



Scale: 5" / 100'  
Measured Depth Log

**Well Name** SHOOK 3-10-4CDH\_LATERAL

**Location** SECTION 3 T1S R67W

**State** COLORADO

**County** ADAMS

**Country** USA

**Rig Number** ENSIGN 145

**API Number** 05-001-09974

**AFE #** 1700010

**Geographic Region** DJ BASIN

**Field** WATTENBERG

**Spud Date** 4/14/2017

**Drilling Completed** 8/17/2017

**Surface Coordinates** Section 3, 2058' FSL x 2184' FEL  
39.992220, -104.873330

**Bottom Hole Coordinates** Section 10, 360' FSL x 2191' FEL  
39.973078, -104.873089

**Ground Elevation** 5098'

**K.B. Elevation** 5111'

**Logged Interval** 7400' To 14025'

**Total Depth** 6625'

**Formation** SHARON SPRINGS to CODELL

**Type of Drilling Fluid** OBM - OIL BASED MUD

## Operator

**Company** PetroShare Corporation

**Address** 9635 Maroon Circle, Suite 400  
Englewood, CO 80112



## Geologist

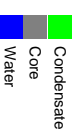
**Name** JOEY LUCE, SAGE BETTS, ALEC WALKER

**Company** Terra Guidance











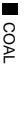


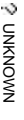















**Address** 1298 O Road  
Loma CO 81524  
(970) 260-5408



## Color Coding



































































Rock Types

 LIMESTONE	 SANDSTONE	 DOLOMITE	 BRECCIA
 Chalk	 BENTONITE	 CHERT	 TILL
 Marl	 CEMENT	 COAL	 TUFF
 SHALE	 UNKNOWN	 MARLSTONE	 IGNEOUS
 Silty Shale	 ANHYDRITE	 CLAYSTONE	 METAMORPHIC
 Shaly Siltstone	 GYPSUM	 SHALE GRAY	
 SILTSTONE	 SALT	 SHALE COLORED	
 Shaly Sandston	 SIDERITE or LIMONITE	 CONGLOMERATE	

ARE

Accessories







 FOSSIL	 ARGILLACEOUS	 GLAUCONITE	
 GASTROPOD	 ARGILLITE GRAIN	 GYPSIFEROUS	
 ALGAE	 OOLITE	 B BENTONITE	 HEAVY MINERAL
 AMPHIPORA	 OSTRACOD	 BITUMENOUS SUBSTANCE	 KAOLIN
 BELEMNITE	 PELECYPOD	 BRECCIA FRAGMENTS	 MARLSTONE
 BIOCLASTIC	 PELLET	 CALCAREOUS	 MINERAL CRYSTALS
 BRACHIOPOD	 PISOLITE	 CARBONACEOUS FLAKES	 NODULES
 BRYOZOA	 PLANT REMAINS	 CHITDK	 PHOSPHATE PELLETS
 CEPHALOPOD	 PLANT SPORES	 CHITLT	 PYRITE
 CORAL	 SCAPHOPOD	 COAL - THIN BEDS	 SALT CAST
 CRINOID	 STROMATOPOROID	 DOLOMITIC	 SANDY
 ECHINOID		 + FELDSPAR	 SILICEOUS
 FISH		 FERRUGINOUS PELLET	 SILTY
 FORAMINIFERA	 ANHYDRITIC	 FERRUGINOUS	 TUFFACEOUS

 Stringer	 ANHYDRITE STRINGER	
 BENTONITE STRINGER	 COAL STRINGER	
 DOLOMITE STRINGER	 GYPSUM STRINGER	
 LIMESTONE STRINGER	 MARLSTONE (CALC) STRG	
 MARLSTONE (DOU) STRG	 SANDSTONE STRINGER	
 SHALE STRINGER	 SILTSTONE STRINGER	








Oil Show

-  ORGANIC
-  PINPOINT

Engineering

-  DEAD
-  VUGGY
-  EVEN
-  QUESTIONABLE
-  SPOTTED STAINING
-  BIT

Porosity

-  CONNECTION (LEFT)
-  CONNECTION (DOWN)
-  FENESTRAL
-  CONNECTION GAS
-  FRACTURE
-  CORE - LOST
-  INTERCRYSTALLINE
-  CORE - RECOVERED
-  INTEROOLITIC
-  DST INTERVAL
-  MOLDIC
-  FAULT


Gas  
Pressure  
Seal

# Other Symbols

 FORMATION TOP      L LITHOGRAPHIC


## Rounding

 GAS SHOW      M~~X~~ MICROXLN


 MIN DEPTH      A ANGULAR      M~~S~~ MUDSTONE

 NORMAL FAULT      R ROUNDED      P~~S~~ PACKSTONE

 OIL SHOW      B SUBANG      W~~S~~ WACKSTONE

 OVERTURNED STRATA      F SUBRND

## Sorting


 REVERSE FAULT

## Textures

 SIDEWALL CORE (LEFT)      M MODERATE


 SIDEWALL CORE (RIGHT)      B~~S~~ BOUNDSTONE      P POOR


 SLIDE      C CHALKY      W WELL

 SURVEY      C~~X~~ CRYPTOXLN

 TRIP GAS      E EARTHY

## ConnectionGas(Vert)

 WIRELINE TESTED - LEFT      F~~X~~ FINELYXLN

 WIRELINE TESTED - RT      G~~S~~ GRAINSTONE

Curve/Survey Data  
ROP ———  
Gamma ———

ROP SCALE: 0-800 ft/hr  
GAMMA SCALE 0-300 api

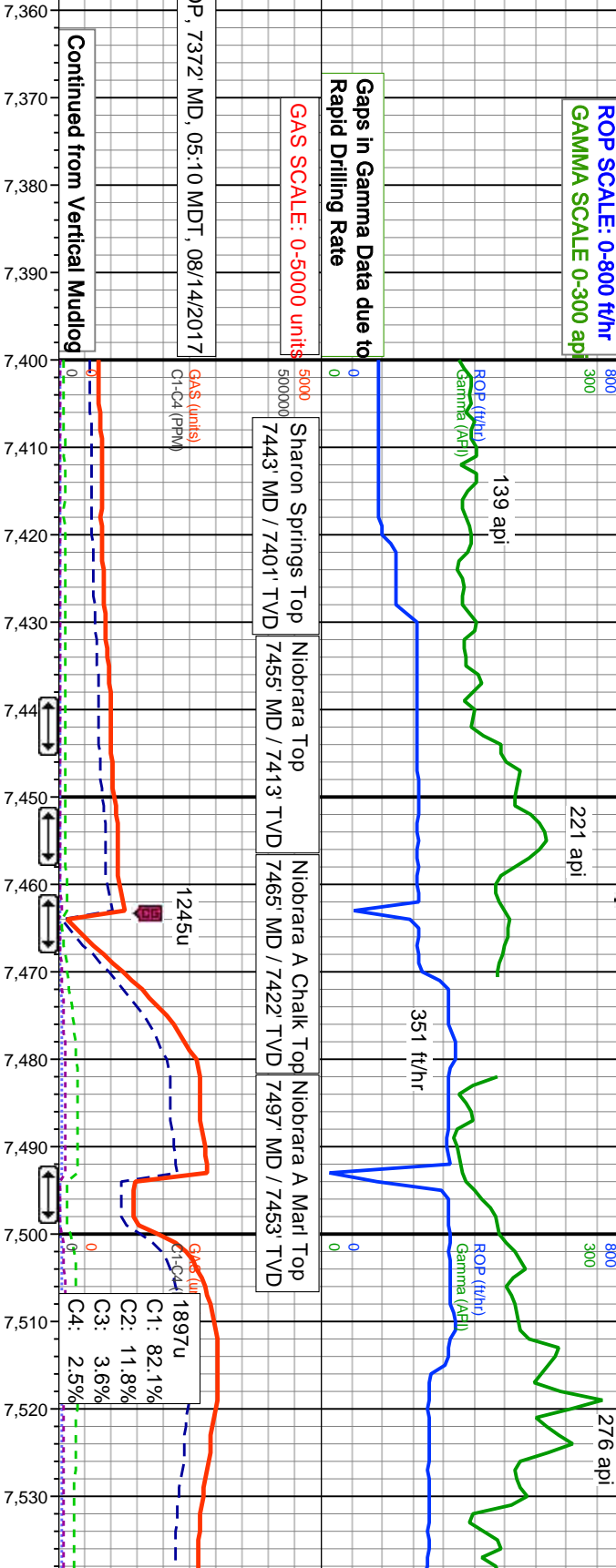
Gaps in Gamma Data due to  
Rapid Drilling Rate

GAS SCALE: 0-5000 units

Total Gas & Chromatograph

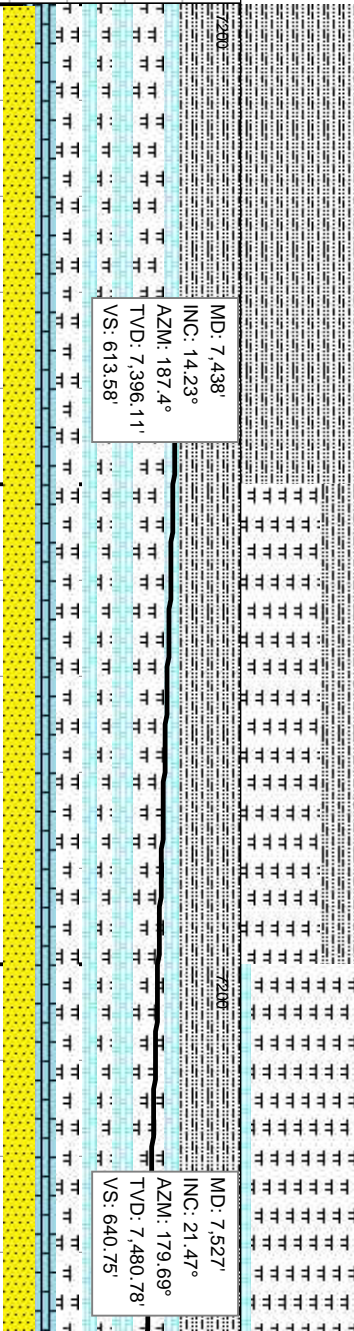
- GAS ———
- C1 - - - - -
- C2 - - - - -
- C3 - - - - -
- C4 - - - - -

Depth



% Lithology

TVD SCALE: 7200'-9000'



Well Bore  
TVD ———

TVD (ft)

100% SLTY SH: drkgy-lp blk, frm-hd, blk-ang, rthy, amor, arg mtx, sl-non calc, mmr bent, scat nodr pyr

70% MRLST: drkgy-drkgy/brn, frm-v hd, sr-ang, rthy, sl slty, v arg, calc, tr nodr pyr, scat bent, tr intbdd chk; 30% SLTY SH: v drkgy, frm-v hd, blk-ang, com fis, rthy-amor, arg mtx, non calc

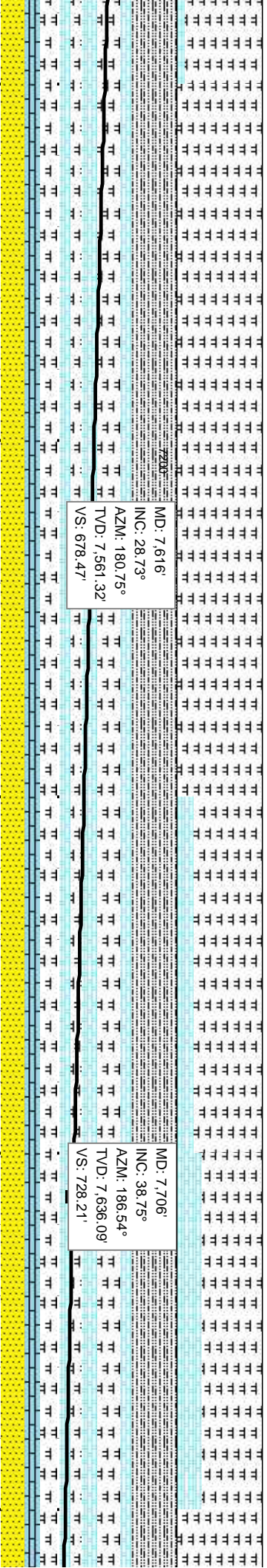
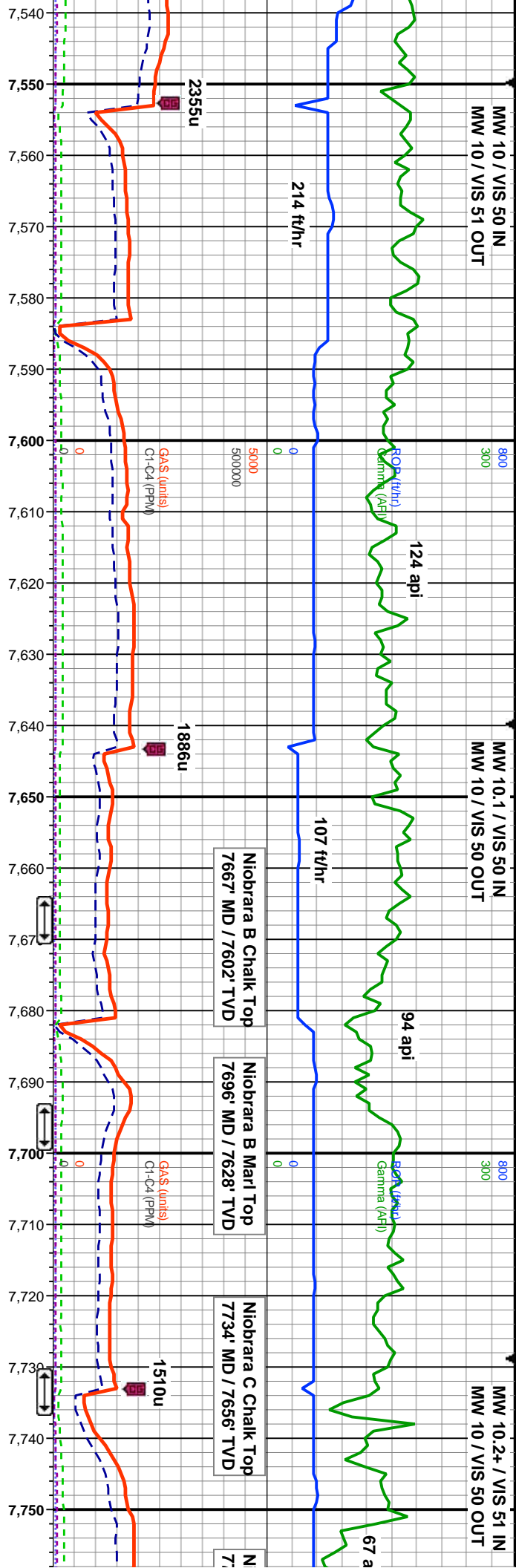
TVD (ft)

90% MRLST: drkgy-drkgy/brn, frm-hd, sr-ang, rthy, sl slty, v arg, calc, nodr pyr, scat bent; 10% CHK: ltk wh, sft-frm, blk-yr-sr-irreg, wxy-mico calc, intbdd wi mrlst

Images



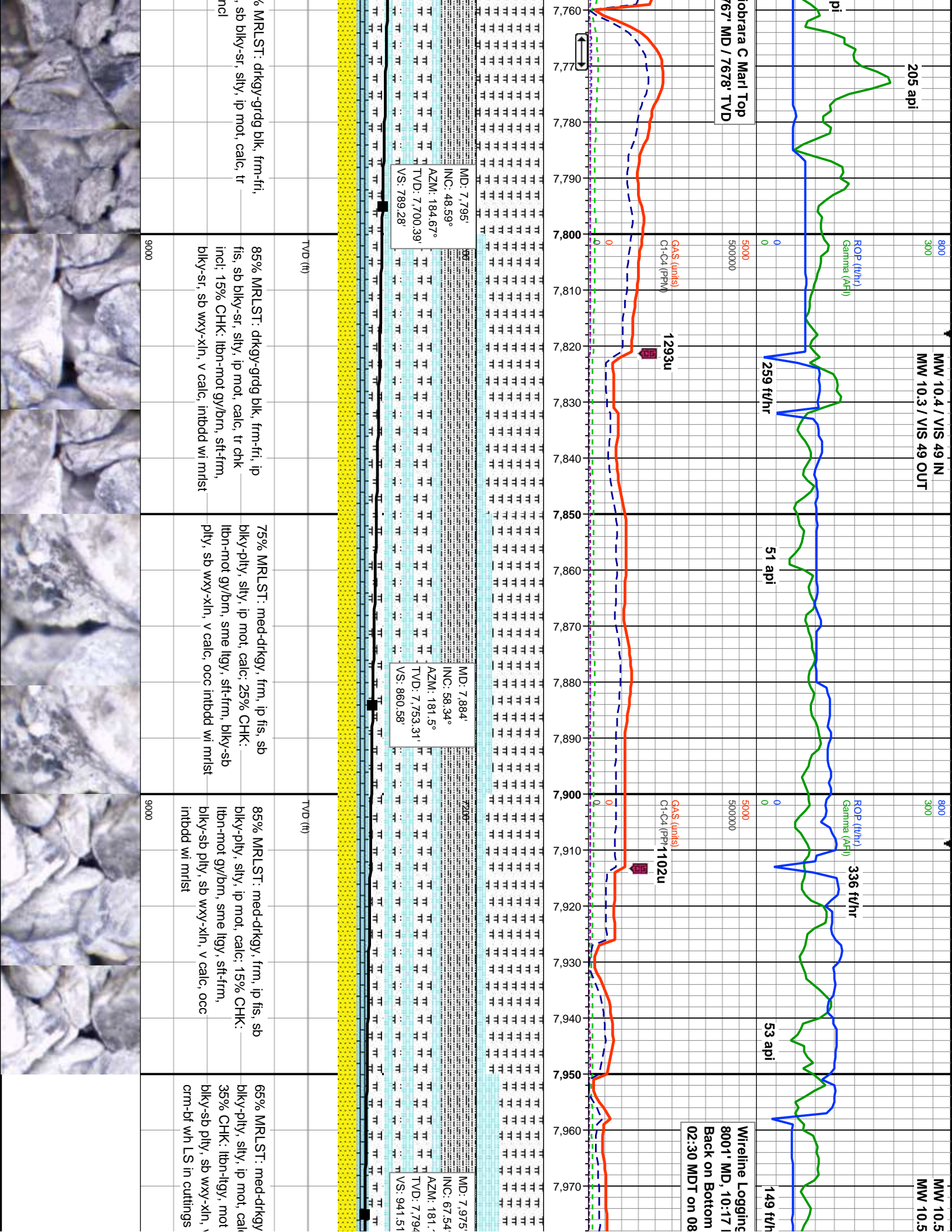




100% MRLST: drkgv-mot drkgv/brn, frm-hd, sr-sb blkly-ip ang, rthy-amor, sl silty, v arg, calc, mntr bent, tr chk frags	100% MRLST: drkgv-mot drkgv/brn, frm-hd, sr-sb blkly-ip ang, rthy-amor, sl silty, v arg, calc, rr scat lnoc frags wi occ pyr incl	80% MRLST: drkgv-drkgv/brn, frm-v hd, sr-ang, rthy, sl silty, v arg, calc, tr nodr pyr, rr bent, scat intbdd lnoc: 20% CHK: lbn-bf wh, crm-dkr gy/brn, sft-frm, blkly-sr, wxy-micxln, v calc, intbdd wi mrlst	70% MRLST: drkgv-drkgv/brn, frm-v hd, sr-ang, rthy, sl silty, v arg, calc, scat pyr, 30% CHK: lbn-bf wh, crm-dkr gy/brn, sft-frm, blkly-sr, wxy-micxln, v calc, intbdd wi mrlst	100% MRLST: drkgv-drkgv/brn, frm-v hd, sr-ang, rthy, sl silty, v arg, calc, scat pyr, ip fis
9000	9000	9000	9000	9000
TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)

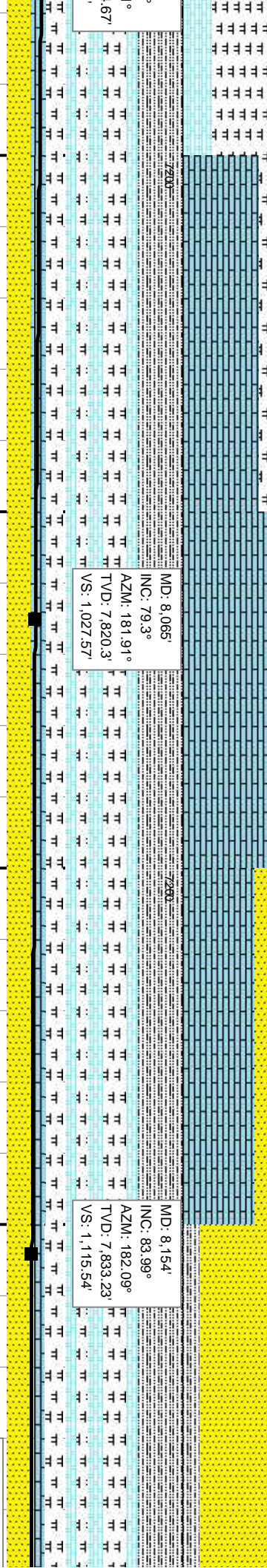
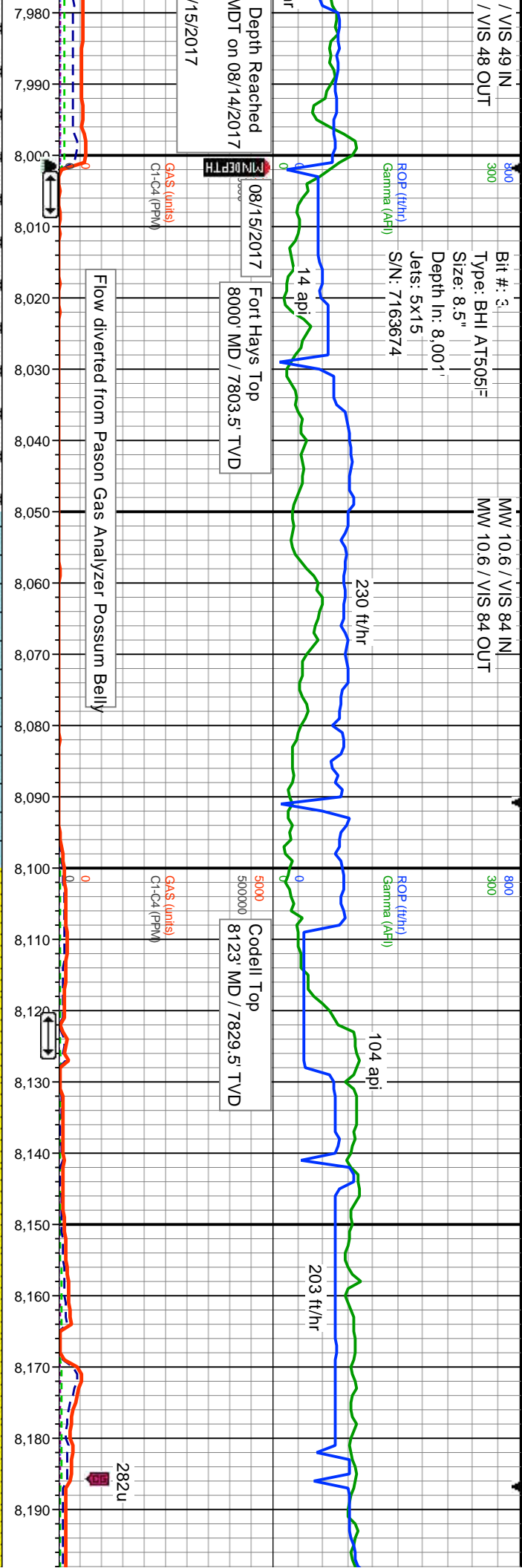








/ VIS 49 IN  
/ VIS 48 OUT  
Bit #: 3  
Type: BHI AT506F  
Size: 8.5"  
Depth In: 8,001'  
Jets: 5x15  
S/N: 7163674  
MW 10.6 / VIS 84 IN  
MW 10.6 / VIS 84 OUT



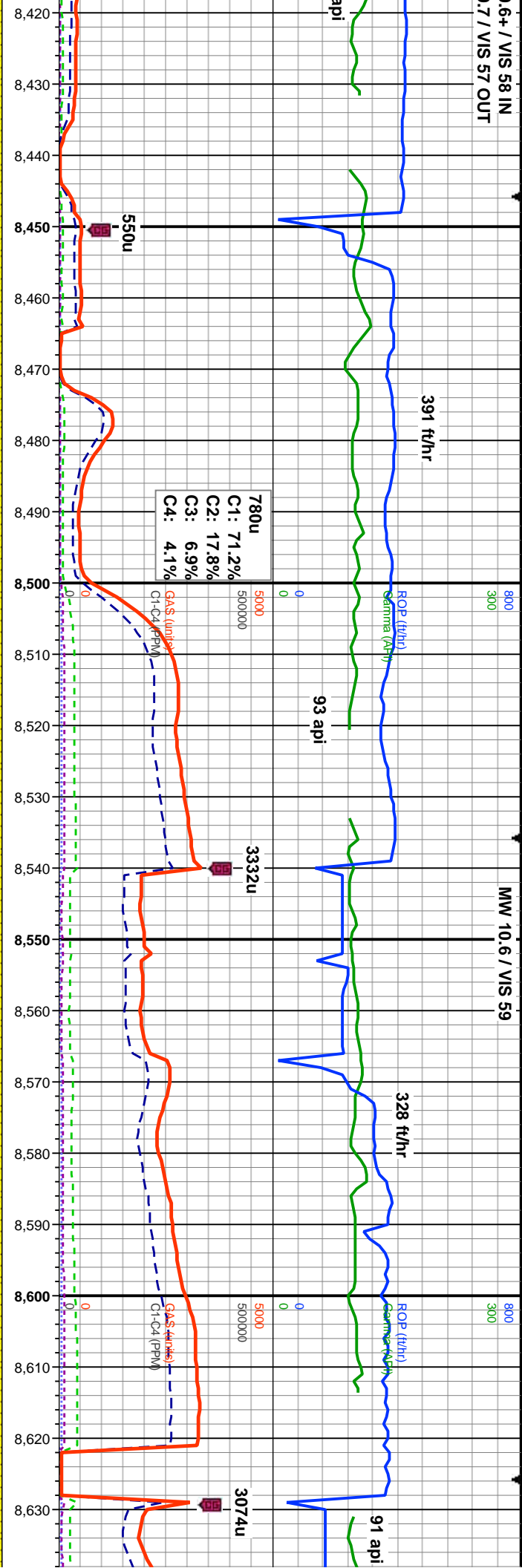
9000	9000	9000	9000
TV D (ft)	TV D (ft)	TV D (ft)	TV D (ft)
frm, ip fis, sb sme intbd chk; gy/brn, sft-frm, v calc, +/-5%	90% LS: med-lt brn-tn-offwht, frm, blky-sb blky, xl-chky, mot, v calc, intbdd-mot wi chk; 10% MRLST: dk gy-v dk gy, frm, blky-sb md, amor-rthy, sl silty, calc	100% LS: med-lt brn-offwht mot, frm, blky-sb blky, xl-chky, mot-sl lam, v calc, intbdd-mot wi chk, mnr mlst frags	85% LS: med-lt brn-offwht-tn, frm, blky-ang, xl-chky, mot-sl lam, v calc, intbdd wi chk, mnr mlst frags; 15% SS: med-dkgy/brn, sme lt gy/brn, sft, vfg, md-sr clus, mod cons, p-mod srt, arg-silty mtx, calc









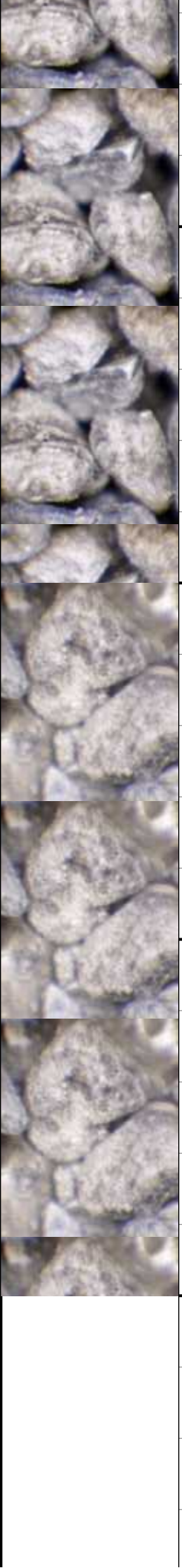
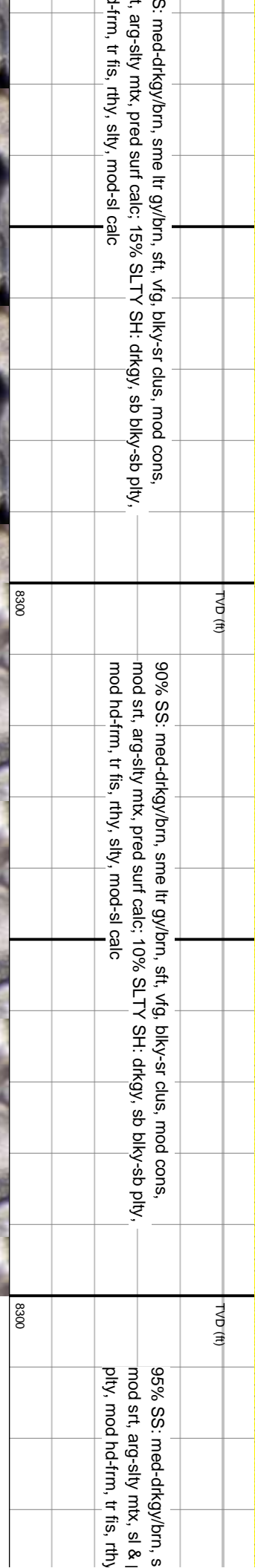


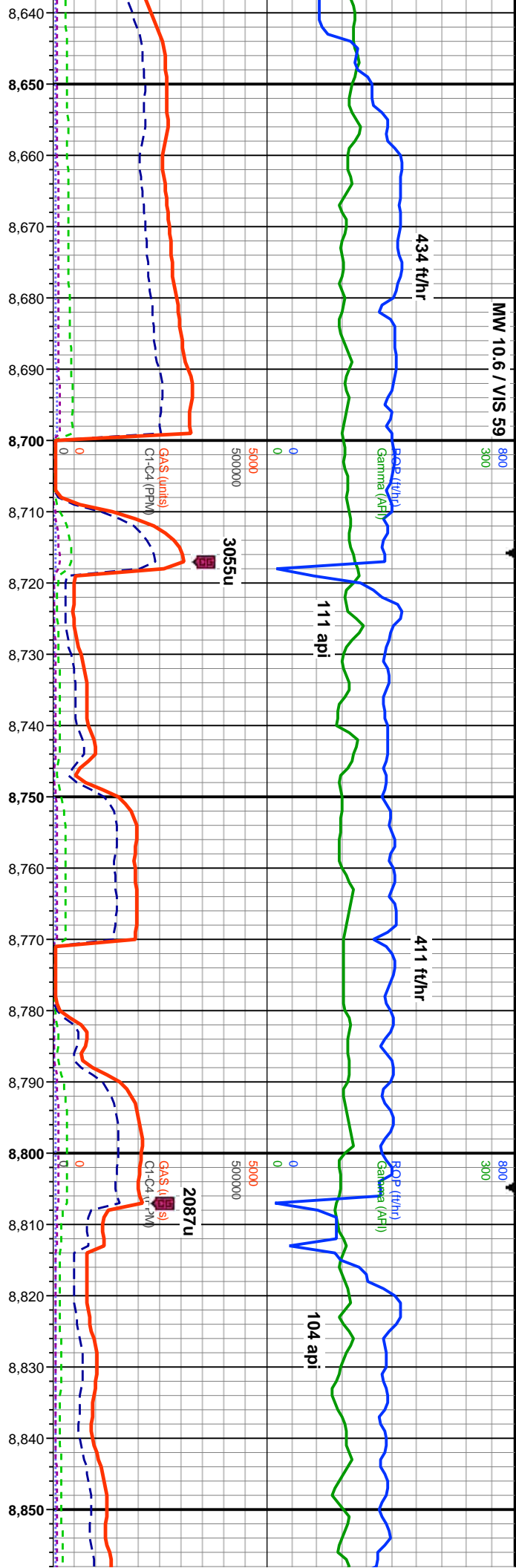
8.422'	7600	MD: 8.512'	MD: 8.603'
89.35°	INC: 89.66°	INC: 89.82°	INC: 89.82°
M: 181.05°	AZM: 181.75°	AZM: 181.28°	AZM: 181.28°
D: 7.838.1'	TVD: 7.838.88'	TVD: 7.839.29'	TVD: 7.839.29'
1.383.29'	VS: 1.473.26'	VS: 1.564.21'	

S: med-dkgy/brn, sme ltr gy/brn, sft, vfg, blk-y-sr clus, mod cons, arg-sily mtz, pred surf calc: 15% SLTY SH: dkgy, sb blk-y-sb plty, mod hd-frn, tr fis, rthy, sily, mod-sl calc

90% SS: med-dkgy/brn, sme ltr gy/brn, sft, vfg, blk-y-sr clus, mod cons, mod srt, arg-sily mtz, pred surf calc: 10% SLTY SH: dkgy, sb blk-y-sb plty, mod hd-frn, tr fis, rthy, sily, mod-sl calc

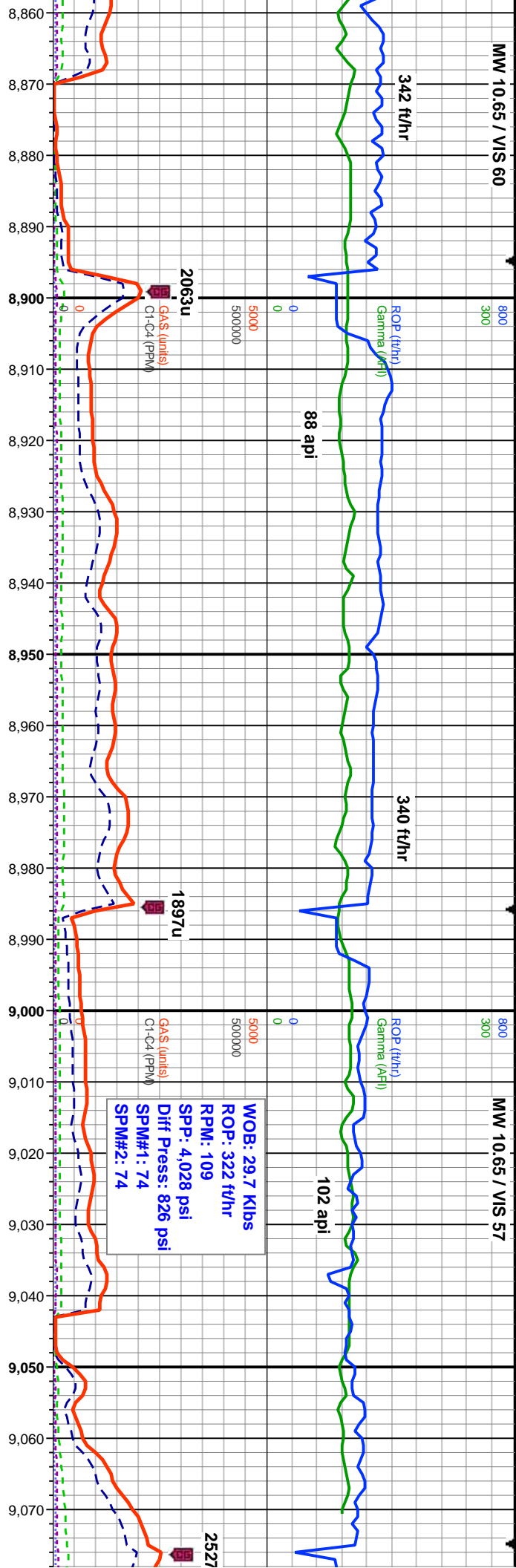
95% SS: med-dkgy/brn, sme ltr gy/brn, sft, vfg, blk-y-sr clus, mod cons, mod srt, arg-sily mtz, pred surf calc: 10% SLTY SH: dkgy, sb blk-y-sb plty, mod hd-frn, tr fis, rthy, sily, mod-sl calc





Well	MD (ft)	INC (°)	AZM (°)	TVD (ft)	VS (ft)	Formation	Notes
Well A	8,693'	90.06°	180.78°	7,839.39'	1,654.19'	med drkgy/brn, sft, vfg, blkly-sr clus, mod cons, pred surf calc; 5% SLTY SH: drkgy, sb blkly-sb	
	8300					90% SS: med-drkgy/brn, sme ltr gy/brn, sft, vfg, blkly-sr clus, mod cons, mod srt, arg-silty mtx, sl & pred surf calc; 10% SLTY SH: drkgy, sb blkly-sb ply, mod hd-frn, tr fls, rthy, silty, v sl calc	
Well B	8,782'	90.09°	181°	7,839.27'	1,743.18'	med drkgy/brn, sft, vfg, blkly-sr clus, mod cons, pred surf calc; 5% SLTY SH: drkgy, sb blkly-sb	
	8300					85% SS: med-drkgy/brn, sft-fr, vfg, blkly-sr clus, mod srt, arg-silty mtx, sl & pred surf calc; 15% SLTY SH: drkgy, sb blkly-sb ply, mod hd-frn, tr fls, rthy, silty, v sl calc	





MD: 8.872'  
INC: 90.06°  
AZM: 180.49°  
TVD: 7.839.15'  
VS: 1.833.17'

MD: 8.962'  
INC: 90.09°  
AZM: 180.15°  
TVD: 7.839.04'  
VS: 1.923.16'

MD: 9.052'  
INC: 89.91°  
AZM: 175.38°  
TVD: 7.839.04'  
VS: 2.013.08'

TVD (ft)

TVD (ft)

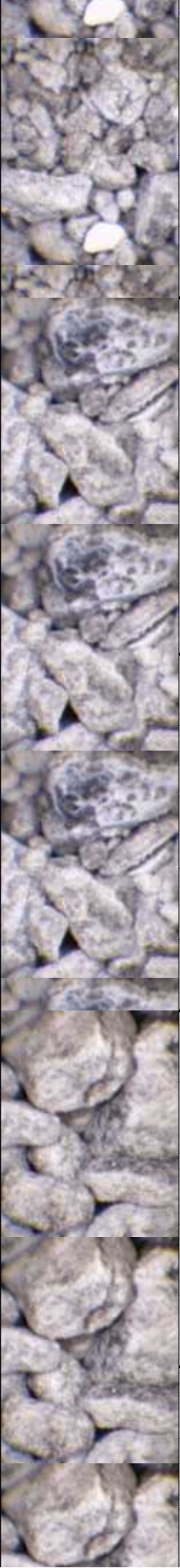
us, mod cons, mod srt, arg-silty  
, sb blk-y-ang, mod hd-frn, ip

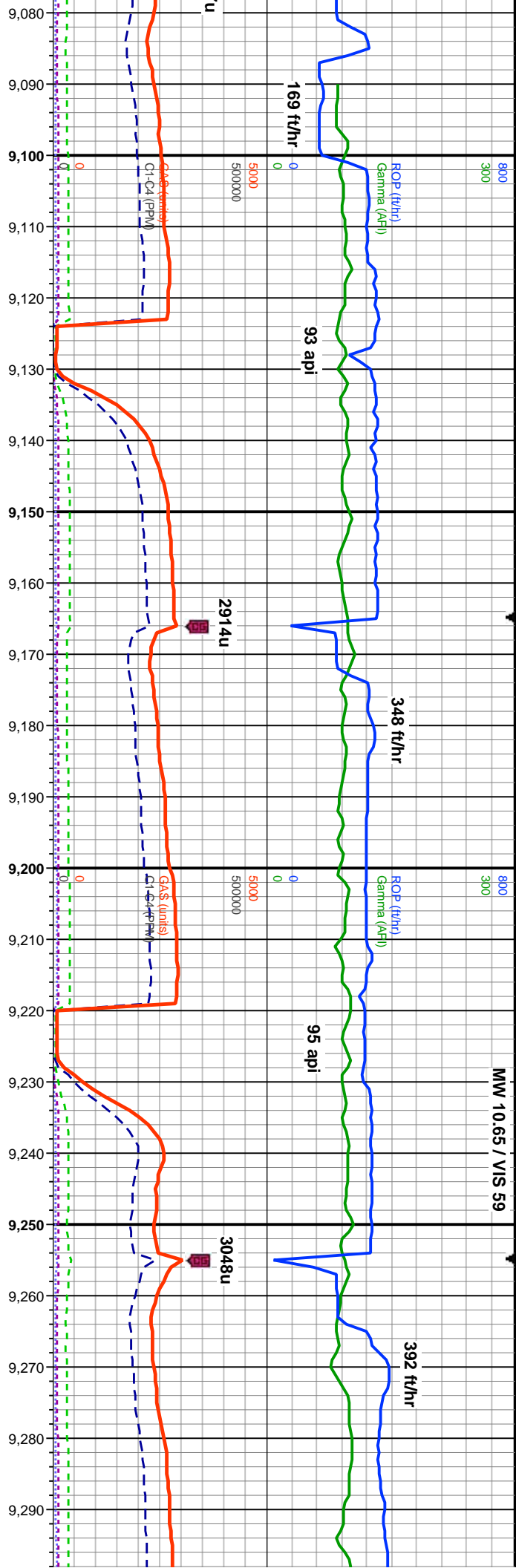
80% SS: med-dtkgy/bm, sft-frt, vfg, blk-y-sr clus, mod cons, mod srt, arg-silty  
mtx, sl & pred surf calc; 20% SLTY SH: dtkgy, sb blk-y-ang, mod hd-frn, ip  
fis, rthy, silty, sl calc

85% SS: med-dtkgy/bm, sme lly-crm/bm, sft-frt, vfg, blk-y-sr clu  
mod-pred cons, mod-ply srt, arg-silty mtx, calc; 15% SLTY SH: d  
sb blk-y-ang, mod hd-frn, ip fis, rthy, silty, sl calc

8300

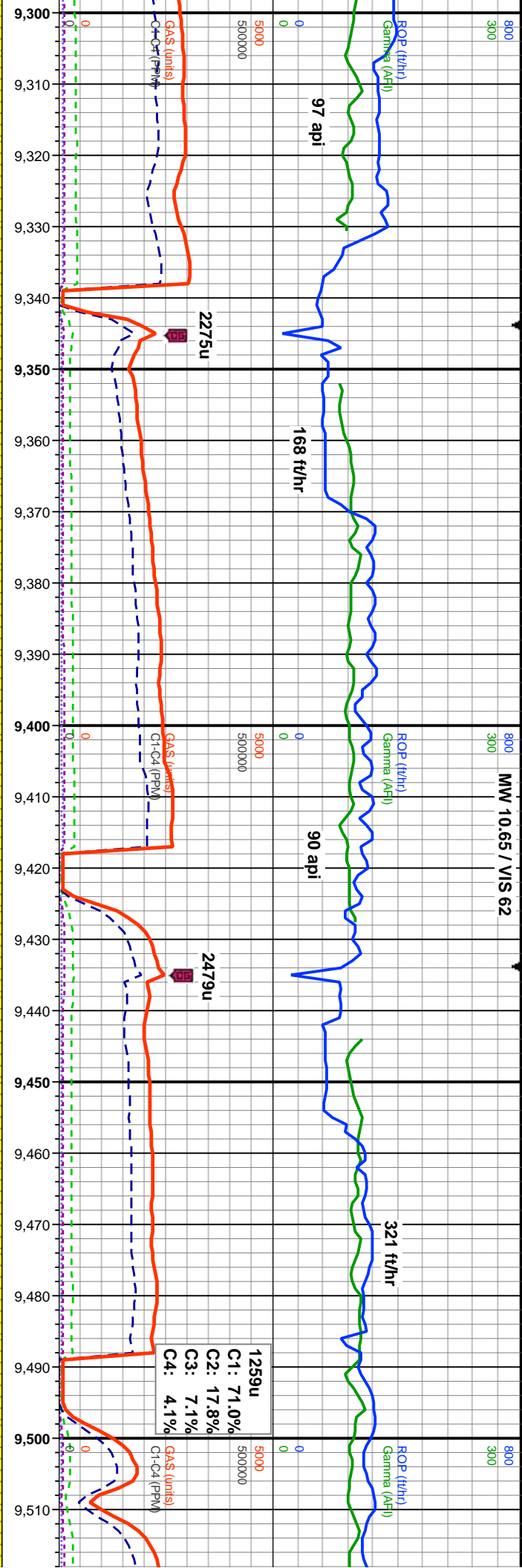
8300



[illegible]

Geologic Unit									
Unit	Thickness (ft)	Top of Unit (ft)	Base of Unit (ft)	Remarks	Unit	Thickness (ft)	Top of Unit (ft)	Base of Unit (ft)	Remarks
8300	8300	8300	8300	85% S.S.; med-drkgy/brn, sme llyg-crm/brn, sft-frt, vfg, blk-sr clus, mod-pred cons, mod-ply srt, arg-slty mtx, calc; 15% SLTY SH; drkgy-dk brn, sb blk-ang, mod hd-frm, ip fis, rthy, slty, sl calc	8300	8300	8300	8300	70% S.S.; med-drkgy/brn, sme llyg-crm/brn, sft-frt, vfg, blk-sr clus, mod-pred cons, mod-ply srt, arg-slty mtx, calc; 30% SLTY SH; drkgy-dk brn, sb blk-ang, mod hd-frm, ip fis-brt, rthy, slty, incr calc

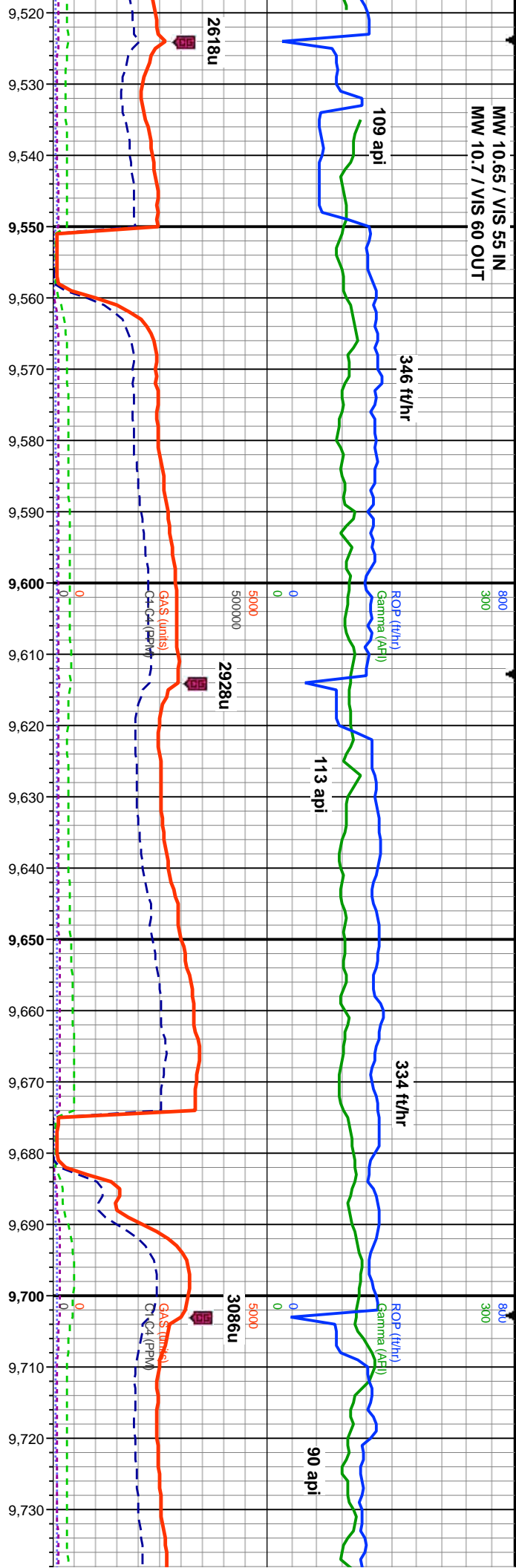




7600	MD: 9.321' INC: 90.22° AZM: 178.35° TVD: 7.838.2' VS: 2.281.38'	7600	MD: 9.411' INC: 89.32° AZM: 177.85° TVD: 7.838.56' VS: 2.371.34'	7600	MD: 9.500' INC: 89.63° AZM: 173.81° TVD: 7.839.38' VS: 2.460.1'
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TVD (ft)		TVD (ft)		TVD (ft)	
75% SS: med-dtkgy/brn, sme ltgy-crm/brn, sft-fri, vfg, blk-y-sr clus, mod-pred cons, mod-ply srt, arg-slty mtx, calc, tr lmy tex/str: 25% SLTY SH: dtkgy-dk brn, sb blk-y-ang, mod hd-frn, ip fis-brlt, rthy, slty, incr calc		75% SS: med-dtkgy/brn, ltgy-crm/brn, sft-fri, vfg, blk-y-sr clus, mod-pred cons, mod-ply srt, arg-slty mtx, calc, tr lmy tex/str: 25% SLTY SH: dtkgy-dk brn, sb blk-y-ang, mod hd-frn, ip fis-brlt, rthy, v slty, mod calc		70% S cons, r dtkgy-c	
8300		8300		8300	

MW 10.65 / VIS 55 IN  
MW 10.7 / VIS 60 OUT



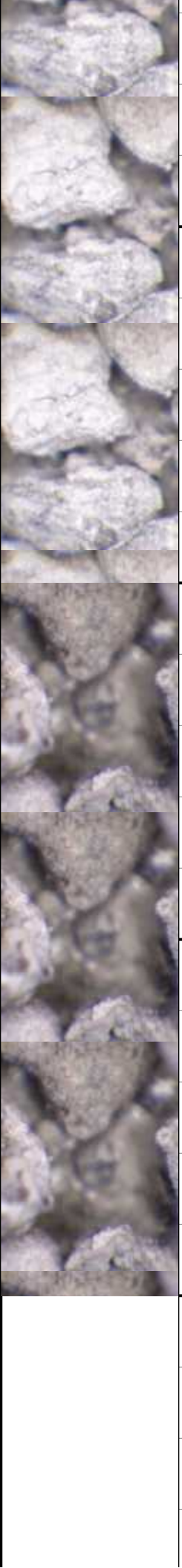
MD: 9.590'  
INC: 90.22°  
AZM: 174.52°  
TVD: 7.839.5'  
VS: 2.549.66'

MD: 9.679'  
INC: 90.18°  
AZM: 176.94°  
TVD: 7.839.18'  
VS: 2.638.43'

S: med-dtgy/brn, ltgy-crm/brn, sft-frt, vfg, blk-yr-clus, mod-pred  
mod-ply srt, arg-sily mtz, calc, tr lmy tex/str: 30% SLTY SH:  
dkl brn, sb blk-ang, mod hd-frn, ip fis-brt, rthy, v sily, mod calc

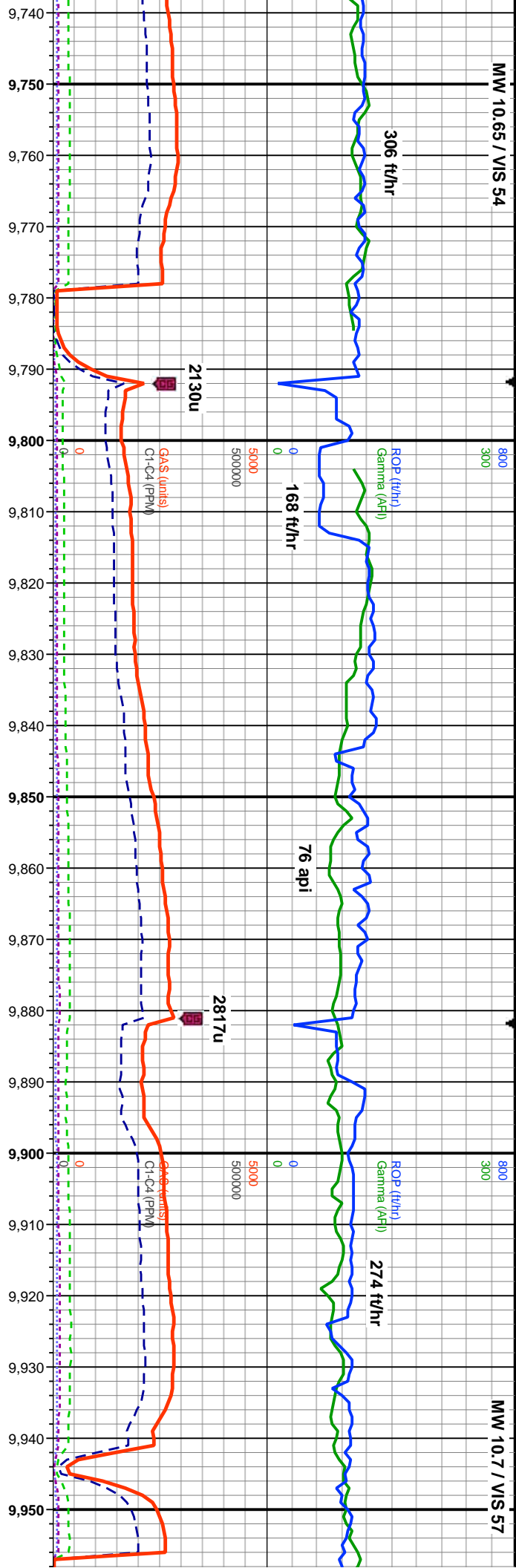
65% SS: med-dtgy/brn, ltgy-crm/brn, sft-frt, occ hd, vfg, blk-yr-clus,  
mod-pred cons, mod srt, arg-sily mtz, calc, ip grdg sily ss: 35% SLTY SH:  
dtgy-dk brn, sb blk-ang, mod hd-frn, ip fis-brt, rthy, v sily, mod calc

70% SS: med-dtgy/brn, ltgy-crm/brn, sft-frt, occ hd, vfg, blk-yr-clus,  
mod-pred cons, mod srt, arg-sily mtz, calc, ip grdg sily ss: 35% SLTY SH:  
dtgy-dk brn, sb blk-ang, mod hd-frn, ip fis-brt, rthy, v sily, mod calc

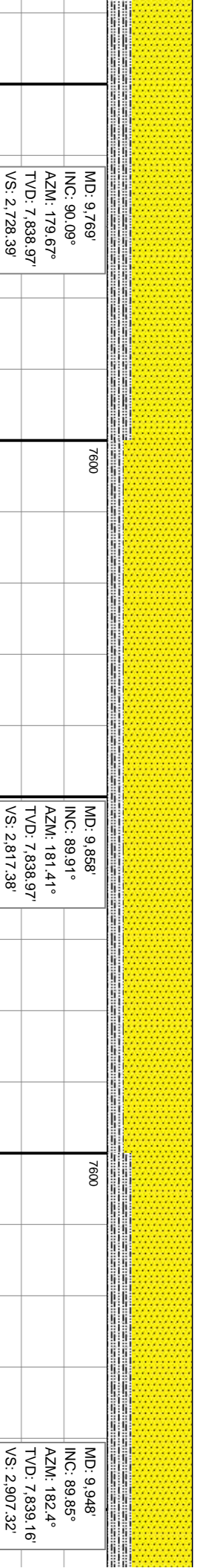




MW 10.65 / VIS 54



MW 10.7 / VIS 57



MD: 9.769'  
INC: 90.09°  
AZM: 179.67°  
TVD: 7.838.97'  
VS: 2.728.39'

MD: 9.858'  
INC: 89.91°  
AZM: 181.41°  
TVD: 7.838.97'  
VS: 2.817.38'

MD: 9.948'  
INC: 89.85°  
AZM: 182.4°  
TVD: 7.839.16'  
VS: 2.907.32'

TVD (ft)

TVD (ft)

gy-crm/brn, st-frt, occ hd, vfg, blk-y-sr clus,  
g-silty mtx, calc, ip gridg silty ss: 30% SLTY SH:  
mod hd-frm, ip fls-brt, rthy, v silty, mod calc

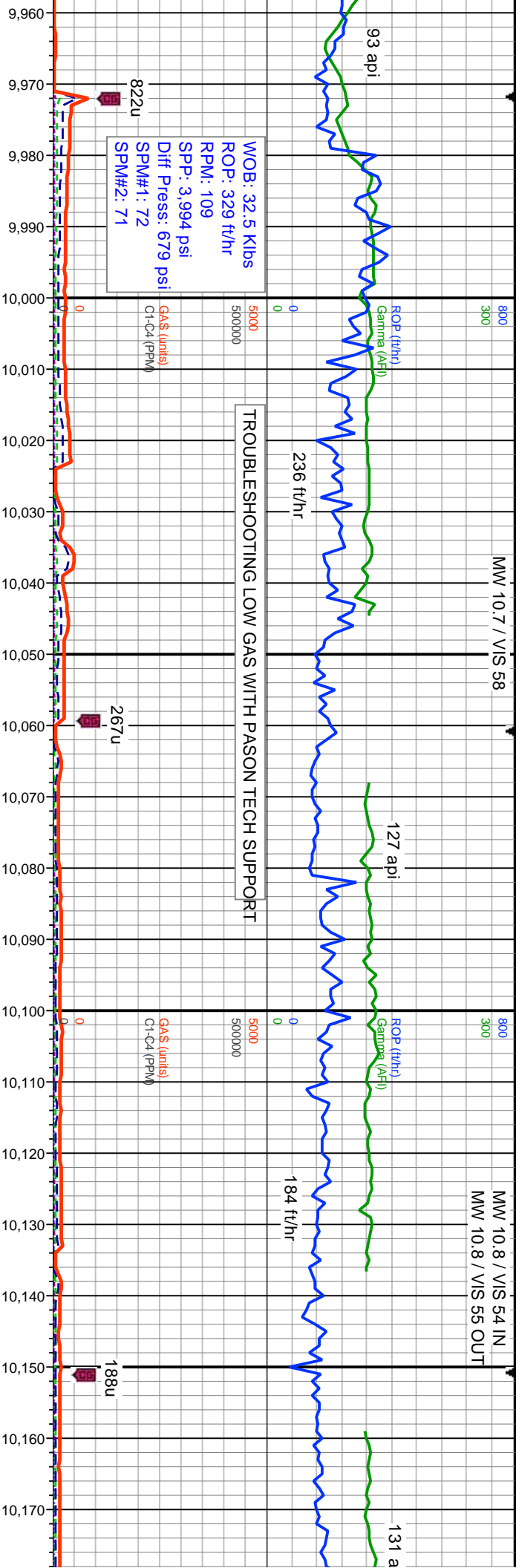
80% SS: med-drkgy/brn, lgy-crm/brn, st-frt, occ hd, vfg, blk-y-sr clus,  
mod-pred cons, mod srt, arg-silty mtx, mod calc: 20% SLTY SH: drkgy-dk  
brn, sb blk-y-ang, mod hd-frm, ip fls-brt, rthy, v silty-aren, mod calc

70% SS: med-drkgy/brn, lgy-crm/brn, st-frt,  
mod-pred cons, mod srt, arg-silty mtx, calc, ip  
drkgy-dk brn, sb blk-y-ang, mod hd-frm, ip fls-

8300

8300





20' D/U Fault - ~1' below top of Carlie

MD: 10.038'  
INC: 90.18°  
AZM: 183.89°  
TVD: 7.839.14'  
VS: 2.997.16'

MD: 10.128'  
INC: 89.48°  
AZM: 185.38°  
TVD: 7.839.4'  
VS: 3.086.84'

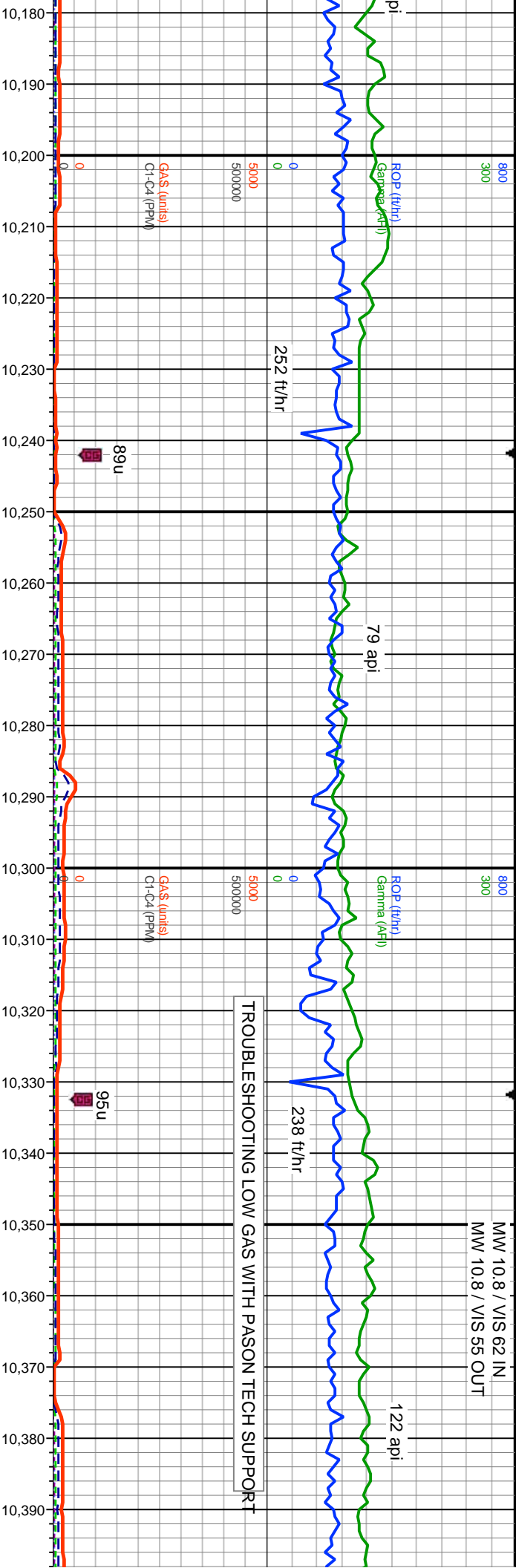
occ hd, vfg, blk-sr clus,  
o grdg silty ss; 30% SLTY SH:  
brit, rthy, v silty, mod calc

50% SS: med-dkgy/brn, ltgy-crm/brn, sft-frt, occ hd, vfg, blk-sr clus,  
mod-pred cons, mod srt, arg-silty mtx, calc, ip grdg silty ss; 50% SLTY SH:  
dkgy-dk brn, sb blk-ang, mod hd-frm, ip fis-brit, rthy, v silty, mod calc

60% SLTY SH: dkgy-dk brn, sb blk-ang, mod hd-frm, ip fis-bri  
silty, mod calc; 40% SS: med-dkgy/brn, ltgy-crm/brn, sft-frt, occ  
blk-sr clus, mod-pred cons, mod srt, arg-silty mtx, calc, ip grdg







MD: 10,218'  
INC: 91.11°  
AZM: 186°  
TVD: 7,838.94'  
VS: 3,176.36'

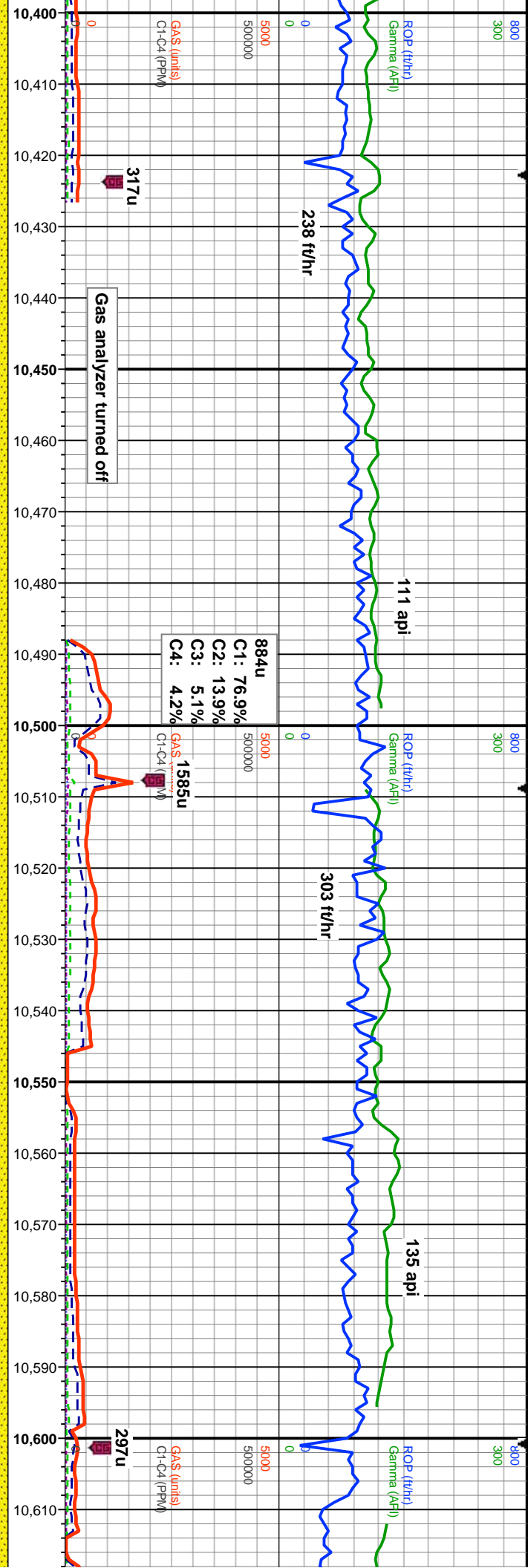
Back into Codell

MD: 10,308'  
INC: 90.25°  
AZM: 184.19°  
TVD: 7,837.87'  
VS: 3,265.97'

MD: 10,330'  
INC: 90.25°  
AZM: 184.19°  
TVD: 7,837.87'  
VS: 3,265.97'

TVD (ft)		TVD (ft)	
7600		8300	
70% SS: med-dkgy/brn, ltgy-crm/brn, sft-fri, occ hd, vfg, blk-y-sr clus, mod-pred cons, mod srt, arg-sily mtix, calc, ip grdg sily ss; 30% SLTY SH: drkgy-dk brn, sb blk-y-ang, mod hd-frn, ip fis-brt, rthy, v sily, mod calc		70% SS: med-dkgy/brn, ltgy-crm/brn, sft-fri, occ hd, vfg, blk-y-sr clus, mod-pred cons, mod srt, arg-sily mtix, calc, ip grdg sily ss; 30% SLTY SH: drkgy-dk brn, sb blk-y-ang, mod hd-frn, ip fis-brt, rthy, v sily, mod calc	
8300		8300	



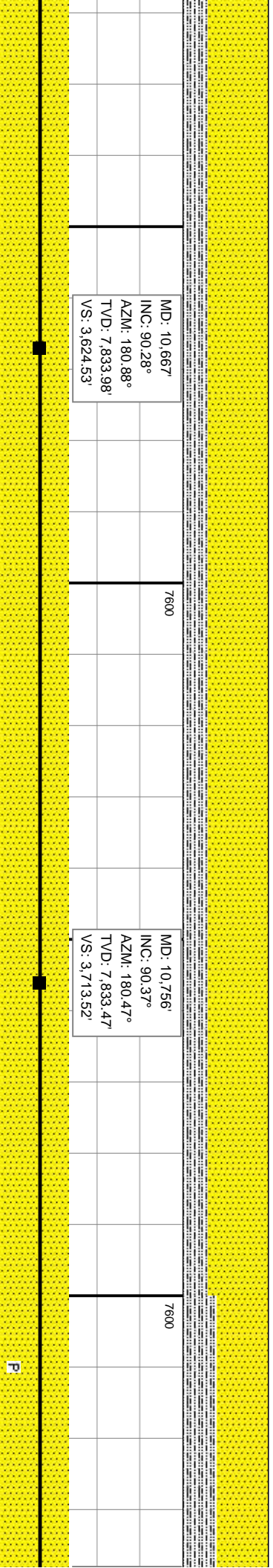
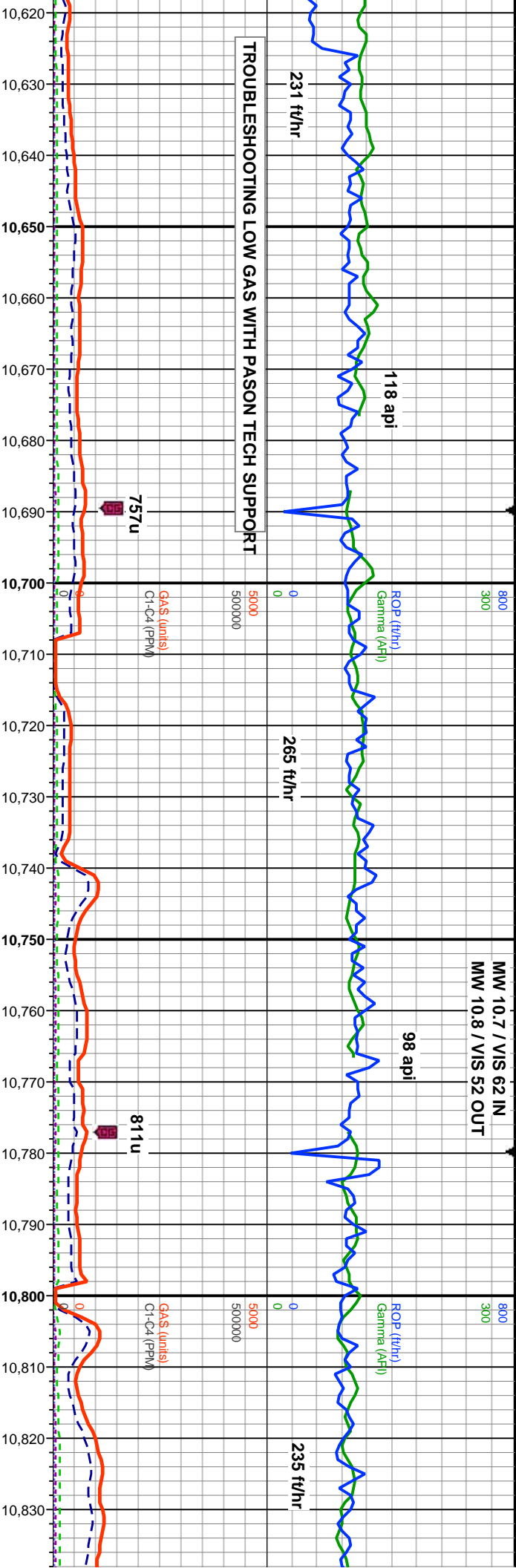


3398'	68°	MD: 10.488'	INC: 90.83°	AZM: 182.47°	TVD: 7.835.96'	VS: 3.445.61'
8337.14'						
8355.75'						

TVD (ft)	8300	8300	8300
80% SS: med-drkgy/brn, sft-fri, vfg, blk-y-sr clus, mod cons, mod srt, arg-silty mtx, sl & pred surf calc; 20% SLTY SH: drkgy, sb blk-y-ang, mod hd-frm, ip fis, rthy, silty, sl calc		60% SS: med-drkgy/brn, sft-fri, vfg, blk-y-sr clus, mod cons, mod srt, arg-silty mtx, sl & pred surf calc; 40% SLTY SH: drkgy, sb blk-y-ang, mod hd-frm, ip fis, rthy, silty, sl calc	70% S mod-pl drkgy-







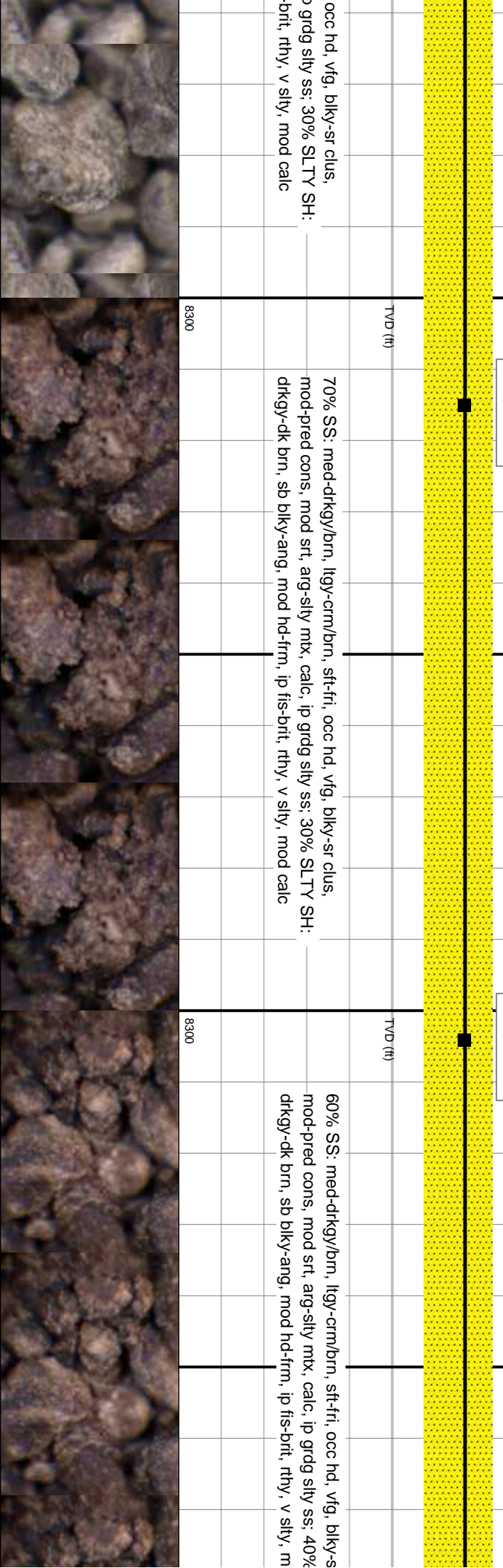
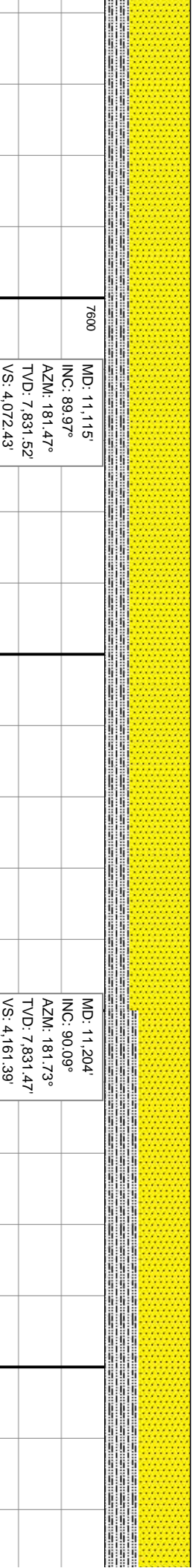
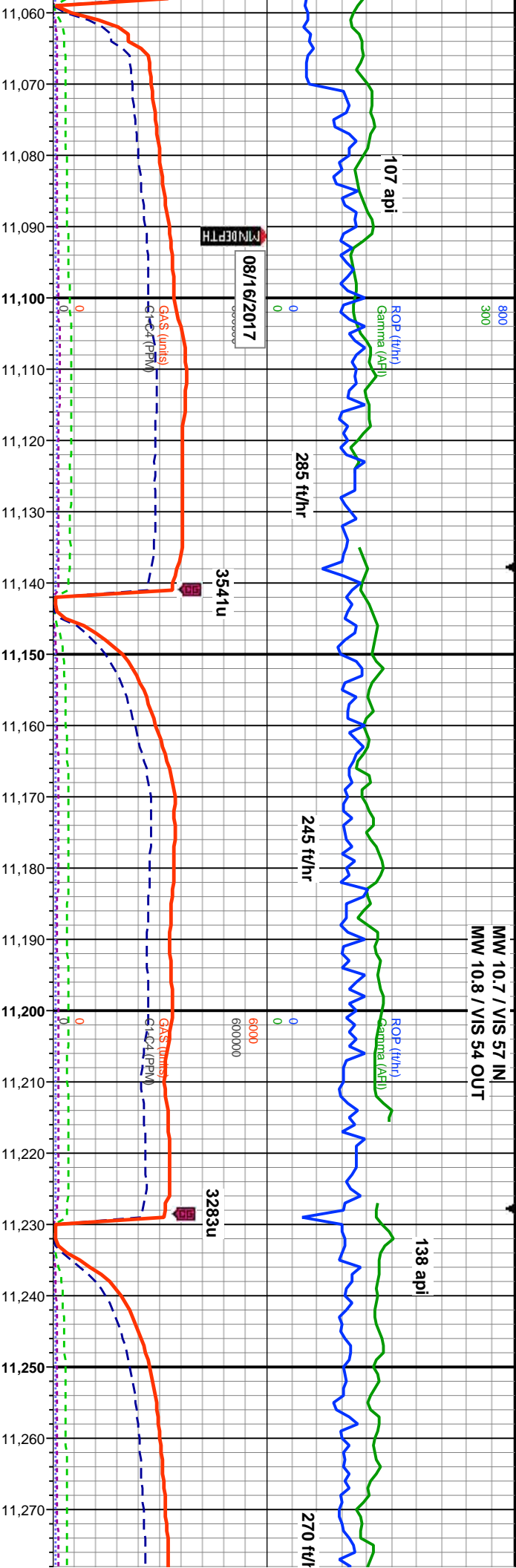
S: med-drklyg/brn, llyg-crm/brn, stf-fri, occ hd, vfg, blyk-sr clus, med cons, mod srt, arg-slty mtk, calc, ip grdg slty ss: 30% SLTY SH: blk brn, sb blyk-ang, mod hd-frm, ip fls-brt, rthy, v slty, mod calc

70% SS: med-dtgyg/bm, ltgy-crm/bm, stf-fri, occ hd, vfg, bkly-sr clus, mod-pred cons, mod srt, atg-sily mtz, calc, ip grdg sily ss; 30% SLTY SH: dtgyg-dk bm, sb bkly-ang, mod hd-frm, ip fts-brt, rthy, v sily, mod calc

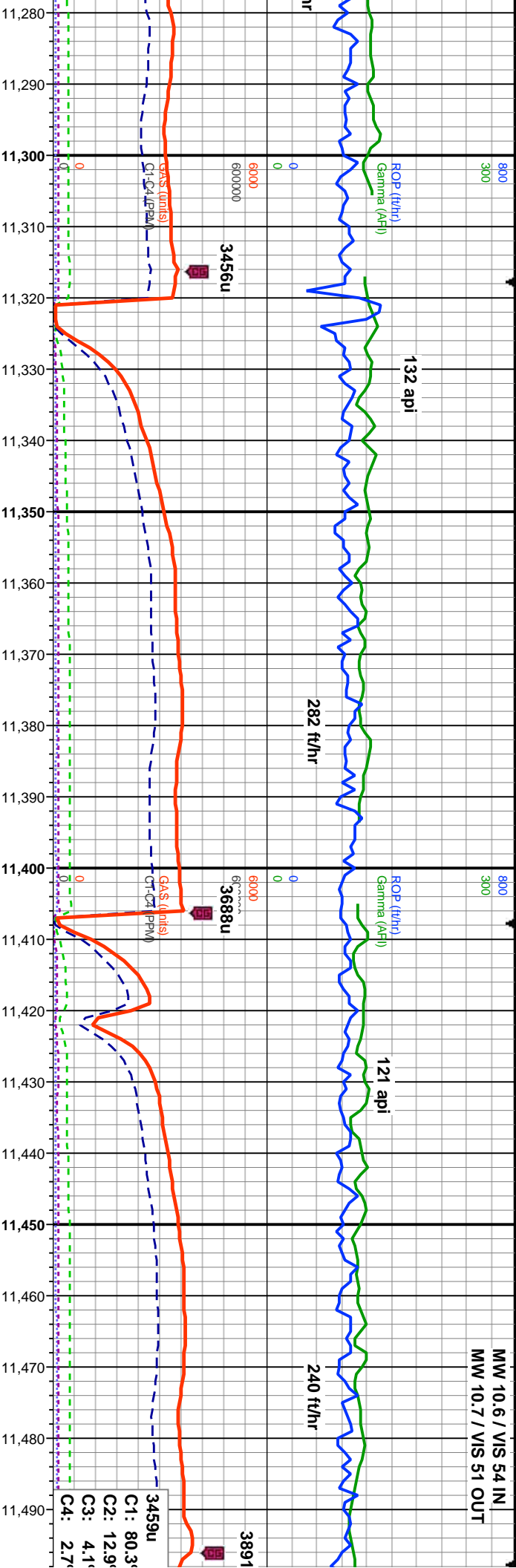
60% SS: med-drkgy/brn, s  
mtx, sl & pred suff calc; 4  
fis, rthy, slty, sl calc, tr pyr







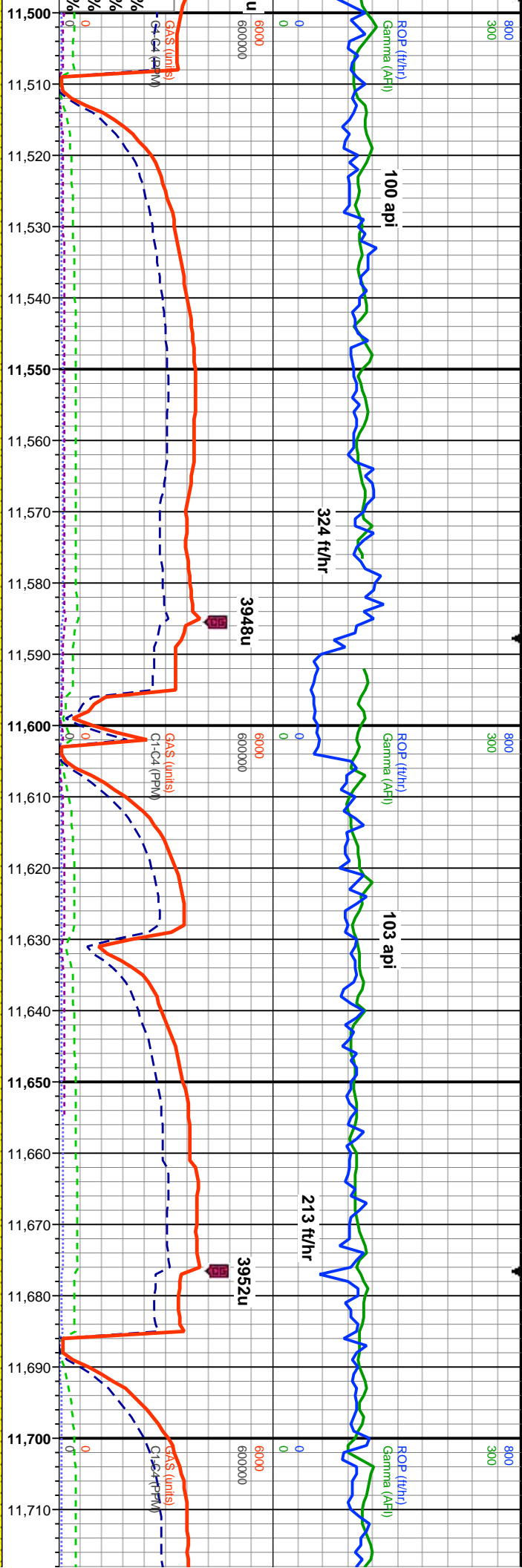
MW 10.6 / VIS 54 IN  
MW 10.7 / VIS 51 OUT



MD: 11,294'	600	MD: 11,384'	7600	MD: 11,474'	
INC: 89.88°		INC: 89.94°		INC: 89.88°	
AZM: 182.79°		AZM: 182.24°		AZM: 181.38°	
TVD: 7,831.49'		TVD: 7,831.63'		TVD: 7,831.78'	
VS: 4,251.31'		VS: 4,341.2'		VS: 4,431.15'	

60% SS: med-dkgy/brn, ltgy-crm/brn, sft-fri, occ hd, vfg, blk-yr clus, mod-pred cons, mod srt, arg-sily mx, calc, ip grdg sily ss, 40% SLTY SH: drkgy-dk brn, sb blk-ang, mod hd-frn, ip fis-brt, rthy, v sily, mod calc	TVD (ft)	8300
70% SS: med-dkgy/brn, ltgy-crm/brn, sft-fri, occ hd, vfg, blk-yr clus, mod-pred cons, mod srt, arg-sily mx, calc, ip grdg sily ss, 30% SLTY SH: drkgy-dk brn, sb blk-ang, mod hd-frn, ip fis-brt, rthy, v sily, mod calc	TVD (ft)	8300



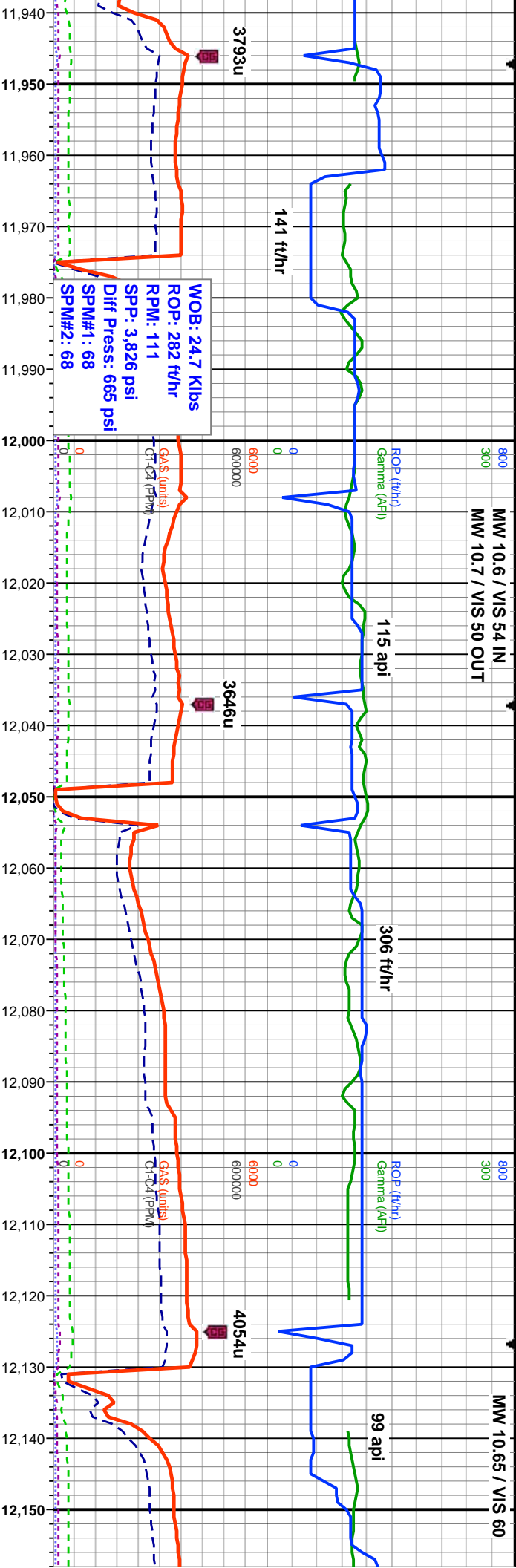


7600	MD: 11.564' INC: 89.78° AZM: 181.78° TVD: 7.832.04' VS: 4.521.11'	7600	MD: 11.654' INC: 89.91° AZM: 178.9° TVD: 7.832.29' VS: 4.611.09'	7600
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8300	8300	8300	8300
TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)
80% SS: med-drkgy/brn, sft-frt, vfg, blkly-sr clus, mod cons, mod srt, arg-sltly mtx, sl & pred surf calc; 20% SLTY SH: drkgy, sb blkly-ang, mod hd-frm, ip fis, rthy, slty, sl calc	80% SS: med-drkgy/brn, sft-frt, vfg, blkly-sr clus, mod cons, mod srt, arg-sltly mtx, sl & pred surf calc; 20% SLTY SH: drkgy, sb blkly-ang, mod hd-frm, ip fis, rthy, slty, sl calc	75% SS: cons, n brn, sb	



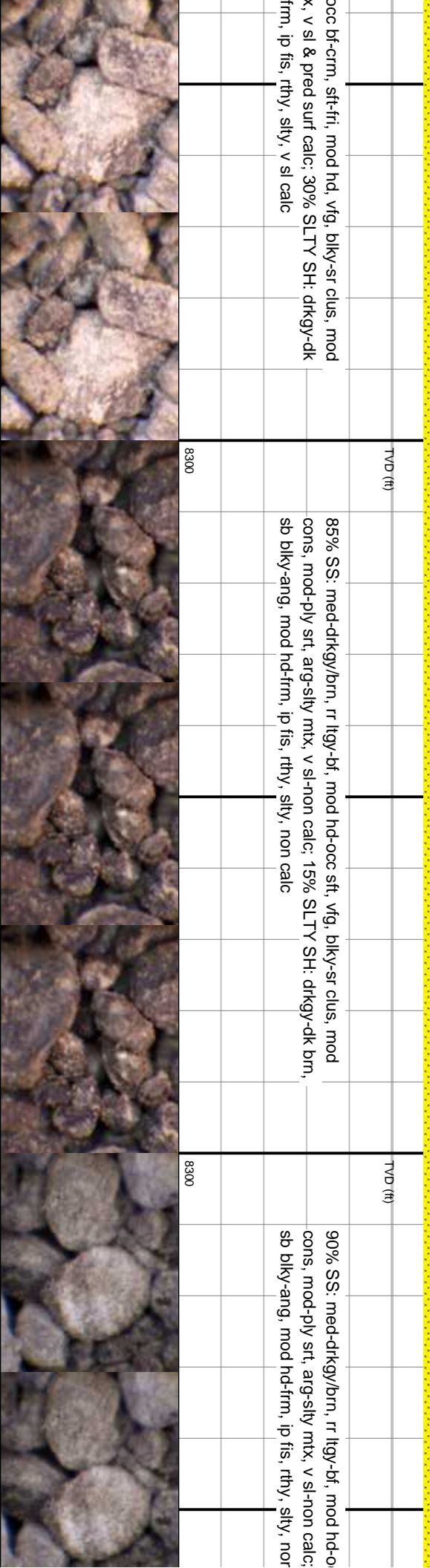




7600

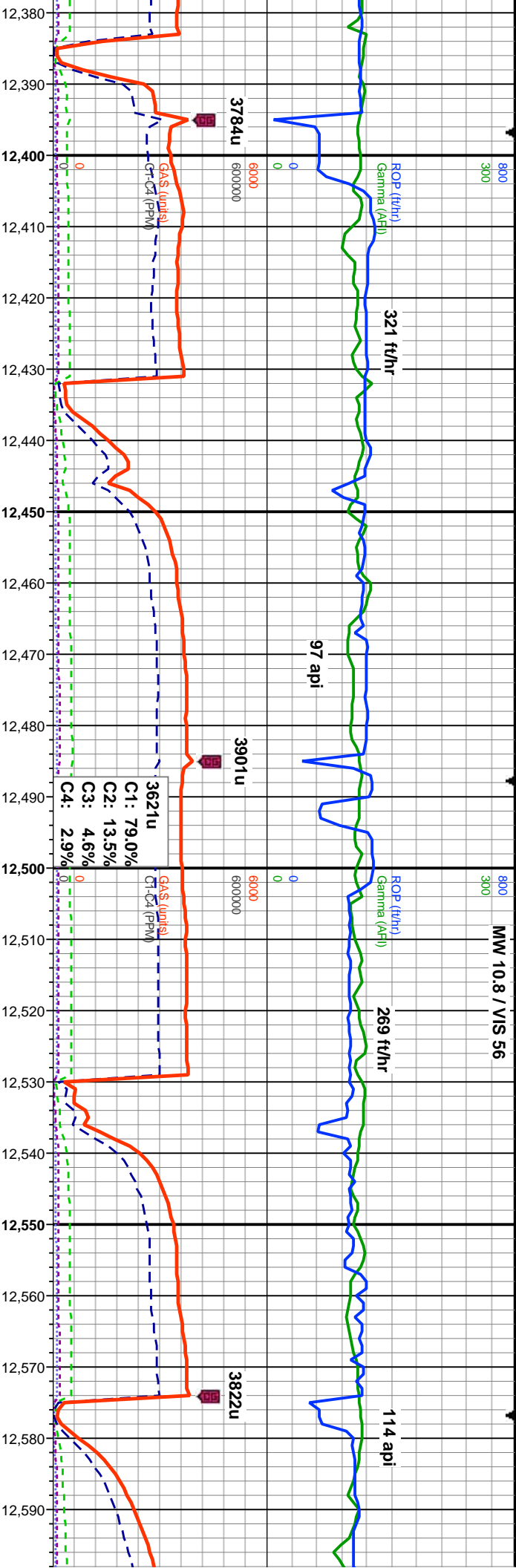
MD: 12.014'  
INC: 89.82°  
AZM: 174.19°  
TVD: 7.834.48'  
VS: 4.970.42'

MD: 12.104'  
INC: 89.72°  
AZM: 174.22°  
TVD: 7.834.84'  
VS: 5.059.99'



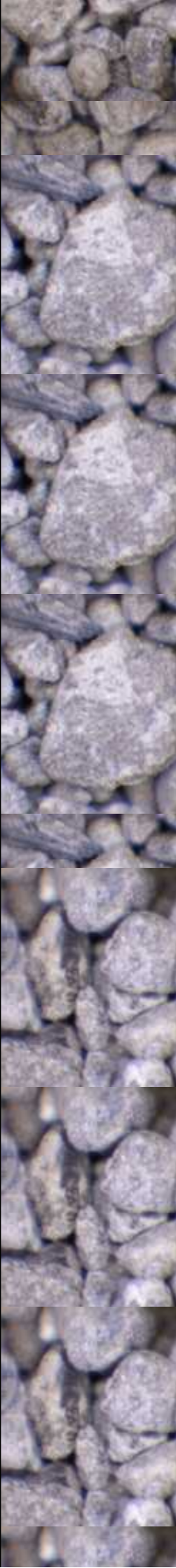


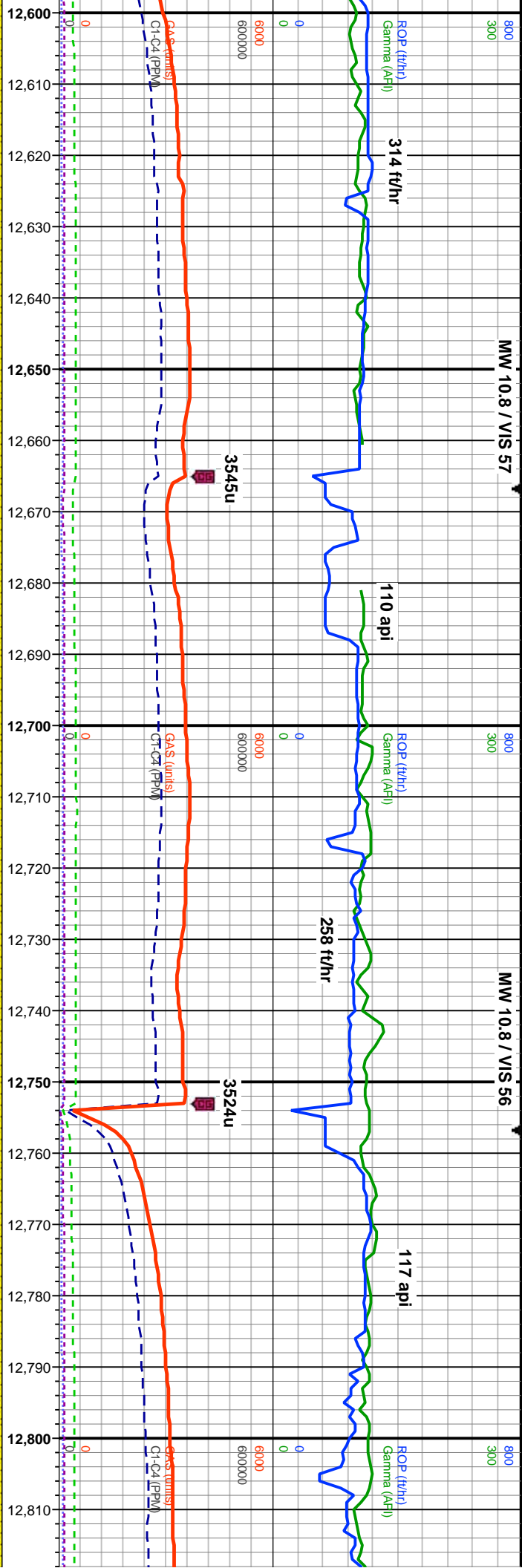




4° 42'	7600	MID: 12.464' INC: 90.09° AZM: 178.16° TVD: 7.834.16' VS: 5.419.01'
1'	7600	MID: 12.554' INC: 90.06° AZM: 179.41° TVD: 7.834.04' VS: 5.508.99'

	TVD (ft)	80% SS: med-dtkgy/brn, rr lly-bf, mod-v hd-occ fri, vfg, blk-y-sr clus, mod cons, mod-ply srt, arg-sily mtz, non-sme surf calc: 20% SLTY SH: drkgy-dk brn, sb blk-y-ang, mod hd-frm, rr fls, rthy, sily-aren, non calc	TVD (ft)	85% SS: med-dtkgy/brn, rr lly-bf, mod-v hd-occ fri, vfg, blk-y-sr clus, mod cons, mod-ply srt, arg-sily mtz, non-sme surf calc: 15% SLTY SH: drkgy-dk brn, sb blk-y-ang, mod hd-frm, rr fls, rthy, sily-aren, non calc
	8300		8300	

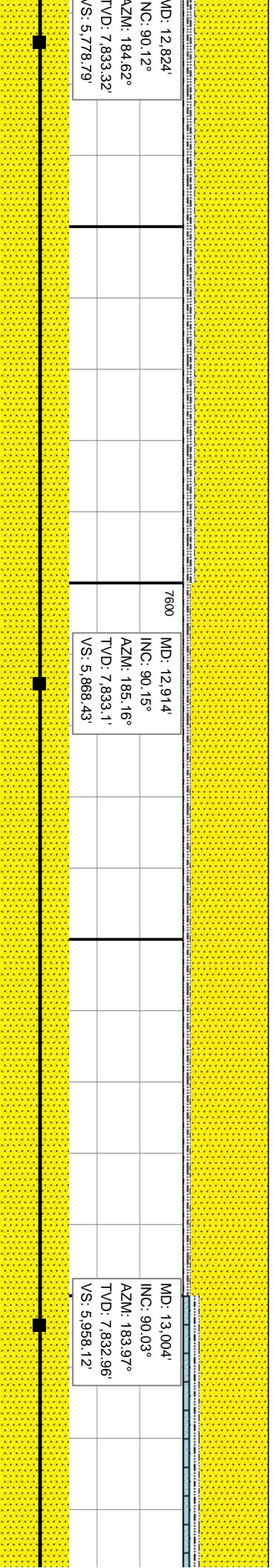
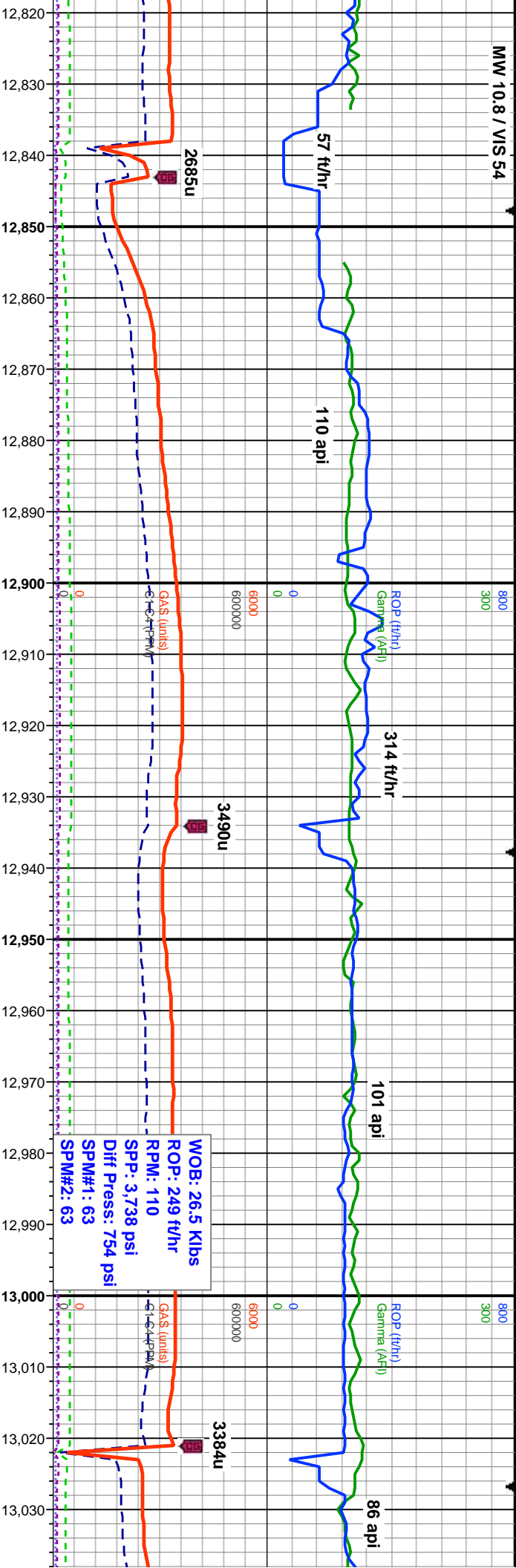




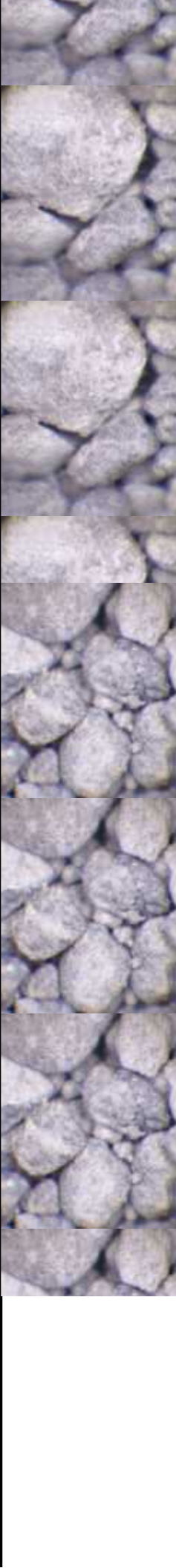
7600	MD: 12.644' INC: 90.15° AZM: 180.52° TVD: 7.833.87' VS: 5.598.99'	7600	MD: 12.734' INC: 90.22° AZM: 181.88° TVD: 7.833.58' VS: 5.688.96'	7600
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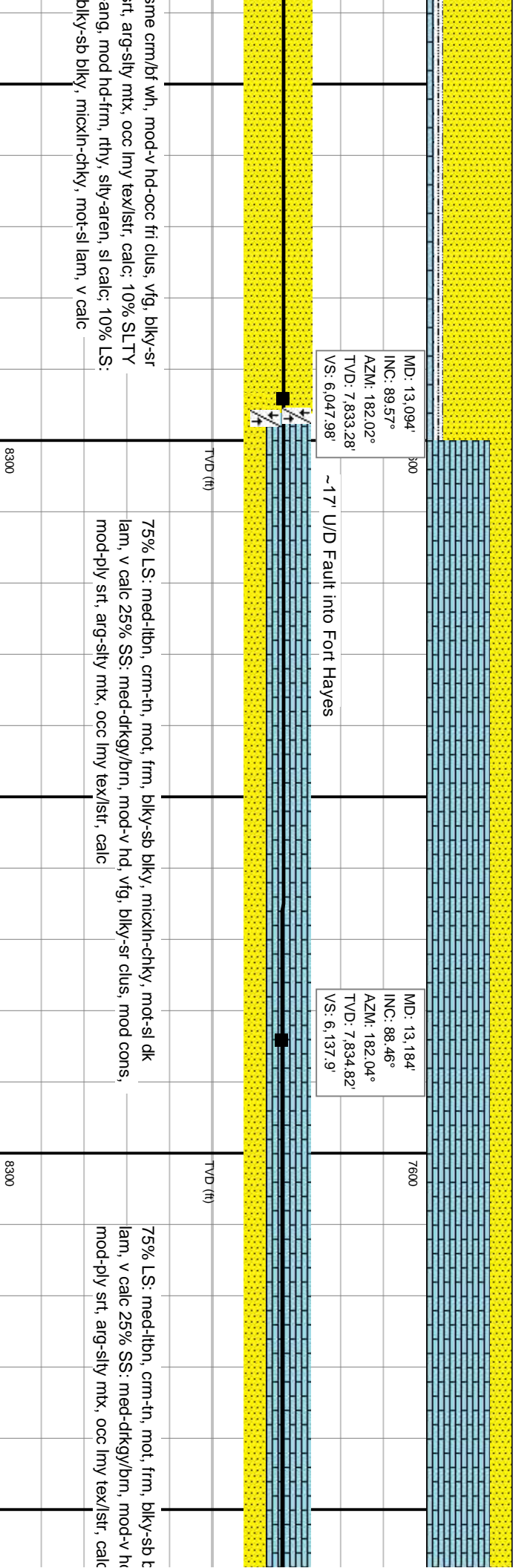
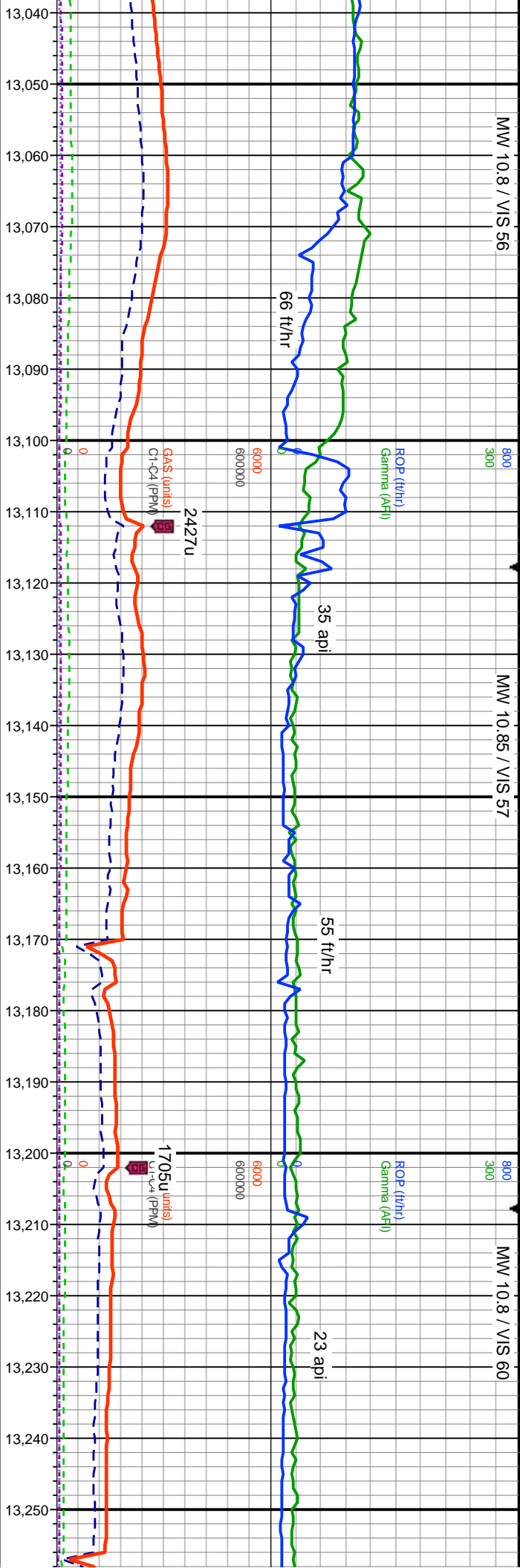
TVD (ft)	90% SS: med-dtkgy/brn, rr ltgy-bf, mod-v hd-occ fri, vfg, blk-y-sr clus, mod cons, mod-ply srt, arg-sily mtx, non-sme surf calc; 10% SLTY SH: dtkgy-dk brn, sb blk-y-ang, mod hd-frm, rr fls, rthy, sily-aren, non calc	TVD (ft)	85% SS: med-dtkgy/brn, sme crm/bf wh, mod-v hd-occ fri clus, vfg, blk-y-sr clus, mod cons, mod-ply srt, arg-sily mtx, non-sme surf calc; 15% SLTY SH: dtkgy-dk brn, sb blk-y-ang, mod hd-frm, rthy, v sily-aren, v sl-non calc	TVD (ft)	85% SS: med-dtkgy/brn, sme crm/bf wh, mod-v hd-occ fri clus, vfg, blk-y-sr clus, mod cons, mod-ply srt, arg-sily mtx, non-sme surf calc; 15% SLTY SH: dtkgy-dk brn, sb blk-y-ang, mod hd-frm, rthy, v sily-aren, v sl-non calc
8300		8300		8300	





3. med-dtgy/brn, sme crm/bf wh, mod-v hd-occ fri clus, vfg, blkly-sr clus, mod-ply str, arg-sily mtz, non-sme surf calc; 15% SLTY gy-dk brn, sb blkly-ang, mod hd-frm, rthy, v sily-aren, v sl-non calc	TVD (ft)	8300
90% SS: med-dtgy/brn, sme crm/bf wh, mod-v hd-occ fri clus, vfg, blkly-sr clus, mod cons, mod-ply str, arg-sily mtz, occ lmy mtz/str, sl & pred surf calc, scat LS frags; 10% SLTY SH: dtgy-dk brn, sb blkly-ang, mod hd-frm, rthy, v sily-aren, v sl calc	TVD (ft)	8300
80% SS: med-dtgy/brn, sme crm/bf wh, mod-v hd-occ fri clus, vfg, blkly-sr clus, mod cons, mod-ply str, arg-sily mtz, occ lmy mtz/str, sl & pred surf calc, scat LS frags; 10% SLTY SH: dtgy-dk brn, sb blkly-ang, mod hd-frm, rthy, v sily-aren, v sl calc	TVD (ft)	8300



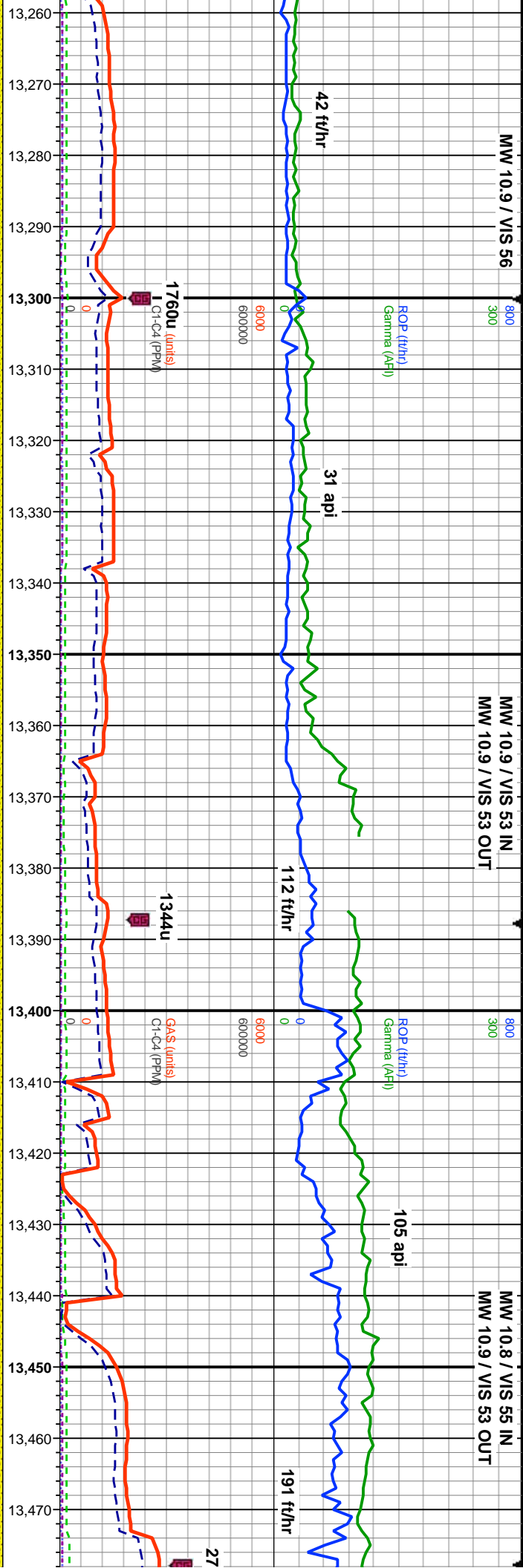




MW 10.9 / VIS 56

MW 10.9 / VIS 53 IN  
MW 10.9 / VIS 53 OUT

MW 10.8 / VIS 55 IN  
MW 10.9 / VIS 53 OUT



MD: 13,274'  
INC: 88.52°  
AZM: 182.89°  
TVD: 7,837.19'  
VS: 6,227.77'

MD: 13,364'  
INC: 88.19°  
AZM: 183.4°  
TVD: 7,839.78'  
VS: 6,317.58'

MD: 13,454'  
INC: 89.05°  
AZM: 180.65°  
TVD: 7,841.95'  
VS: 6,407.48'

TVD (ft)

TVD (ft)

blk, micln-chky, mot-sl dk  
d, vfg, blk-sr clus, mod cons,

75% LS: med-ltn, crm-tn, mot, frm, blk-sb blk, micln-chky, mot-sl dk  
lam, v calc 25% SS: med-drky/brn, mod-v hd, vfg, blk-sr clus, mod cons,  
mod-ply srt, arg-sily mtx, occ lmy tex/srt, calc

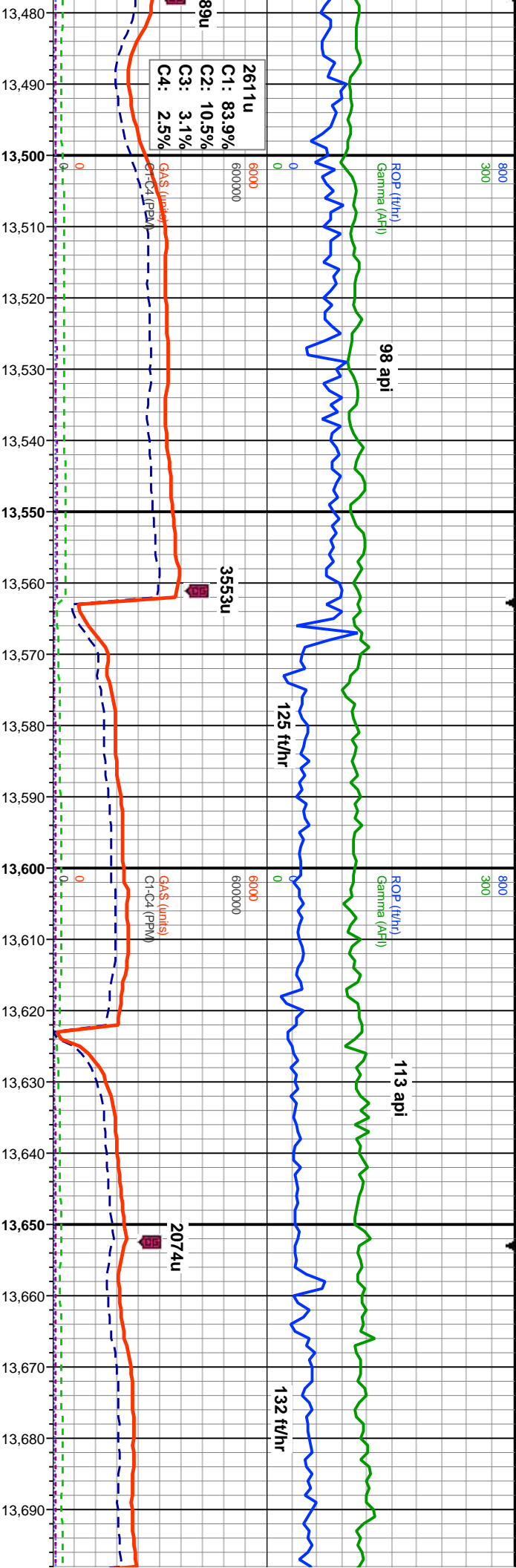
70% SS: med-drky/brn, sme crm/bf wh, mod-v hd-occ fri clus,  
clus, mod cons, mod-ply srt, arg-sily mtx, occ lmy tex/srt, calc,  
med-ltn-offwht mot, frm, blk-sb blk, micln-chky, mot-sl lam,  
SLTY SH: drky-dk brn, sb blk-ang, mod hd-frm, rthy, sily-aren

8300

8300







MD: 13,544'  
INC: 88.89°  
AZM: 180.36°  
TVD: 7,843.56'  
VS: 6.497.45'

MD: 13,634'  
INC: 89.78°  
AZM: 180.55°  
TVD: 7,844.61'  
VS: 6.587.44'

vfg, blk-y-sr	
20% LS:	
v calc 10%	
1, sl calc.	
TVD (ft)	8300
70% SS: med-dtkgy/brn, sme crm/bf wh, mod-v hd-occ fri clus, vfg, blk-y-sr clus, mod cons, mod-ply srt, arg-sily mtz, occ lmy tex/istr, calc; 20% LS: med-lbn-offwht mot, frm, blk-y-sb blk-y, micxn-chky, mot-sl lam, v calc 10% SLTY SH: dtkgy-dk brn, sb blk-y-ang, mod hd-frm, rthy, sily-aren, sl calc, tr pyr nod.	
TVD (ft)	8300
80% SS: med-dtkgy/brn, sme crm/bf wh, mod-v hd-occ fri clus, vfg, blk-y-sr clus, mod cons, mod-ply srt, arg-sily mtz, occ lmy tex/istr, calc; 10% SLTY SH: dtkgy-dk brn, sb blk-y-ang, mod hd-frm, rthy, sily-aren, sl calc; 10% LS: med-lbn-offwht mot, frm, blk-y-sb blk-y, micxn-chky, mot-sl lam, v calc.	
TVD (ft)	8300

