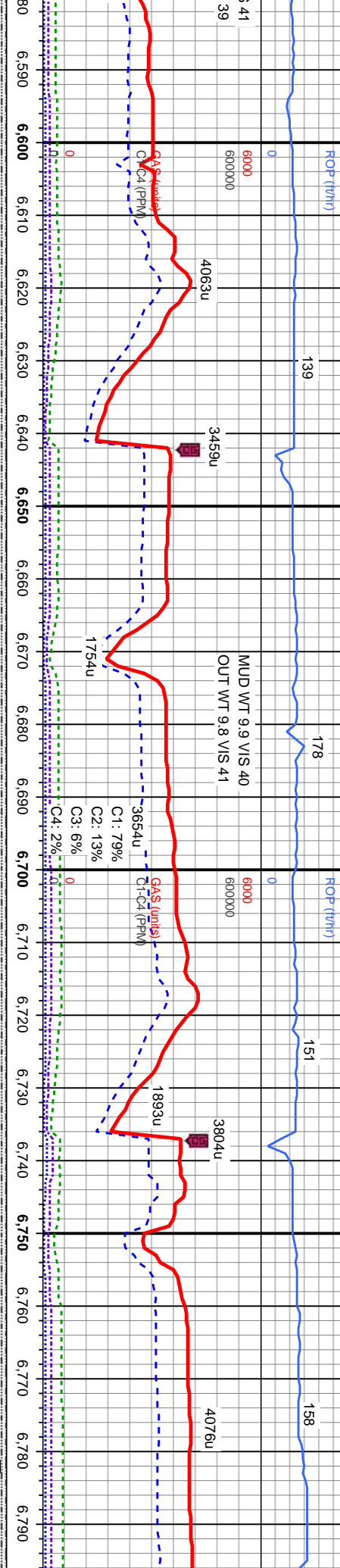
SLTY SH: med gy-bnshy, blk, ooc it gy, p
sl frm-frm, r slt, mod sly tex, sl rhy lst, n
SHY SLTST: lt-med gy, sl-vr gy, sl frm, ply
ooc sl gt tex, r bdg, non calc, slow disse, s
mod bishwv cut, mod even read ring

MD: 6,112'
TVD: 5,958.66'
Inclination: 1.4°
Azimuth: 127.7°
VS: -122.15'









blk, pily-sb blk, sl
on calc
sl frm, v-f-gr, sb
se, slow string, mod

57 SLTY SH: med gy-bnshgy, occ blk, pily-sb blk,
sl frm-frm, sl sily tex, sl rthy lstr, non calc
tr SHY SS: slow difse, slow string, mod bishwh
cut, mod even resd ring

SLTY SH: med gy-bnshgy, occ blk, pily-sb blk, sl
frm-frm, sl sily tex, sl rthy lstr, non calc: slow difse,
slow string, mod bishwh cut, mod even resd ring

5 SLTY SH: med gy-bnshgy, occ blk, pily-sb blk,
sl frm-frm, sl sily tex, sl rthy lstr, non calc: med
difse, mod string, bri bishwh cut, bri mod
even-blochy ring

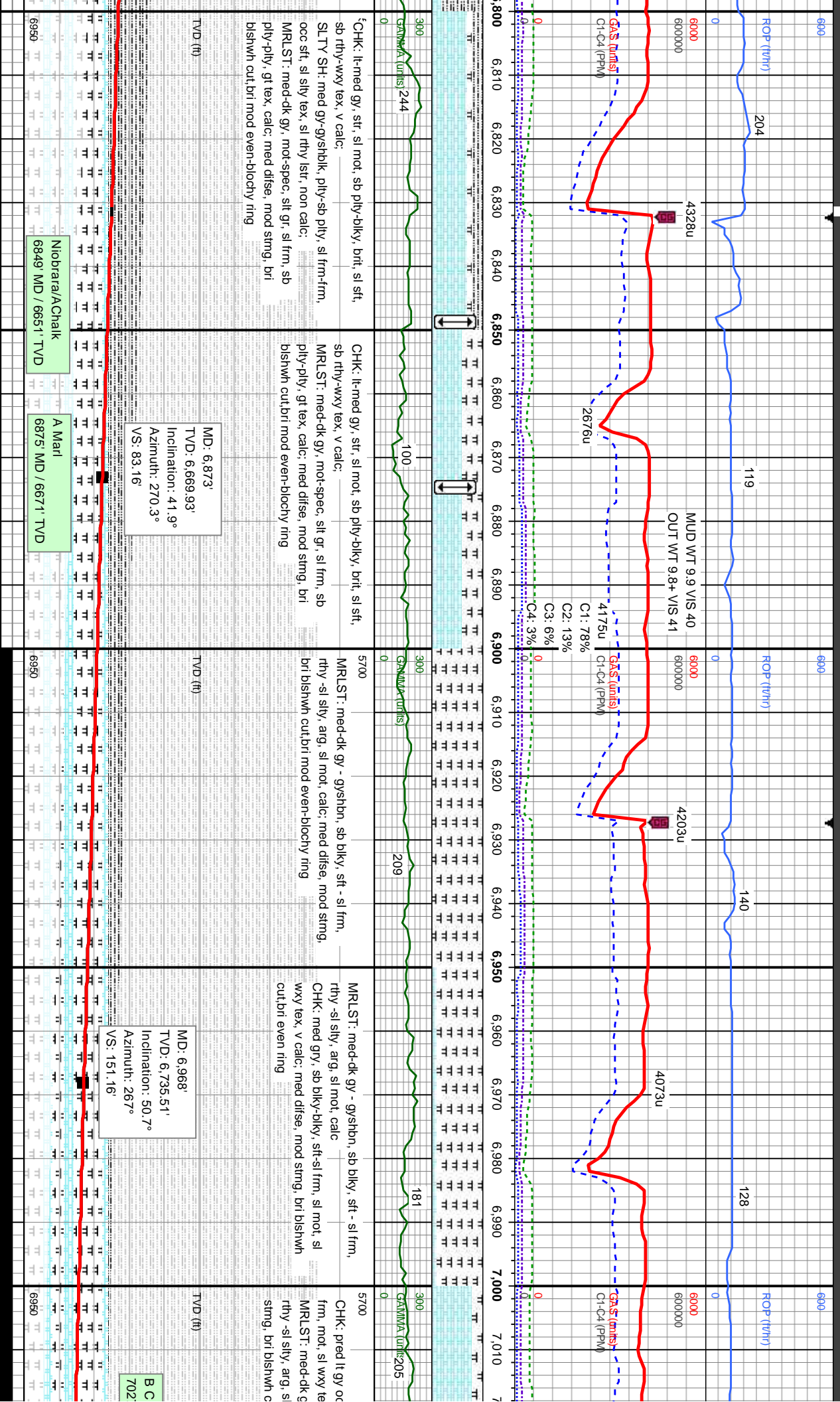
SLTY SH: med gy-gyshblk, pily-sb pily, sl frm-frm,
occ sft, sl sily tex, sl rthy lstr, non calc:
CHK: lt-med gy, str, sl mot, sb pily-blky, bri, sl sft,
sb rthy-wxy tex, v calc: med difse, mod string, bri
bishwh cut, bri mod even-blochy ring

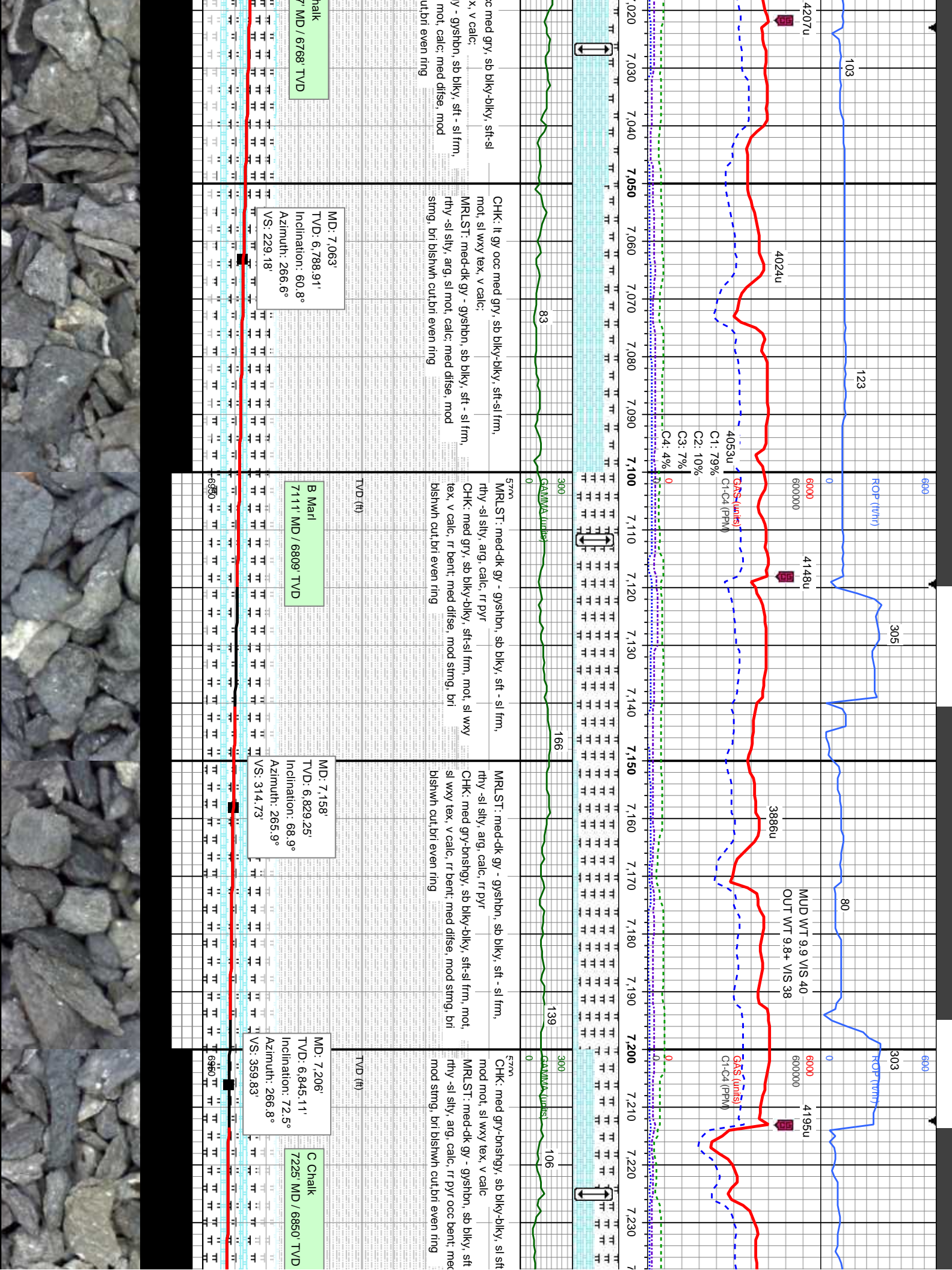
MD: 6,588'
TVD: 6,427.28'
Inclination: 20.7°
Azimuth: 268.7°
VS: -60.29'

MD: 6,683'
TVD: 6,514'
Inclination: 27.4°
Azimuth: 274.9°
VS: -22.38'

MD: 6,778'
TVD: 6,596.38'
Inclination: 34.6°
Azimuth: 272.4°
VS: 25.34'

Sharon Springs
6782 MD / 6599 TVD





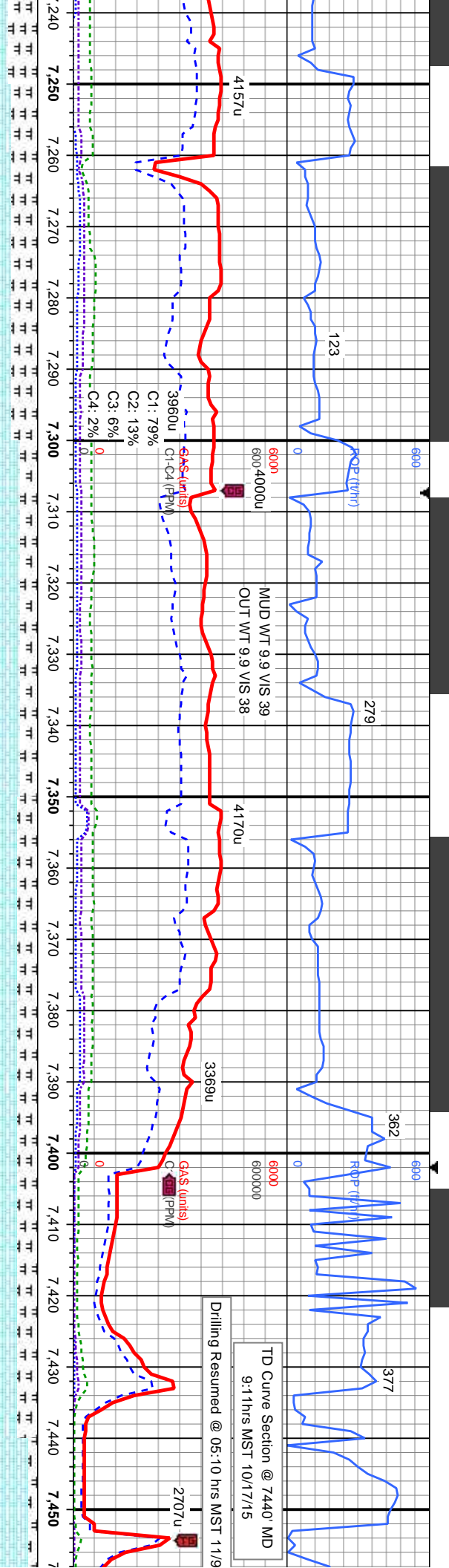
MD: 7.063'
TVD: 6.788.91'
Inclination: 60.8°
Azimuth: 266.6°
VS: 229.18'

B Marl
7111' MD / 6809' TVD

MD: 7.158'
TVD: 6.829.25'
Inclination: 68.9°
Azimuth: 265.9°
VS: 314.73'

MD: 7.206'
TVD: 6.845.11'
Inclination: 72.5°
Azimuth: 266.8°
VS: 359.83'

C Chalk
7225' MD / 6850' TVD



TD Curve Section @ 7,440 MD
9:11 hrs MST 10/17/15

Drilling Resumed @ 05:10 hrs MST 11/9

sl frm,
mod mot, sl wxy tex, v calc
CHK: med gry-brnshgy, sb blkly-blky, sl sft-sl frm,
MRLST: med-dk gy - gysbhn, sb blkly, sft - sl frm,
rthy -sl sily, arg, calc, rr pyr occ bent, mod difse,
mod stimg, bri blshwn cut/bri even ring

MD: 7,253'
TVD: 6,857.83'
Inclination: 76.1°
Azimuth: 267.7°
VS: 404.8'

MD: 7,301'
TVD: 6,867.85'
Inclination: 79.8°
Azimuth: 269.1°
VS: 451.33'

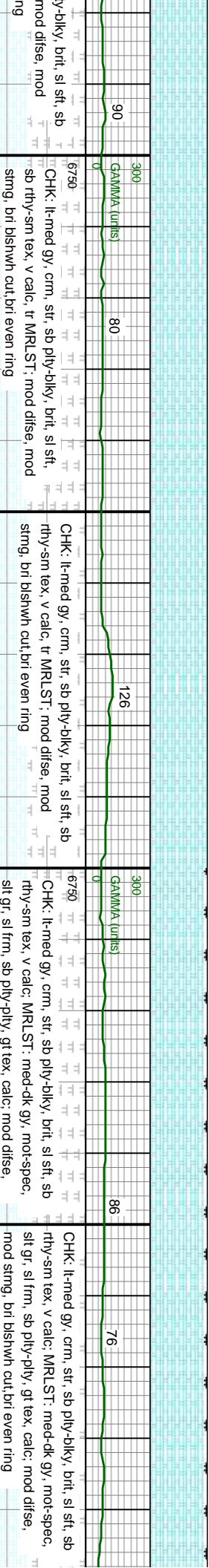
MD: 7,348'
TVD: 6,874.96'
Inclination: 82.8°
Azimuth: 269.8°
VS: 497.28'

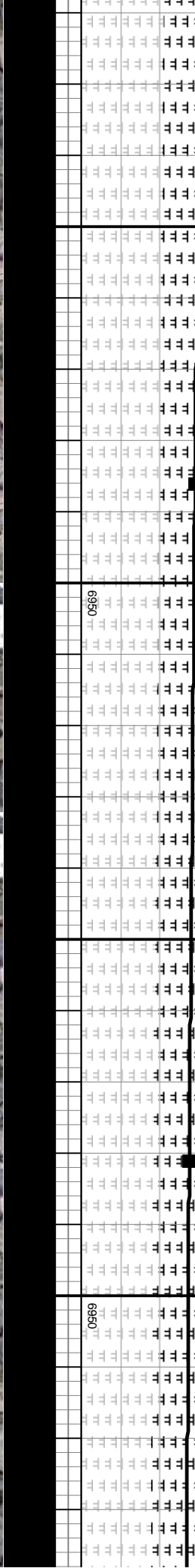
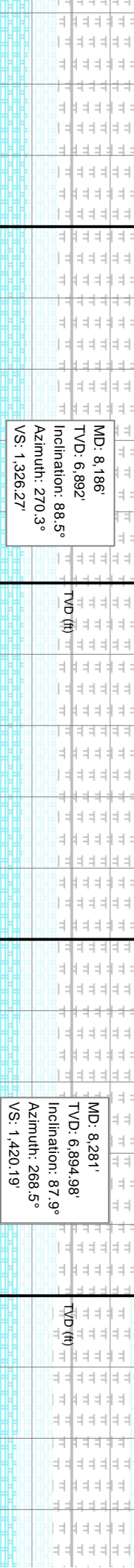
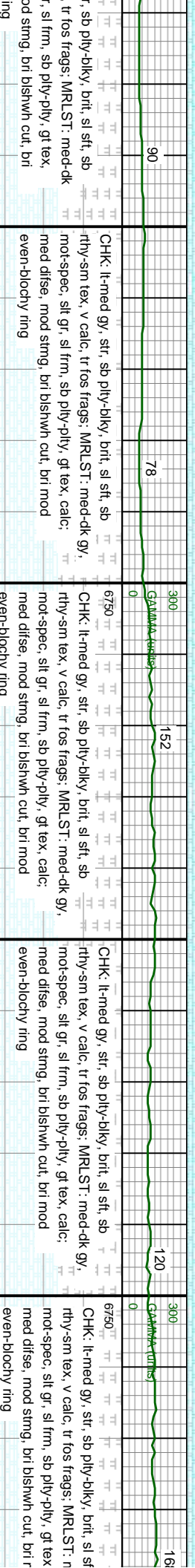
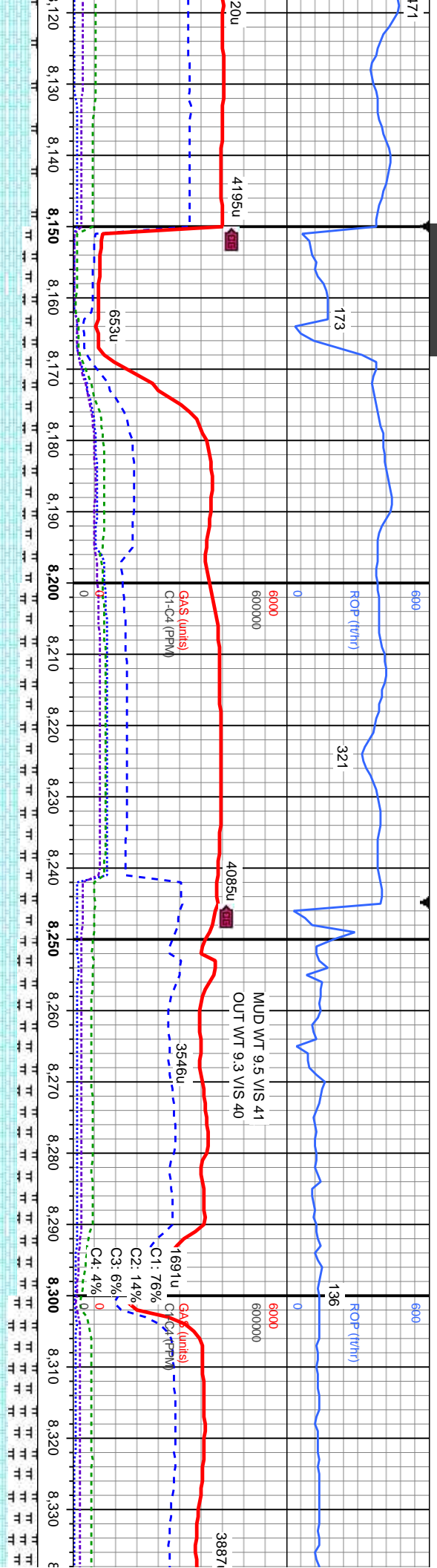
MD: 7,386'
TVD: 6,878.73'
Inclination: 85.8°
Azimuth: 269.2°
VS: 534.67'

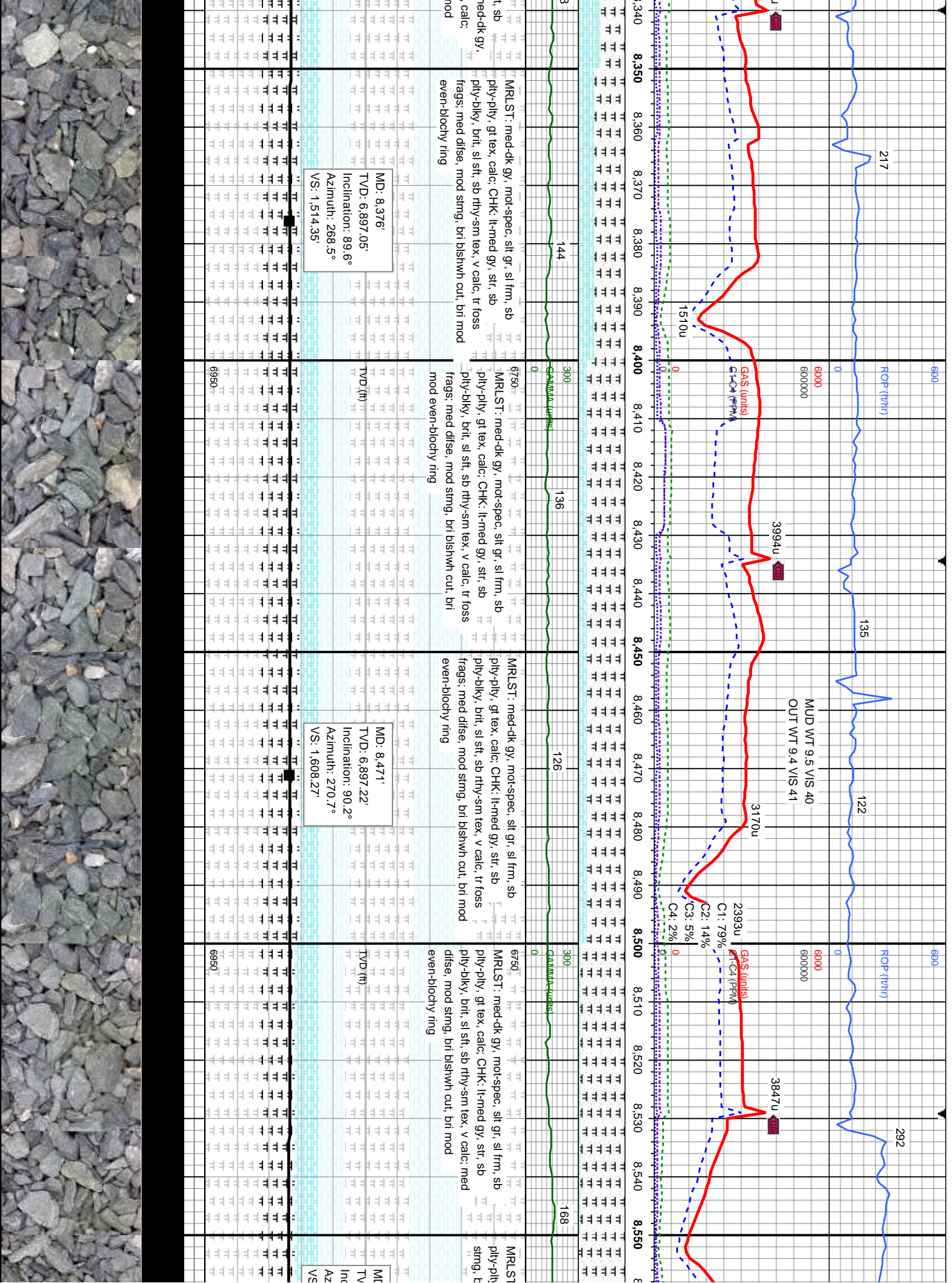
Bit Data
Bit #: 3
Type: SK516M-E1-Z
Size: 6.12
Depth In: 7,440'
Jets: 3x16 2x18
S/N: A213640

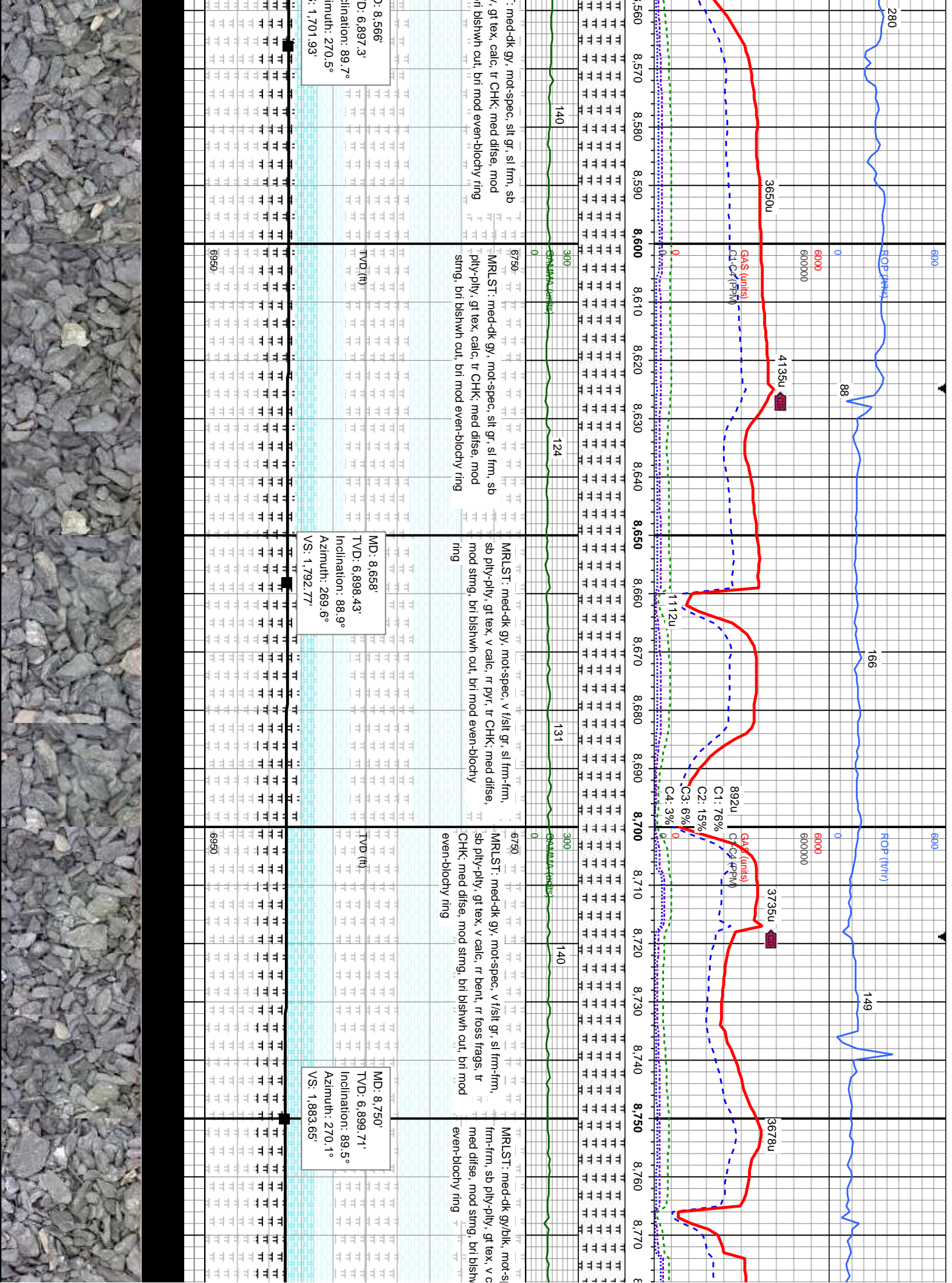
TVD SCALE CHAN

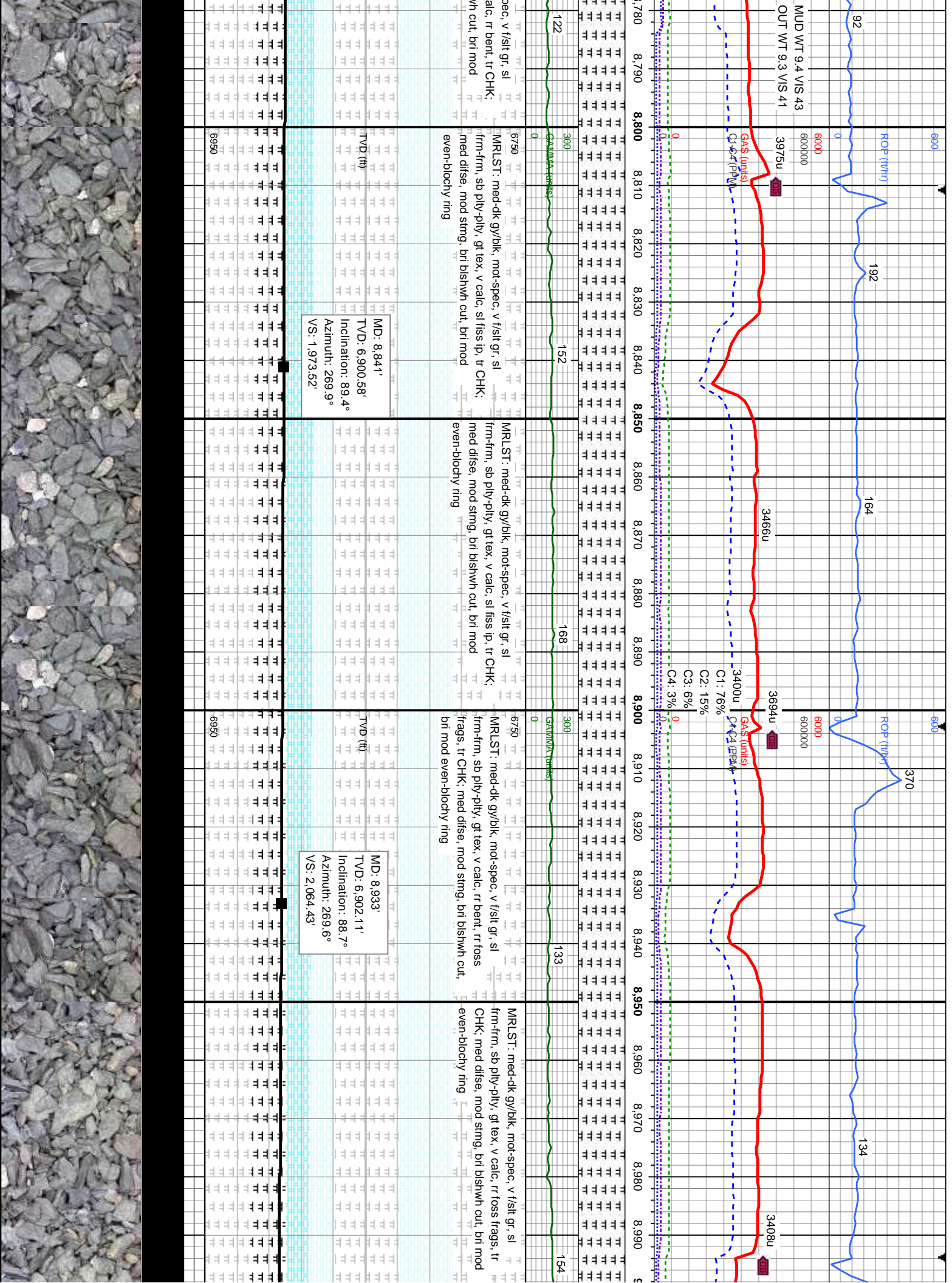


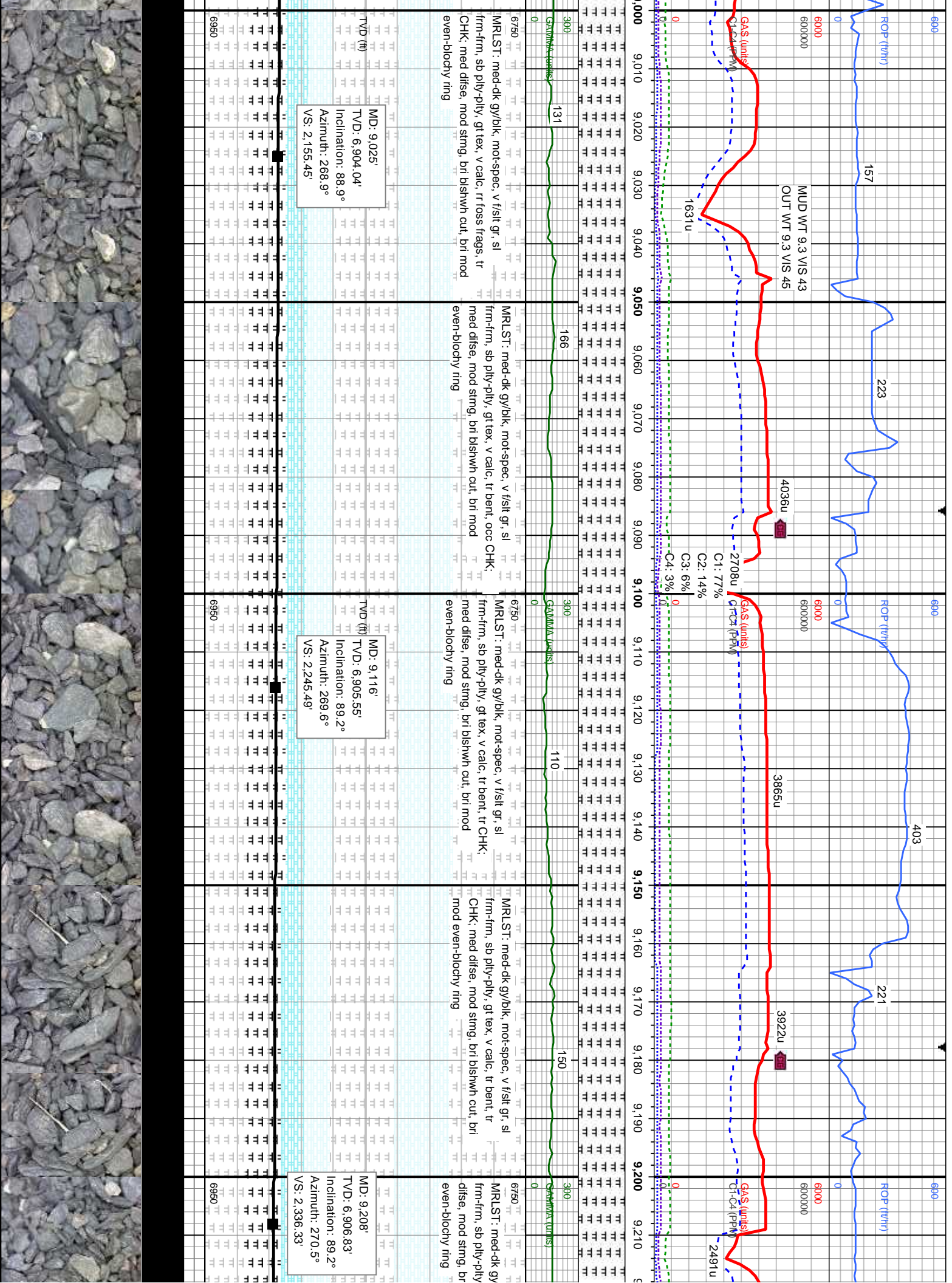


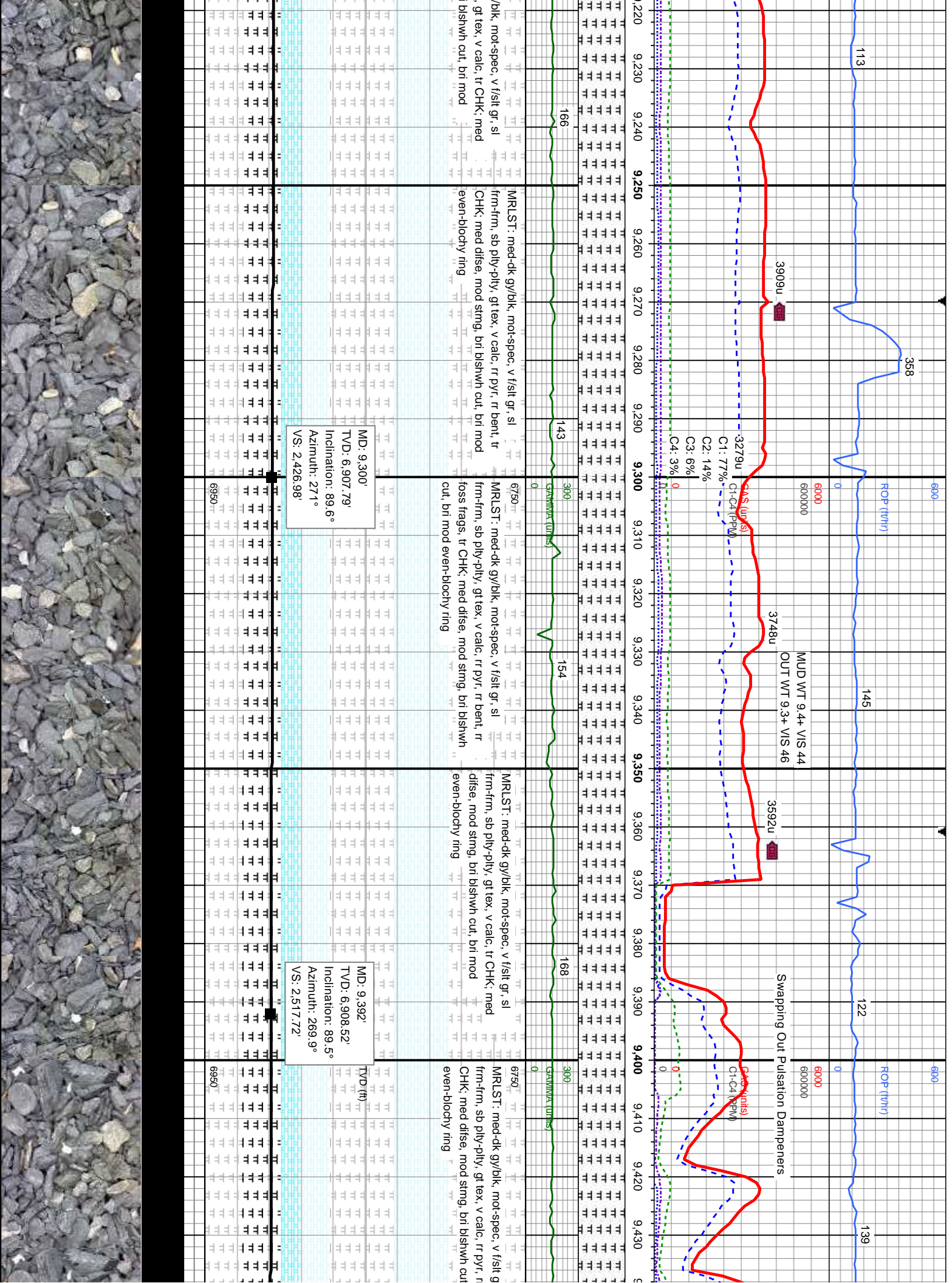












11/10/2015

6900

ROP (twh)

109

0

6000

600000

195

MUD WT 9.4 VIS 46
OUT WT 9.3 VIS 50

424

6900

ROP (twh)

0

6000

600000

99

35

3106u

3106u

C1: 78%

C2: 14%

C3: 6%

C4: 2%

3188u

4136u

3860u

3860u

C1: 78%

C2: 14%

C3: 6%

C4: 2%

300

172

152

163

300

145

16

MRLST: med-dk gy/blk, mot-spec, v f/slt gr, sl
frm-frm, sb ply-ply, gt tex, v calc, tr bent, tr CHK;
med difse, mod sting, bri blshwh cut, bri mod
even-blocly ring

MRLST: med-dk gy/blk, mot-spec, v f/slt gr, sl
frm-frm, sb ply-ply, gt tex, v calc, ooc bent, tr
CHK; med difse, mod sting, bri blshwh cut, bri
mod even-blocly ring

MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb
ply-ply, gt tex, calc, tr bent, med difse, mod
sting, bri blshwh cut, bri mod even-blocly ring

MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb
ply-ply, gt tex, calc, tr bent, med difse, mod sting,
bri blshwh cut, bri mod even-blocly ring

MRLS
ply-ply
med d
even-t

MD: 9.484
TVD: 6,909.32
Inclination: 89.5°
Azimuth: 268.2°
VS: 2.608.8

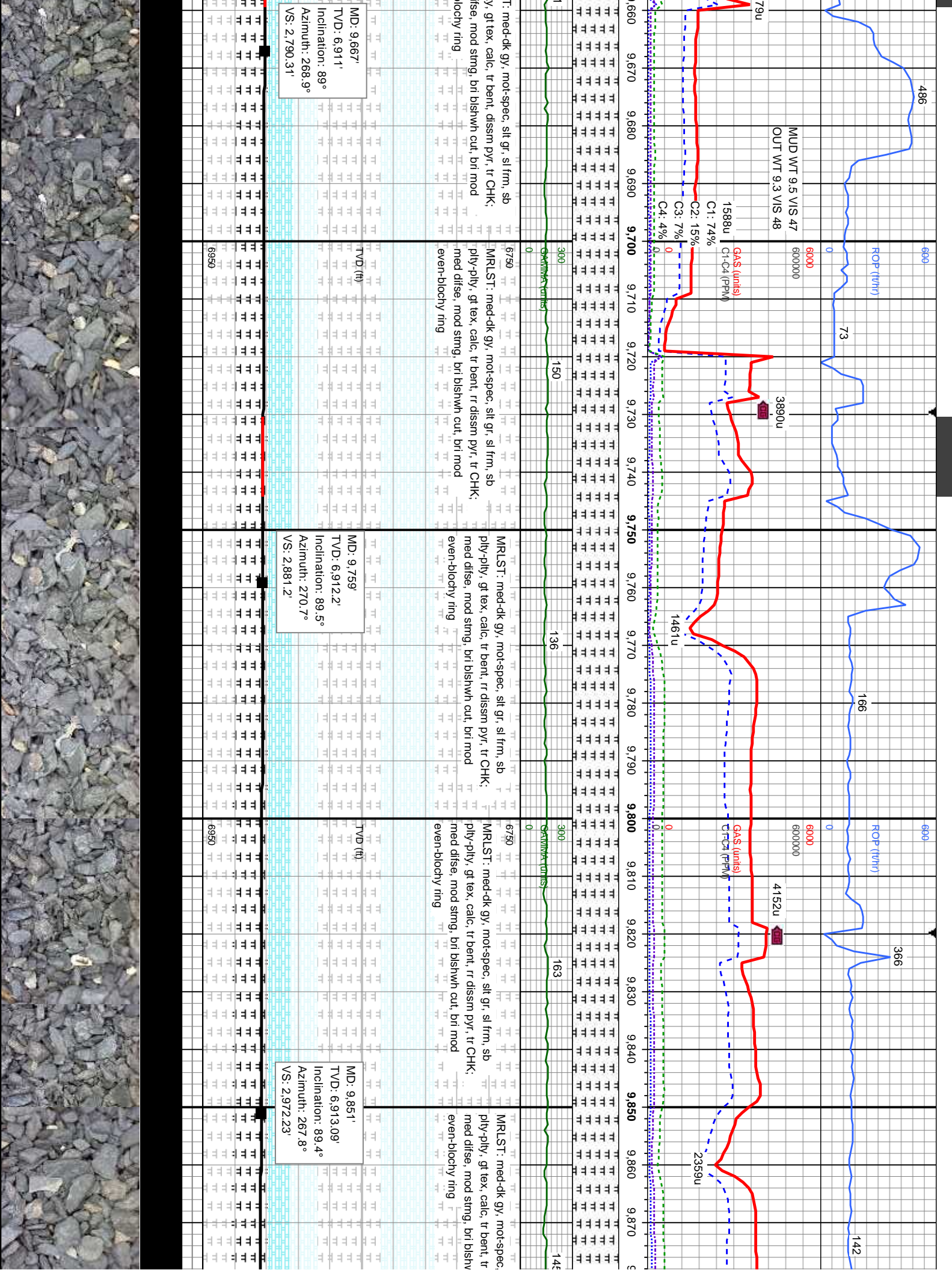
MD: 9.575
TVD: 6,909.95
Inclination: 89.7°
Azimuth: 268°
VS: 2.699.1

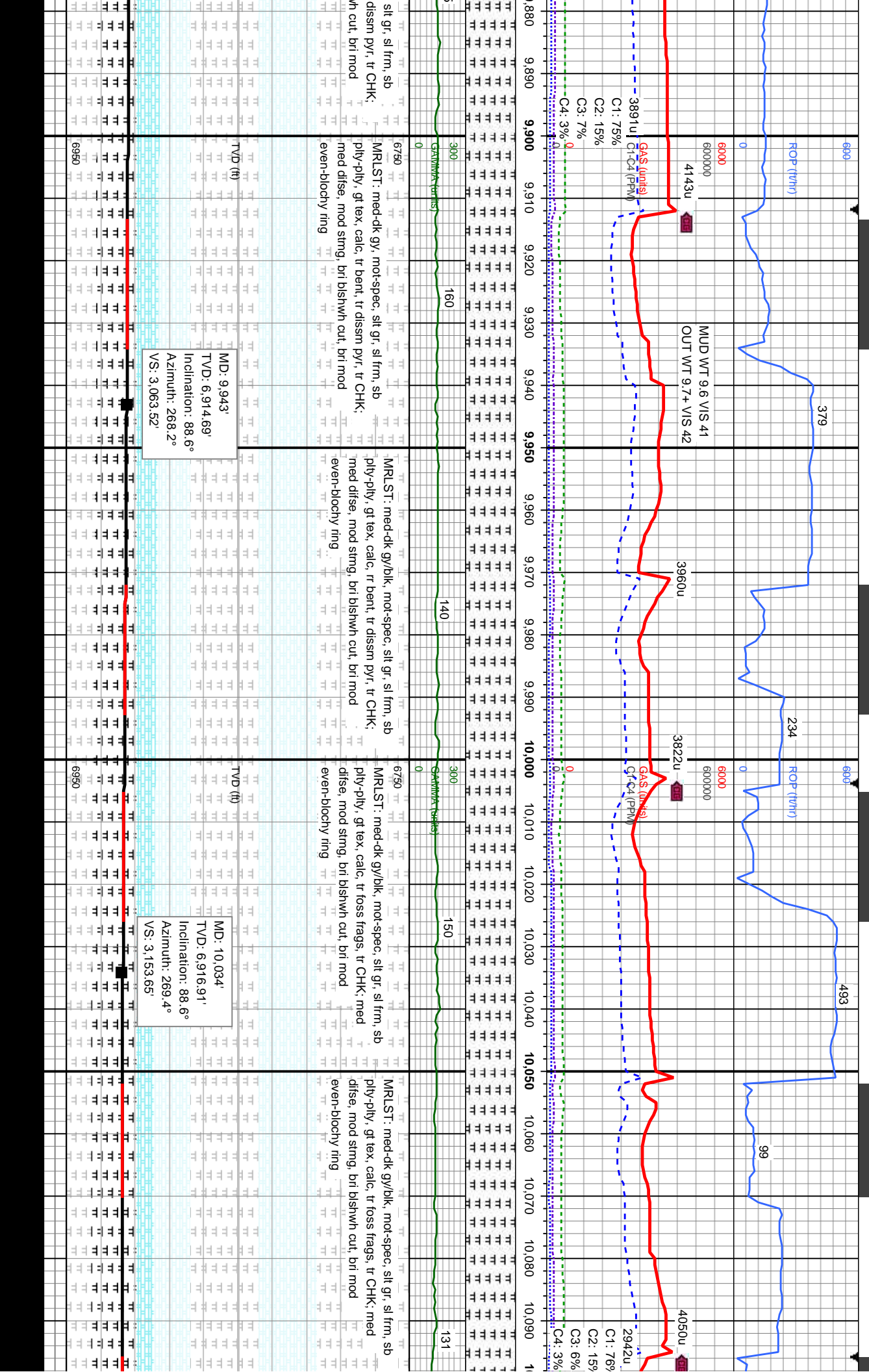
TVD (ft)

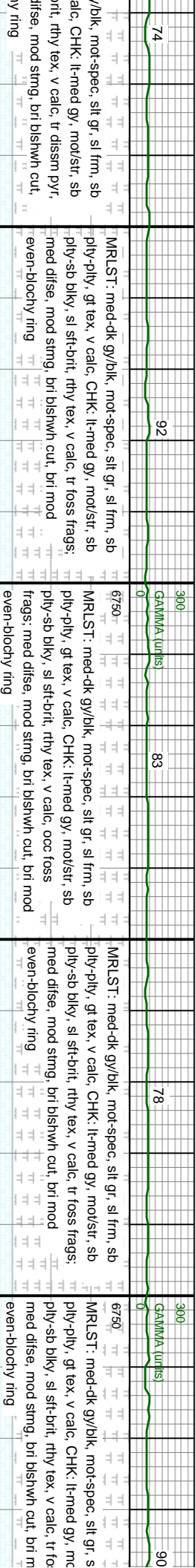
TVD (ft)

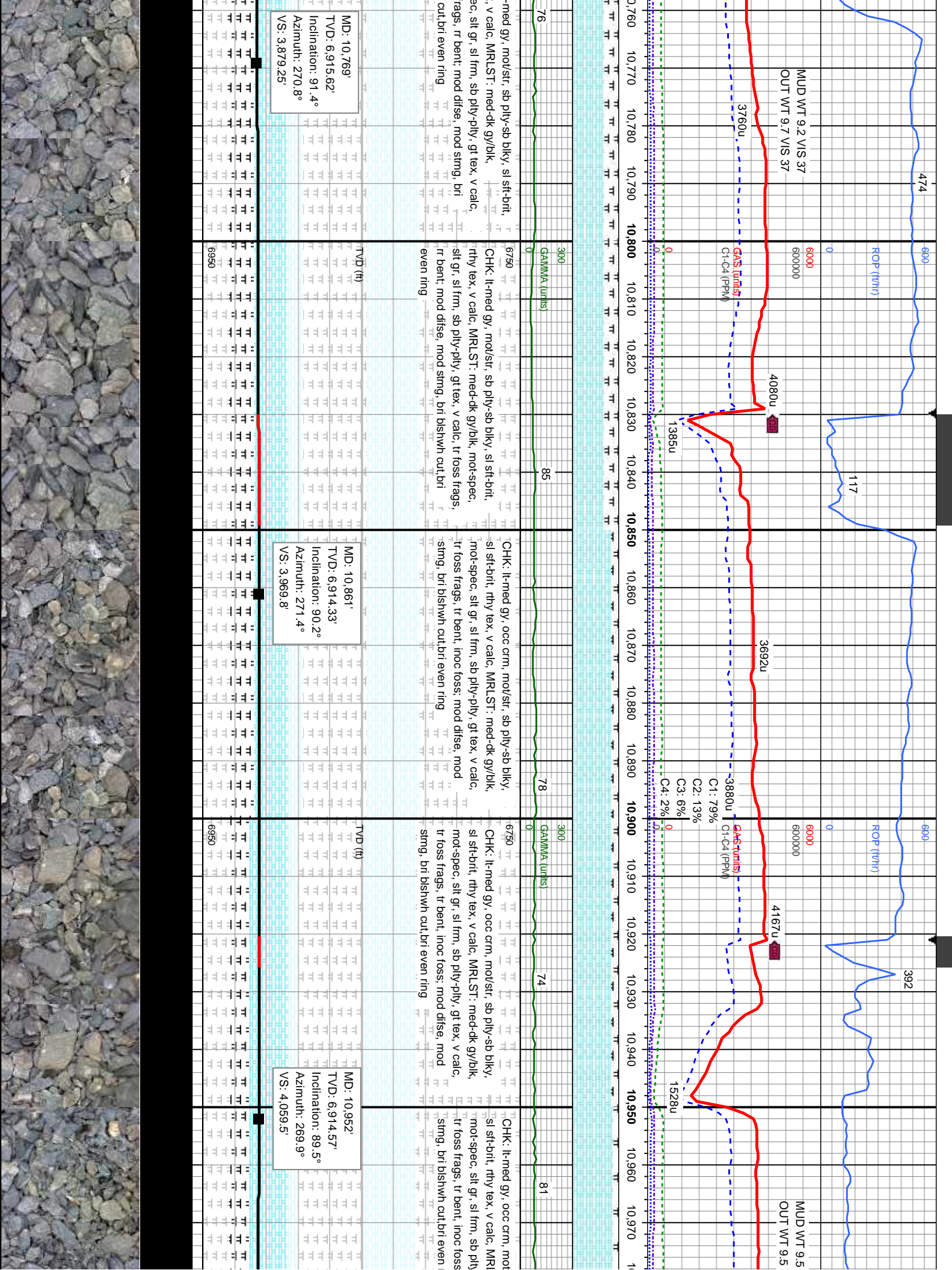
TVD (ft)

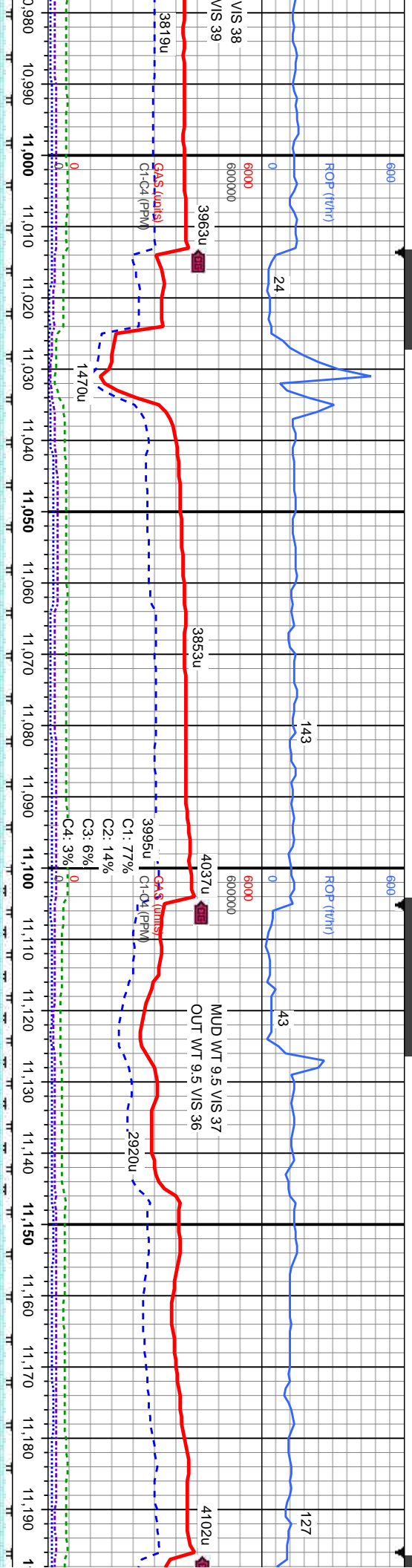






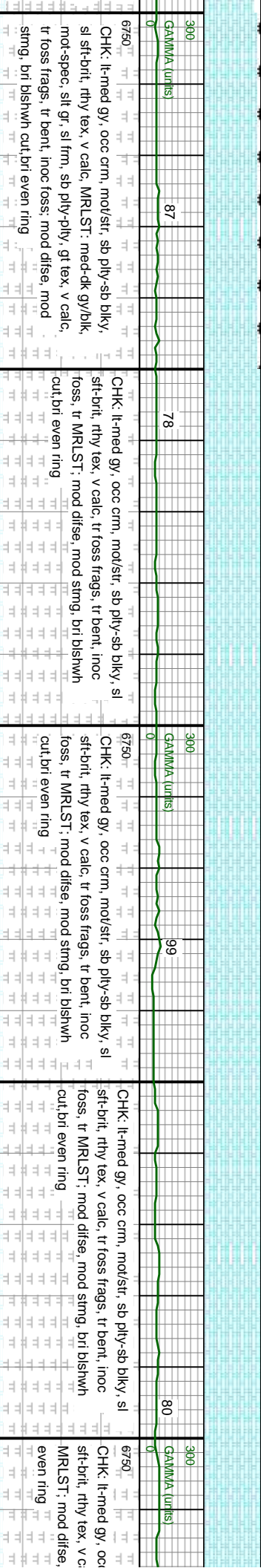
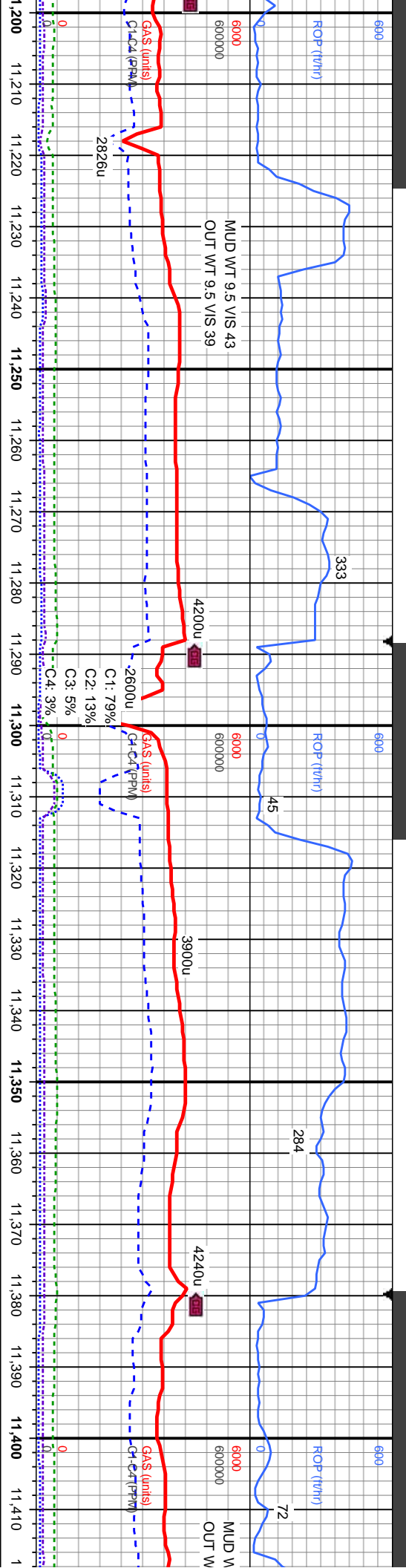






sb ply-sb blk, ST, med-dk gy/bk, -ply, gt tex, v calc, mod difse, mod	6750	300	GA/MMA (units)	69	CHK: lt-med gy, occ crm, mot/st, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/bk, mot-spec, slt gr, sl frm, sb ply-ply, gt tex, v calc, tr foss frags, tr bent, inoc foss, mod difse, mod string, bri bishwh cut, bri even ring	6750	300	GA/MMA (units)	78	CHK: lt-med gy, occ crm, mot/st, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/bk, mot-spec, slt gr, sl frm, sb ply-ply, gt tex, v calc, tr foss frags, tr bent, inoc foss, mod difse, mod string, bri bishwh cut, bri even ring	6750	300	GA/MMA (units)	90	CHK: lt-med gy, occ crm, mot/st, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/bk, mot-spec, slt gr, sl frm, sb ply-ply, gt tex, v calc, tr foss frags, tr bent, inoc foss, mod difse, mod string, bri bishwh cut, bri even ring	6750	300	GA/MMA (units)	76	CHK: lt-med gy, occ crm, mot/st, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/bk, mot-spec, slt gr, sl frm, sb ply-ply, gt tex, v calc, tr foss frags, tr bent, inoc foss, mod difse, mod string, bri bishwh cut, bri even ring
TVD (ft)	11,000	11,010	11,020	11,030	11,040	11,050	11,060	11,070	11,080	11,090	11,100	11,110	11,120	11,130	11,140	11,150	11,160	11,170	11,180	11,190
MD: 11,044'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'	MD: 11,136'
TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'	TVD: 6,915.62'
Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°	Inclination: 89.2°
Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°	Azimuth: 268.7°
VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'	VS: 4,150.52'

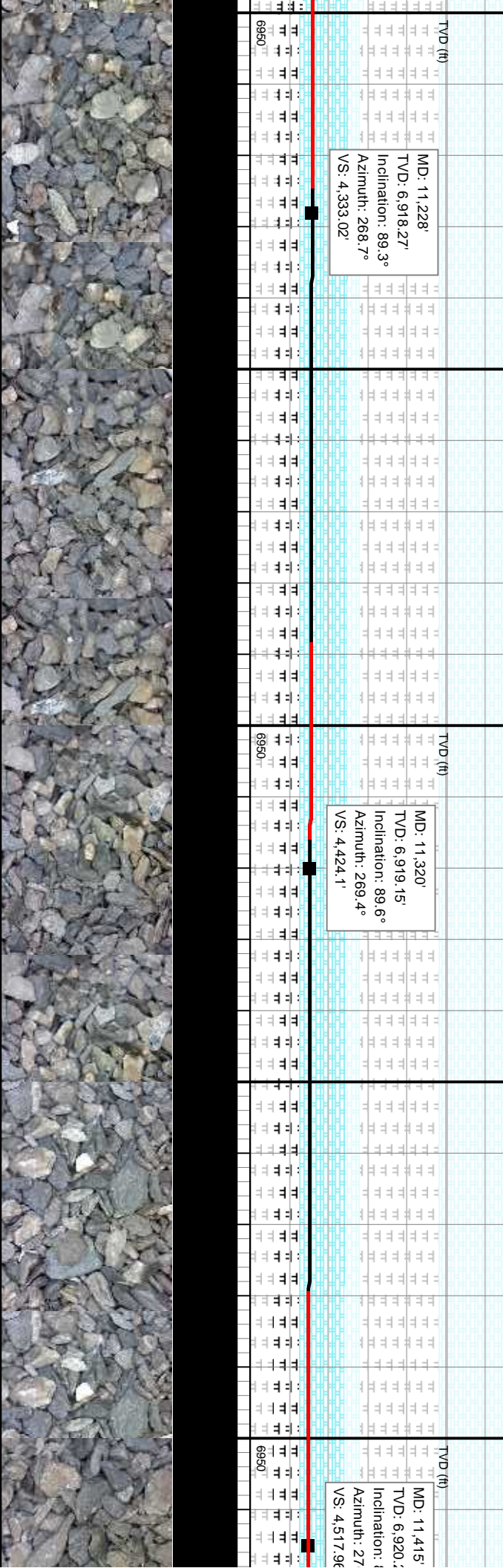


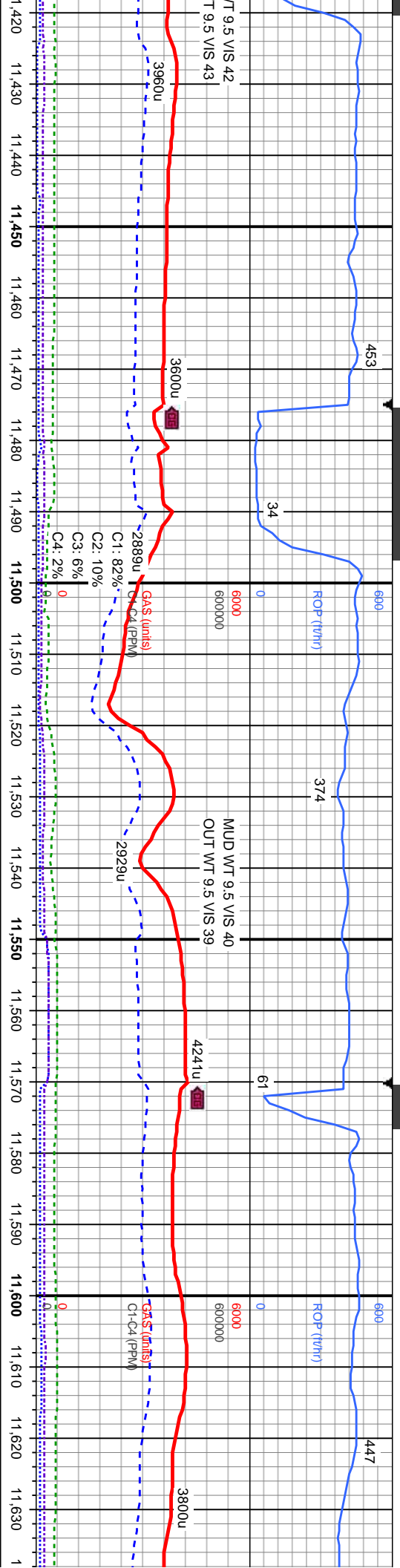


MD: 11,228'
TVD: 6,918.27'
Inclination: 89.3°
Azimuth: 268.7°
VS: 4,333.02'

MD: 11,320'
TVD: 6,919.15'
Inclination: 89.6°
Azimuth: 269.4°
VS: 4,424.1'

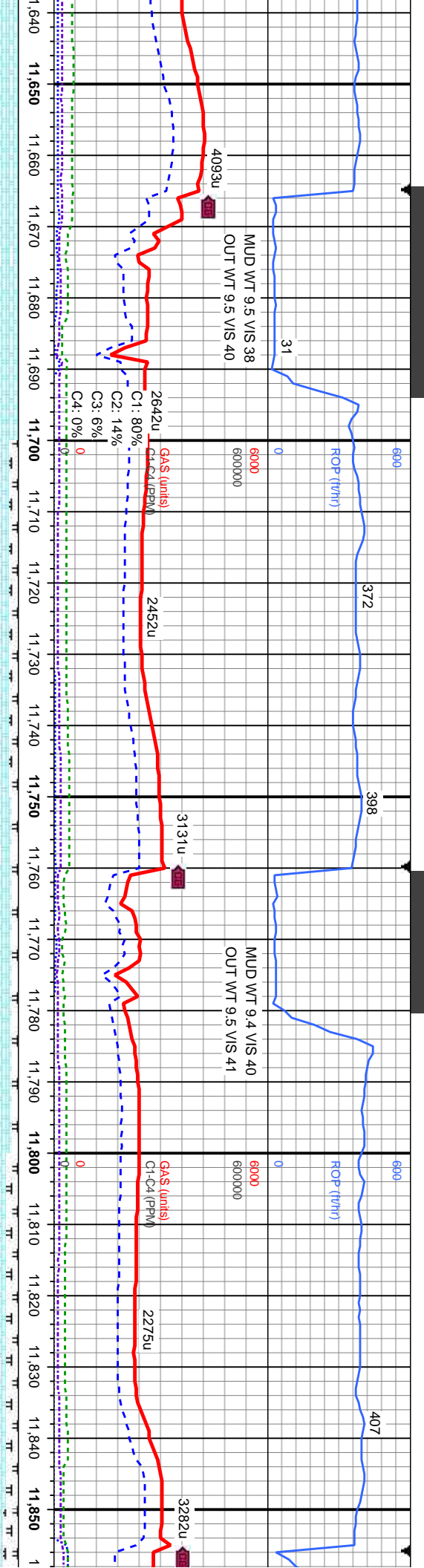
MD: 11,415'
TVD: 6,920.2'
Inclination: 89.6°
Azimuth: 270.0°
VS: 4,517.96'





83	74	300	84	64
6750	6750	6750	6750	6750
CHK: lt-med gy, occ crm, mod/st, sb ply-sb blkly, sl	CHK: lt-med gy, occ crm, mod/st, sb ply-sb blkly, sl	CHK: lt-med gy, occ crm, mod/st, sb ply-sb blkly, sl	CHK: lt-med gy, occ crm, mod/st, sb ply-sb blkly, sl	CHK: lt-med gy, occ crm, mod/st, sb ply-sb blkly, sl
stf-brt, rthy tex, v calc, tr bent, inoc foss, tr	stf-brt, rthy tex, v calc, tr bent, inoc foss, tr	stf-brt, rthy tex, v calc, tr bent, inoc foss, tr	stf-brt, rthy tex, v calc, tr bent, inoc foss, tr	stf-brt, rthy tex, v calc, tr bent, inoc foss, tr
MRLST: mod stmg, bri blshwh cut, bri	MRLST: mod stmg, bri blshwh cut, bri	MRLST: mod stmg, bri blshwh cut, bri	MRLST: mod stmg, bri blshwh cut, bri	MRLST: mod stmg, bri blshwh cut, bri
even ring	even ring	even ring	even ring	even ring
VS: 4.611.72'	VS: 4.611.72'	VS: 4.611.72'	VS: 4.611.72'	VS: 4.611.72'
MD: 11.510'	MD: 11.510'	MD: 11.510'	MD: 11.510'	MD: 11.510'
TVD: 6,920.31'	TVD: 6,920.31'	TVD: 6,920.31'	TVD: 6,920.31'	TVD: 6,920.31'
Inclination: 90.8°	Inclination: 90.8°	Inclination: 90.8°	Inclination: 90.8°	Inclination: 90.8°
Azimuth: 270.1°	Azimuth: 270.1°	Azimuth: 270.1°	Azimuth: 270.1°	Azimuth: 270.1°
VS: 4.611.72'	VS: 4.611.72'	VS: 4.611.72'	VS: 4.611.72'	VS: 4.611.72'
MD: 11.606'	MD: 11.606'	MD: 11.606'	MD: 11.606'	MD: 11.606'
TVD: 6,918.55'	TVD: 6,918.55'	TVD: 6,918.55'	TVD: 6,918.55'	TVD: 6,918.55'
Inclination: 91.3°	Inclination: 91.3°	Inclination: 91.3°	Inclination: 91.3°	Inclination: 91.3°
Azimuth: 269.4°	Azimuth: 269.4°	Azimuth: 269.4°	Azimuth: 269.4°	Azimuth: 269.4°
VS: 4.706.58'	VS: 4.706.58'	VS: 4.706.58'	VS: 4.706.58'	VS: 4.706.58'



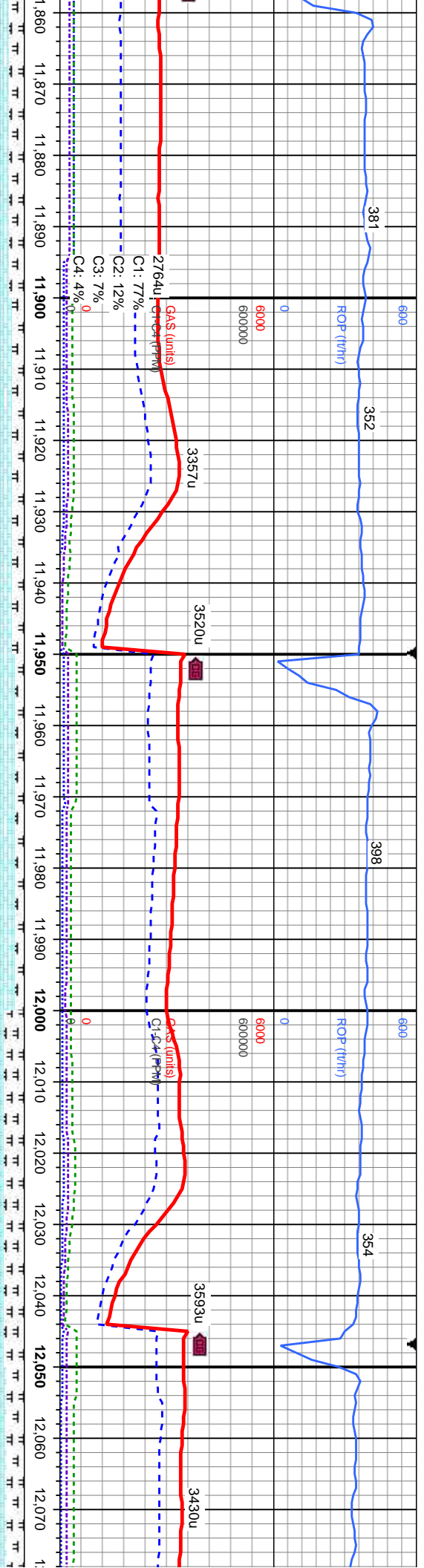


146	CHK: It-med gy, occ crm, mot/sr, sb ply-sb blk, slt-gr, rthy tex, v calc, incc foss; mod difse, mod string, brt bishwn cut,brt even ring	133	CHK: It-med gy, mot/sr, sb ply-sb blk, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt-gr, sl frm, sb ply-pty, gt tex, v calc; mod difse, mod string, brt bishwn cut,brt even ring	152	CHK: It-med gy, mot/sr, sb ply-sb blk, slt-gr, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt-gr, sl frm, sb ply-pty, gt tex, v calc; mod difse, mod string, brt bishwn cut,brt even ring	122	CHK: It-med gy, mot/sr, sb ply-sb blk, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt-gr, sl frm, sb ply-pty, gt tex, v calc; mod difse, mod string, brt bishwn cut,brt even ring	CHK: It-med gy, mot/sr, sb ply-sb blk, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt-gr, sl frm, sb ply-pty, gt tex, v calc; mod difse, mod string, brt bishwn cut,brt even ring
6750		6750		6750		6750		6750
6950		6950		6950		6950		6950

MD: 11,700'
TVD: 6,916.17'
Inclination: 91.6°
Azimuth: 271.2°
VS: 4,799.3'

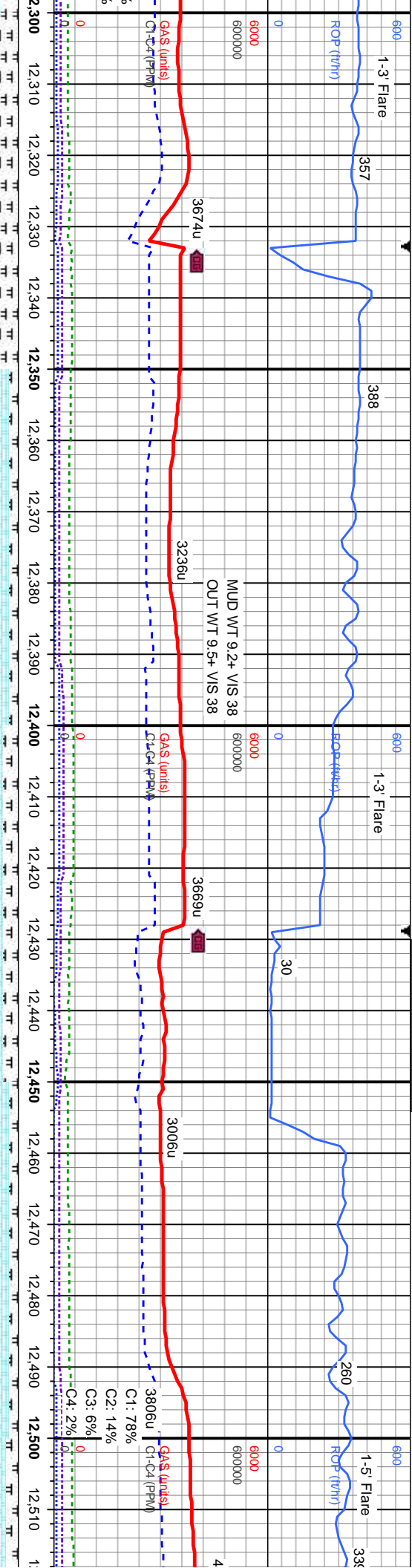
MD: 11,795'
TVD: 6,914.85'
Inclination: 90°
Azimuth: 271.4°
VS: 4,892.75'





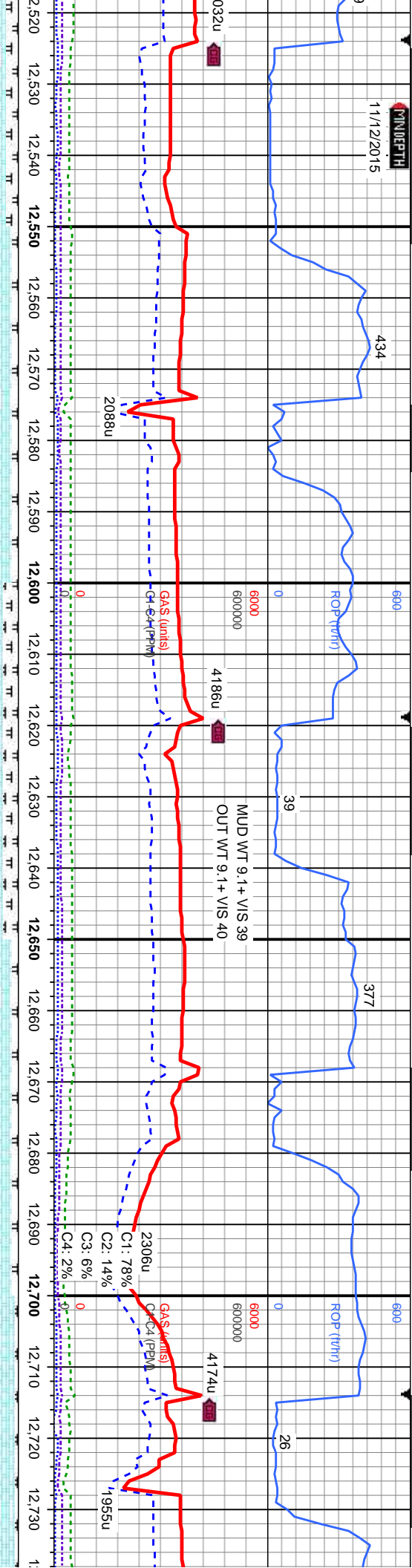
140	300	120	138	300	120	130
med gy, mod/st, sb ply-sb blk, sl sft-brt, v calc, MRLST: med-dk gy/blk, mot-spec, frm, sb ply-pty, gt tex, v calc, occ dissm frags; mod difse, mod sting, bri bishwh van ring	6750	CHK: lt-med gy, mod/st, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, sit gr, sl frm, sb ply-pty, gt tex, v calc, tr foss frags; mod difse, mod sting, bri bishwh cut, bri even ring	6750	CHK: lt-med gy, mod/st, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, sit gr, sl frm, sb ply-pty, gt tex, v calc, tr foss frags; mod difse, mod sting, bri bishwh cut, bri even ring	6750	CHK: lt-med gy, mod/st, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, sit gr, sl frm, sb ply-pty, gt tex, v calc, mod difse, mod sting, bri bishwh cut, bri even ring
MD: 11,891'	TVD	MD: 11,986'	TVD	MD: 11,986'	TVD	MD: 11,986'
Inclination: 90.1°		Inclination: 89.7°		Inclination: 89.7°		Inclination: 89.7°
Azimuth: 271.2°		Azimuth: 270.5°		Azimuth: 270.5°		Azimuth: 270.5°
VS: 4,987.2'		VS: 5,080.79'		VS: 5,080.79'		VS: 5,080.79'





300	300	300	300	300	300
GAMMA (units)	GAMMA (units)	GAMMA (units)	GAMMA (units)	GAMMA (units)	GAMMA (units)
0	99	0	108	0	136
6750	6750	6750	6750	6750	6750
CHK: lt-med gy, mot/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, v calc, tr dissim pyr, tr foss frags, mod difse, mod sting, bri bishwh cut, bri even ring	CHK: lt-med gy, mot/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, v calc, tr dissim pyr, tr foss frags, mod difse, mod sting, bri bishwh cut, bri even ring	CHK: lt-med gy, mot/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, v calc, tr dissim pyr, tr foss frags, mod difse, mod sting, bri bishwh cut, bri even ring	CHK: lt-med gy, occ tan/bf, mot/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, v calc, tr dissim pyr, occ foss frags, mod difse, mod sting, bri bishwh cut, bri even ring	CHK: lt-med gy, occ tan/bf, mot/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, v calc, tr dissim pyr, occ foss frags, mod difse, mod sting, bri bishwh cut, bri even ring	CHK: lt-med gy, occ tan/bf, mot/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, v calc, tr dissim pyr, occ foss frags, mod difse, mod sting, bri bishwh cut, bri even ring
TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)
6950	6950	6950	6950	6950	6950
MD: 12,367' TVD: 6,917.92' Inclination: 89.5° Azimuth: 266.4° VS: 5,457.72					
MD: 12,463' TVD: 6,918.34' Inclination: 90° Azimuth: 266.1° VS: 5,553.32					



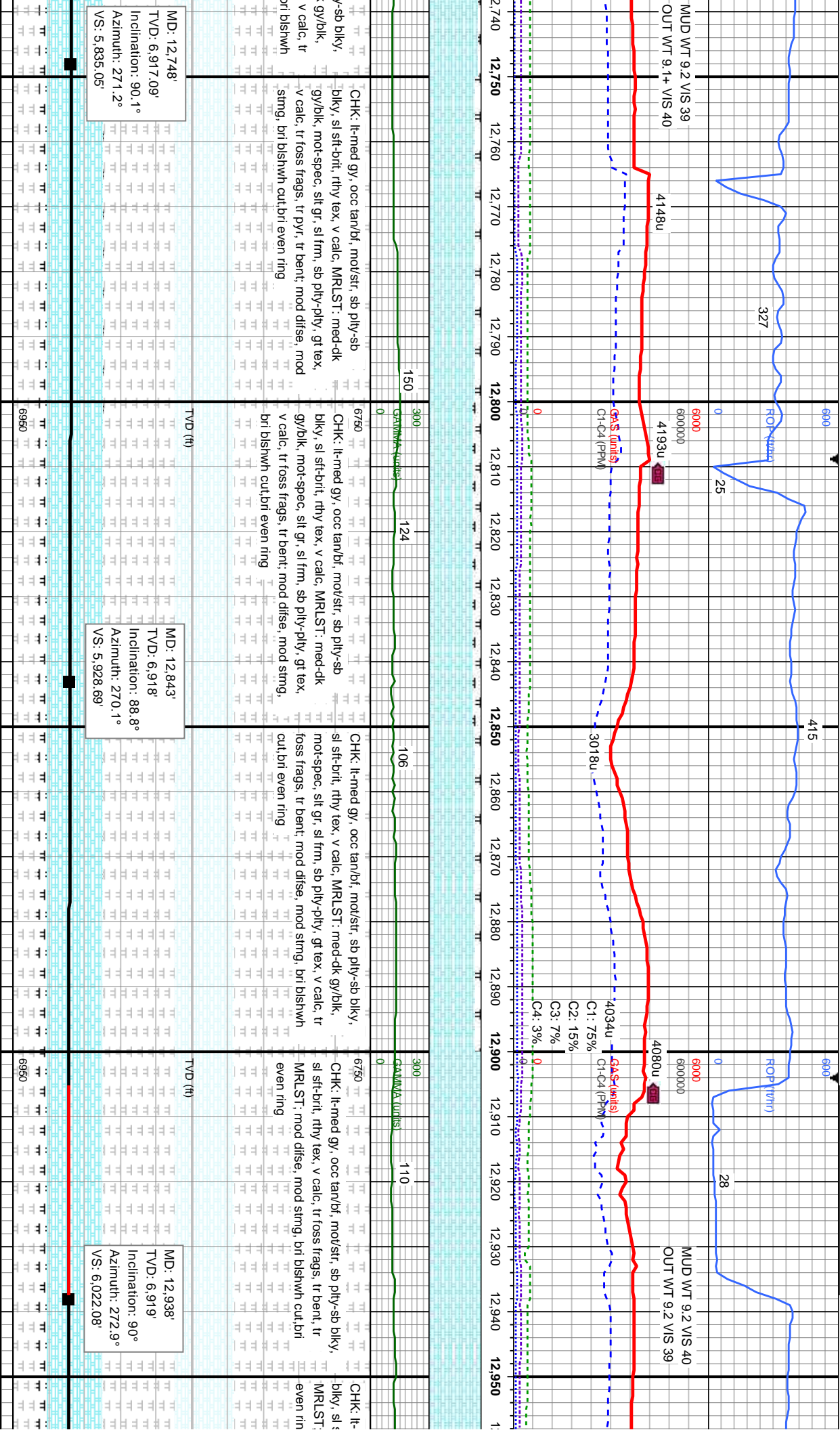


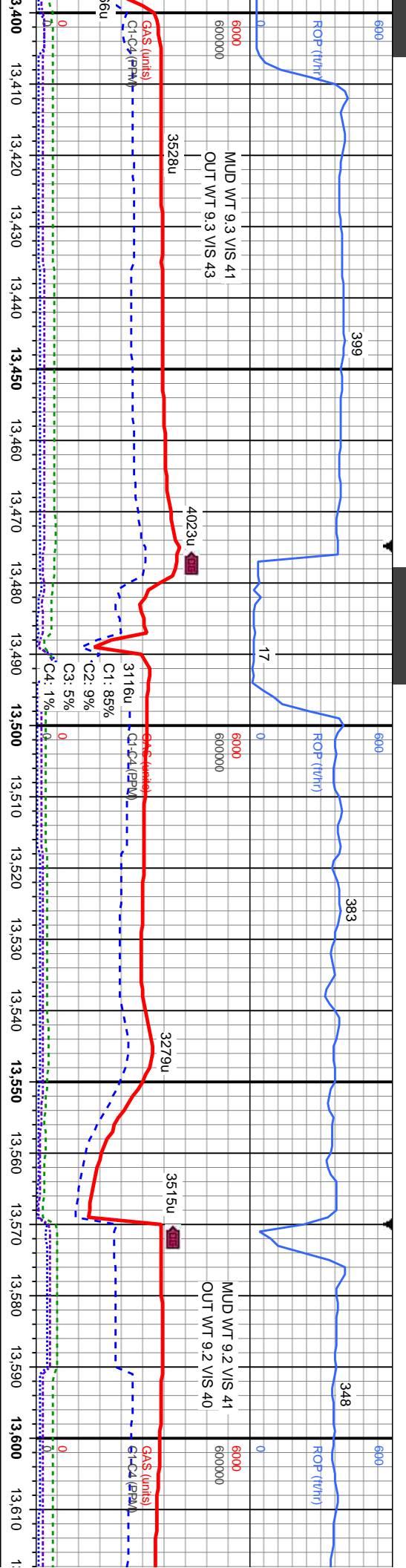
118	CHK: lt-med gy, occ tan/bf, mod/st, sb ply-sb blk, sl sft-brit, rthy tex, v calc, MRLST: med-dk gy/bk, mot-spec, silt gr, sl frm, sb ply-pty, gt tex, v calc, r foss frags, tr pyr, mod difse, mod string, bri bishwh cut, bri even ring	126	CHK: lt-med gy, occ tan/bf, mod/st, sb ply-sb blk, sl sft-brit, rthy tex, v calc, MRLST: med-dk gy/bk, mot-spec, silt gr, sl frm, sb ply-pty, gt tex, v calc, r foss frags, tr pyr, mod difse, mod string, bri bishwh cut, bri even ring	143	CHK: lt-med gy, occ tan/bf, mod/st, sb ply-sb blk, sl sft-brit, rthy tex, v calc, MRLST: med-dk gy/bk, mot-spec, silt gr, sl frm, sb ply-pty, gt tex, v calc, r foss frags, tr pyr, tr bent, mod difse, mod string, bri bishwh cut, bri even ring	104	CHK: lt-med gy, occ tan/bf, mod/st, sb ply-sb blk, sl sft-brit, rthy tex, v calc, MRLST: med-dk gy/bk, mot-spec, silt gr, sl frm, sb ply-pty, gt tex, v calc, r foss frags, tr pyr, mod difse, mod string, bri bishwh cut, bri even ring
VS: 5,646.64	VS: 5,741.46	VS: 5,741.46	VS: 5,741.46	VS: 5,741.46	VS: 5,741.46	VS: 5,741.46	VS: 5,741.46

MD: 12,557'
TVD: 6,917.68'
Inclination: 90.8°
Azimuth: 269.4°
VS: 5,646.64

MD: 12,653'
TVD: 6,917.09'
Inclination: 89.9°
Azimuth: 270.5°
VS: 5,741.46





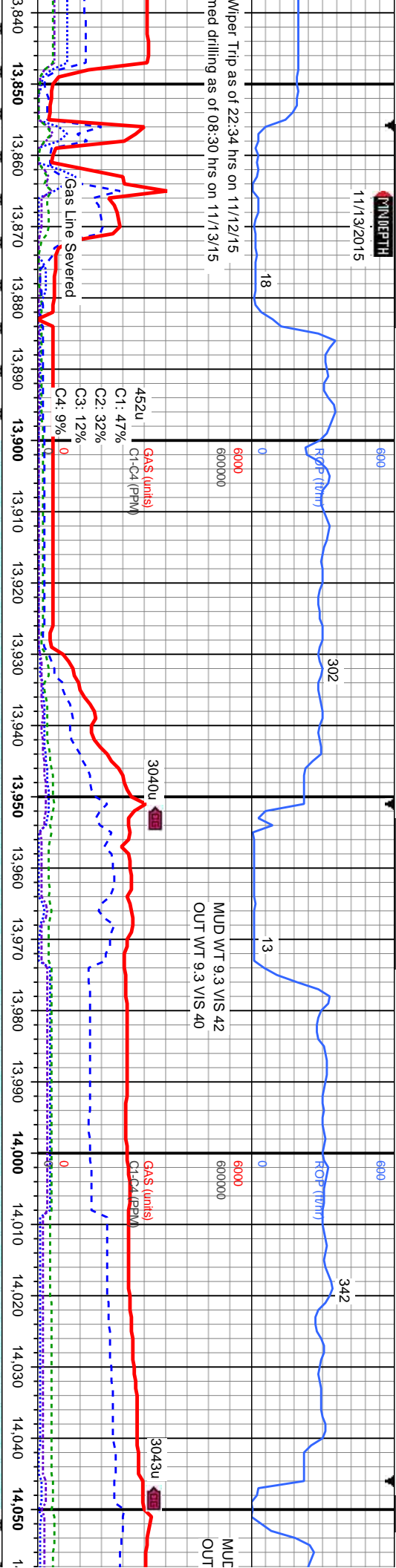


6750	CHK: lt-med gy, occ tan/bf, mod/str, sb ply-sb blk, sl sft-brt, rthy tex, v calc, tr foss frags; mod difse, mod stmg, bri bishwh cut,bri even ring	6750	CHK: lt-med gy, occ tan/bf, mod/str, sb ply-sb blk, sl sft-brt, rthy tex, v calc, tr foss frags; mod difse, mod stmg, bri bishwh cut,bri even ring	6750	CHK: lt-med gy, mod/str, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRL ST, med-dk gy/bk, mot-spec, slt gr, sl frm, sb ply-ply, gt tex, v calc, rr foss frags; mod difse, mod stmg, bri bishwh cut,bri even ring	6750	CHK: lt-med gy, m rthy tex, v calc, MR slt gr, sl frm, sb ply mod difse, mod str
300	GAMMA (units)	300	GAMMA (units)	300	GAMMA (units)	300	GAMMA (units)
124		92		112		108	
0		0		0		0	
MD: 13,415'	TVD: 6,923.83'	MD: 13,510'	TVD: 6,924.49'	MD: 13,604'	TVD: 6,925.23'		
Inclination: 89.8°		Inclination: 89.4°		Inclination: 89.7°			
Azimuth: 270.3°		Azimuth: 269.1°		Azimuth: 271.4°			
VS: 6,489.97'		VS: 6,583.87'		VS: 6,676.63'			
6950		6950		6950		6950	



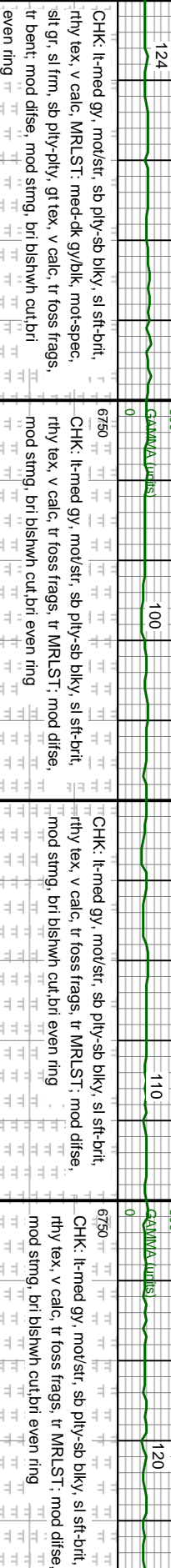
DEPTH
11/13/2015

Wiper Trip as of 22:34 hrs on 11/12/15
med drilling as of 08:30 hrs on 11/13/15



MD: 13.890'
TVD: 6.927.06'
Inclination: 89.9°
Azimuth: 267.8°
VS: 6.959.75'

MD: 13.984'
TVD: 6.927.72'
Inclination: 89.3°
Azimuth: 267°
VS: 7.053.16'



CHK: It-med gy, mod/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, MRLST: med-dk gy/blk, mot-spec, slt gr, sl frm, sb ply-ply, gt tex, v calc, tr foss frags, tr bent, mod difse, mod string, bri blshwh cut, bri even ring

CHK: It-med gy, mod/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, tr foss frags, tr MRLST: mod difse, mod string, bri blshwh cut, bri even ring

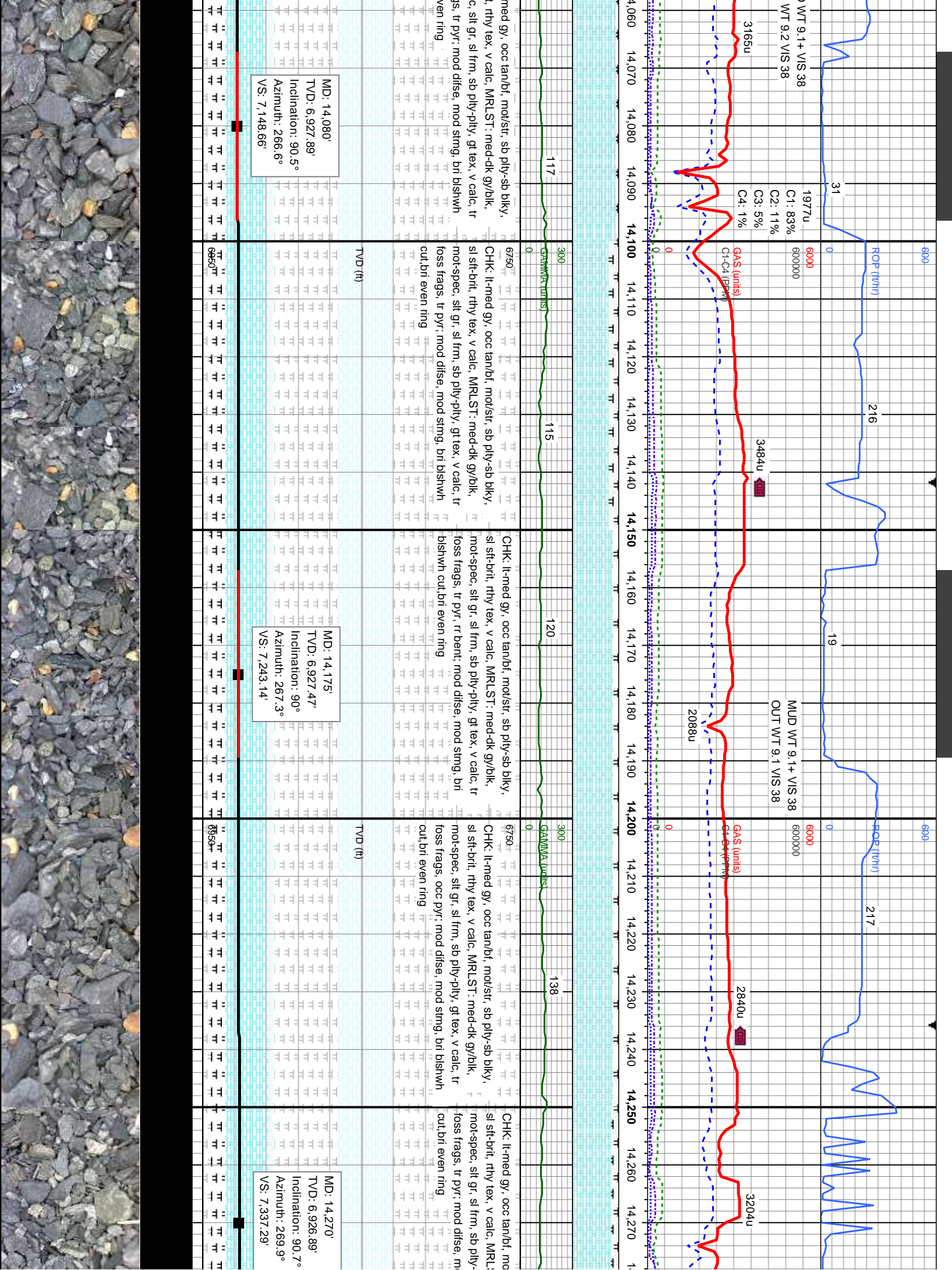
CHK: It-med gy, mod/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, tr foss frags, tr MRLST: mod difse, mod string, bri blshwh cut, bri even ring

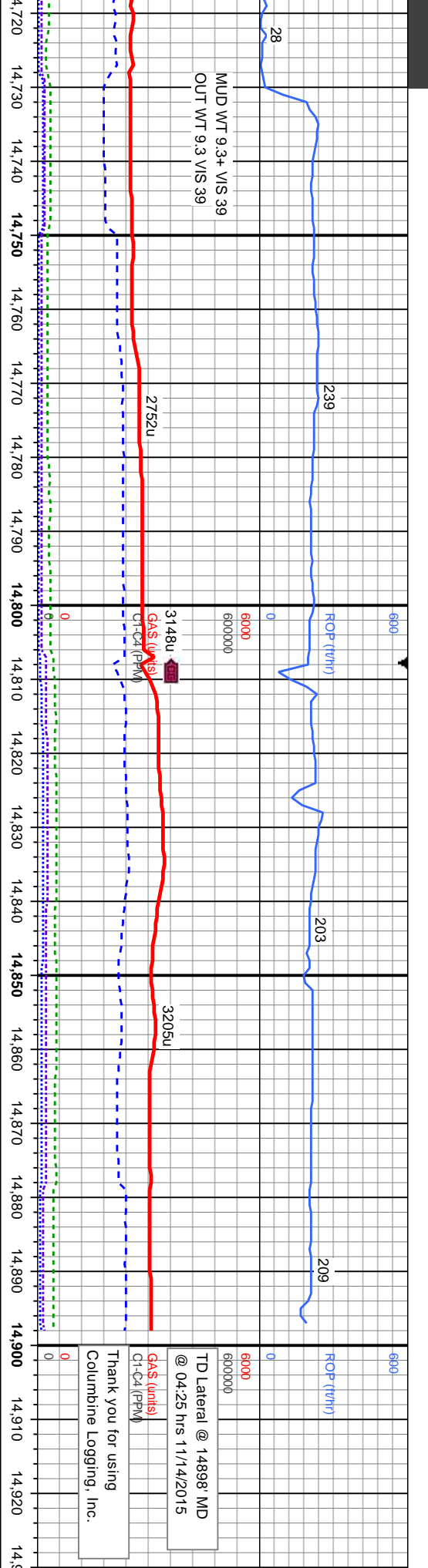
CHK: It-med gy, mod/sr, sb ply-sb blk, sl sft-brt, rthy tex, v calc, tr foss frags, tr MRLST: mod difse, mod string, bri blshwh cut, bri even ring

TVD (ft)

TVD (ft)







MD: 14,746'
TVD: 6,926.06'
Inclination: 88.3°
Azimuth: 268.5°
VS: 7.807.63

MD: 14,837'
TVD: 6,928.6'
Inclination: 88.5°
Azimuth: 268.2°
VS: 7.897.84

Projection to Bit
MD: 14,898'
TVD: 6,930.2'
Inclination: 88.5°
Azimuth: 268.2°

