



Scale: 5" / 100'
Measured Depth Log

Well Name	Resolute E25-63HC		
Location	SESE SEC26 T6N R65W		
State	COLORADO	County	WELD
Country	USA	Rig Number	PRECISION 828
API Number	05-123-38165	AFE #	139763
Region	DENVER JULESBURG BASIN	Field	WATTENBERG
Spud Date	5/18/2014	Drilling Completed	5/25/2014
Surface Coordinates	373' FSL, 280' FEL	LAT/LONG	40.45071/-104.62175
Ground Elevation	4676'	K.B. Elevation	4692'
Logged Interval	6400'	To	11166'
		Total Depth	11166'
Formation	TEEPEE BUTTES, SHARON SPRINGS, NIOBRARA (SMOKY HILLS, FORT HAYS), CODELL, CARLILE		
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: GARY MYER
WELLSITE
LOG CONT



Operator

INC.

Geologist

INC.

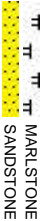
Other

RS, GABRIEL RUBIO

GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.

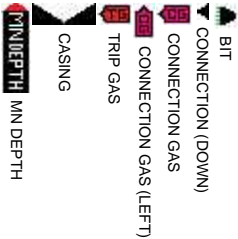
INUES FROM FILE: Resolute E25-63HC Vert.mplot

Rock Types

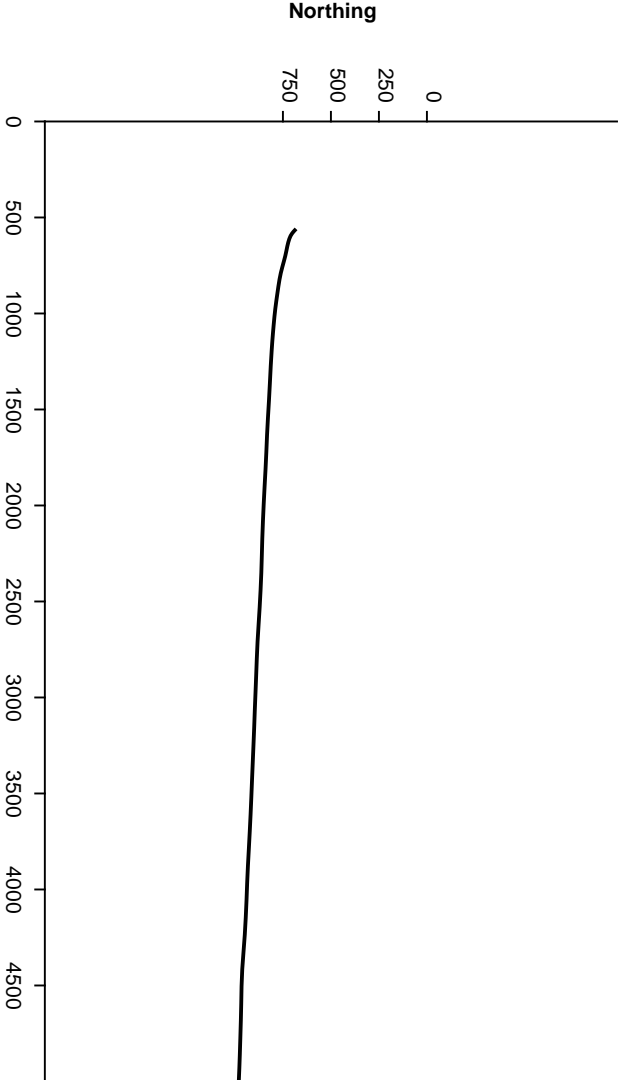


Other Symbols

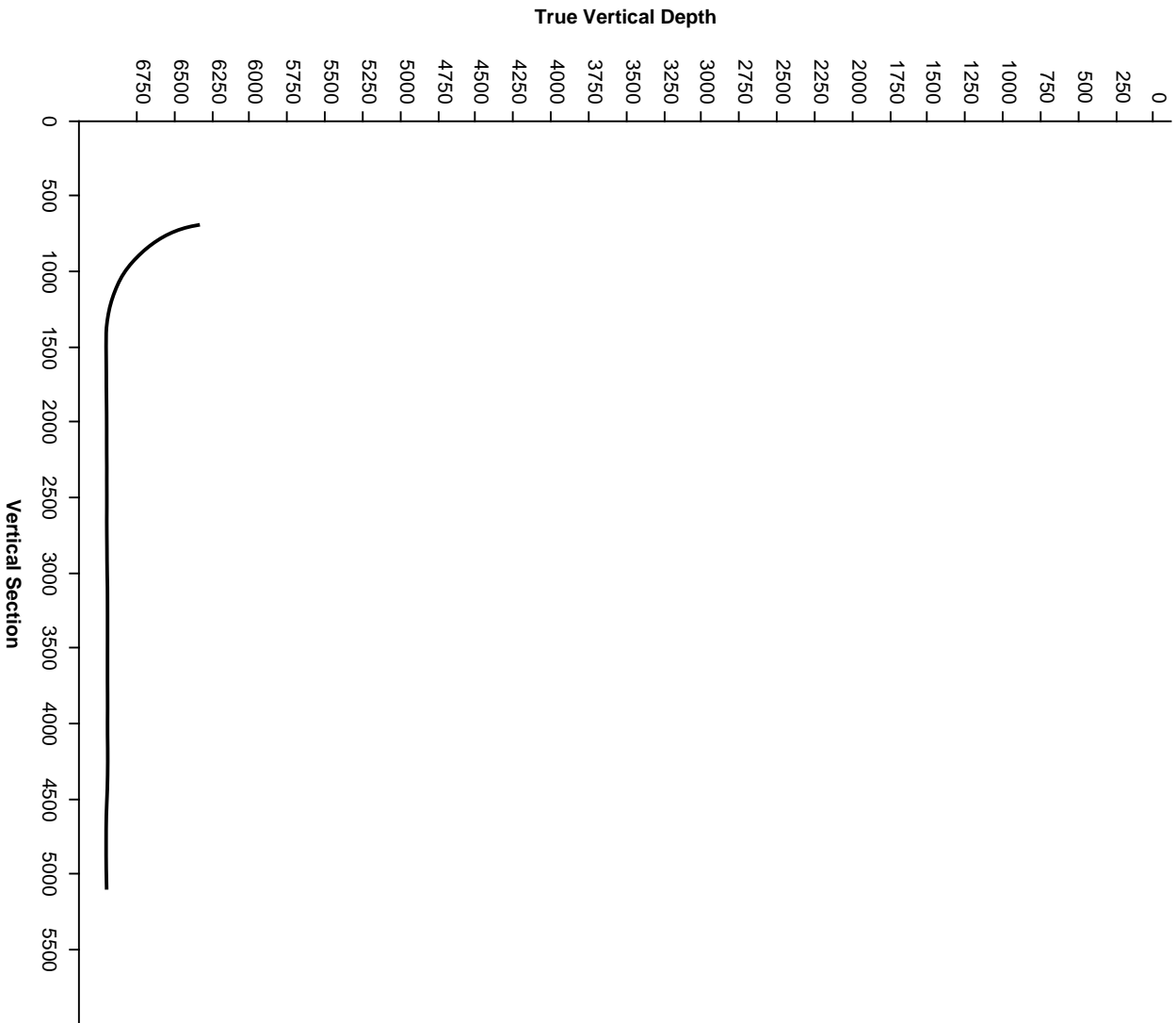
Engineering

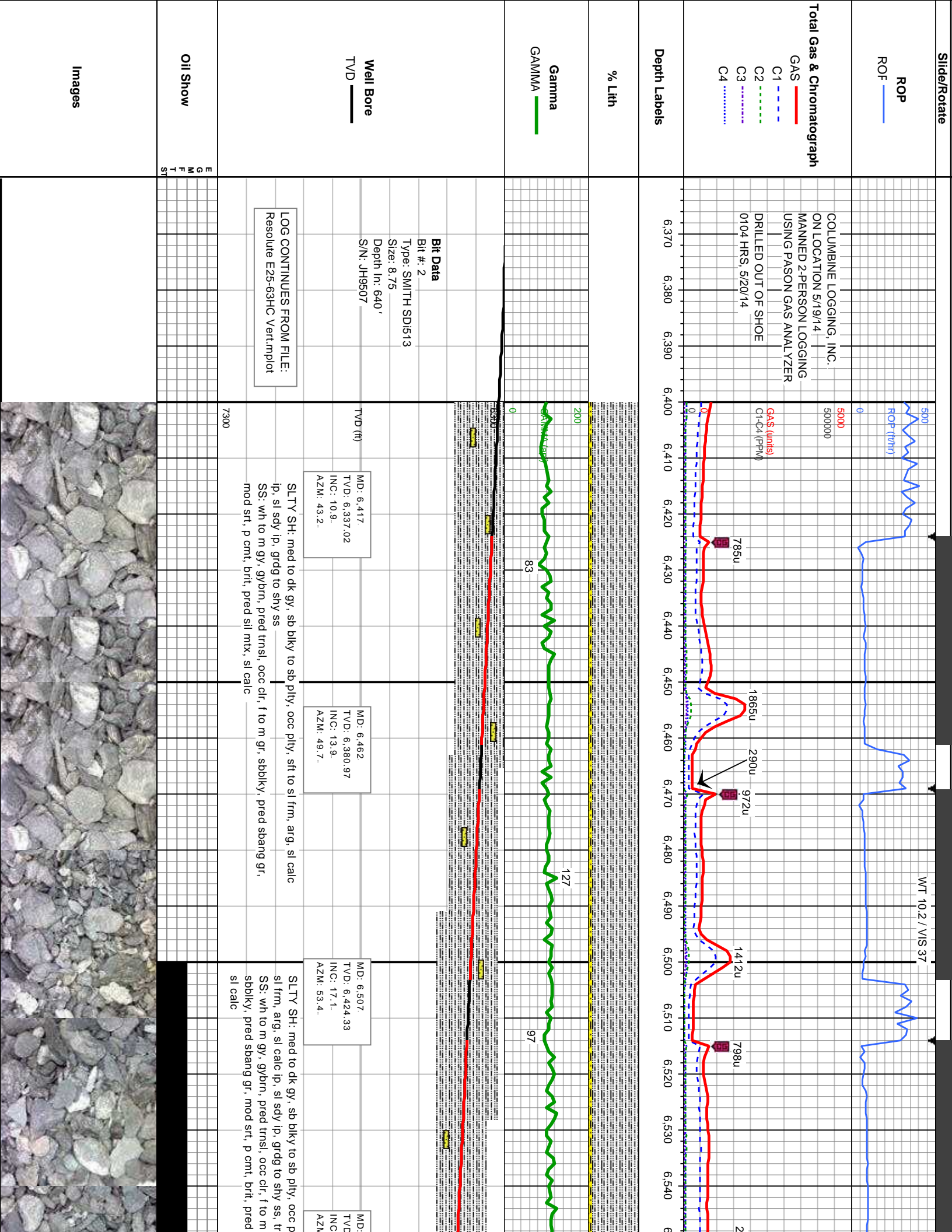


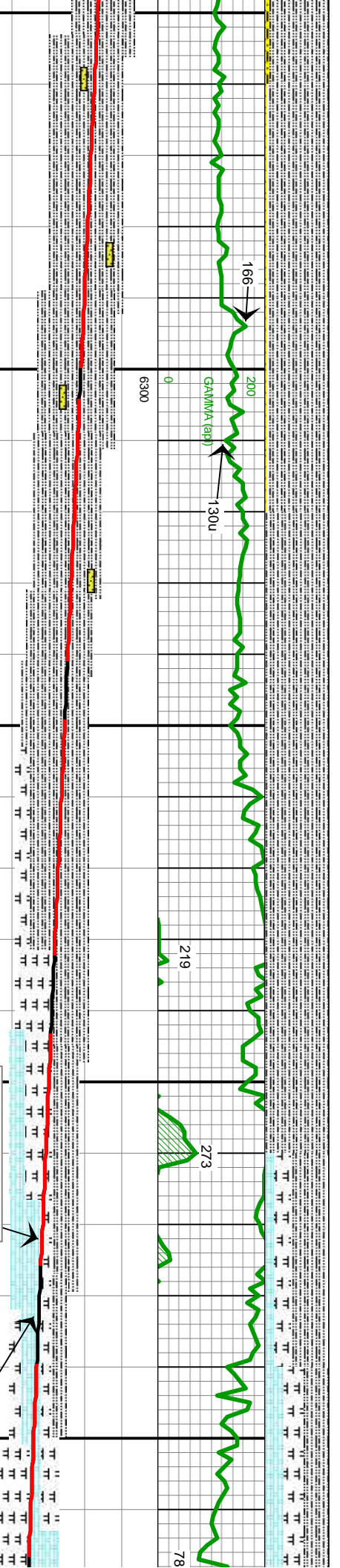
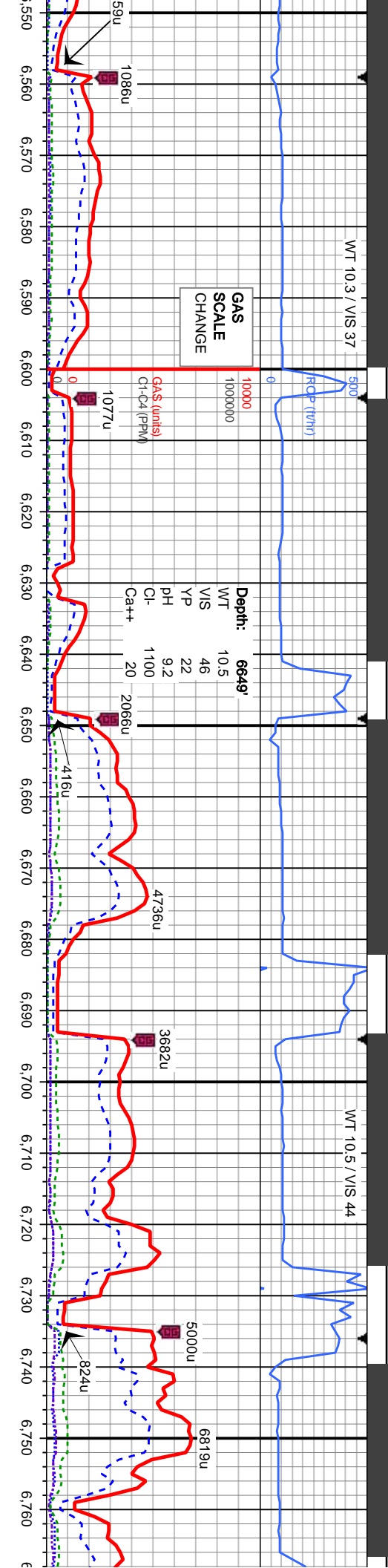
Survey Plan



Survey Elevation







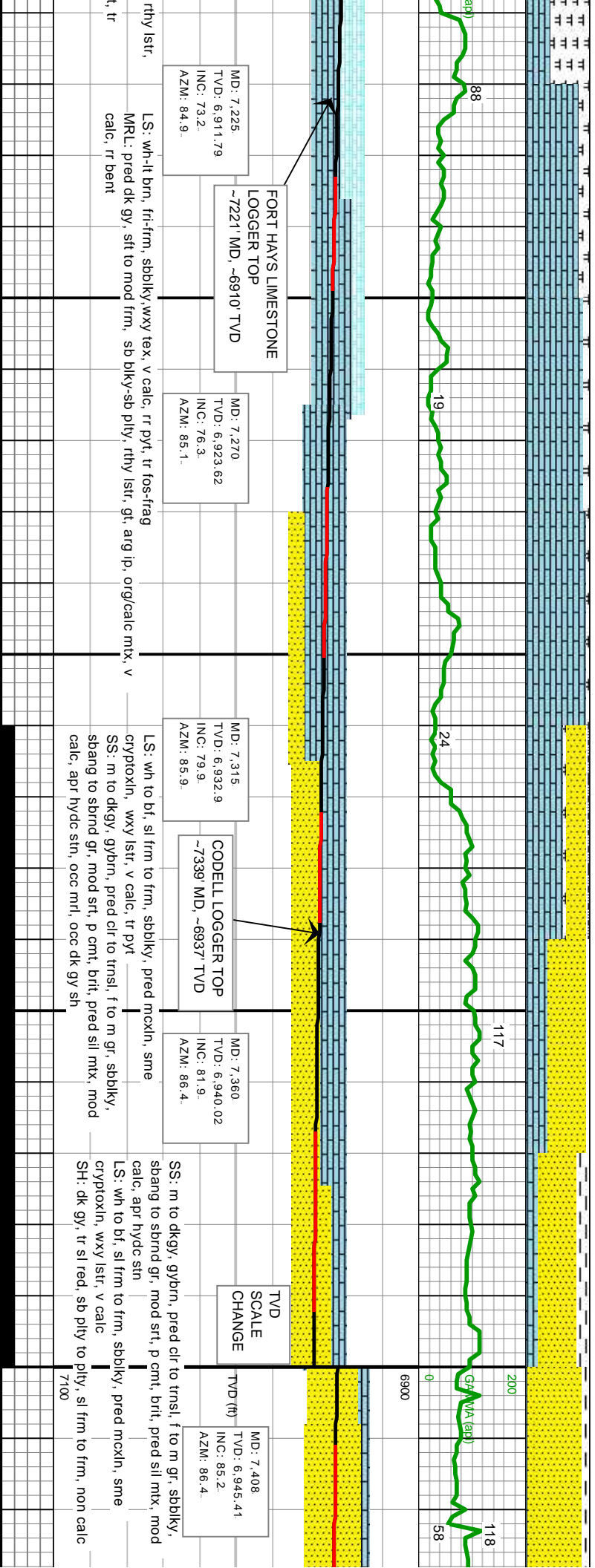
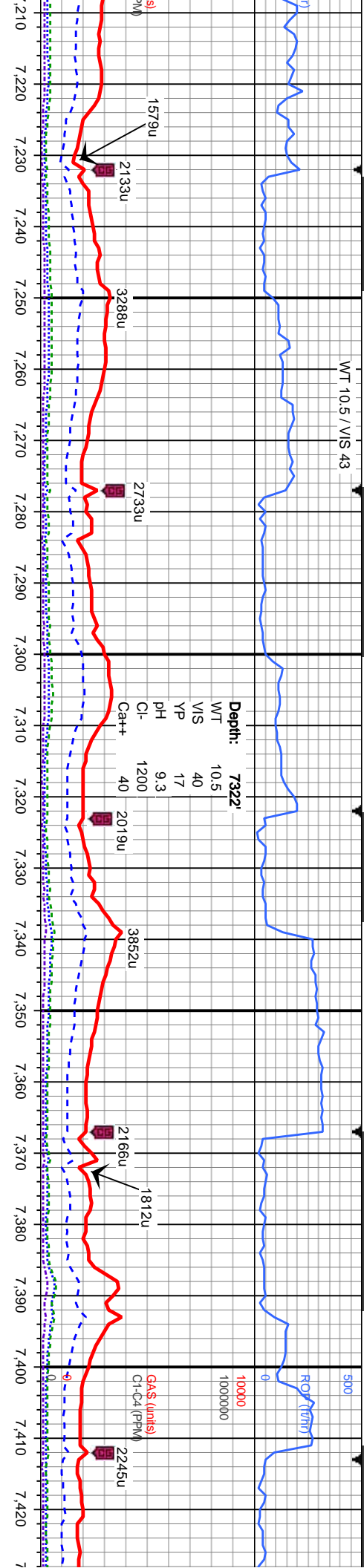
6,552 MD: 6,597 TVD: 6,508.67 INC: 23.8 AZM: 71.	TVD (ft)	MD: 6,642 TVD: 6,549.28 INC: 27.2 AZM: 75.2
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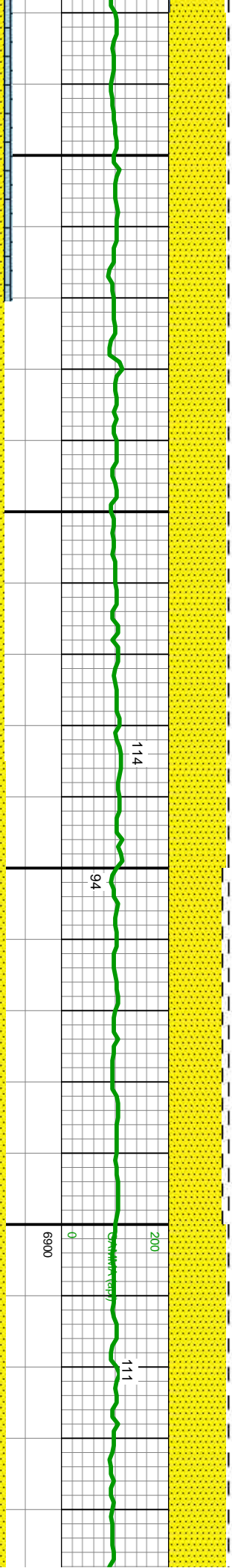
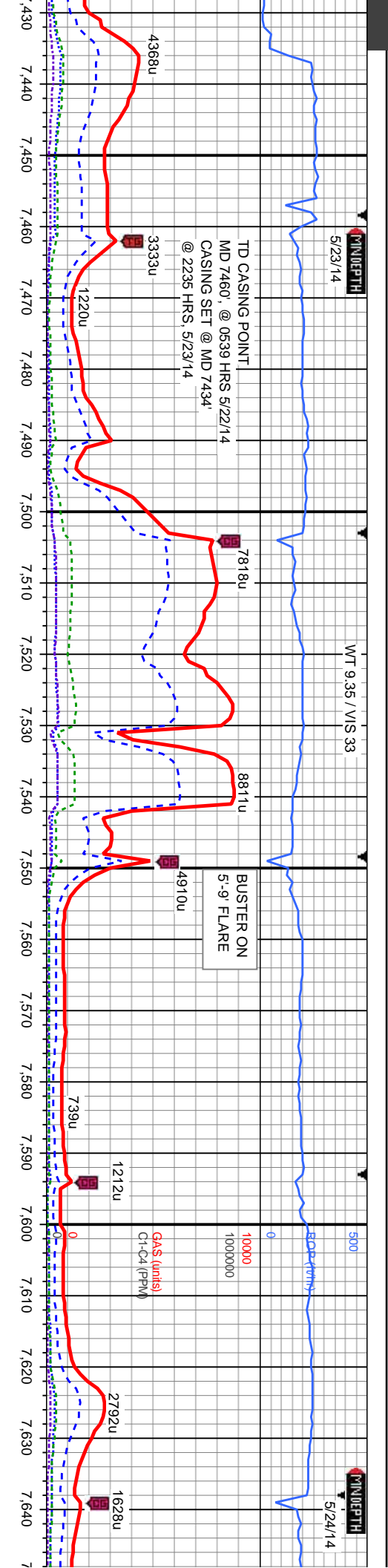
SLTY SH: med to dk gy, sb biky to sb pily, occ pily, sft to sl frm, arg, sl calc ip, sl sdy ip, grdg to shy ss, occ bent SS: wh to m gy, gybm, pred trns, occ cl, f to m gr, sbiky, pred sbang gr, mod srt, p cmt, brit, pred sil mtx, sl calc

6,552 MD: 6,597 TVD: 6,508.67 INC: 23.8 AZM: 71.	TVD (ft)	MD: 6,642 TVD: 6,549.28 INC: 27.2 AZM: 75.2
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SLTY SH: med to dk gy, sb biky to sb pily, occ pily, sft to sl frm, arg, sl calc ip, sl sdy ip, grdg to shy ss, occ bent SS: wh to m gy, gybm, pred trns, occ cl, f to m gr, sbiky, pred sbang gr, mod srt, p cmt, brit, pred sil mtx, sl calc

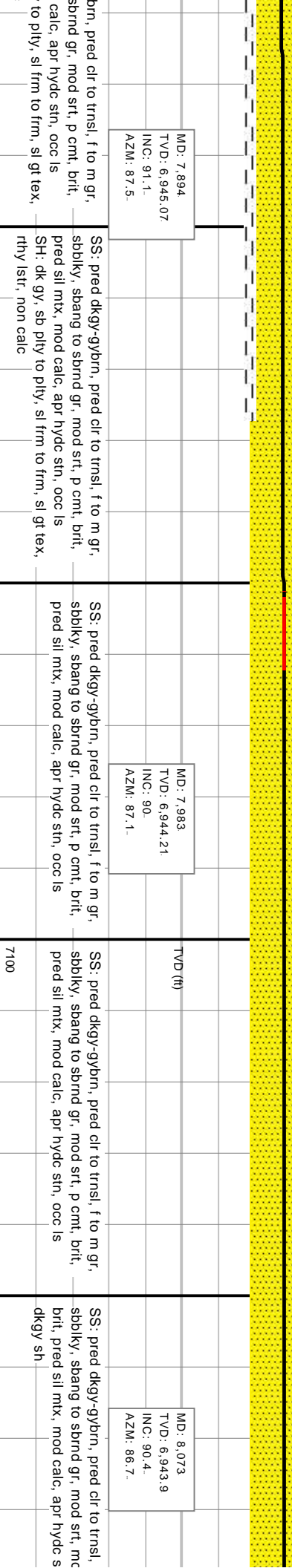
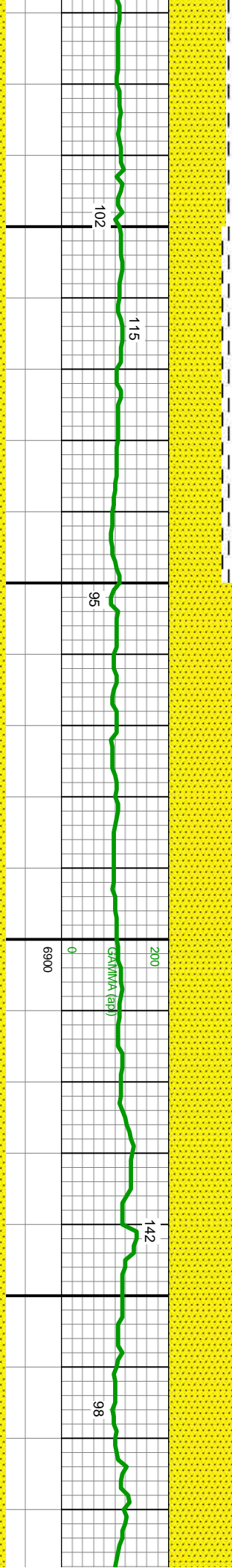
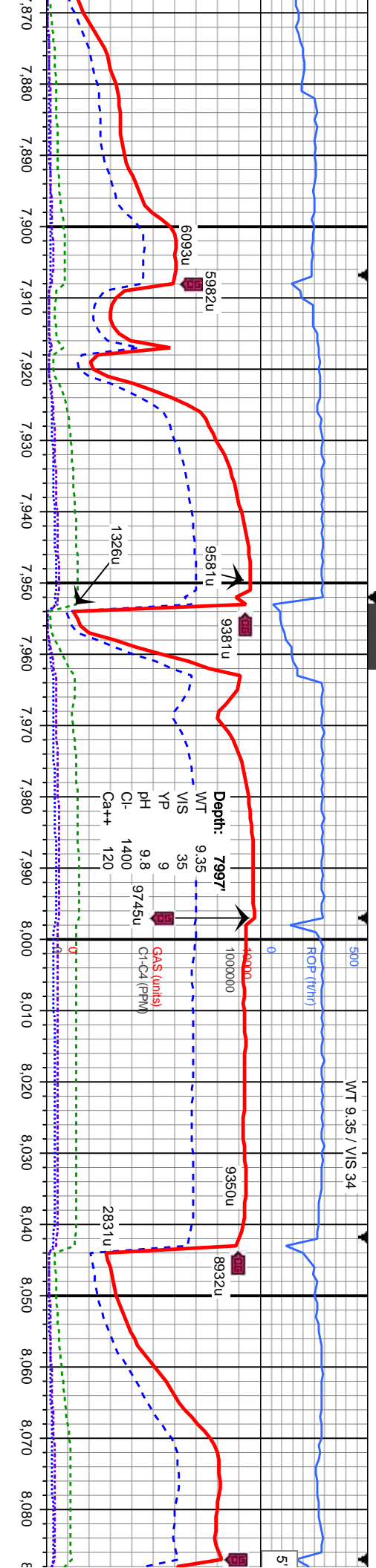


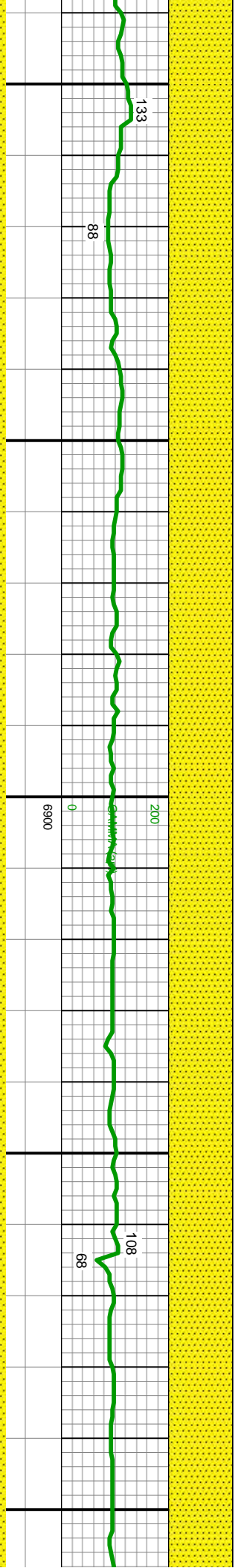
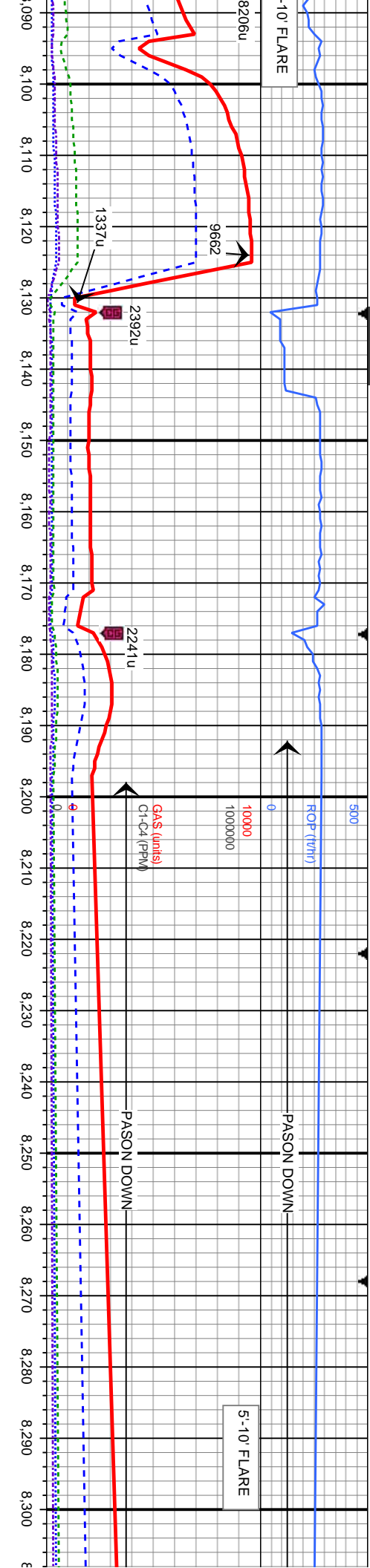




<p>MD: 7.443 TVD: 6,947.18 INC: 89. AZM: 87.</p> <p>Bit Data Bit #: 2 Depth Out: 7,460' Hours: 53.5 hrs</p> <p>Bit Data Bit #: 3 Type: SMITH 513 Size: 6.125" Depth In: 7,460' S/N: JH2807</p> <p>SS: pred dkgy, gybrn, pred clr to trnsl, f to m gr, sbbkly, sbang to sbnd gr, mod srl, p cnt, brlt, pred sil mt, mod calc, apr hyc stn, occ ls, rr bent SH: dk gy, sb ply to ply, sl frm to frm, sl gt tex, rthy lstr, non calc</p>		<p>MD: 7.534 TVD: 6,947.81 INC: 90.2 AZM: 87.1</p> <p>SS: pred dkgy-gybrn, pred clr to trnsl, f to m gr, sbbkly, sbang to sbnd gr, mod srl, p cnt, brlt, pred sil mt, mod calc, apr hyc stn, occ ls, rr bent SH: dk gy, sb ply to ply, sl frm to frm, sl gt tex, rthy lstr, non calc</p>		<p>MD: 7.624 TVD: 6,946.95 INC: 90.9 AZM: 87</p> <p>SS: pred dkgy-gybrn, pred clr to trnsl, f to m gr, sbbkly, sbang to sbnd gr, mod srl, p cnt, brlt, pred sil mt, mod calc, apr hyc stn, occ ls, rr bent SH: dk gy, sb ply to ply, sl frm to frm, sl gt tex, rthy lstr, non calc</p>	
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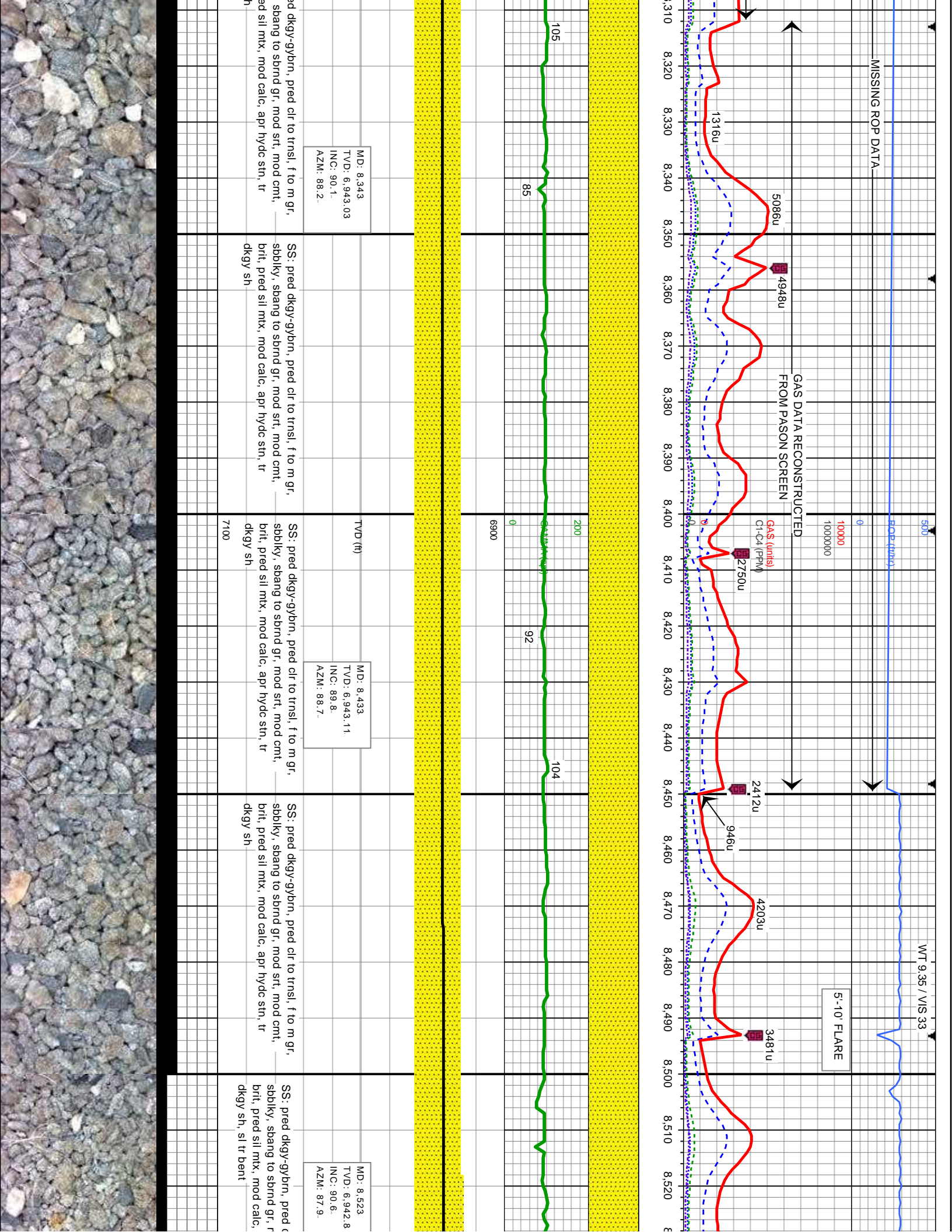


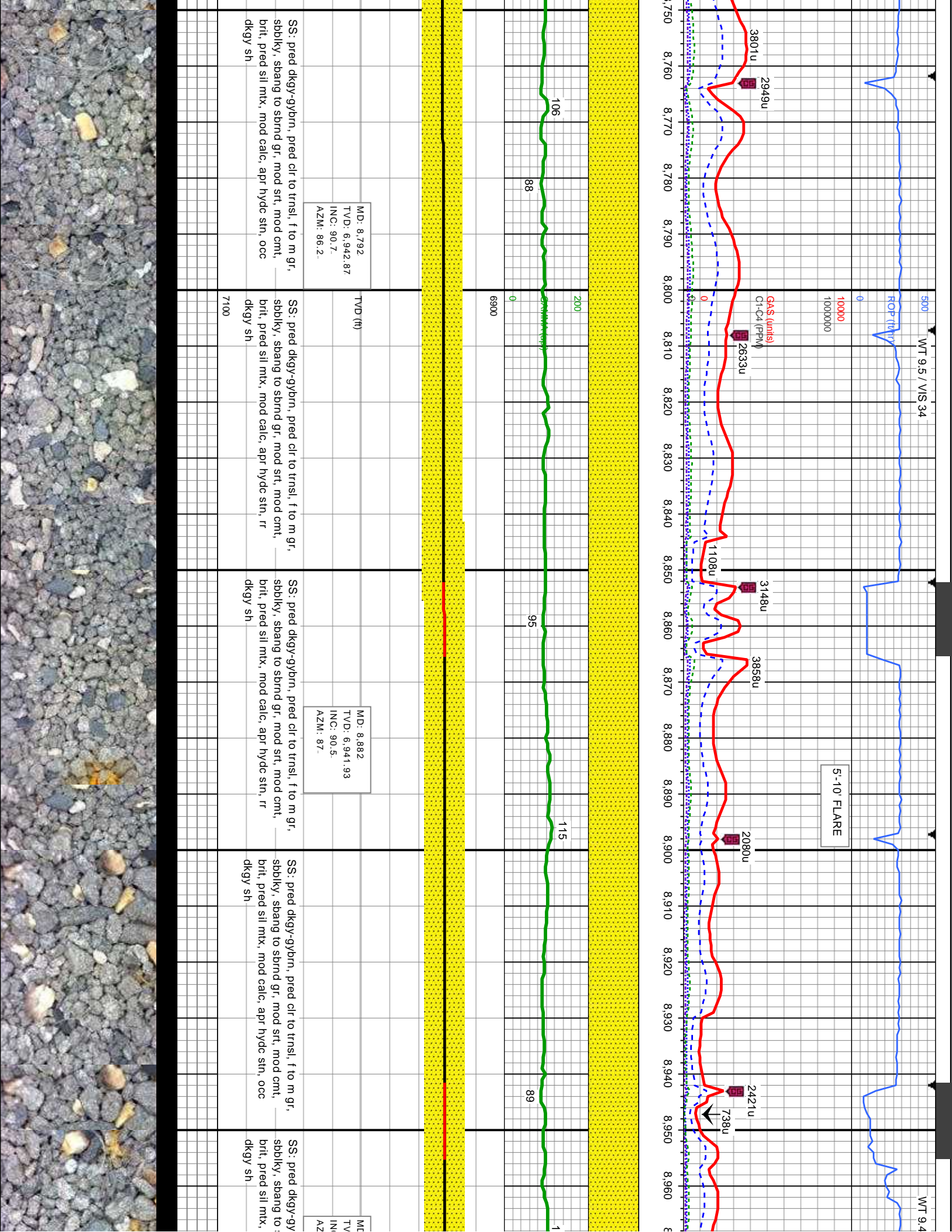


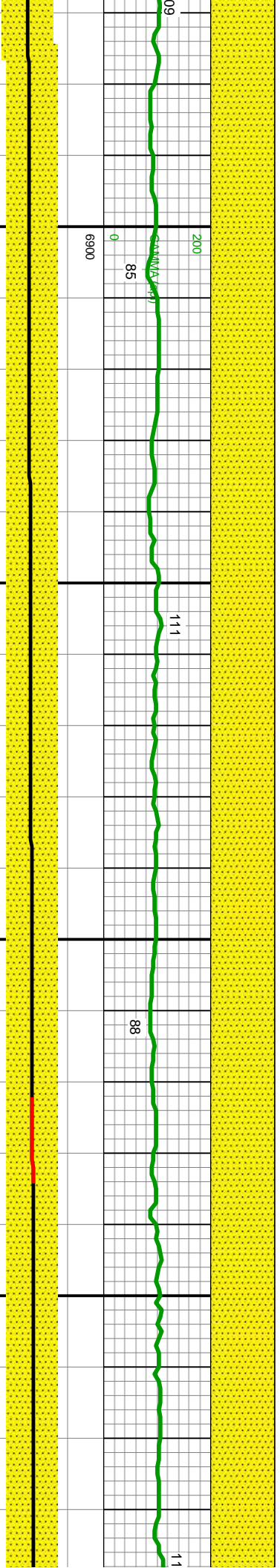
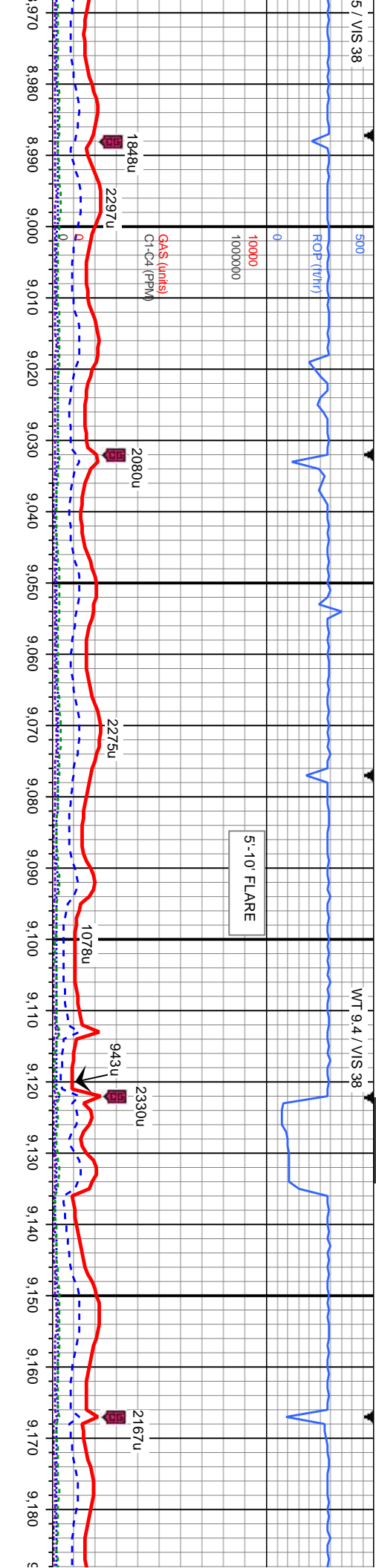


SS: pred dkgy-gybn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cmt, brti, pred sil mtx, mod calc, apr hydc stn, tr dkgy sh		SS: pred dkgy-gybn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cmt, brti, pred sil mtx, mod calc, apr hydc stn, tr dkgy sh		SS: pred dkgy-gybn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cmt, brti, pred sil mtx, mod calc, apr hydc stn, tr dkgy sh		SS: pred dkgy-gybn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cmt, brti, pred sil mtx, mod calc, apr hydc stn, tr dkgy sh		SS: pred dkgy-gybn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cmt, brti, pred sil mtx, mod calc, apr hydc stn, tr dkgy sh	
MD: 8.163 TVD: 6.943.9 INC: 89.6 AZM: 87.4.		MD: 8.253 TVD: 6.943.66 INC: 90.7 AZM: 87.5.		MD: 8.253 TVD: 6.943.66 INC: 90.7 AZM: 87.5.		MD: 8.253 TVD: 6.943.66 INC: 90.7 AZM: 87.5.		MD: 8.253 TVD: 6.943.66 INC: 90.7 AZM: 87.5.	
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
7100		7100		7100		7100		7100	









D: 8.972
D: 6,941.46
C: 90.1
M: 87.7

TVD (ft)

MD: 9.062
TVD: 6,940.28
INC: 91.4
AZM: 88.2

MD: 9.151
TVD: 6,938.72
INC: 90.6
AZM: 87.3

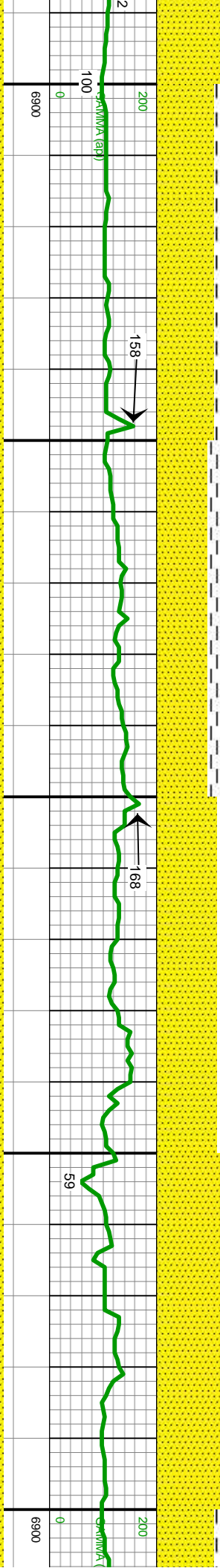
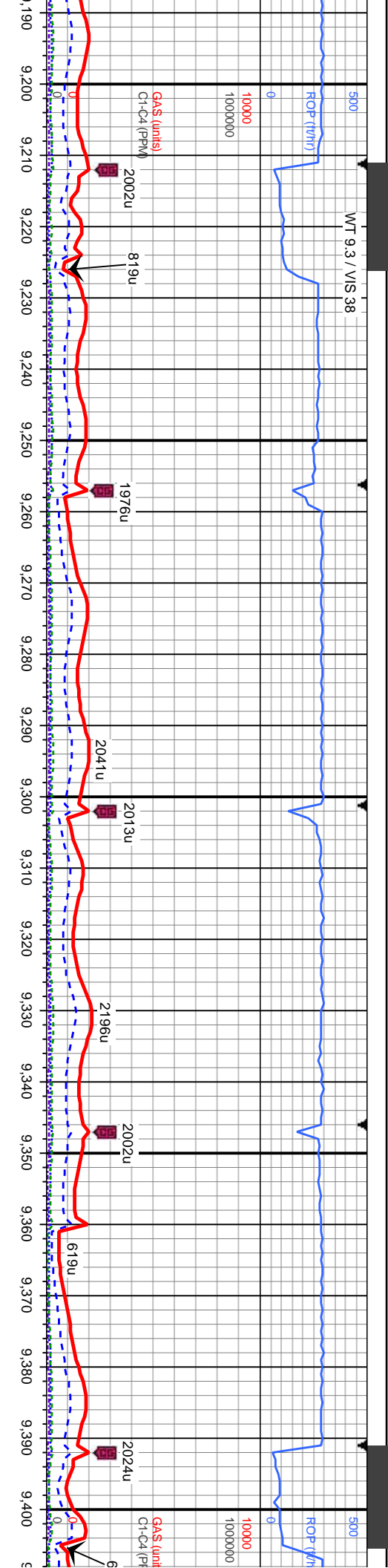
brn, pred clr to trns, f to m gr,
sbbiky, sbang to sbnd gr, mod srl, mod cmt,
brt, pred sil mt, mod calc, apr hyc stn, occ
dkgy sh, tr bent

SS: pred dkgy-gybrn, pred clr to trns, f to m gr,
sbbiky, sbang to sbnd gr, mod srl, mod cmt,
brt, pred sil mt, mod calc, apr hyc stn, occ
dkgy sh, tr bent

SS: pred dkgy-gybrn, pred clr to trns, f to m gr,
sbbiky, sbang to sbnd gr, mod srl, mod cmt,
brt, pred sil mt, mod calc, apr hyc stn, occ
dkgy sh, tr bent

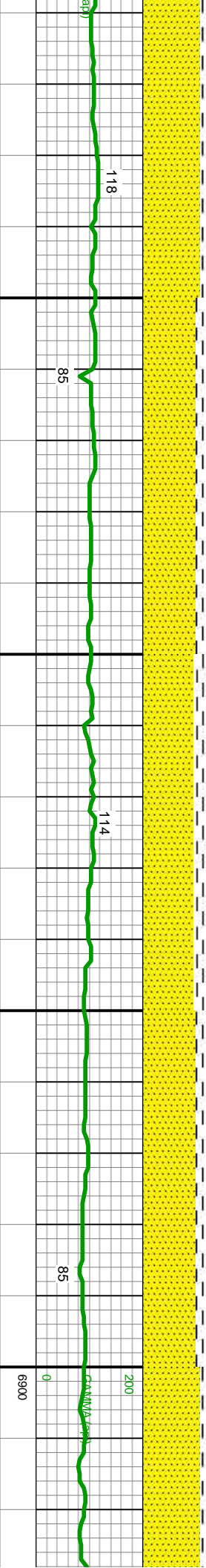
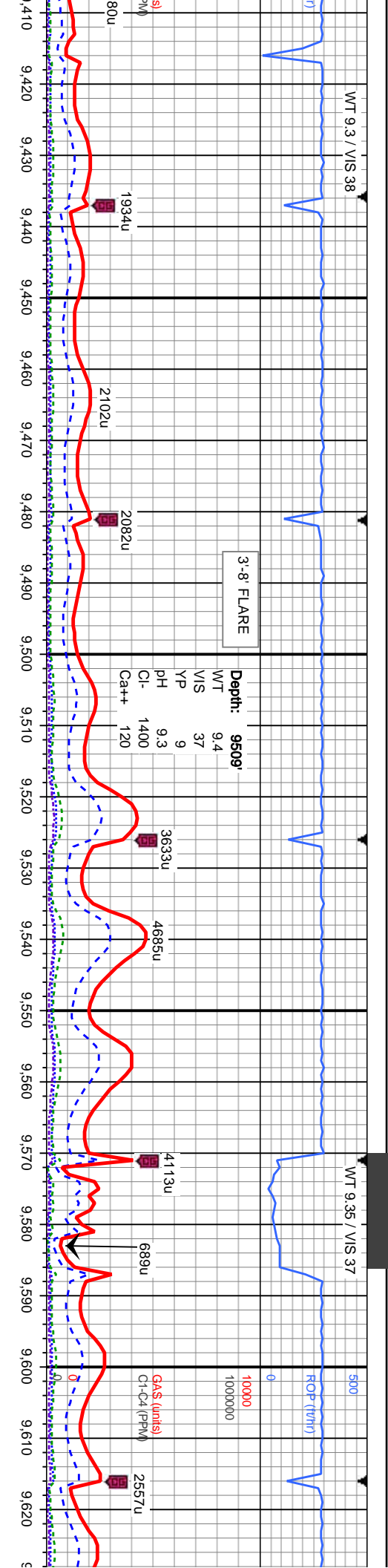
SS: pred dkgy-gybrn, pred clr to trns, f to m gr,
sbbiky, sbang to sbnd gr, mod srl, mod cmt,
brt, pred sil mt, mod calc, apr hyc stn, occ
dkgy sh, tr bent





MD: 9.241 TVD: 6,938.41 INC: 89.8 AZM: 88.1		SS: pred dkgy-gy/brn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cnt, brlt, pred sil mtx, mod calc, apr hydc stn, occ bent SH: dk gy, sb ply to ply, sl frm to frm, sl gt tex, rthy lstr, non calc	7100
MD: 9.331 TVD: 6,938.1 INC: 90.6 AZM: 87.8		SS: pred dkgy-gy/brn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cnt, brlt, pred sil mtx, mod calc, apr hydc stn, occ dkgy sh	7100
MD: 9.331 TVD: 6,938.1 INC: 90.6 AZM: 87.8		SS: pred dkgy-gy/brn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cnt, brlt, pred sil mtx, mod calc, apr hydc stn, occ dkgy sh, sl tr bent	7100
MD: 9.331 TVD: 6,938.1 INC: 90.6 AZM: 87.8		SS: pred dkgy-gy/brn, pred clr to trnsi, f to m gr, sbblky, sbang to sbnd gr, mod srt, mod cnt, brlt, pred sil mtx, mod calc, apr hydc stn, occ dkgy sh, sl tr bent	7100





MD: 9.421
TVD: 6.938.1
INC: 89.4
AZM: 87.6.

MD: 9.511
TVD: 6.938.18
INC: 90.5
AZM: 87.6.

MD: 9.601
TVD: 6.938.25
INC: 89.4
AZM: 87.6.

d dkgy-gybrn, pred cfr to trnsf, f to m gr,
sbshang to sbnd gr, mod str, mod cnt, brit,
mtx, mod calc, apr hydc str
gy, sb ply to ply, sl frm to frm, sl gr tex,
non calc

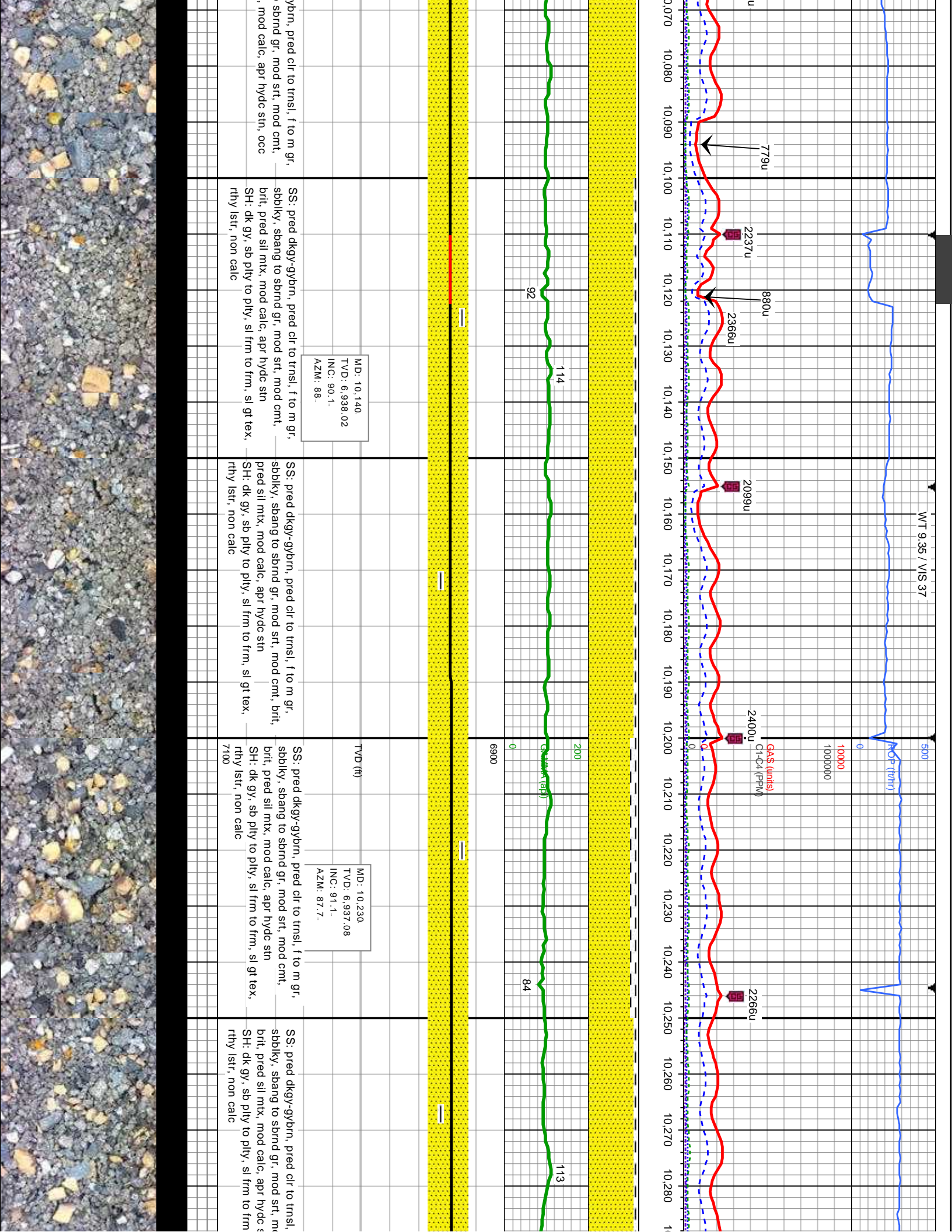
SS: pred dkgy-gybrn, pred cfr to trnsf, f to m gr,
sblky, sbang to sbnd gr, mod str, mod cnt, brit,
pred sil mtx, mod calc, apr hydc str
SH: dk gy, sb ply to ply, sl frm to frm, sl gr tex,
rthy lstr, non calc

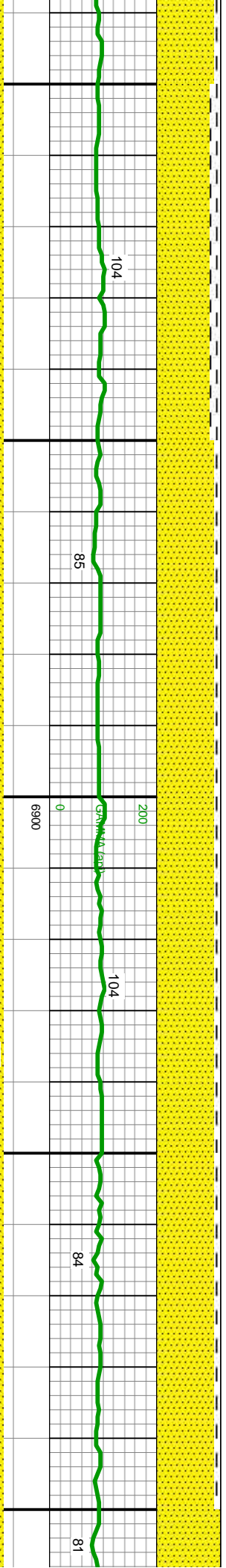
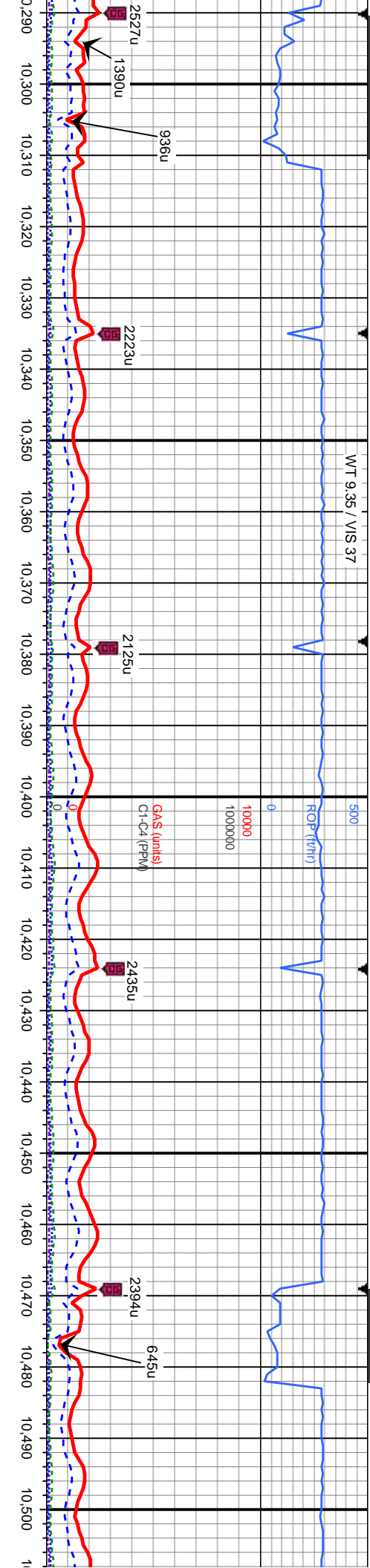
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sblky, sbang to sbnd gr, mod str, mod cnt, brit,
pred sil mtx, mod calc, apr hydc str
SH: dk gy, sb ply to ply, sl frm to frm, sl gr tex,
rthy lstr, non calc

SS: pred dkgy-gybrn, pred cfr to trnsf, f to m gr,
sblky, sbang to sbnd gr, mod str, mod cnt,
brit, pred sil mtx, mod calc, apr hydc str
SH: dk gy, sb ply to ply, sl frm to frm, sl gr tex,
rthy lstr, non calc

SS: pred dkgy-gybrn, pred cfr to trnsf, f to m gr,
sblky, sbang to sbnd gr, mod str, mod calc,
brit, pred sil mtx, mod calc,
SH: dk gy, sb ply to ply, sl frm to frm, sl gr tex,
rthy lstr, non calc







MD: 10.320
TVD: 6.936.84
INC: 89.2-
AZM: 87.3

MD: 10.410
TVD: 6.937.71
INC: 89.7-
AZM: 86.2

MD: 10.500
TVD: 6.939.44
INC: 88.1-
AZM: 85.3

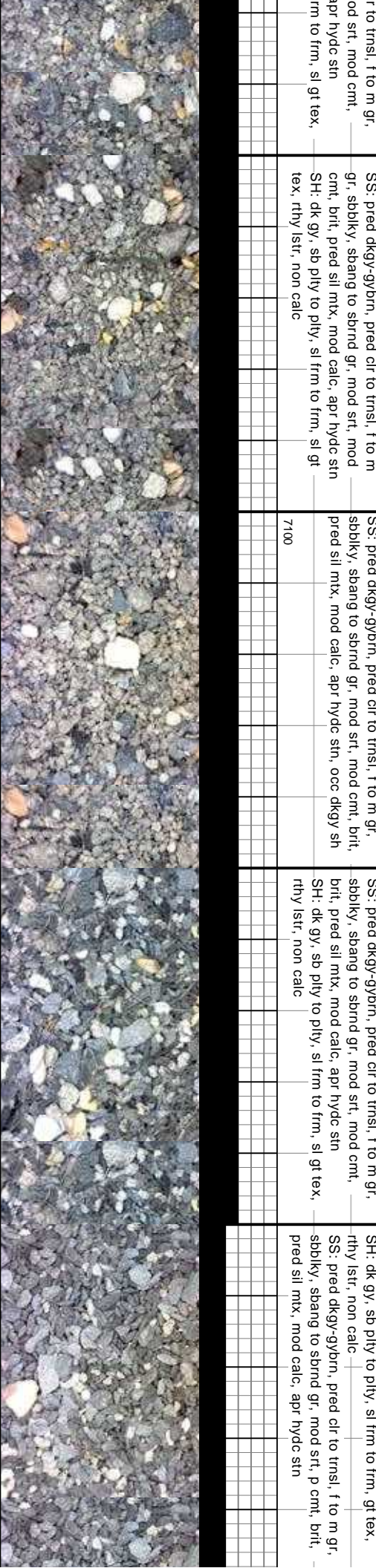
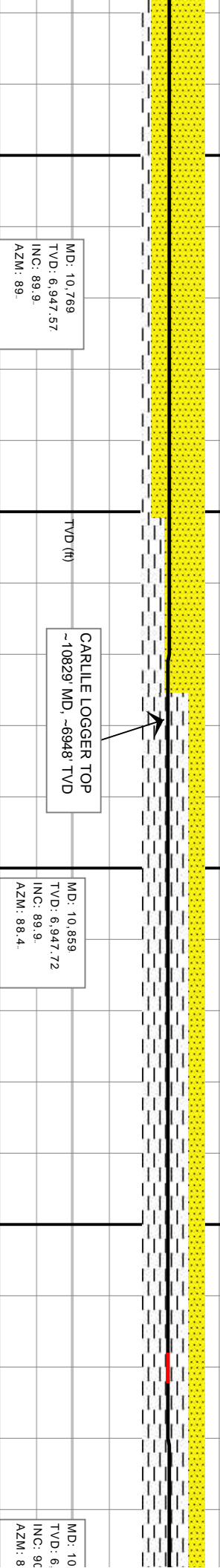
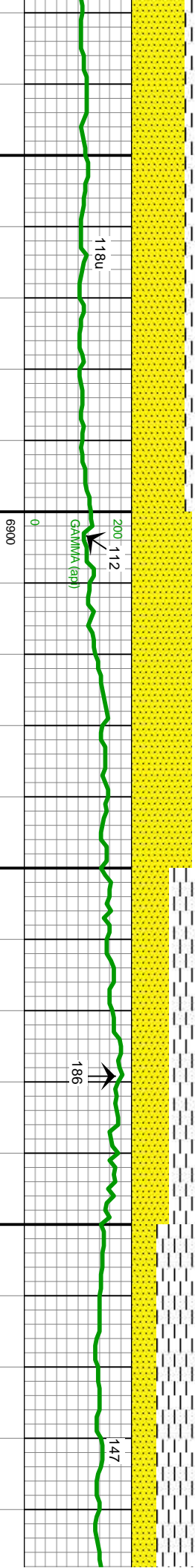
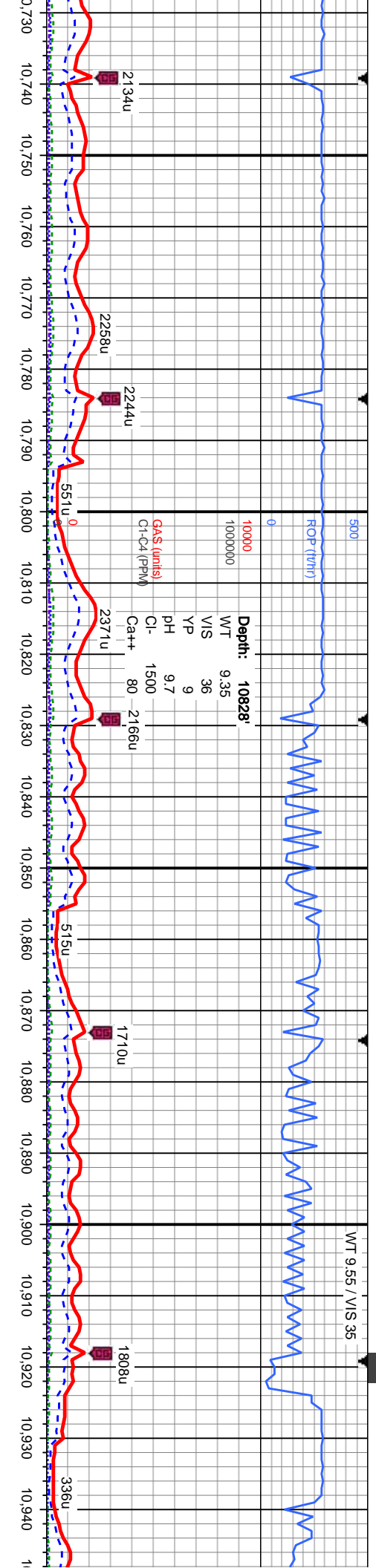
f to m gr,
sdblkly, sbang to sbnd gr, mod srt, mod cmt,
brt, pred sil mtk, mod calc, apr hydc sin
SH: dk gy, sb ply to ply, sl frm to frm, sl gt tex,
rthy lstr, non calc

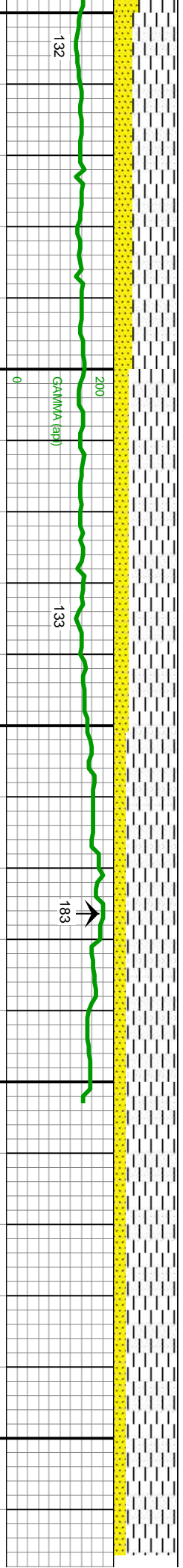
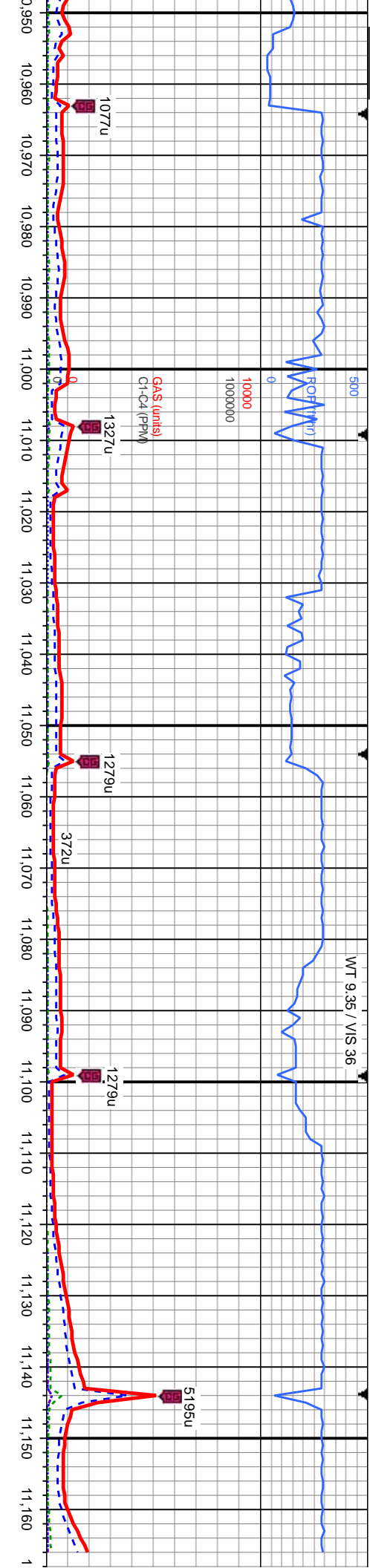
SS: pred dkgy-gybrn, pred clr to trns, f to m gr,
sdblkly, sbang to sbnd gr, mod srt, mod cmt,
brt, pred sil mtk, mod calc, apr hydc sin
SH: dk gy, sb ply to ply, sl frm to frm, sl gt tex,
rthy lstr, non calc

SS: pred dkgy-gybrn, pred clr to trns, f to m gr,
sdblkly, sbang to sbnd gr, mod srt, mod cmt,
brt, pred sil mtk, mod calc, apr hydc sin
SH: dk gy, sb ply to ply, sl frm to frm, sl gt tex,
rthy lstr, non calc

SS: pre
sdblkly,
pred sil







949 947.64 2. 8.3	SH: dk gy, sb ply to ply, sl frm to frm, gt tex, rthy lstf, non calc, tr bent SS: pried dkgy-gybrn, pried clr to trnsf, f to m gr, sbbiky, sbang to sbnd gr, mod srt, p cmt, brlt, pried sil mtz, mod calc, apr hydc stn	TVD (ft)	MD: 11.039 TVD: 6,946.78 INC: 90.9 AZM: 88.2	SH: dk gy, sb ply to ply, sl frm to frm, gt tex, rthy lstf, non calc, occ bent SS: pried dkgy-gybrn, pried clr to trnsf, f to m gr, sbbiky, sbang to sbnd gr, mod srt, p cmt, brlt, pried sil mtz, mod calc, apr hydc stn	7100



THANK YOU FOR CHOOSING
COLUMBINE LOGGING, INC.

11,170 11,180 11,190 11,200

D: 11166 MD
2 0736 HRS 5/25/14

566
14.3
5

Bit Data
Bit #: 3
Depth Out: 11,166 '
Hours: 53.53 hrs