



Scale: 5" / 100'
Measured Depth Log

Well Name	Oscar Y10-77HN		
Location	NESW SEC10 T2N R64W		
State	COLORADO	County	WELD
Country	USA	Rig Number	PRECISION 828
API Number	05-123-38198	AFE #	138752
Region	DENVER-JULESBURG BASIN	Field	WATTENBERG
Spud Date	4/18/2014	Drilling Completed	4/28/2014
Surface Coordinates	2380' FSL, 1980' FWL	Lat/Long:	40.15224/-104.53999
Ground Elevation	4930	K.B. Elevation	4946
Logged Interval	6300'	To	14600'
		Total Depth	14600'
Formation	TEEPEE BUTTES, SHARON SPRINGS, NIOBRARA		
Type of Drilling Fluid	LSND		

Company NOBLE ENERGY INC
Address 1625 Broadway
Denver, CO 80202

Name EVAN HOWELL
Company NOBLE ENERGY INC
Address 1625 Broadway
Denver, CO 80202

Wellsite Geologists: MOHAMMED
WELLSITE
LOG CONT

Operator

INC.

Geologist

INC.

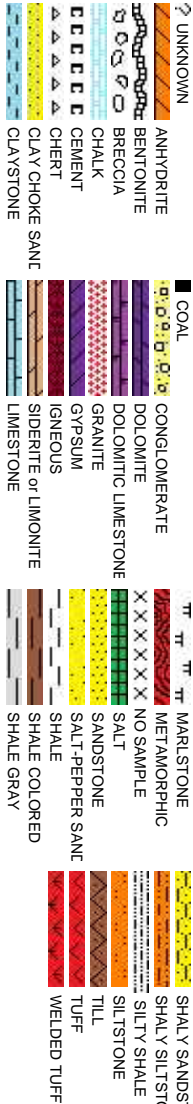
Other

D ALMUBARAK, TED STOCKWELL

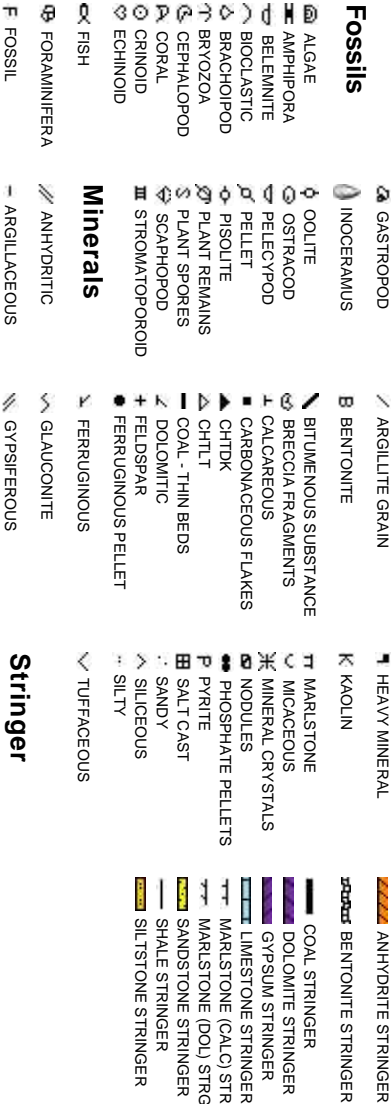
GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.

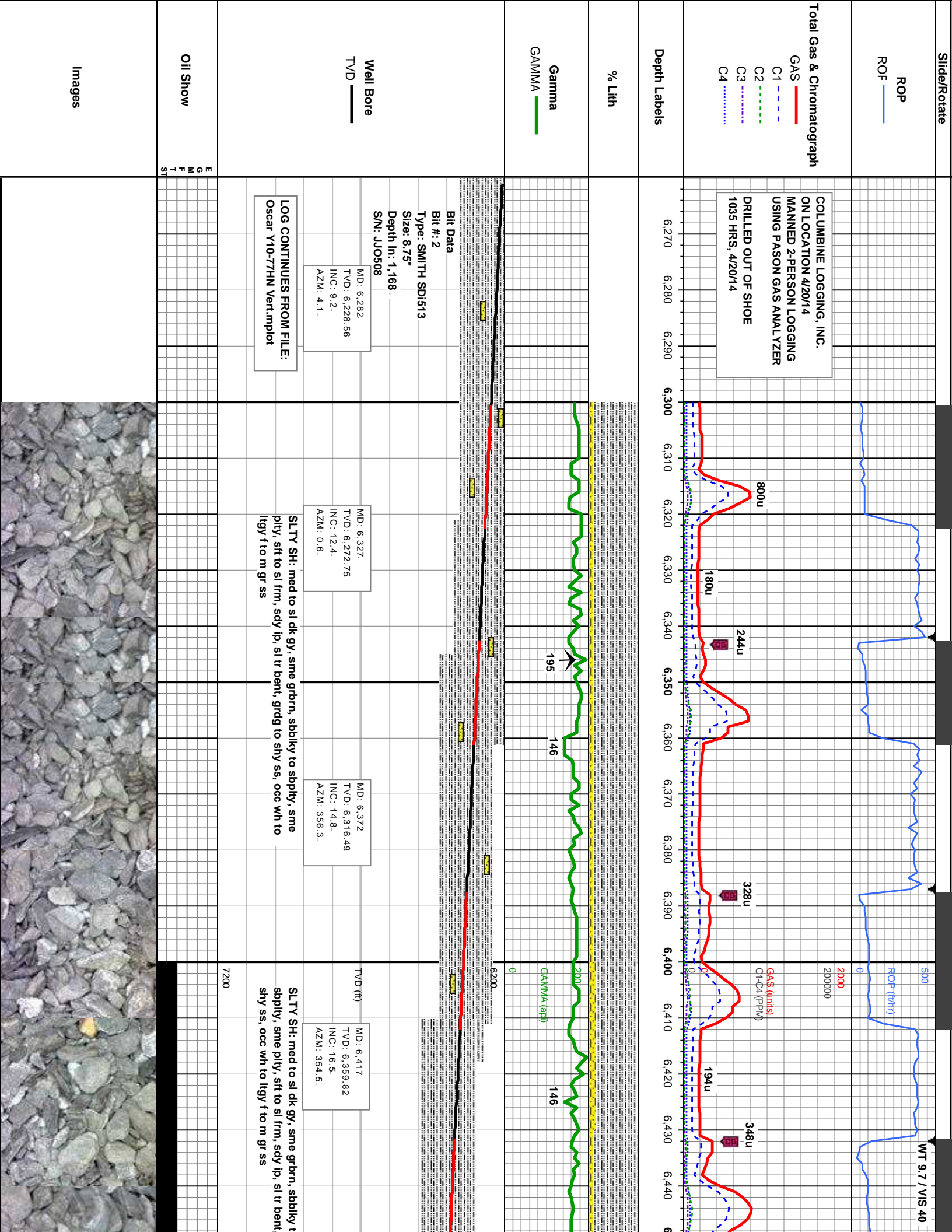
INJUES FROM FILE: Oscar Y10-77HN Vert.mplot

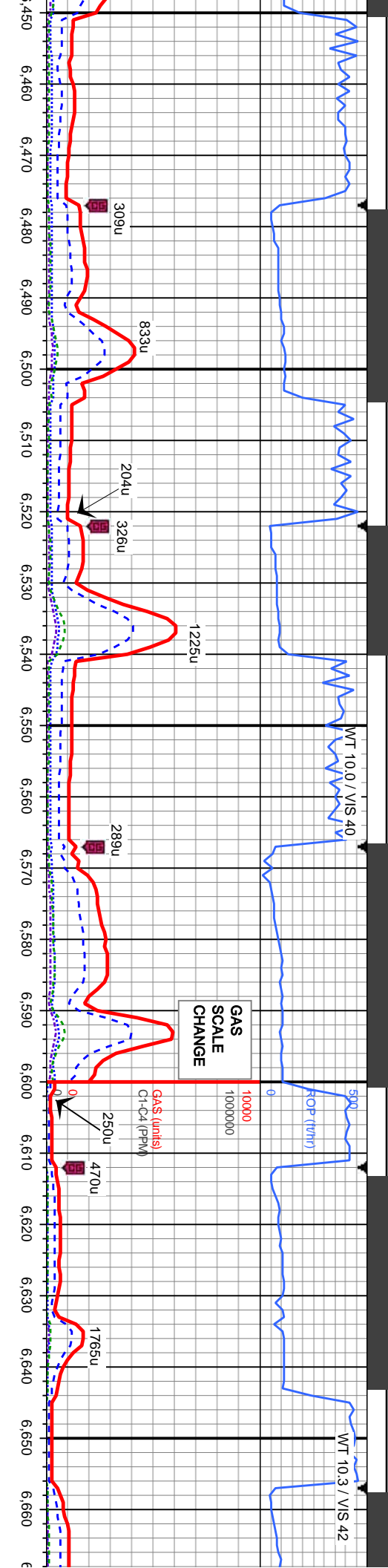
Rock Types



Accessories

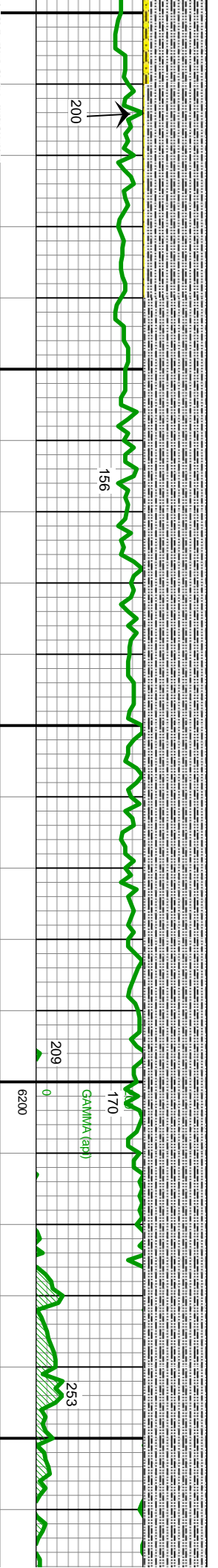






GAS
SCALE
CHANGE

GAS (units)
C1-C4 (PPM)



MD: 6.462
TVD: 6.402.7
INC: 18.8
AZM: 351.4.

MD: 6.507
TVD: 6.445
INC: 21.1
AZM: 355.3.

MD: 6.552
TVD: 6.486.74
INC: 22.8
AZM: 357.5.

MD: 6.597
TVD: 6.527.75
INC: 25.8
AZM: 359.

MD: 6.642
TVD: 6.567.52
INC: 29.9
AZM: 359.1.

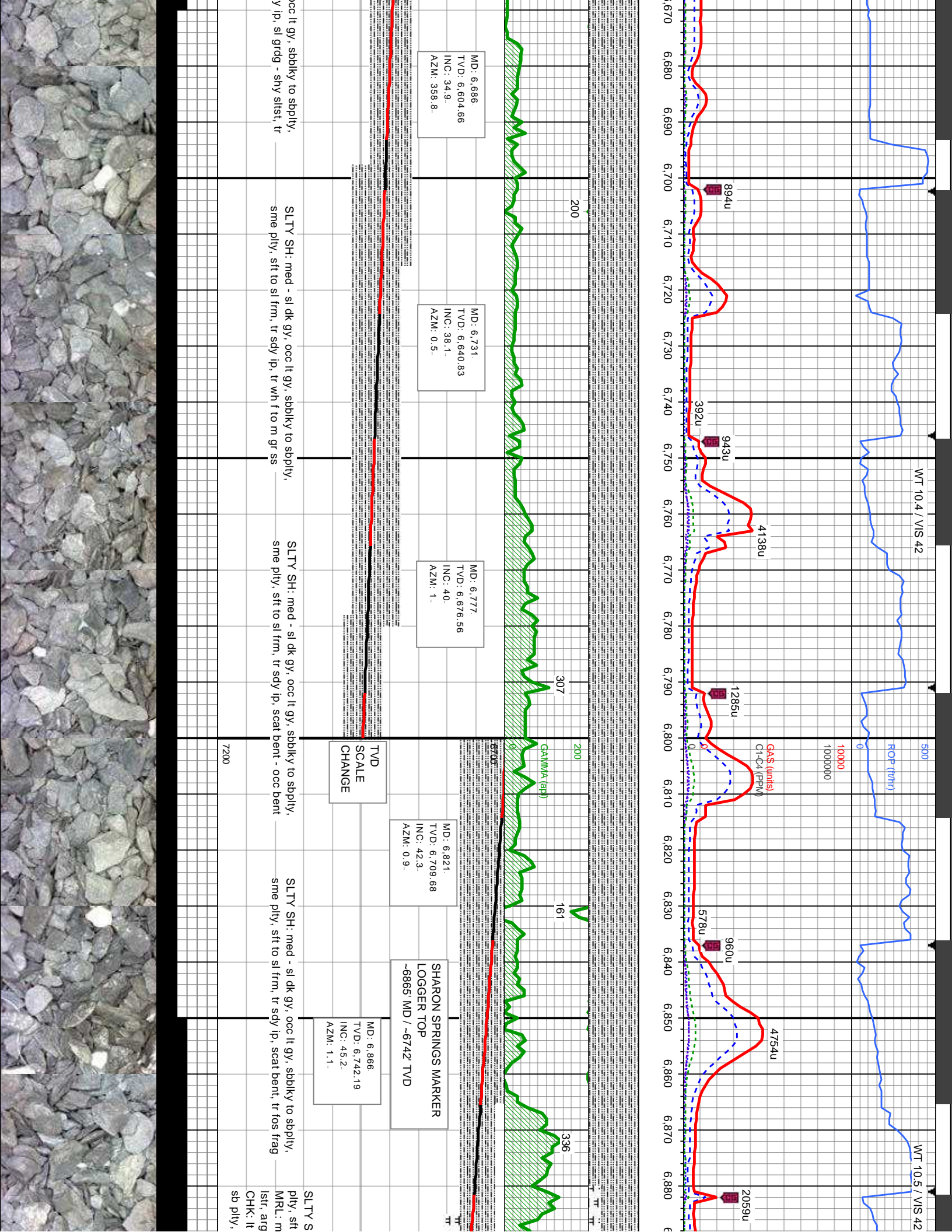
SLTY SH: med to sl dk gy, sme grbm, sbbkly to
sbply, sme ply, sft to sl frm, sdy ip, grdg to shy ss,
occ wh to lgy f to m gr ss

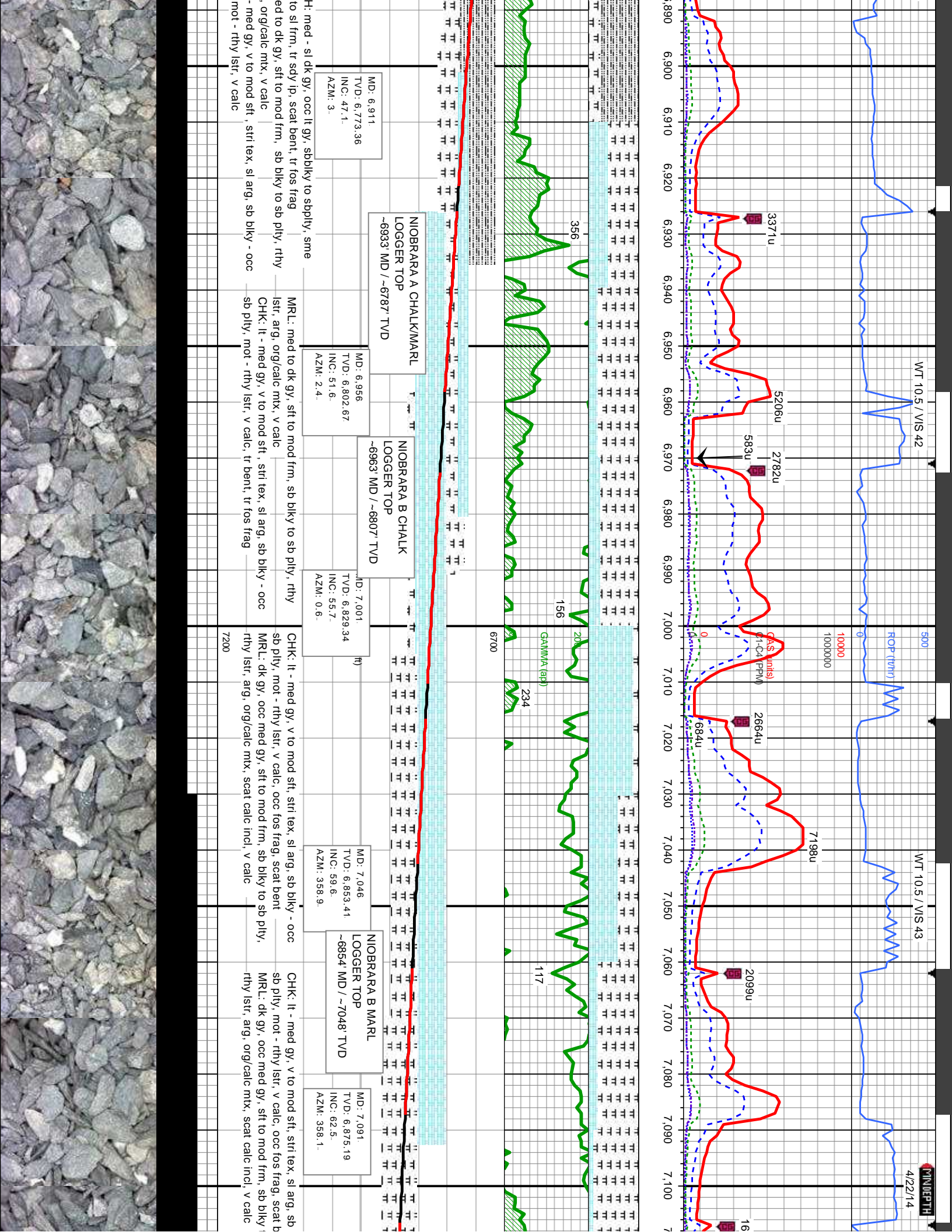
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sbply, sme ply, sft to sl frm, sdy ip, sl grdg - shy
slst, tr wh f to m gr ss

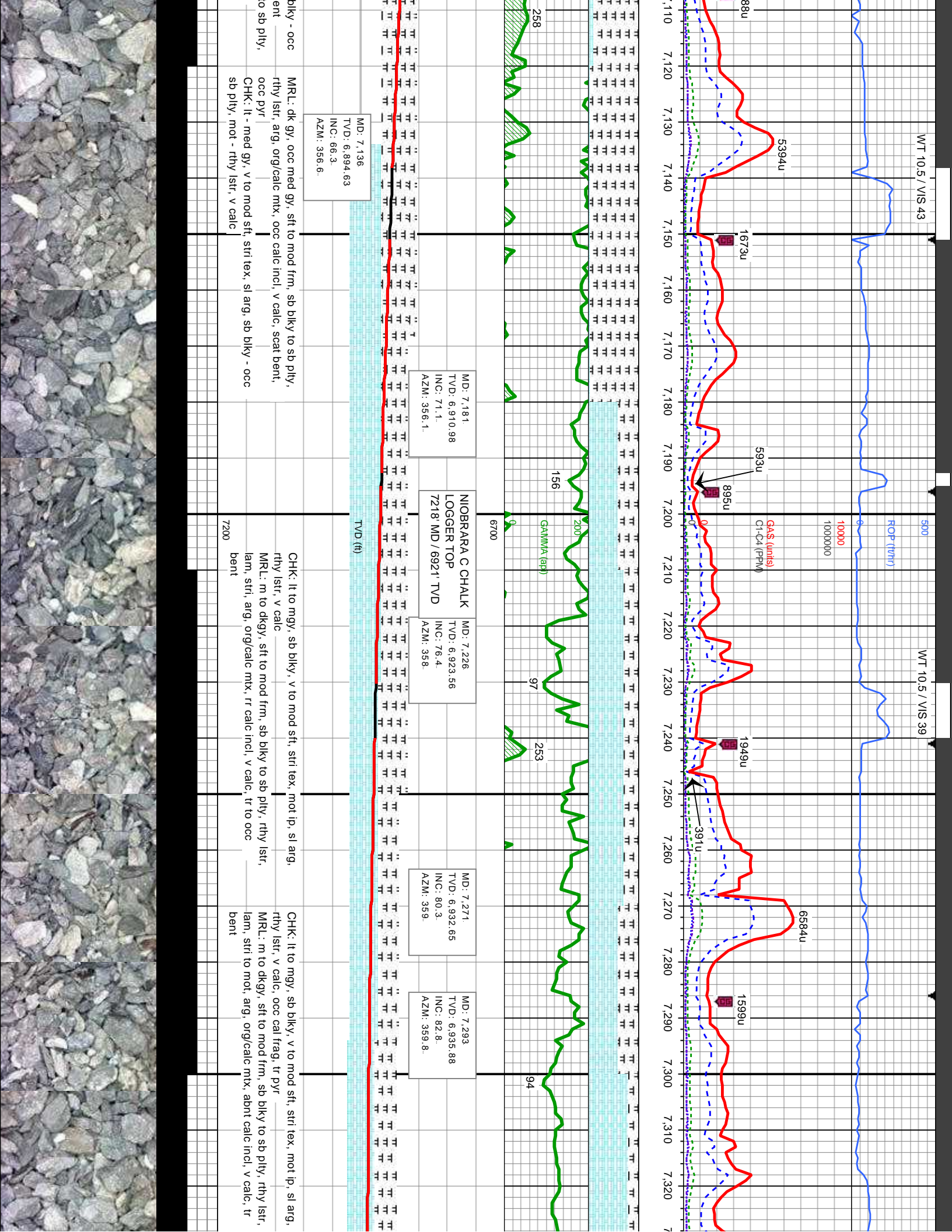
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sbply, sme ply, sft to sl frm, occ sdy ip, sl grdg - shy
slst, tr wh - lt gy f to m gr ss

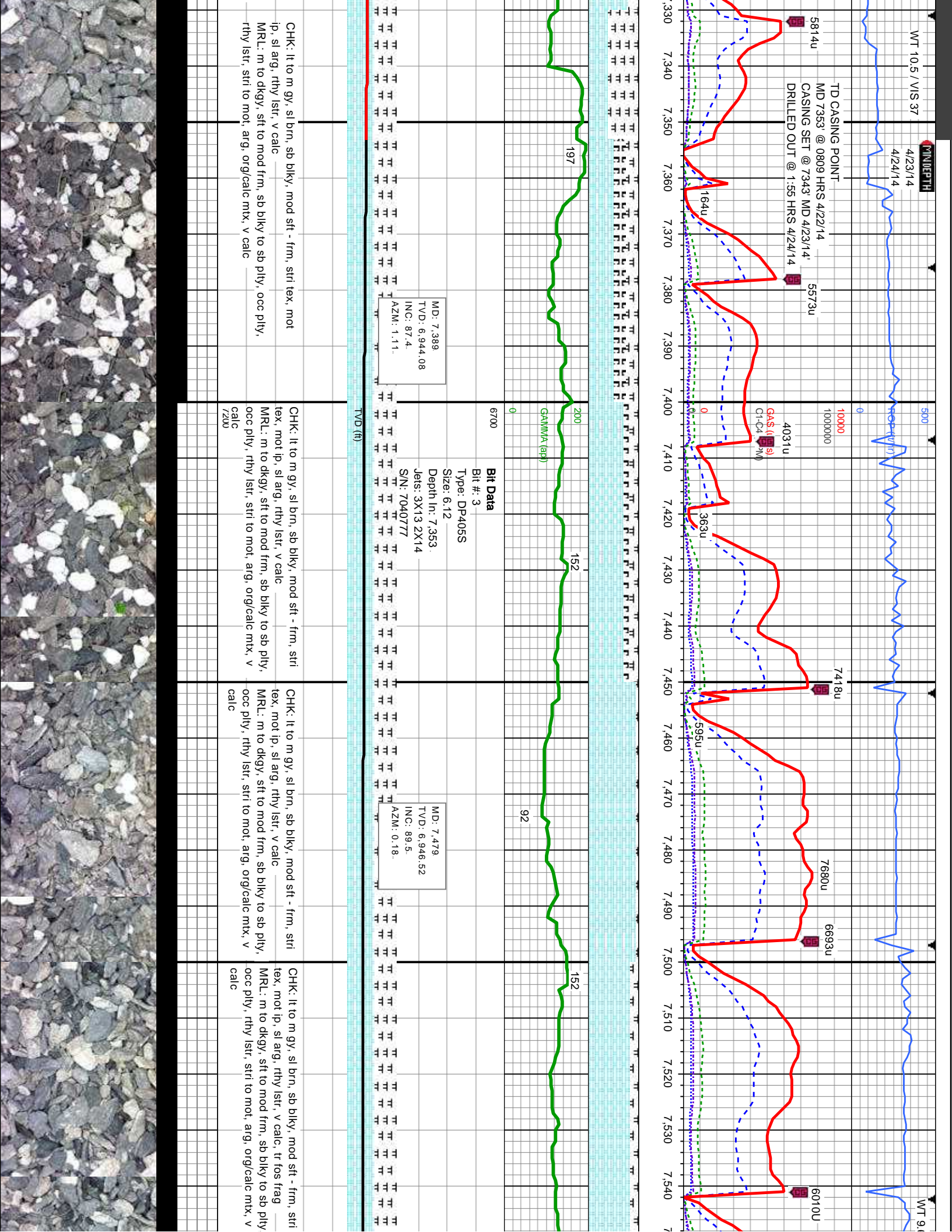
SLTY SH: med - sl dk gy, c
sme ply, sft to sl frm, tr sd
wh f to m gr ss

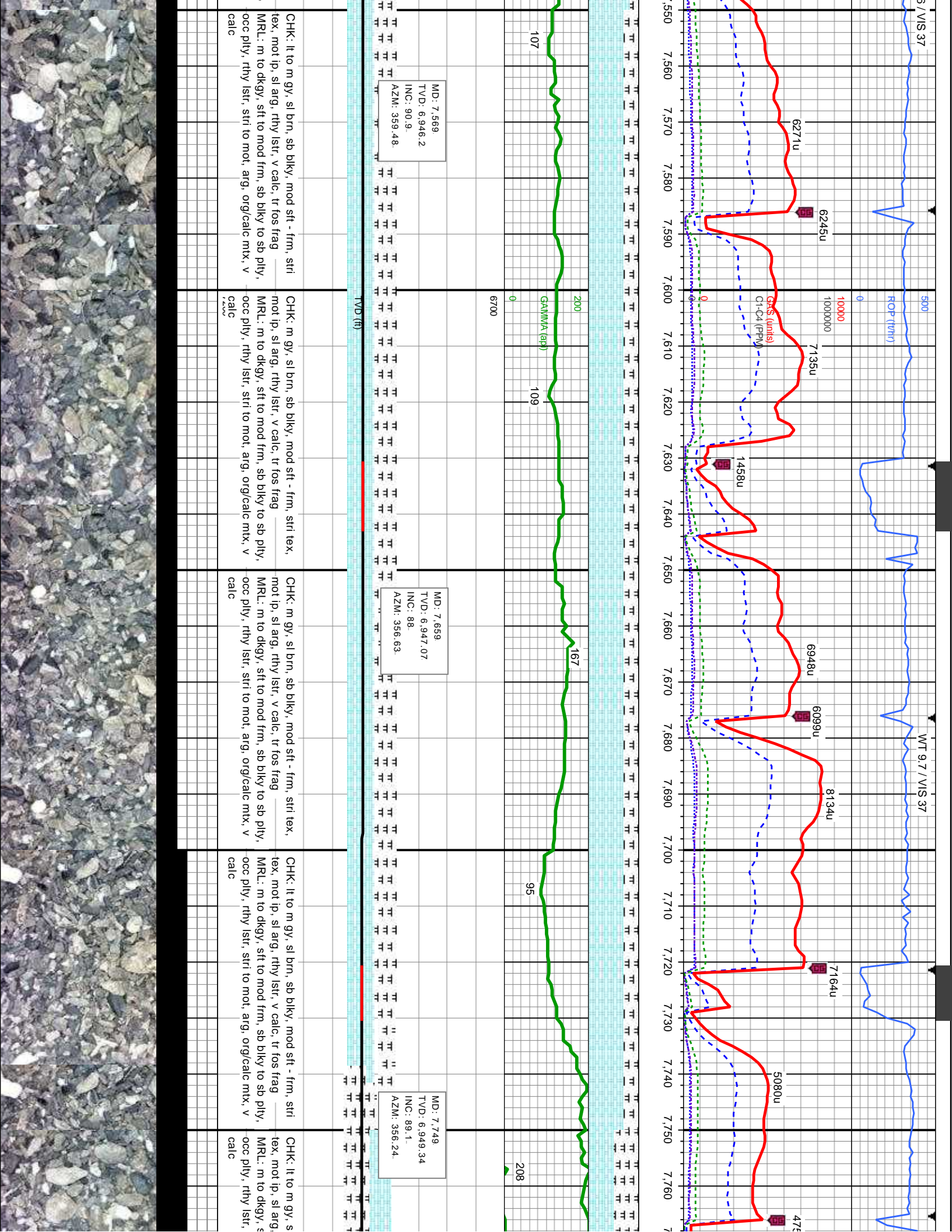


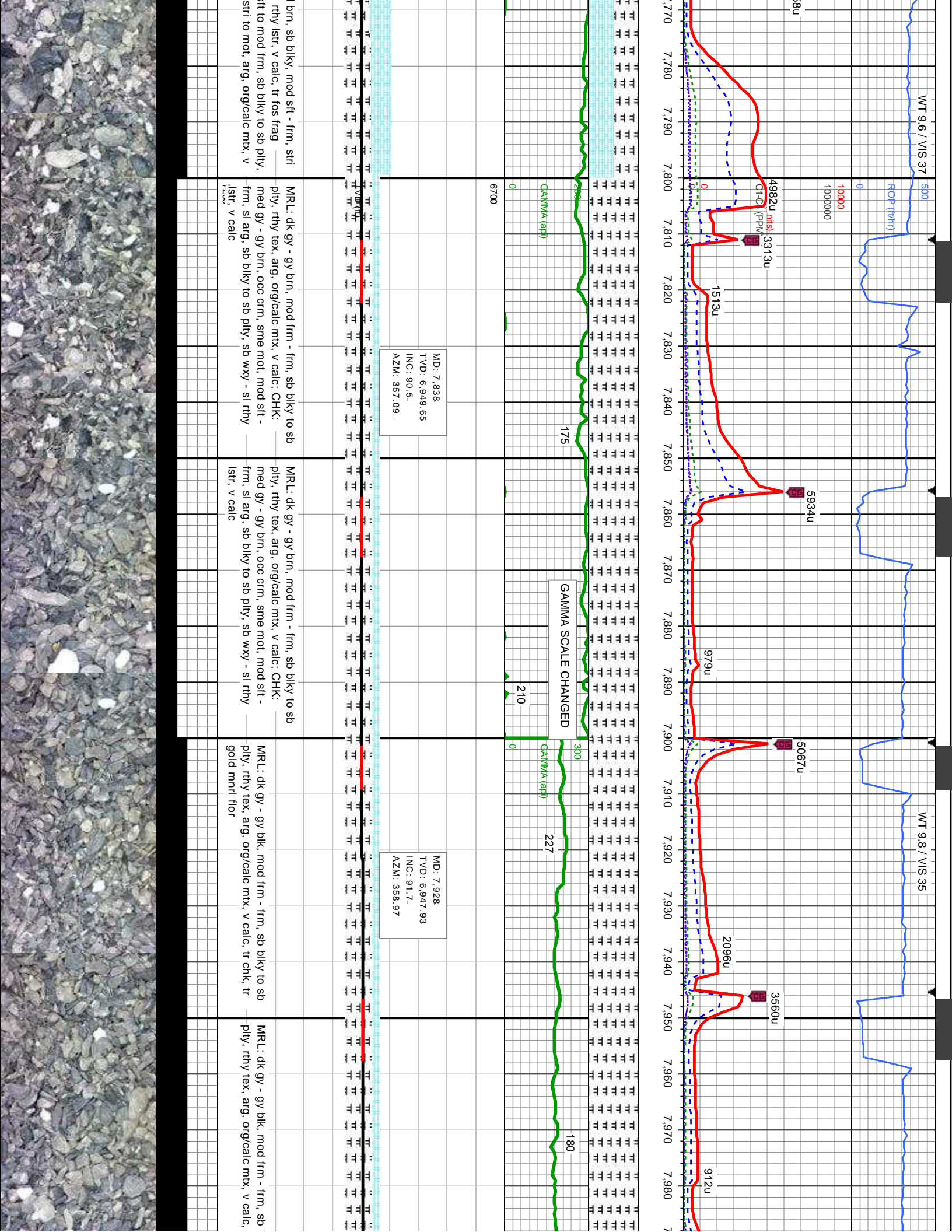


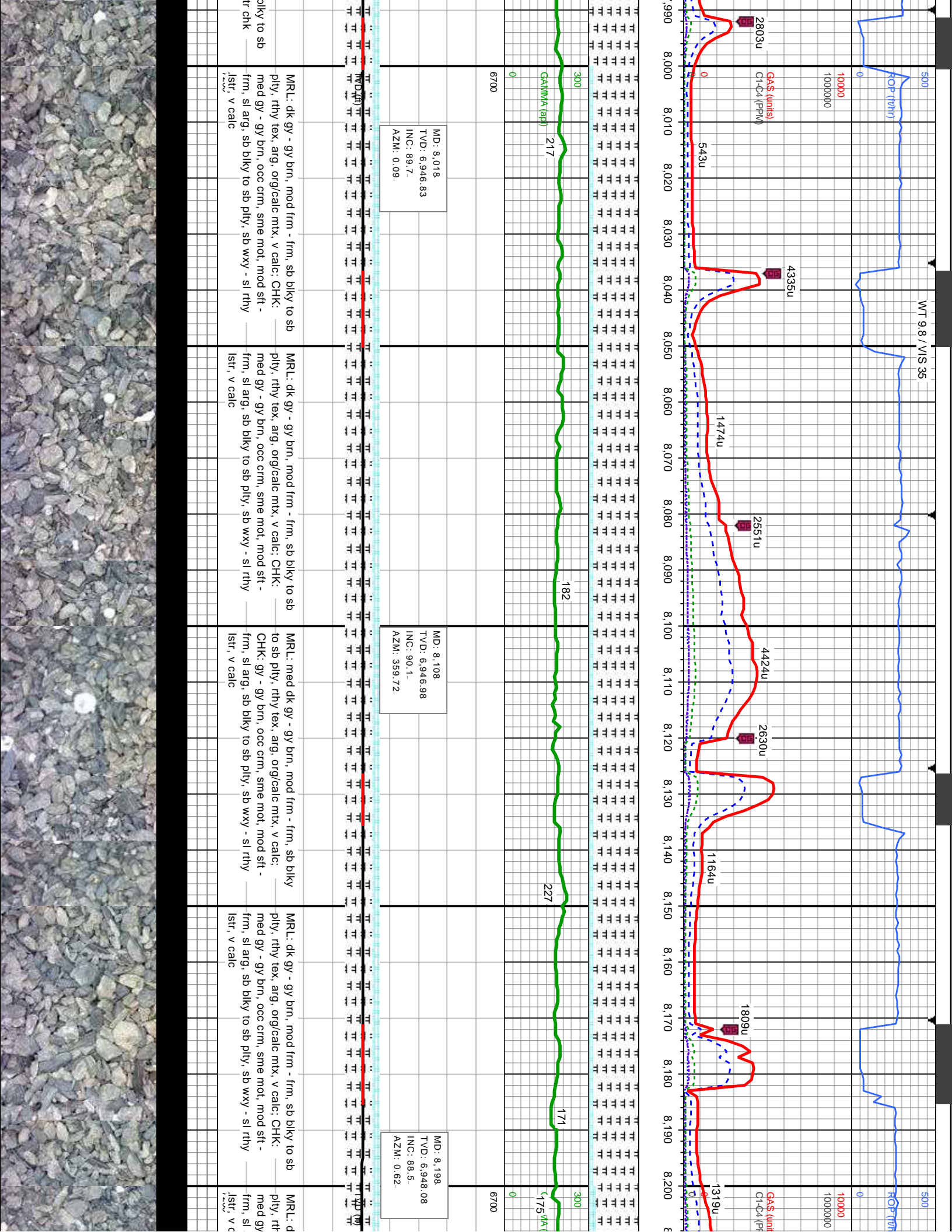


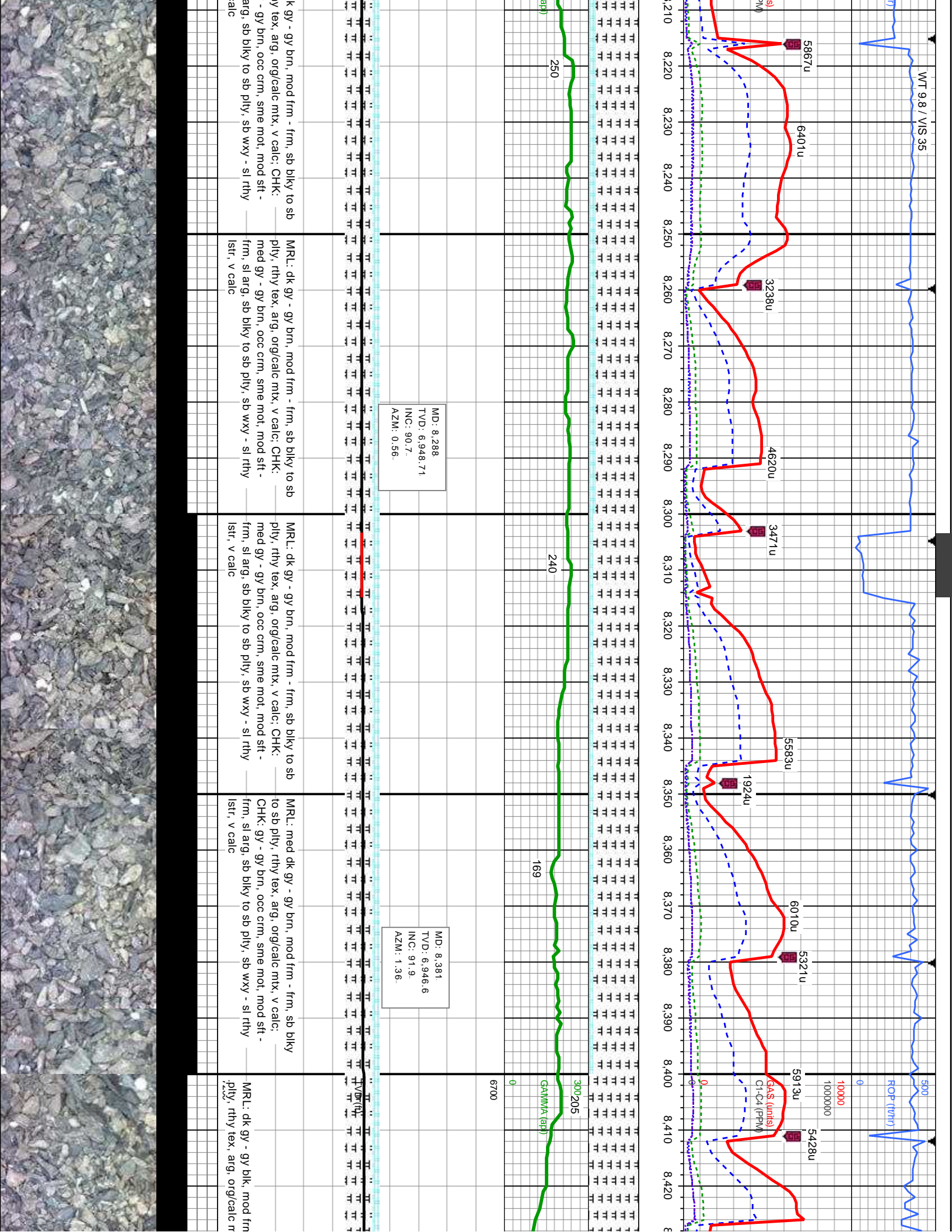


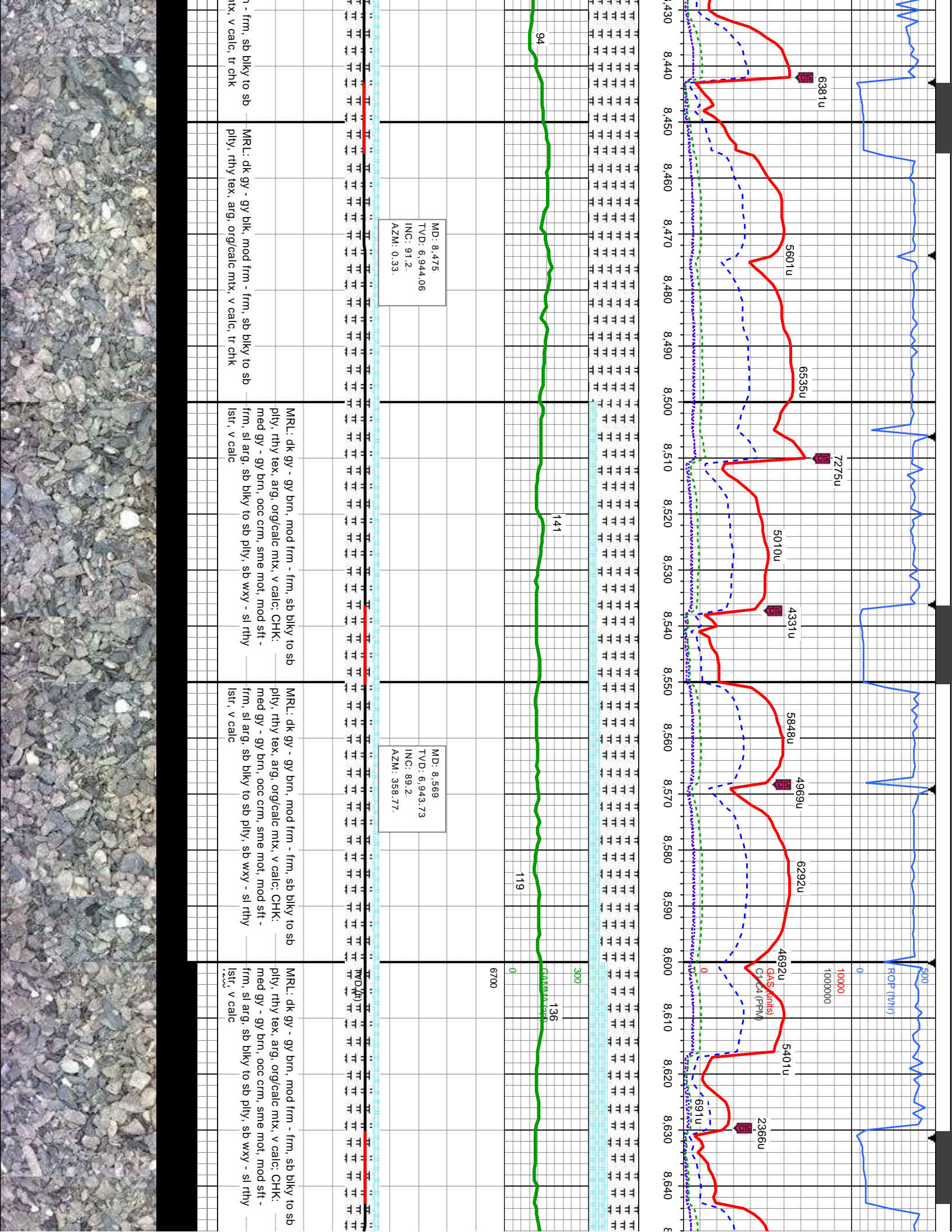


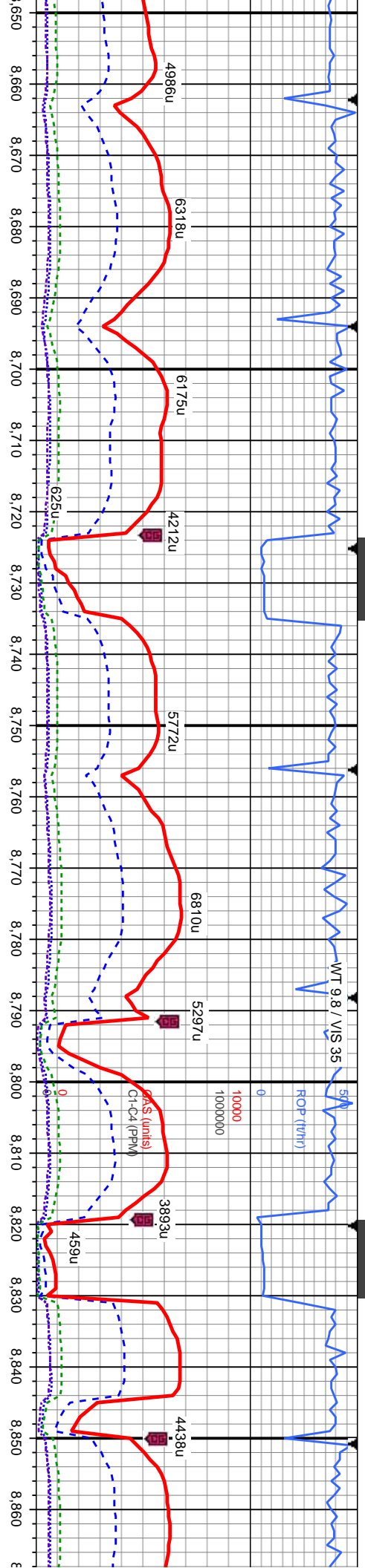












Problems with Gamma

MD: 8.663
TVD: 6.944.22
INC: 90.2
AZM: 0.74

MD: 8.757
TVD: 6.943.98
INC: 90.1
AZM: 1.43

MD: 8.852
TVD: 6.943.89
INC: 90.
AZM: 1.8

CHK: It to m gy, sl brn, sb blk, mod sft - frm, stri
tex, mot ip, sl arg, rthy lstr, v calc, tr fos frag
MRL: m to dkgy, sft to mod frm, sb blk to sb ply,
occ ply, rthy lstr, stri to mot, arg, orgcalc mix, v
calc

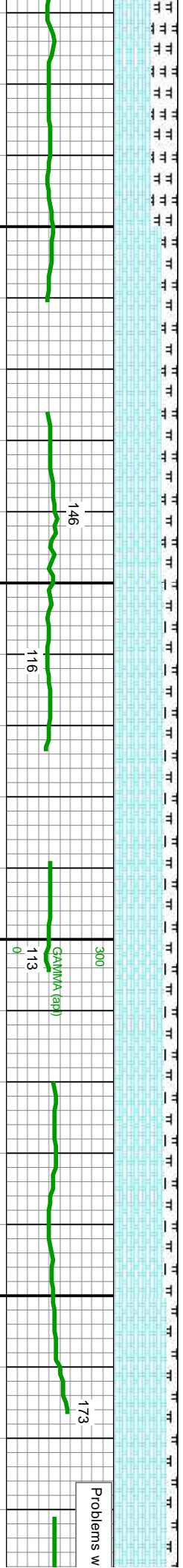
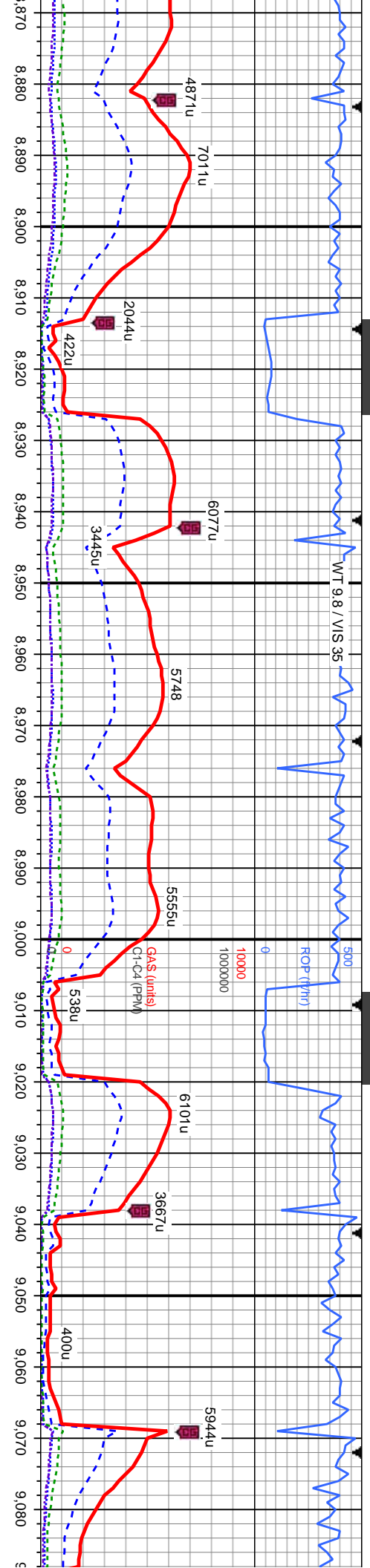
MRL: dk gy - gy brn, mod frm - frm, sb blk to sb
ply, rthy tex, arg, orgcalc mix, v calc; CHK:
med gy - gy brn, occ crm, sme mot, mod sft -
frm, sl arg, sb blk to sb ply, sb wxy - sl rthy
lstr, v calc

MRL: dk gy - gy brn, mod frm - frm, sb blk to sb
ply, rthy tex, arg, orgcalc mix, v calc; CHK:
med gy - gy brn, occ crm, sme mot, mod sft -
frm, sl arg, sb blk to sb ply, sb wxy - sl rthy
lstr, v calc

MRL: dk gy - gy brn, mod frm - frm, sb blk to sb
ply, rthy tex, arg, orgcalc mix, v calc; CHK:
med gy - gy brn, occ crm, sme mot, mod sft -
frm, sl arg, sb blk to sb ply, sb wxy - sl rthy
lstr, v calc

CHK: crm - med g
frm, sl arg, sb blk
lstr, v calc, tr fos f
MRL: dk gy - gy br
ply, rthy tex, arg,



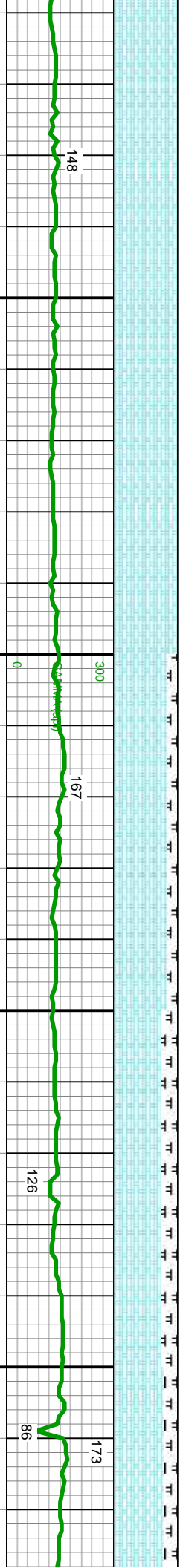
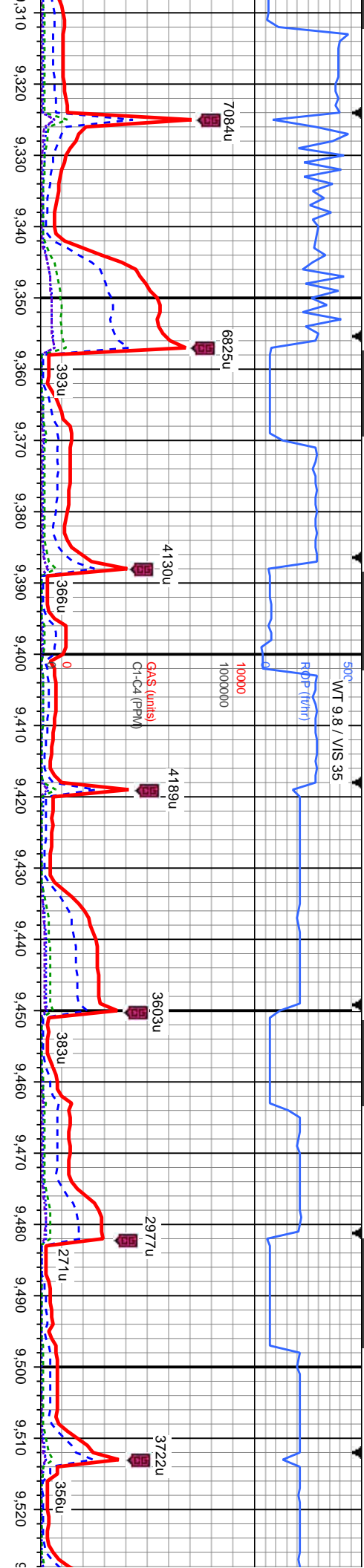


MD: 8.947
TVD: 6.943.98
INC: 89.9
AZM: 359.14

MD: 9.041
TVD: 6.945.45
INC: 88.3
AZM: 357.38

mod frm - lt gy - gy brn, sme mot, mod sft - mod sft - frm, sl arg, sb biky to sb pily, sb wxy - sl rthy lstr, v calc, occ fos frag MRL: dk gy - gy brn, mod frm - frm, sb biky to sb pily, rthy tex, arg, org/calc mt, v calc	CHK: med - lt gy - gy brn, occ crm, sme mot, mod sft - frm, sl arg, sb biky to sb pily, sb wxy - sl rthy lstr, v calc, occ fos frag MRL: dk gy - gy brn, mod frm - frm, sb biky to sb pily, rthy tex, arg, org/calc mt, v calc	CHK: med - lt gy - gy brn, occ crm, sme mot, mod sft - frm, sl arg, sb biky to sb pily, sb wxy - sl rthy lstr, v calc, occ fos frag MRL: dk gy - gy brn, mod frm - frm, sb biky to sb pily, rthy tex, arg, org/calc mt, v calc	CHK: med - lt gy - gy brn, occ crm, sme mot, mod sft - frm, sl arg, sb biky to sb pily, sb wxy - sl rthy lstr, v calc, occ fos frag MRL: dk gy - gy brn, mod frm - frm, sb biky to sb pily, rthy tex, arg, org/calc mt, v calc
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MD: 9.324
TVD: 6.945.38
INC: 89.2
AZM: 356.05

MD: 9.418
TVD: 6.947.43
INC: 88.3
AZM: 357.58

MD: 9.512
TVD: 6.948.58
INC: 90.3
AZM: 0.73

gy - gy brn, sme mot, mod sft - frm, sl
biky to sb ply, sb wxy - sl rthy lstr, v
c fos frag, occ mst frag

CHK: It gy - gy brn, sme mot, mod sft - frm, sl
arg, sb biky to sb ply, sb wxy - sl rthy lstr, v
calc, occ fos frag, occ mst frag

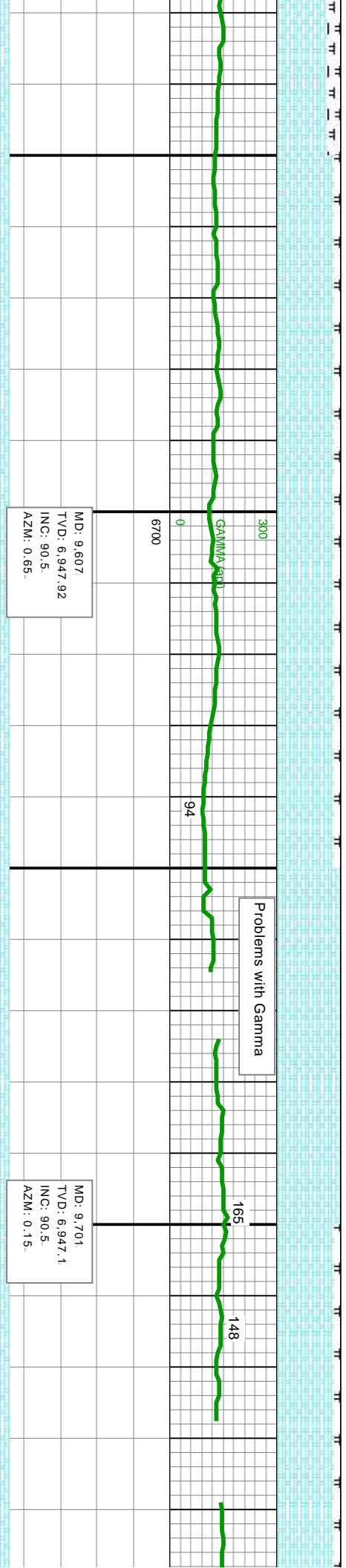
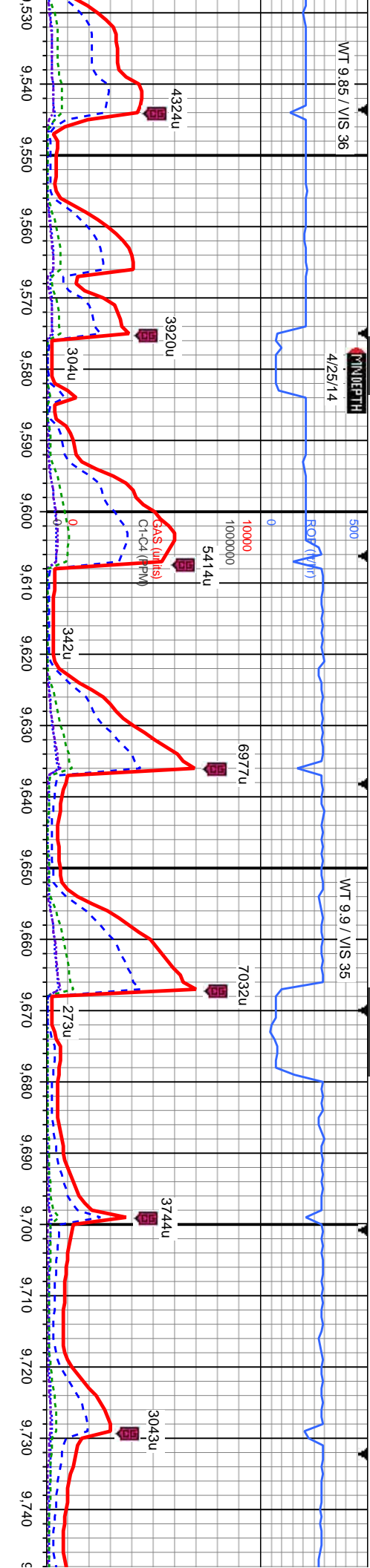
CHK: It gy - gy brn, sme mot, mod sft - frm, sl arg,
sb biky to sb ply, sb wxy - sl rthy lstr, v calc,
occ fos frag

MR: dk gy - gy brn, mod frm - frm, sb biky to sb
ply, rthy tex, arg, org/calc mix, occ calc incl, v
calc

CHK: It gy - gy brn, sme mot, mod sft - frm, sl arg,
frm, sl arg, sb biky to sb ply
lstr, v calc, tr fos frag, tr pyr

MR: dk gy - gy brn, mod frm - frm, sb biky to sb
ply, rthy tex, arg, org/calc m





sme mot, mod sft -
frm, sl arg, sb blkly to sb plty, sb wxy - sl rthy

- frm, sb blkly to sb
ply, occ calc incl, v

CHK: lt gy - gy brn, sme crm, sme mot, mod sft -
frm, sl arg, sb blkly to sb plty, sb wxy - sl rthy
lstr, v calc, tr fos frag

MRL: dk gy - gy brn, mod frm - frm, sb blkly to sb
ply, rthy tex, arg, org/calc mix, occ calc incl, v
calc

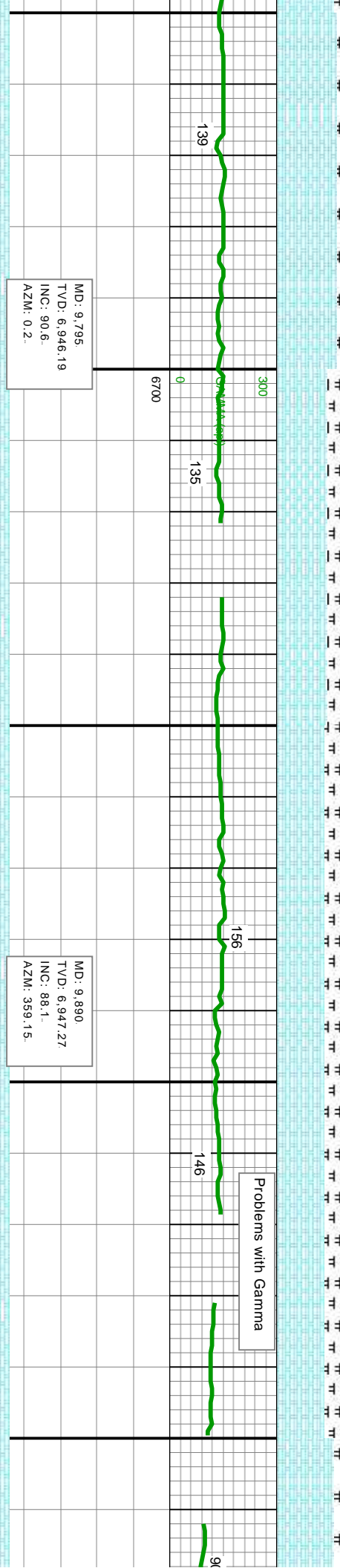
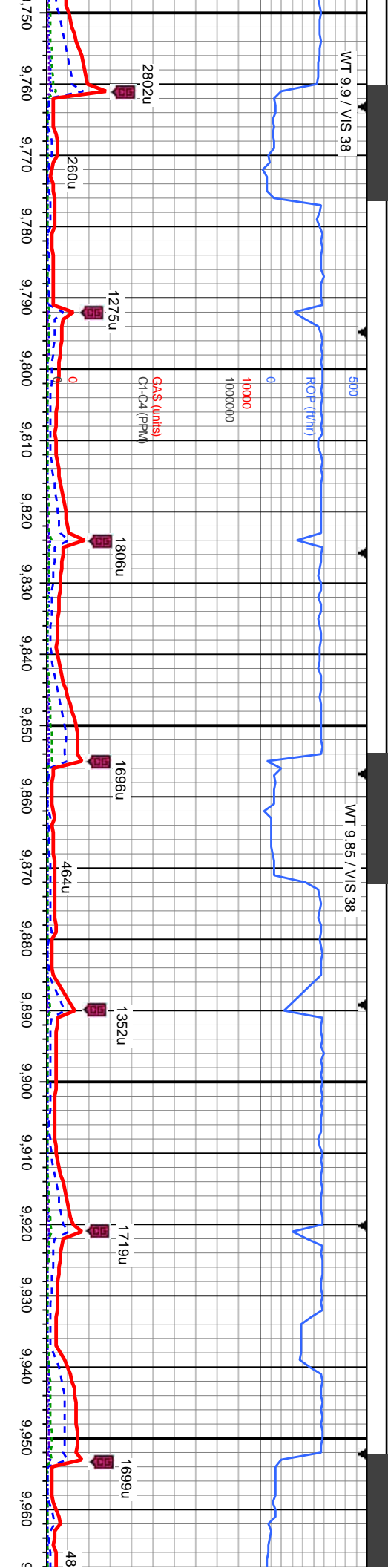
CHK: lt gy - gy brn, sme crm, sme mot, mod sft -
frm, sl arg, sb blkly to sb plty, sb wxy - sl rthy
lstr, v calc, tr fos frag

MRL: dk gy - gy brn, mod frm - frm, sb blkly to sb
ply, rthy tex, arg, org/calc mix, occ calc incl, v
calc

CHK: lt gy - gy brn, sme crm, sme mot, mod sft -
frm, sl arg, sb blkly to sb plty, sb wxy - sl rthy
lstr, v calc, tr fos frag

MRL: dk gy - gy brn, mod frm - frm, sb blkly to sb
ply, rthy tex, arg, org/calc mix, occ calc incl, v
calc





CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb biky to sb ply, sb wxy - sl rthy - str, v calc, occ fos frag

MR: dk gy - gy brn, mod frm - frm, sb biky to sb ply, rthy tex, arg, org/calc mix, occ calc incl, v calc

CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb biky to sb ply, sb wxy - sl rthy - str, v calc, occ fos frag

MR: dk gy - gy brn, mod frm - frm, sb biky to sb ply, rthy tex, arg, org/calc mix, occ calc incl, v calc

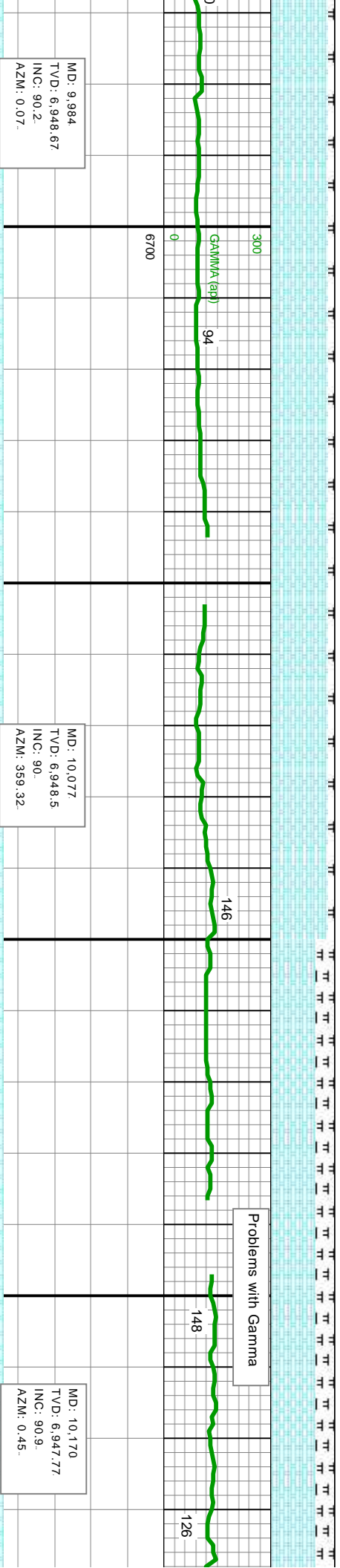
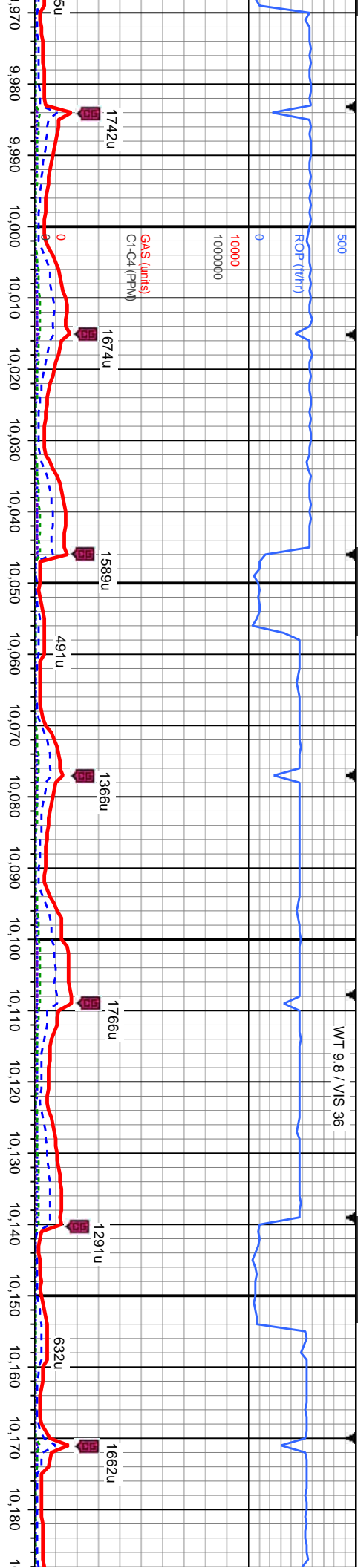
CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb biky to sb ply, sb wxy - sl rthy - str, v calc, occ fos frag

MR: dk gy - gy brn, mod frm - frm, sb biky to sb ply, rthy tex, arg, org/calc mix, occ calc incl, v calc

CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb biky to sb ply, sb wxy - sl rthy - str, v calc, occ fos frag

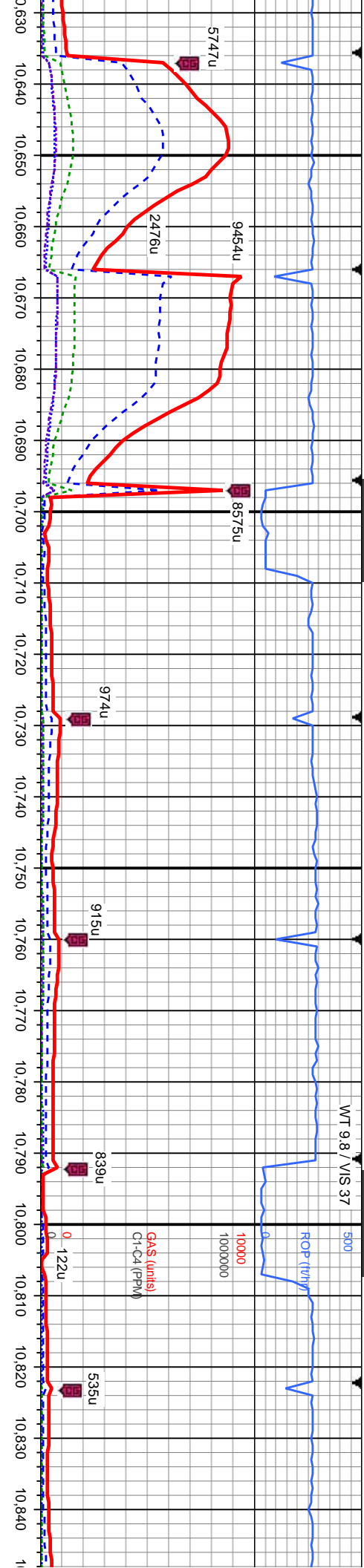
MR: dk gy - gy brn, mod frm - frm, sb biky to sb ply, rthy tex, arg, org/calc mix, occ calc incl, v calc





CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb bly to sb ply, sb wxy - sl rthy	CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb bly to sb ply, sb wxy - sl rthy	CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb bly to sb ply, sb wxy - sl rthy	CHK: med It gy - gy brn, sme crm, sme sft - frm, sl arg, sb bly to sb ply, sb wxy
MR: dk gy - gy brn, mod frm - frm, sb bly to sb ply, rthy tex, arg, orgcalc mix, occ calc incl, v calc	MR: dk gy - gy brn, mod frm - frm, sb bly to sb ply, rthy tex, arg, orgcalc mix, occ calc incl, v calc	MR: dk gy - gy brn, mod frm - frm, sb bly to sb ply, rthy tex, arg, orgcalc mix, occ calc incl, v calc	MR: med dk gy - gy brn, mod frm - frm to sb ply, rthy tex, arg, orgcalc mix, occ incl, v calc





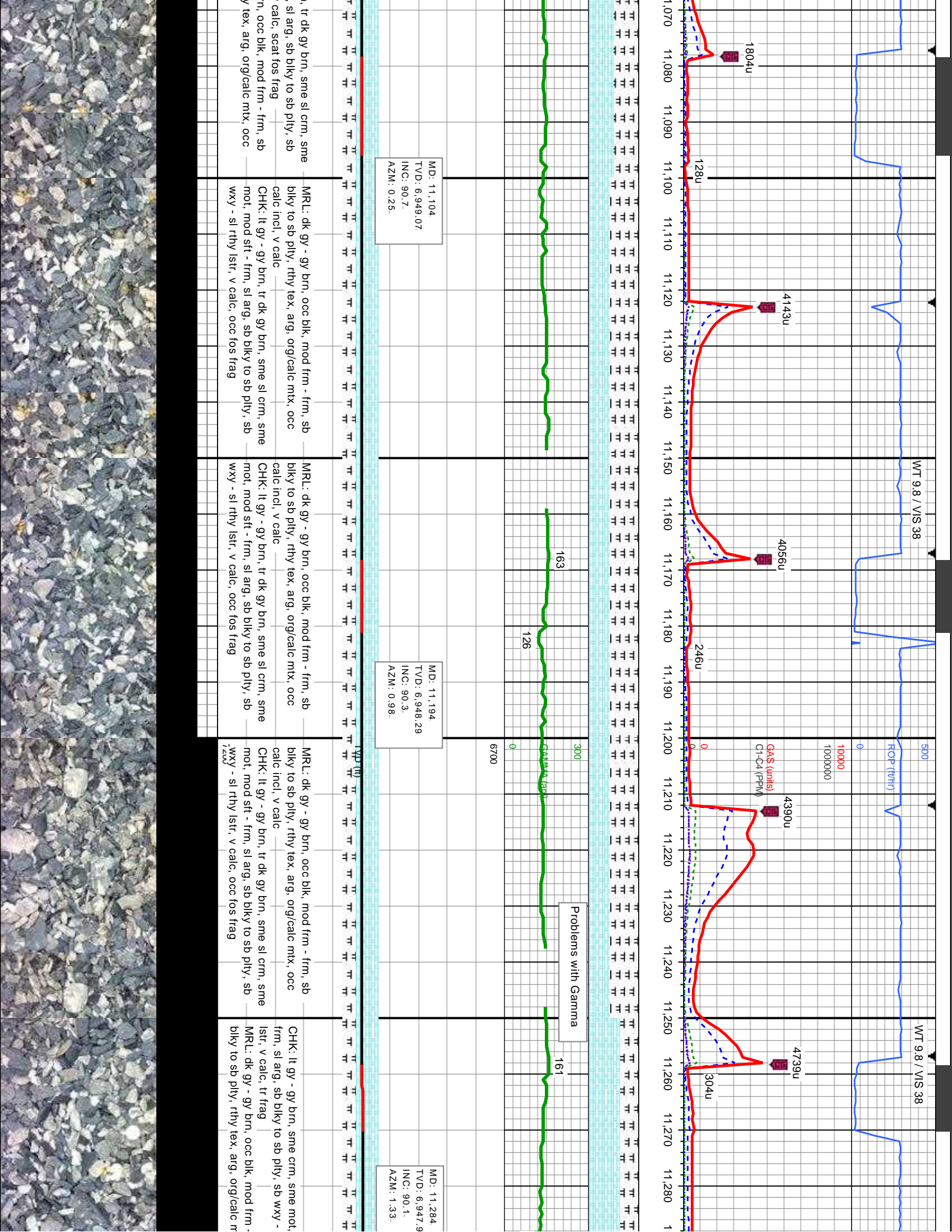
D: 10.634
VD: 6.945.43
IC: 89.6
AZM: 359.8

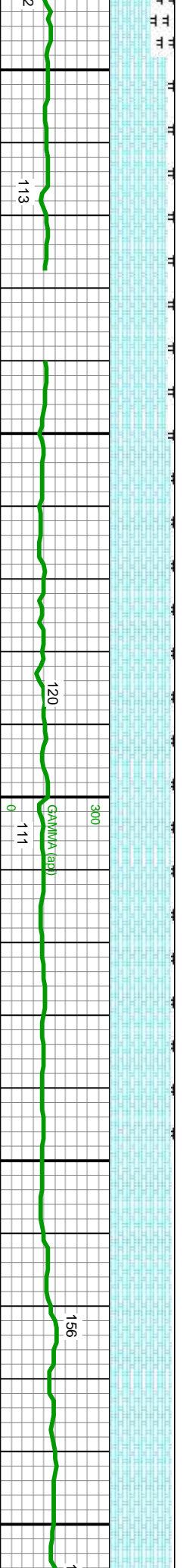
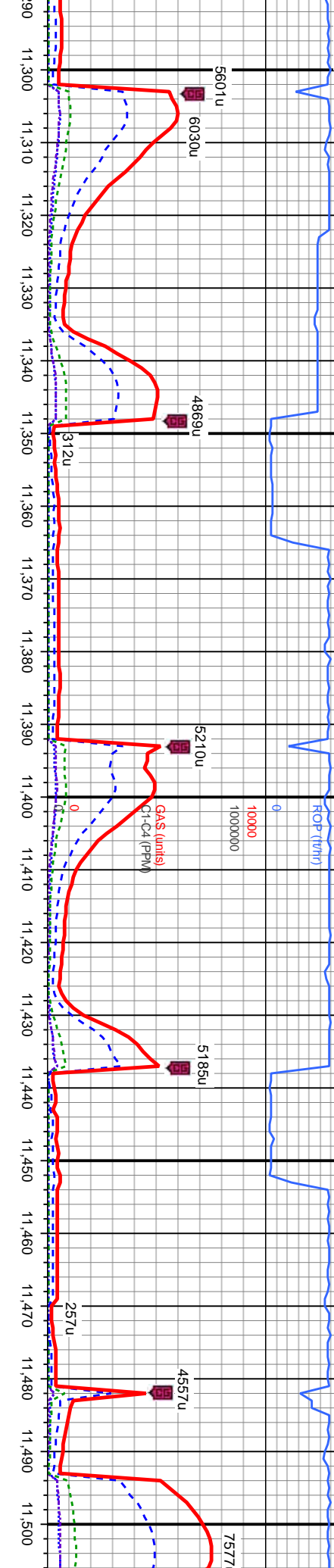
MD: 10.729
TVD: 6.946.59
INC: 89.
AZM: 358.24

MD: 10.835
TVD: 6.947.98
INC: 89.5
AZM: 359.15

frm, sl arg, sb blk	CHK: It gy - gy brn, mod sft - frm, sl arg, sb blk	CHK: It gy - gy brn, mod sft - frm, sl arg, sb blk	CHK: It gy - gy brn, sme crm, sme mot, mod sft -	CHK: It gy - gy brn, sme crm, sme mot, mod sft -
to sb ply, v calc, occ fos	to sb ply, sb wxy - sl rthy lstr, v calc, occ fos	to sb ply, sb wxy - sl rthy lstr, v calc, occ fos	frm, sl arg, sb blk to sb ply, sb wxy - sl rthy	frm, sl arg, sb blk to sb ply, sb wxy - sl rthy
frm, sb blk to sb ply,	MR: dk gy - gy brn, frm - frm, sb blk to sb ply,	MR: dk gy - gy brn, frm - frm, sb blk to sb ply,	lstr, v calc, occ fos frag	lstr, v calc, occ fos frag
occ calc incl, v calc	rthy tex, arg, org/calc mix, occ calc incl, v calc	rthy tex, arg, org/calc mix, occ calc incl, v calc	MR: dk gy - gy brn, mod frm - frm, sb blk to sb	MR: dk gy - gy brn, mod frm - frm, sb blk to sb
			ply, rthy tex, arg, org/calc mix, occ calc incl, v	ply, rthy tex, arg, org/calc mix, occ calc incl, v
			calc	calc





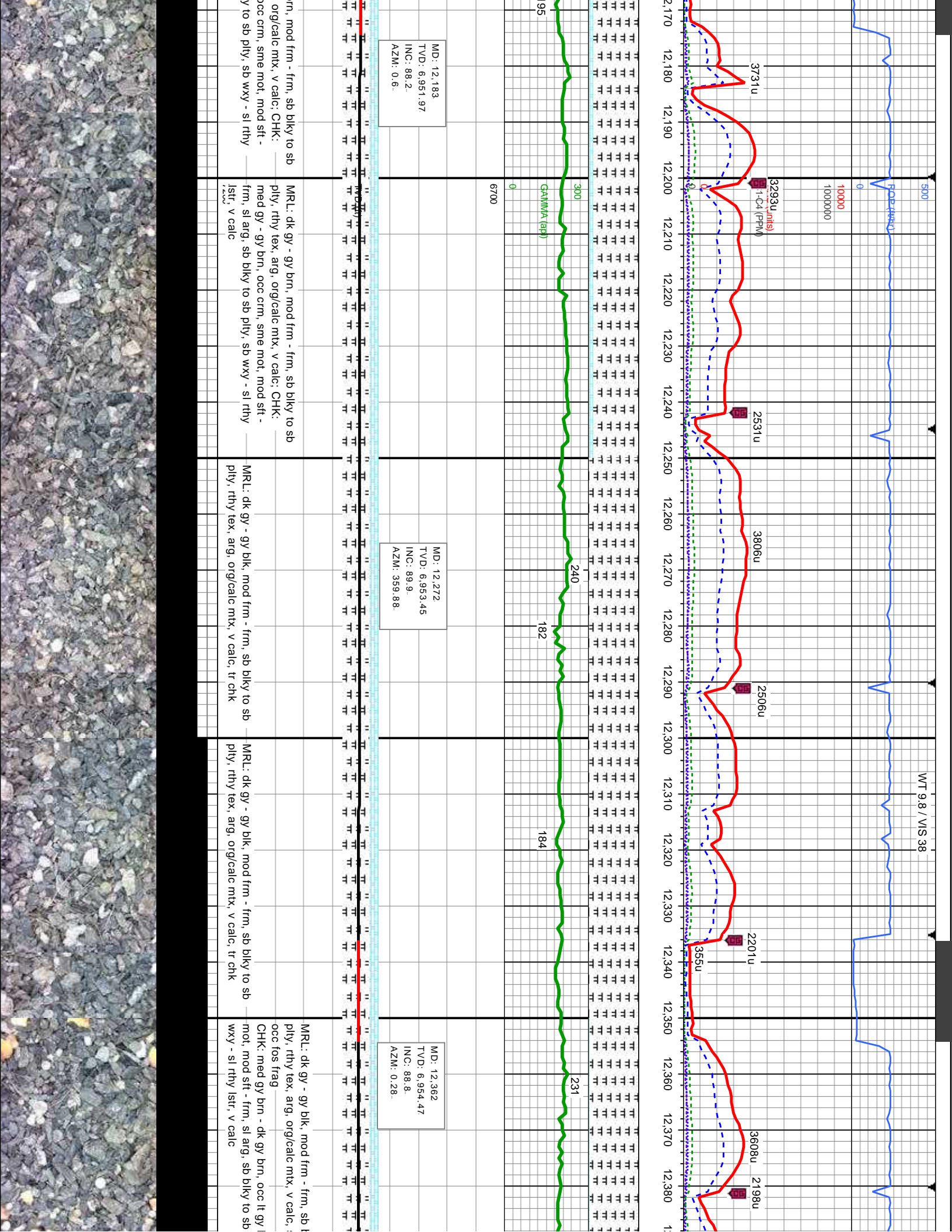


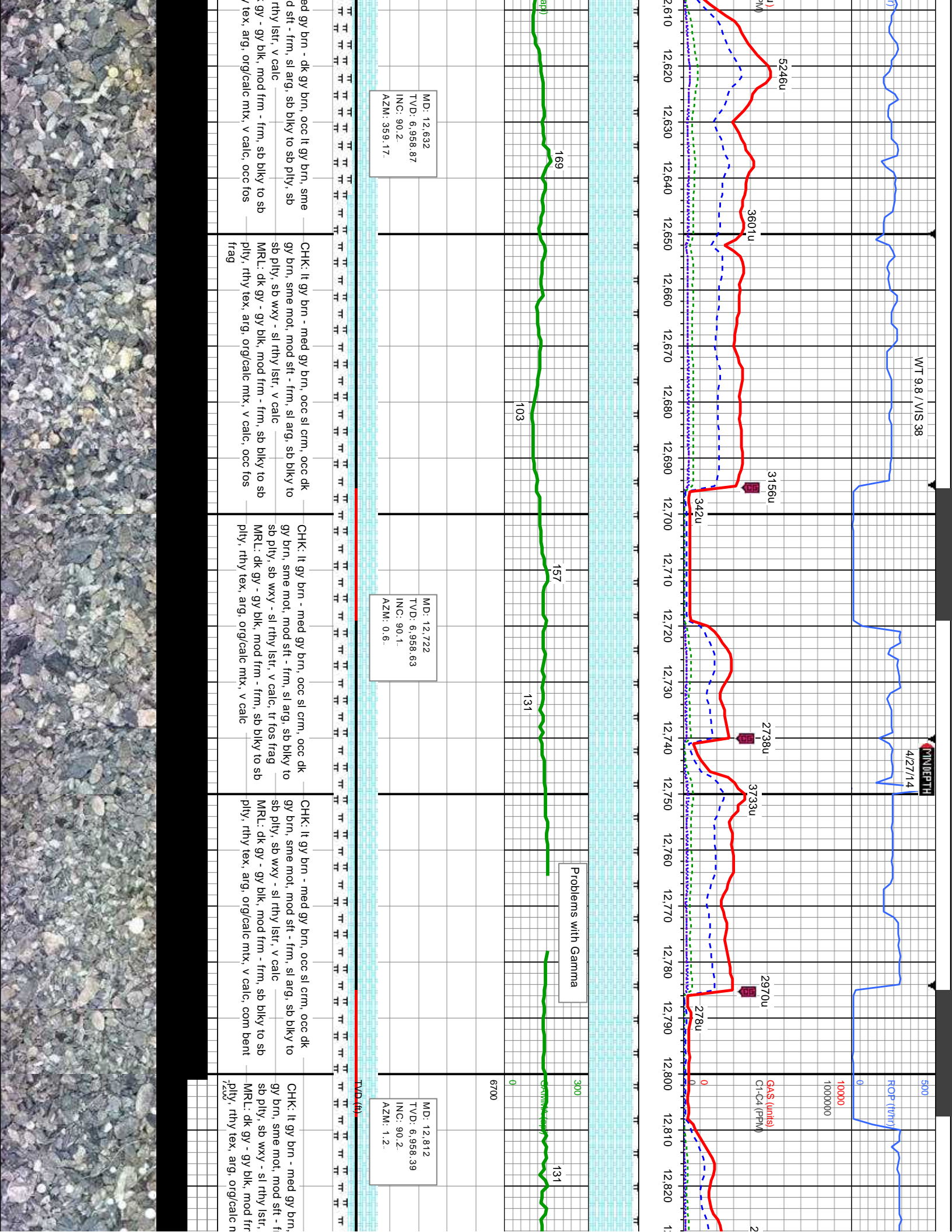
MD: 11,374
TVD: 6,948.05
INC: 89.8
AZM: 0.57.

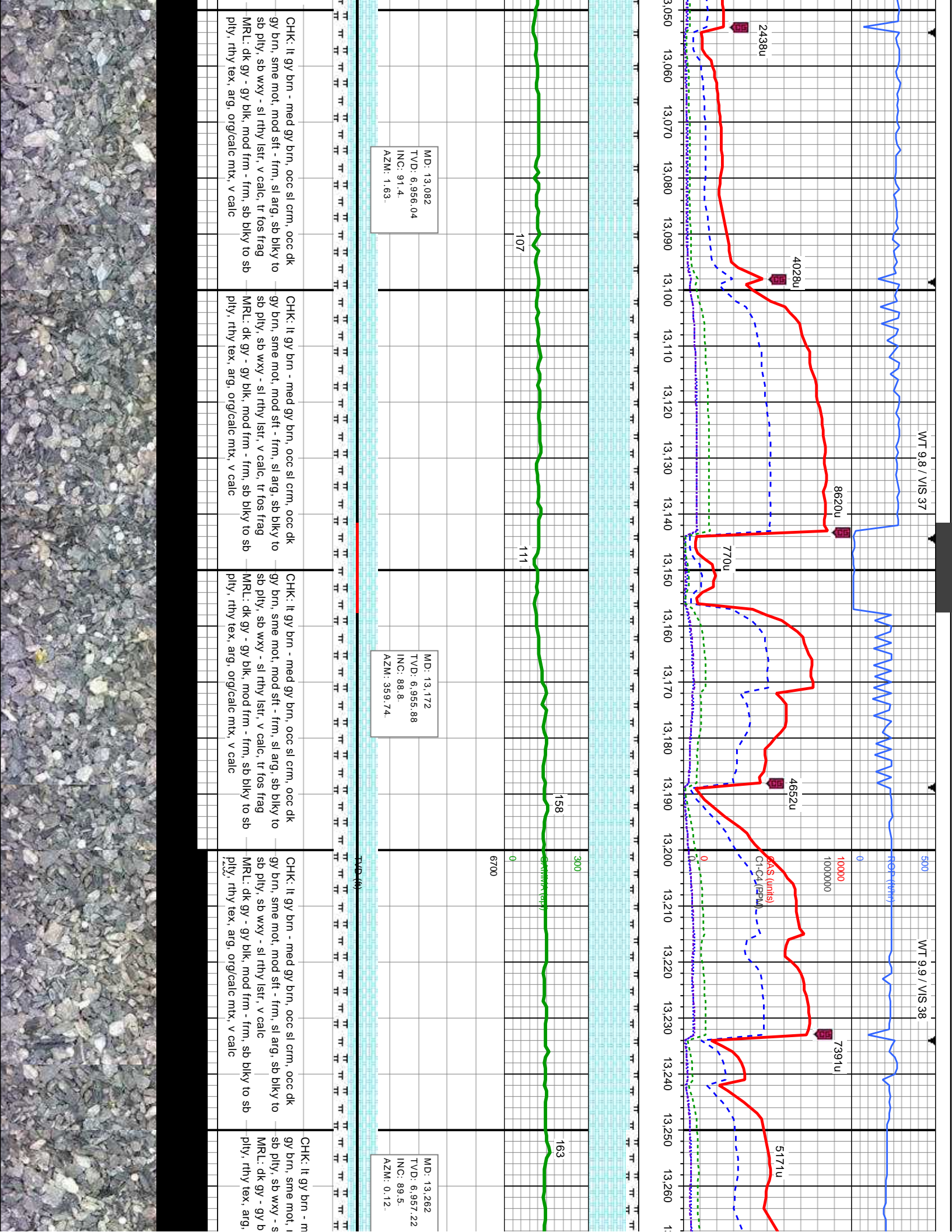
MD: 11,464
TVD: 6,949.86
INC: 87.9
AZM: 0.33.

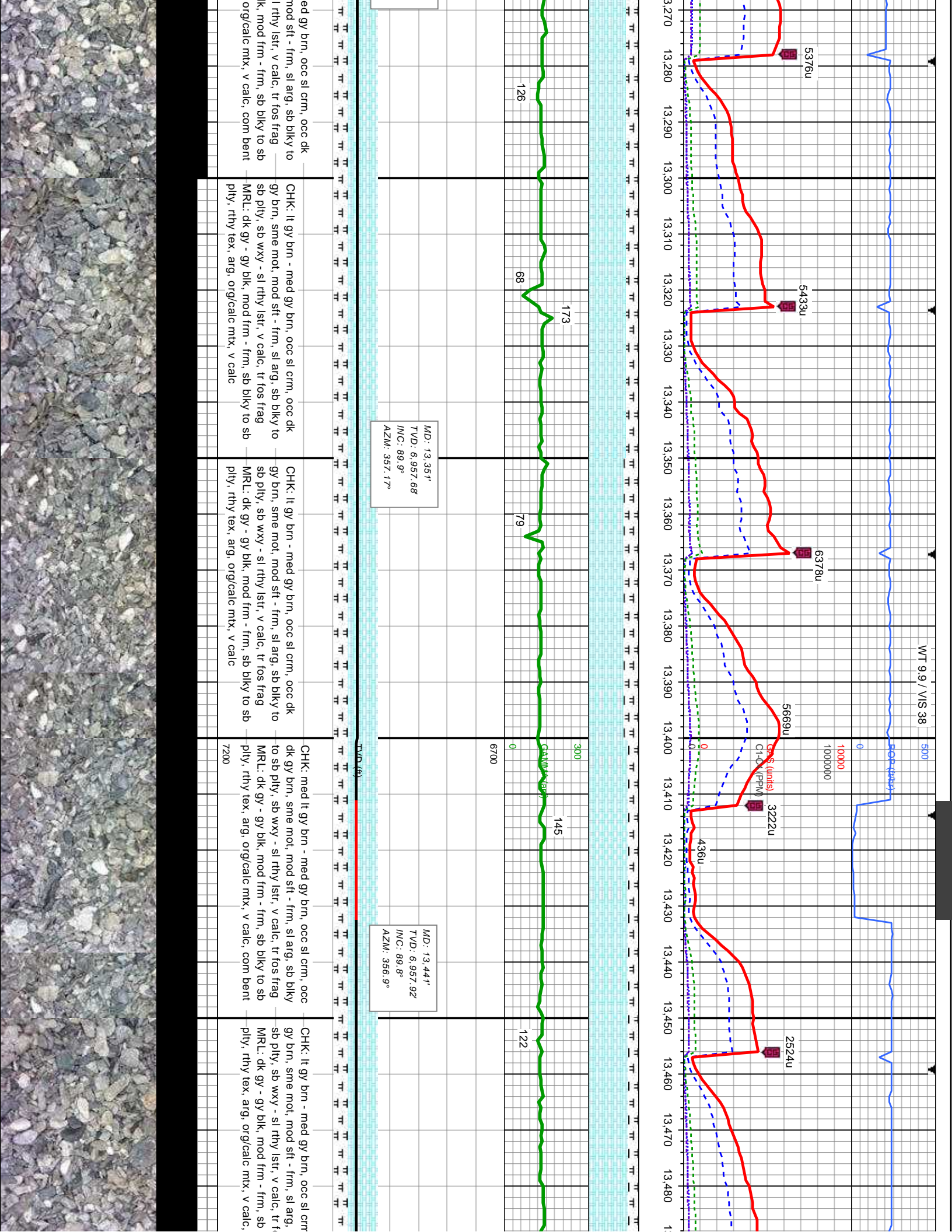
mod sft - sl rthy	CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb blkly to sb ply, sb wxy - sl rthy lsfr, v calc, tr frag	CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb blkly to sb ply, sb wxy - sl rthy lsfr, v calc, tr frag	CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb blkly to sb ply, sb wxy - sl rthy lsfr, v calc, tr frag	CHK: It gy - gy brn, sme crm, sme mot, mod sft - frm, sl arg, sb blkly to sb ply, sb wxy - sl rthy lsfr, v calc, tr frag
frm, sb tx, v calc	MRL: dk gy - gy brn, occ blk, mod frm - frm, sb blkly to sb ply, rthy tex, arg, org/calc mix, v calc	MRL: dk gy - gy brn, occ blk, mod frm - frm, sb blkly to sb ply, rthy tex, arg, org/calc mix, v calc	MRL: dk gy - gy brn, occ blk, mod frm - frm, sb blkly to sb ply, rthy tex, arg, org/calc mix, v calc	MRL: dk gy - gy brn, occ blk, mod frm - frm, sb blkly to sb ply, rthy tex, arg, org/calc mix, v calc











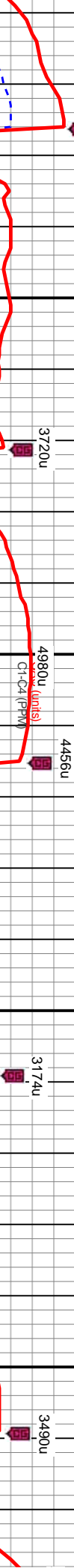
6472u

3720u

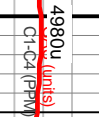
4456u

3174u

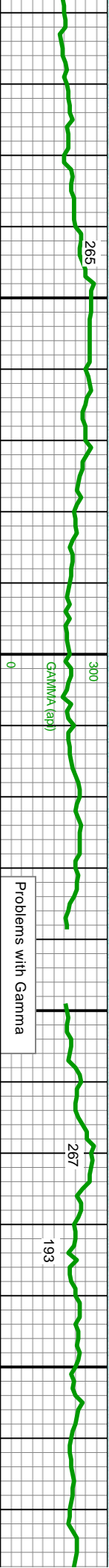
3490u



441u



403u



300

267

193

265

6700

Problems with Gamma

13.711
6.956,5
90.4
1.36

MD: 13.801
TVD: 6.954,85
INC: 91.7
AZM: 0.44

MD: 13.891
TVD: 6.952,26
INC: 91.6
AZM: 0.68

gy brn - med gy brn, occ sl crm, occ dk gy e mot, mod sft - frm, sl arg, sb biky to sb wxy - sl rthy lstr, v calc, tr fos frag, tr pyr	MRL: dk gy - gy blk, mod frm - frm, sb biky to sb ply, rthy tex, arg, org/calc mtx, v calc, tr pyr, occ calc incl	MRL: dk gy - gy blk, mod frm - frm, sb biky to sb ply, rthy tex, arg, org/calc mtx, v calc, tr pyr, tr calc incl	MRL: dk gy - gy blk, mod frm - frm, sb biky to sb ply, rthy tex, arg, org/calc mtx, v calc, tr pyr, tr calc incl	MRL: dk gy - gy blk, mod frm - frm, sb biky to sb ply, rthy tex, arg, org/calc mtx, v calc, tr pyr, tr calc incl
gy - gy blk, mod frm - frm, sb biky to sb v tex, arg, org/calc mtx, v calc	CHK: med gy brn - dk gy brn, occ lt gy brn, sme mot, mod sft - frm, sl arg, sb biky to sb ply, sb wxy - sl rthy lstr, v calc, tr fos frag	CHK: med gy brn - dk gy brn, occ lt gy brn, sme mot, mod sft - frm, sl arg, sb biky to sb ply, sb wxy - sl rthy lstr, v calc, tr fos frag	CHK: med gy brn - dk gy brn, occ lt gy brn, sme mot, mod sft - frm, sl arg, sb biky to sb ply, sb wxy - sl rthy lstr, v calc, tr fos frag	CHK: med gy brn - dk gy brn, occ lt gy brn, sme mot, mod sft - frm, sl arg, sb biky to sb ply, sb wxy - sl rthy lstr, v calc, tr fos frag



