



Scale: 5" / 100'
Measured Depth Log

Well Name B-Farm LD 18-392HC

Location Section 7, T1S, R67W

State COLORADO

Country USA

API Number 050011009400

Geographic Region DJ BASIN

County ADAMS

Rig Number PRECISION 466

AFF # 19DC0010

Field WATTENBERG

Ground Elevation 5124.5'

K.B. Elevation 5144.5'

Logged Interval 6000' MD To 18619' MD

Total Depth 18619' MD

Formation CODELL

Type of Drilling Fluid OIL BASED MUD

Operator

Company Great Western Oil and Gas

Address 1001 17th Street, Suite 2000
Denver, CO 80202



Geologist

Name Gabriel Rubio, Zach Souvall

Company Terra Guidance

Address 67 W. Floyd Ave. Ste 105
Englewood, CO 80110
(970) 260-5408

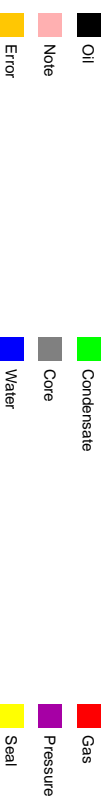


Other

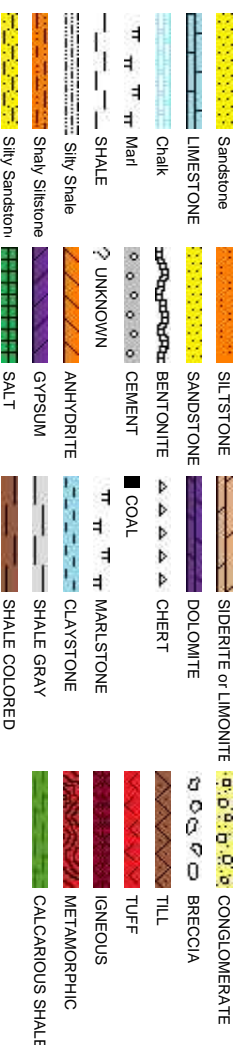
Mudlog Start Date 1/25/2019

Mudlog End Date 1/28/2019
























Color Coding



Rock Types



Fossils

	F FOSSIL
	GASTROPOD
	ALGAE
	AMPHIPORA
	BELONITE
	BIOCLASTIC
	BRACHIOPOD
	BRYOZOA
	CEPHALOPOD
	CORAL
	CRINOID
	ECHINOID
	FISH
	FORAMINIFERA
	F FOSSIL
	GASTROPOD
	OOLITE
	OSTRACOD
	PELECYPOD
	PELLET
	PISOLITE
	PLANT REMAINS
	PLANT SPORES
	SCAPHOPOD
	STROMATOPOROID
	ARGILL
	BENTONITE
	BITUMINOUS
	BRECCIA
	CALICHE
	CARBONACEOUS
	CHERT
	CHERT
	COAL
	DOLomite
	FELDSPAR
	FERRUGINOUS
	F FOSSIL
	GASTROPOD
	ALGAE
	AMPHIPORA
	BELONITE
	BIOCLASTIC
	BRACHIOPOD
	BRYOZOA
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	AMPHIPORA
	BELONITE
	BIOCLASTIC
	BRACHIOPOD
	BRYOZOA
	CEPHALOPOD
	CORAL
	CRINOID

Minerals

+ FIELDS
 ● FERR
 ✓ FERR

Oil Show



















Oil Show

Engineering

QUESTIONABLE

SPOTTED STAINING BIT

Porosity

	CASING		
	E EARTHY		
	F FRACTURE		
	INTERCRYSTALLINE		
	INTEROOLITIC		
	MOLDIC		

Accessories

LACEOUS	GLAUCONITE
LITE GRAIN	GYPSIFEROUS
OMITE	HEAVY MINERAL
ENOUS SUBSTANCE	KAOLIN
CIA FRAGMENTS	MARLSTONE
AREOUS	MINERAL CRYSTALS
ONACEOUS FLAKES	MINUTE CRYSTALS
PHOSPHATE PELLETS	PHOSPHATE PELLETS
PYRITE	PYRITE
- THIN BEDS	SALT CAST
MITIC	SANDY
SPAR	SILICEOUS
UGINOUS PELLET	SILTY
UGINOUS	TUFFACEOUS
	SILTSTONE STRINGER

Stringer

ANHYDRITE STRINGER
BENTONITE STRINGER
COAL STRINGER
DOLomite STRINGER
GYPSUM STRINGER
LIMESTONE STRINGER
MARLSTONE (CALC) STRG
MARLSTONE (DOL) STRG
SANDSTONE STRINGER
SHALE STRINGER

Other Symbols

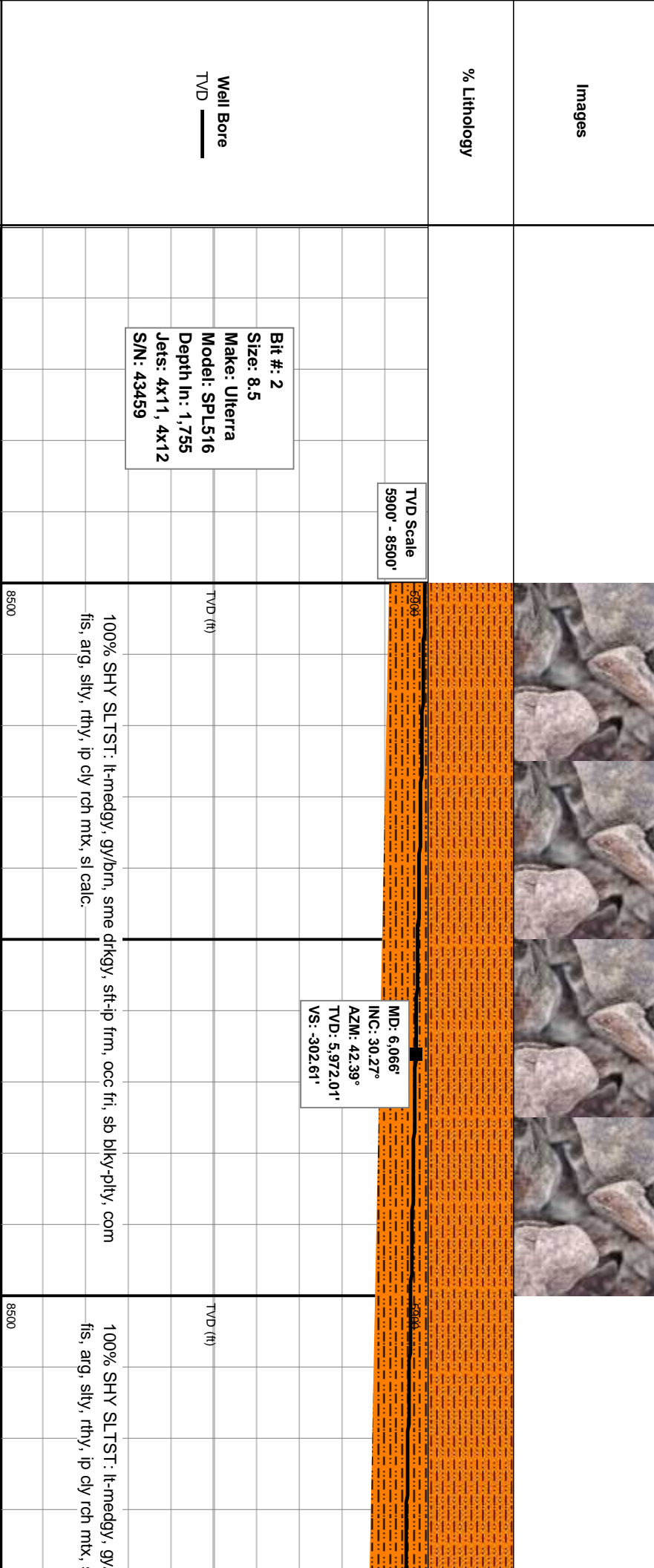
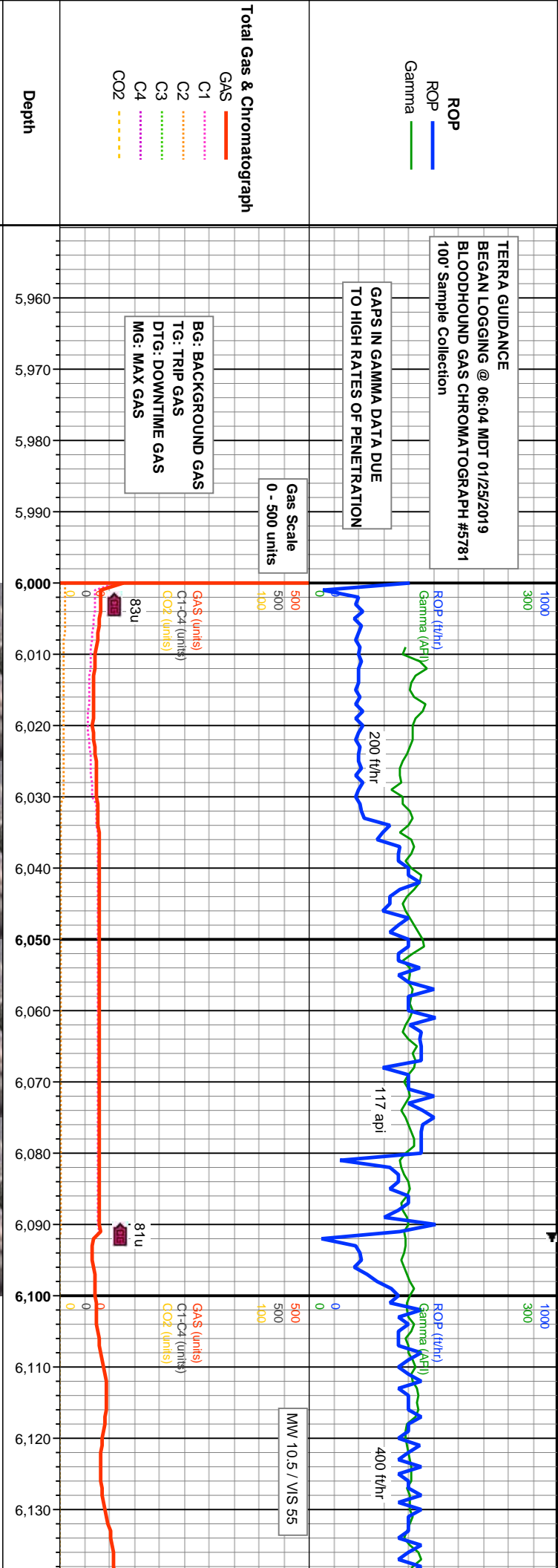
FORMATION TOP	LITHOGRAPHIC
GAS SHOW	MICROXIN
DEPTH	MIN DEPTH
ORMAL FAULT	ANGULAR
IL SHOW	ROUNDED
VERTURNED STRATA	SUBANG
	WACKESTONE
	SUBRND

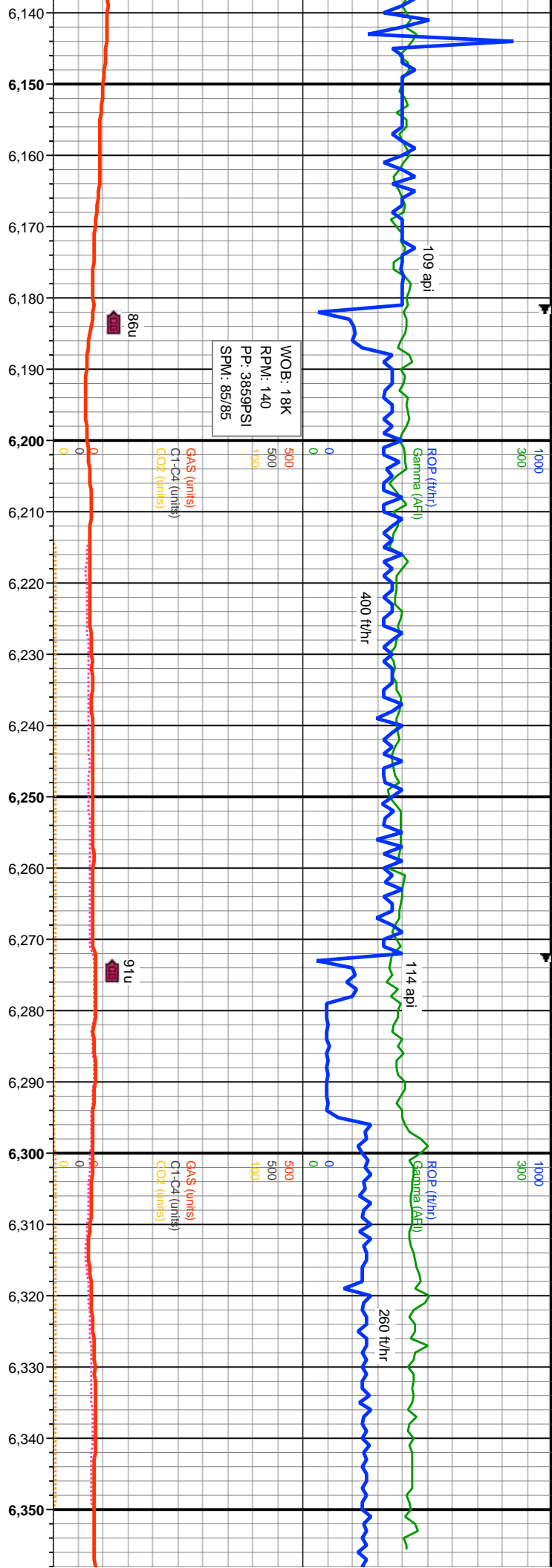
Sorting

REVERSE FAULT	MODERATE
IDEWALL CORE (LEFT)	BOUNDSTONE
IDEWALL CORE (RIGHT)	POOR
LIDE	CHALKY
	WELL

Textures

SURVEY	CRYPTOXIN
TRIP GAS	EARTHY
WIRELINE TESTED - LEFT	FINELYXIN
WIRELINE TESTED - RT	GRAINSTONE
	CALCARIUS SHALE
	CALCARIOUS SHALE





MD: 6,156'
INC: 30.04°
AZM: 42.46°
TVD: 6,049.84'
VS: -332.48'

MD: 6,245'
INC: 30.19°
AZM: 43.99°
TVD: 6,126.82'
VS: -361.51'

MD: 6,335'
INC: 30.28°
AZM: 41.98°
TVD: 6,204.58'
VS: -391.12'

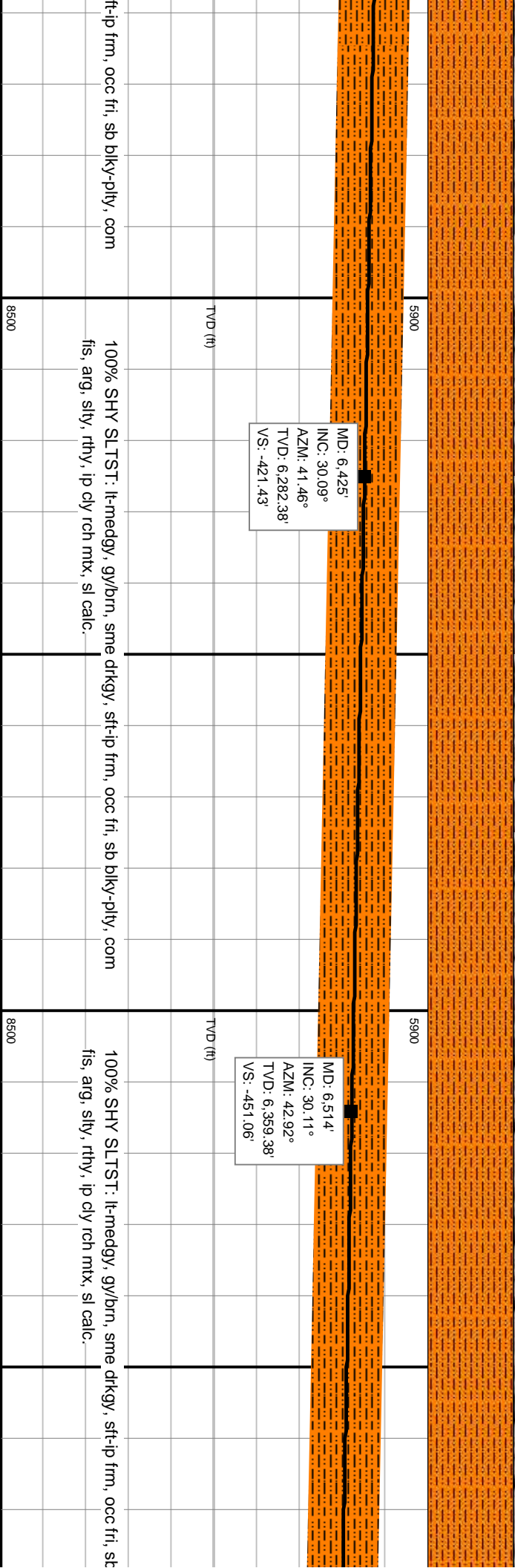
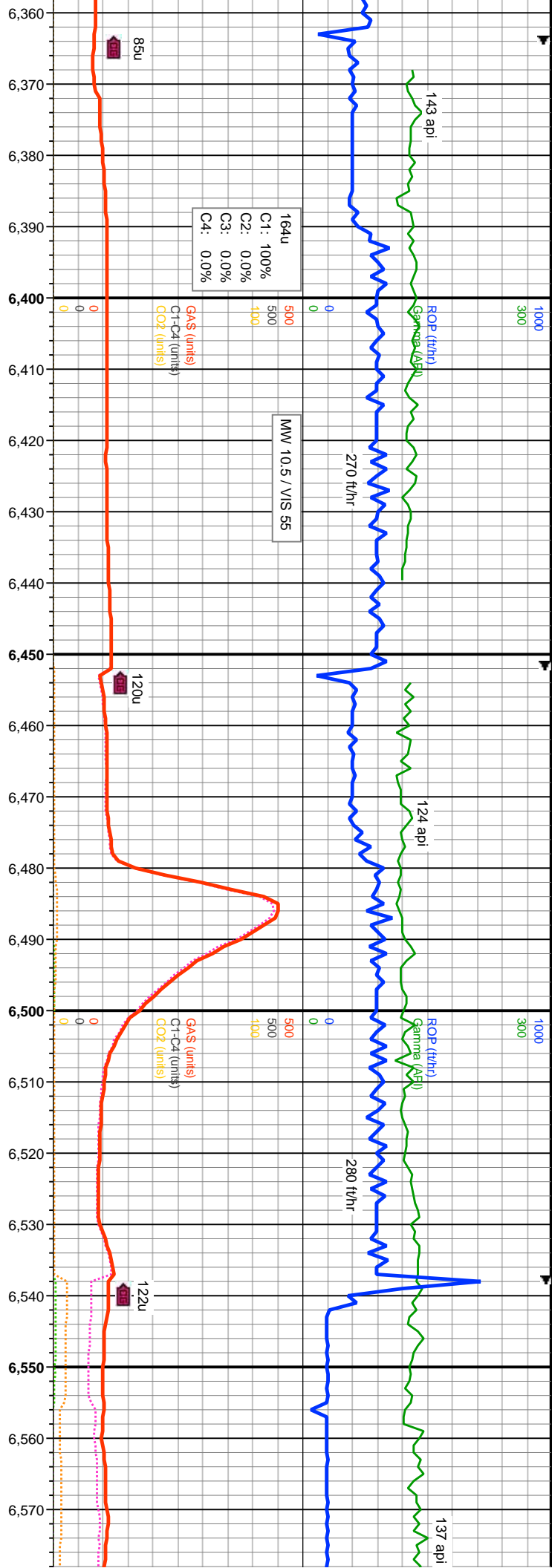
TVD (ft)

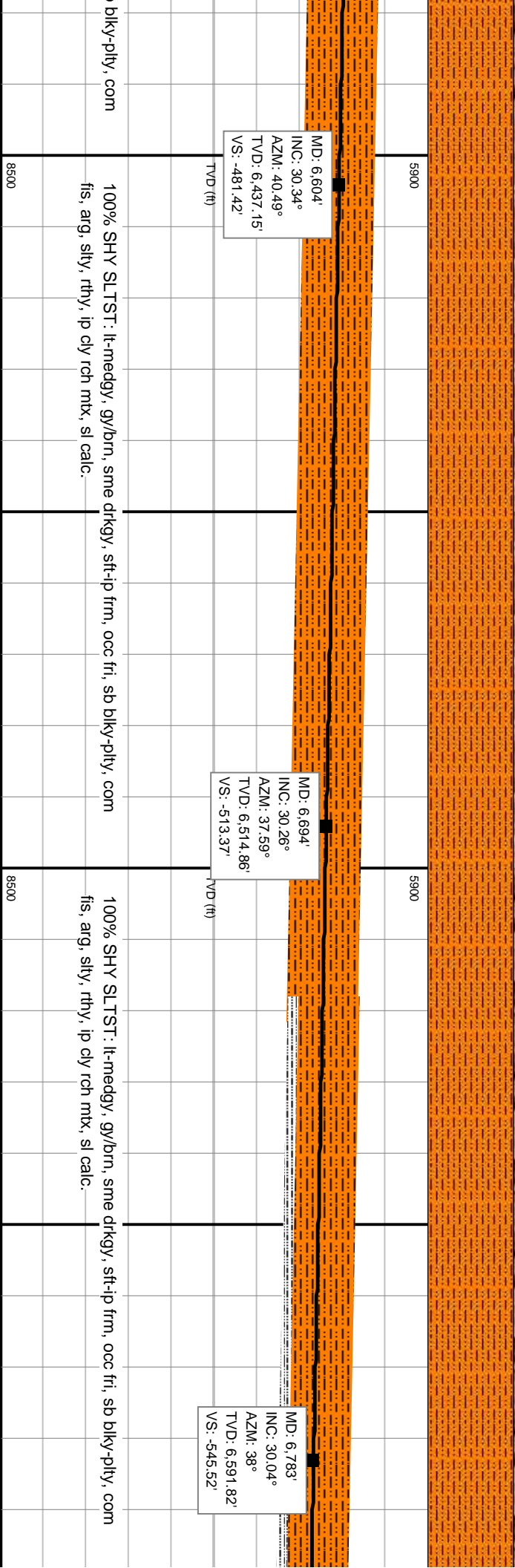
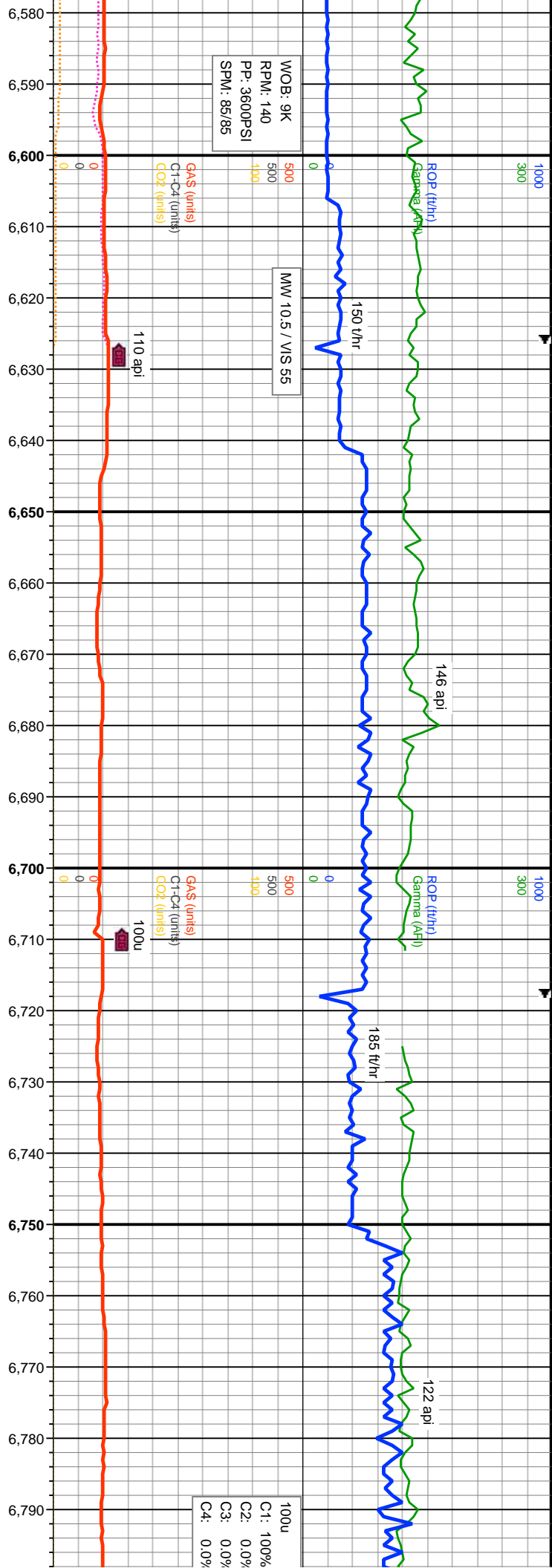
TVD (ft)

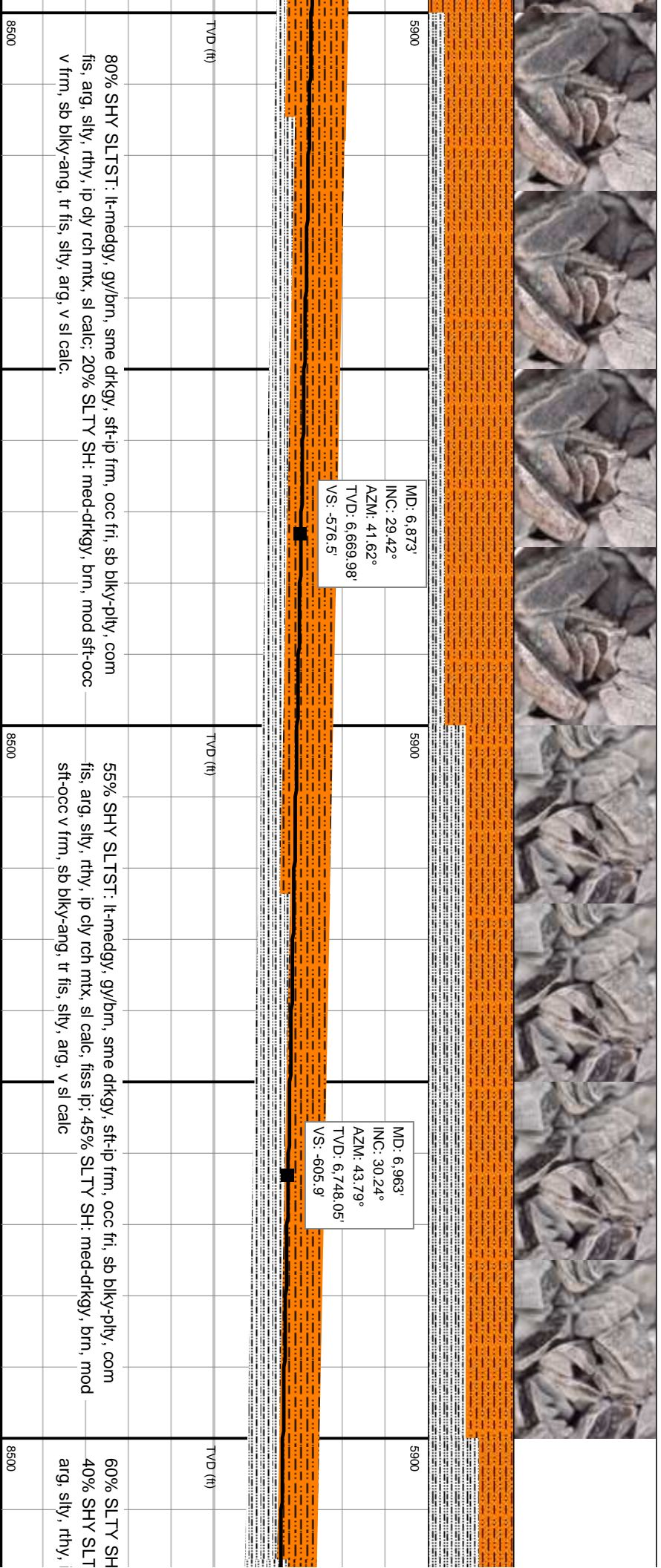
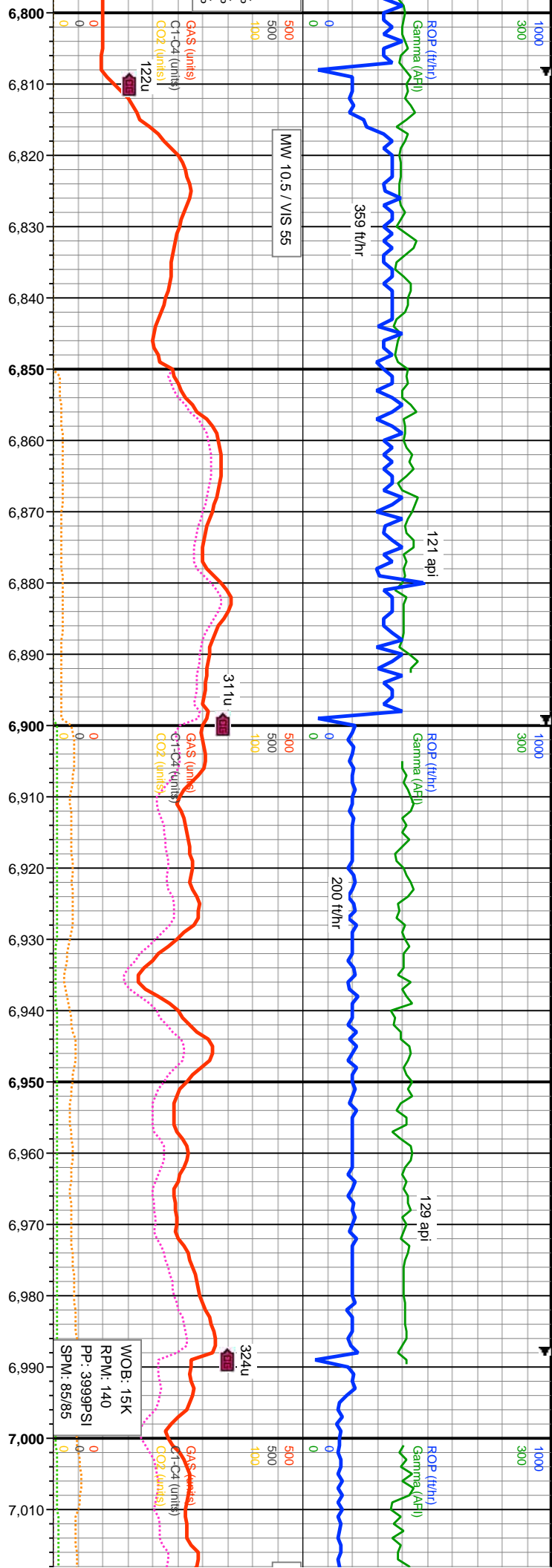
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fis, arg, silty, rthy, ip cly rch mt, sl calc.

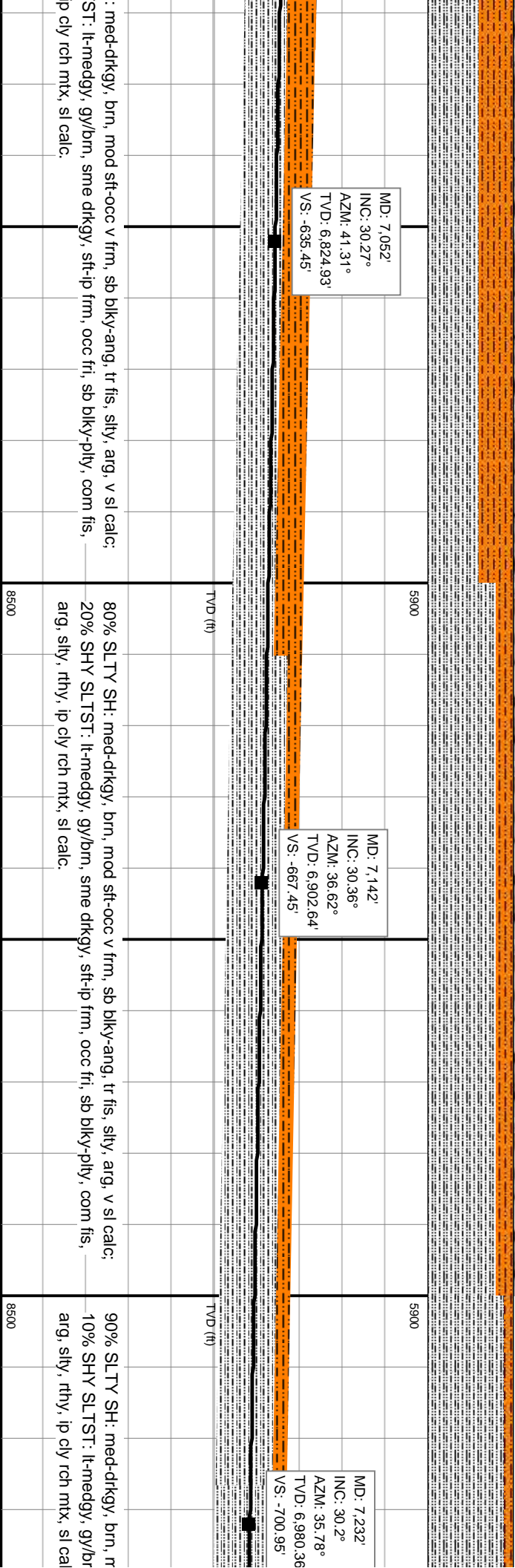
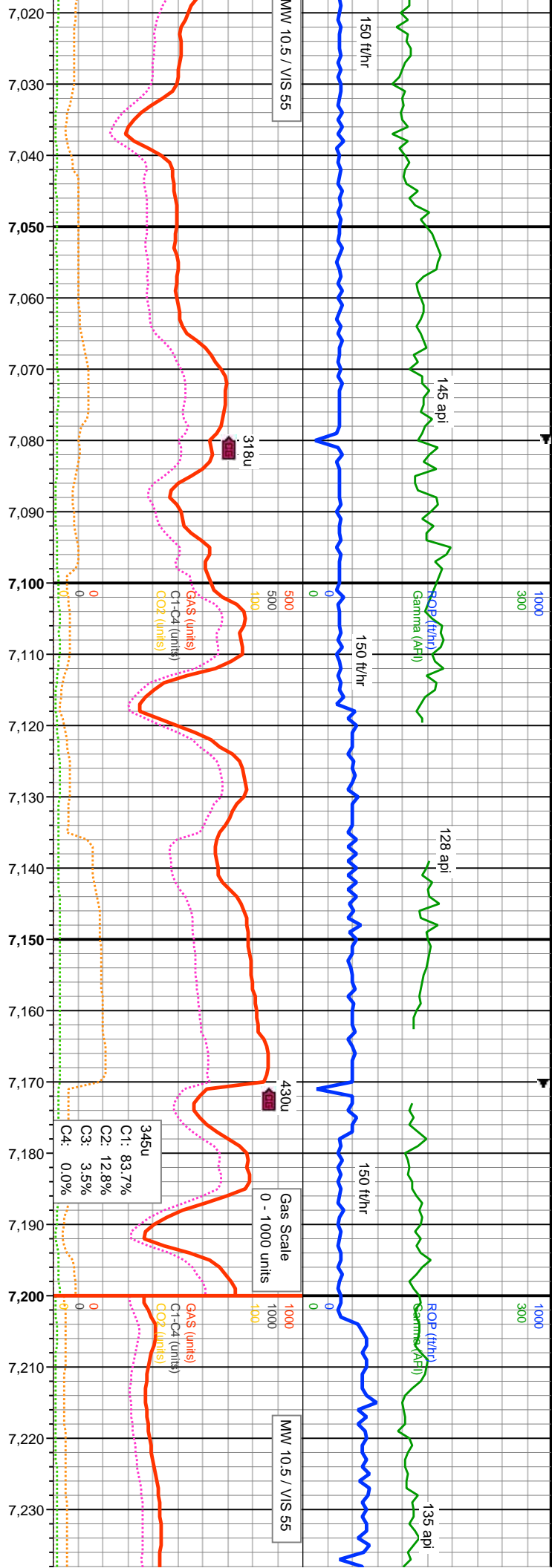
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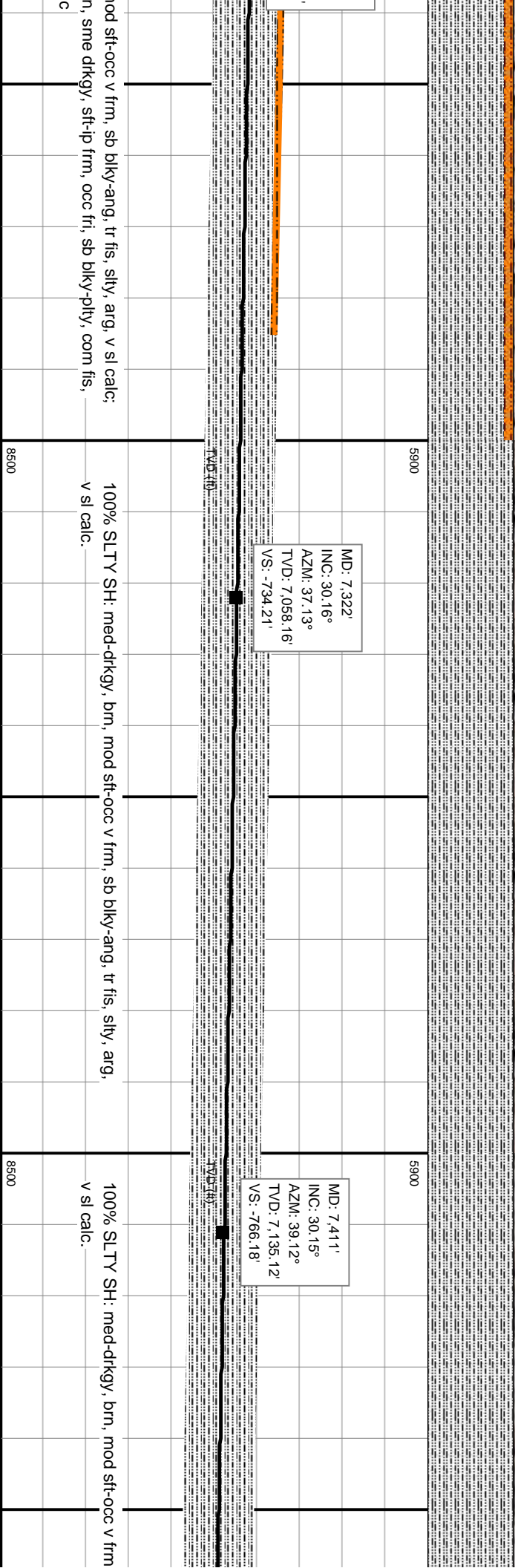
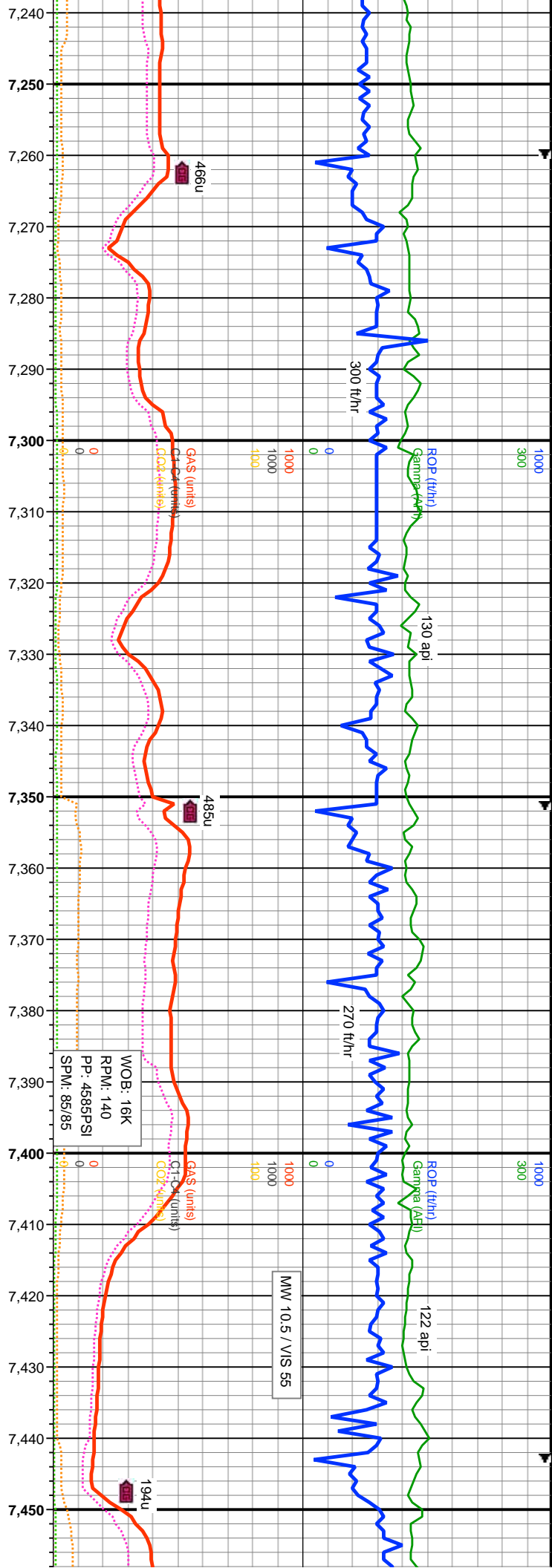
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fis, arg, silty, rthy, ip cly rch mt, sl calc.

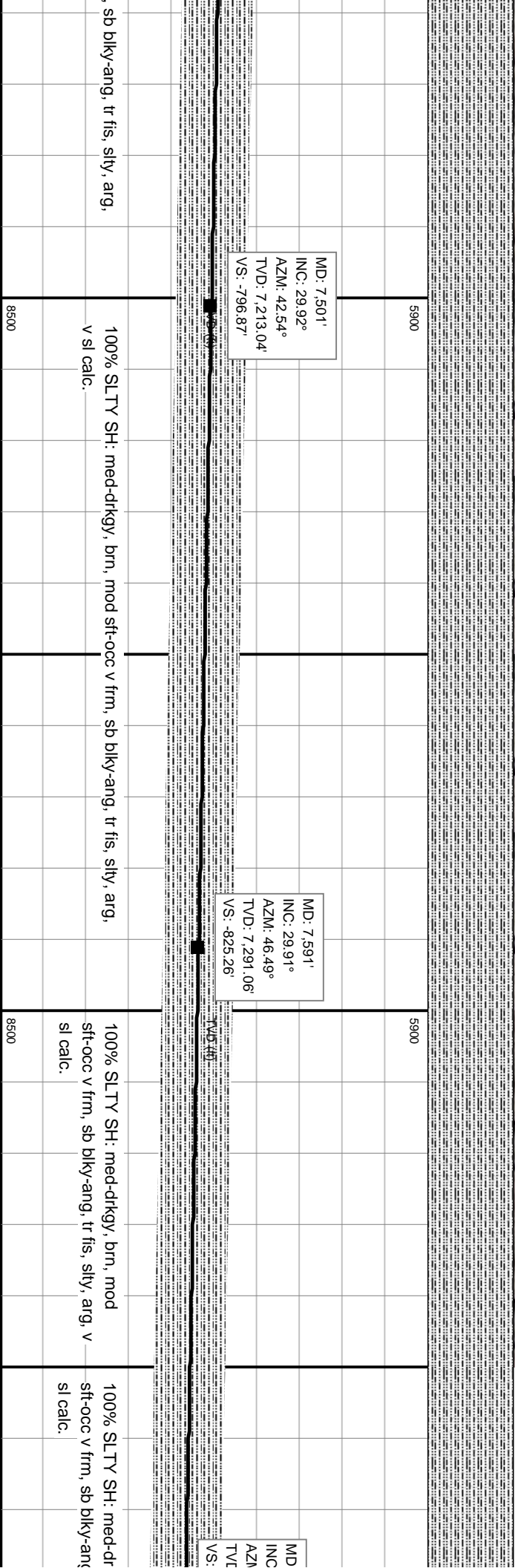
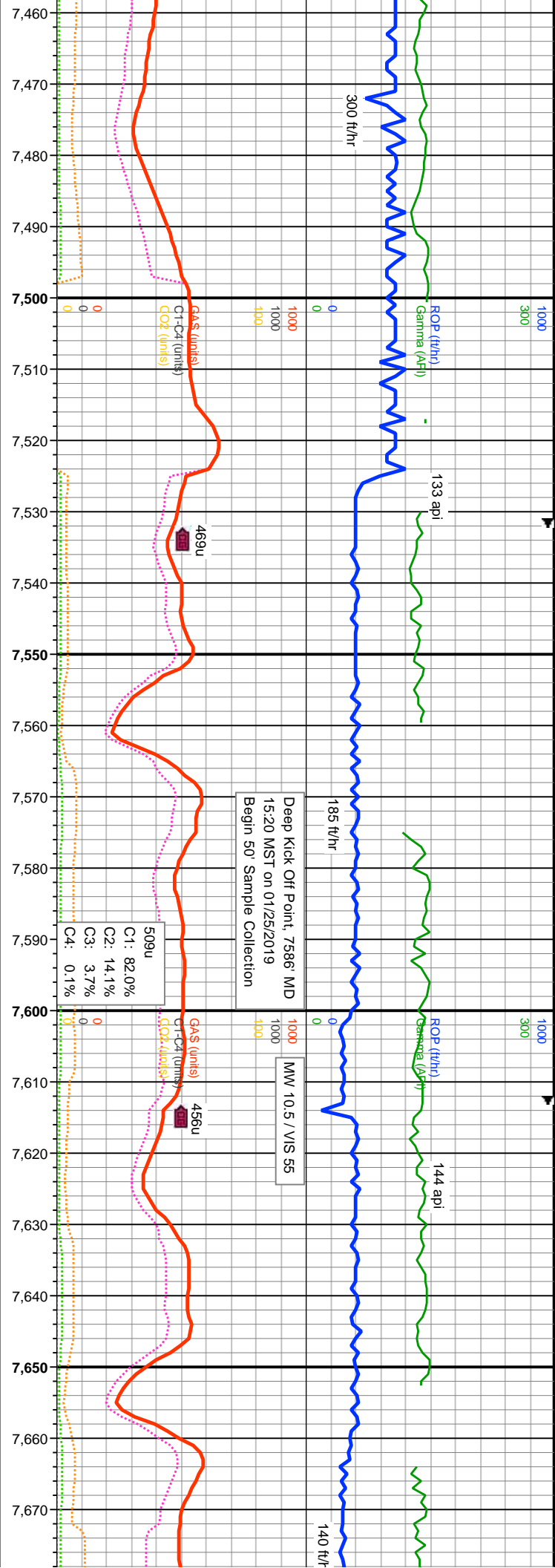


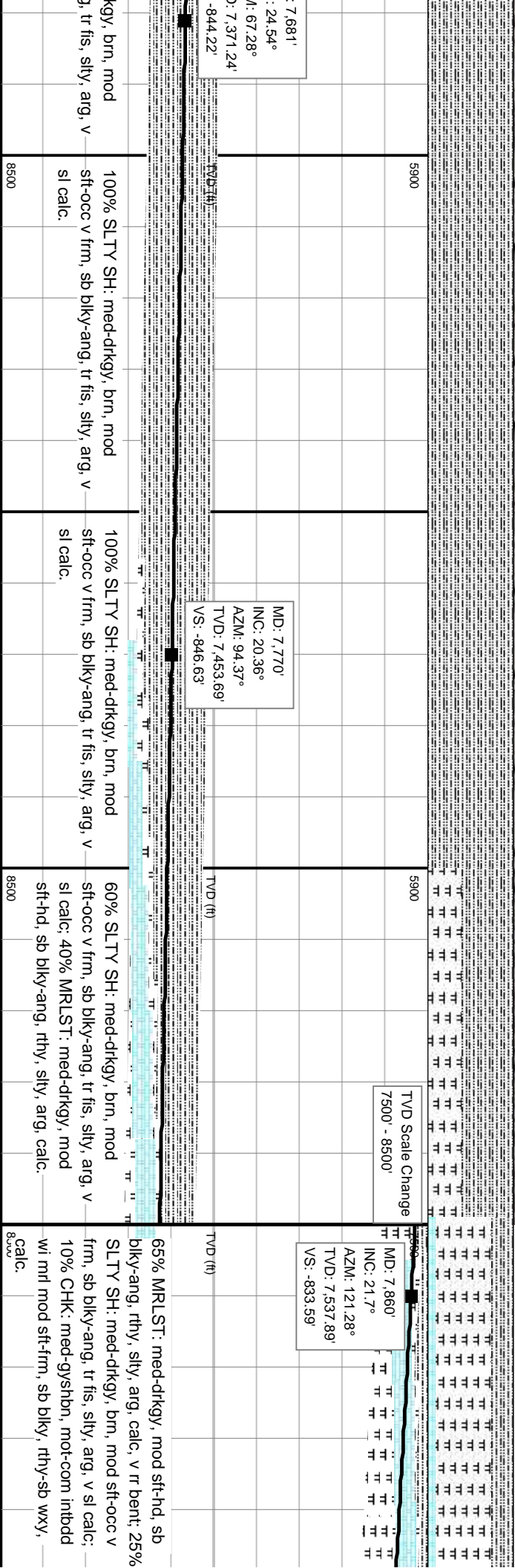
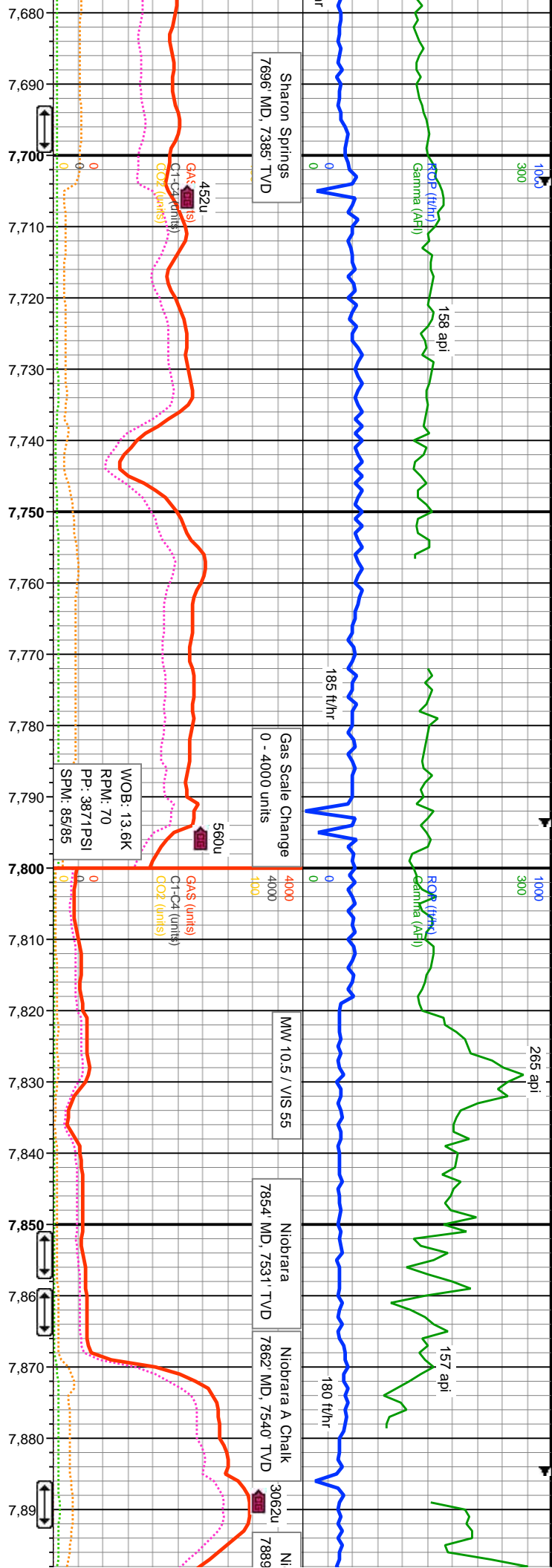


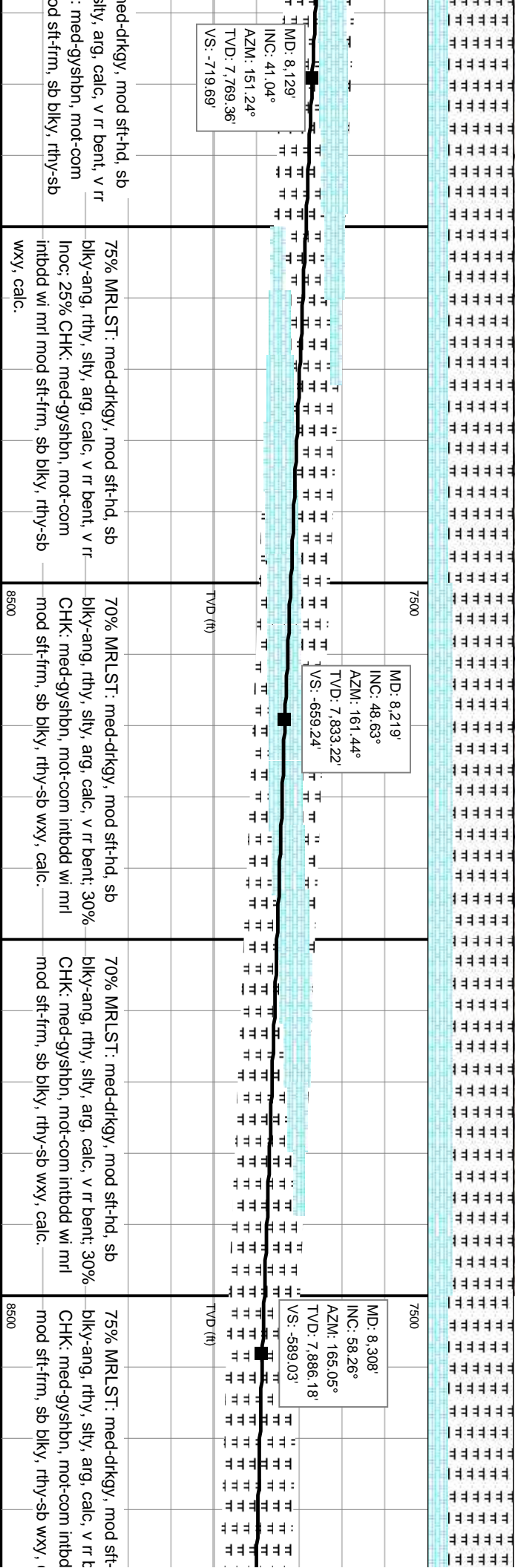
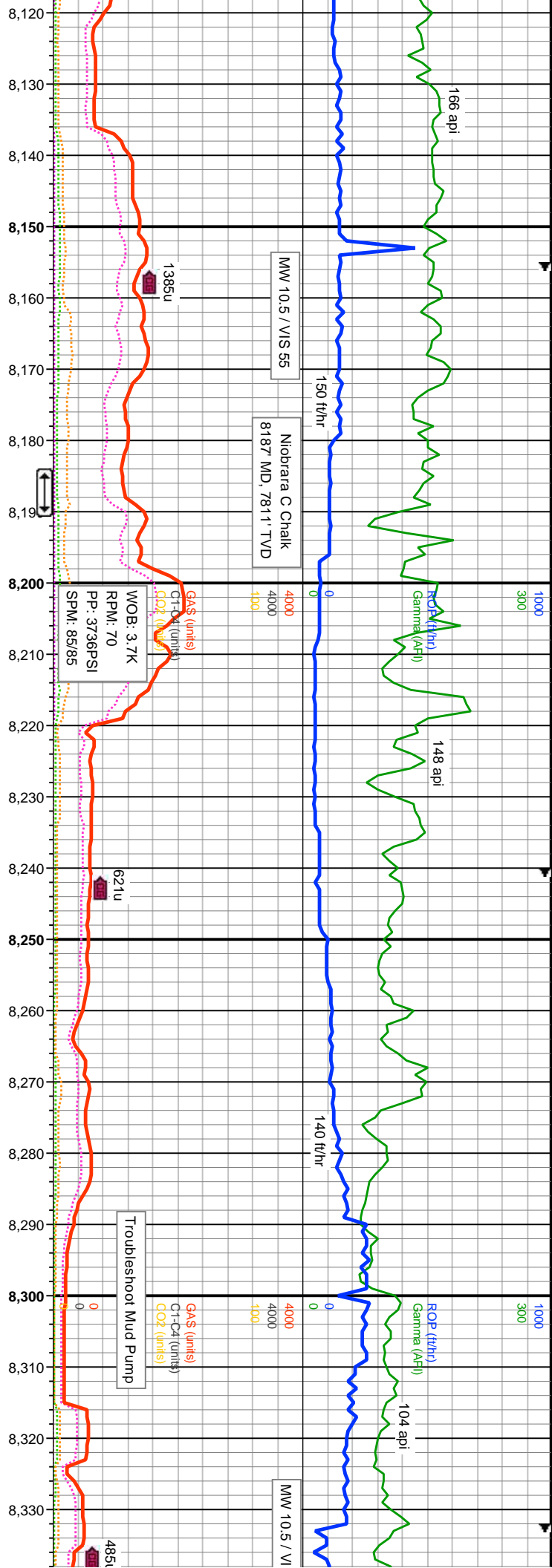


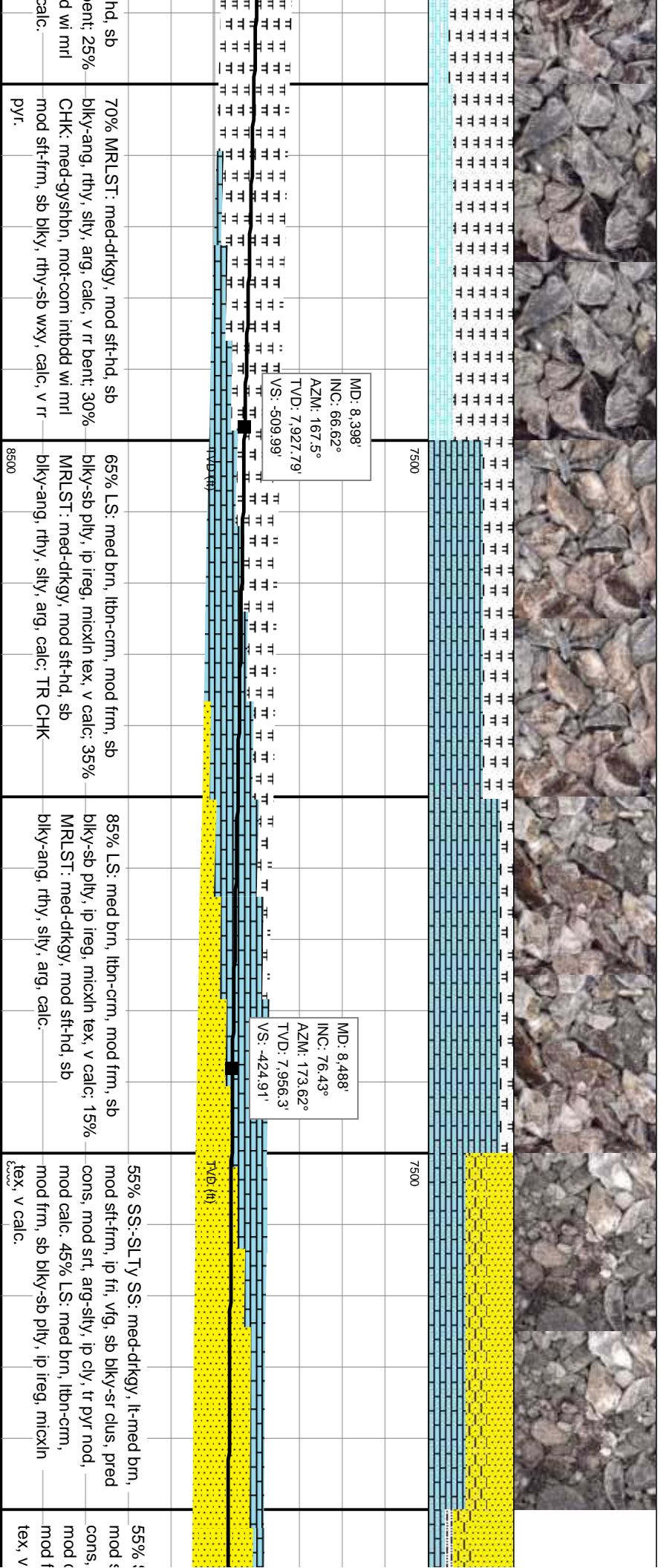
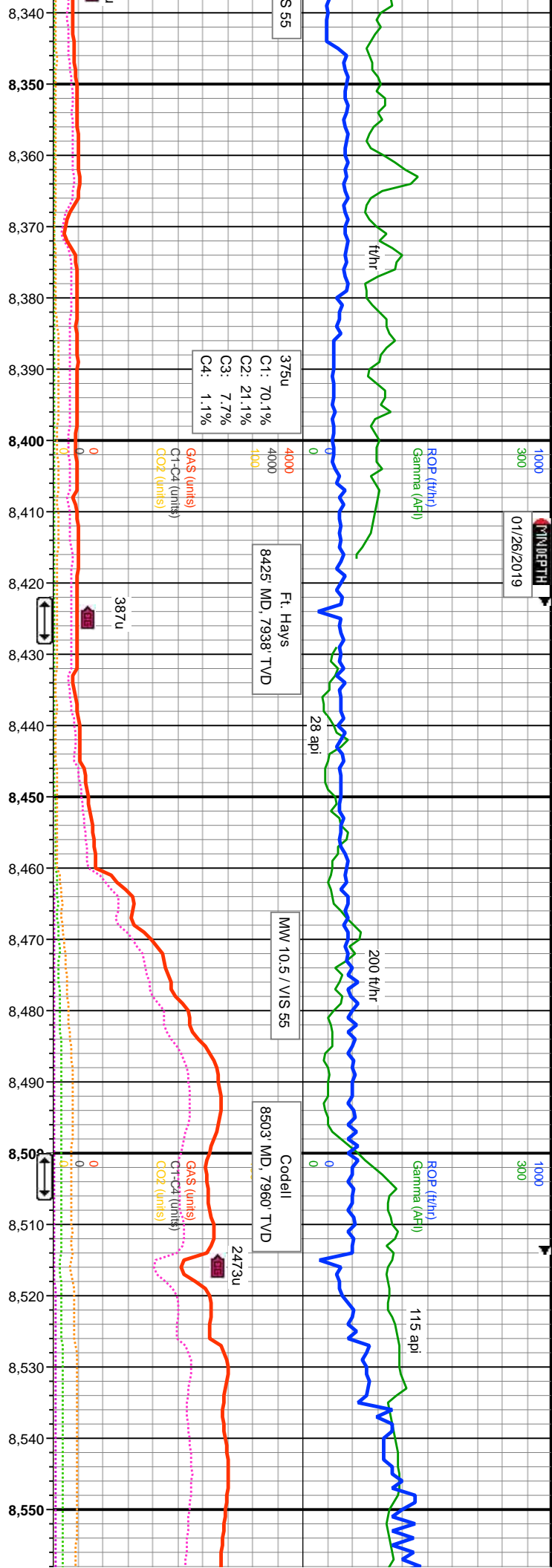


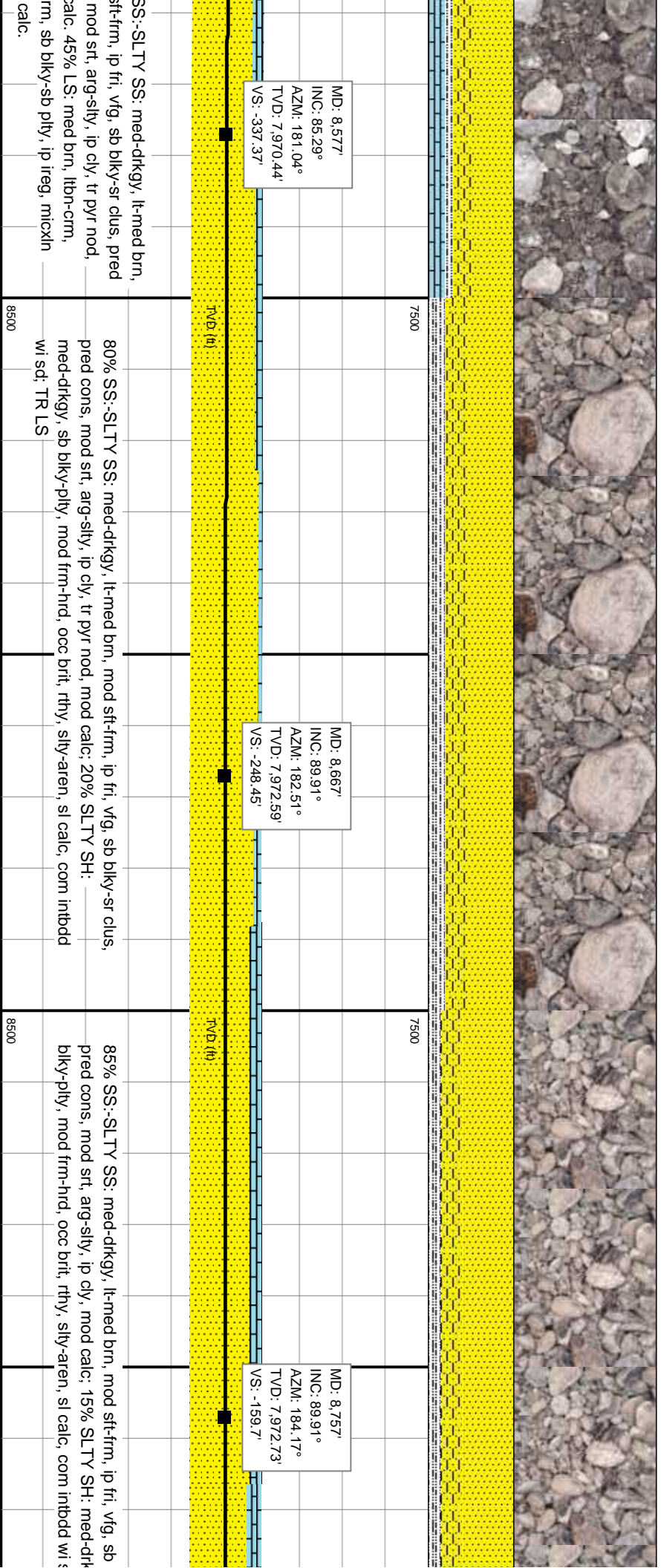
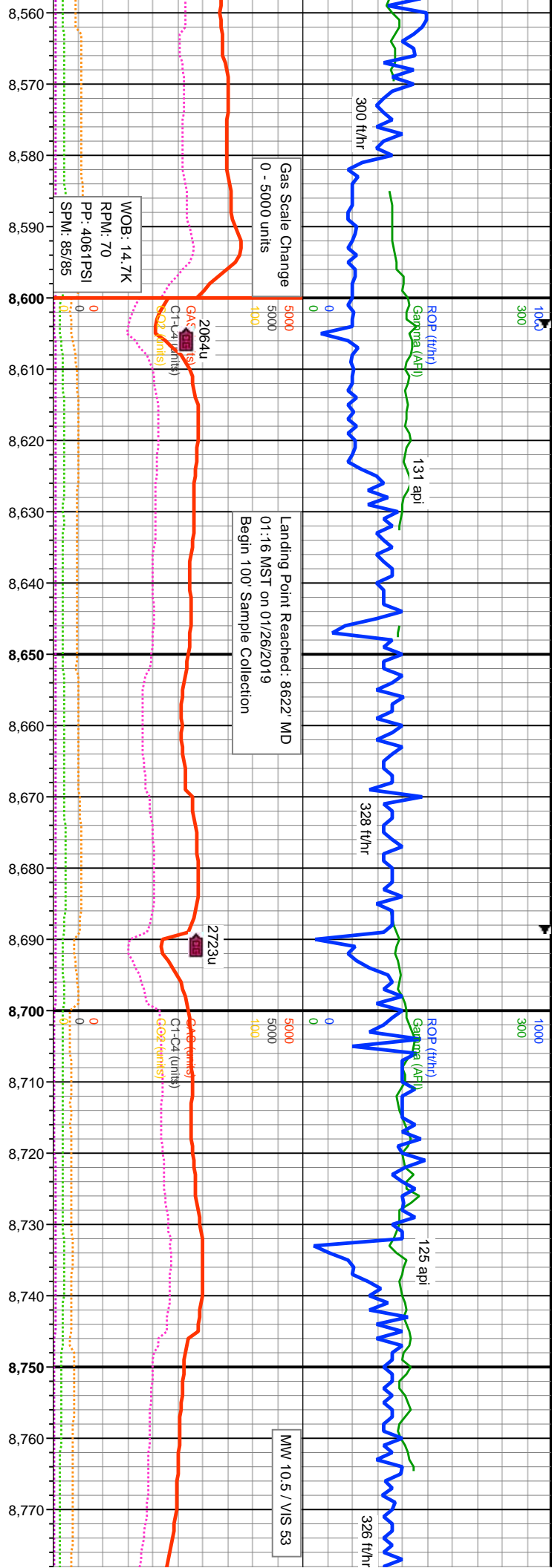


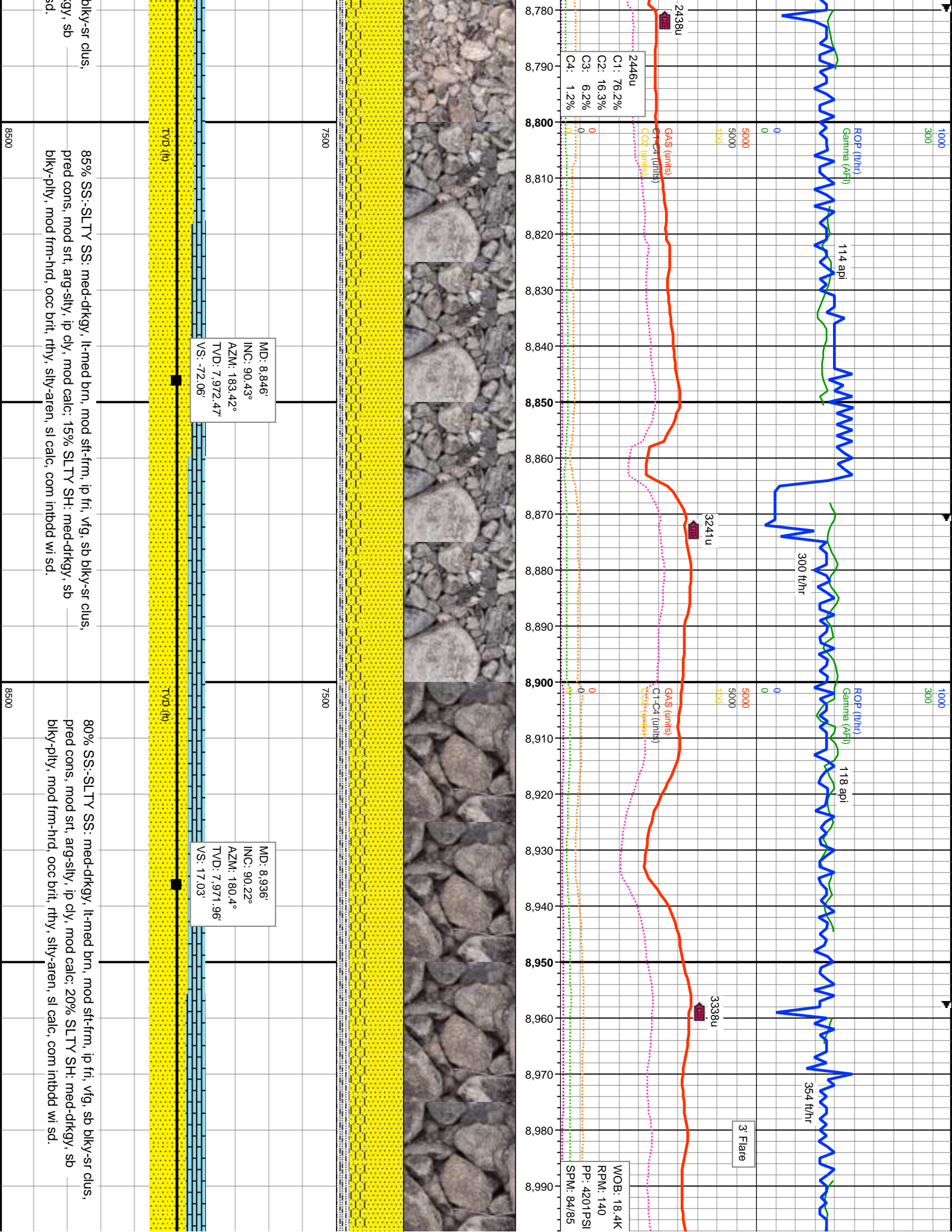


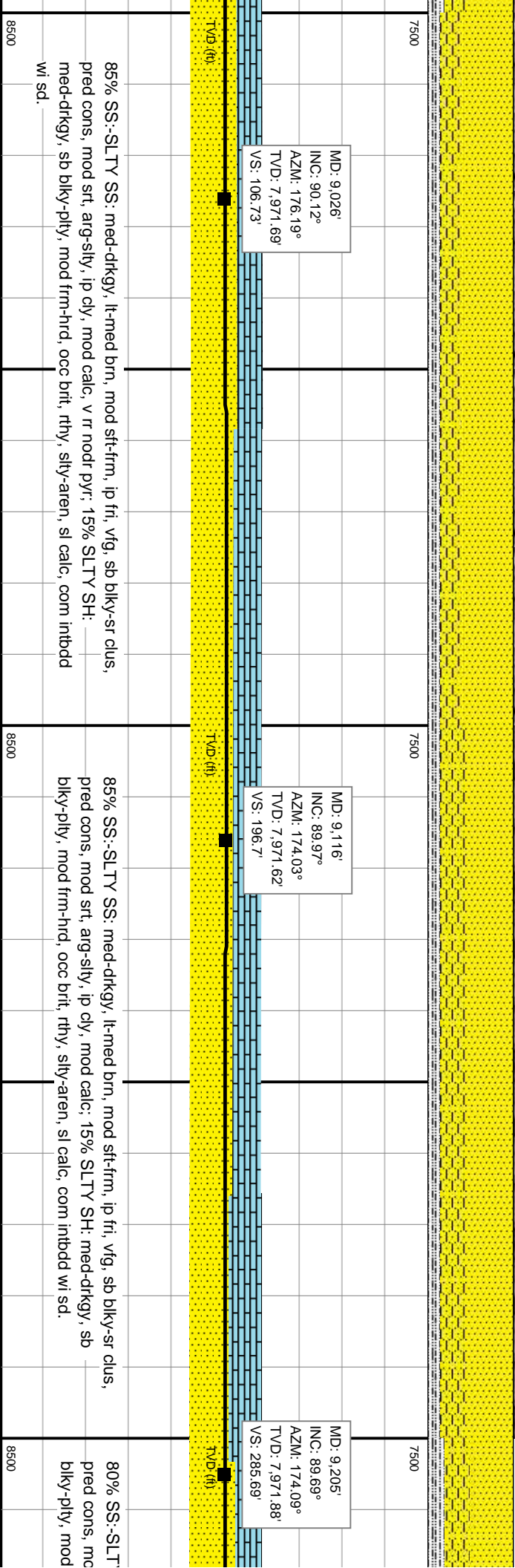
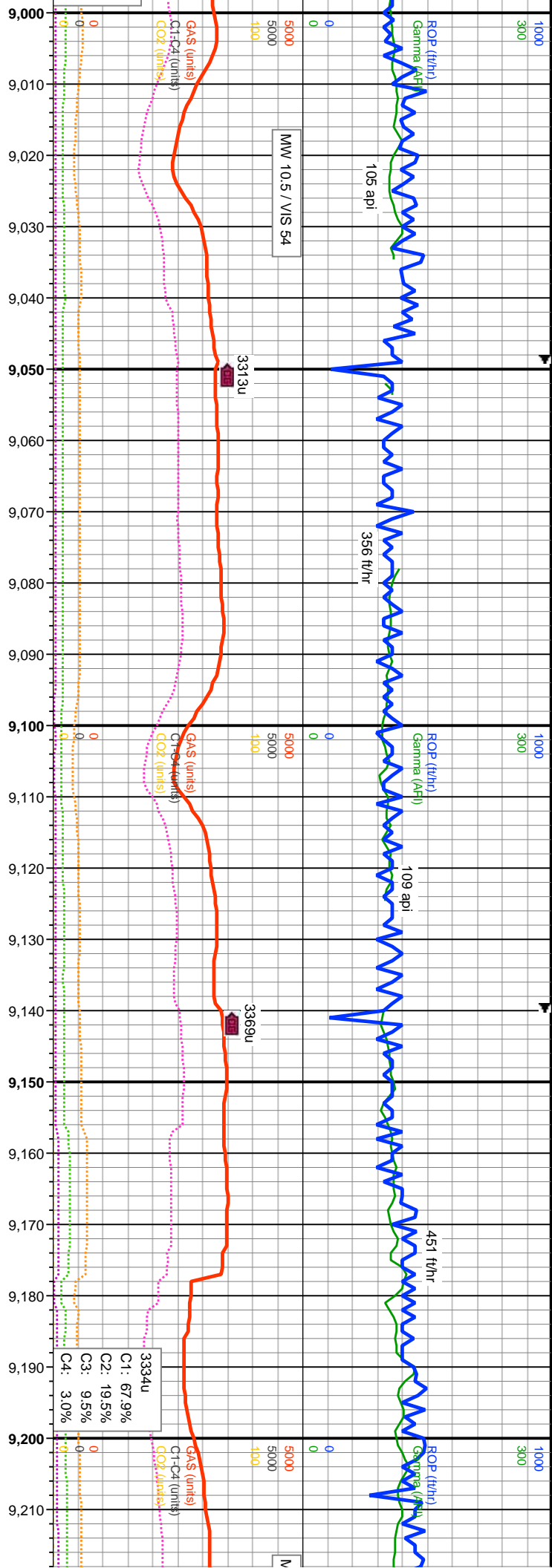


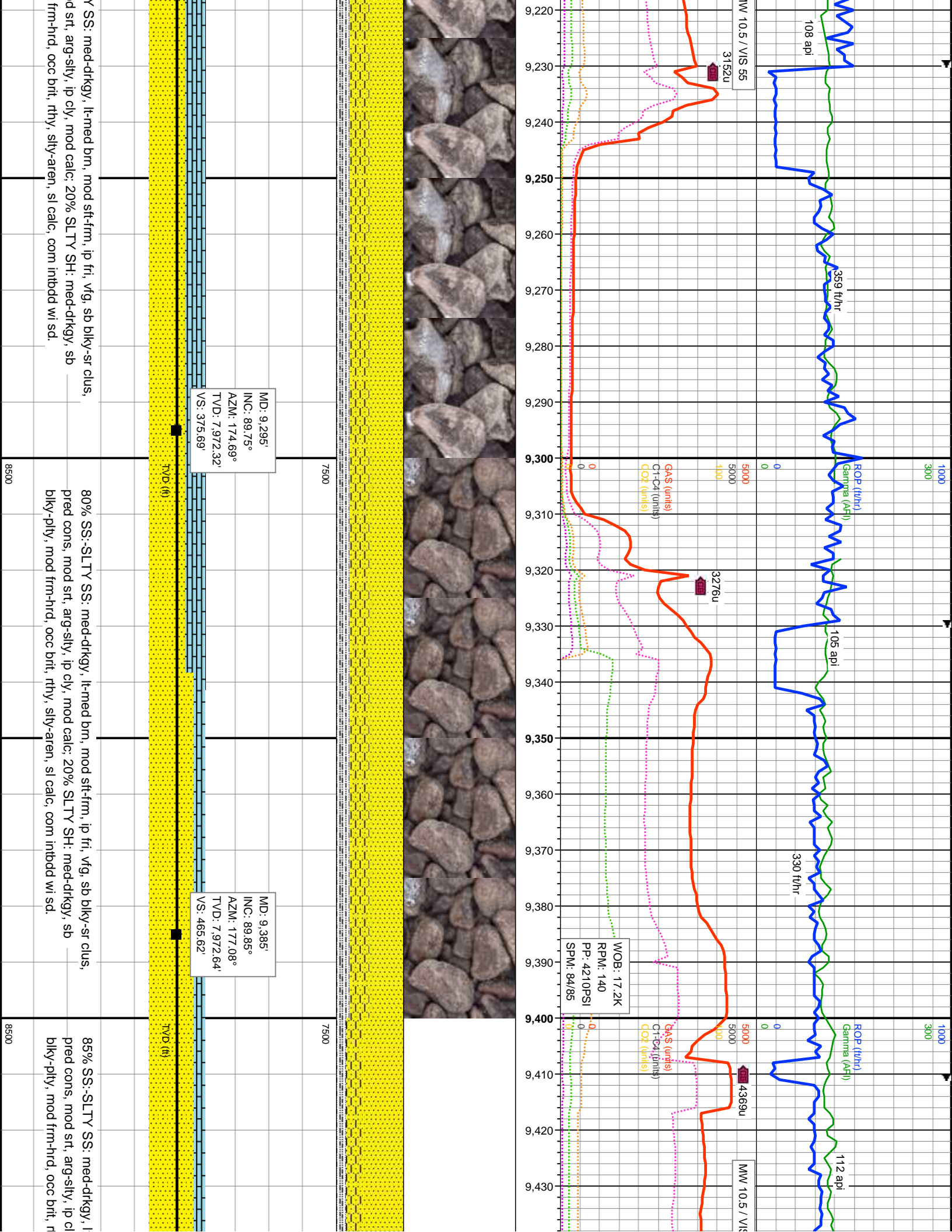


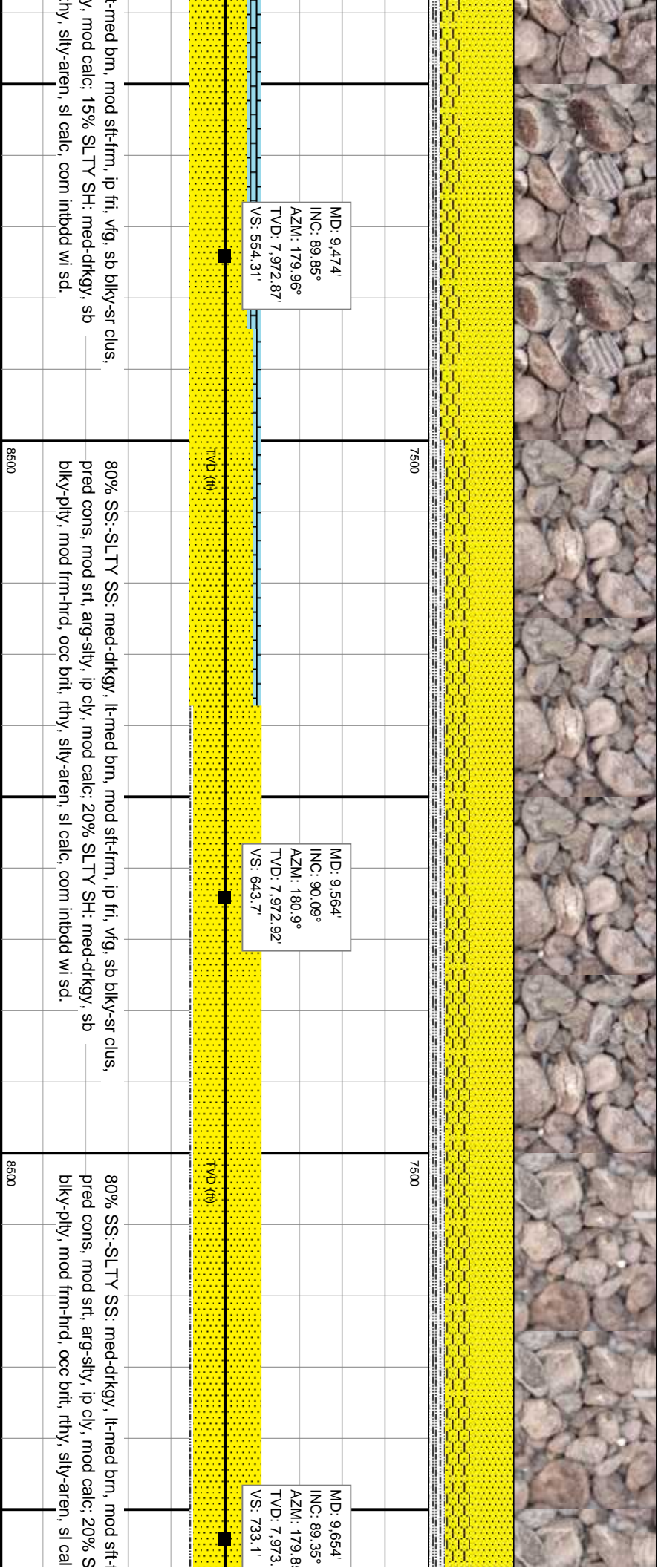
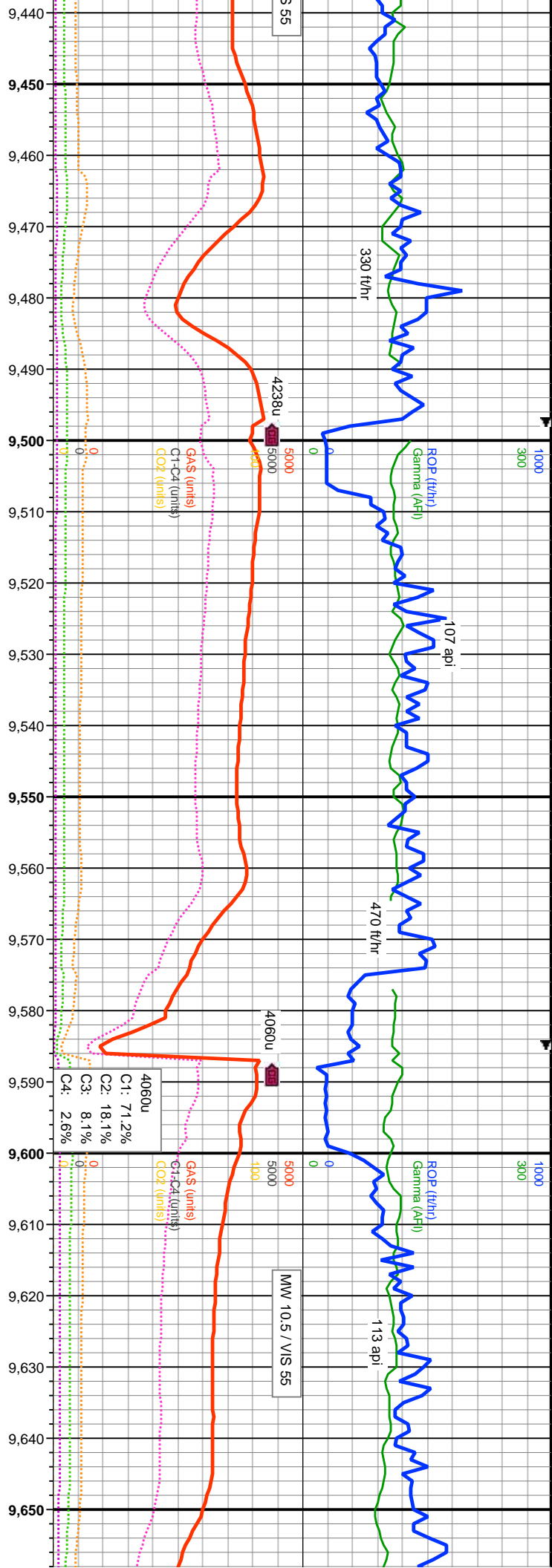


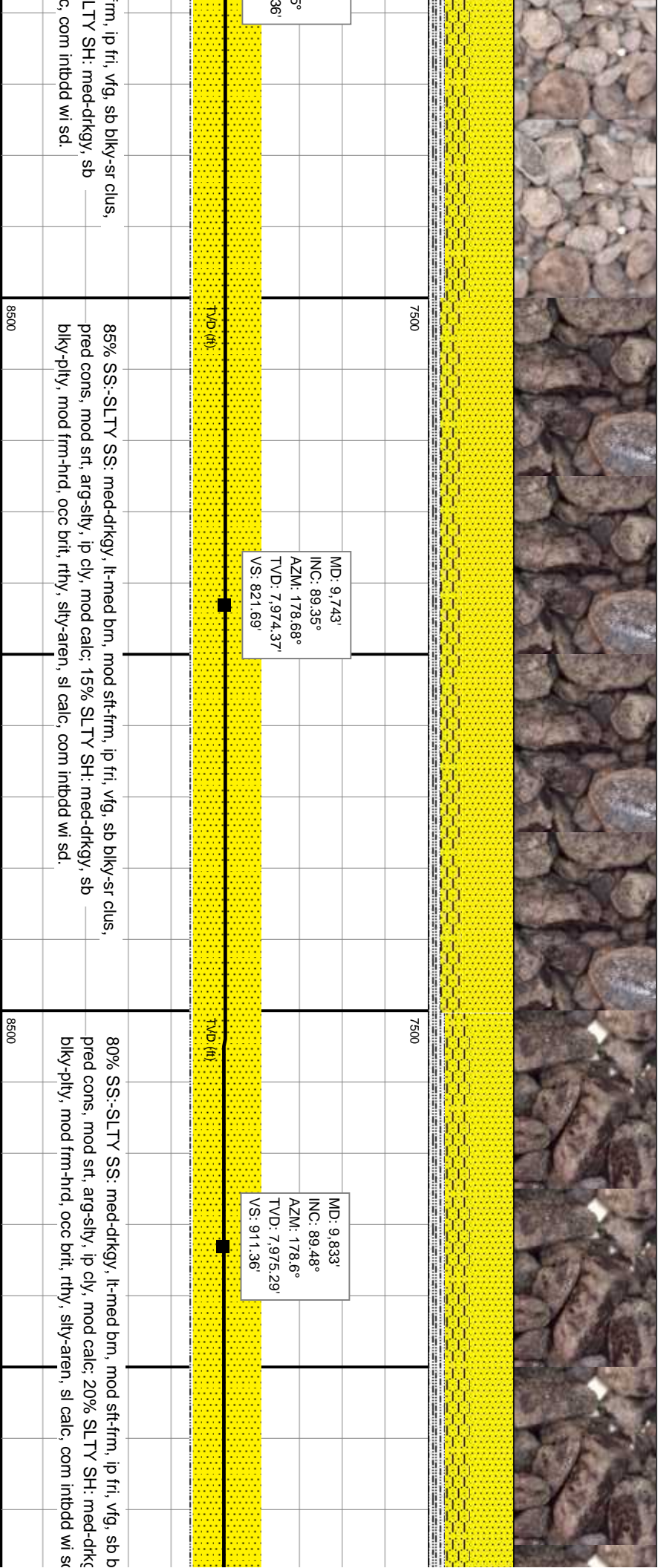
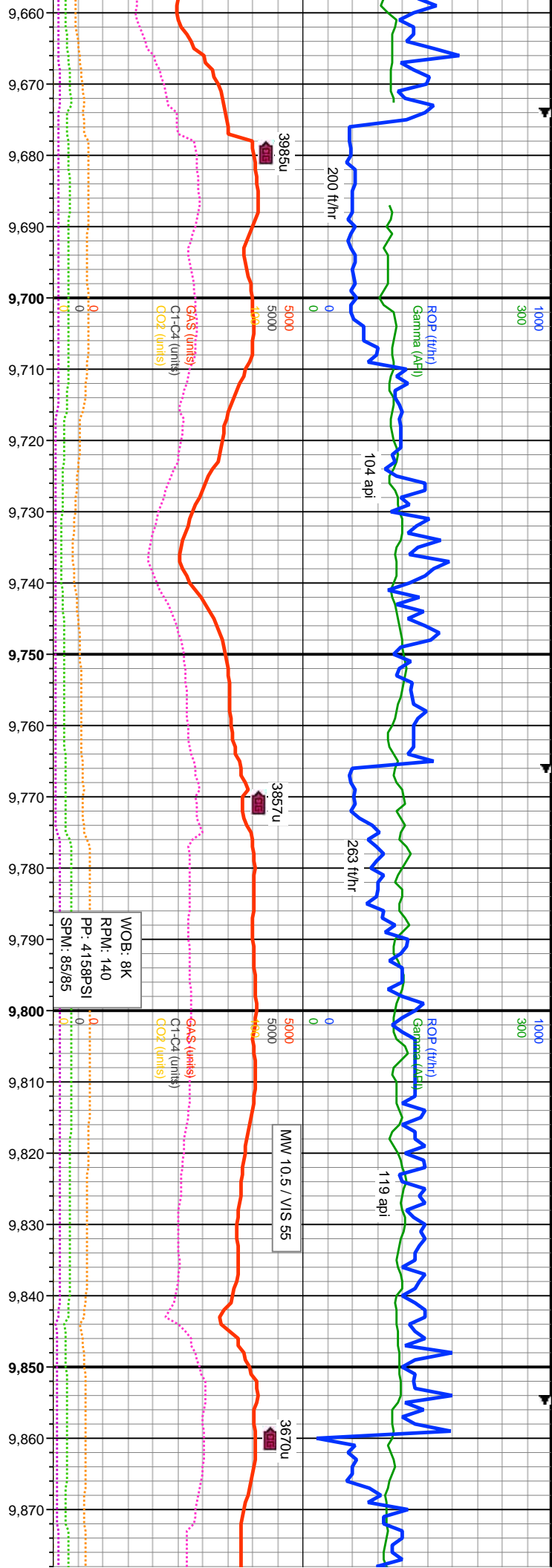


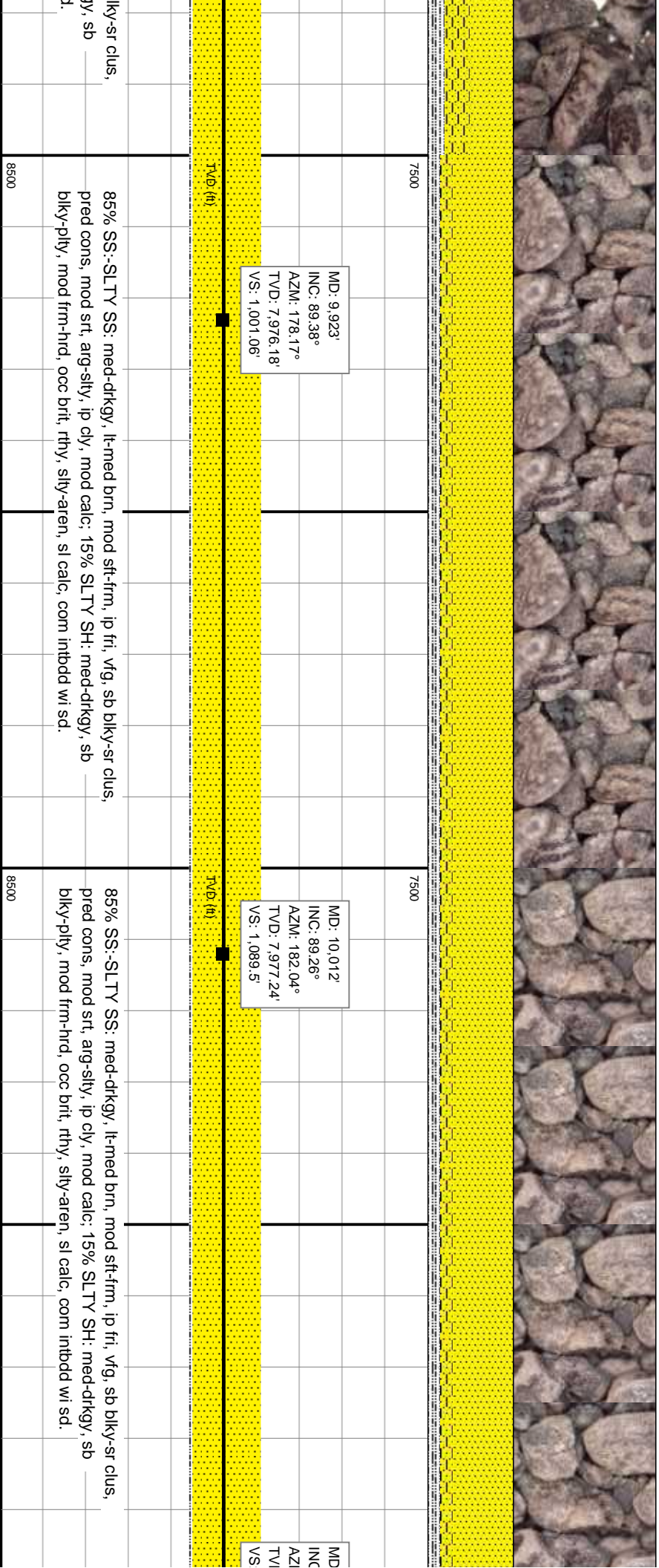
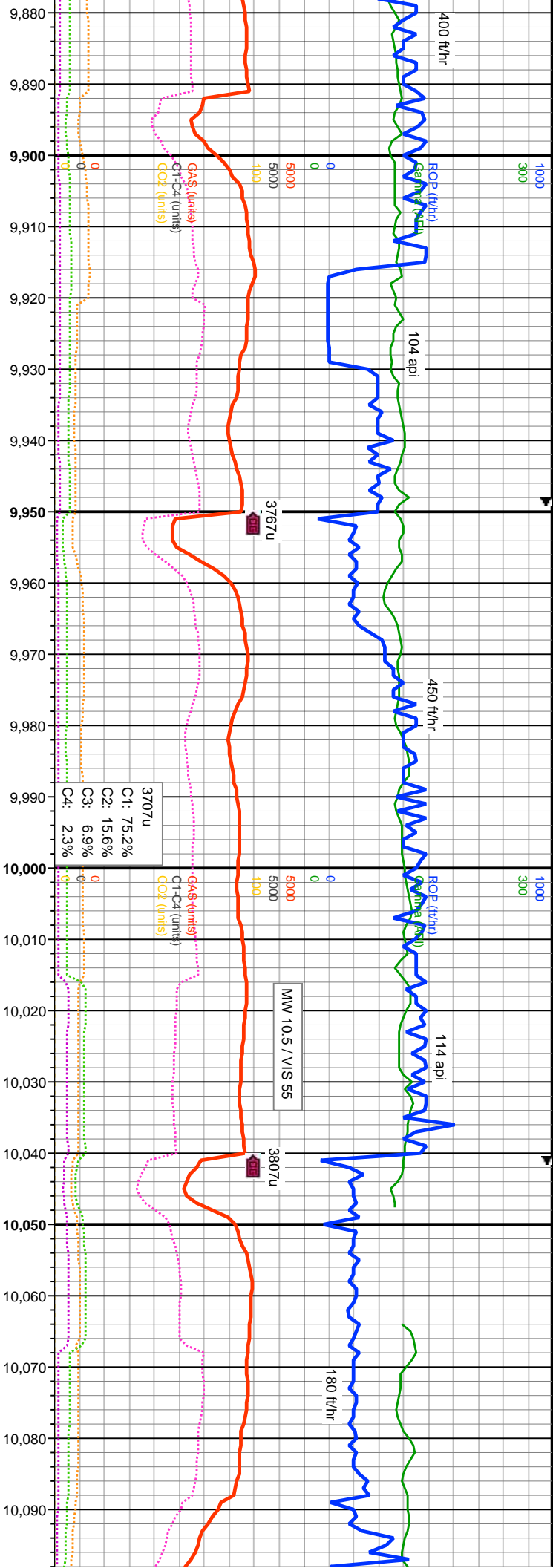


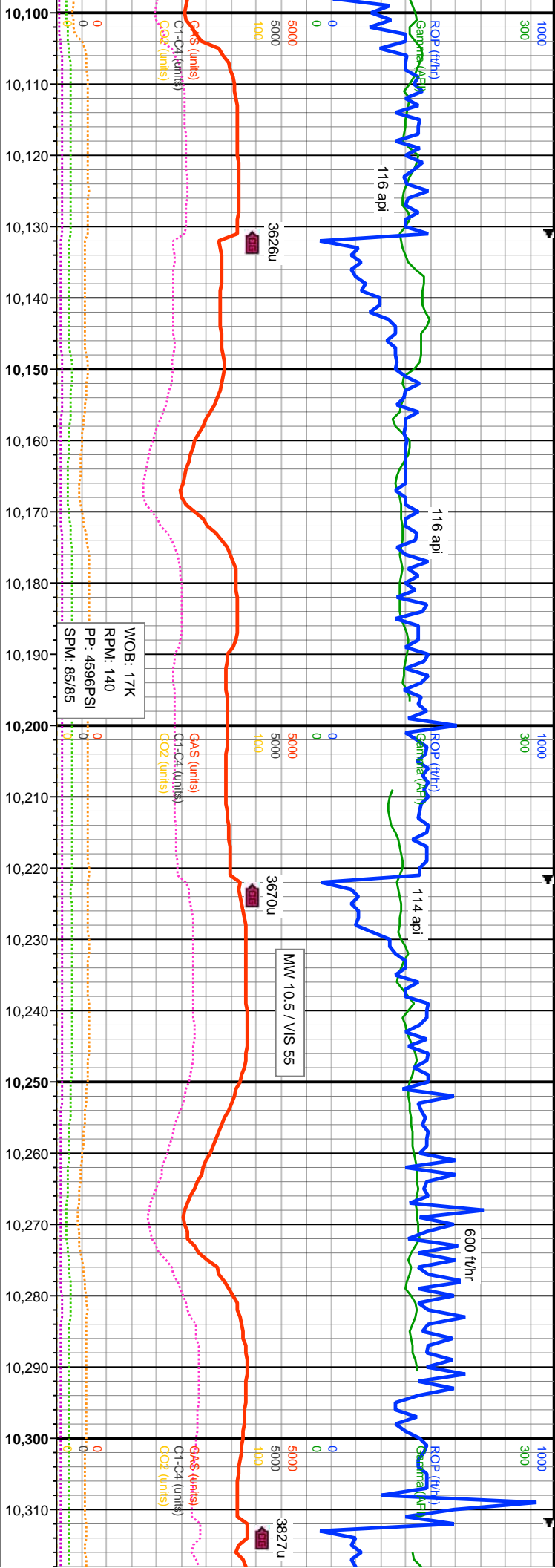




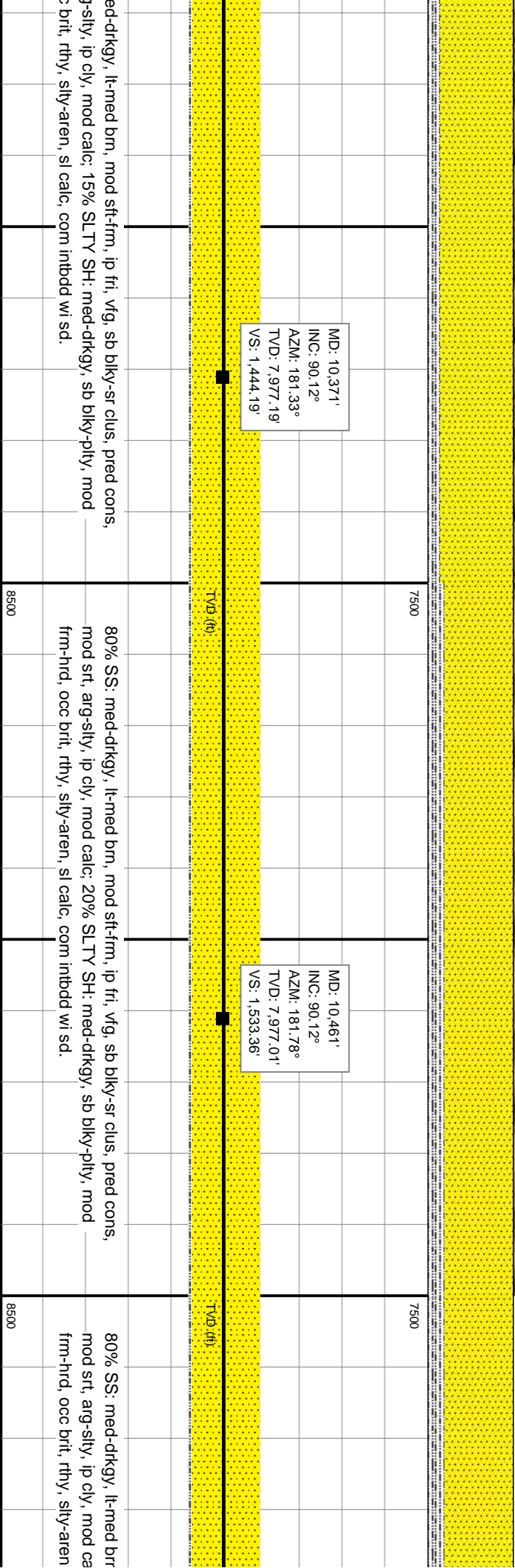
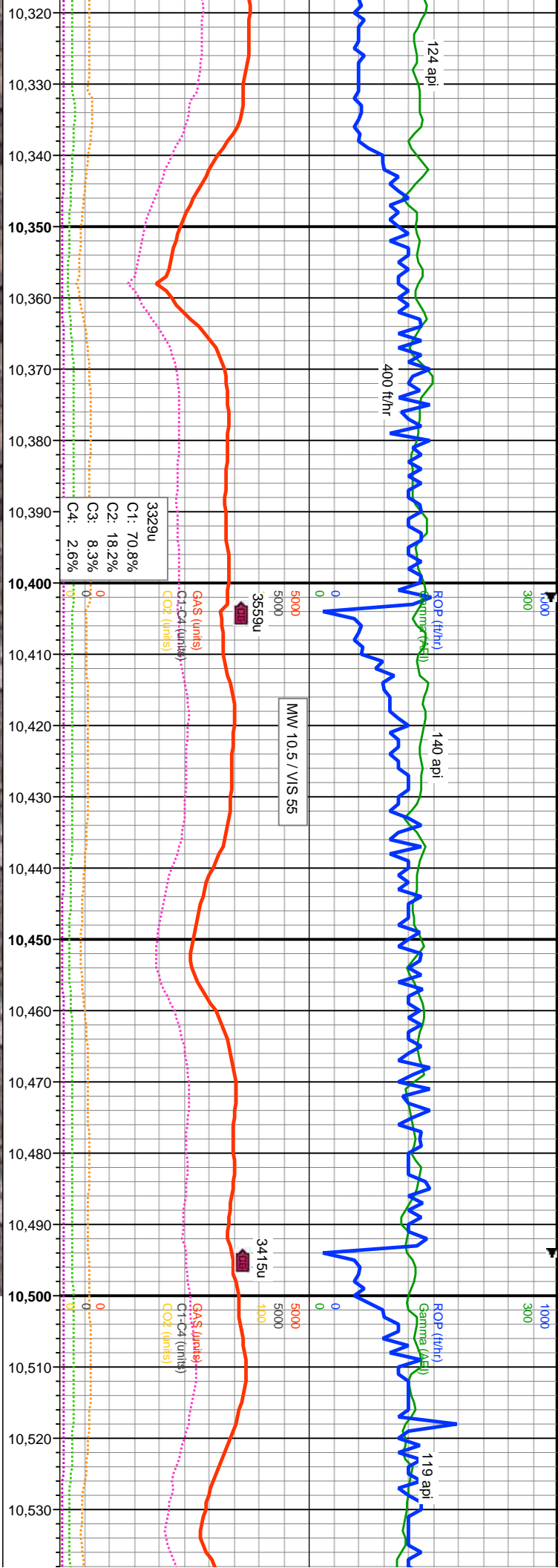


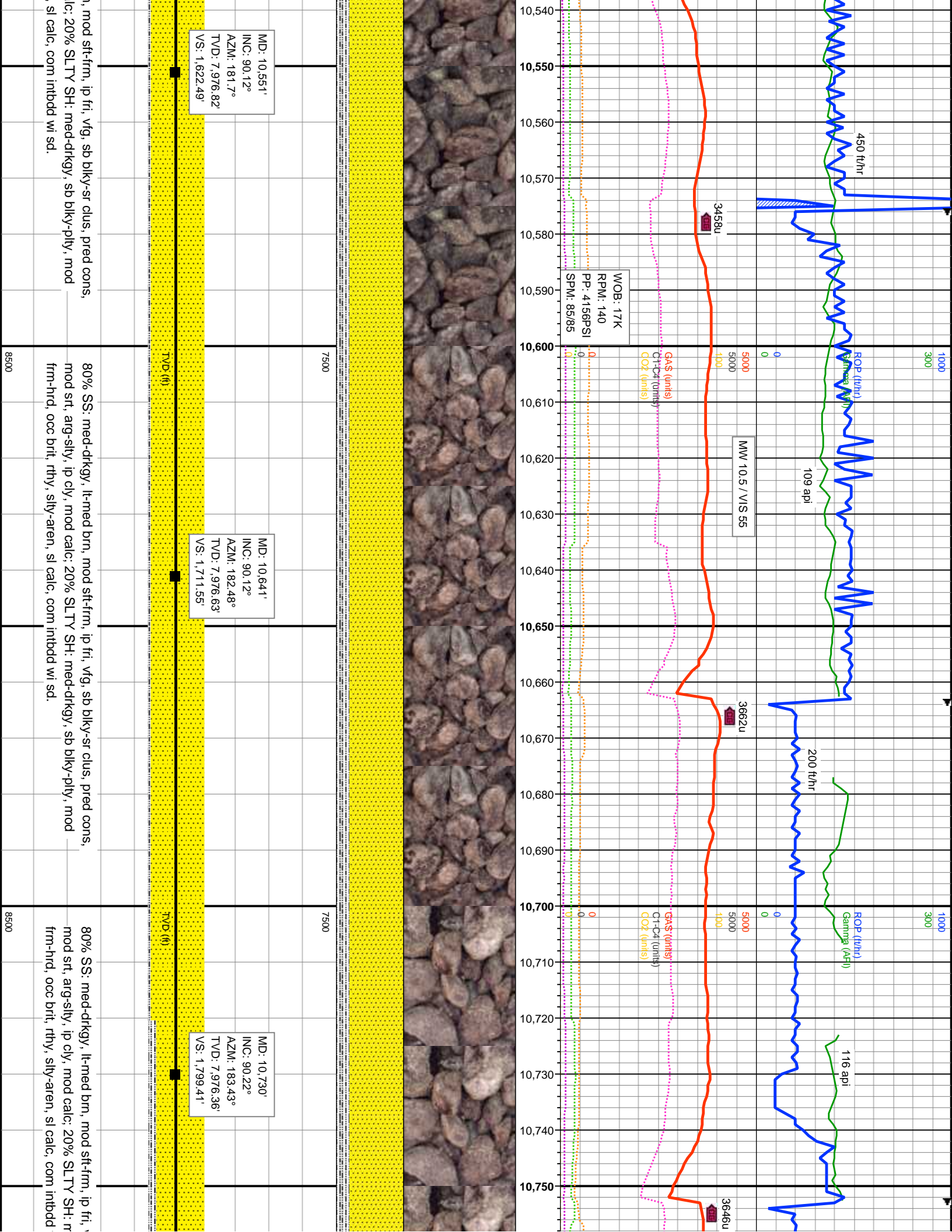


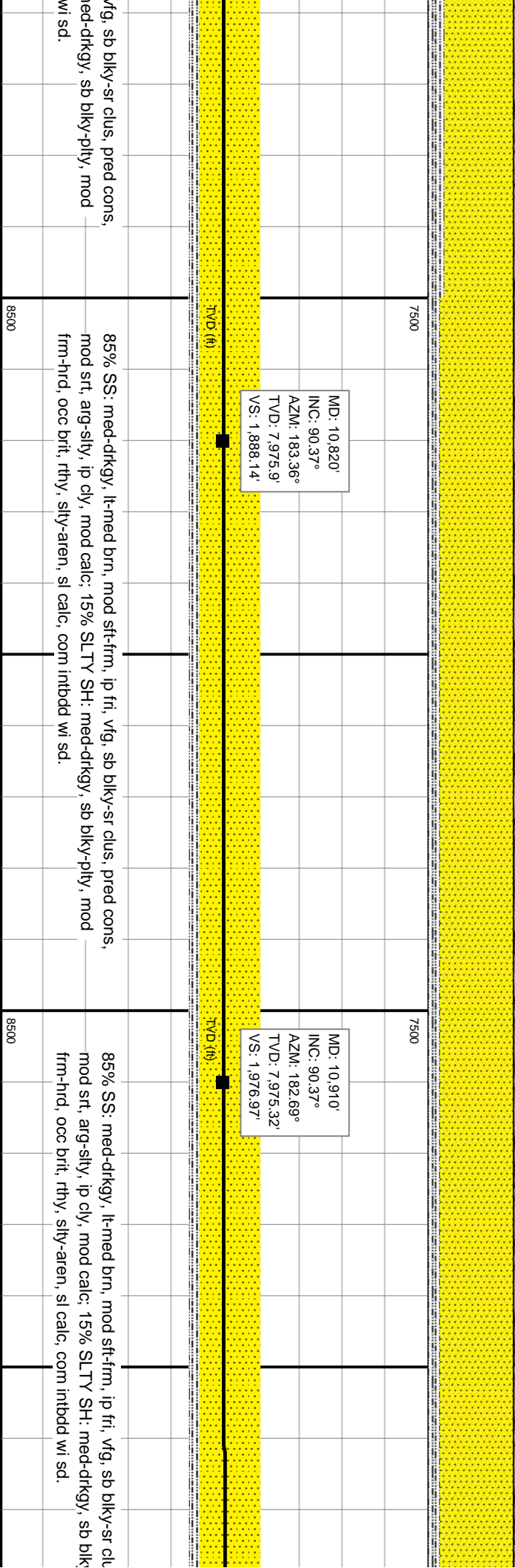
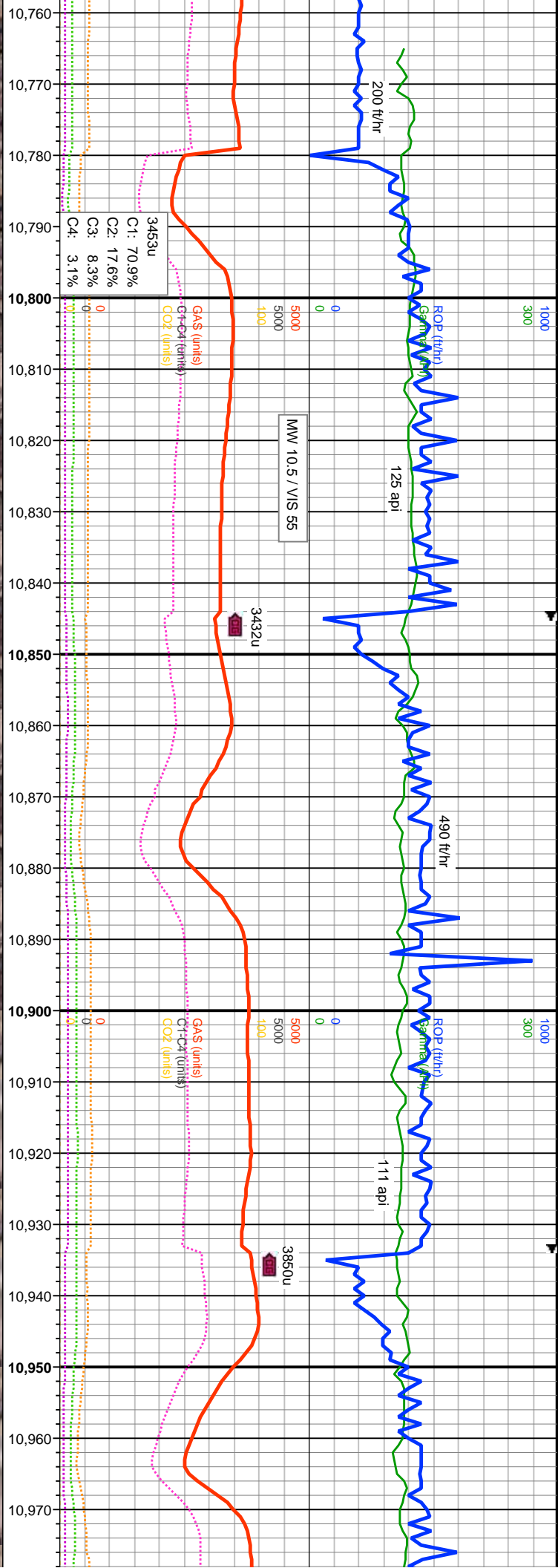




	TVD (ft)	TVD (ft)	TVD (ft)
7500	<div>MD: 10,102'</div> <div>INC: 89.97°</div> <div>AZM: 184.64°</div> <div>TVD: 7,977.84'</div> <div>VS: 1,178.24'</div>	<div>MD: 10,192'</div> <div>INC: 90.25°</div> <div>AZM: 183.39°</div> <div>TVD: 7,977.67'</div> <div>VS: 1,266.8'</div>	7500
8500	85% SS; med-drkgy, lt-med brn, mod sft-frn, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc; 15% SLTY SH: med-drkgy, sb blk-y-pily, mod frn-hrd, occ brit, rthy, silty-aren, sl calc, com intbdd wi sd.	85% SS; med-drkgy, lt-med brn, mod sft-frn, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc; 15% SLTY SH: med-drkgy, sb blk-y-pily, mod frn-hrd, occ brit, rthy, silty-aren, sl calc, com intbdd wi sd.	8500
8500			8500



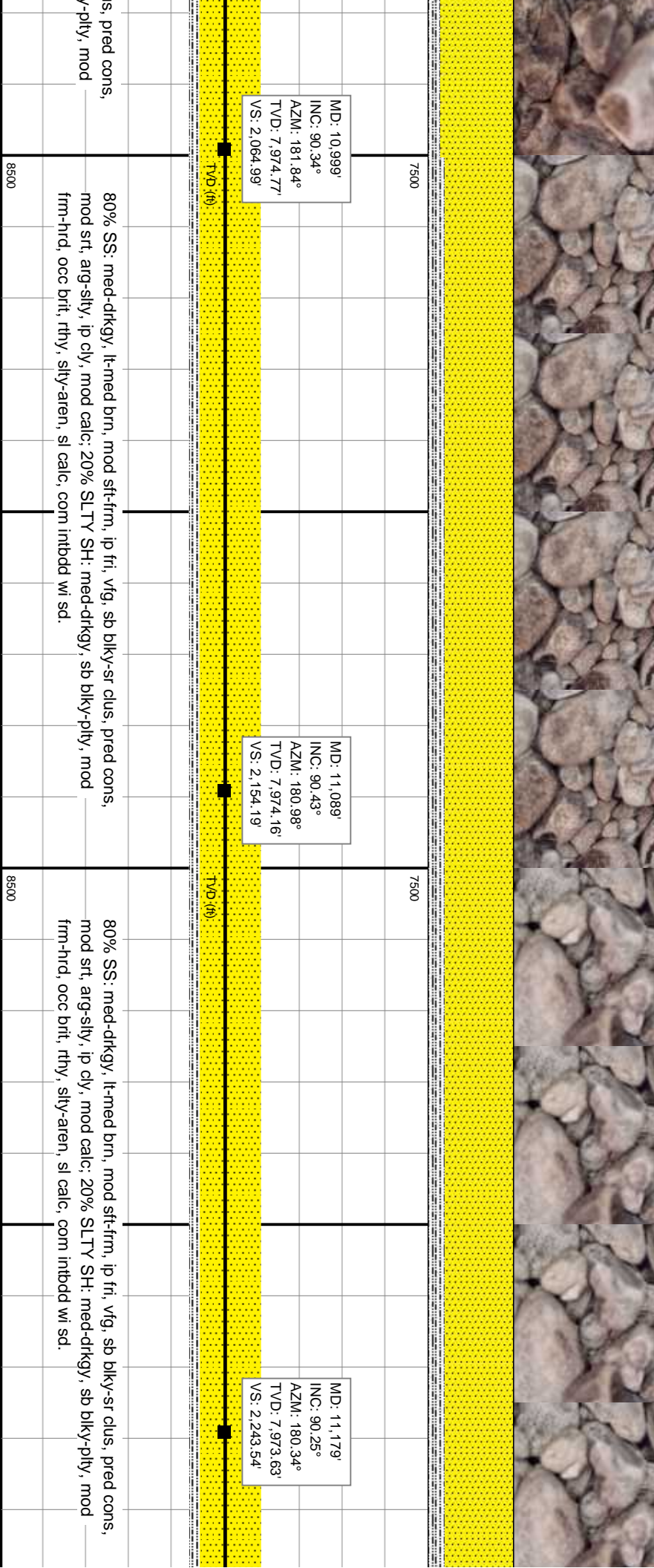
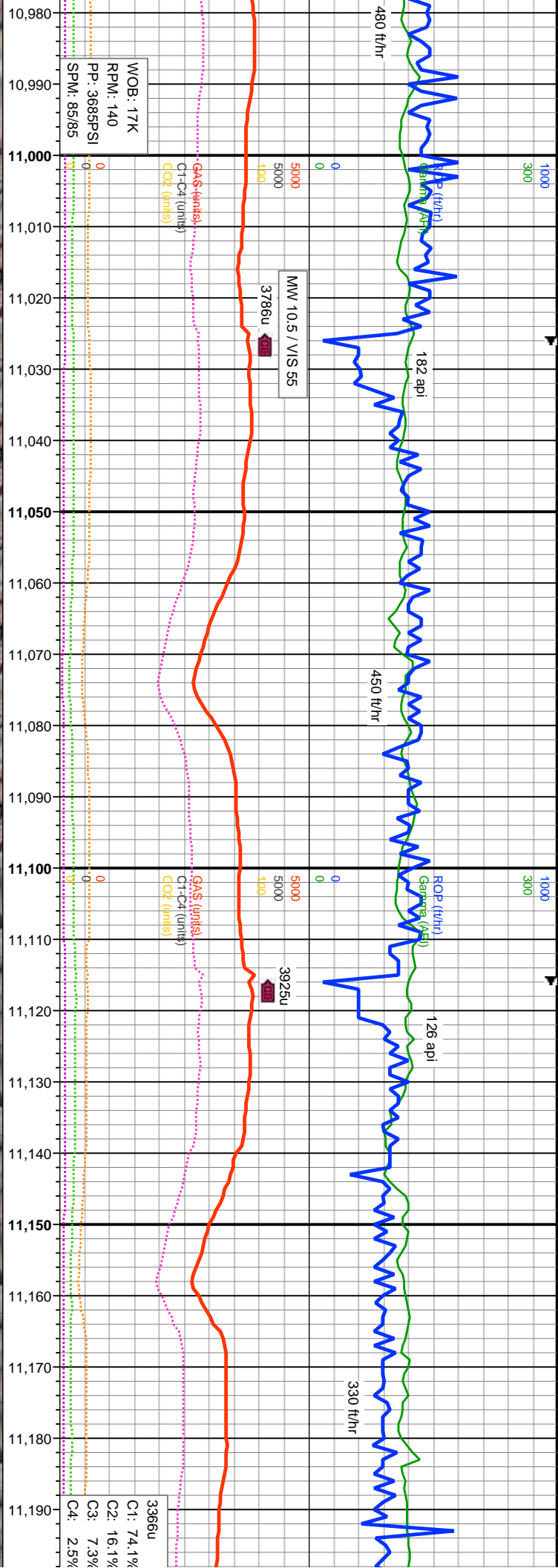


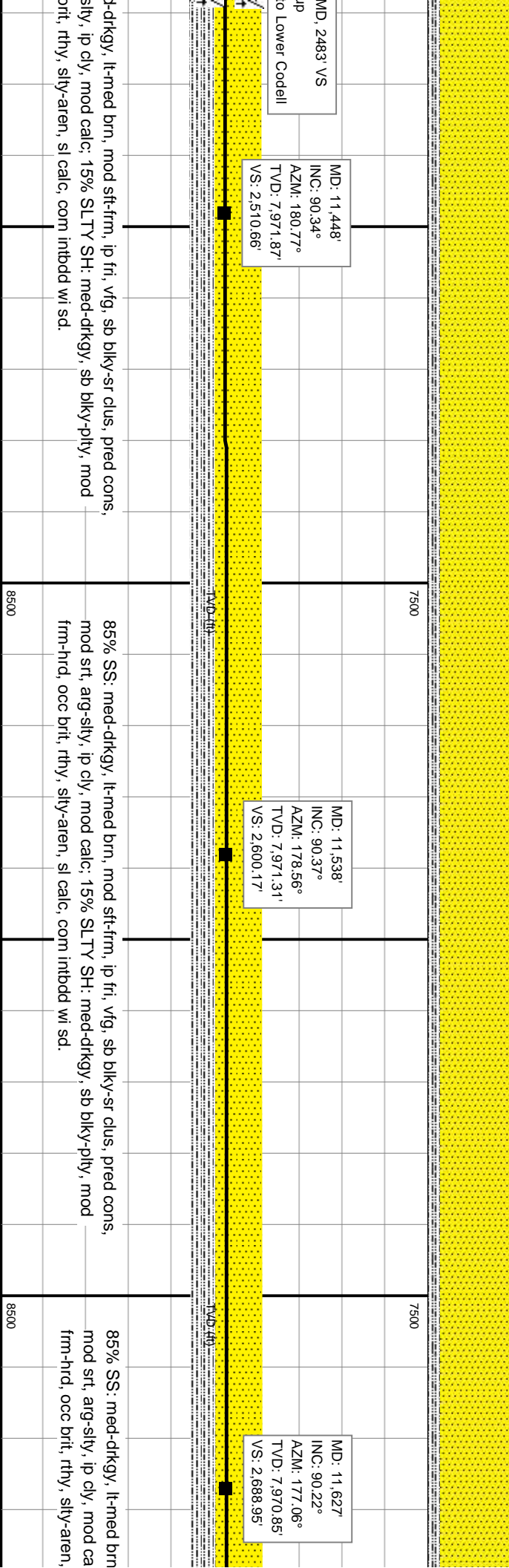
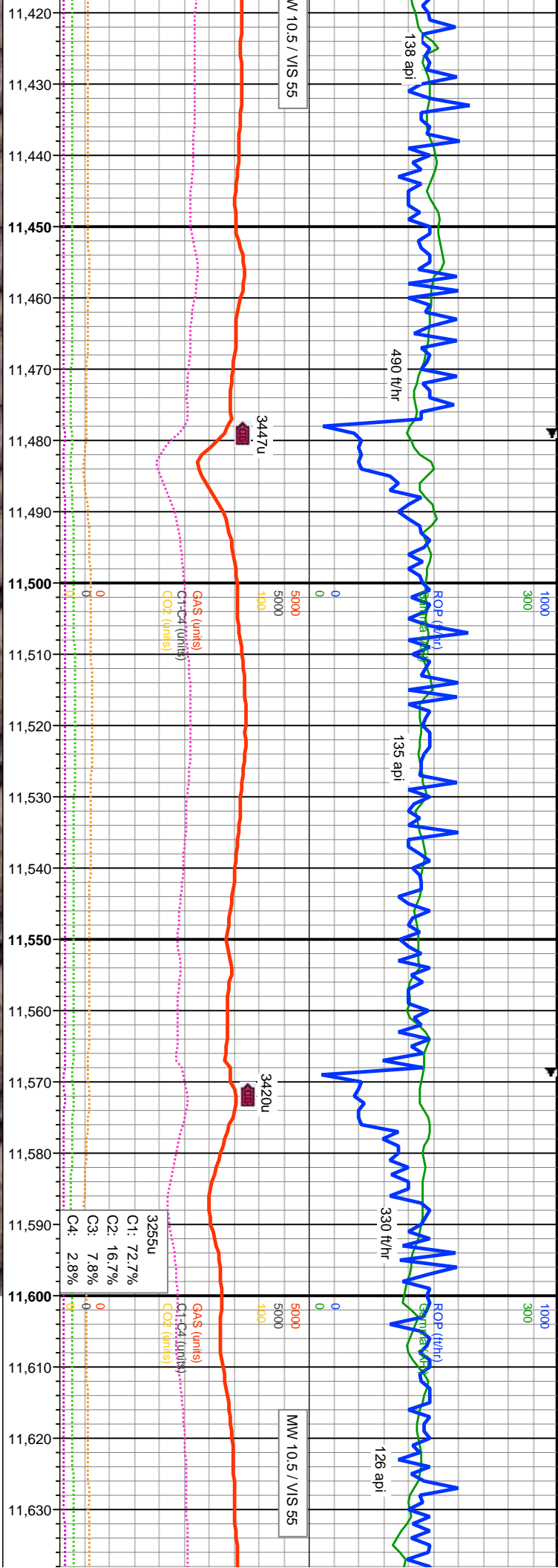


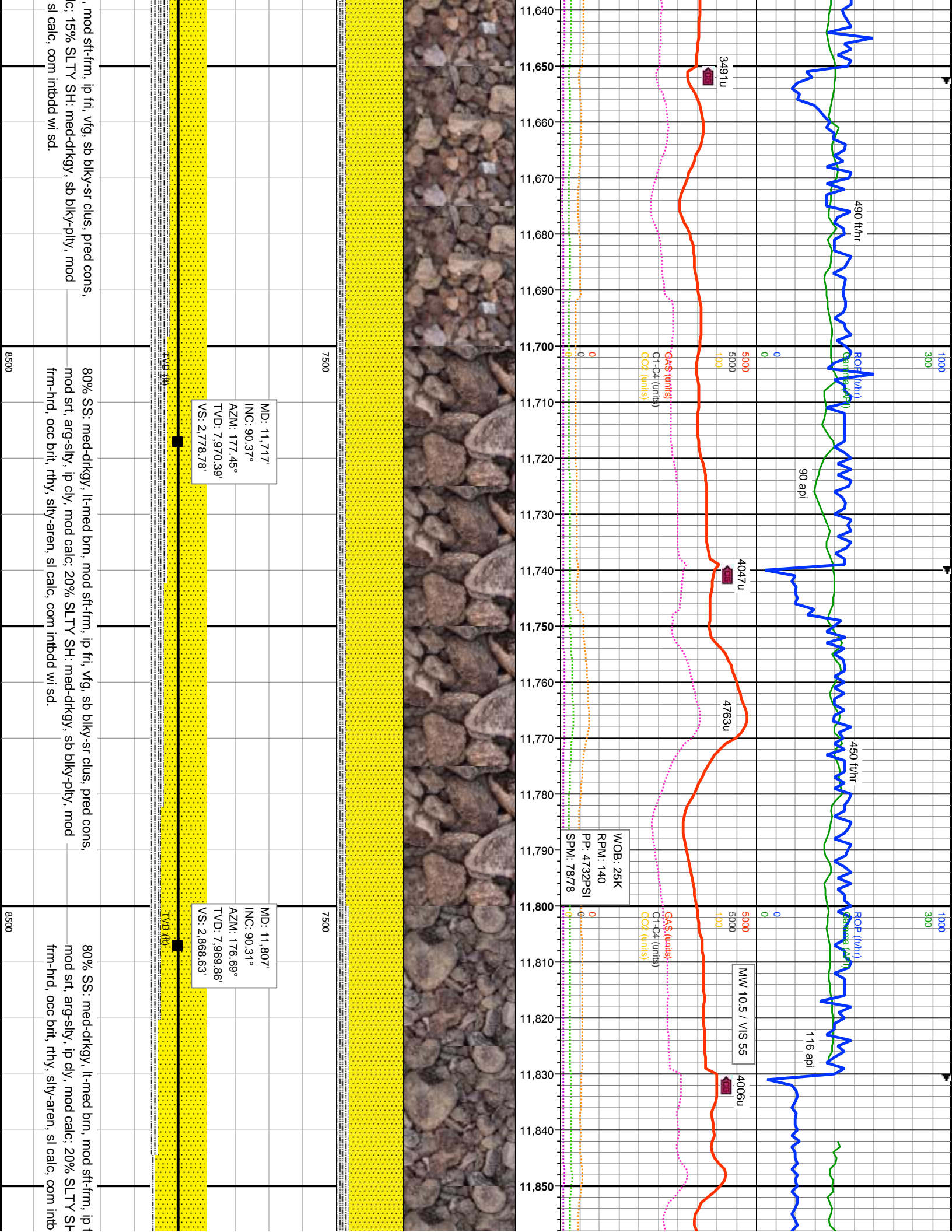
fig, sb blkly-sr clus, pred cons, med-dkgy, sb blkly-plty, mod w sd.

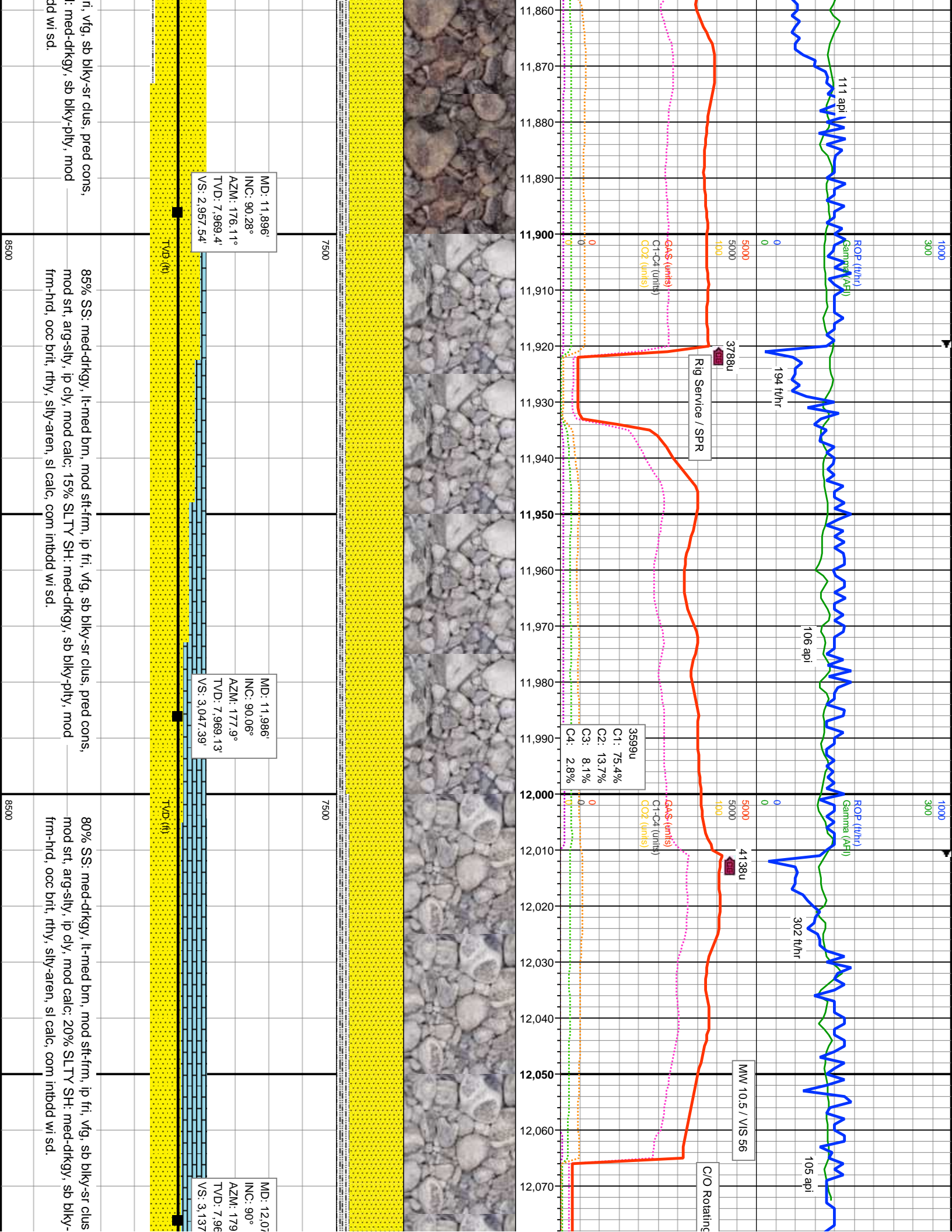
85% SS: med-dkgy, lt-med brn, mod sft-fm, ip fri, vfg, sb blkly-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, 15% SLTY SH: med-dkgy, sb blkly-plty, mod frm-hrd, occ brit, rthy, silty-aren, sl calc, com intbdd wi sd.

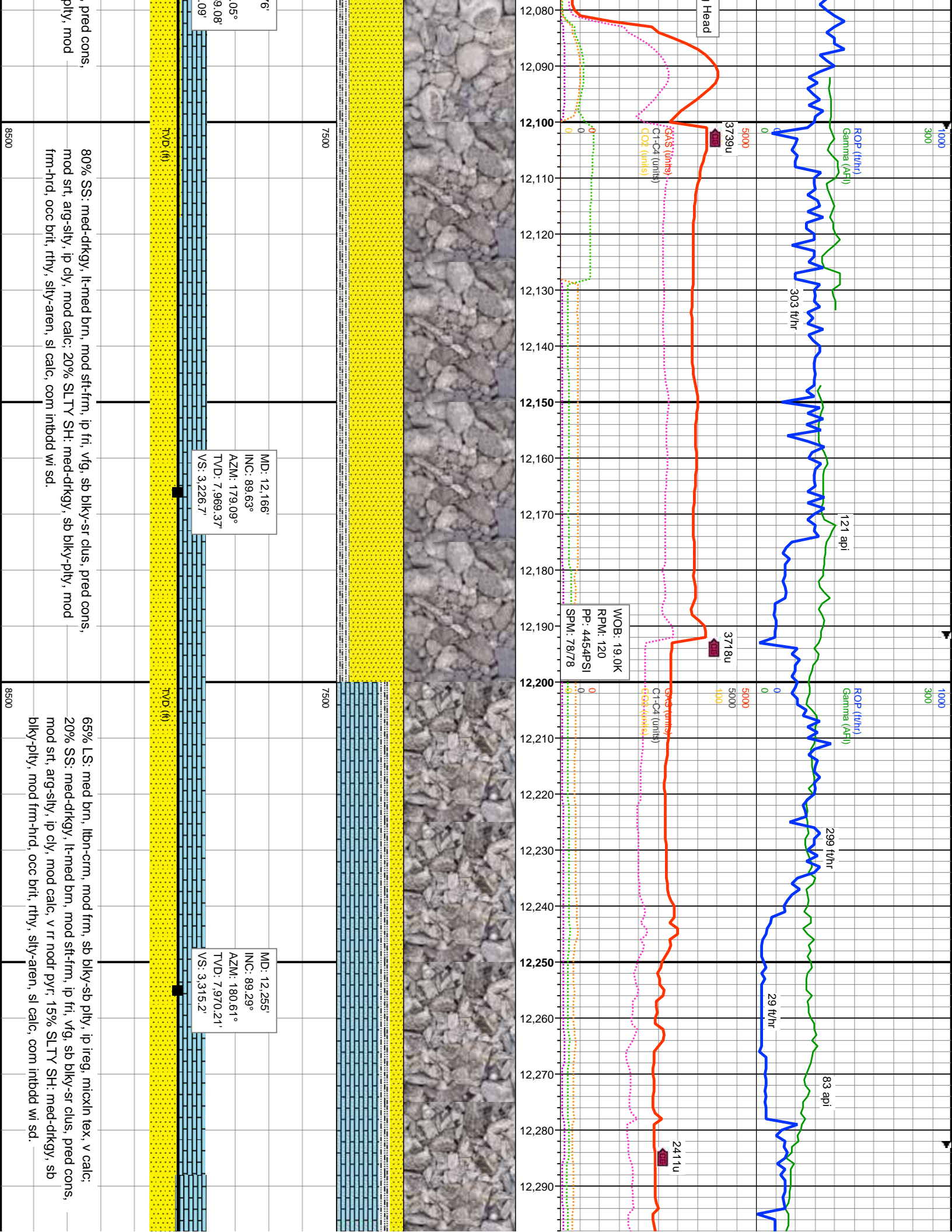
85% SS: med-dkgy, lt-med brn, mod sft-fm, ip fri, vfg, sb blkly-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, 15% SLTY SH: med-dkgy, sb blkly-plty, mod frm-hrd, occ brit, rthy, silty-aren, sl calc, com intbdd wi sd.

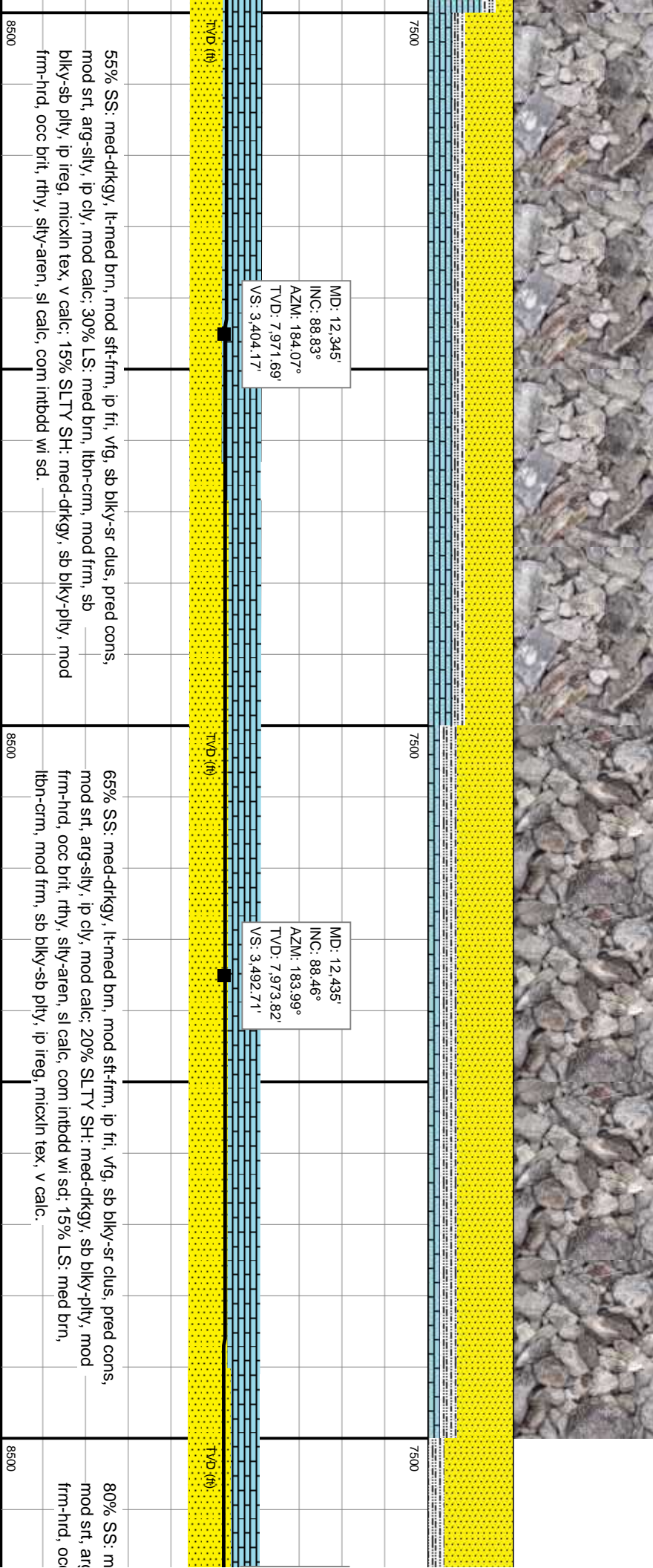
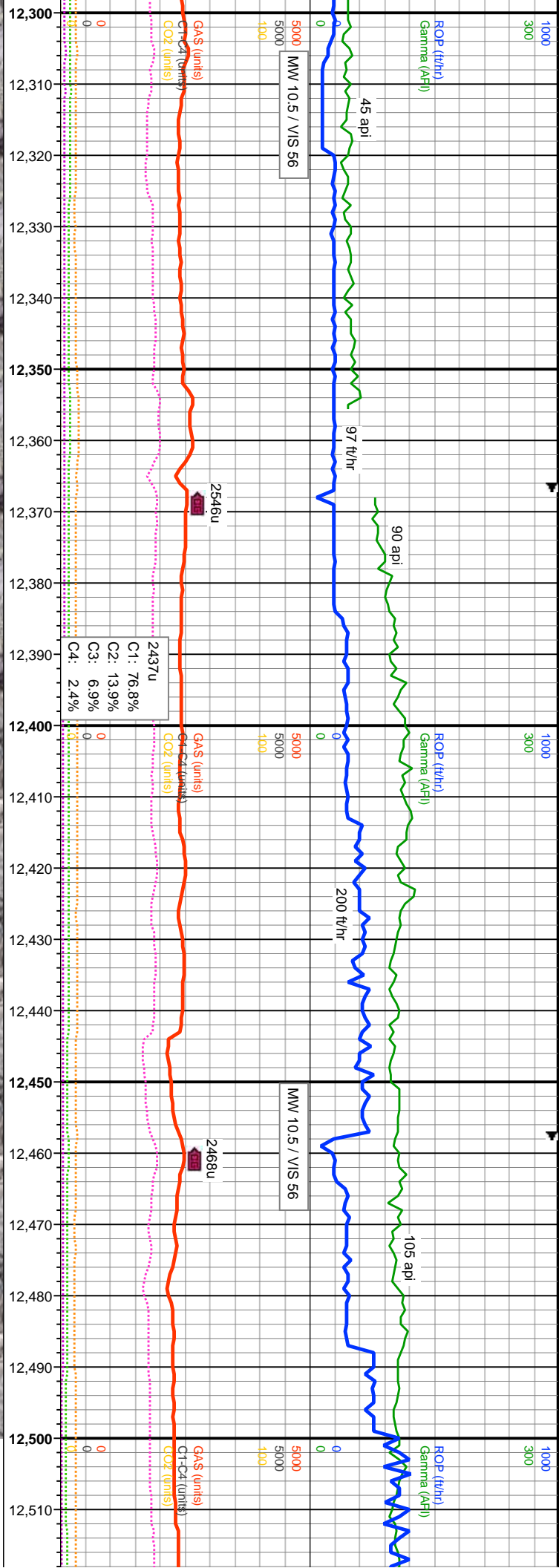


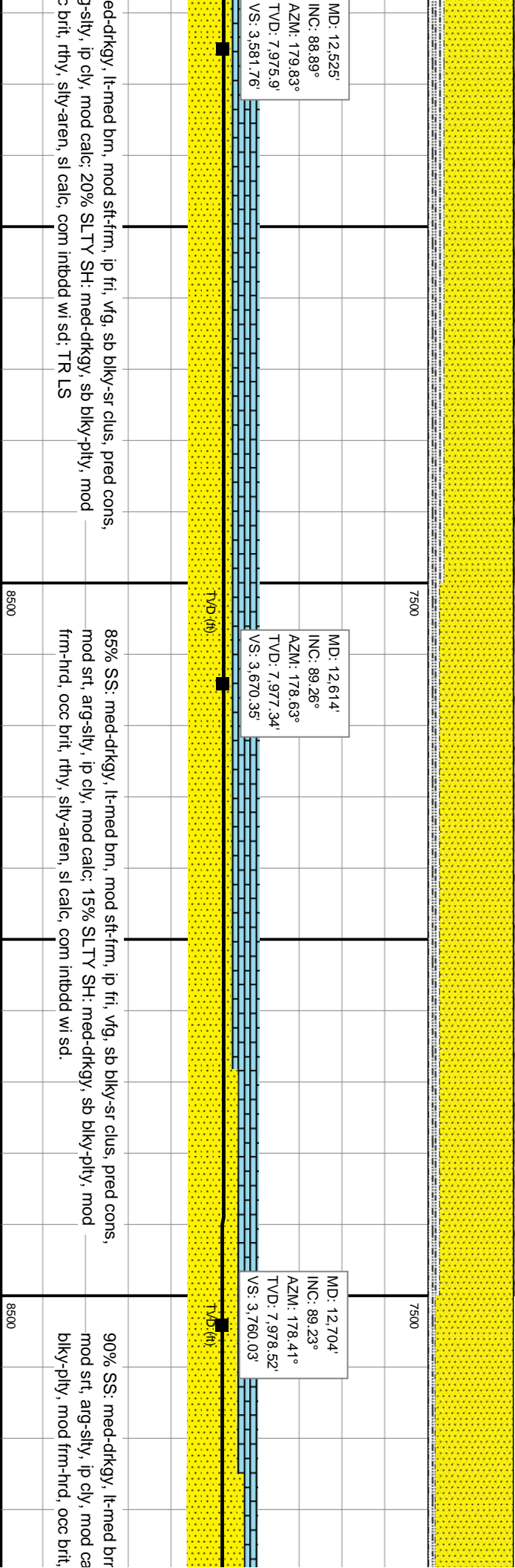
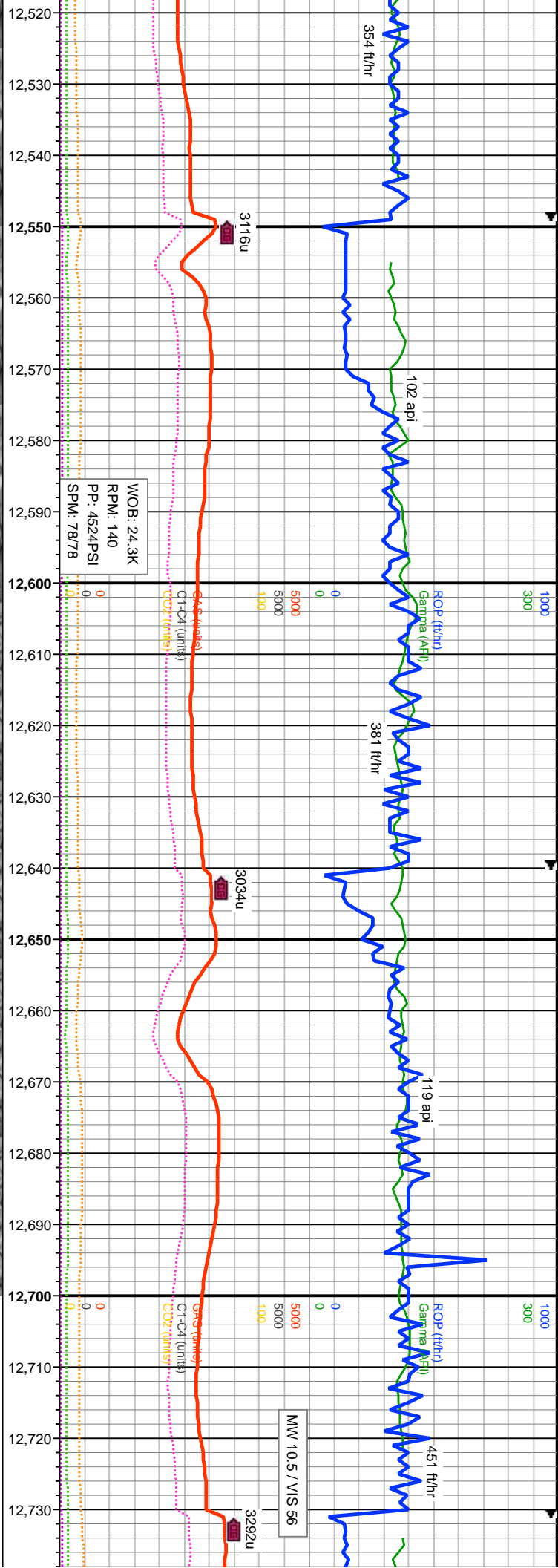


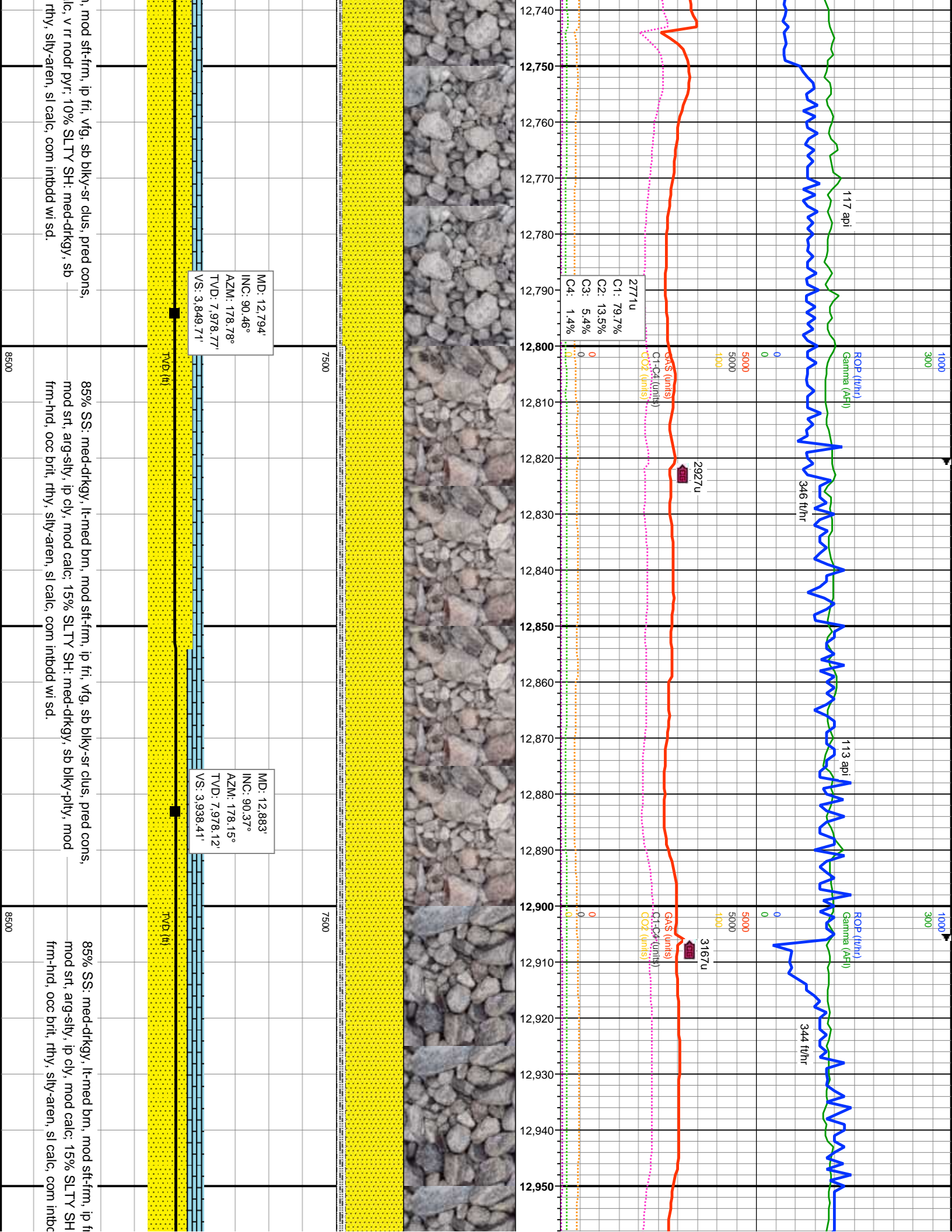


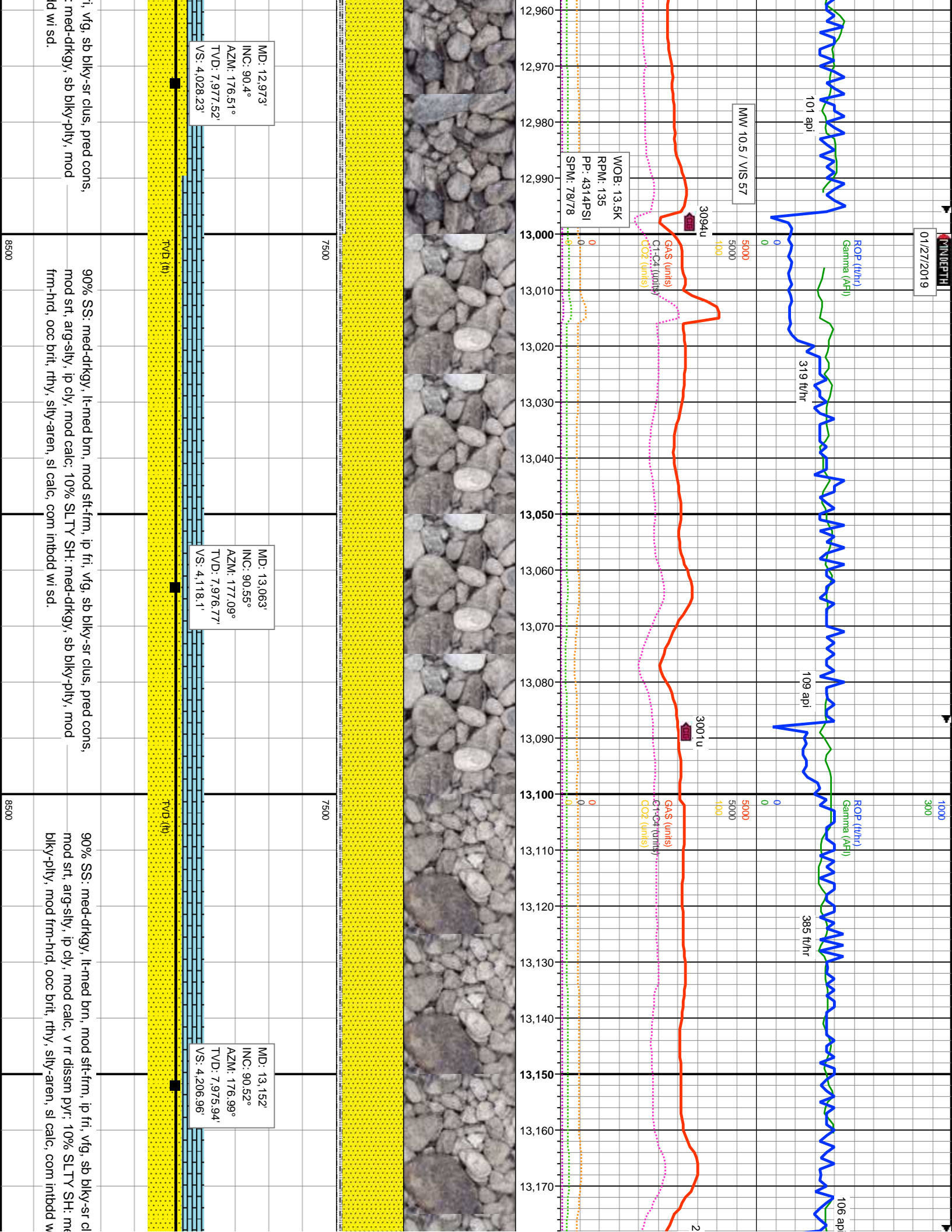


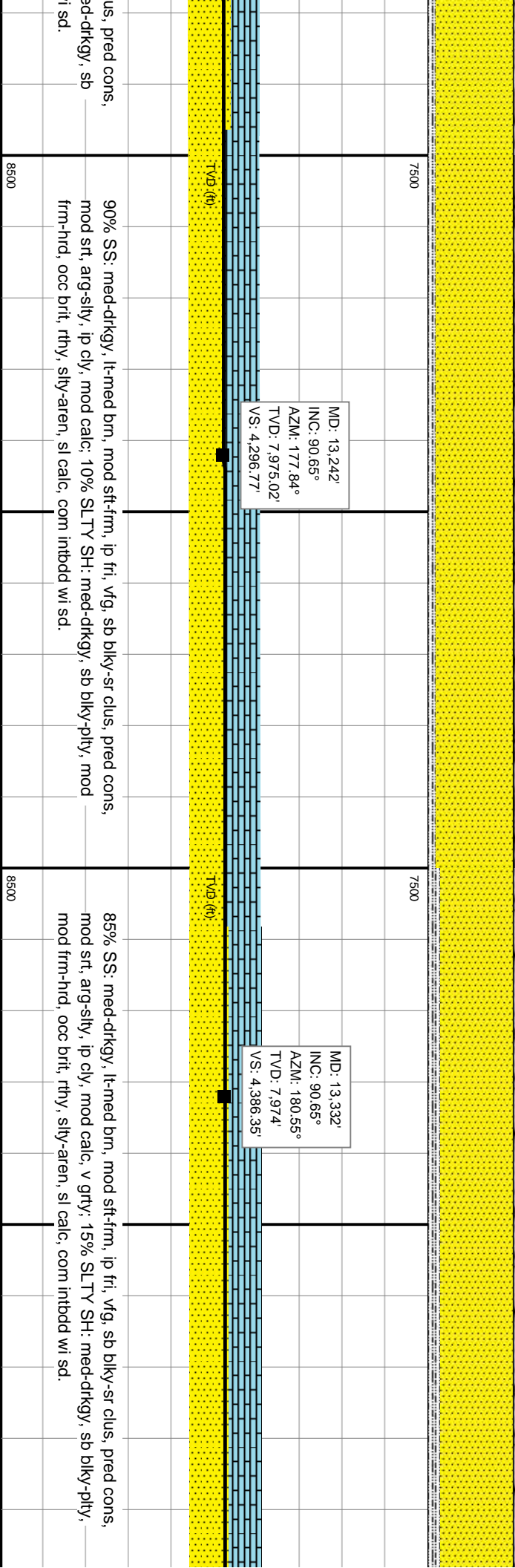
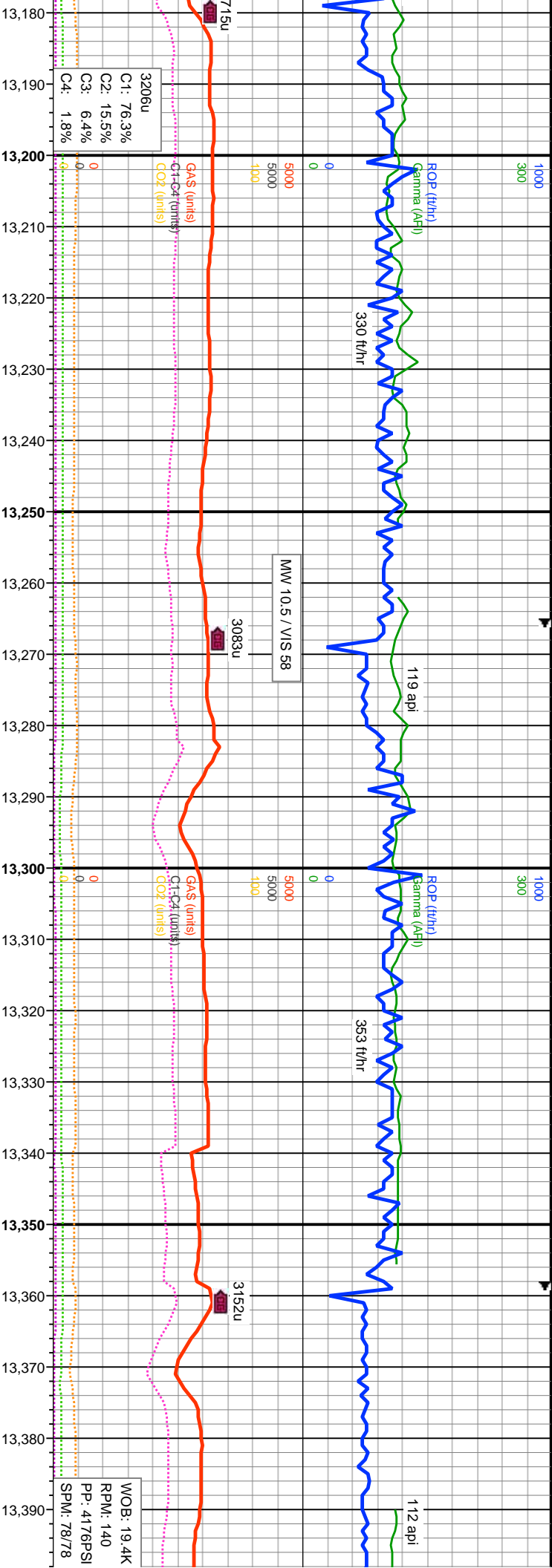


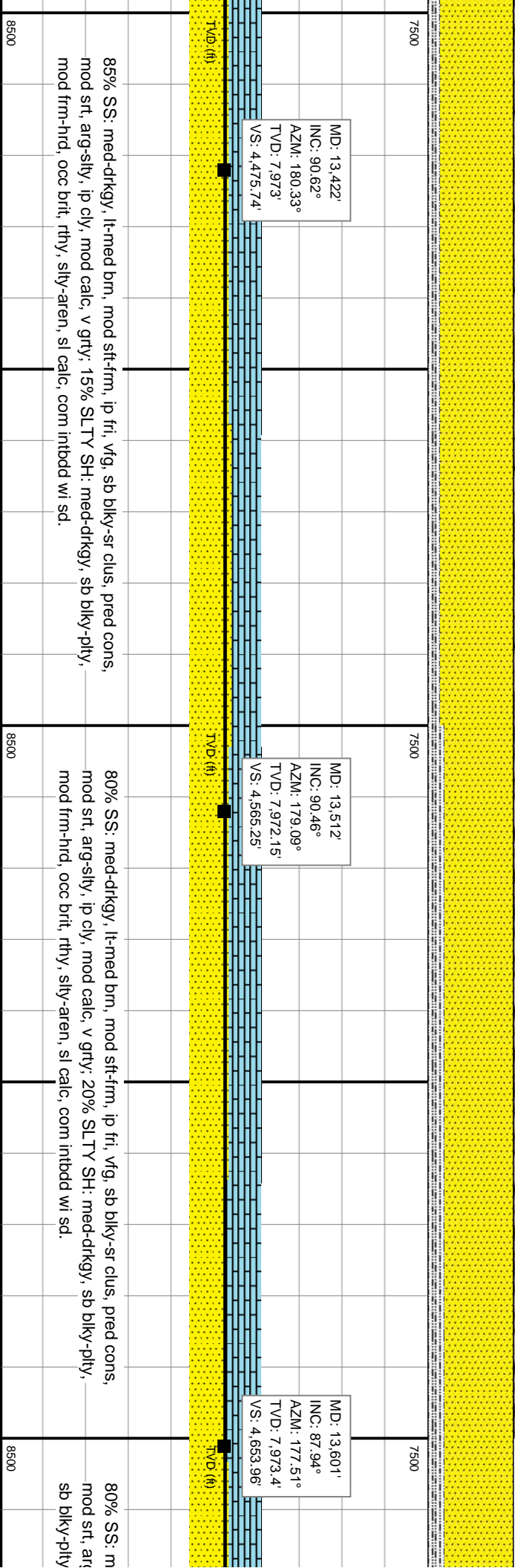
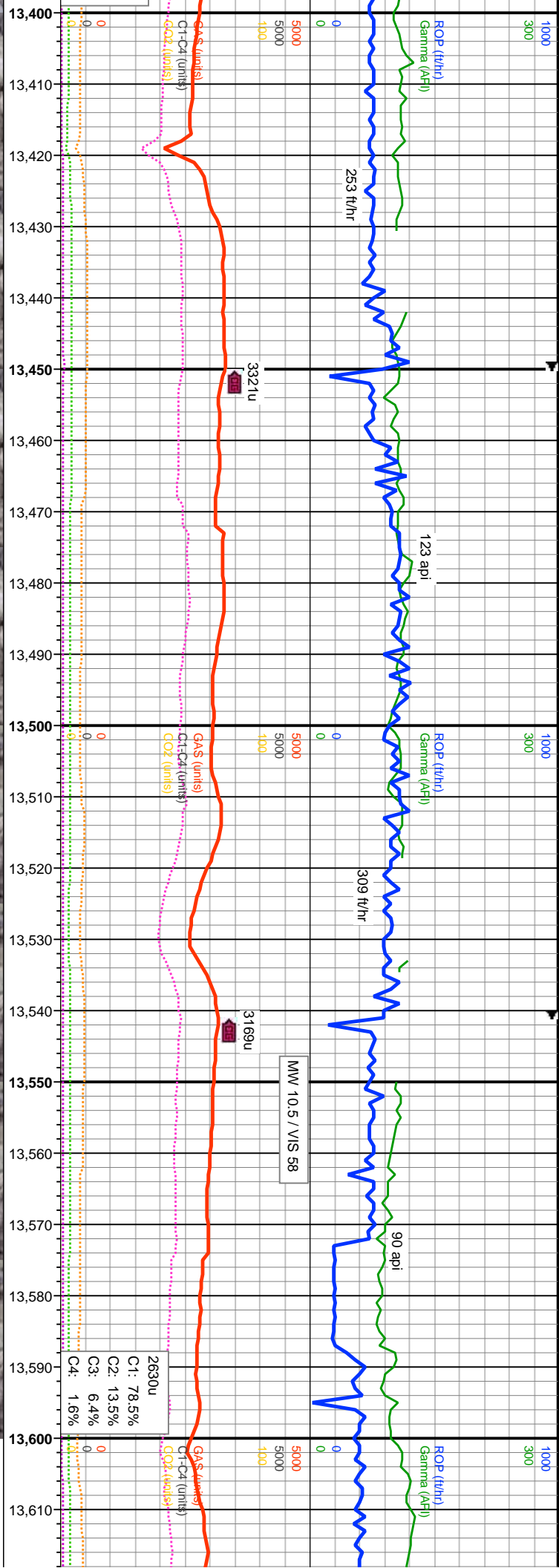


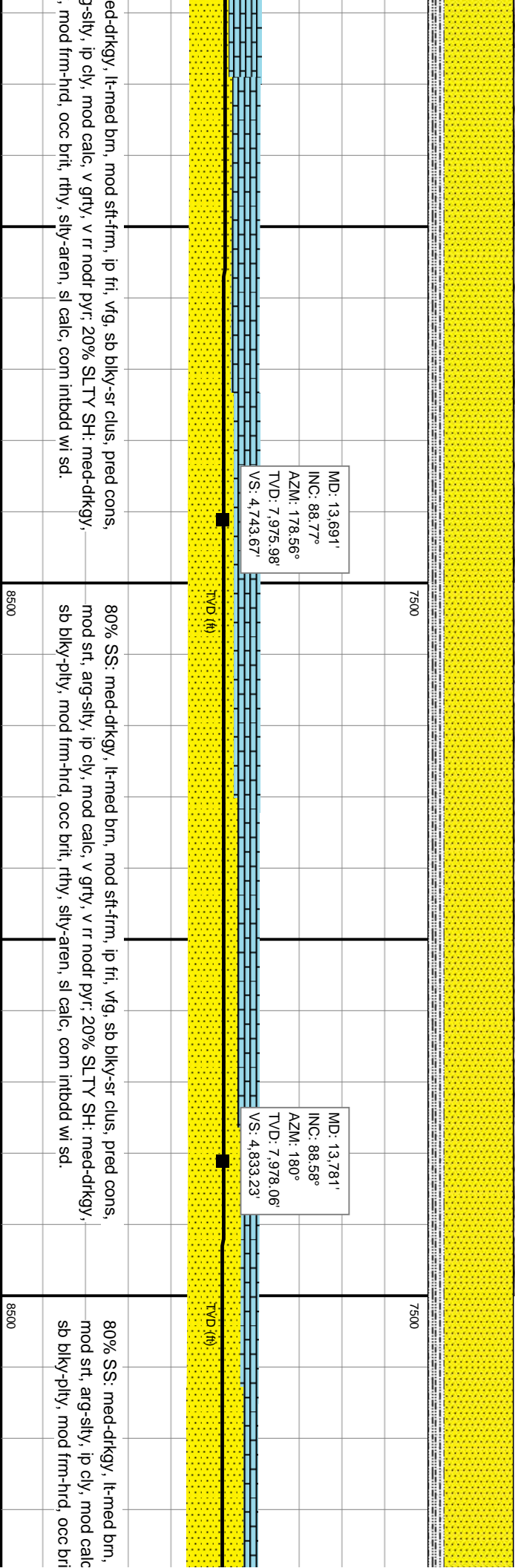
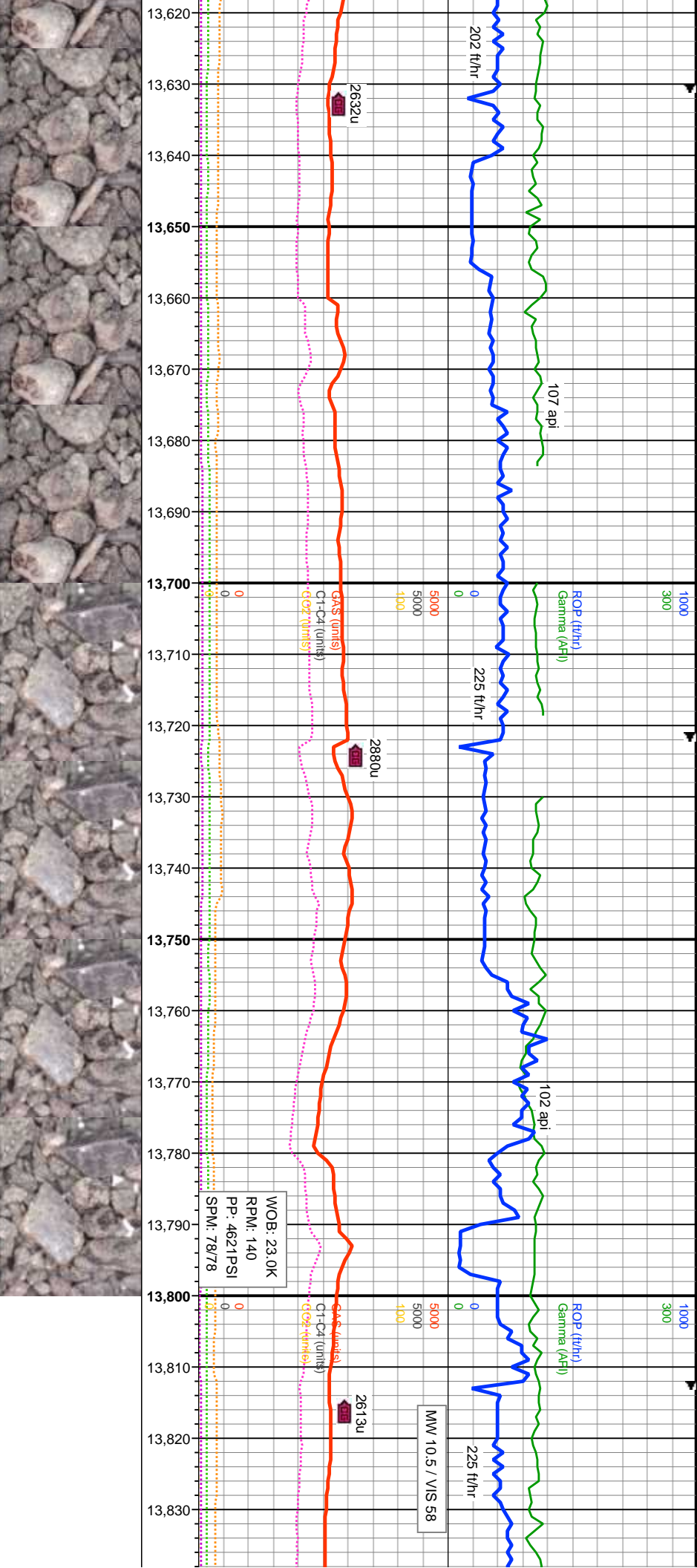


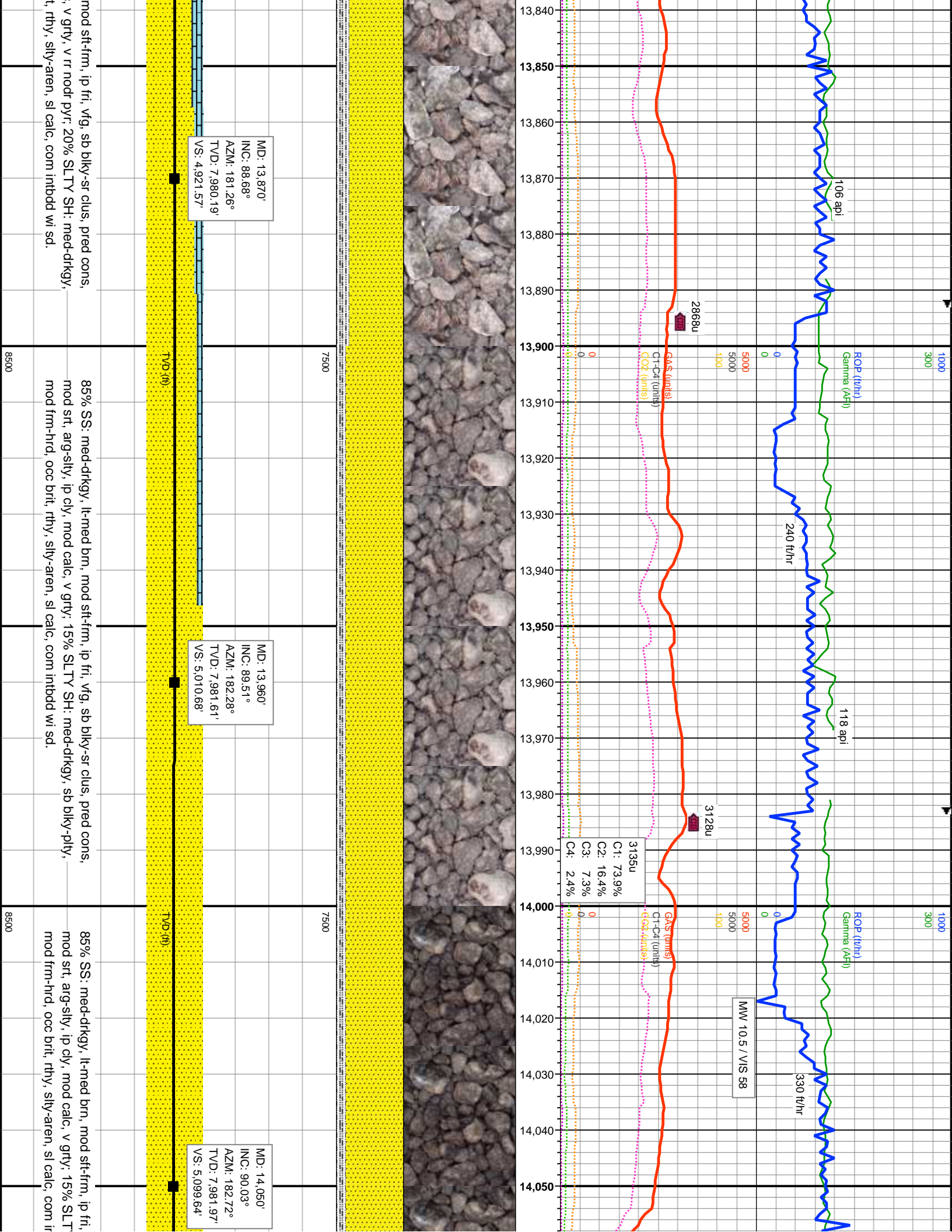


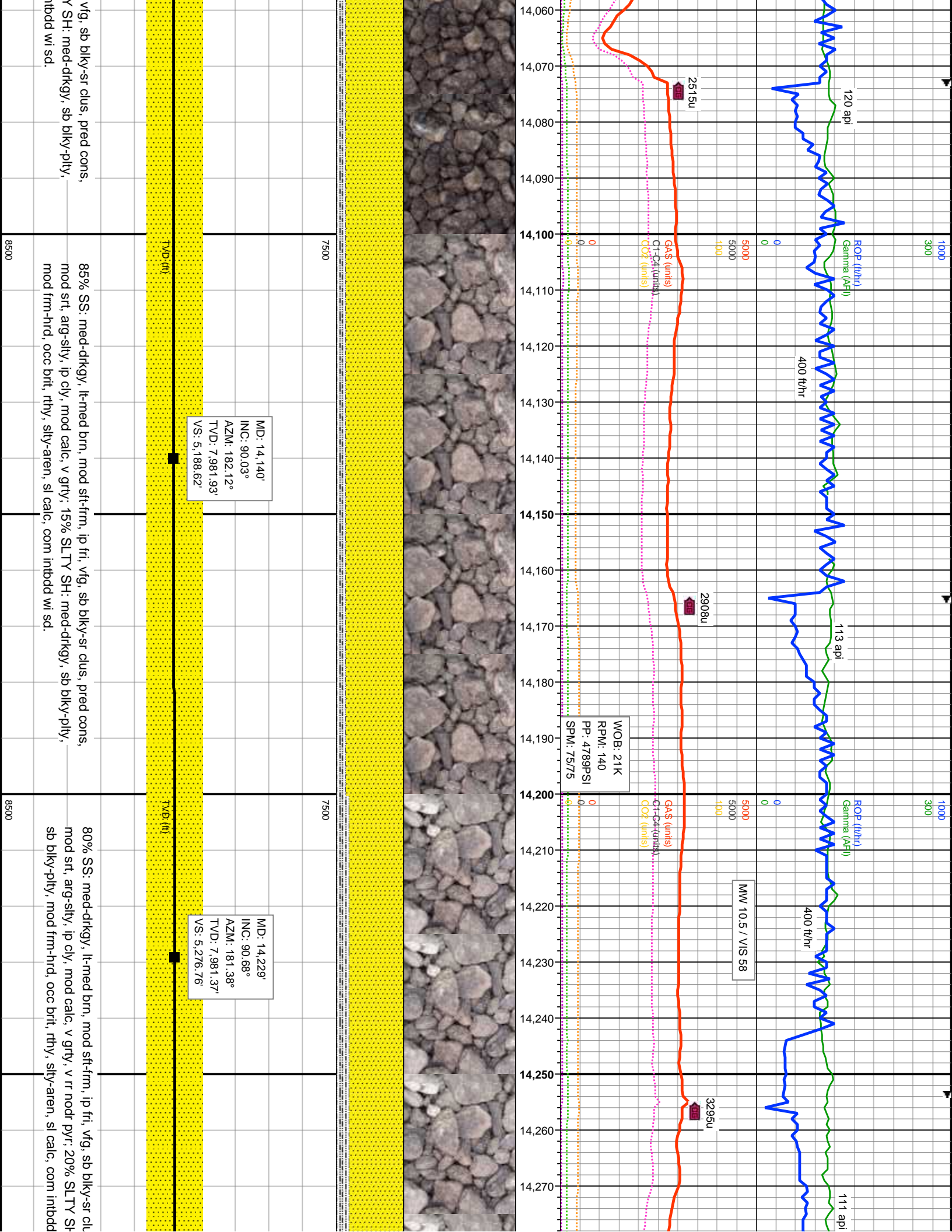


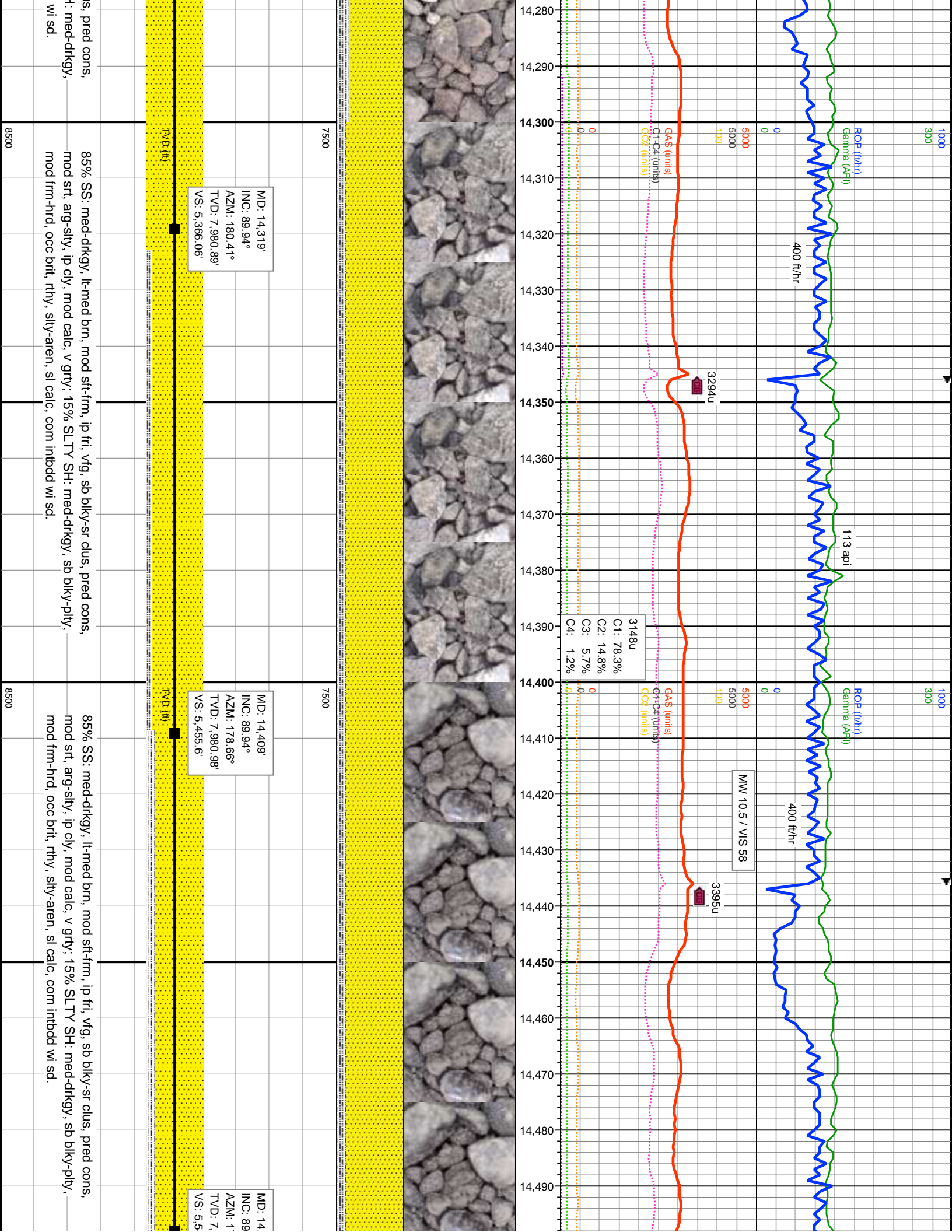


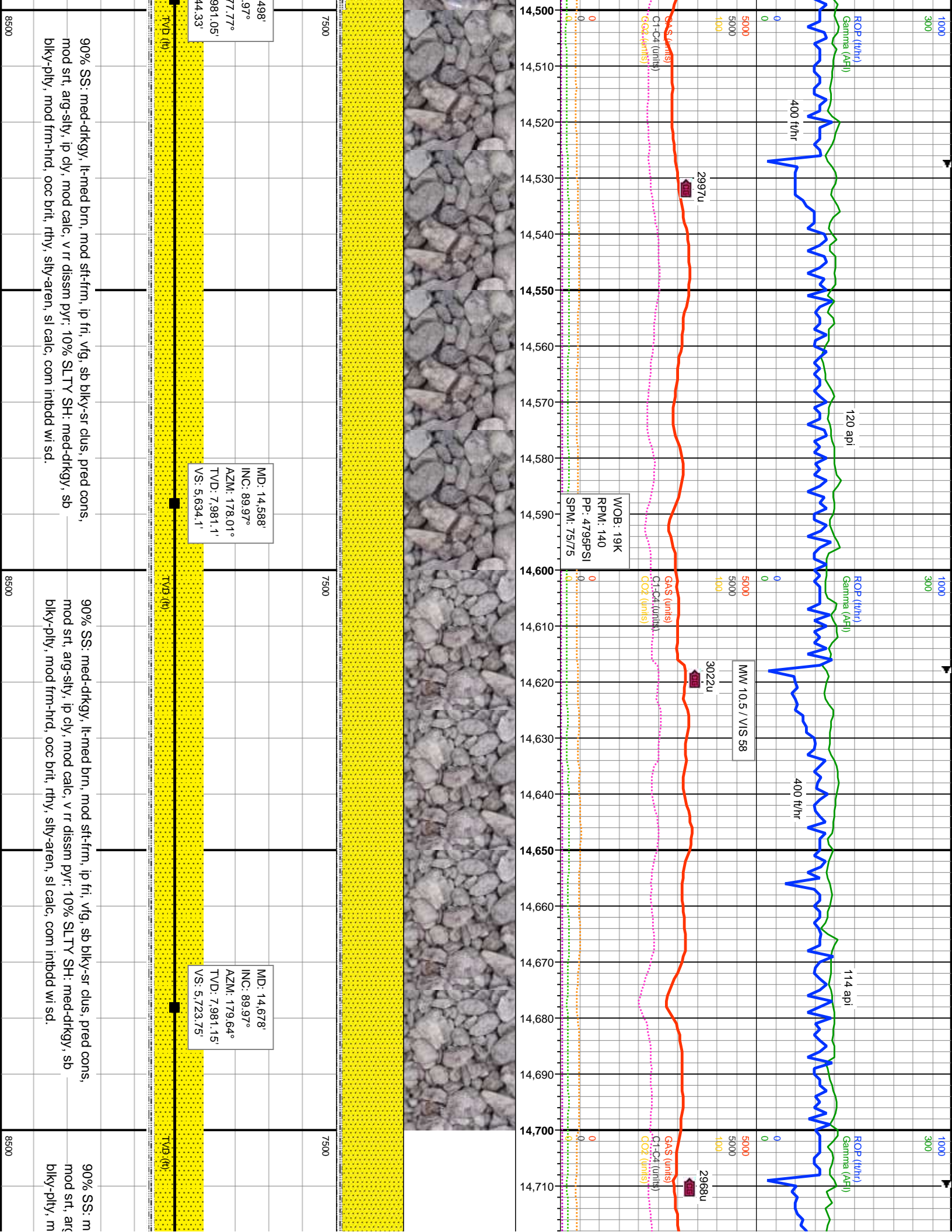


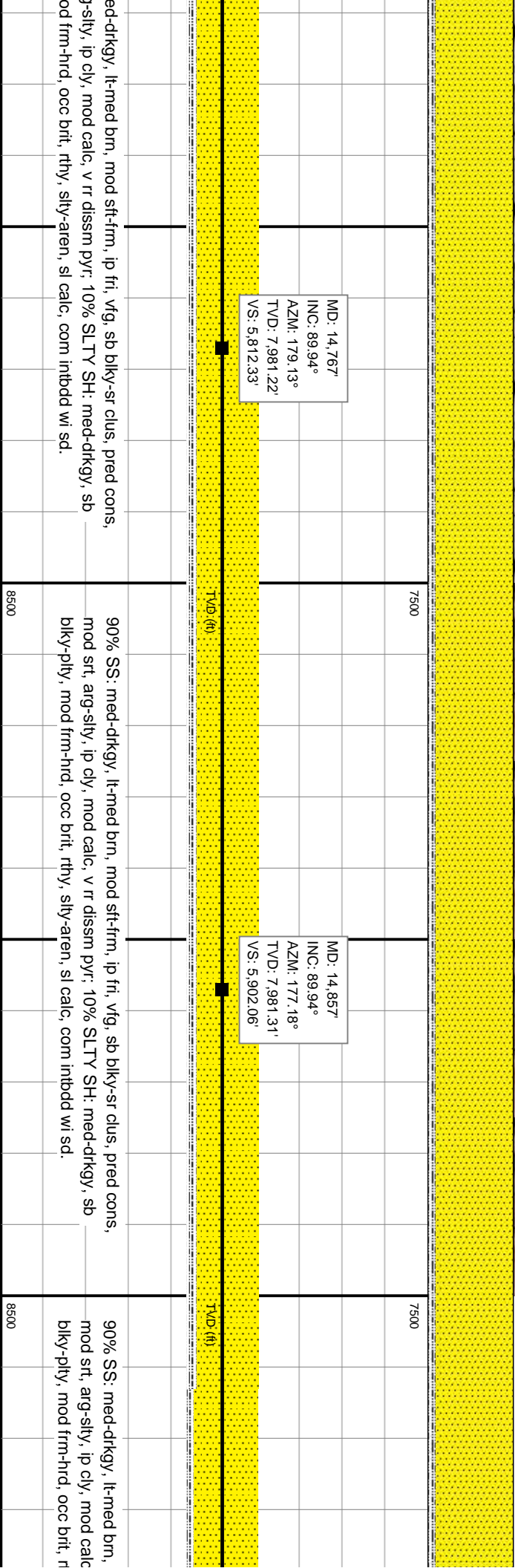
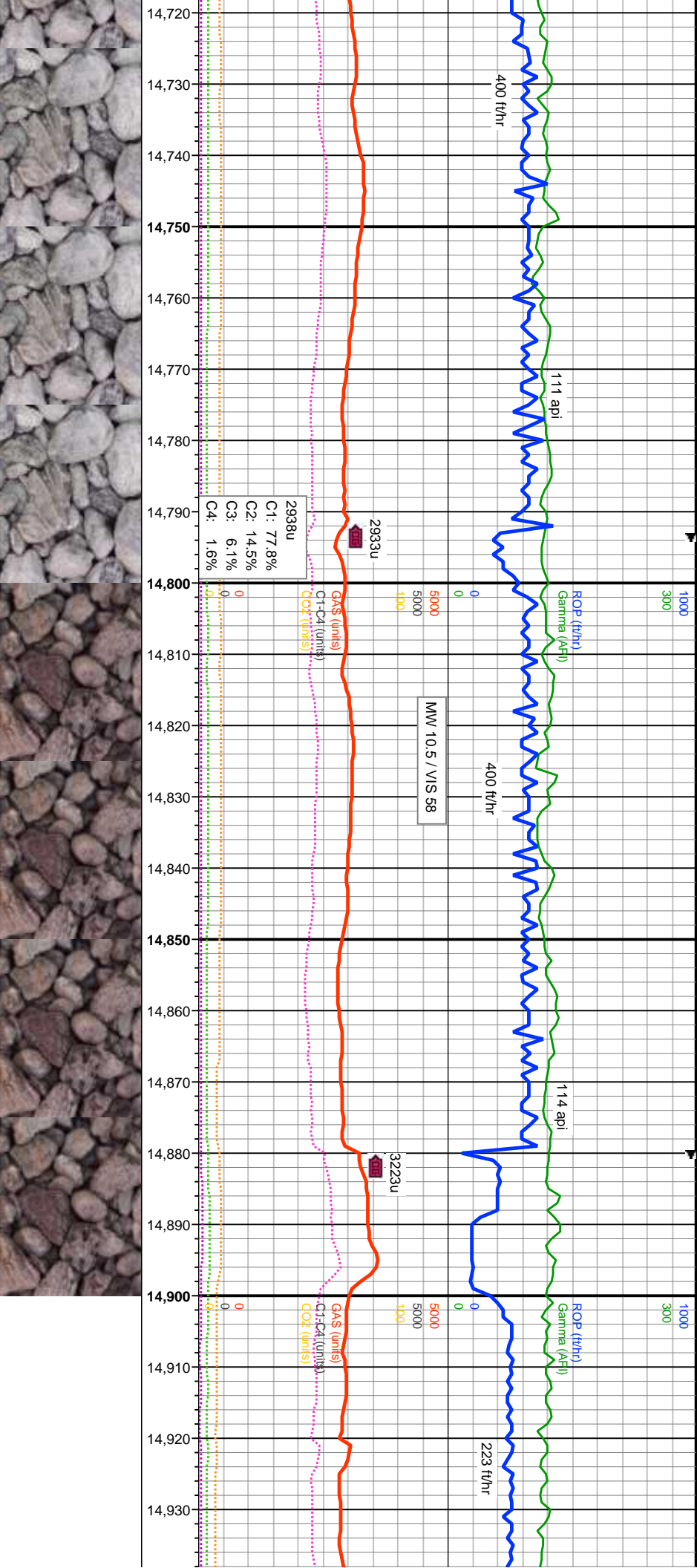


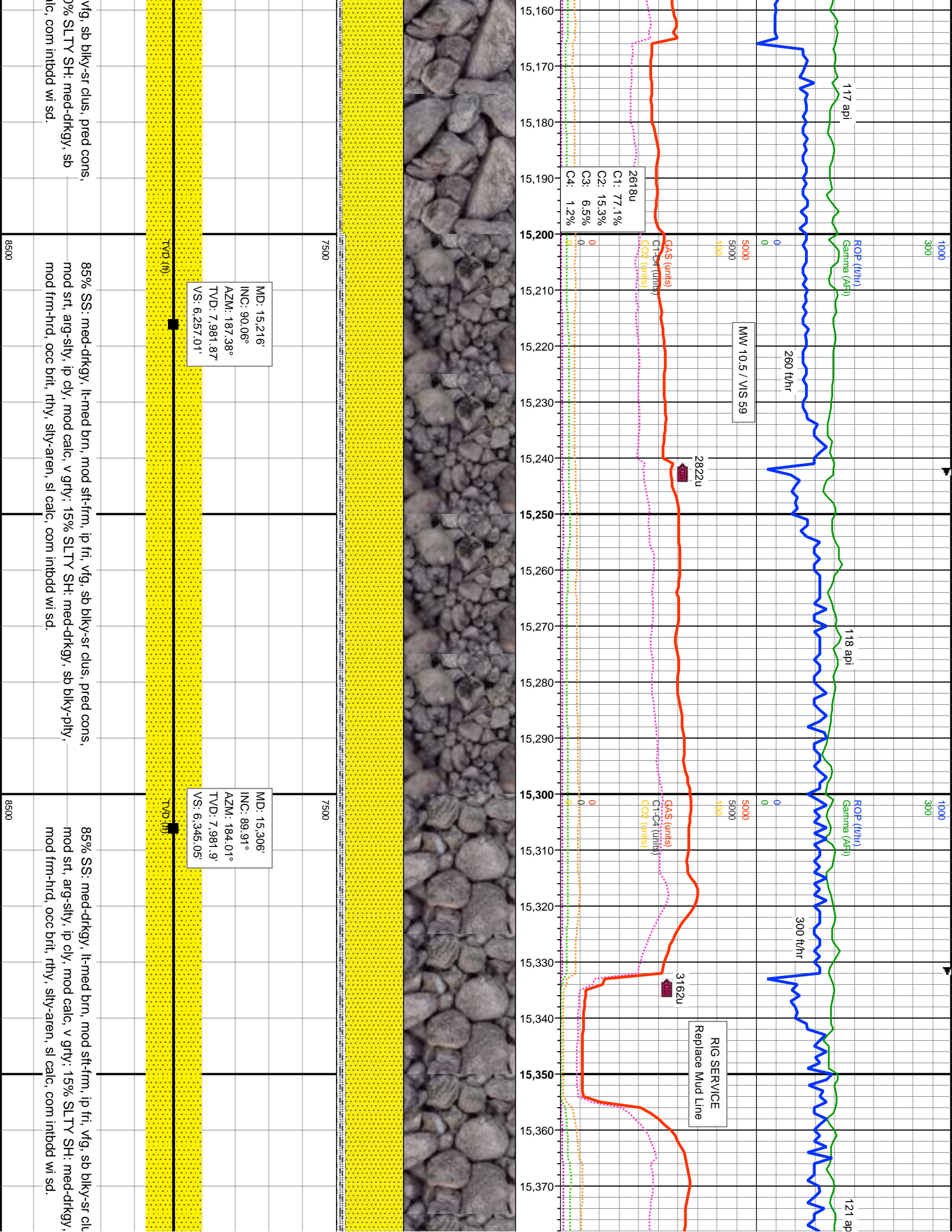


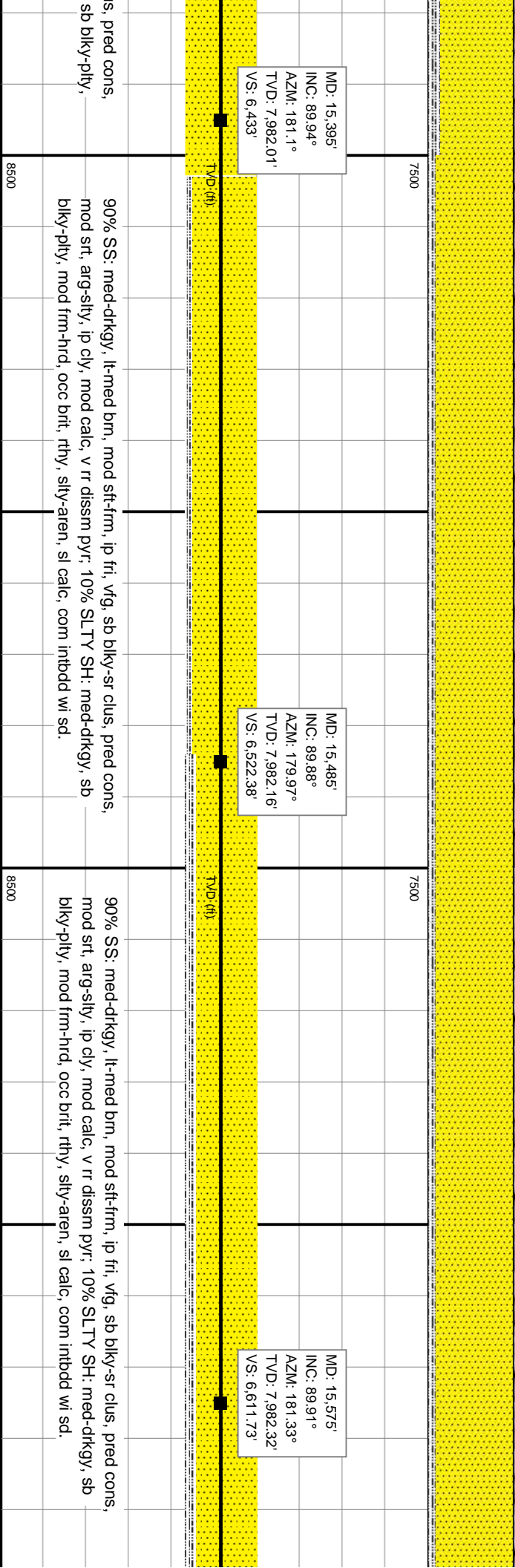
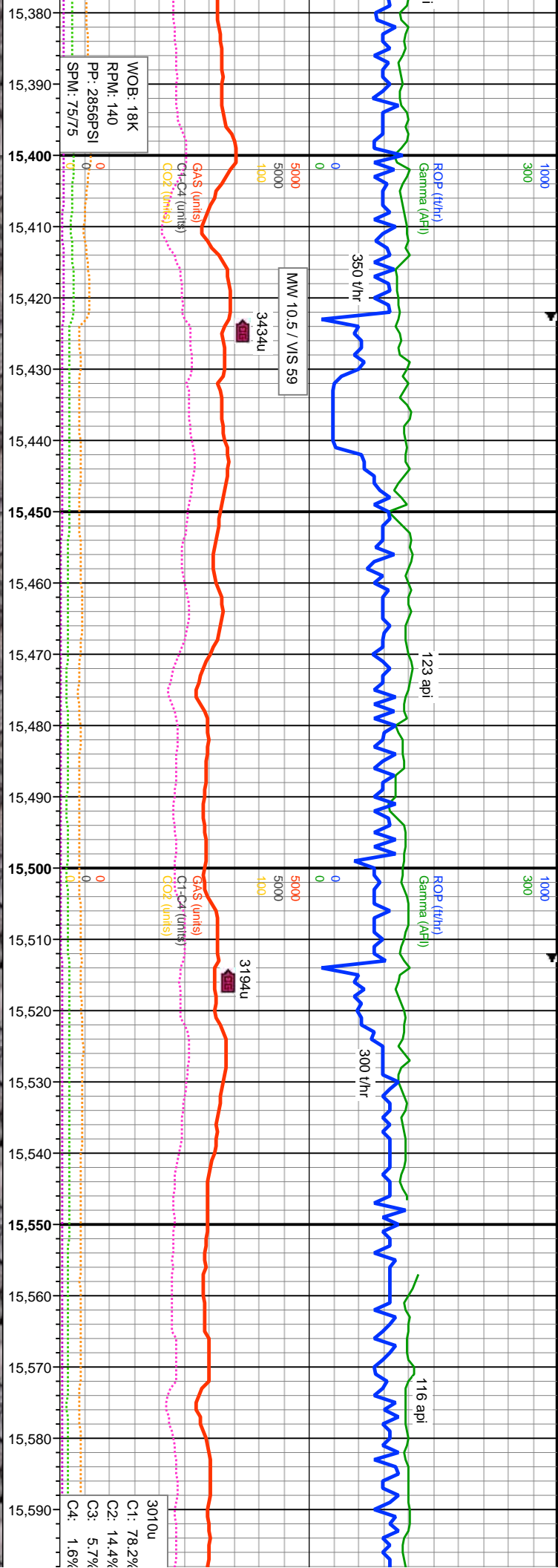


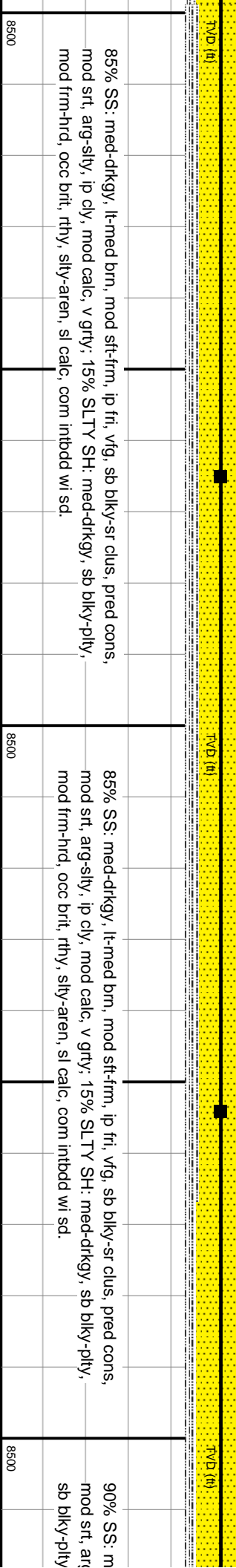
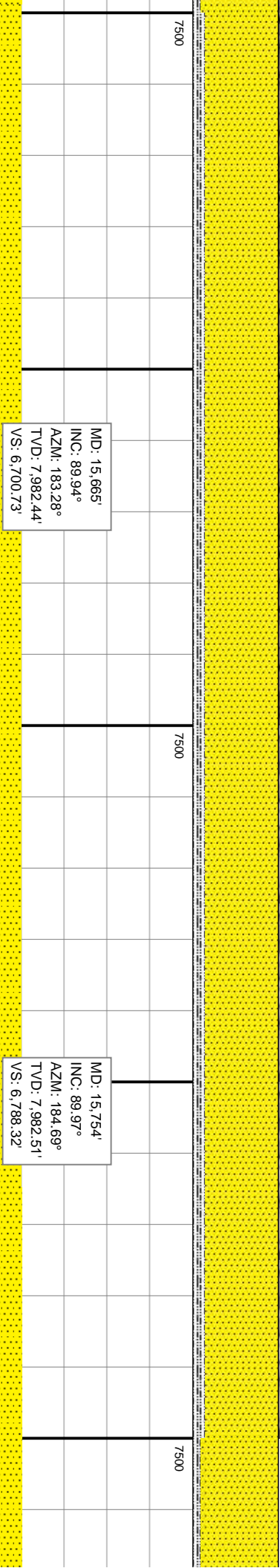
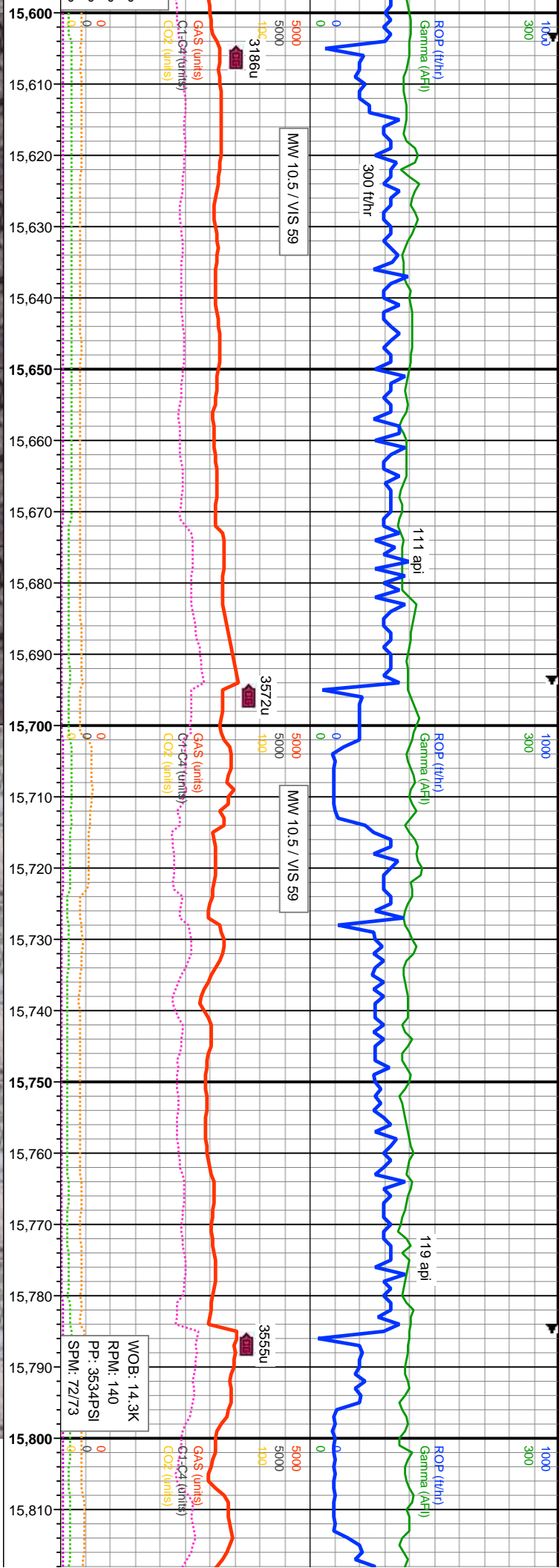


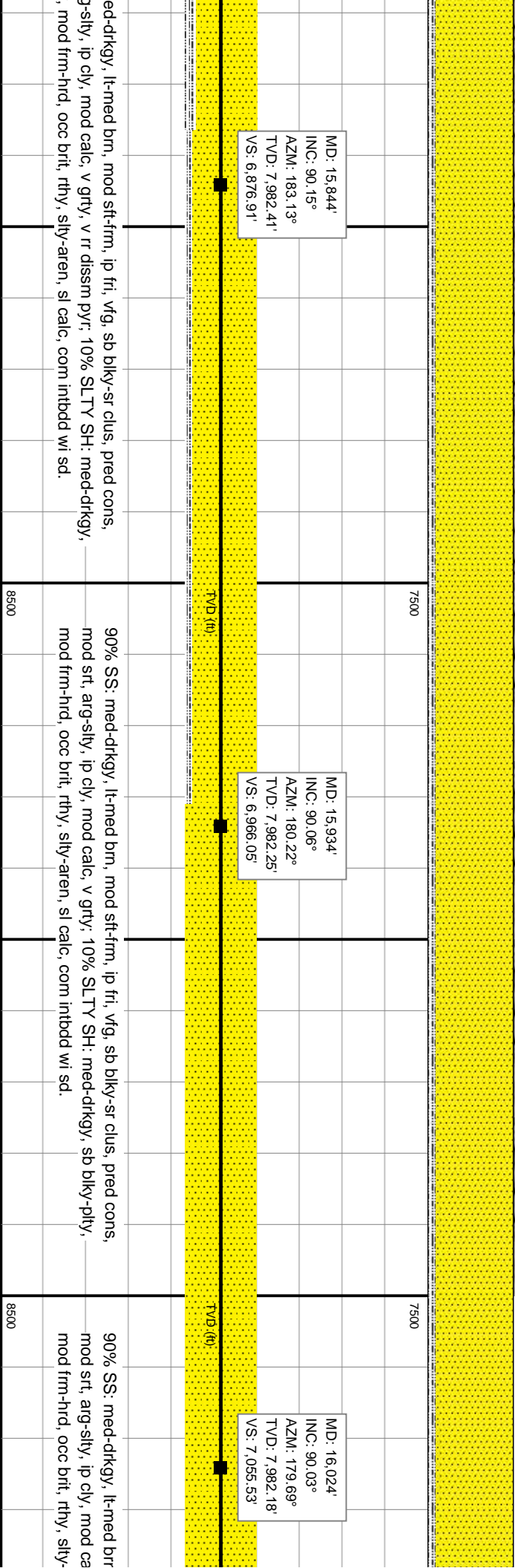
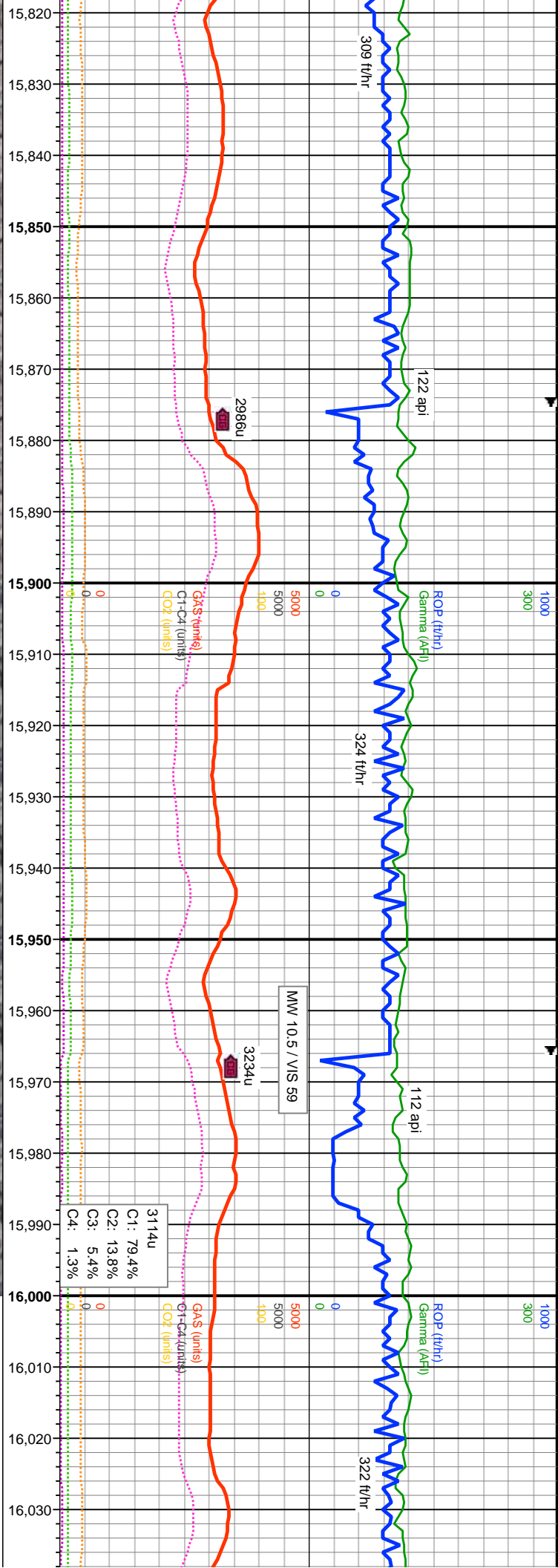


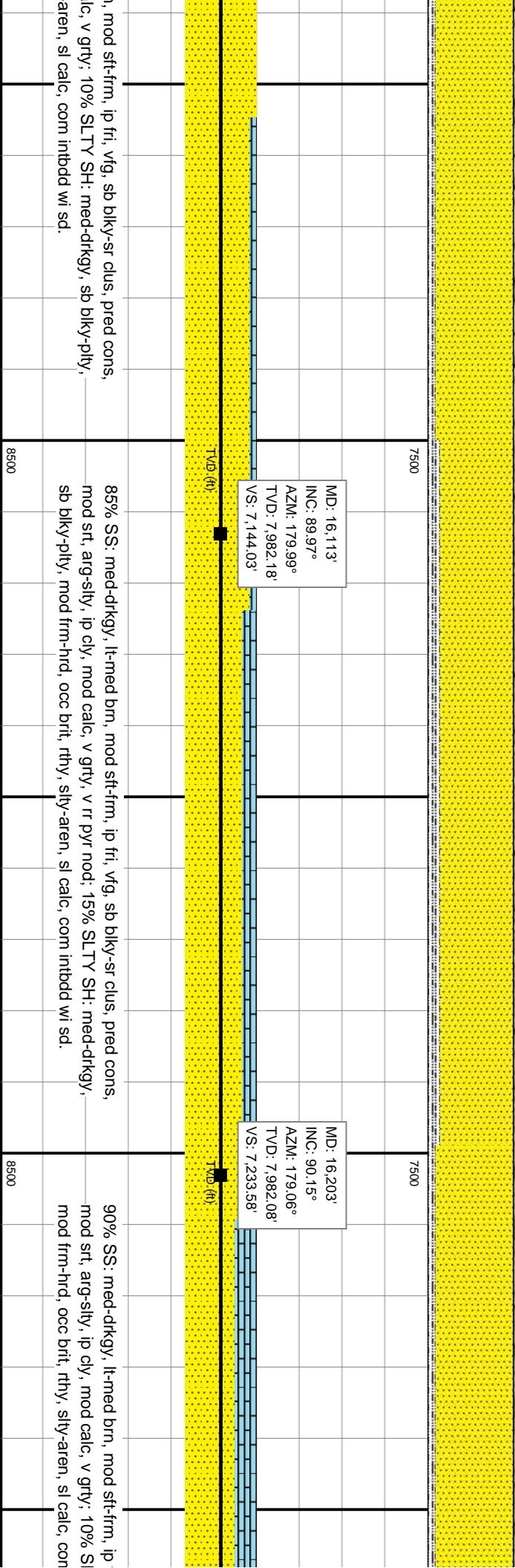
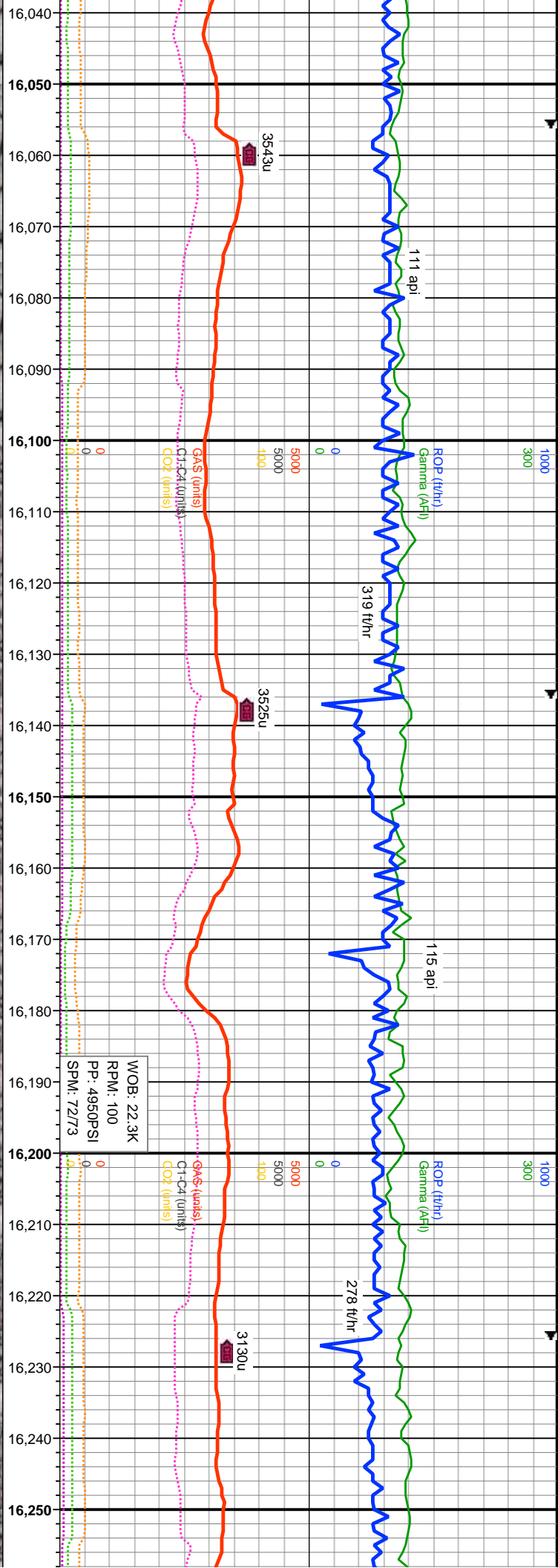


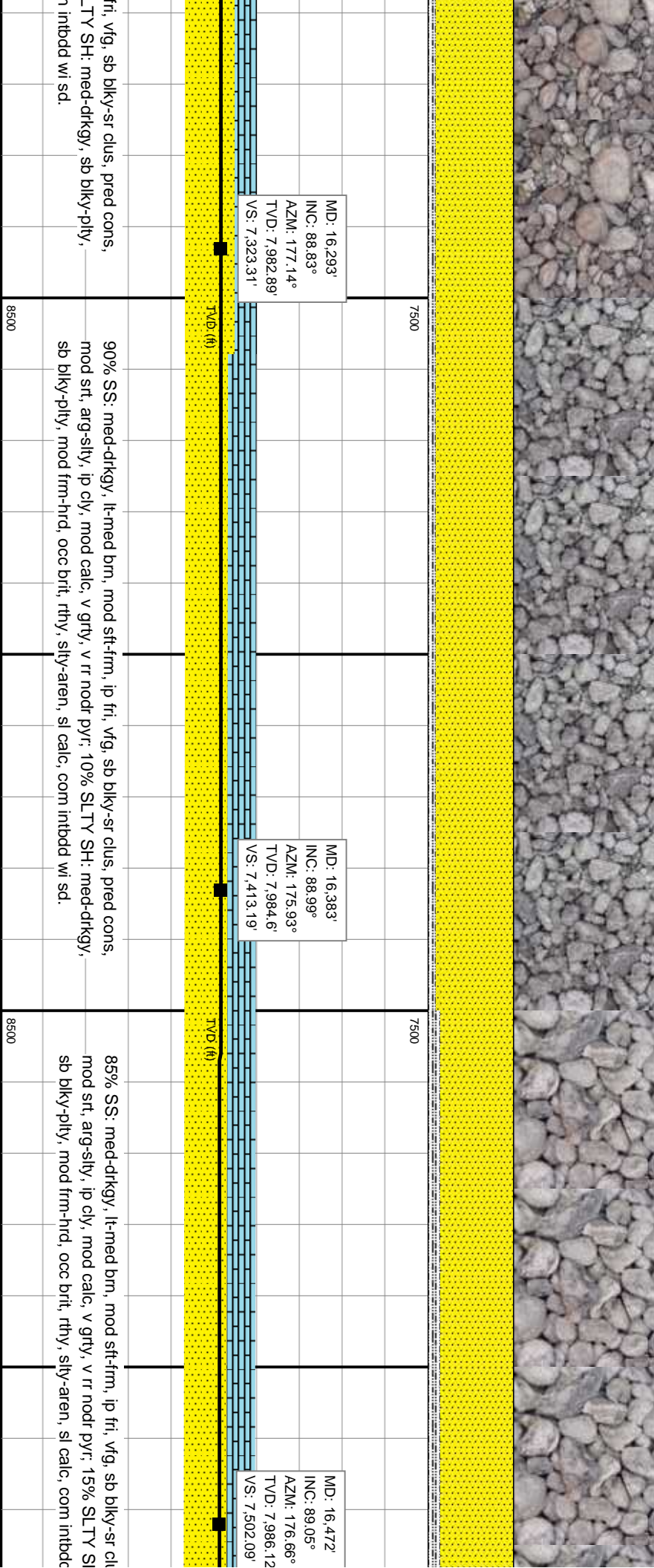
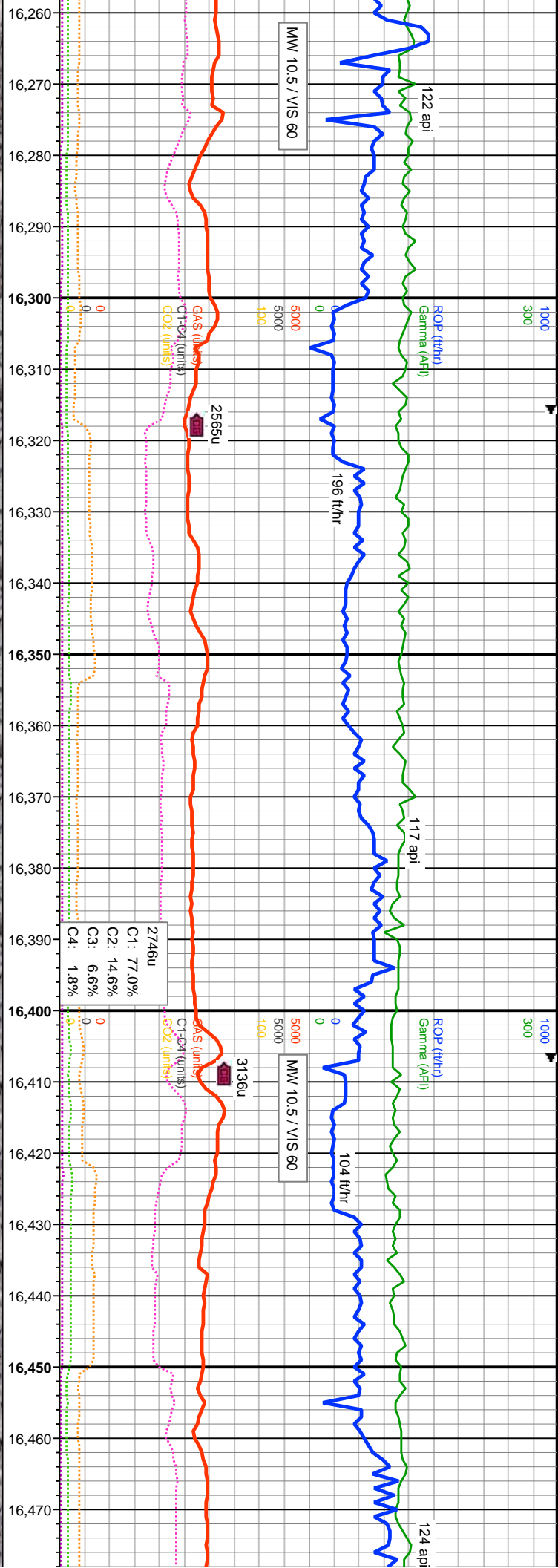


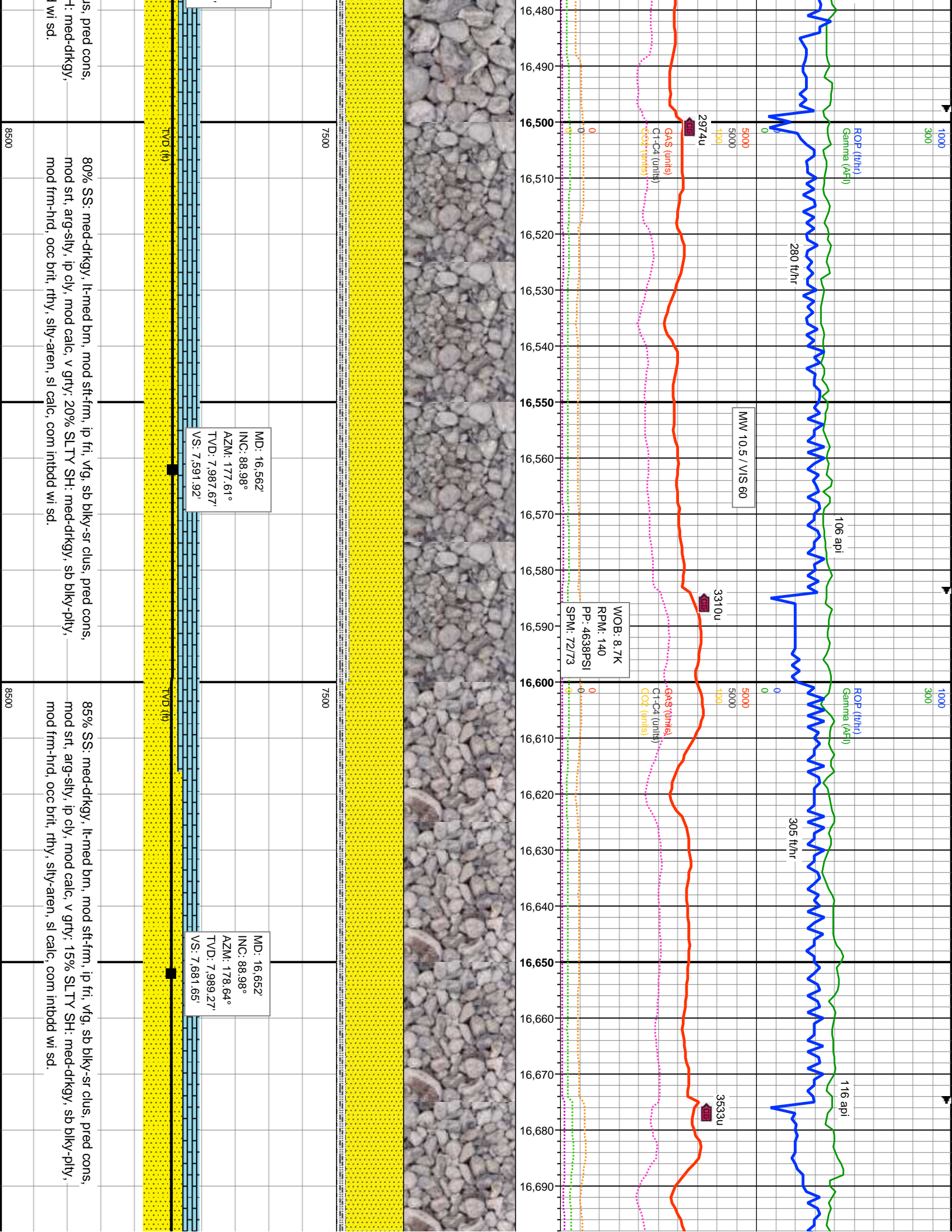


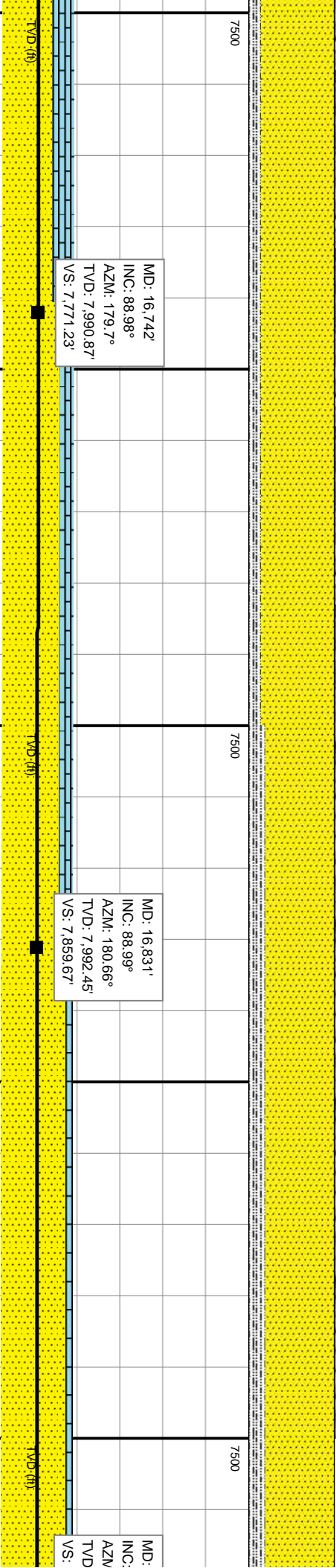
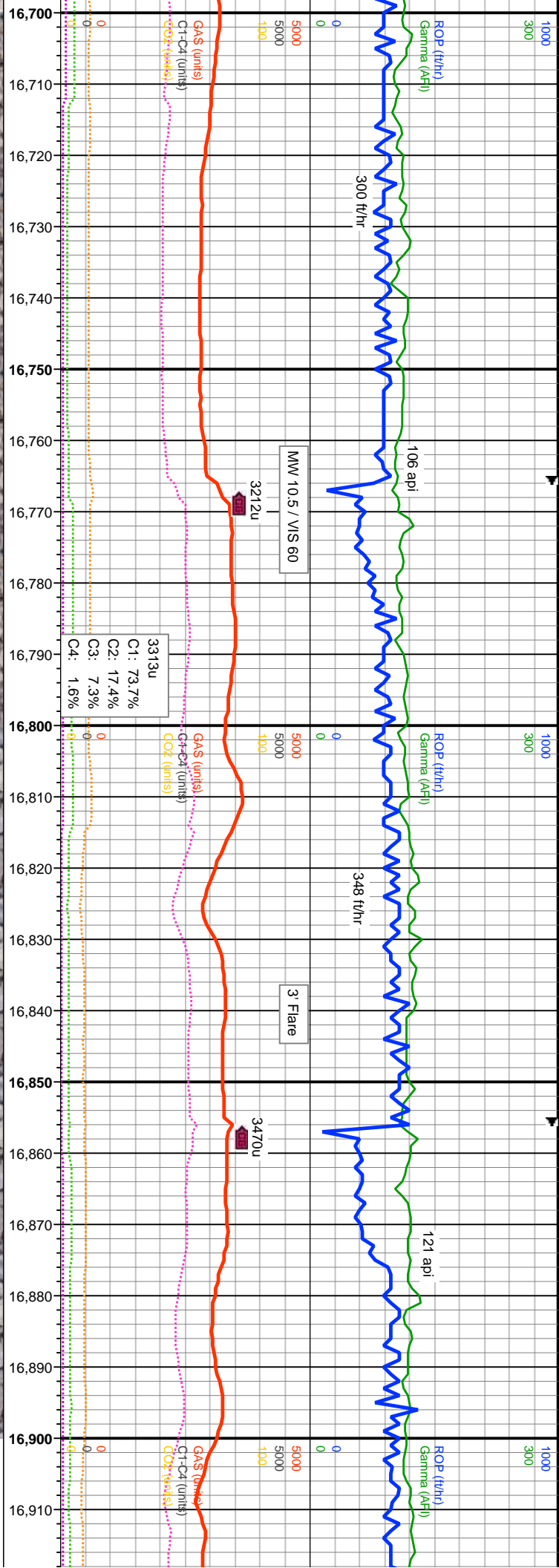








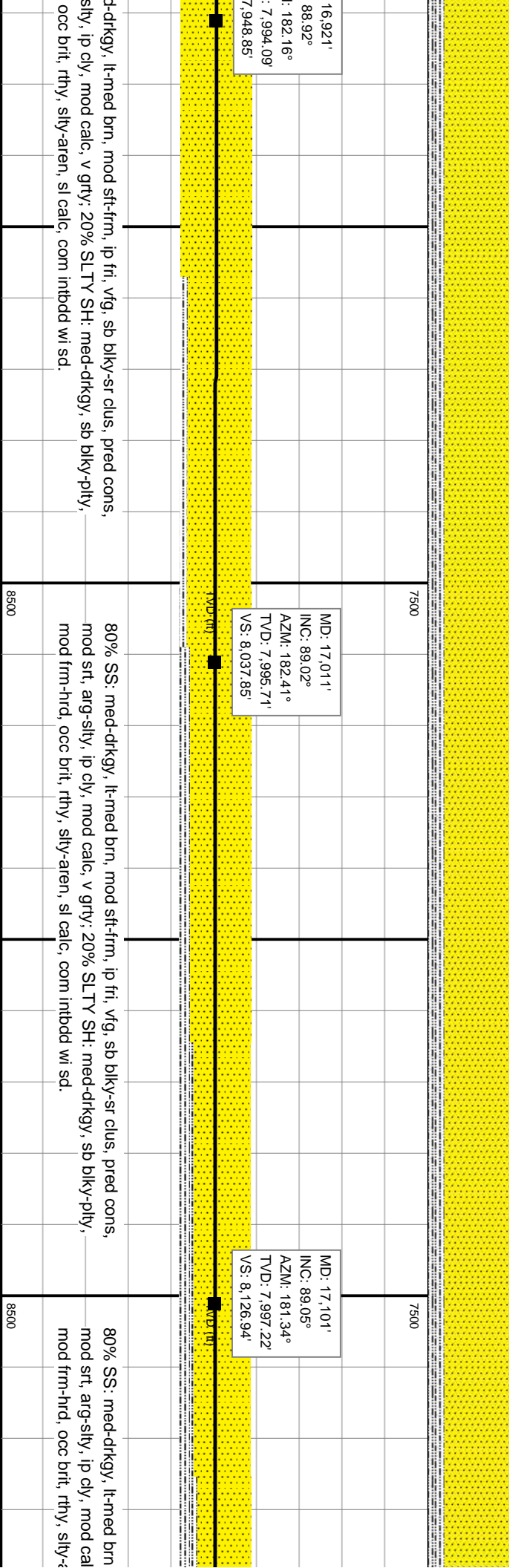
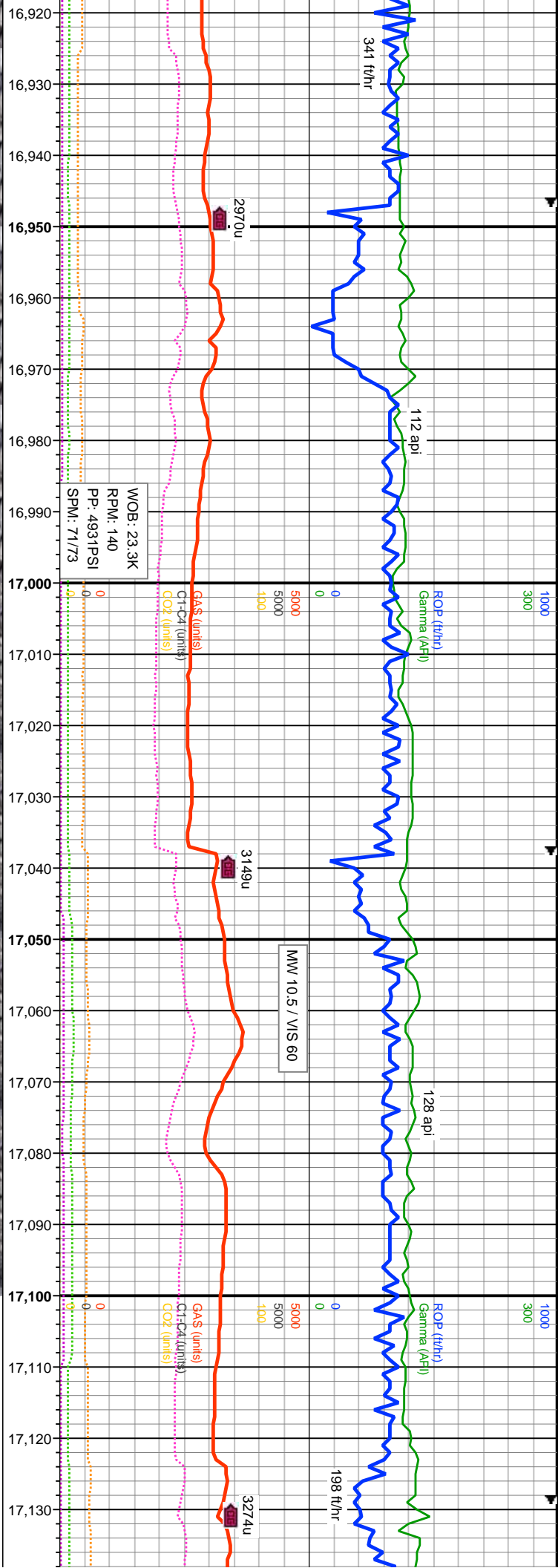


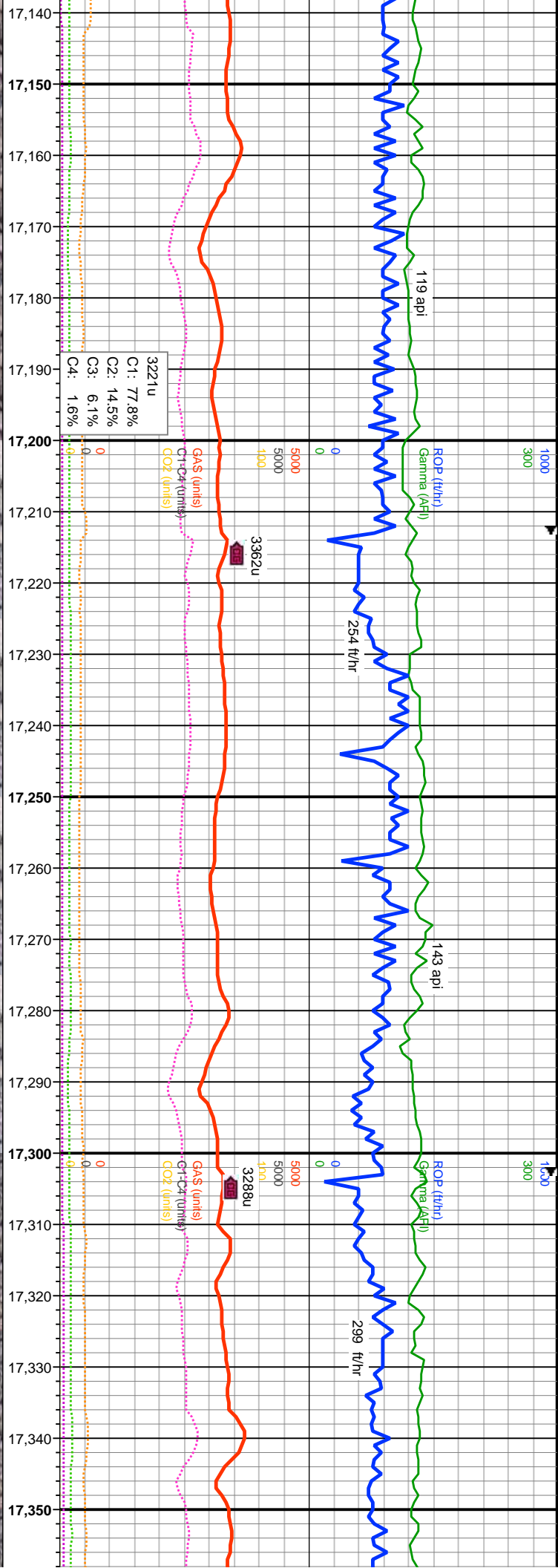


85% SS: med-drkgy, lt-med brn, mod sft-fm, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, v grty; 15% SLTY SH: med-drkgy, sb blk-y-pily, mod frm-hrd, occ brt, rthy, sily-aren, sl calc, com intbdd wi sd.

80% SS: med-drkgy, lt-med brn, mod sft-fm, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, v grty; 20% SLTY SH: med-drkgy, sb blk-y-pily, mod frm-hrd, occ brt, rthy, sily-aren, sl calc, com intbdd wi sd.

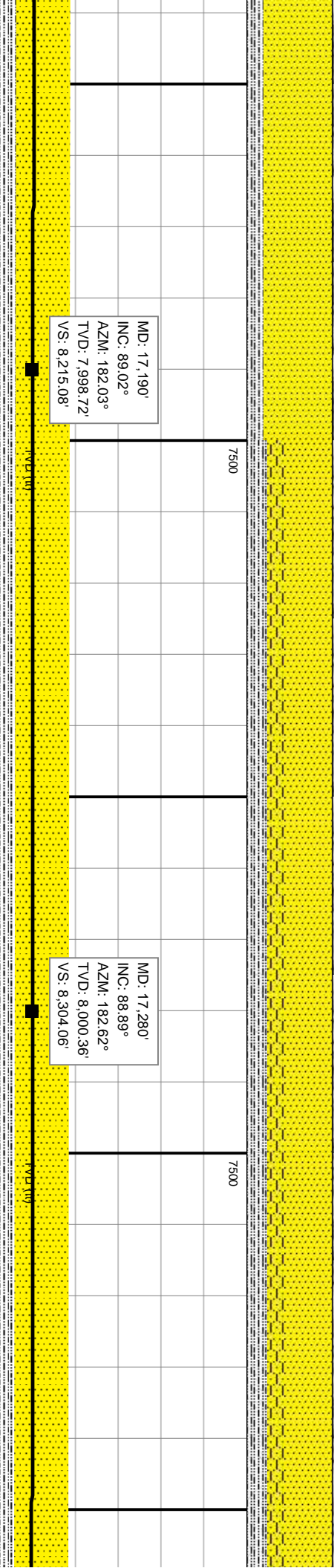
80% SS: med-drkgy, lt-med brn, mod sft-fm, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, v grty; 20% SLTY SH: med-drkgy, sb blk-y-pily, mod frm-hrd, occ brt, rthy, sily-aren, sl calc, com intbdd wi sd.





MD: 17,190'
INC: 89.02°
AZM: 182.03°
TVD: 7,998.72'
VS: 8,215.08'

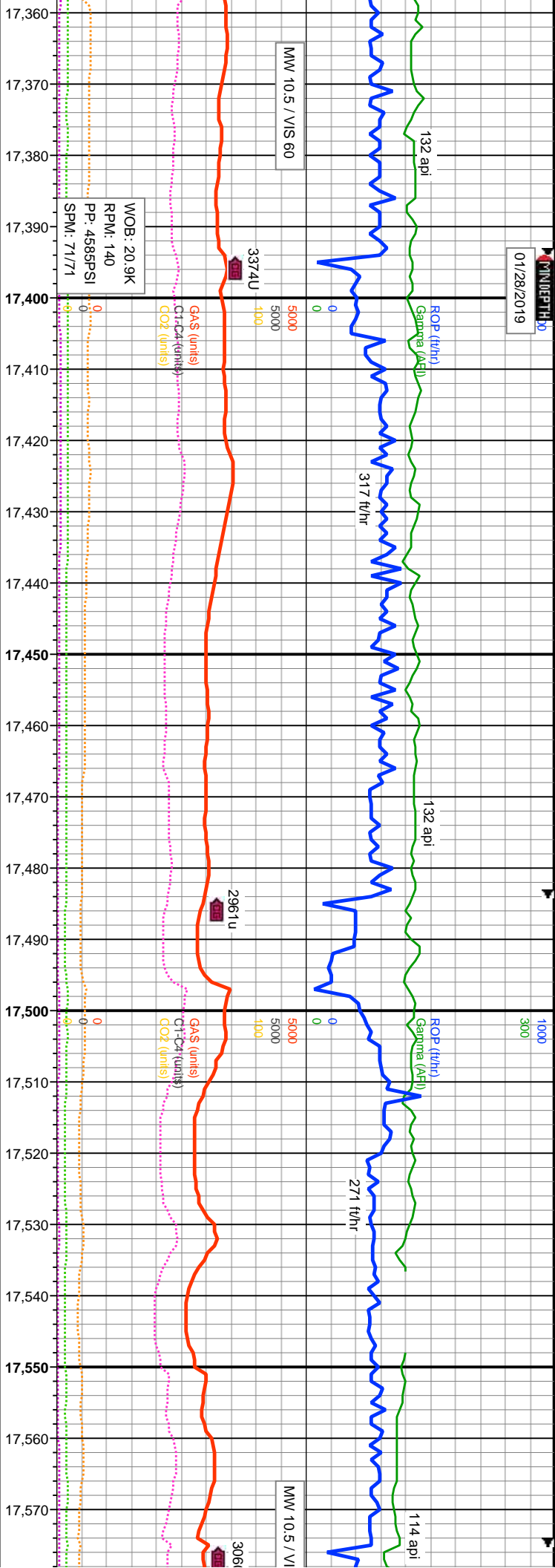
MD: 17,280'
INC: 88.89°
AZM: 182.62°
TVD: 8,000.36'
VS: 8,304.06'



mod sft-frm, ip fri, vfg, sb blk-y-sr clus, pred cons, c, v grty, 20% SLTY SH: med-dkgy, sb blk-y-pty, aren, sl calc, com inbddd wi sd.

75% SS:-SLTY SS: med-dkgy, lt-med brn, mod sft-frm, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, v grty, v sl sily, 25% SLTY SH: med-dkgy, sb blk-y-pty, mod frm-hrd, occ brt, rthy, sily-aren, sl calc, com inbddd wi sd.

75% SS:-SLTY SS: med-dkgy, lt-med brn, mod sft-frm, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, v grty, v sl sily, 25% SLTY SH: med-dkgy, sb blk-y-pty, mod frm-hrd, occ brt, rthy, sily-aren, sl calc, com inbddd wi sd.

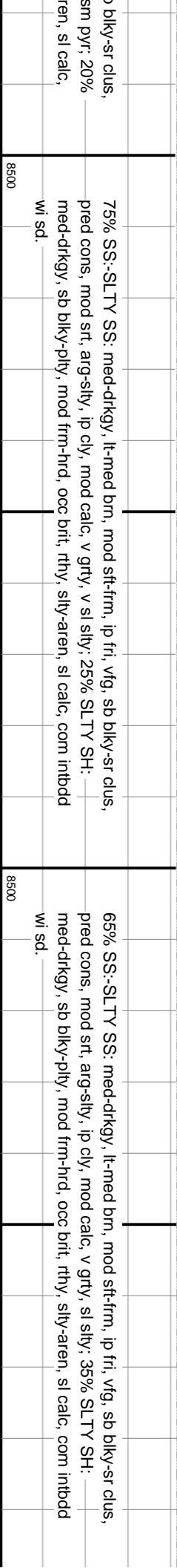


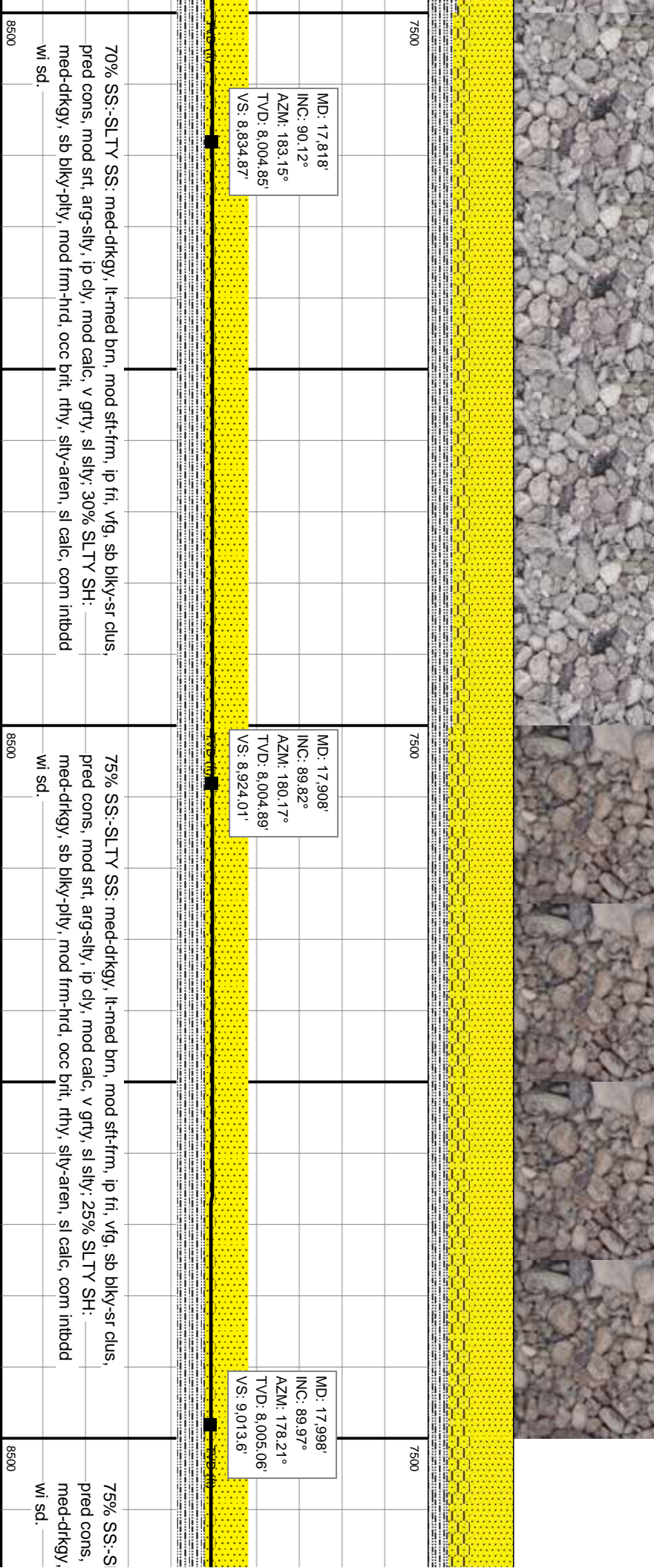
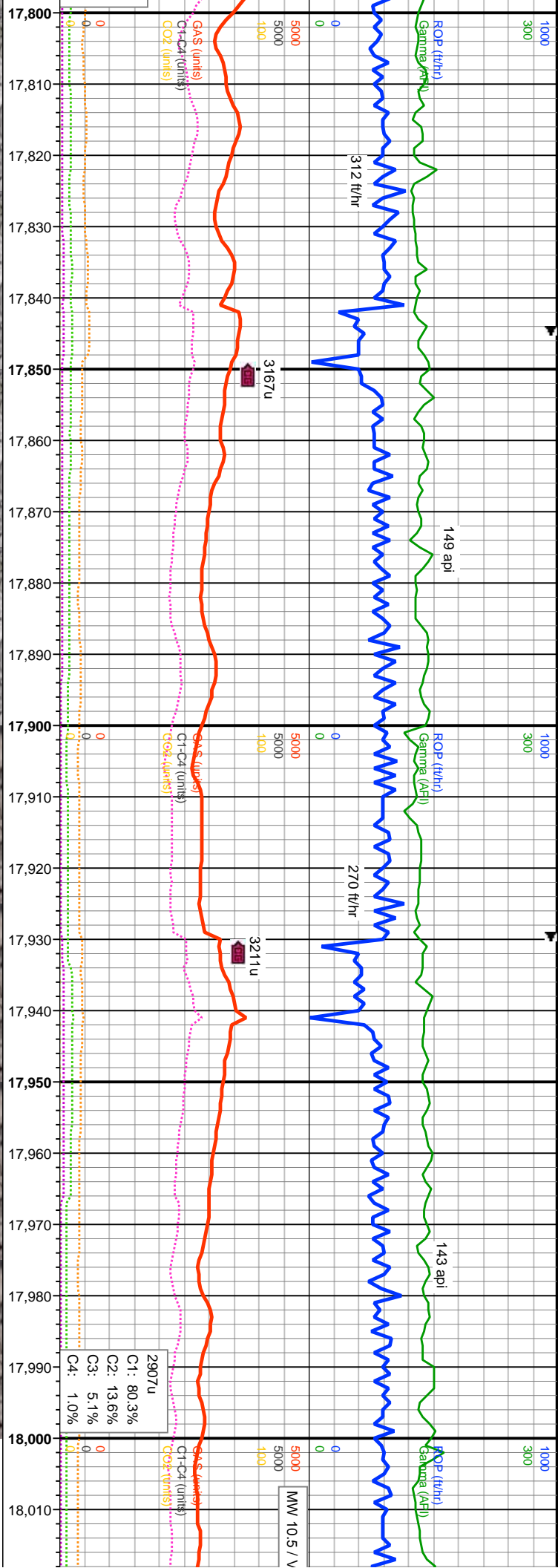
MD: 17,370'
INC: 88.92°
AZM: 182.79°
TVD: 8,002.08'
VS: 8,392.96'

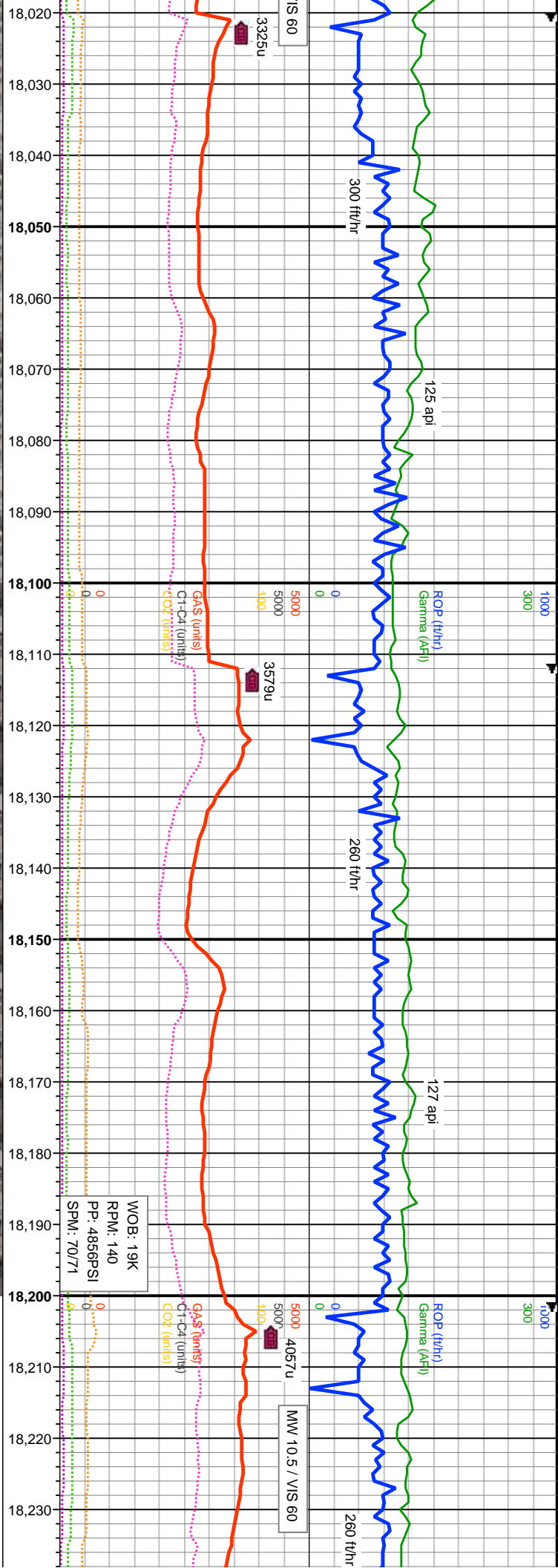
MD: 17,459'
INC: 89.08°
AZM: 182.21°
TVD: 8,003.64'
VS: 8,480.91'

MD: 17,549'
INC: 89.45°
AZM: 183.49°
TVD: 8,004.79'
VS: 8,569.78'

fit-frm, ip fri, vfg, sb blk-yr clus,
ty, v si slty; 25% SLTY SH:
y; silty-aren, si calc, com intbdd
7500
8500
70% SS:-SLTY SS: med-dkgy, lt-med brn, mod sft-frm, ip fri, vfg, sb blk-yr clus,
pied cons, mod srt, arg-sily, ip cly, mod calc, v gfty, v si slty; 30% SLTY SH:
med-dkgy, sb blk-pty, mod frm-hrd, occ brt, rthy, silty-aren, si calc, com intbdd
wi sd.
7500
8500
80% SS:-SLTY SS: med-dkgy, lt-med brn, mod sft-frm, ip fri, vfg, sb blk-yr clus,
pied cons, mod srt, arg-sily, ip cly, mod calc, v gfty, v si slty, v r r dis
SLTY SH: med-dkgy, sb blk-pty, mod frm-hrd, occ brt, rthy, silty-a
com intbdd wi sd.



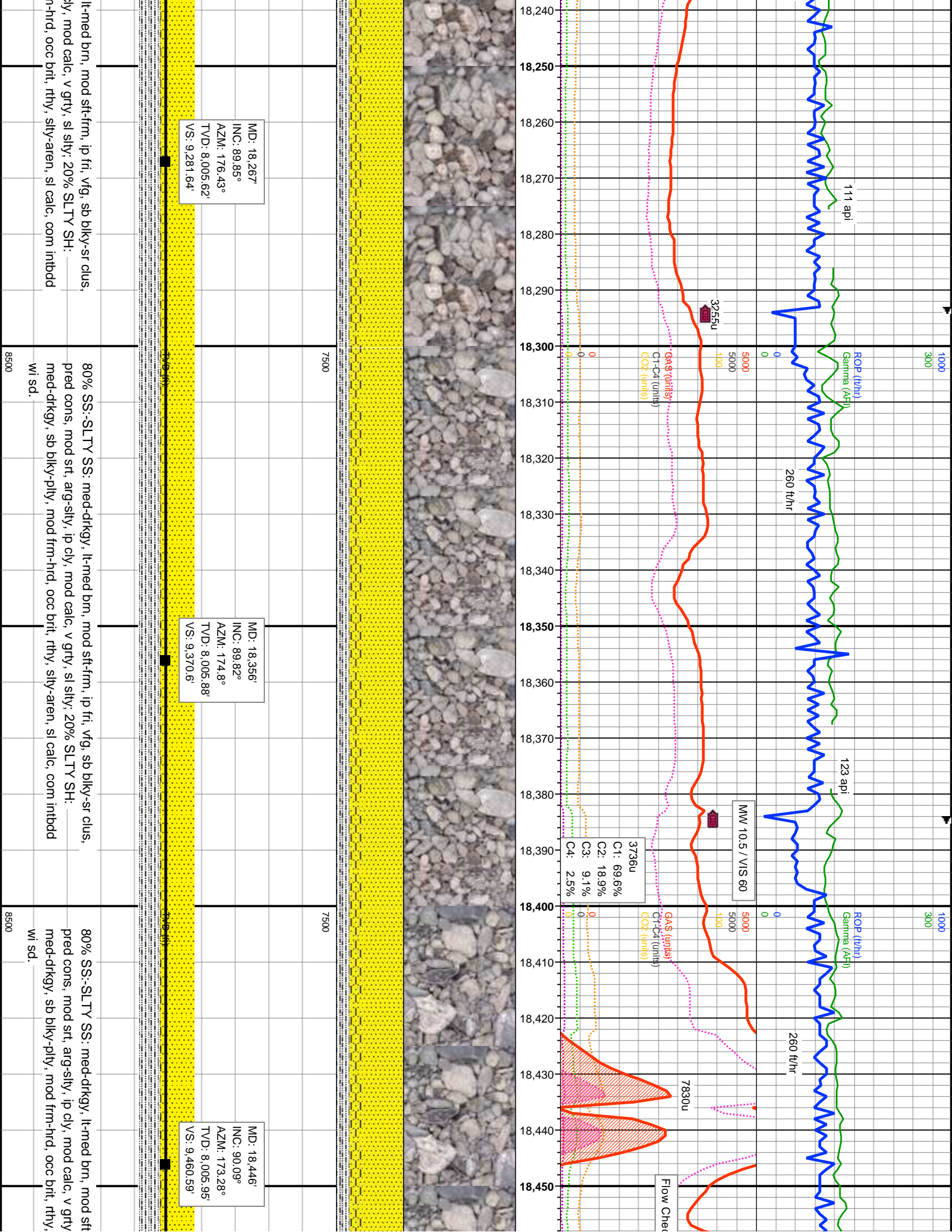


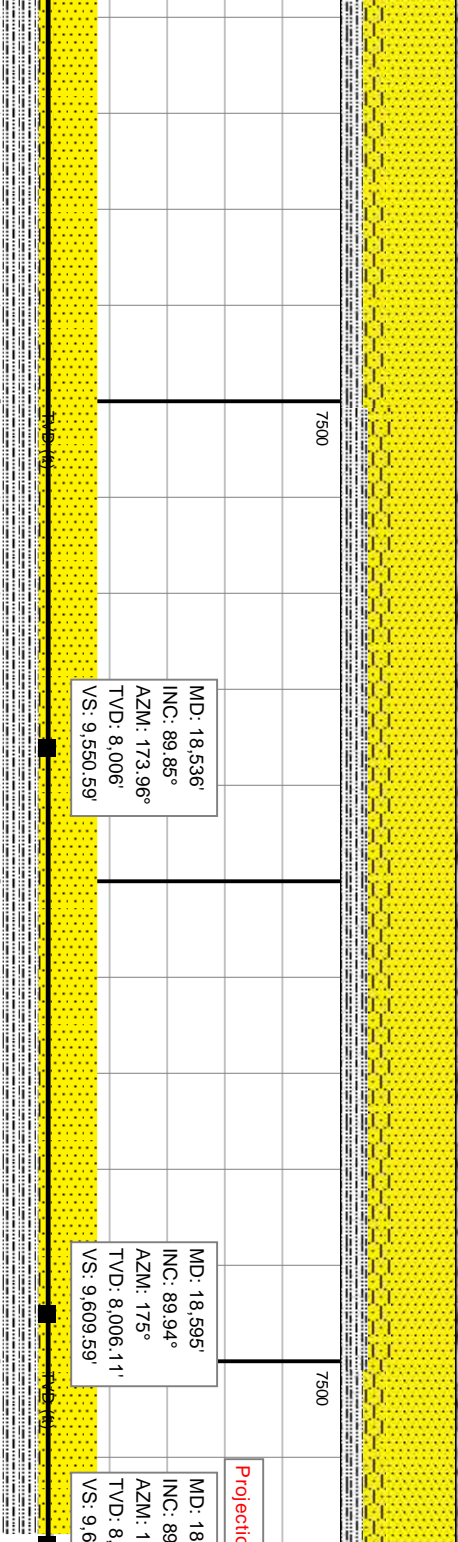
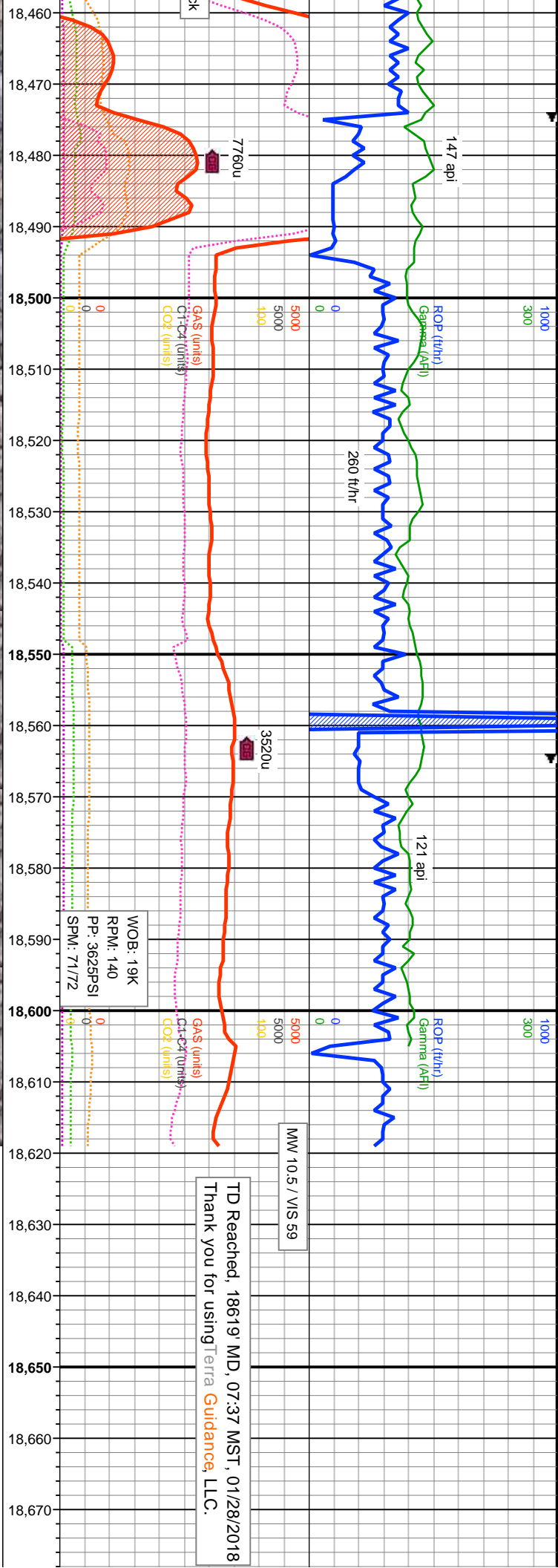


MD: 18,087'
INC: 89.88°
AZM: 180.13°
TVD: 8,005.18'
VS: 9,102.2'

MD: 18,177'
INC: 89.85°
AZM: 178.06°
TVD: 8,005.39'
VS: 9,191.81'

LTy SS: med-dkgy, lt-med brn, mod sft-frm, ip fri, vfg, sb blk-y-sr clus, mod srt, arg-sily, ip cly, mod calc, v grty, sl sily; 25% SLTY SH: sb blk-y-pty, mod frm-hrd, occ brt, rthy, silty-aren, sl calc, com intbdd	7500	7500	8500
75% SS:-SLTY SS: med-dkgy, lt-med brn, mod sft-frm, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, v grty, sl sily; 25% SLTY SH: med-dkgy, sb blk-y-pty, mod frm-hrd, occ brt, rthy, silty-aren, sl calc, com intbdd w/ sd.	7500	7500	8500
80% SS:-SLTY SS: med-dkgy, pred cons, mod srt, arg-sily, ip c med-dkgy, sb blk-y-pty, mod frm w/ sd.	7500	7500	8500





MD: 18,536'
INC: 89.85°
AZM: 173.96°
TVD: 8,006'
VS: 9,550.59'

MD: 18,595'
INC: 89.94°
AZM: 175°
TVD: 8,006.11'
VS: 9,609.59'

MD: 18,619'
INC: 89.94°
AZM: 175°
TVD: 8,006.13'
VS: 9,633.58'

Projection to Bit

FM Name				
Niobrara	7854			
Ft Hays	8425	12193		
Codell	8503		12379	
Carlile				
Greenhorn				

frm, ip fri, vfg, sb blk-y-sr clus, sl sily; 20% SLTY SH: med-dkgy, sb blk-y-plty, mod frm-hrd, occ brit, rthy, sily-aren, sl calc, com intbdd wi sd.

75% SS:-SLTY SS: med-dkgy, lt-med brn, mod sft-frm, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, v gfty, sl sily; 25% SLTY SH: med-dkgy, sb blk-y-plty, mod frm-hrd, occ brit, rthy, sily-aren, sl calc, com intbdd wi sd.

80% SS:-SLTY SS: med-dkgy, lt-med brn, mod sft-frm, ip fri, vfg, sb blk-y-sr clus, pred cons, mod srt, arg-sily, ip cly, mod calc, v gfty, sl sily; 20% SLTY SH: med-dkgy, sb blk-y-plty, mod frm-hrd, occ brit, rthy, sily-aren, sl calc, com intbdd wi sd.

