



Scale: 5" / 100'  
Measured Depth Log

Well Name Sekich State 9C-17HZ

Location Sec 18 T3N R67W

State Colorado

Country USA

API Number 05123391220000

Region DJ Basin

Spud Date 4/6/2014

Surface Coordinates 2030' FSL & 380' FWL

Bottom Hole Coordinates Relative to Wellhead:  
58.2' S & 9931.36 E

Ground Elevation 4850'

K.B. Elevation 4875'

Logged Interval 6590' MD To 16785' MD

Total Depth 16785' MD

Formation Codell

Type of Drilling Fluid Fresh Water for Curve/ Synthetic Mud for Lateral

Company Anadarko

Address 1099 18th Street  
Denver, Co., 80202

Operator

Geologist

Name Jim Frank, Chris Johnson

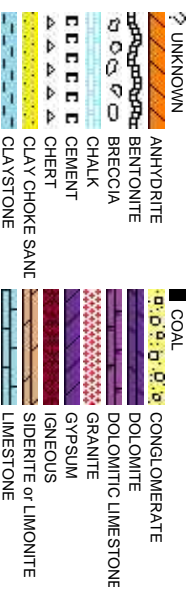
Company Columbine Logging Inc.

Address 2385 S. Lipan St.  
Denver, CO

Zone Color Code



Rock Types



## Accessories

GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL	ANHYDRITE STRINGER
INOCERAMUS	B BENTONITE	K KAOLIN	BENTONITE STRINGER
ALGAE	O OOLITE	M MARLSTONE	COAL STRINGER
AMPHIPORA	O OSTRACOD	M MICACEOUS	DOLOMITE STRINGER
BELEMNITE	P PELECYPOD	M MINERAL CRYSTALS	GYPSUM STRINGER
BIOCLASTIC	P PELLET	C CARBONACEOUS FLAKES	LIMESTONE STRINGER
BRACHIOPOD	P PISOLITE	CHERT	PHOSPHATE PELLETS
BRYOZOA	P PLANT REMAINS	CHERT	P PYRITE
CEPHALOPOD	P PLANT SPORES	C COAL - THIN BEDS	S SALT CAST
CORAL	S SCAPHOPOD	D DOLOMITIC	S SANDY
CRINOID	S STROMATOPOROÏD	F FELDSPAR	S SILICEOUS
E ECHINOÏD	F FERRUGINOUS PELLET	S SILTY	MARLSTONE (CALC) STRG
F FISH	Minerals	T TUFFACEOUS	MARLSTONE (DOL) STRG
F FORAMINIFERA	A ANHYDRITIC		SANDSTONE STRINGER
F FOSSIL	A ARGILLACEOUS	Stringer	SHALE STRINGER
			SILTSTONE STRINGER

## Other Symbols

P PINPOINT	DST INTERVAL	WIRELINE TESTED - LEFT	E EARTHY
V VUGGY	FAULT	WIRELINE TESTED - RT	FM FINELYXLN
D DEAD	FORMATION TOP	DRILL STEM TEST	BS GRAINSTONE
E EVEN	GAS SHOW	MN DEPTH	L LITHOGRAPHIC
Q QUESTIONABLE	OIL SHOW		MX MICROXLN
S SPOTTED STAINING	CONNECTION (UP)	Rounding	MS MUDSTONE
Porosity	CONNECTION (DOWN)	A ANGULAR	PS PACKSTONE
E EARTHY	CONNECTION GAS (LEFT)	R ROUNDED	WS WACKESTONE
F FENESTRAL	TRIP GAS	B SUBANG	
F FRACTURE	TRIP GAS (LEFT)	R SUBRND	
X INTERCRYSTALLINE	CASING	Textures	M MODERATE
O INTEROOLITIC	DOWN TIME GAS	SIDEWALL CORE (LEFT)	P POOR
M MOLDIC	DOWN TIME GAS (LEFT)	SIDEWALL CORE (RIGHT)	W WELL
O ORGANIC	CORE - LOST	S SLIDE	
	CORE - RECOVERED	S SURVEY	CX CRYPTOXLN

## ling



MARLSTONE	SHALY SANDSTONE
METAMORPHIC	SHALY SILTSTONE
NO SAMPLE	SILTY SHALE
SALT	SILTSTONE
SANDSTONE	TILL
SALT-PEPPER SANC	TUFF
SHALE	WELDED TUFF
SHALE COLORED	
SHALE GRAY	

Slide/Rotate

ROP  
ROF  
GAMMA

COLUMBINE LOGGING TWO MAN  
RIGGED UP ON 4/7/2014 @ 11:30HRS  
BEGIN LOGGING @ 16:00 HRS 4/7/2014

DRUG 8.75" HOLE W/ BIT #1  
SMITH SD61MPX  
IN @ 1246' MD

Total Gas & Chromatograph  
GAS  
C1  
C3

GAS DETECTION  
PROVIDED BY TOTCO

Depth Labels

% Lith

KOP 6690' MD

Well Bore  
TVD

DRILLING IN  
SUSSEX FM.

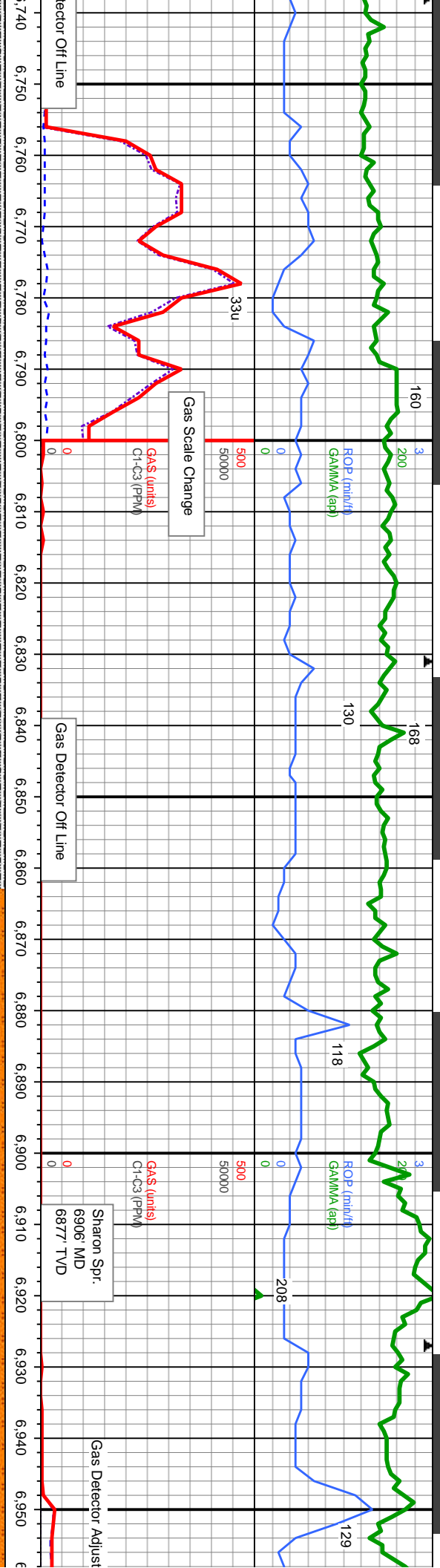
Oil Show

E  
G  
M  
F  
T  
ST

Images







MD: 6.768  
TVD: 6.756.71  
Inclination: 23.63  
Azimuth: 87.13  
VS: 101.48

MD: 6,815.	
TVD: 6,799.06.	
Inclination: 27.72.	
Azimuth: 87.75.	
VS: 121.81.	
TVD (ft)	

MD: 6,863.  
TVD: 6,840.92.  
Inclination: 30.89  
Azimuth: 91.11  
VS: 145.29

MD: 6,910 .
TVD: 6,880.49 .
Inclination: 34.3
Azimuth: 92.18
VS: 170.63 .

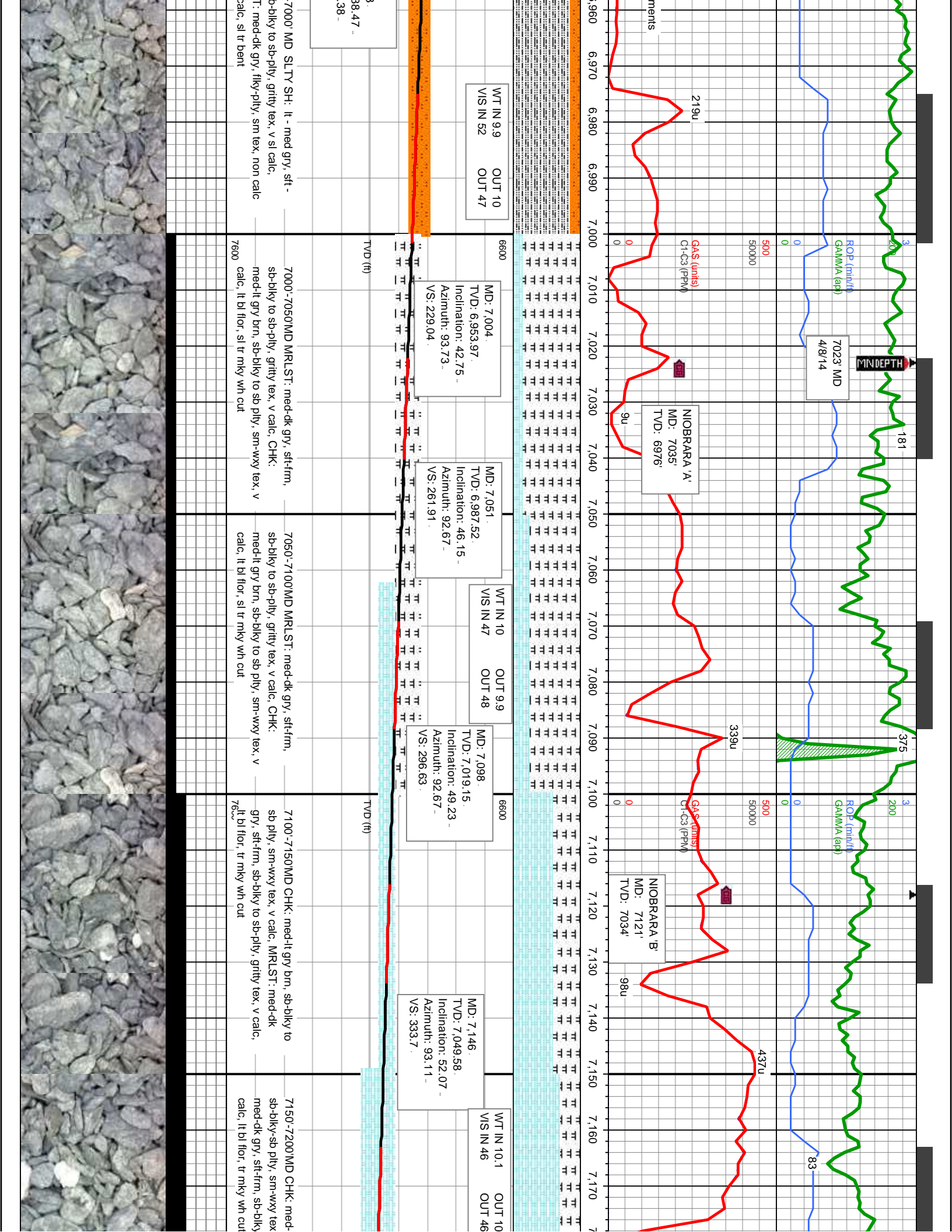
MD: 6,957  
TVD: 6,918.3  
Inclination: 0  
Azimuth: 93  
VS: 198.51

MD SLTY SH: lt - med gry, sft - frm, polty, gritty tex, v sl calc

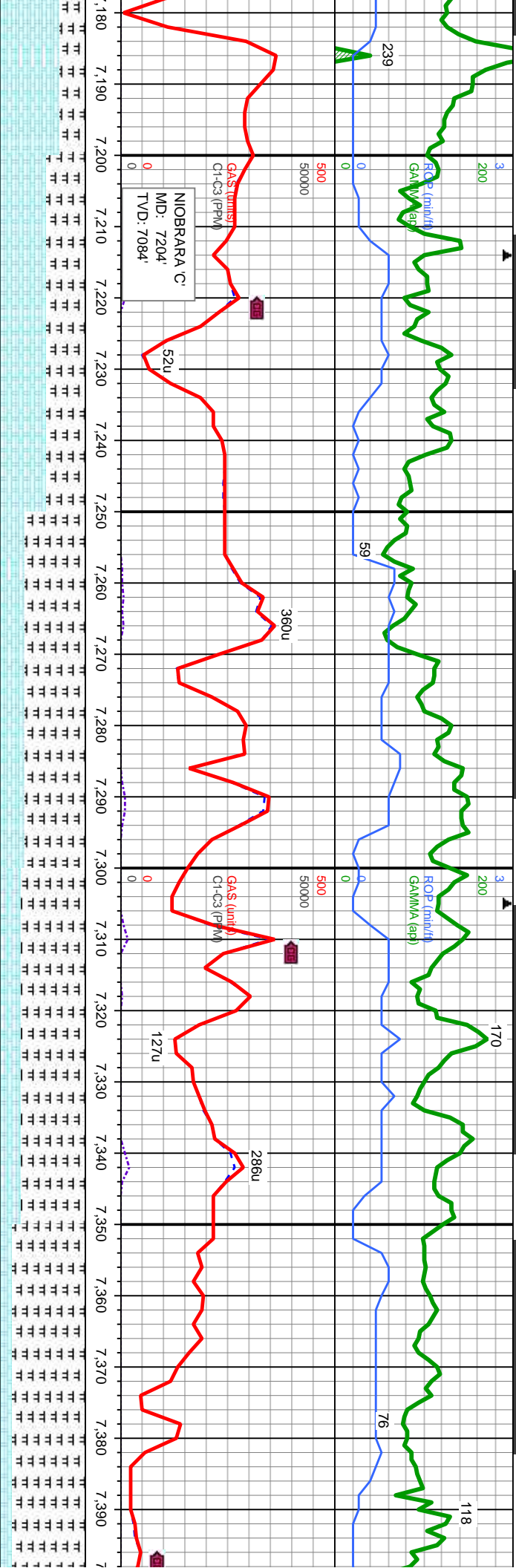
6800-6900' MD SLTY SH: lt - med gry, sft - frm, sb-bky to sb-ply, gritty tex, v sl calc, SLST: med-dk gry, flky-ply, gsy tex, non calc - v sl calc, mod bent

	6900'-6950' MD	SLTY SH:	lt - med gry, sft- frm, sb-blky to sb-ply, gritty tex, v sl calc,
	SLTST:	med-dk gry, flky-ply, sm tex, non calc 76c'	v sl calc, tr bent

6950' -  
frm, s  
SLTS  
- V sl







MD: 7,193.  
TVD: 7,077.7.  
Inclination: 54.43 -  
Azimuth: 92.54 -  
VS: 371.32.

MD: 7,240.  
TVD: 7,104.27.  
Inclination: 56.72 -  
Azimuth: 92.6 -  
VS: 410.06.

MD: 7,287.  
TVD: 7,128.49  
Inclination: 61.23 -  
Azimuth: 92.7 -  
VS: 450.29.

MD: 7,335.  
TVD: 7,149.43.  
Inclination: 67.02 -  
Azimuth: 92.81 -  
VS: 493.41.

MD: 7,382.  
TVD: 7,165.68.  
Inclination: 72.49 -  
Azimuth: 92.13 -  
VS: 537.46.

7200'-7250 MD CHK: med-lt gry brn-mot, sb-bkly-sb ply, sm-wxy tex, sft-sl frm, v calc, MRLST: med-dk gry, sft-frm, sb-bkly-sb-ply, gritty tex, v calc, lt bl flor, tr nky wh cut

7250'-7300 MD: MRLST: med-dk gy-gy brn, sb ply-sb bkly, mod sft-frm, sb arg-sily, calc, tr bent, CHK: lt-med gy, mot, sb bkly-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, tr lt bl flor w/ v slow-med halo cut

7300'-7350 MD: MRLST: med-dk gy-gy brn, sb ply-sb bkly, mod sft-frm, sb arg-sily, calc, tr bent, CHK: lt-med gy, mot, sb bkly-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, tr lt bl flor w/ v slow-med halo cut

7350'-7400 MD: MRLST: med-dk gy-gy brn, sb ply-sb bkly, mod sft-sl frm, arg-sl sily, calc, tr bent, CHK: lt-med gy, mot, sb bkly-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, tr lt bl flor w/ v slow-med halo cut

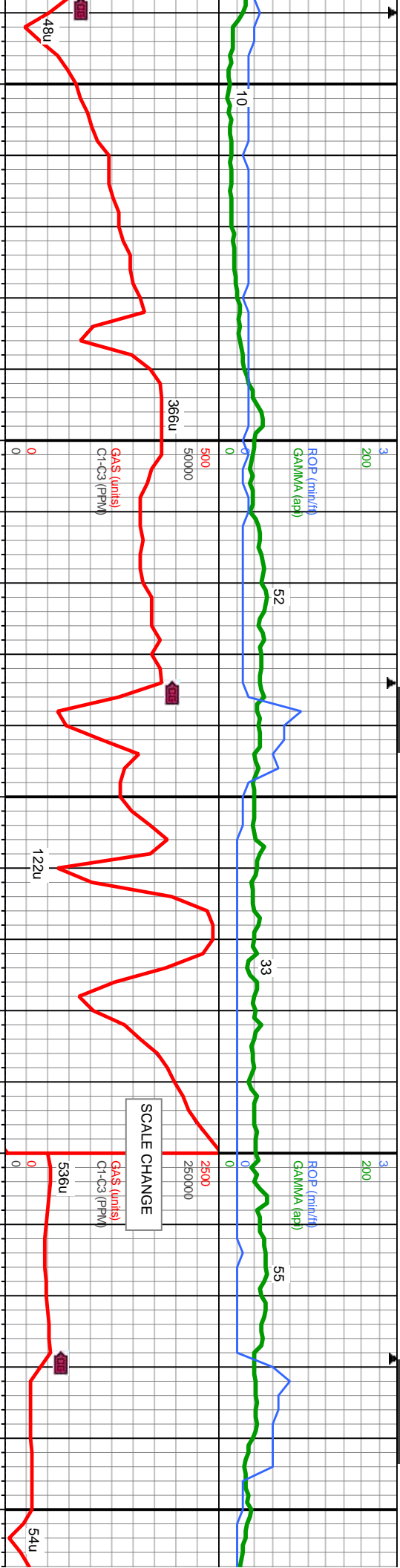












MD: 7.866.  
TVD: 7,207.17.  
Inclination: 90.27 -  
Azimuth: 93.86 -  
VS: 1,016.81 -

MD: 7.960.  
TVD: 7,206.71  
Inclination: 90.3 -  
Azimuth: 93.71 -  
VS: 1,110.63 -

MD: 8.055.  
TVD: 7,207.23  
Inclination: 88.5  
Azimuth: 92.4  
VS: 1,205.51 -

QUALITY VERY POOR,  
TO WASH SAMPLES

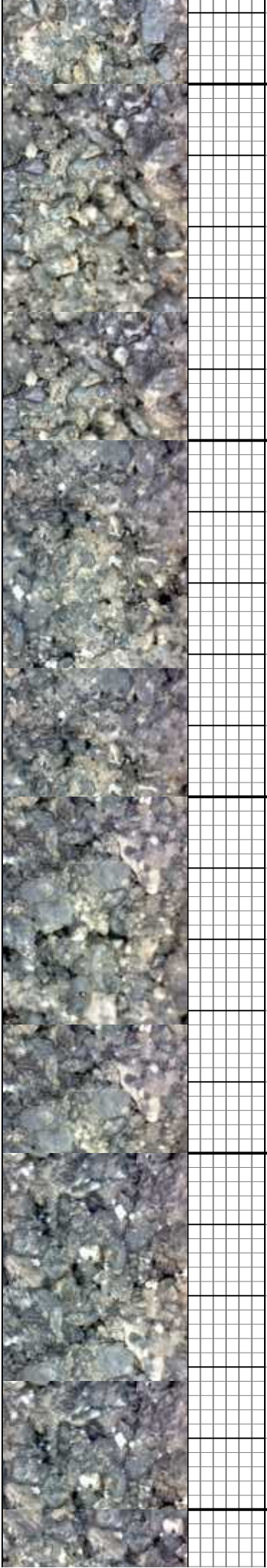
SAMPLE QUALITY VERY POOR,  
UNABLE TO WASH SAMPLES

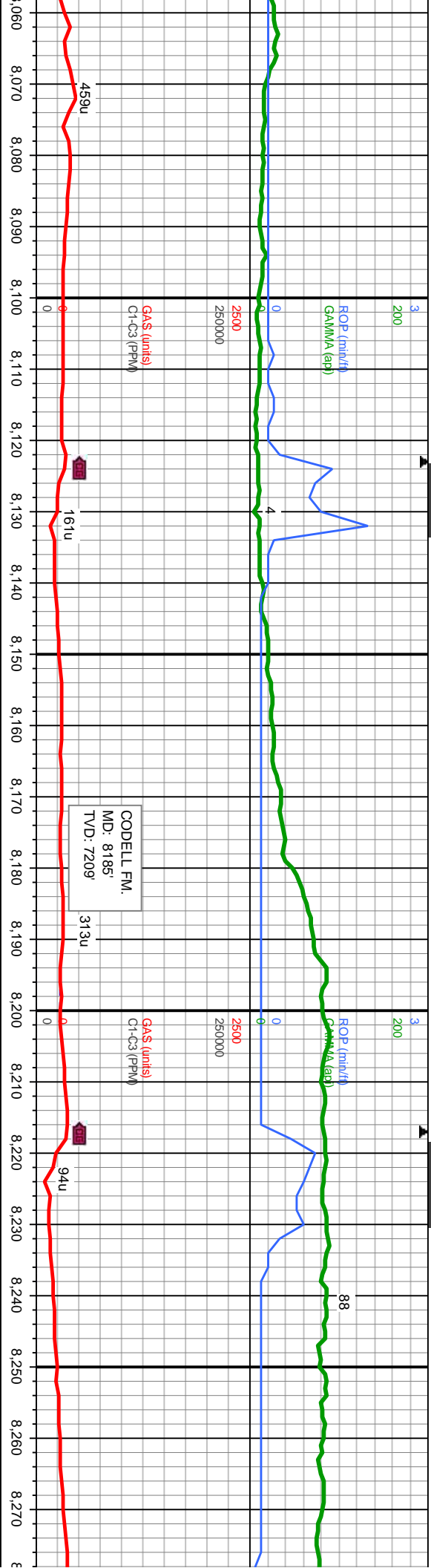
SAMPLE QUALITY VERY  
UNABLE TO WASH SAMP

cm-offwh-tt brn, ply-fiky lp, frm-bit,  
crpxn-micxn, xin-sl dns, sl arg, calc, MRLST: med-dk gy-gy  
mod stt-sl frm, arg-sl sily, calc, tr bent, nostc

7900'-8000' MD: LS: crm-offwh-tt brn, ply-fiky lp, frm-bit,  
crpxn-micxn, xin-sl dns, sl arg, calc, MRLST: med-dk gy-gy brn,  
sb ply-sb biky, mod stt-sl frm, arg-sl sily, calc, tr bent, nostc

8000'-8100' MD: LS: crm-offwh-tt brn, ply-fiky  
crpxn-micxn, xin-sl dns, sl arg, calc, MRLST: med-dk gy-gy  
brn, sb ply-sb biky, mod stt-sl frm, arg-sl sily





5. -

MD: 8,149  
TVD: 7,208.25  
Inclination: 89.69 -  
Azimuth: 92.53 -  
VS: 1,299.44

MD: 8,243.  
TVD: 7,210.04  
Inclination: 88.12 -  
Azimuth: 91.2 -  
VS: 1,393.38

POOR,  
LES

SAMPLE QUALITY VERY POOR,  
UNABLE TO WASH SAMPLES

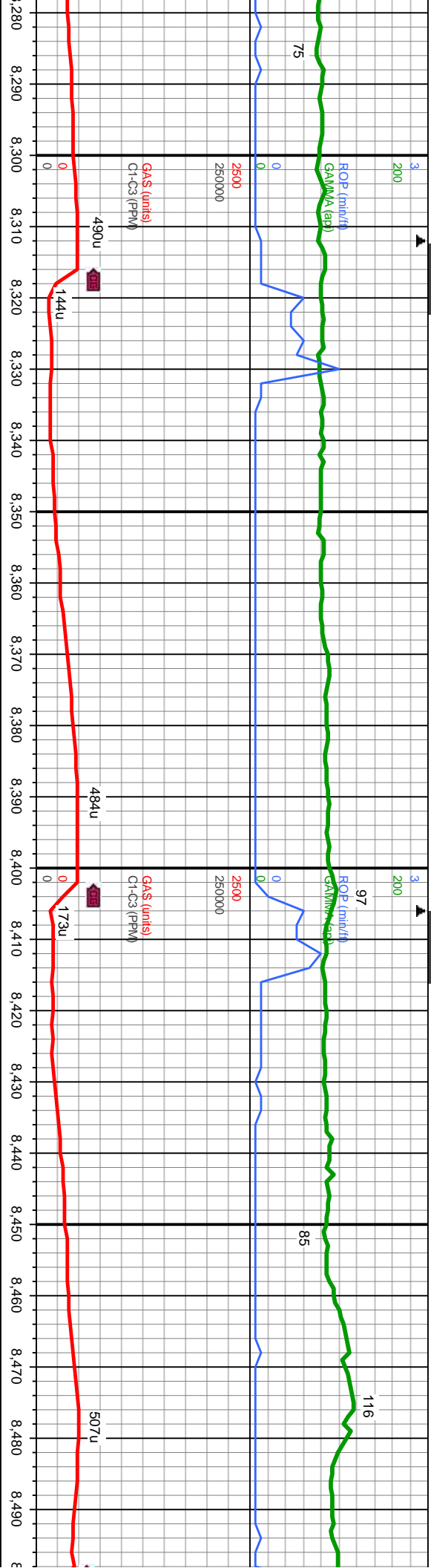
SAMPLE QUALITY VERY POOR,  
UNABLE TO WASH SAMPLES

8100'-8200' MD: LS: crm-offwhit-lt brn, pily-fiky ip, frm-brit, crpxln-mickln, xln-sl dns, sl arg, calc, SS: lt brn-dk brn-blk, vf-f gr, mod frm-frm, sbmrd - sb ang, mod-w strd, m cons w/ sl calc cnt, nosfc

8200'-8300' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbmrd - sbang mod-w strd, m cons w/ sl calc cnt, LS: crm-offwhit-lt brn, pily-fiky ip, frm-brit, crpxln-mickln, xln-sl dns, sl arg, calc, nosfc







MD: 8,337.  
TVD: 7,212.75  
Inclination: 88.58 -  
Azimuth: 91.56 -  
VS: 1,487.32

SAMPLE QUALITY VERY POOR,  
UNABLE TO WASH SAMPLES

WT IN 9.4 OUT 9.4  
VIS IN 53 OUT 49

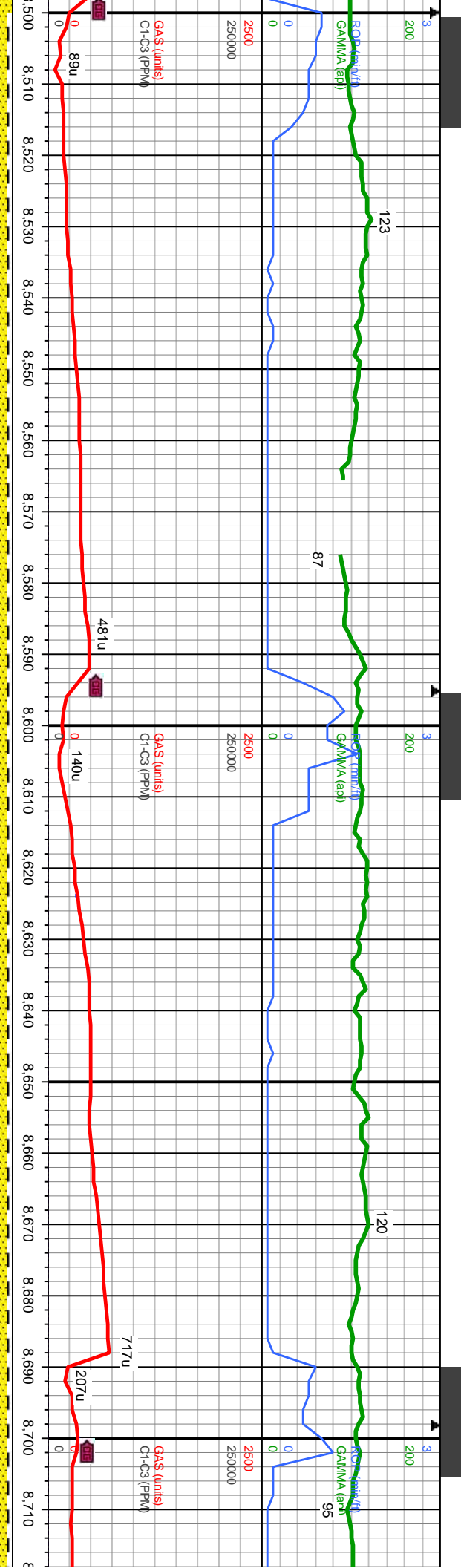
MD: 8,432.  
TVD: 7,215.31  
Inclination: 88.33 -  
Azimuth: 91.72 -  
VS: 1,582.26

SAMPLE QUALITY VERY POOR,  
UNABLE TO WASH SAMPLES

8300'-8400' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbmd -  
sbang, mod-w strd, m cons w/ sl calc cnt,LS: crm-offwht-lt brn,  
ply-illy ip, frm-brt, crpxn-micxln, xln-sl dns, sl arg, calc, nostc

8400'-8500' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbmd -  
-sbang, mod-w strd, m cons w/ sl calc cnt, nostc



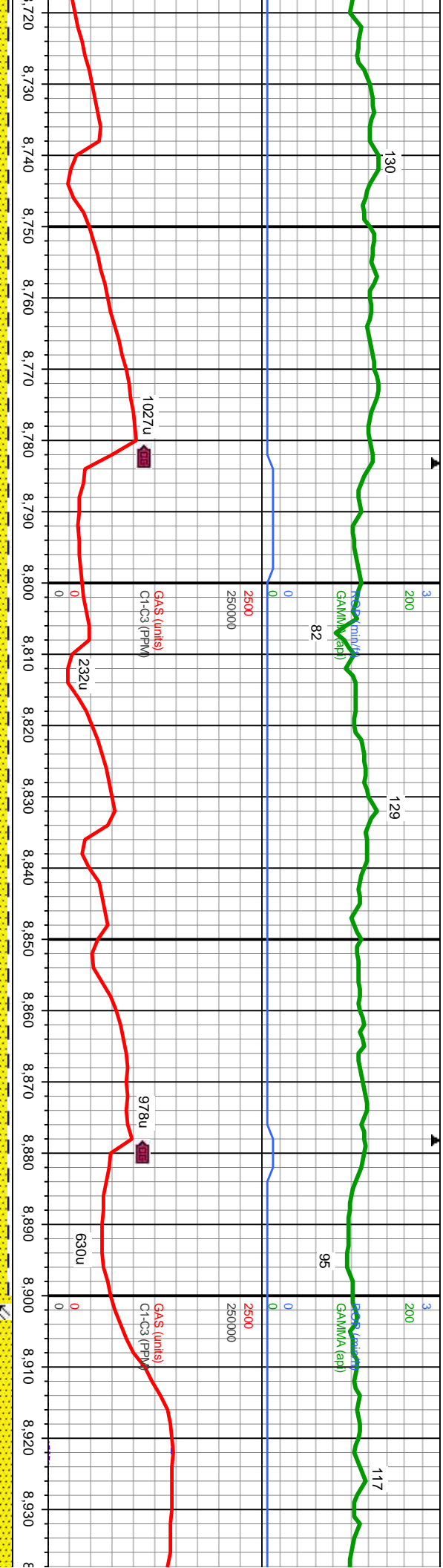


6600	WT IN 9.4 VIS IN 53	OUT 9.4 OUT 49	6600
MD: 8.526. TVD: 7.217.26. Inclination: 89.29 - Azimuth: 92.35 - VS: 1.676.19 .			
TVD (ft)			TVD (ft)

SAMPLE QUALITY VERY POOR, UNABLE TO WASH SAMPLES			
8500'-8600'	MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cmt, SH: dk gry, frm, - sblky-sbply, gt-sly tex, ns		7600
8600'-8700'	MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cmt, SH: dk gry, frm, sblky - sply, gt-sly tex, non-calc - v sl calc, tr dull bl - yel flr, string cut		7600







0.04 - 8 -

MD: 8,810.  
TVD: 7,216.12.  
Inclination: 90.64 -  
Azimuth: 92.76 -  
VS: 1,959.94

MD: 8,904.  
TVD: 7,215.37.  
Inclination: 90.27 -  
Azimuth: 92.59 -  
VS: 2,053.86

8700'-8800' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbnd -  
sbang, mod-w strd, m cons w/ sl calc cnt, SH: dk gry, frm, sbblky -  
sblply, gt-sily tex, non-calc - v sl calc, tr dull bl-yl flr, string cut

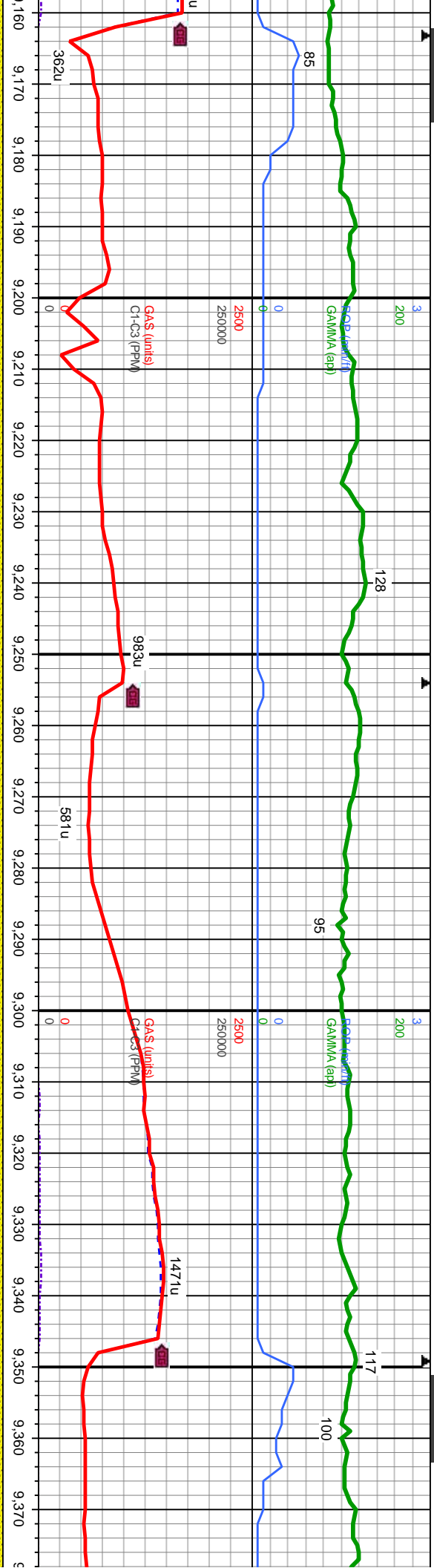
8800'-8900' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbnd -  
sbang, mod-w strd, m cons w/ sl calc cnt, SH: dk gry, frm, sbblky -  
sblply, gt-sily tex, non-calc - v sl calc, tr dull bl-yl flr, string cut

8900'-9000' MD: SS: sbang, mod-w strd, m bfr, ctpxin - microxin,









MD: 9,187.  
TVD: 7,212.91.  
Inclination: 90.33 -  
Azimuth: 92.45 -  
VS: 2,336.54.

TVD (ft)

6600

WT IN 9.6+ OUT 9.6+  
VIS IN 56 OUT 52

6600

TVD (ft)

MD: 9,376.  
TVD: 7,212.6  
Inclination: 89.75 -  
Azimuth: 92.41 -  
VS: 2,525.41

SAMPLE QUALITY VERY POOR,  
UNABLE TO WASH SAMPLES

SAMPLE QUALITY VERY POOR,  
UNABLE TO WASH SAMPLES

OOOR,  
ES

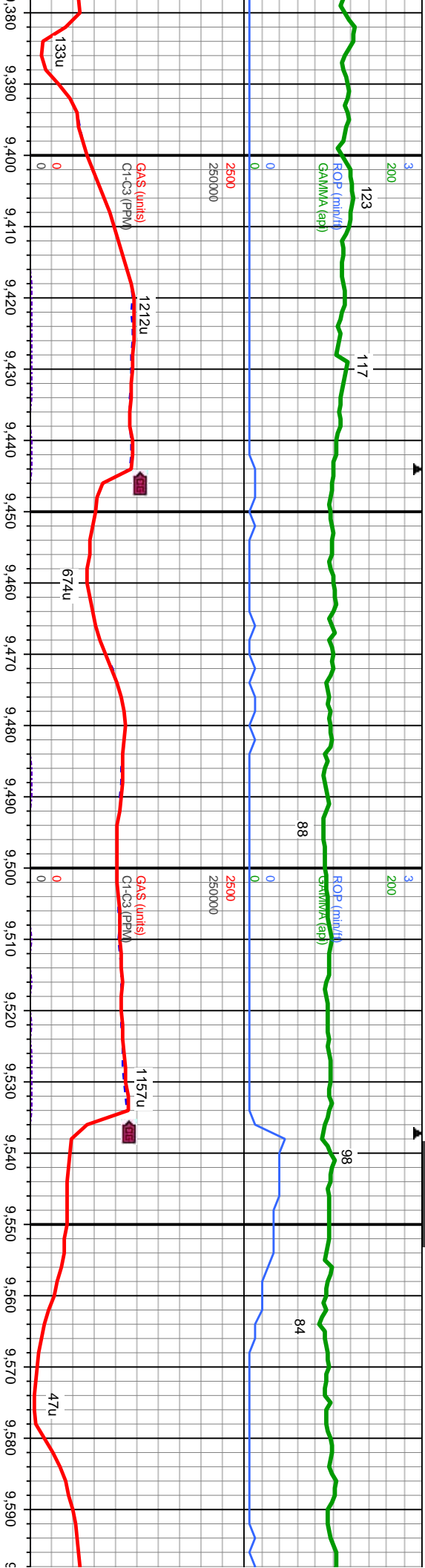
7600

7600

9300'-9400' MD: SS: lt brn-dk brn-blik, v-f gr, m-v frm,  
sbrnd - sbang, mod-w srt, m cons w/ sl calc cnt, nstc

9200'-9300' MD: SS: lt brn-dk brn-blik, v-f gr, m-v frm,  
sbrnd - sbang, mod-w srt, m cons w/ sl calc cnt, nstc

n-v frm, sbrnd - sbang,



WT IN 9.7  
VIS IN 58  
OUT 9.6+  
OUT 56

MD: 9.469  
TVD: 7,212.48  
Inclination: 89.72  
Azimuth: 92.15  
VS: 2.618.36

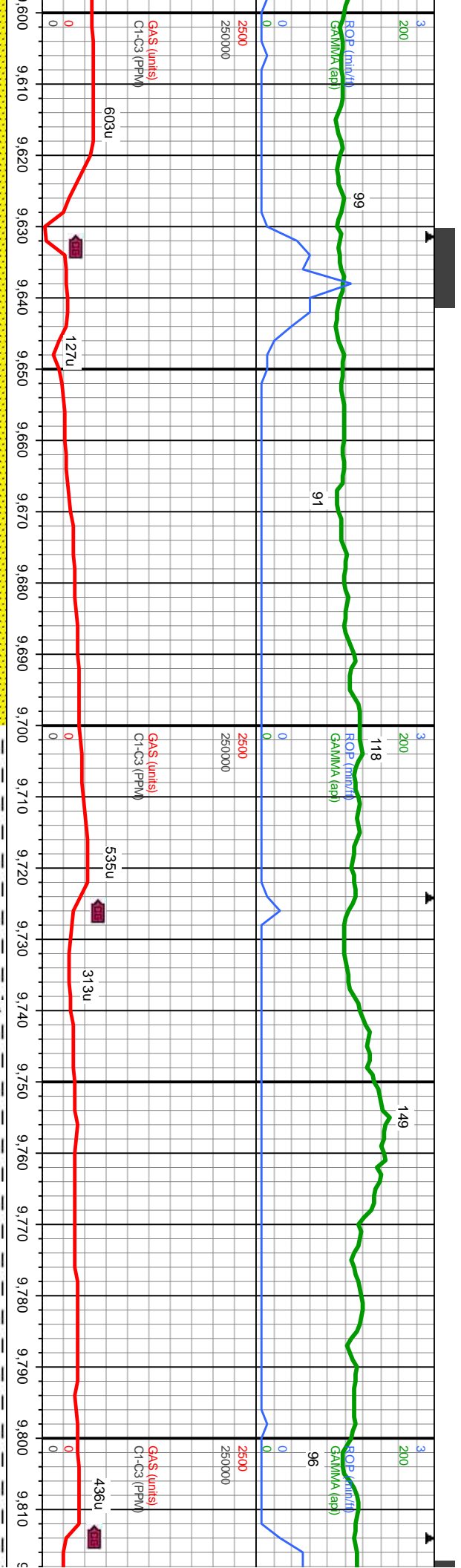
MD: 9.561  
TVD: 7,212.38  
Inclination: 90.4  
Azimuth: 91.02  
VS: 2.710.33

9400'-9500' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbnd - sbang,  
mod-w strd, m cons w/ sl calc crnt, tr amt L.S, tr dull bl-yel flr, string cut

9500'-9600' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbnd - sbang,  
mod-w strd, m cons w/ sl calc crnt, tr amt L.S, tr dull bl-yel flr, string cut







WT IN 9.7 OUT 9.6+  
VIS IN 61 OUT 51

MD: 9.655.  
TVD: 7,211.51.  
Inclination: 90.67 -  
Azimuth: 90.36 -  
VS: 2,804.32.

TVD (ft)

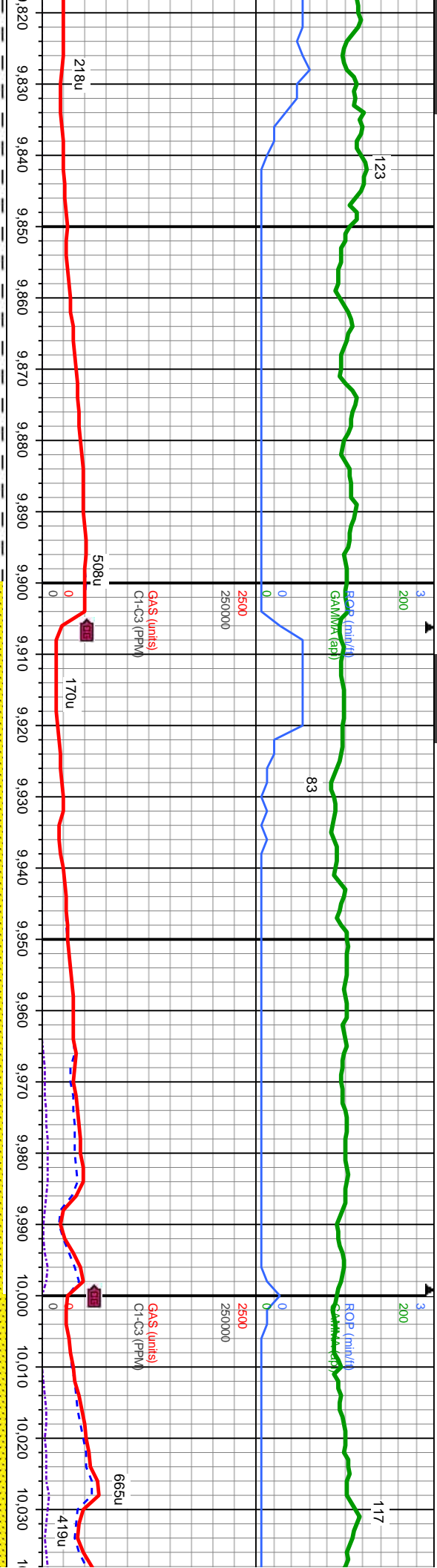
MD: 9.748.  
TVD: 7,210.87.  
Inclination: 90.12 -  
Azimuth: 89.74 -  
VS: 2,897.32.

TVD (ft)

9600'-9700' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbnd - shang, mod-w srd, m cons w/ sl calc cnt, lt dull bl-yel flr, string cut

9700'-9800' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbnd - shang, mod-w srd, m cons w/ sl calc cnt, SH: med - dk gry, frm, sbply, gr - silty tex, non - v sl calc, lt dull bl-yel flr, string cut





MD: 9.841  
TVD: 7,209.67  
Inclination: 91.35  
Azimuth: 89.65  
VS: 2,990.31

WT IN 9.6+  
VIS IN 63  
OUT 9.7+  
OUT 58

TVD (ft)

MD: 9.933  
TVD: 7,206.61  
Inclination: 92.46  
Azimuth: 88.79  
VS: 3,082.24

WT IN 9.5  
VIS IN 63  
OUT 9.6+  
OUT 56

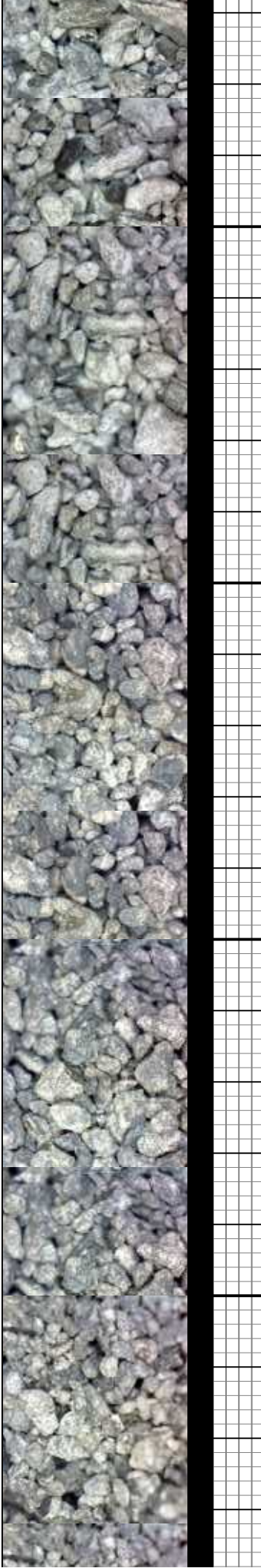
TVD (ft)

MD: 10.027  
TVD: 7,202.96  
Inclination: 92  
Azimuth: 88.83  
VS: 3,176.14

9800'-9900' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbmd -  
sbang, mod-w strd, m cons w/ sl calc cnt, SH: med - dk gry, frm,  
sbply, gt - silty tex, non - v sl calc, tr dull bl-ylr flr, string cut

9900'-10,000' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbmd -  
sbang, mod-w strd, m cons w/ sl calc cnt, SH: med - dk gry, frm,  
sbply, gt - silty tex, non - v sl calc, tr dull bl-ylr flr, string cut

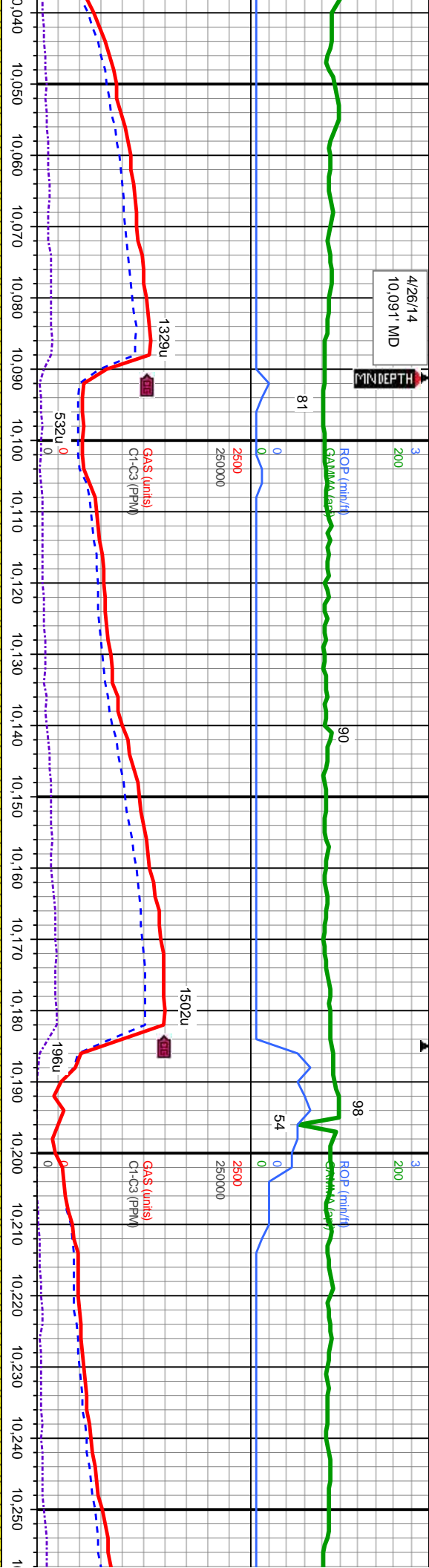
10,000'-10,100' MD: SS: ssang, mod-w strd, m cc





4/26/14  
10,091' MD

MINDEPTH



6600

MD: 10,120.  
TVD: 7,199.36.  
Inclination: 92.43 -  
Azimuth: 89.32 -  
VS: 3,269.05

6600

MD: 10,213.  
TVD: 7,197.27.  
Inclination: 90.15 -  
Azimuth: 88.63 -  
VS: 3,361.99

WT IN 9.3+ OUT 9.5+  
VIS IN 61 OUT 56

10,040-10,091' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbnd -  
cons w/ sl calc cnt, tr dull bl-yel flr, string cut

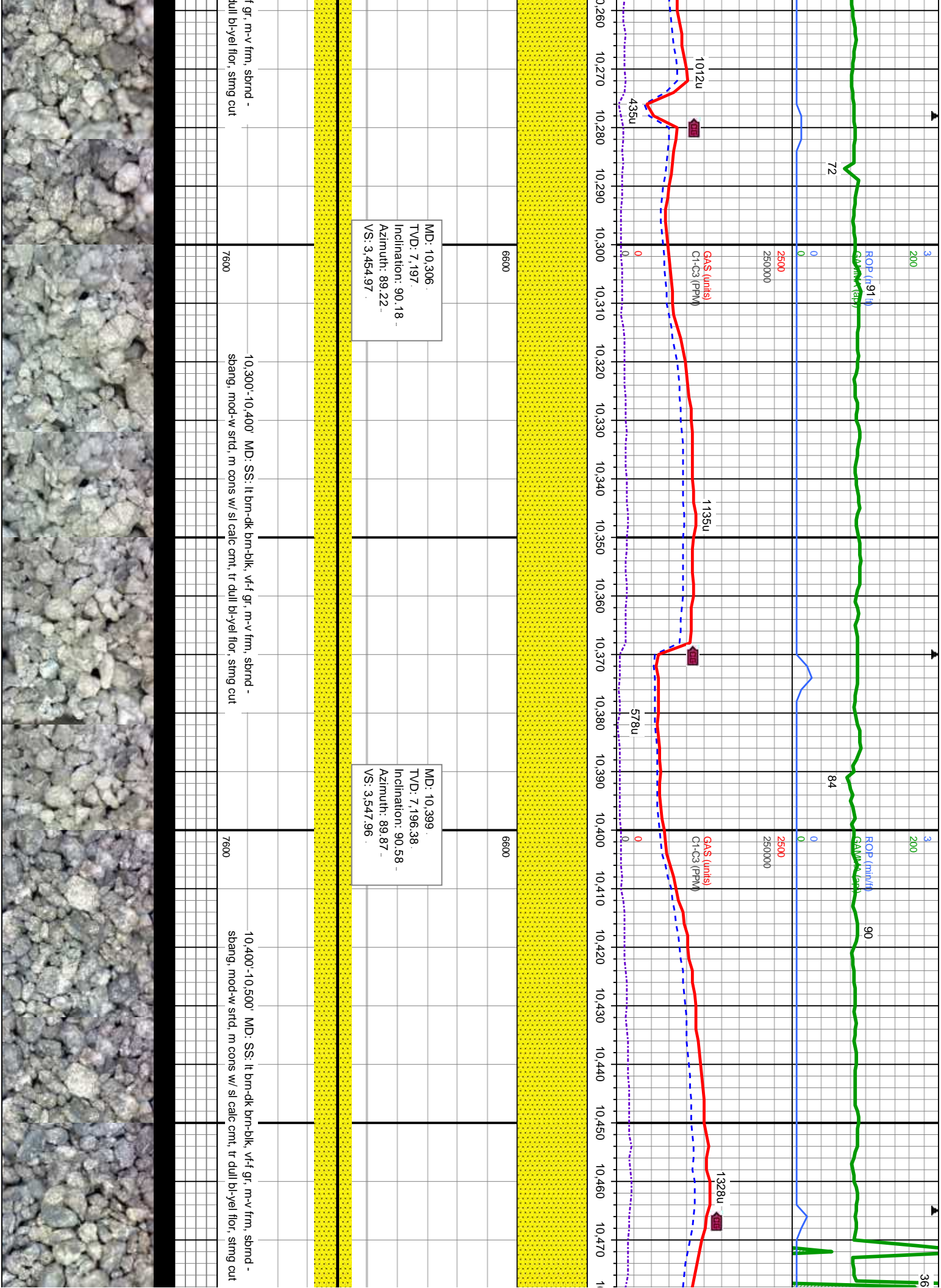
7600

10,100-10,200' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbnd -  
sbang, mod-w strd, m cons w/ sl calc cnt, tr dull bl-yel flr, string cut

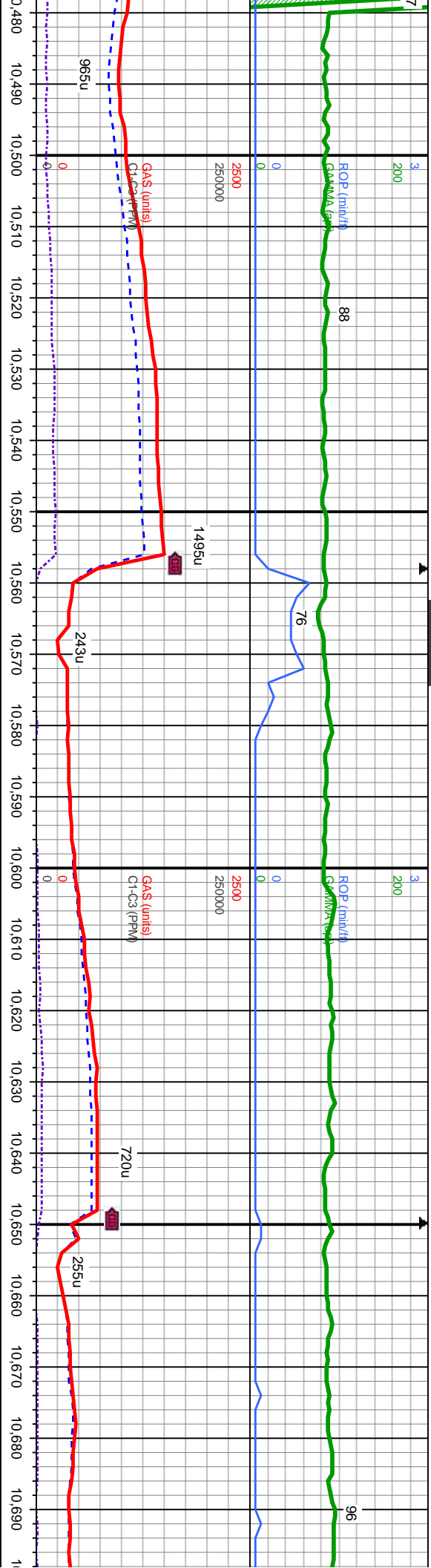
7600

10,200-10,300' MD: SS: lt brn-dk brn-blk, v-f  
sbang, mod-w strd, m cons w/ sl calc cnt, tr c









MD: 10,493.  
TVD: 7,195.66.  
Inclination: 90.3 -  
Azimuth: 90.22 -  
VS: 3,641.95 .

MD (ft)

MD: 10,586.  
TVD: 7,195.39.  
Inclination: 90.03 -  
Azimuth: 88.93 -  
VS: 3,734.95 .

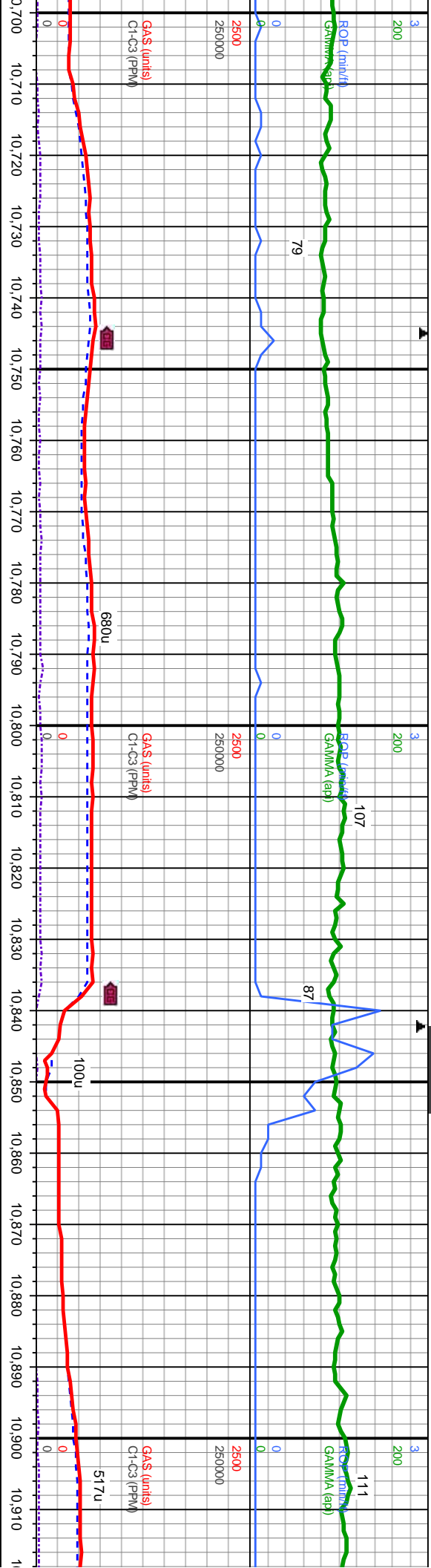
TVD (ft)

WT IN 9.2+ OUT 9.3+  
VIS IN 62 OUT 57

10,500'-10,600' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbmd - sbang, mod-w strd, m cons w/ sl calc crnt, tr dull bl-ylr flr, stmg cut

10,600'-10,700' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbmd - sbang, mod-w strd, m cons w/ sl calc crnt, tr dull bl-ylr flr w/ limnd slw stmg milky cut



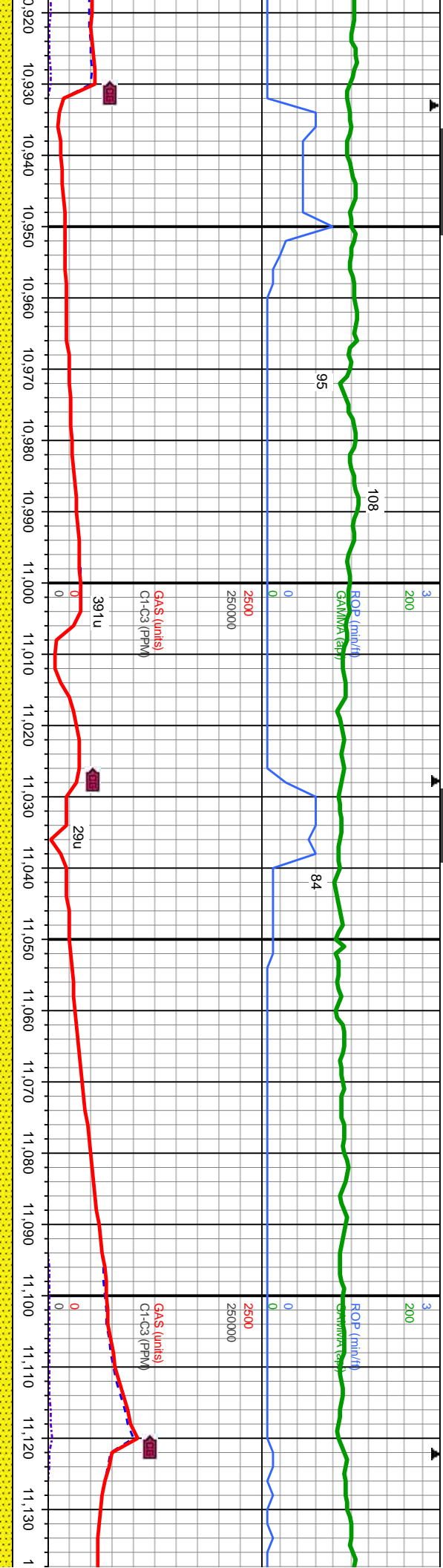


MD: 10,773 TVD: 7,197.06 Inclination: 88.95 - Azimuth: 89.16 - VS: 3.921.89		TVD (ft)
MD: 10,867 TVD: 7,198.78 Inclination: 88.95 - Azimuth: 88.45 - VS: 4.015.85		TVD (ft)

WT IN 9.2+ OUT 9.2 VIS IN 67 OUT 60		TVD (ft)
10,700'-10,800' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cmf, tr dull bi-vel flr w/ innrd slw string milky cut		7600
10,800'-10,900' MD: SS: lt brn-dk brn-blk, vf-f gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cmf, tr dull bi-vel flr w/ innrd slw string milky cut		7600







WT IN 9.3 OUT 9.2  
VIS IN 69 OUT 62

MD: 10,960.  
TVD: 7,199.86.  
Inclination: 89.72 -  
Azimuth: 88.53 -  
VS: 4,108.8.

TVD (ft)

6600

MD: 11,053.  
TVD: 7,200.06.  
Inclination: 90.03 -  
Azimuth: 88.94 -  
VS: 4,201.76.

TVD (ft)

6600

10,900'-11,000' MD: SS: lt brn-dk brn-blk, vt-f gr, m-v  
frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, tr  
dull bl-yeel flr w/ innrd slw string mlky cut

7600

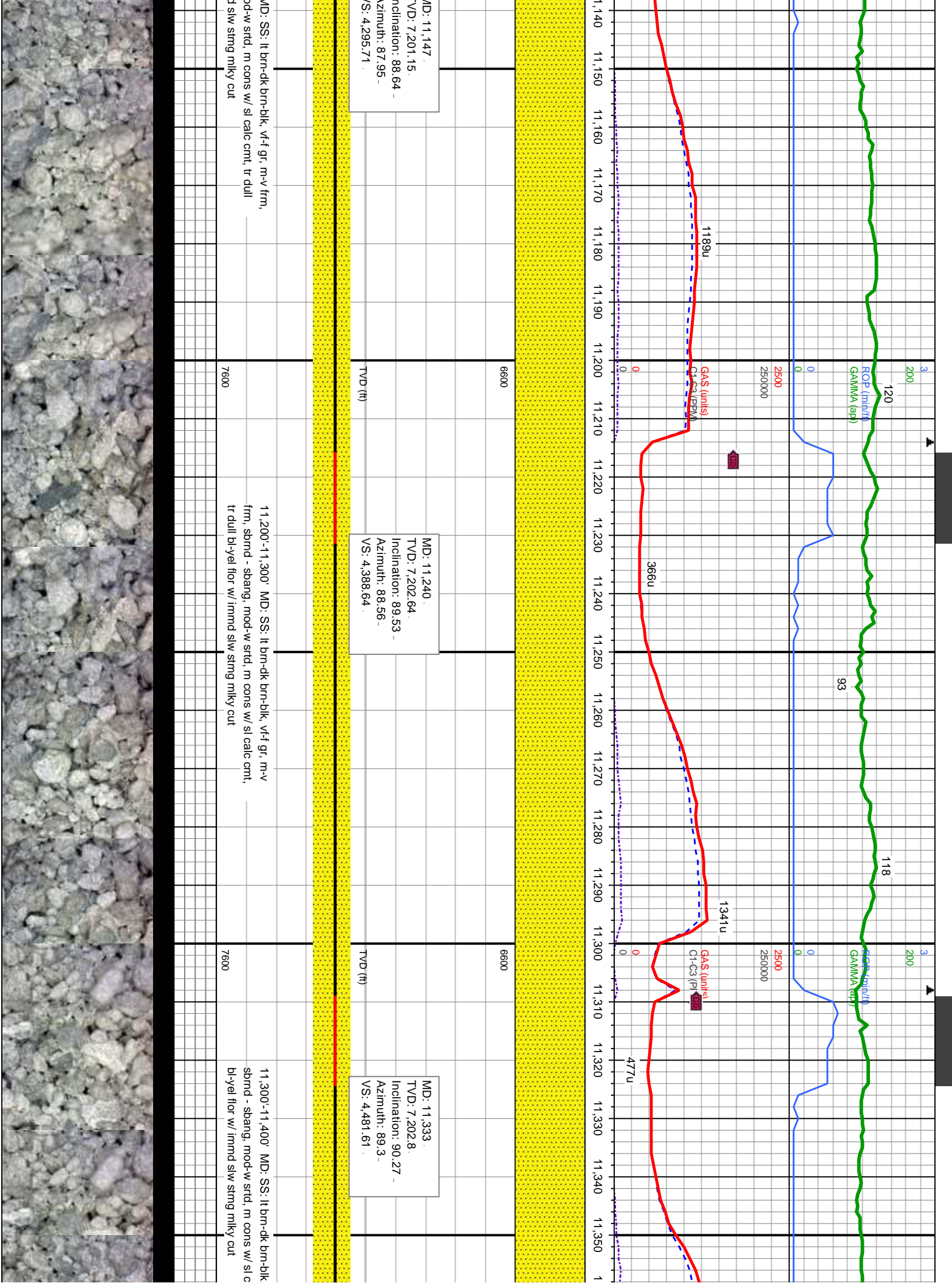
11,000'-11,100' MD: SS: lt brn-dk brn-blk, vt-f gr w/ occ m gr,  
m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, tr  
dull bl-yeel flr w/ innrd slw string mlky cut

7600

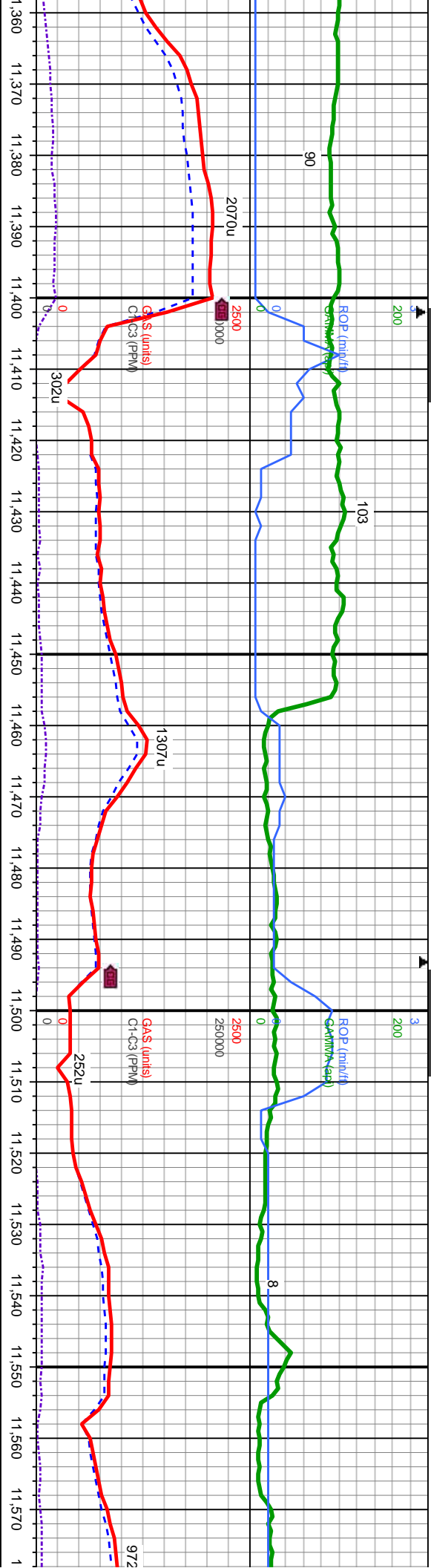
11,100'-11,200' MD: SS: lt brn-dk brn-blk, vt-f gr w/ occ m gr,  
m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, tr  
dull bl-yeel flr w/ innrd slw string mlky cut

7600









WT IN 9.3  
VIS IN 63  
OUT 9.3  
OUT 56

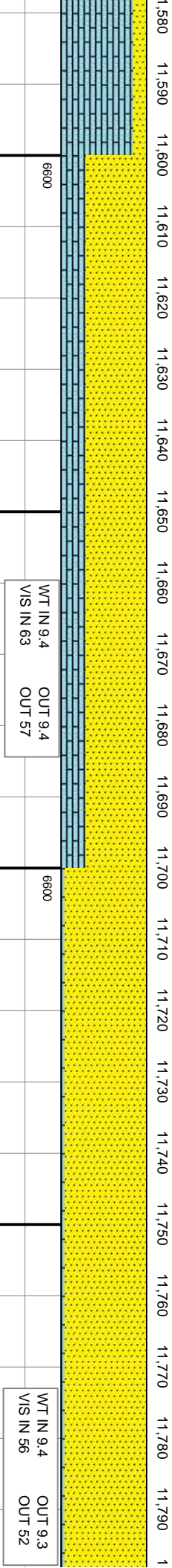
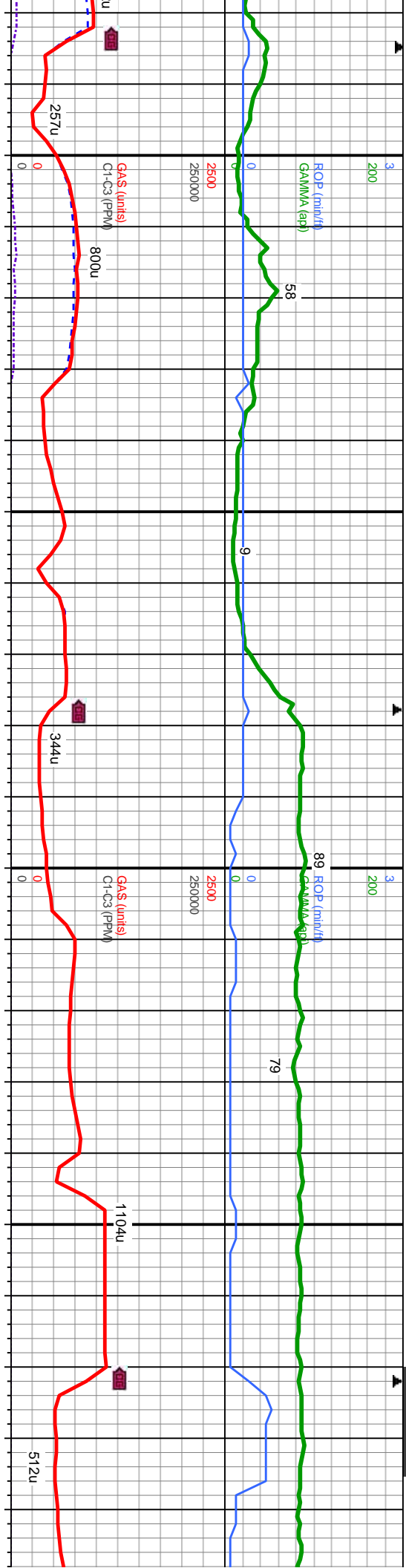
MD: 11,425.  
TVD: 7,202.32.  
Inclination: 90.33 -  
Azimuth: 90.75 -  
VS: 4,573.61.

MD: 11,517.  
TVD: 7,200.45.  
Inclination: 92 -  
Azimuth: 90.67 -  
VS: 4,665.58.

11,400'-11,500' MD: SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbnd - spang, mod-w strd, m cons w/ sl calc cnt, LS: crm-offwh-tt brn, ply-fiky ip, frm-brlt, cpxln-micxln, xln-sl dns, sl arg, calc, fnt tr dull bl-yel flwr w/ no cut

11,500'-11,600' MD: LS: crm-offwh-tt brn, ply-fiky ip, frm-brlt, cpxln-micxln, xln-sl dns, sl arg, calc, SS: lt brn-dk brn-blk, v-f gr, m-v frm, sbnd - spang, mod-w strd, m cons w/ sl calc cnt, nosc





MD: 11,609  
TVD: 7,197.39  
Inclination: 91.81  
Azimuth: 91.02  
VS: 4,757.53

MD: 11,701  
TVD: 7,194.95  
Inclination: 91.23  
Azimuth: 91.37  
VS: 4,849.48

WT IN 9.4  
VIS IN 56  
OUT 52

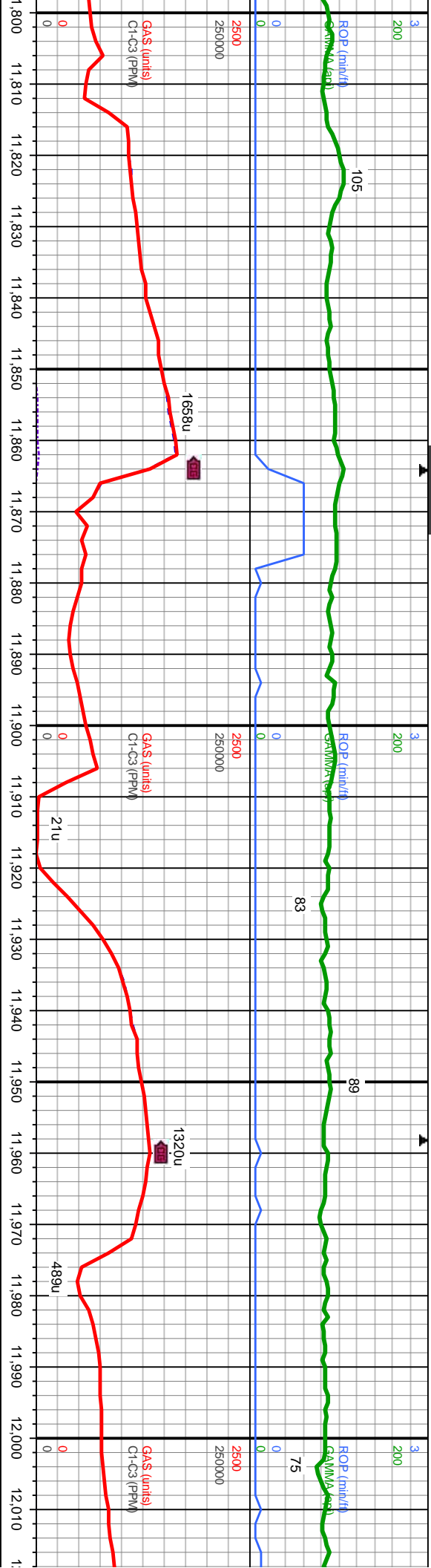
MD: 11,792  
TVD: 7,192.97  
Inclination: 91.26  
Azimuth: 90.18  
VS: 4,940.45

11,600'-11,700' MD: SS: clt-opq-wh-it gy, f-m gr, m-v frm, sbnd - sbang, mod-w  
srtd, m cons w/ sl calc cmt, LS: crm-offwh-it brn, pty-fiky ip, frm-brt,  
cpxin-nicxin, xin-sl dns, sl arg, calc, tr lt blu/yel flr w/ innmd slw strng mlky cut

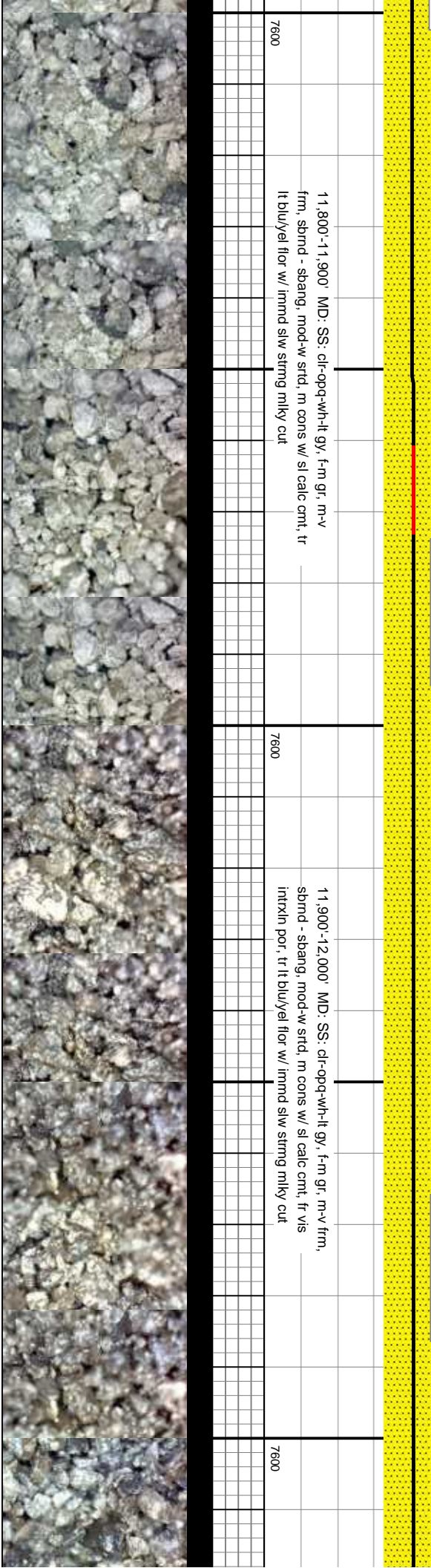
11,700'-11,800' MD: SS: clt-opq-wh-it gy, f-m gr, m-v frm, sbnd - sbang, mod-w  
srtd, m cons w/ sl calc cmt, LS: crm-offwh-it brn, pty-fiky ip, frm-brt,  
cpxin-nicxin, xin-sl dns, sl arg, calc, tr lt blu/yel flr w/ innmd slw strng mlky cut

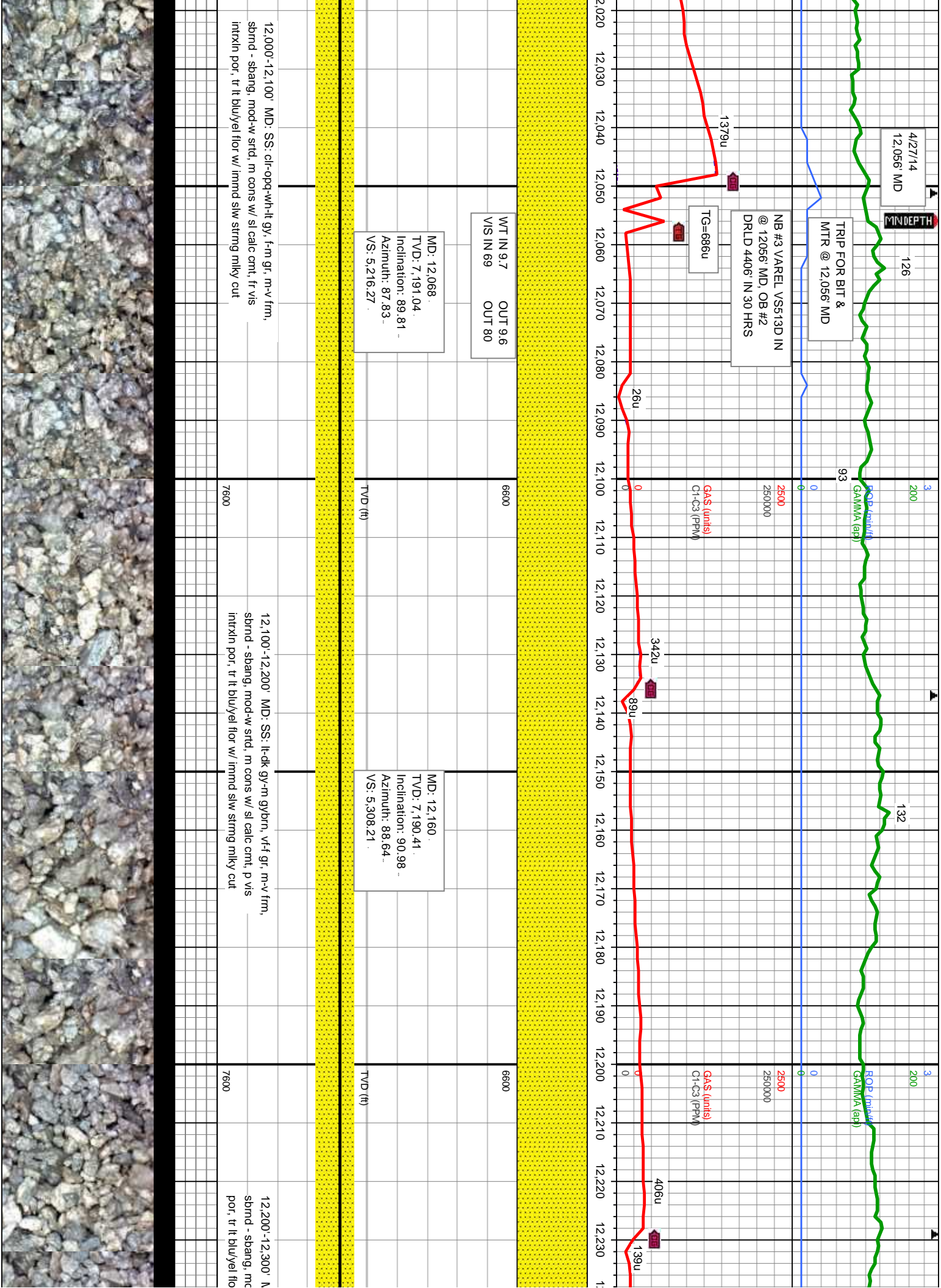




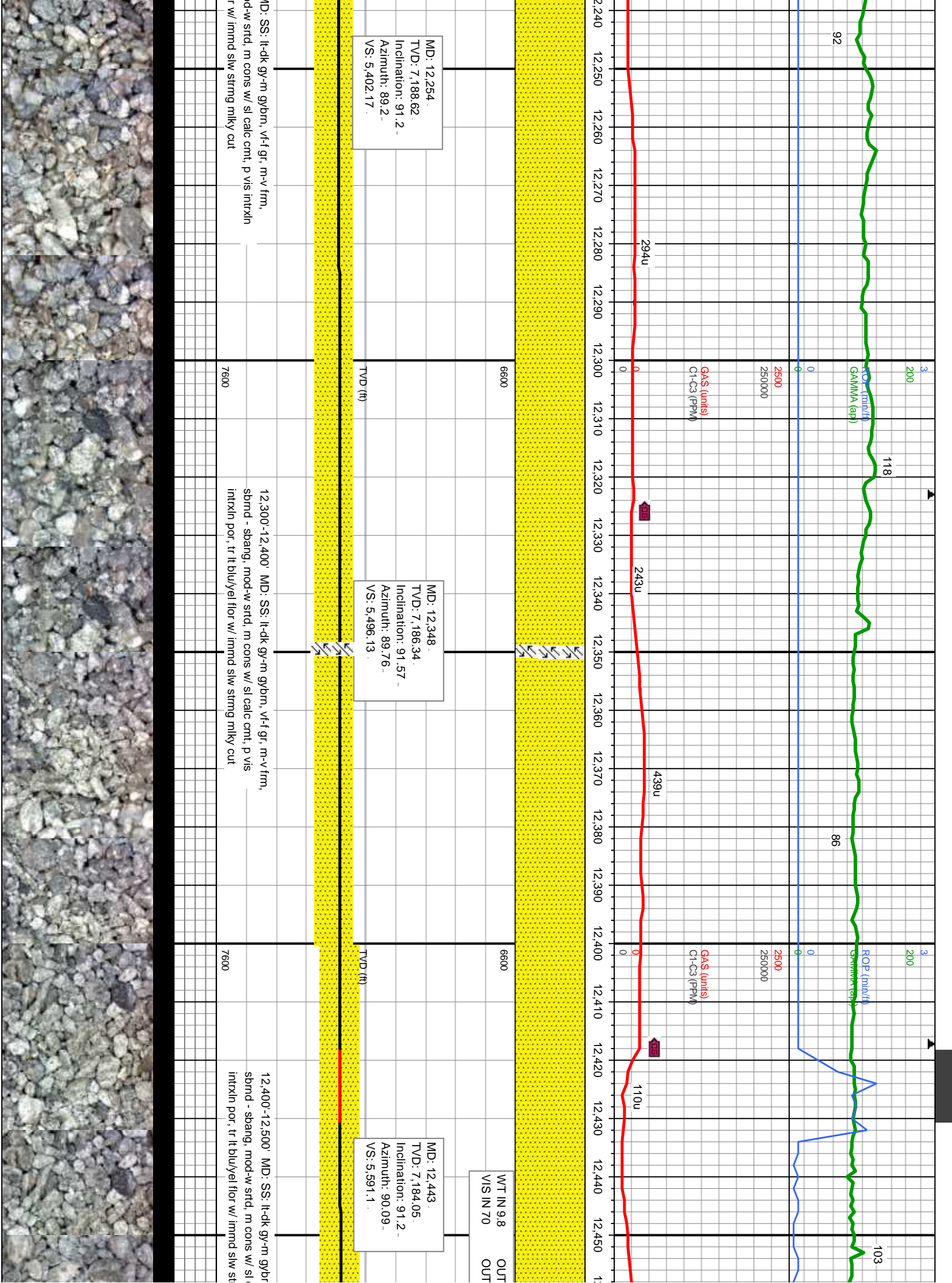


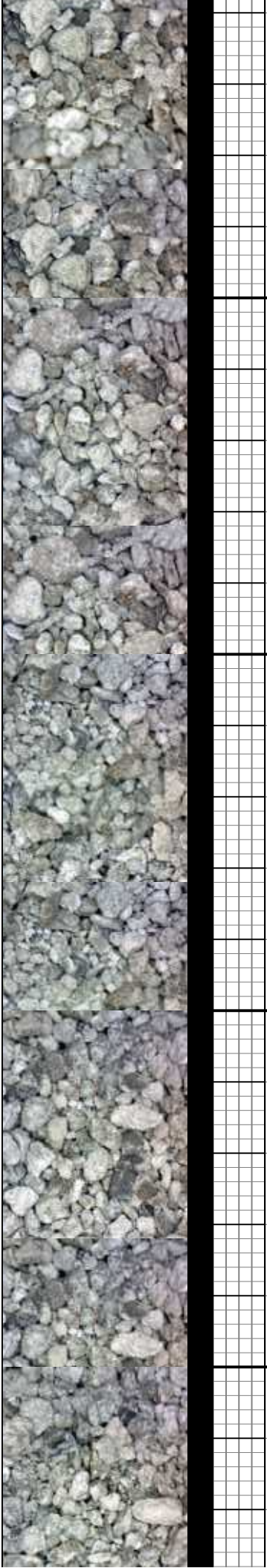
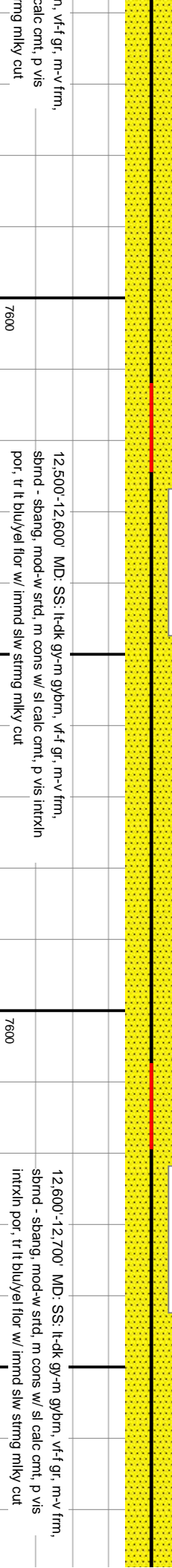
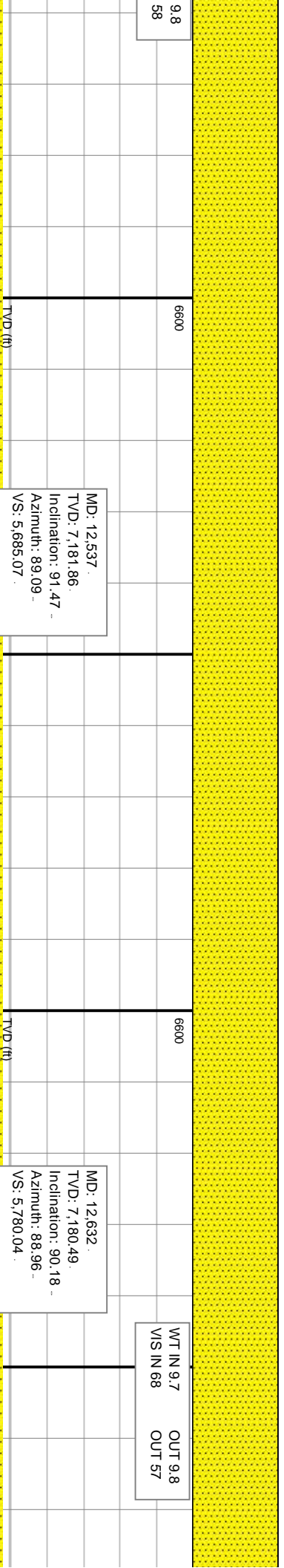
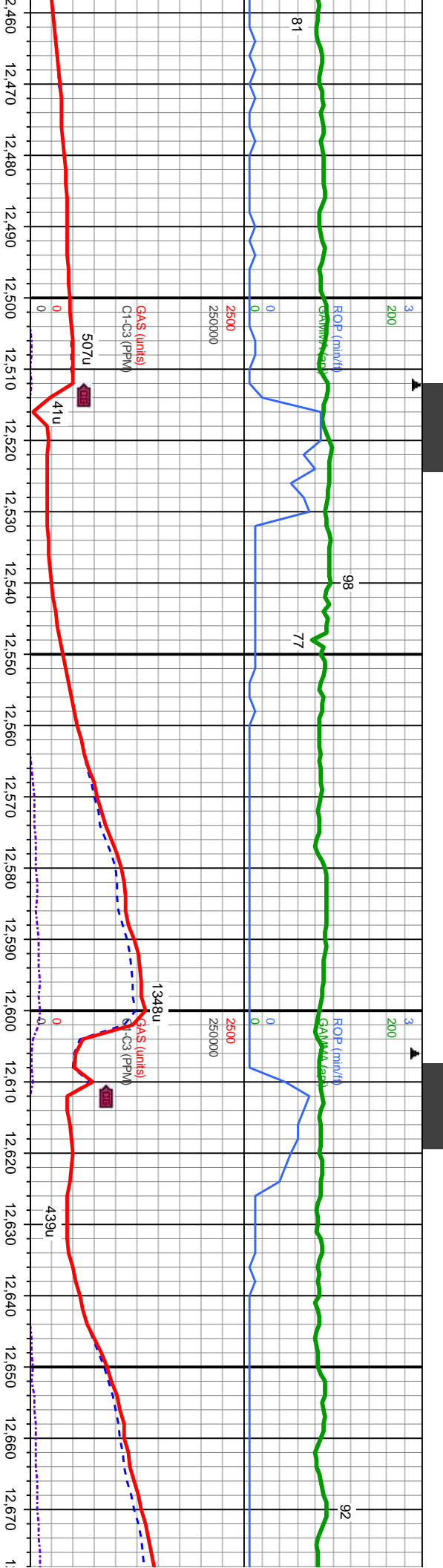
MD: 11,884. TVD: 7,191.15 Inclination: 91.01 Azimuth: 89.17 VS: 5.032.43		6600	6600
11,800'-11,900'	MD: SS: cl-r-opq-wh-lt gy, f-m gr, m-v frn, sbnd - sbang, mod-w strd, m cons w/ sl calc cmt, tr lt blu/yel flr w/ innrd slw strng mlky cut	7600	7600
MD: 11,976. TVD: 7,190.61 Inclination: 89.66 Azimuth: 87.43 VS: 5.124.37		6600	6600
11,900'-12,000'	MD: SS: cl-r-opq-wh-lt gy, f-m gr, m-v frn, sbnd - sbang, mod-w strd, m cons w/ sl calc cmt, fr vis intrxn por, tr lt blu/yel flr w/ innrd slw strng mlky cut	7600	7600





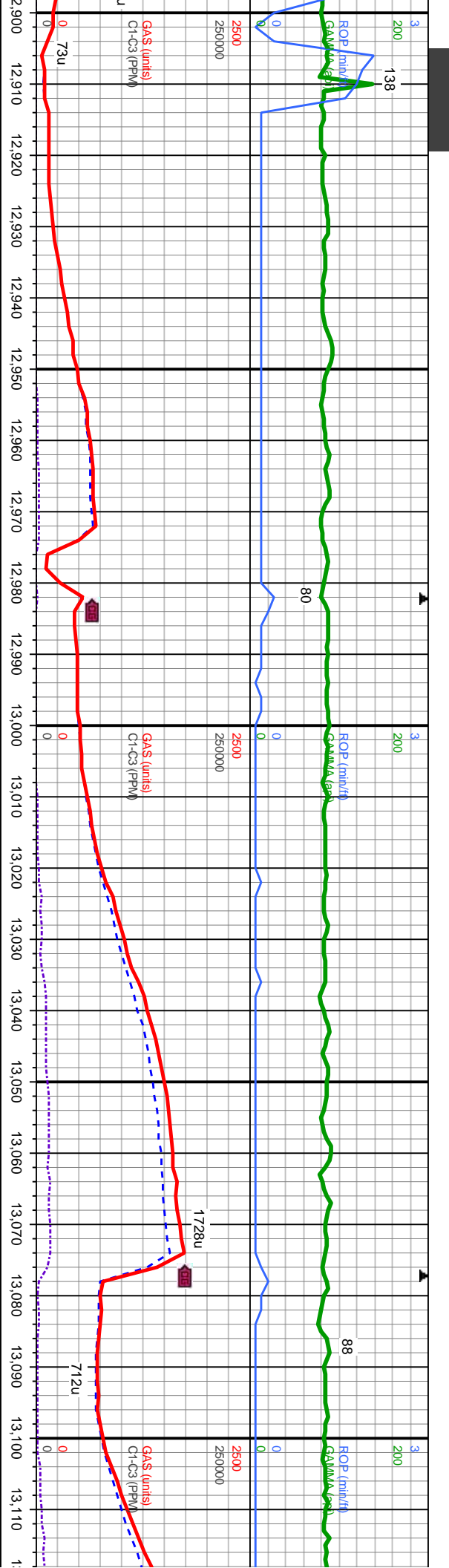












OUT 9.5  
OUT 57

MD: 12,915.  
TVD: 7,179.57.  
Inclination: 89.29 -  
Azimuth: 91.26 -  
VS: 6.063.02

WT IN 9.5  
VIS IN 57  
OUT 53

MD: 13,010.  
TVD: 7,180.44.  
Inclination: 89.66 -  
Azimuth: 91.64 -  
VS: 6.157.99

6600

MD: 13,104.  
TVD: 7,180.37.  
Inclination: 90.43 -  
Azimuth: 92.07 -  
VS: 6.251.95

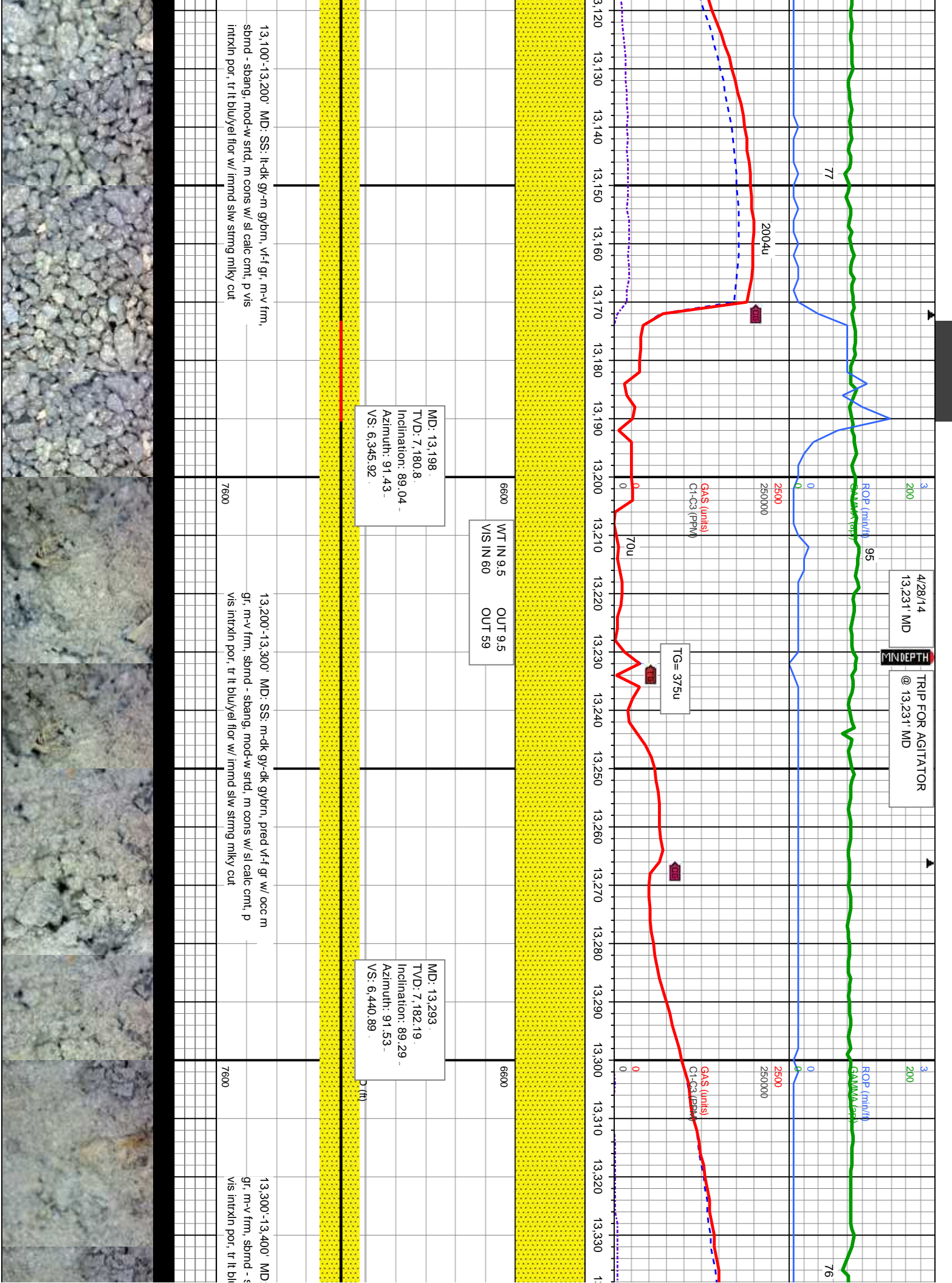
12,900'-13,000' MD: SS: lt-dk gy-m gybrn, v-f gr, m-v frm,  
sbrnd - sbang, mod-w srd, m cons w/ sl calc cntl, p vis  
intrxn por, tr lt blu/yel flr w/ innrd slw strng mlky cut

13,000'-13,100' MD: SS: lt-dk gy-m gybrn, v-f gr, m-v frm,  
sbrnd - sbang, mod-w srd, m cons w/ sl calc cntl, p vis  
intrxn por, tr lt blu/yel flr w/ innrd slw strng mlky cut

7600

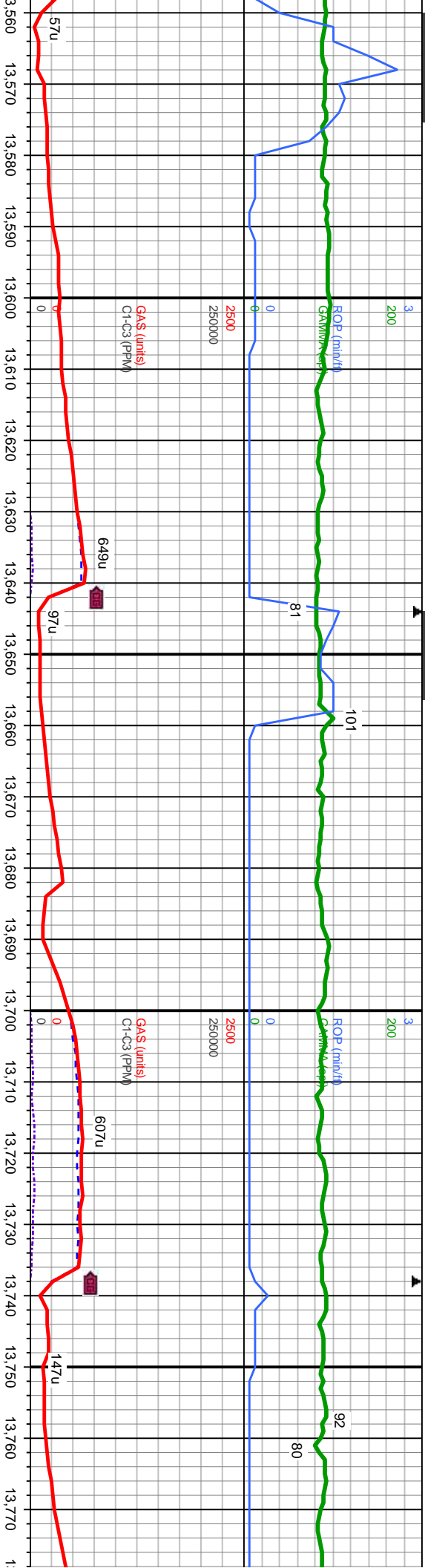












IN 9.6	OUT 9.6
IN 63	OUT 57
WT IN 9.5	OUT 9.4
VIS IN 56	OUT 47

MD: 13,575.  
TVD: 7,186.66.  
Inclination: 89.84 -  
Azimuth: 90.57 -  
VS: 6,722.82.

MD: 13,670.  
TVD: 7,186.67.  
Inclination: 90.15 -  
Azimuth: 89.34 -  
VS: 6,817.81.

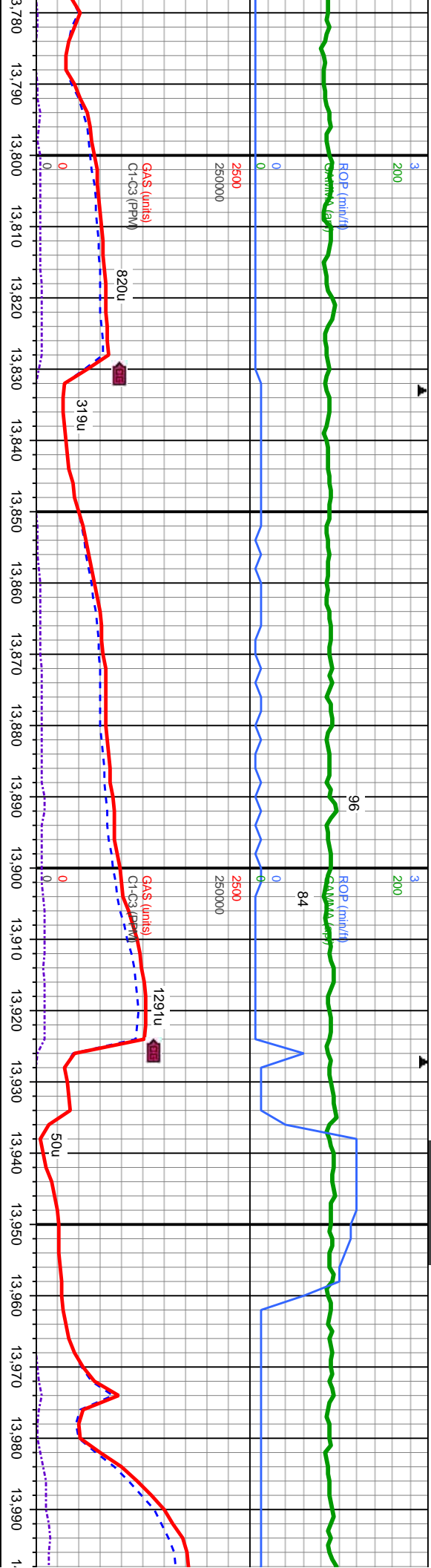
MD: 13,764.  
TVD: 7,185.74.  
Inclination: 90.98 -  
Azimuth: 89.54 -  
VS: 6,911.8.

cored v-f-f gr w/ occ m  
ns w/ sl calc cnt, p vis  
miky cut

13,600'-13,700' MD: SS: m-dk gy-dk gybm, pred v-f-f gr w/ occ m  
gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, p  
vis intrxn por, tr lt blu/yel flr w/ innrd slw strng mlky cut

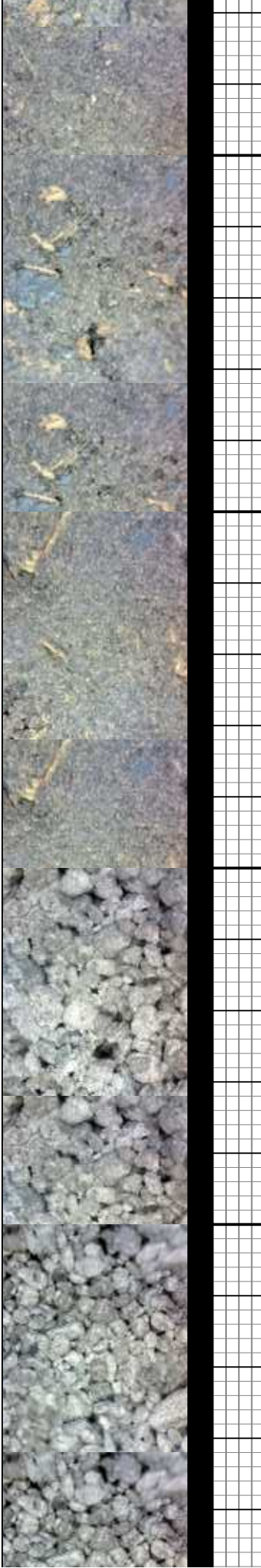
13,700'-13,800' MD: SS: m-dk gy-dk gybm, pred v-f-f gr w/ occ m gr,  
m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, p vis intrxn  
por, tr lt blu/yel flr w/ innrd slw strng mlky cut



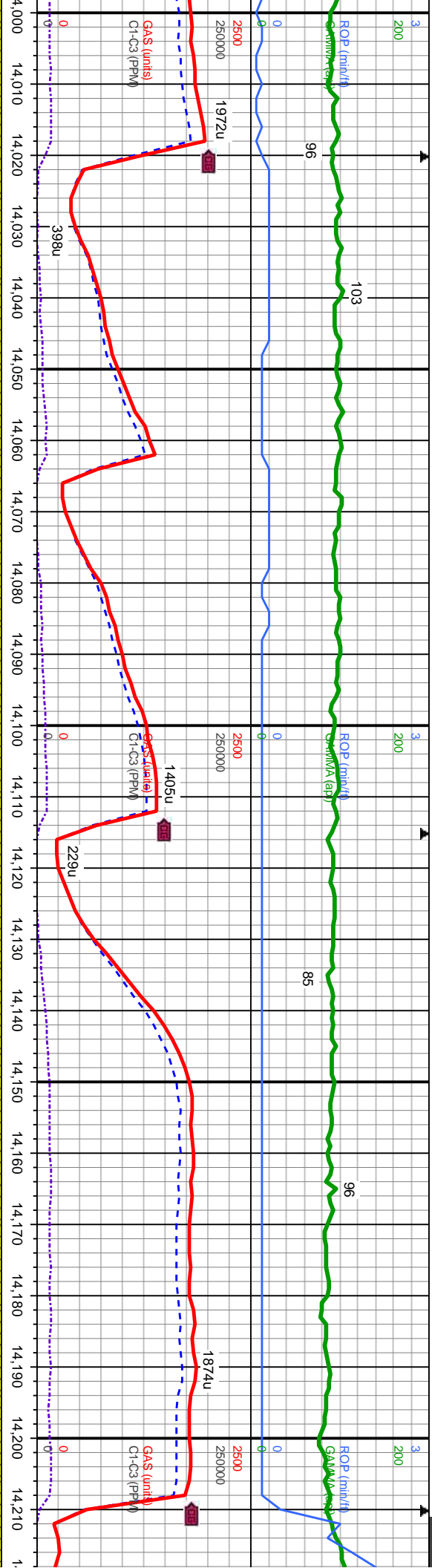


6600	MD: 13,859. TVD: 7,183.68 Inclination: 91.51 - Azimuth: 89.77 - VS: 7,006.77	TVD (ft)
6600	MD: 13,953. TVD: 7,182.27 Inclination: 90.21 - Azimuth: 89.2 - VS: 7,100.75	TVD (ft)

7600	13,800'-13,900' MD: SS: m-dk gy-dk gybrn, pred v-f gr w/ occ m gr, m-v frm, sbnd - sbang, mod-w srtf, m cons w/ sl calc cmf, p vis intrxn por, tr lt blu/yel flr w/ innrd slw strng mlky cut	7600
7600	13,900'-14,000' MD: SS: m-dk gy-dk gybrn, pred v-f gr w/ occ m gr, m-v frm, sbnd - sbang, mod-w srtf, m cons w/ sl calc cmf, p vis intrxn por, tr lt blu/yel flr w/ innrd slw strng mlky cut	7600







WT IN 9.4 OUT 9.4  
VIS IN 56 OUT 47

MD: 14,048  
TVD: 7,181.89  
Inclination: 90.24  
Azimuth: 89.04  
VS: 7,195.73

TVD (ft)

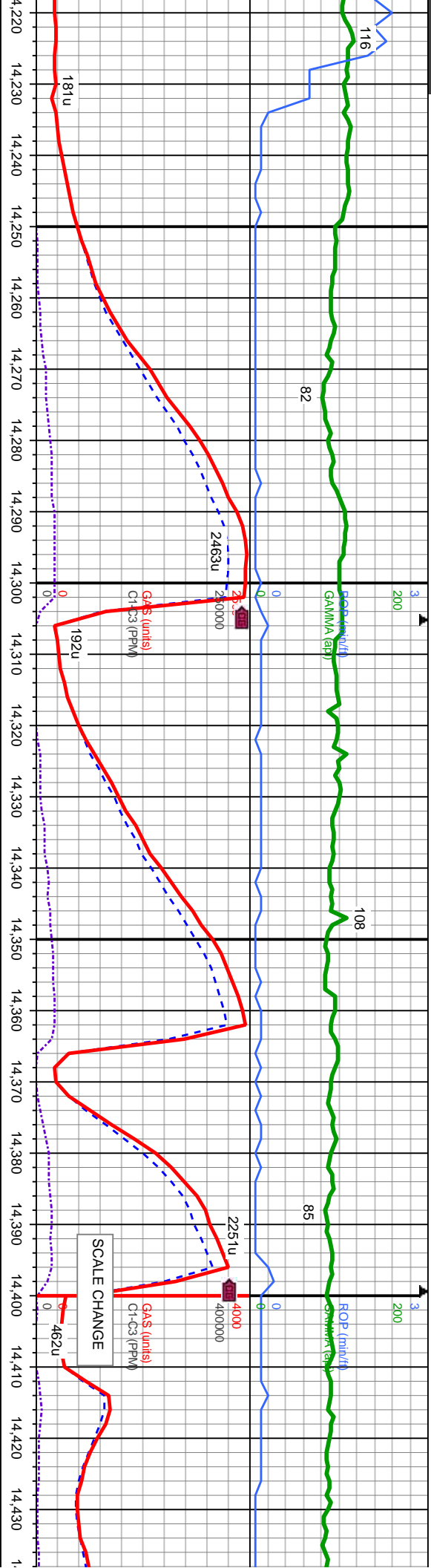
MD: 14,142  
TVD: 7,180.92  
Inclination: 90.95  
Azimuth: 89.31  
VS: 7,289.71

TVD (ft)

14,000'-14,100' MD: SS: m-dk gy-dk gybrn, pried vt-f gr w/ occ m  
gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cmt, p  
vis intrxn por, tr lt blu/yel flwr w/ innrd slw strng milky cut

14,100'-14,200' MD: SS: m-dk gy-dk gybrn, pried vt-f gr w/ occ m  
gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cmt, p  
vis intrxn por, tr lt blu/yel flwr w/ innrd slw strng milky cut





MD: 14,237.  
TVD: 7,180.67.  
Inclination: 89.35 -  
Azimuth: 89.91 -  
VS: 7,384.7.

TVD (ft)

MD: 14,331.  
TVD: 7,181.55.  
Inclination: 89.57 -  
Azimuth: 89.89 -  
VS: 7,478.69.

TVD (ft)

WT IN 9.3+ OUT 9.3  
VIS IN 59 OUT 55

MD: 14,419.  
TVD: 7,181.7.  
Inclination: 90 -  
Azimuth: 90.25 -  
VS: 7,566.69.

TVD (ft)

14,200'-14,300' MD: SS: m-dk gy-dk gybrn, pred vf-f gr w/ occ m  
gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, p  
vis intrxn por, tr lt blu/yel flr w/ innrd slw strng mlky cut

14,300'-14,400' MD: SS: m-dk gy-dk gybrn, pred vf-f gr w/ occ m  
gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, p  
vis intrxn por, tr lt blu/yel flr w/ innrd slw strng mlky cut

14,400'-14,500' MD:  
gr, m-v frm, sbnd - s  
vis intrxn por, tr lt bl



4/29/14  
14,493' MD  
TRIP FOR BIT, MOTOR, AND  
AGITATOR @ 14,493' MD

MINDEPTH

91

ROP (minu/f)  
GAMA (g)

82

89

ROP (minu/f)  
GAMA (g)

76

TG = 3182u

10' FLARE

NB #4 VAREL VS513D IN  
@ 14493' MD, OB #3  
DRLD 2437' IN 25 HRS

2357u

GA\$ (units)  
C1-C3 (PPM)

GA\$ (units)  
C1-C3 (PPM)

1371u

485u

14,440 14,450 14,460 14,470 14,480 14,490 14,500 14,510 14,520 14,530 14,540 14,550 14,560 14,570 14,580 14,590 14,600 14,610 14,620 14,630 14,640 14,650 1-

6600

6600

WT IN 9.6 OUT 9.6  
VIS IN 69 OUT 60

MD: 14,513.  
TVD: 7,181.4.  
Inclination: 90.36 -  
Azimuth: 90.31 -  
VS: 7,660.69.

MD: 14,607.  
TVD: 7,180.73  
Inclination: 90.46 -  
Azimuth: 90.13 -  
VS: 7,754.69.

SS: m-dk gy-dk gybrn, pried vf-f gr w/ occ m  
bang, mod-w strd, m cons w/ sl calc cmt, p  
lyel flor w/ innrd slw string mlky cut

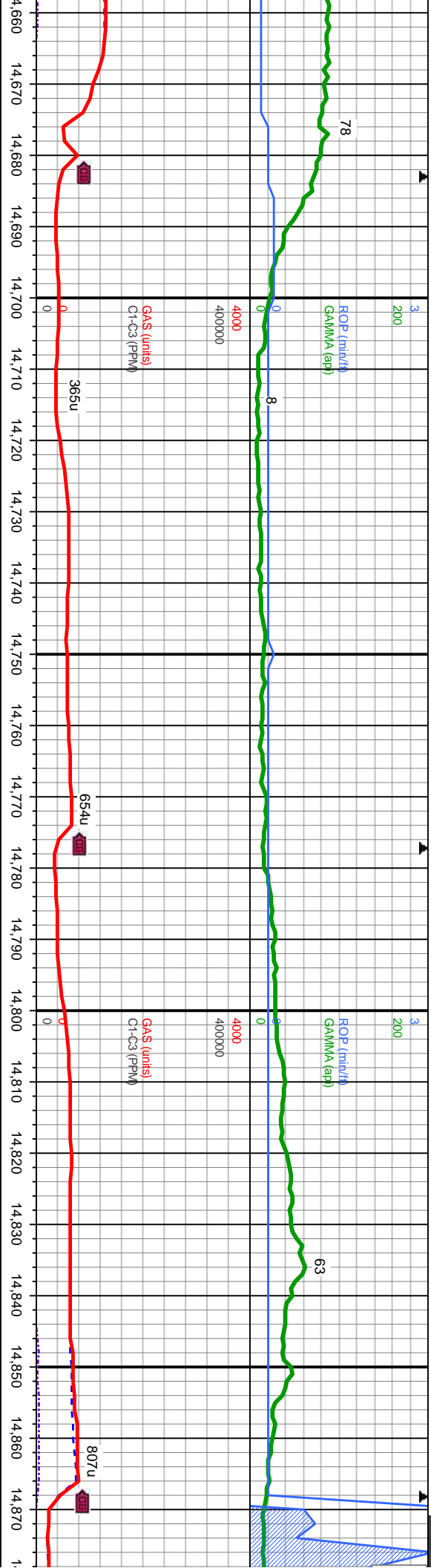
14,500'-14,600' MD: SS: m-dk gy-dk gybrn, pried vf-f gr w/ occ m  
gr, m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cmt, p  
vis intrxn por, tr lt blu/yel flor w/ innrd slw string mlky cut

14,600'-14,700' MD: SS: chr-opq-wh-lt gy, f-m gr, m-  
strd, m cons w/ sl calc cmt, LS: crm-offwh-lt brn, ply  
crpxln-micxln, xln-sl dns, sl arg, calc, tr lt blu/yel flor

7600

7600





MD: 14,702.  
TVD: 7,179.99  
Inclination: 90.43 -  
Azimuth: 90.04 -  
VS: 7,849.69

WT IN 9.6+ OUT 9.6  
VIS IN 68 OUT 58

MD: 14,796.  
TVD: 7,178.51  
Inclination: 91.38 -  
Azimuth: 90.11 -  
VS: 7,943.67

WT IN 9.6+  
VIS IN 62

v frm, sbnd - sbang, mod-w  
-fky ip, frm-brt,  
w/ innd slw strng mlky cut

7600

14,700'-14,800' MD: LS: crm-offwh-tt brn, ply-fky ip, frm-brt,  
crpxln-micxln, xln-sl dns, sl arg, calc,SS: lt brn-dk brn-blk, v-f gr,  
m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, nosfc

7600

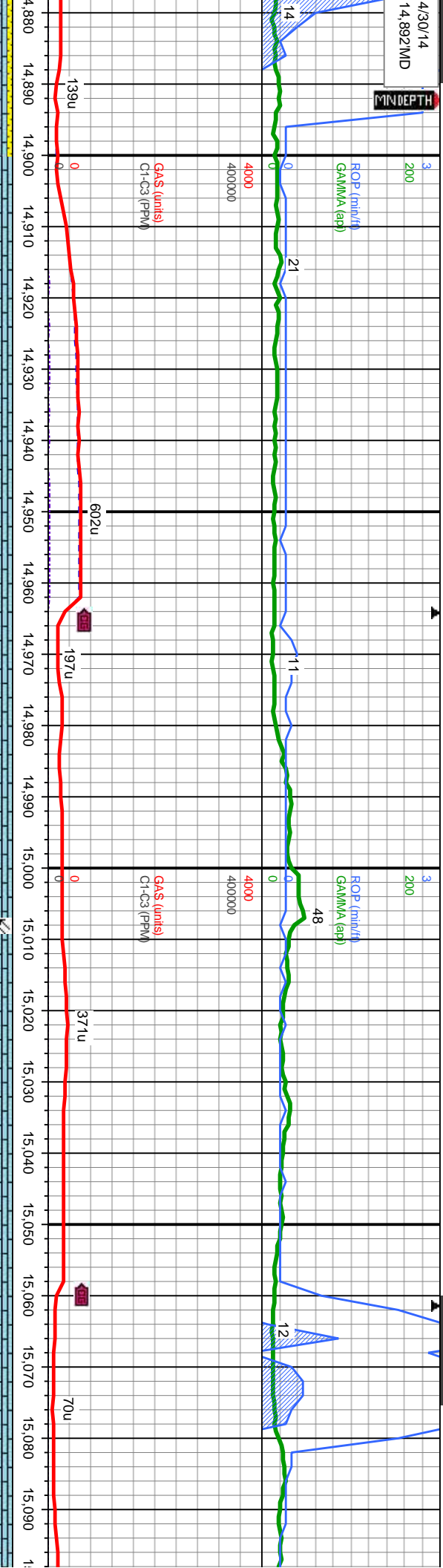
14,800'-14,900' MD: LS: crm-offwh-tt brn, ply-fky ip, frm-brt,  
crpxln-micxln, xln-sl dns, sl arg, calc,SS: lt brn-dk brn-blk, v-f gr,  
m-v frm, sbnd - sbang, mod-w strd, m cons w/ sl calc cnt, nosfc

7600





MINDEPTH



OUT 9.6  
OUT 56

MD: 14,891  
TVD: 7,177.01  
Inclination: 90.43  
Azimuth: 88.08  
VS: 8,038.64

MD (ft)

WT IN 9.5  
VIS IN 57  
OUT 9.5  
OUT 54

MD: 14,985  
TVD: 7,176.3  
Inclination: 90.43  
Azimuth: 88.51  
VS: 8,132.58

TVD (ft)

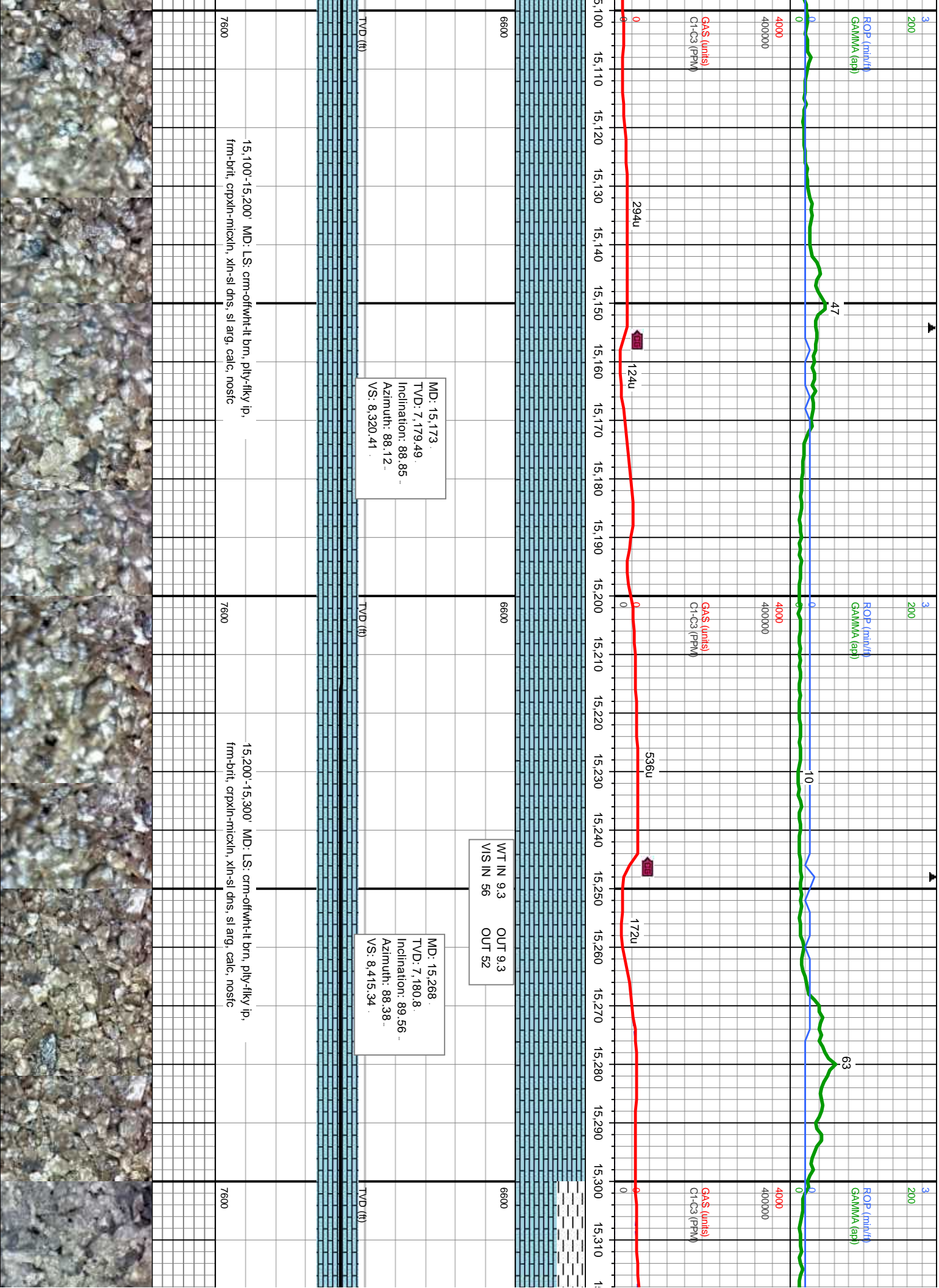
WT IN 9.4  
VIS IN 55  
OUT 9.5  
OUT 54

MD: 15,079  
TVD: 7,177.25  
Inclination: 88.42  
Azimuth: 87.88  
VS: 8,226.51

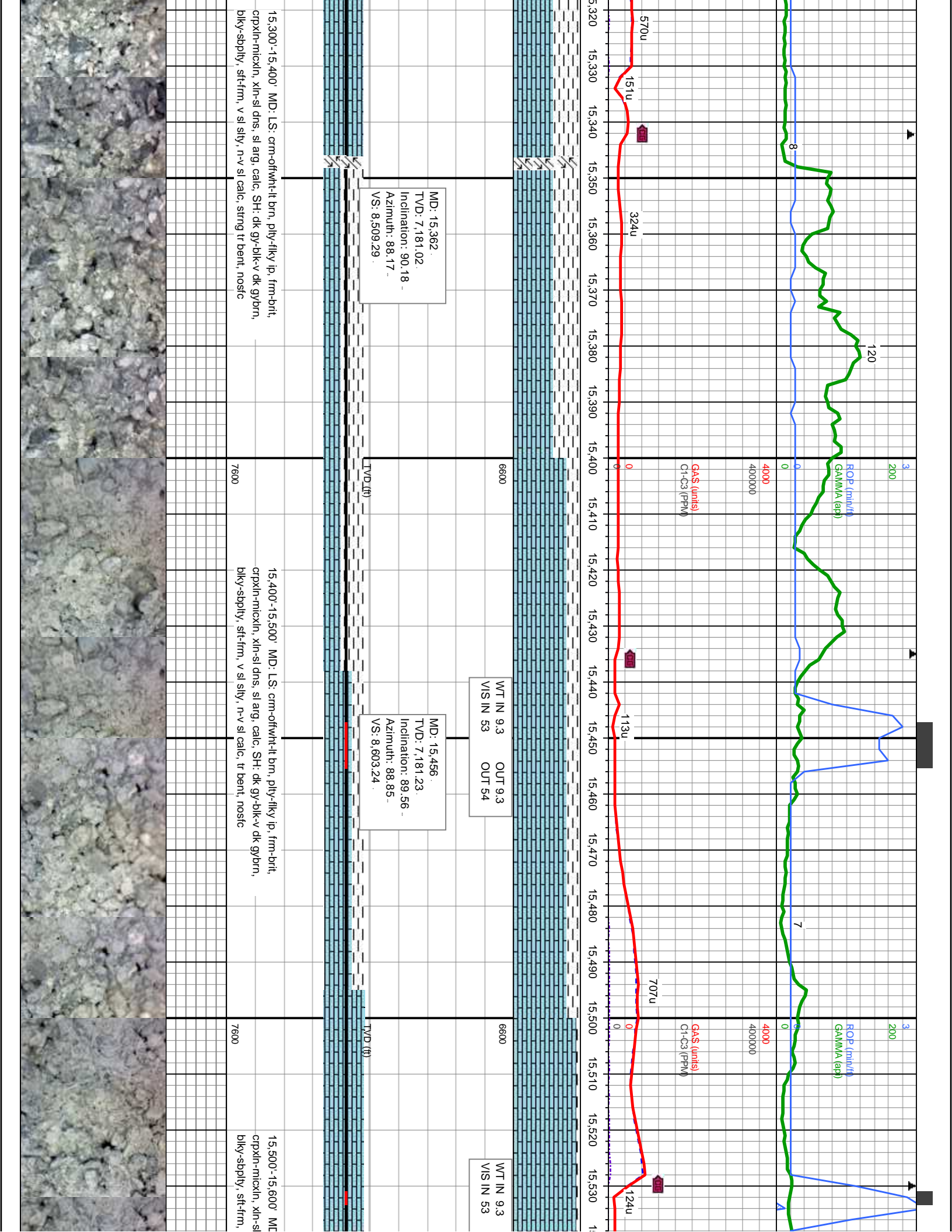
14,900'-15,000' MD: LS: crm-offwht-lt brn, pily-fiky ip, frm-brt, crpxln-micxln, xln-sl drs, sl arg, calc, nosfc

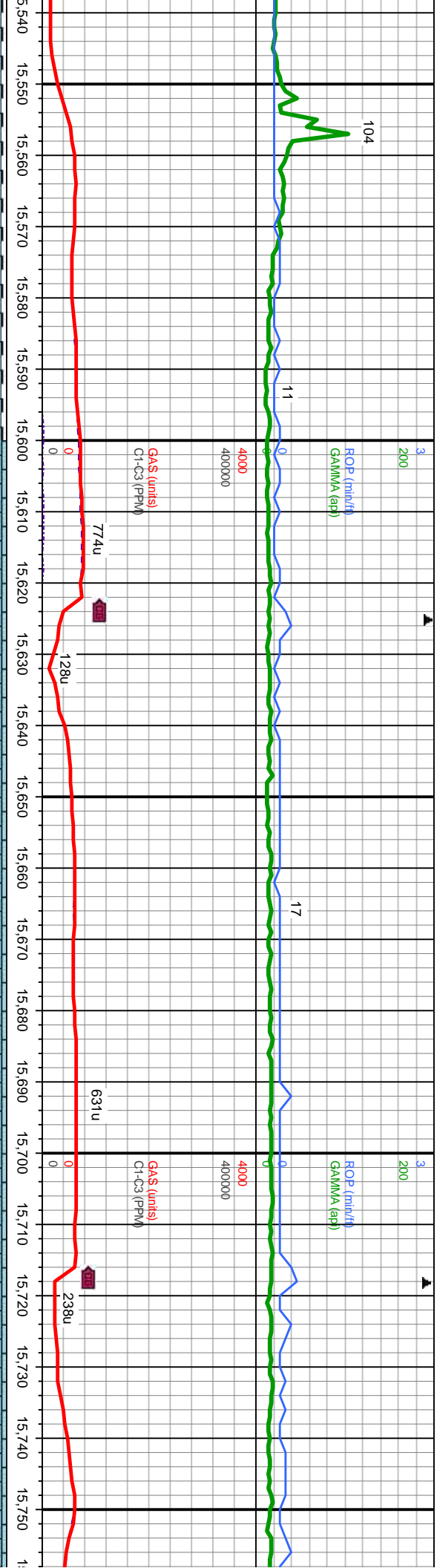
15,000'-15,100' MD: LS: crm-offwht-lt brn, pily-fiky ip, frm-brt, crpxln-micxln, xln-sl drs, sl arg, calc, nosfc











OUT 9.3  
OUT 53

6600

MD: 15,551.  
TVD: 7,181.91.  
Inclination: 89.84 -  
Azimuth: 89.53 -  
VS: 8,698.22.

TVD (ft)

); L.S.: crm-offwht-lt brn, ply-fily ip, frm-bit,  
dns, sl arg, calc, SH: dk gy-blk-v dk gybrn,  
v sl slty, n-v sl calc, tr bent, nosfc

7600

MD: 15,645.  
TVD: 7,181.52.  
Inclination: 90.64 -  
Azimuth: 89.96 -  
VS: 8,792.22.

TVD (ft)

15,600'-15,700' MD: L.S.: crm-offwht-lt brn, ply-fily ip,  
frm-bit, crpxln-micxln, xln-sl dns, sl arg, calc, nosfc

7600

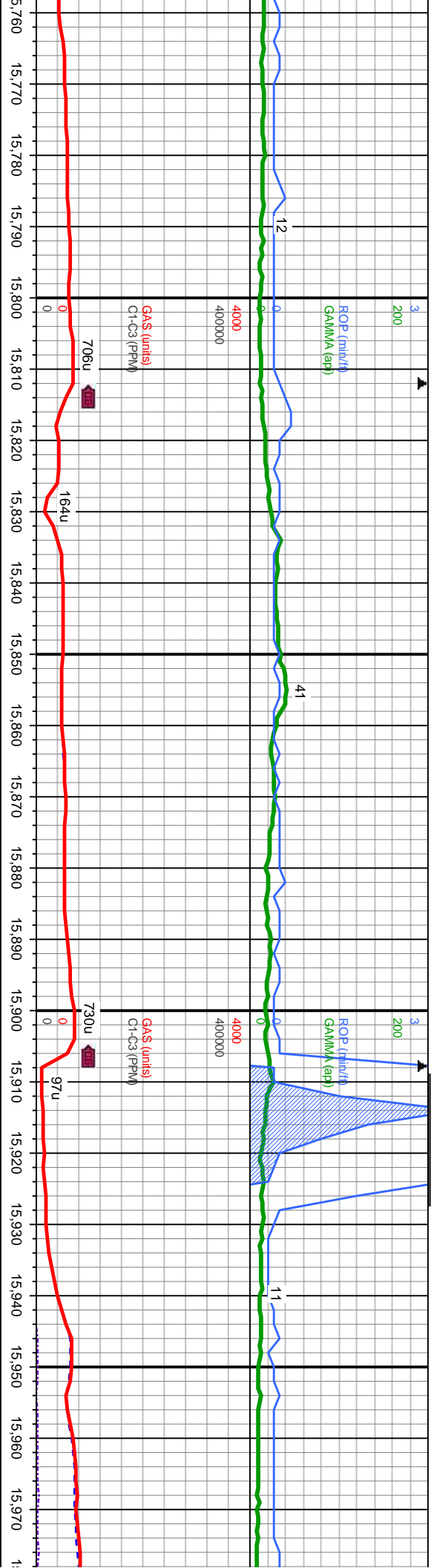
WT IN 9.5  
VS IN 53  
OUT 9.3  
OUT 52

MD: 15,739.  
TVD: 7,179.86.  
Inclination: 91.38 -  
Azimuth: 89.59 -  
VS: 8,886.2.

15,700'-15,800' MD: L.S.: crm-offwht-lt  
frm-bit, crpxln-micxln, xln-sl dns, sl a







MD: 15,834.  
TVD: 7,177.06.  
Inclination: 92 -  
Azimuth: 89.58 -  
VS: 8,981.15.

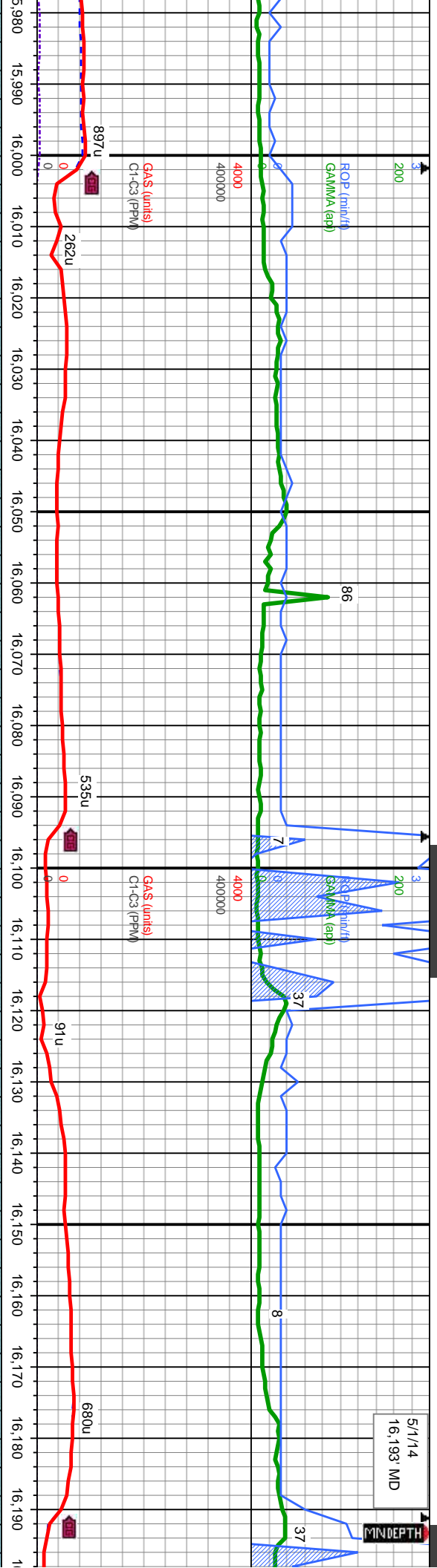
WT IN 9.5 OUT 9.5  
VIS IN 51 OUT 51

MD: 15,928.  
TVD: 7,174.97.  
Inclination: 90.55 -  
Azimuth: 88.82 -  
VS: 9,075.11.

brn, pily-fily ip, —  
g, calc, nostc

15,800'-15,900' MD: LS: crm-offwh-lt brn, pily-fily ip,  
frm-brt, crpxln-mickln, xln-sl dns, sl arg, calc, nostc

15,900'-16,000' MD: LS: crm-offwh-lt brn, pily-fily ip,  
frm-brt, crpxln-mickln, xln-sl dns, sl arg, calc, nostc

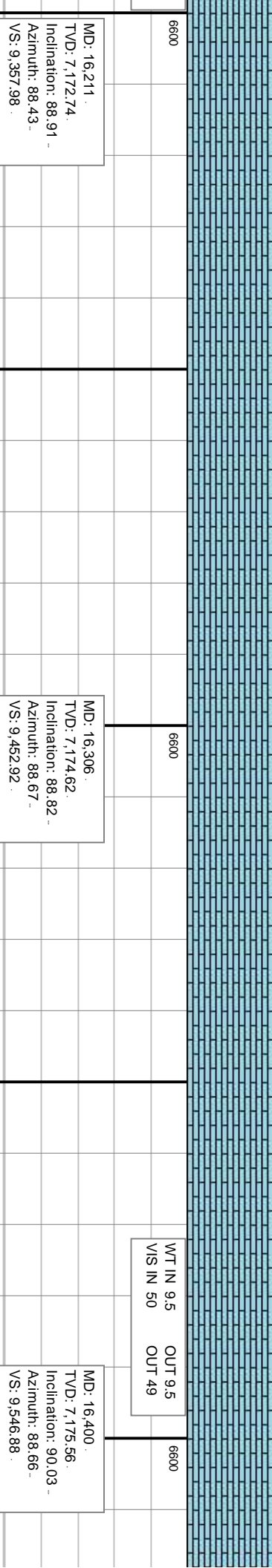
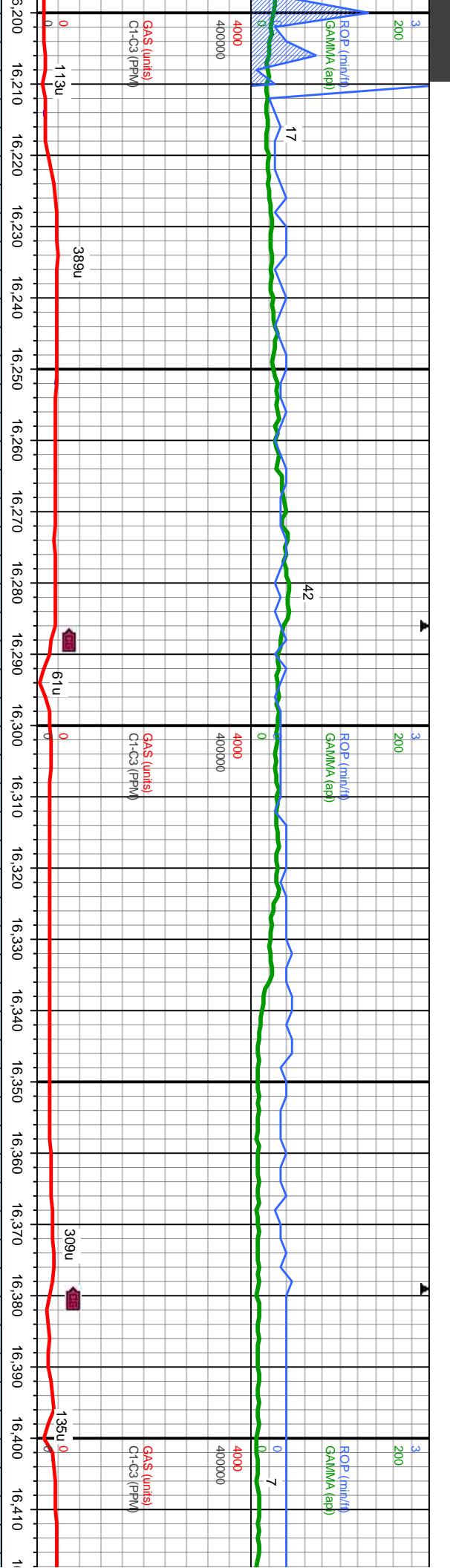


16,000-16,100' MD: LS: crm-offwt-lt brn, pty-filky ip, frm-brt, crpxln-micxln, xln-sl dns, sl arg, calc, nosfc

16,100'-16,200' MD: LS: crm-offwht-lt brn, plty-filky ip, frm-brlt, crpxln-micxln, xln-sl dns, sl arg, calc, nosfc



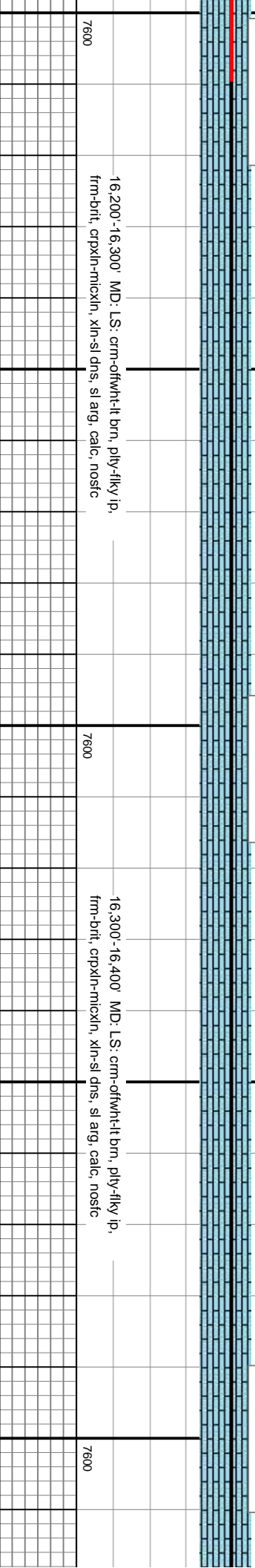




MD: 16,211  
TVD: 7,172.74  
Inclination: 88.91  
Azimuth: 88.43  
VS: 9,357.98

MD: 16,306  
TVD: 7,174.62  
Inclination: 88.82  
Azimuth: 88.67  
VS: 9,452.92

MD: 16,400  
TVD: 7,175.56  
Inclination: 90.03  
Azimuth: 88.66  
VS: 9,546.88



MD: 16,211  
TVD: 7,172.74  
Inclination: 88.91  
Azimuth: 88.43  
VS: 9,357.98

MD: 16,306  
TVD: 7,174.62  
Inclination: 88.82  
Azimuth: 88.67  
VS: 9,452.92

MD: 16,400  
TVD: 7,175.56  
Inclination: 90.03  
Azimuth: 88.66  
VS: 9,546.88



MD: 16,211  
TVD: 7,172.74  
Inclination: 88.91  
Azimuth: 88.43  
VS: 9,357.98

MD: 16,306  
TVD: 7,174.62  
Inclination: 88.82  
Azimuth: 88.67  
VS: 9,452.92

MD: 16,400  
TVD: 7,175.56  
Inclination: 90.03  
Azimuth: 88.66  
VS: 9,546.88

