



Scale: 5" / 100'

Measured Depth Log

Well Name Schneider HD 11-102HN

Location Section 7, T4N, R66W

State COLORADO

Country USA

API Number 051234640600

Geographic Region DJ BASIN

County WELD

Rig Number PRECISION 466

AFE # 19DC0222

Field WATTENBERG

Ground Elevation 4735.0'

K.B. Elevation 4755.0'

Logged Interval 6000' MD To 17758' MD

Total Depth 17758' MD

Formation NIOBRARA C CHALK

Type of Drilling Fluid OIL BASED MUD

Operator

Company Great Western Operating Company, LLC

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



Geologist

Name Gabriel Rubio, Kennedy Oginga, Zach Souvall

Company Terra Guidance

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

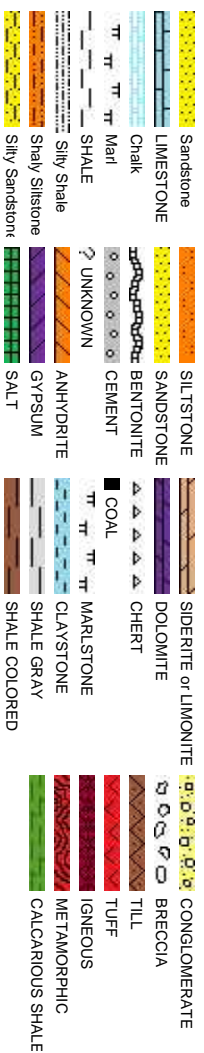


Other

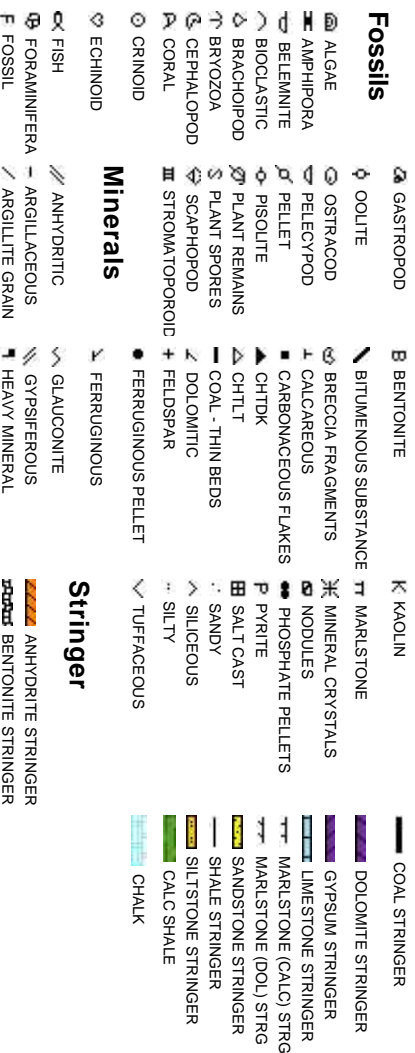
MUDLOG START DATE 10/25/2019

MUDLOG END DATE 10/28/2019

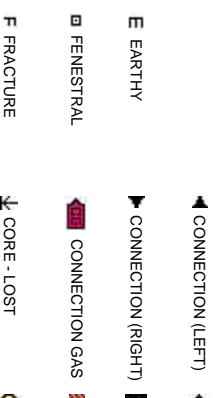
Rock Types



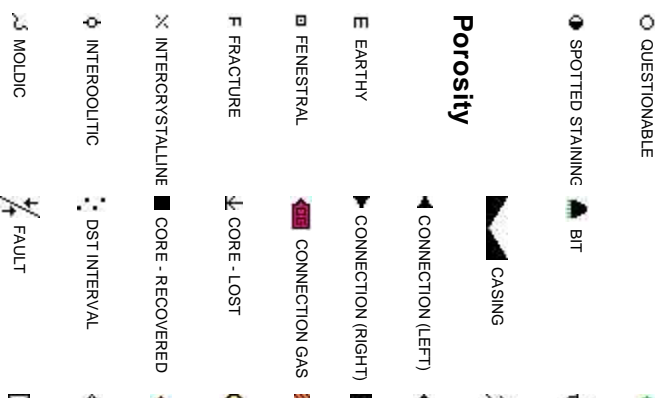
Accessories



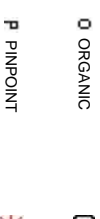
Porosity



Engineering



Oil Show






Other Symbols

 FORMATION TOP L LITHOGRAPHIC


Rounding

GAS SHOW  MICROXLN

 MIN DEPTH  ANGULAR  MUDSTONE

NORMAL FAULT  ROUNDED  PACKSTONE

OIL SHOW  SUBANG  WACKESTONE

OVERTURNED STRATA  SUBRND

Sorting

REVERSE FAULT

Textures

SIDEWALL CORE (LEFT)  MODERATE


SIDEWALL CORE (RIGHT)  BOUNDSTONE  POOR

SLIDE  CHALKY  WELL


 SURVEY  CRYPTOXLN

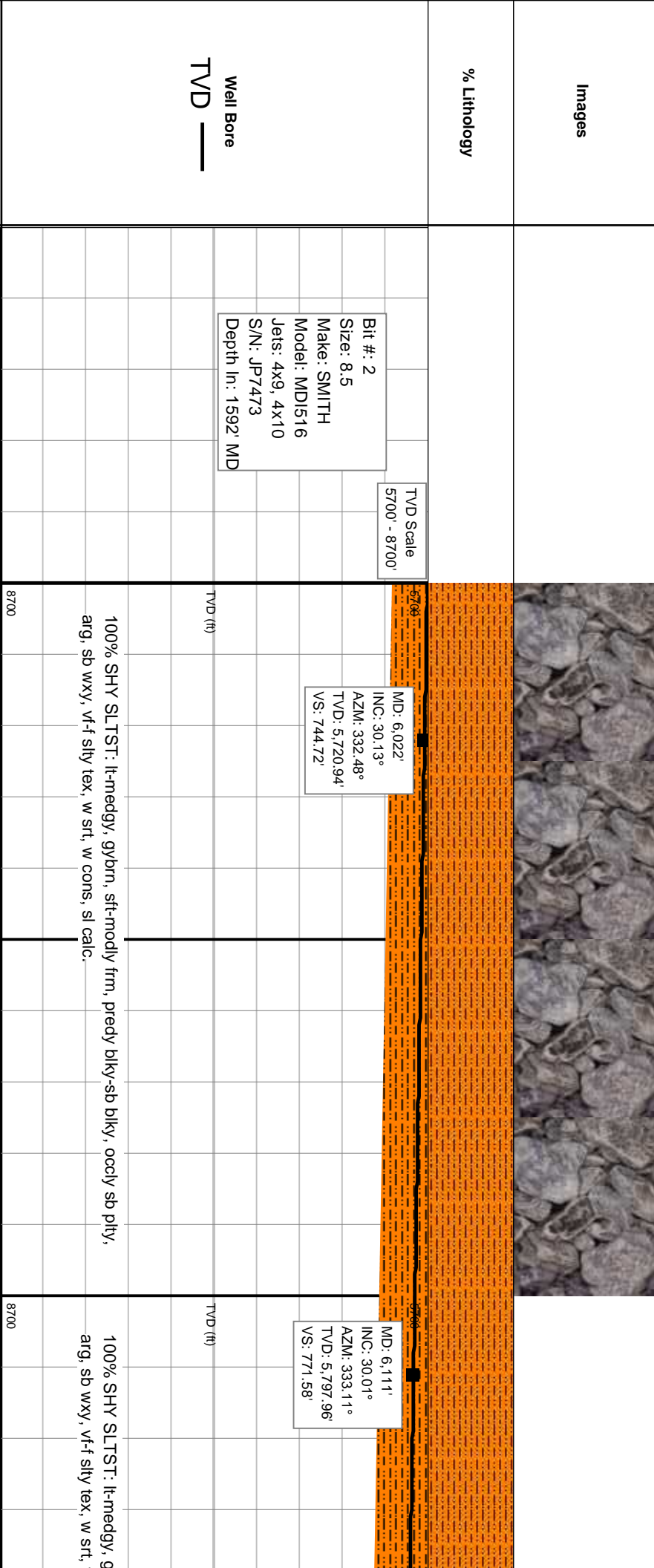
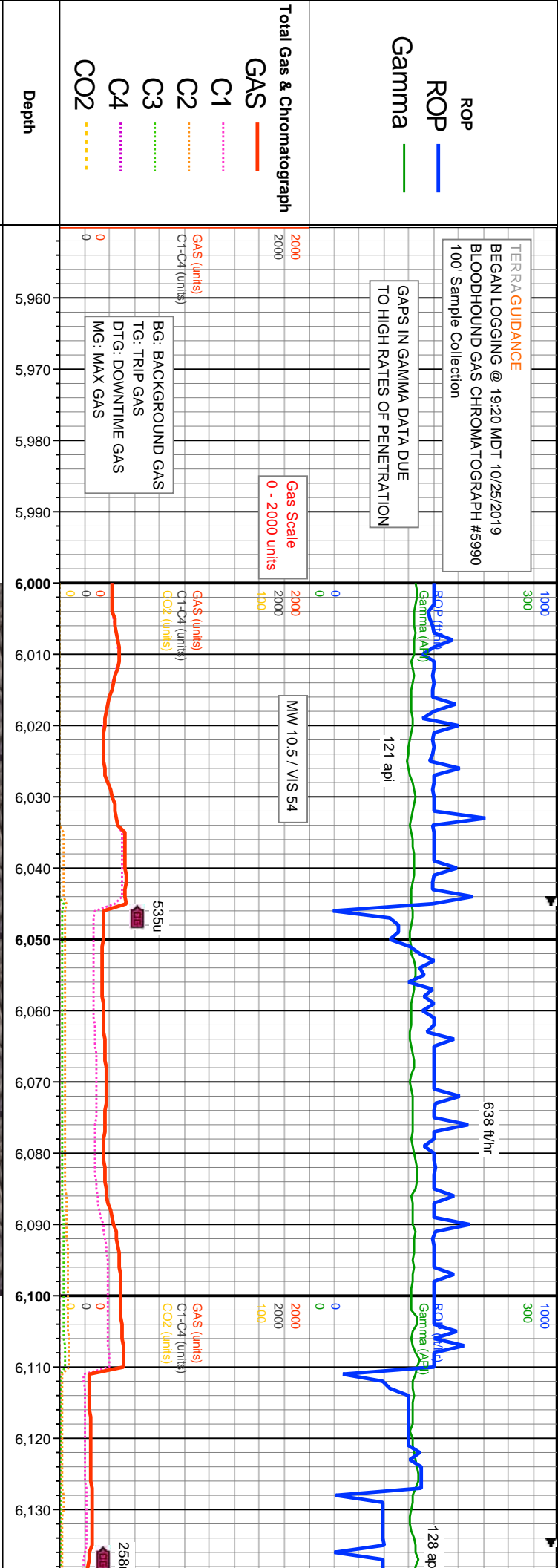
CALCARIUOS SHALE

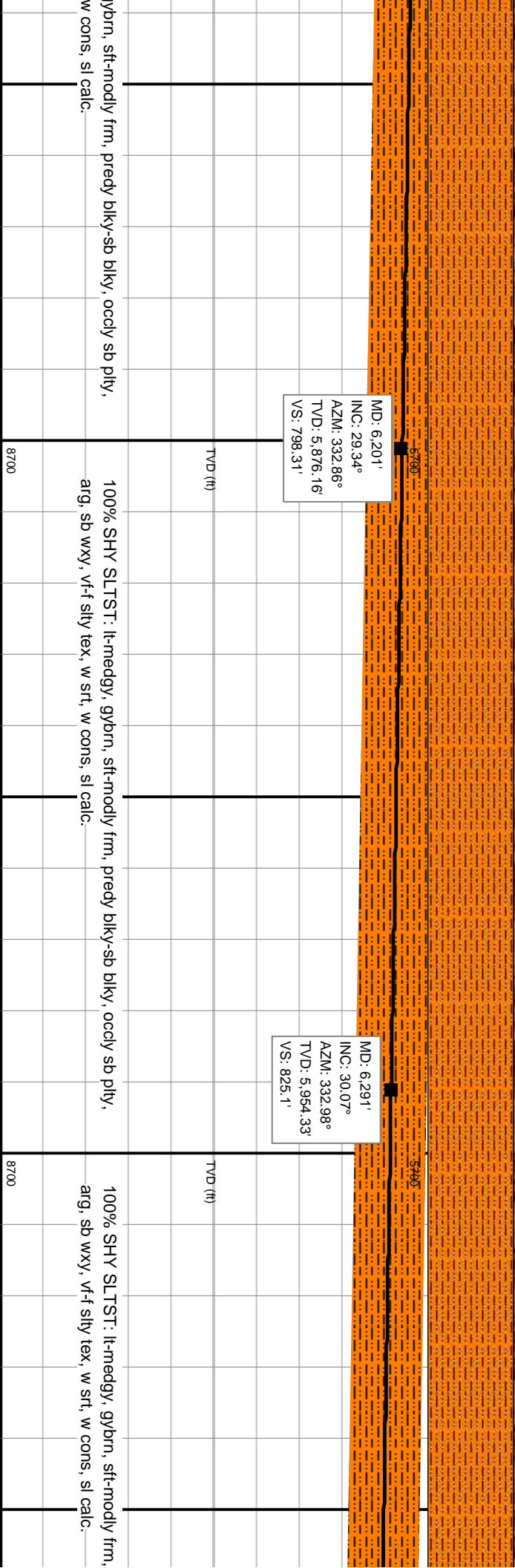
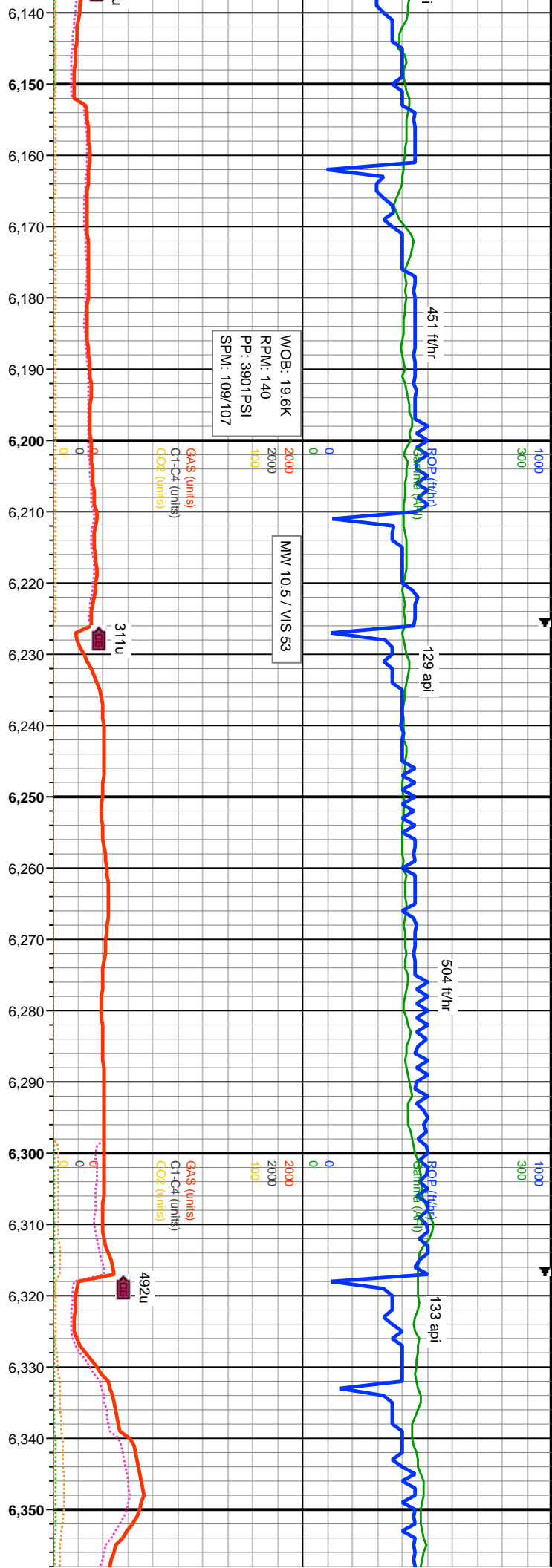
 TRIP GAS  EARTHY

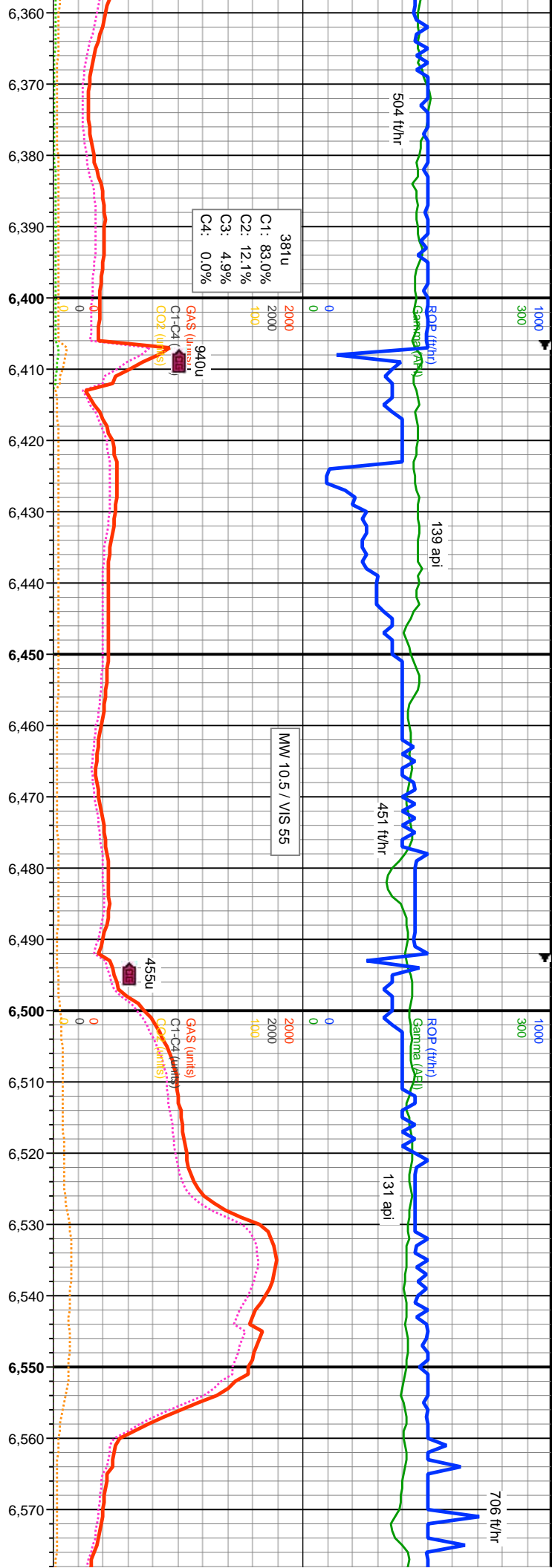
WIRELINE TESTED - LEFT  FINELYXLN

CALCARIOUS SHALE

WIRELINE TESTED - RT  GRAINSTONE



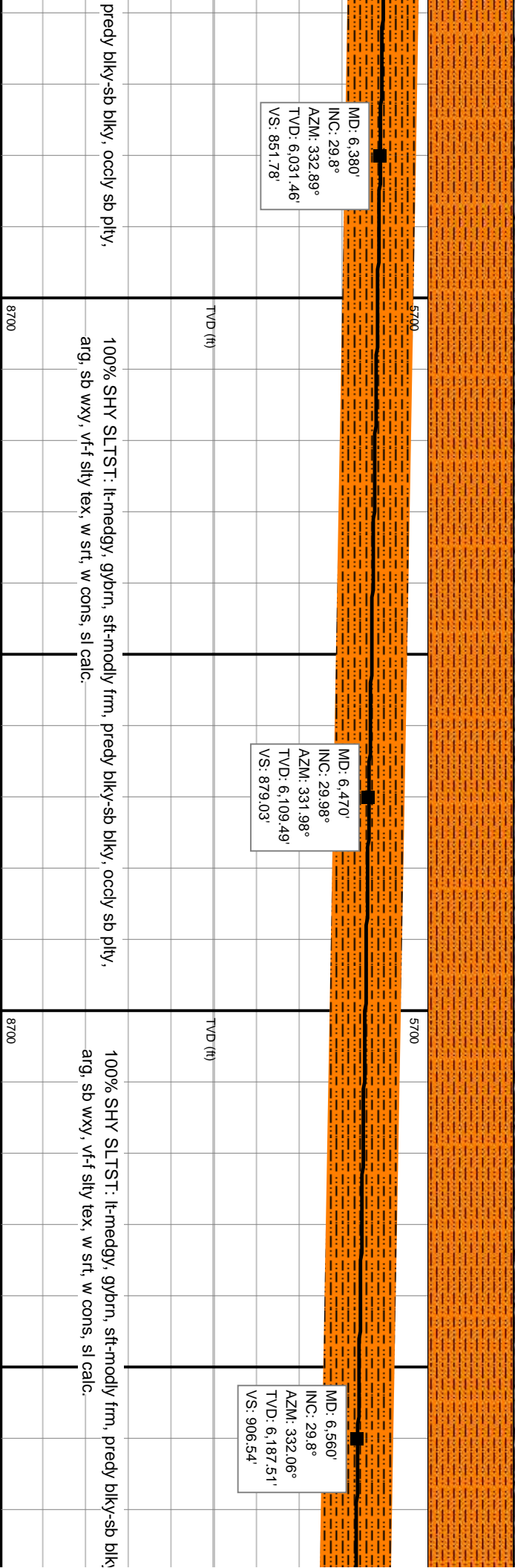


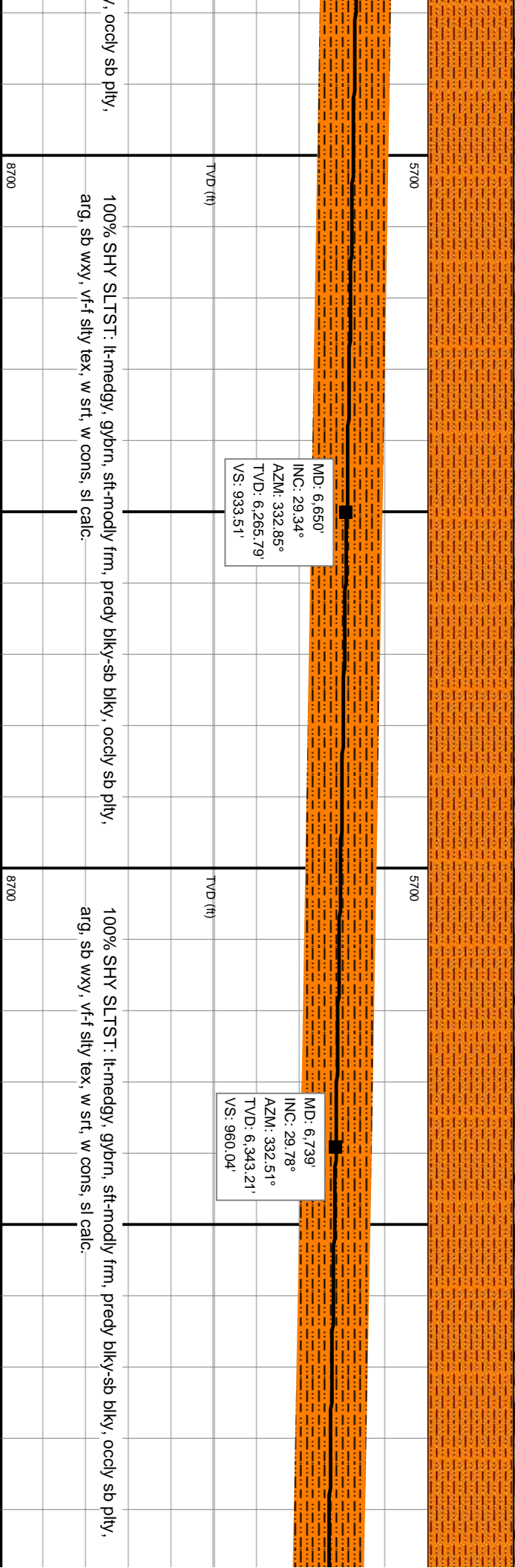
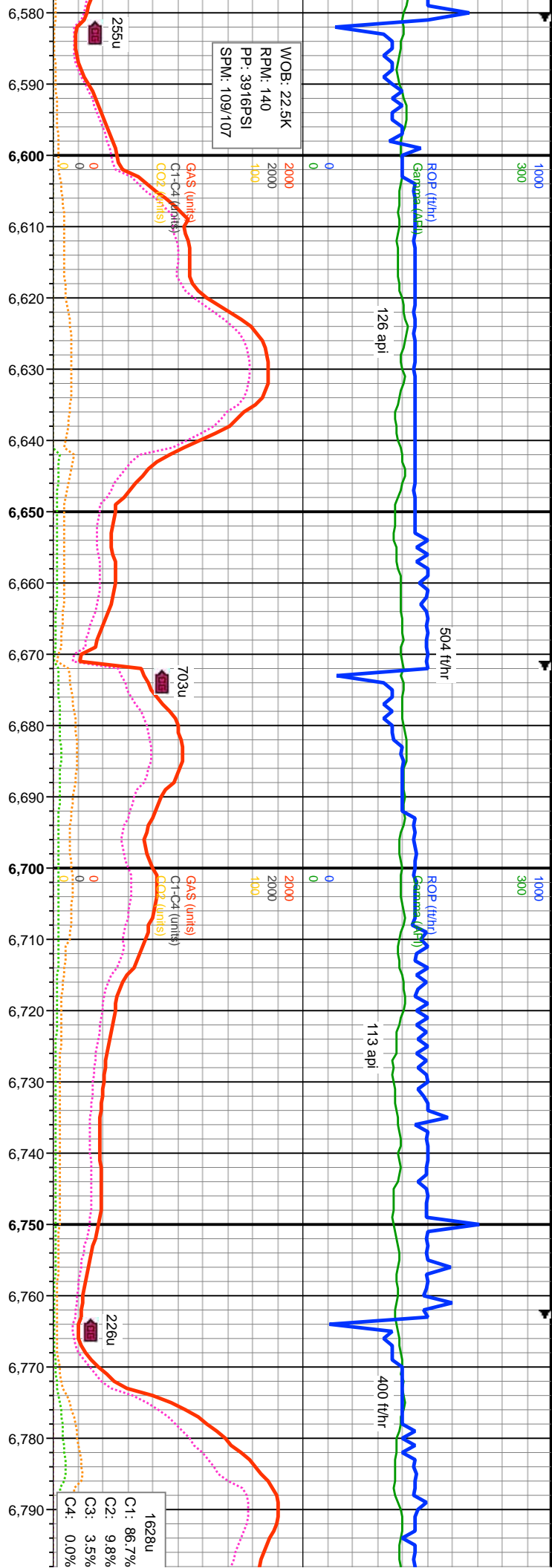


MD: 6,380'
INC: 29.8°
AZM: 332.89°
TVD: 6,031.46'
VS: 851.78'

MD: 6,470'
INC: 29.98°
AZM: 331.98°
TVD: 6,109.49'
VS: 879.03'

MD: 6,560'
INC: 29.8°
AZM: 332.06°
TVD: 6,187.51'
VS: 906.54'



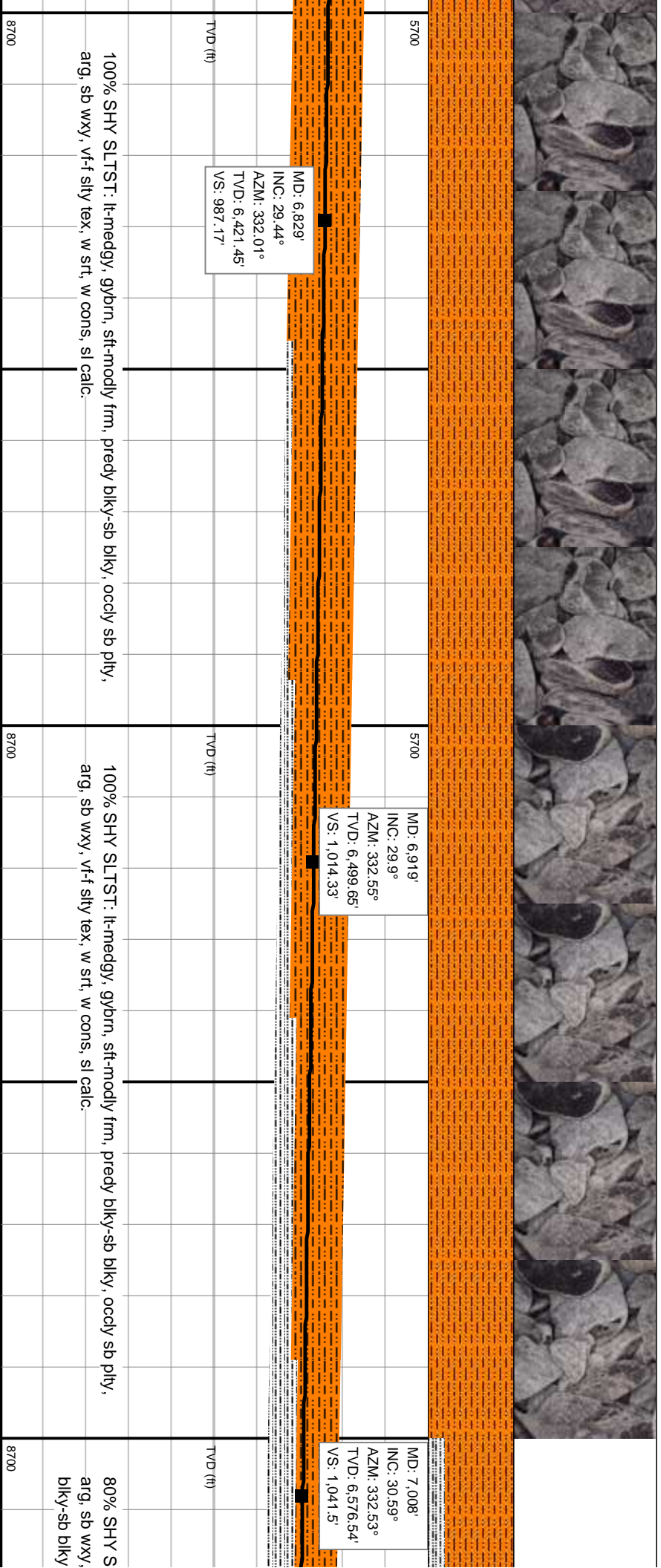
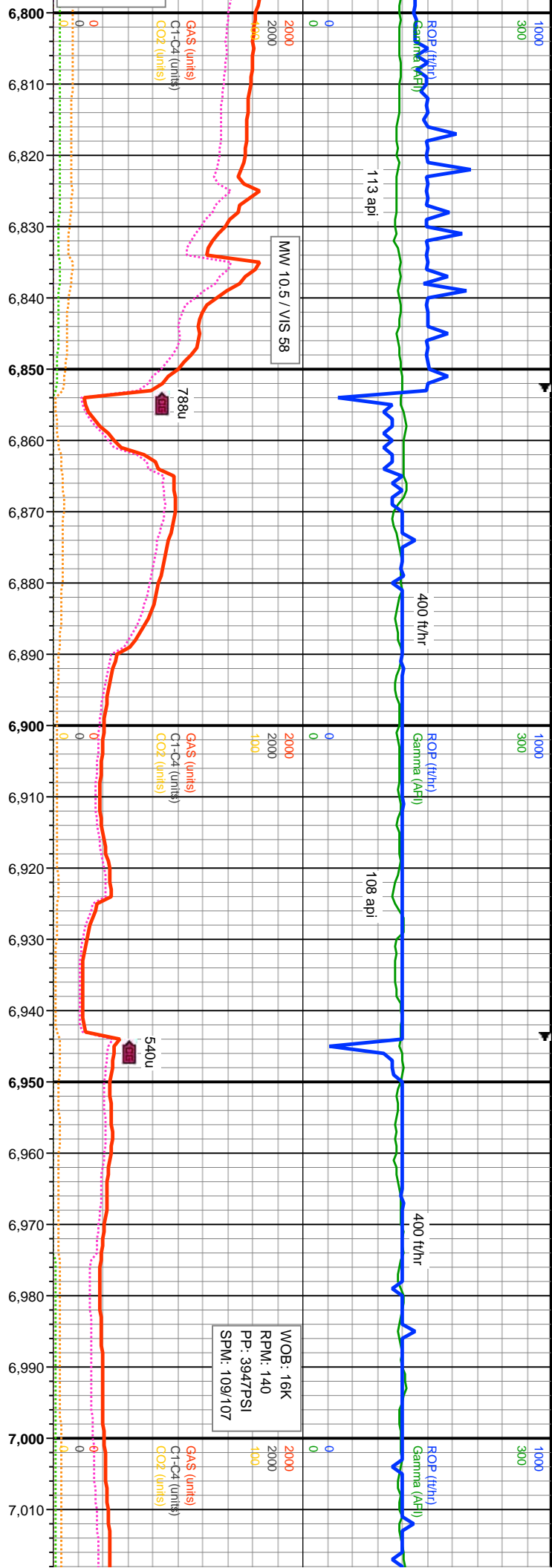


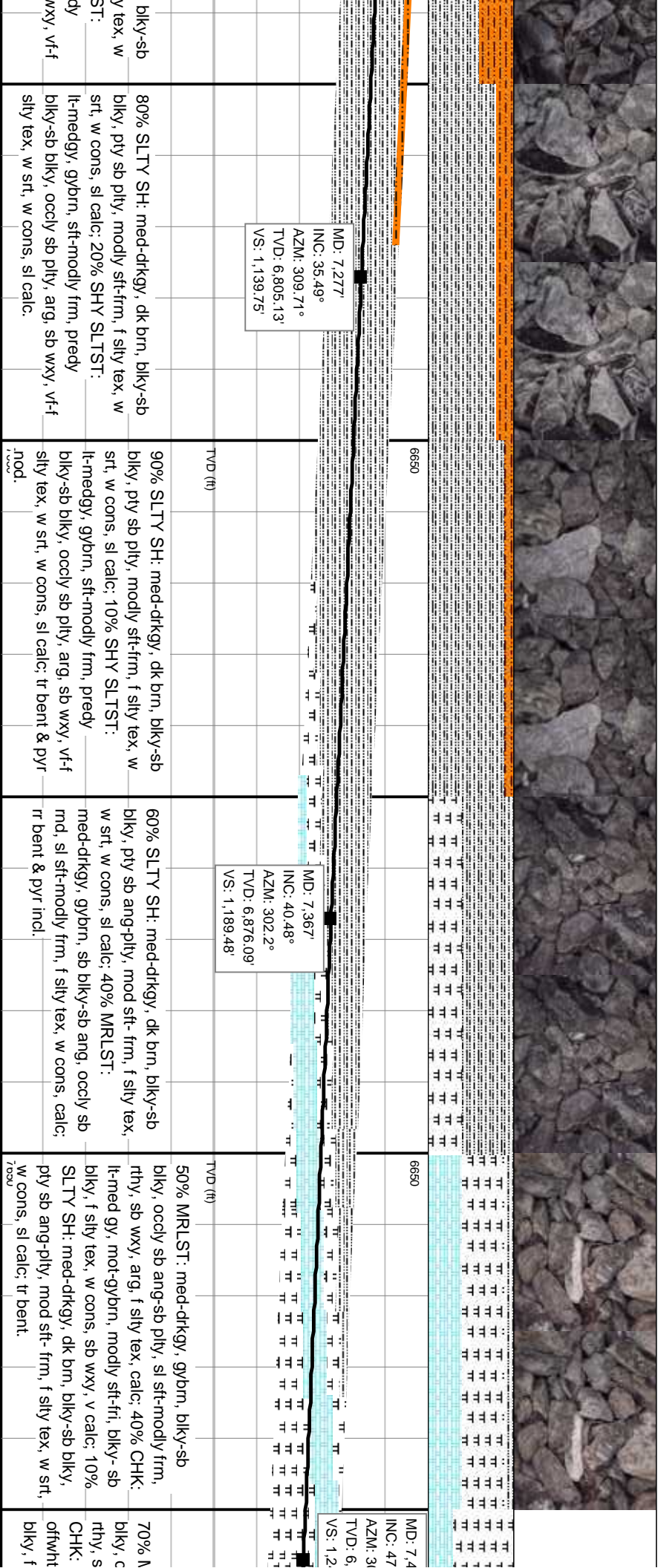
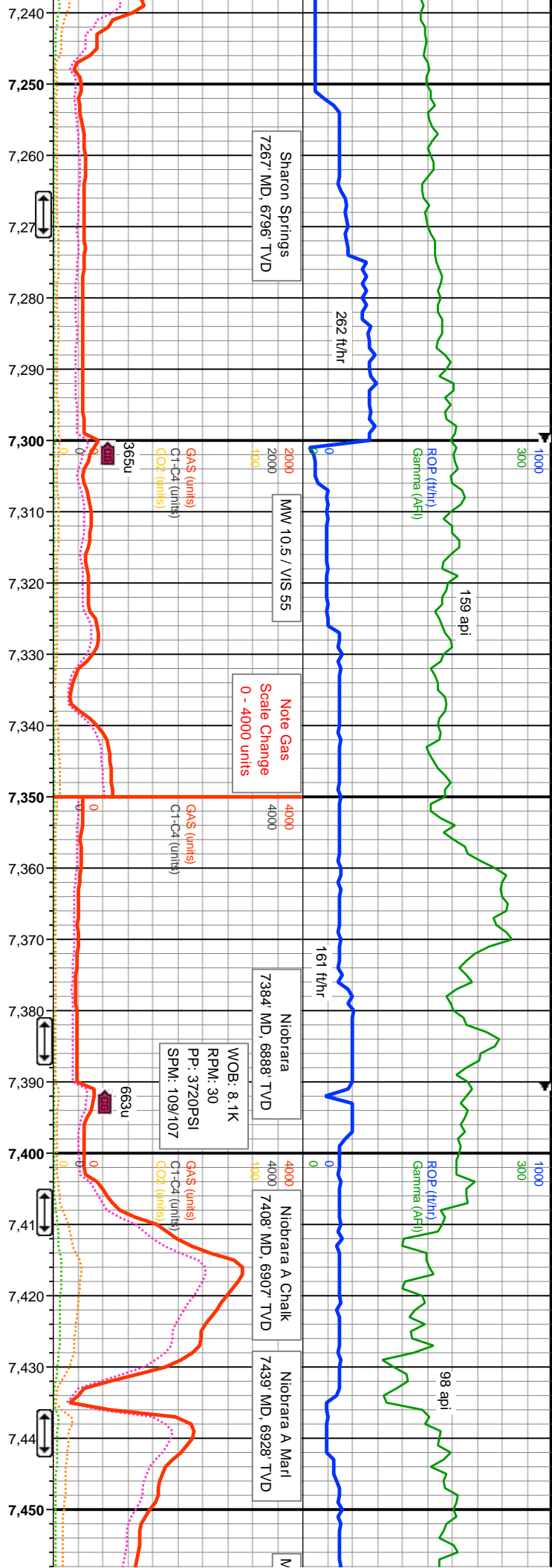
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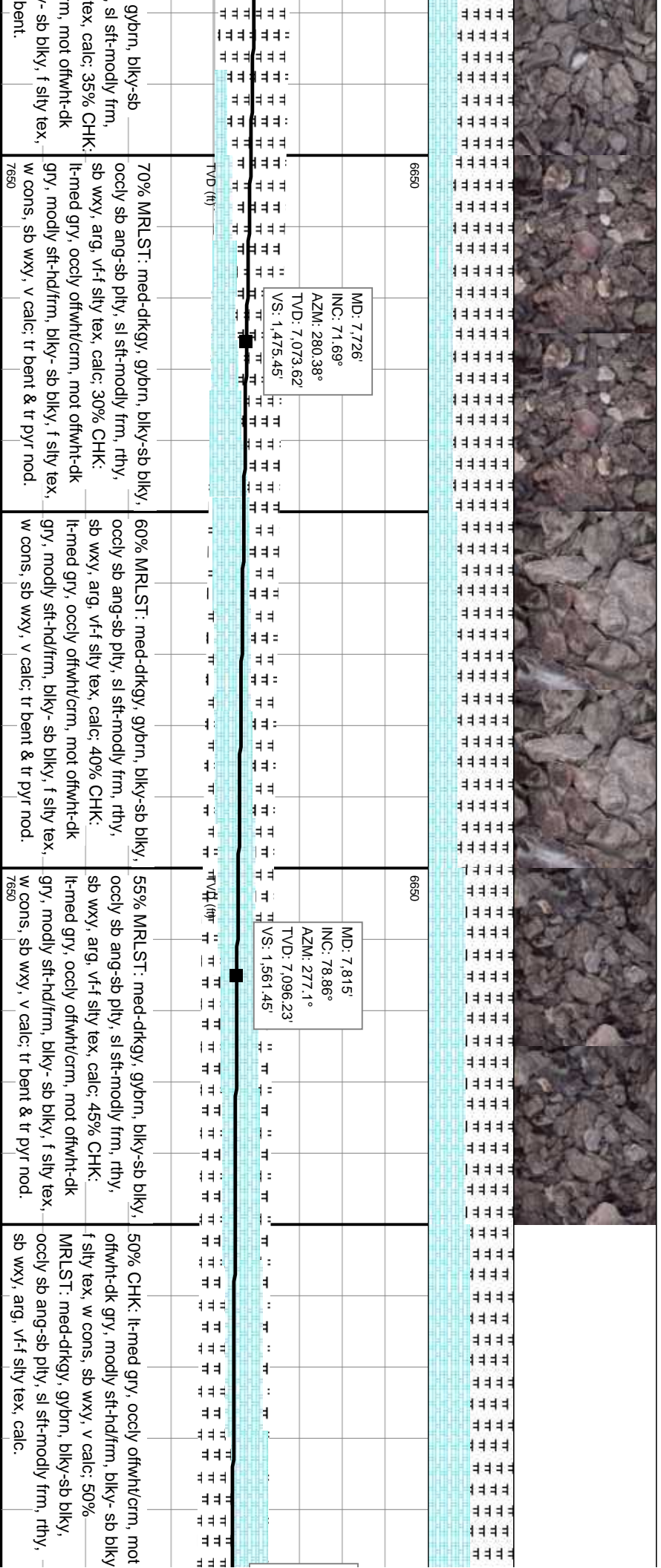
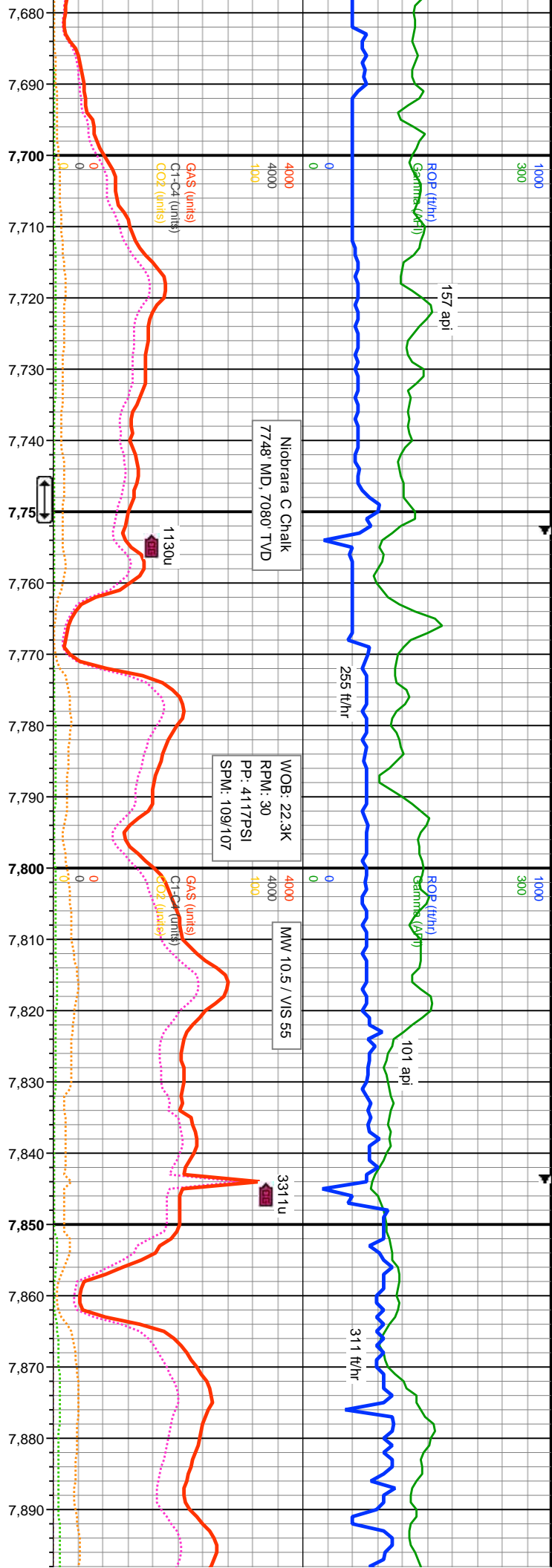
arg, sb wxy, vf-f silty tex, w srl, w cons, sl calc.

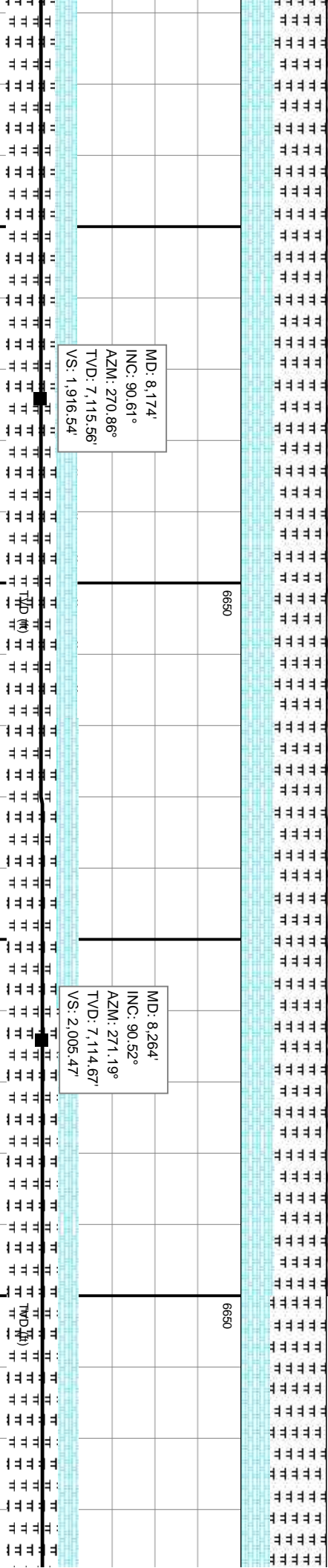
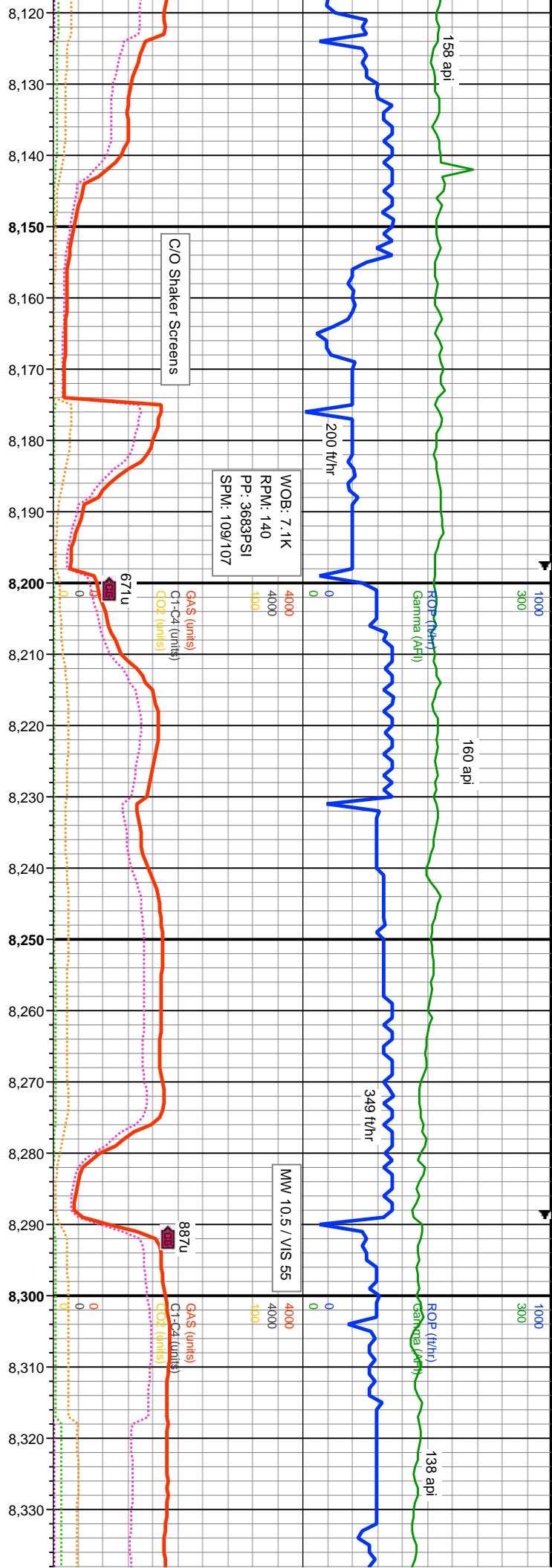
100% SHY SLTST: lt-medgy, gybrn, sft-modly frm, predy blkly-sb blkly, occly sb ply,

arg, sb wxy, vf-f silty tex, w srl, w cons, sl calc.





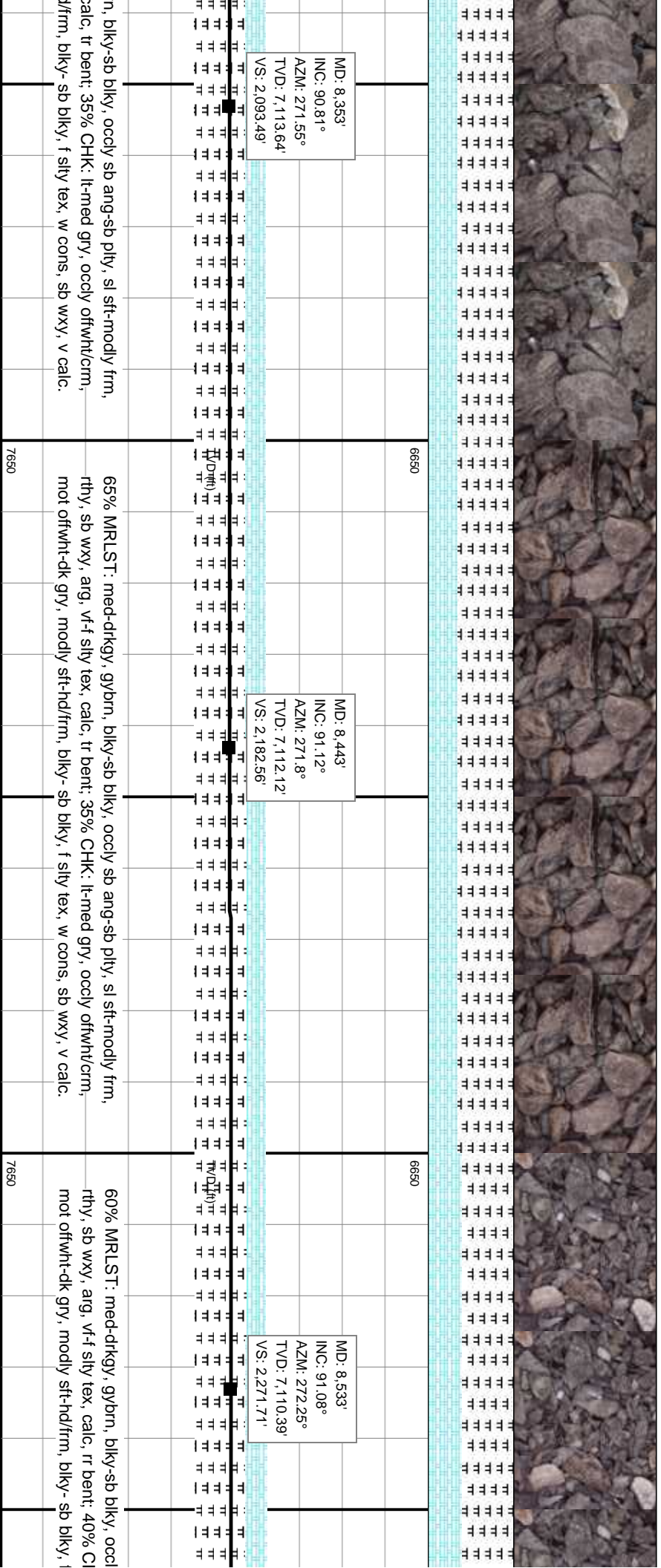
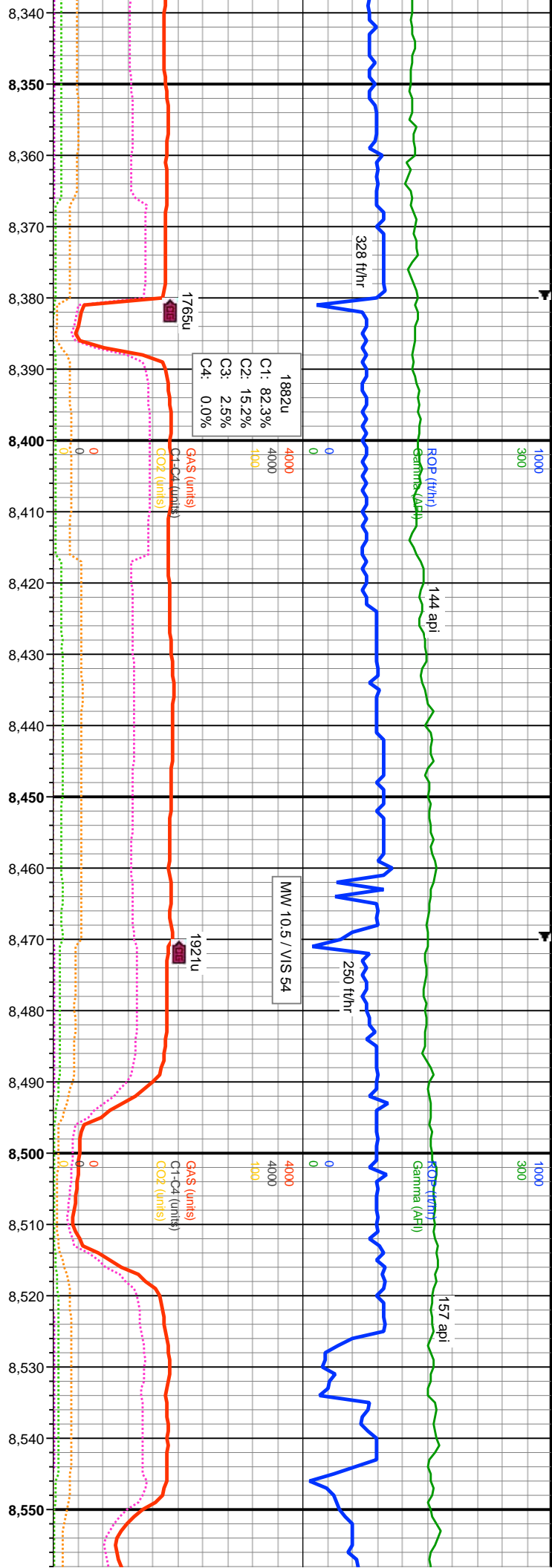


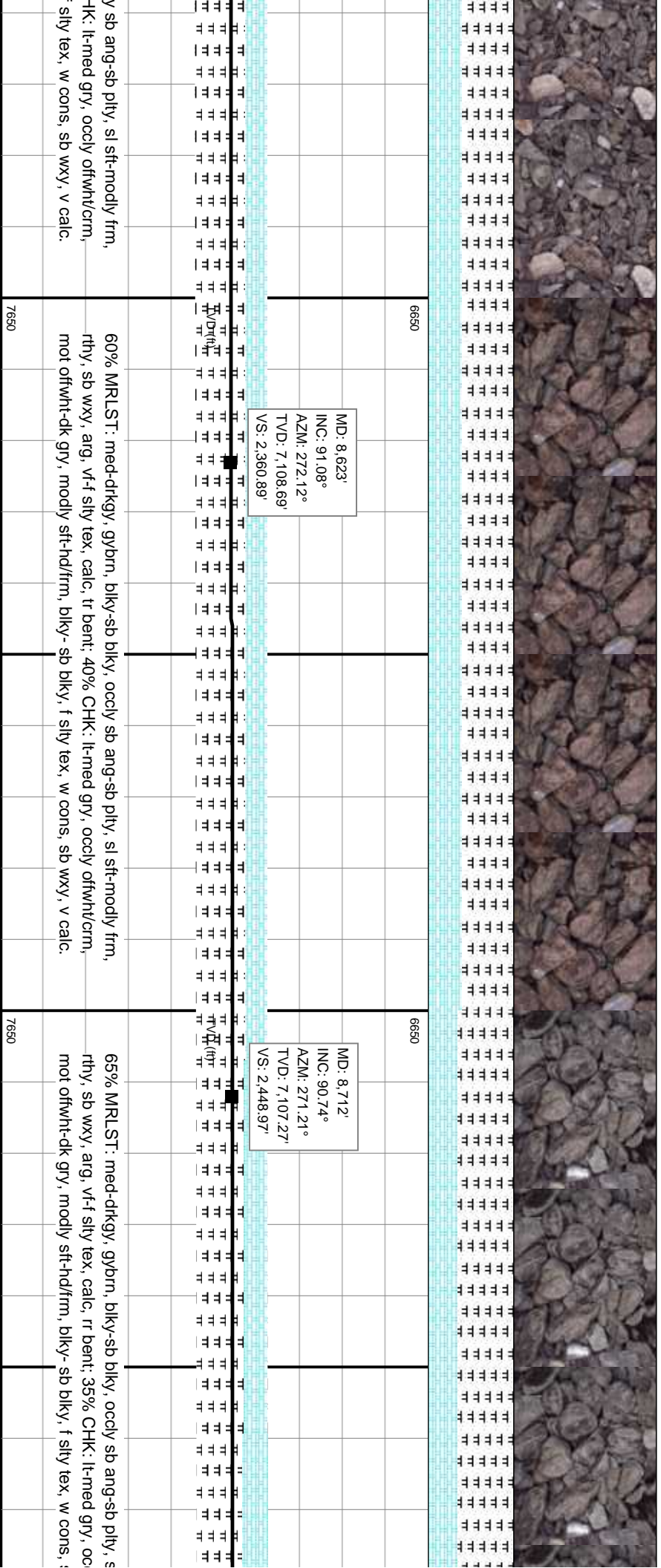
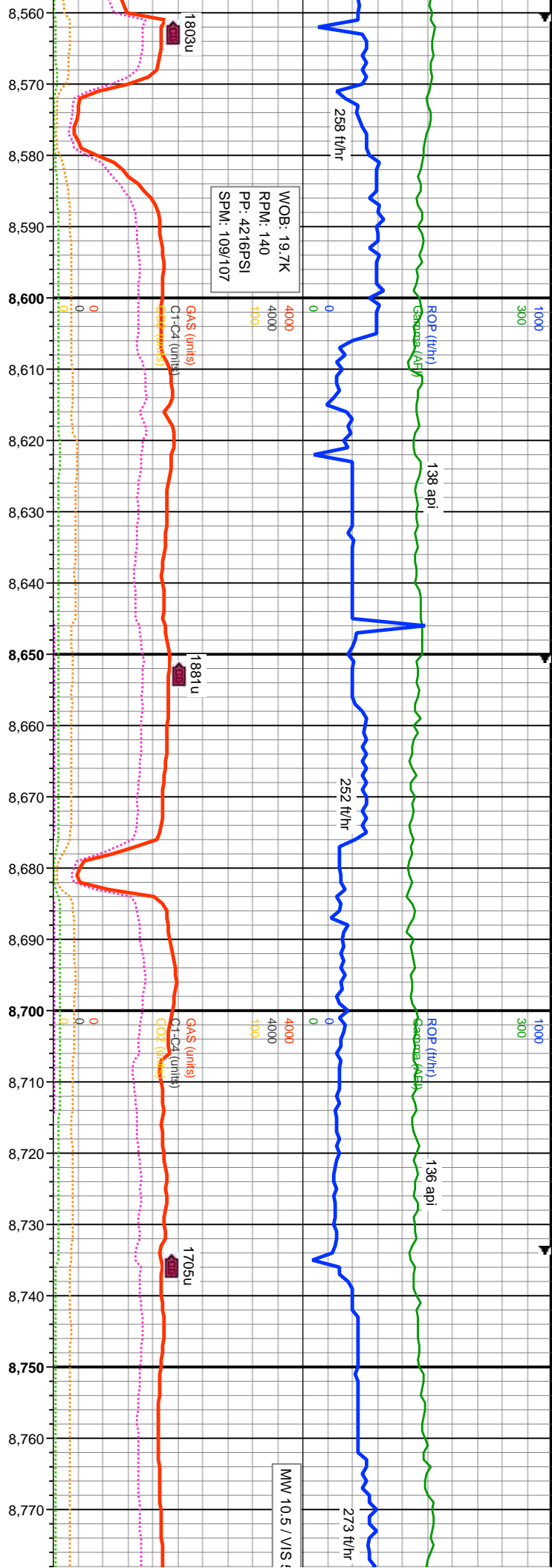


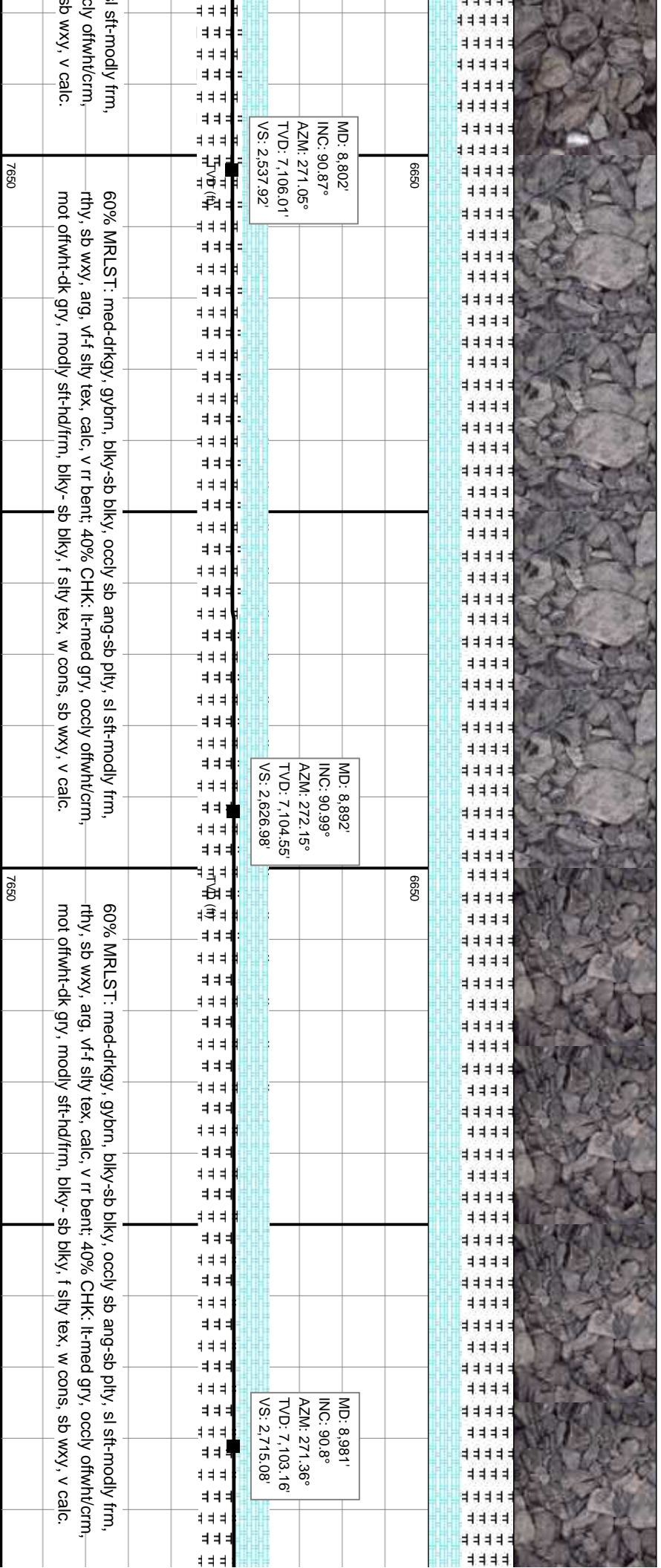
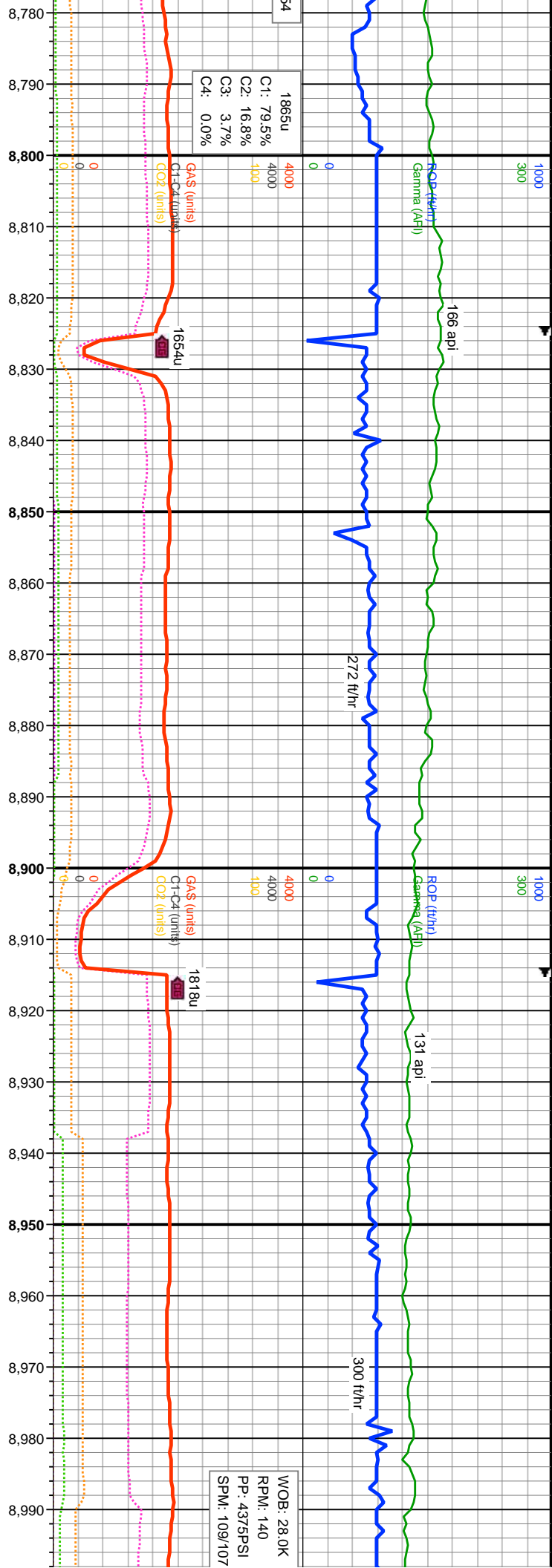
med-dkgy, gybrn, biky-sb biky, oocly sb ang-sb pily, sl sft-modly frm, arg, v-f silty tex, calc, tr bent, 40% CHK: lt-med gry, oocly offwht/crm, gry, modly sft-hd/frm, biky-sb biky, f silty tex, w cons, sb wxy, v calc.

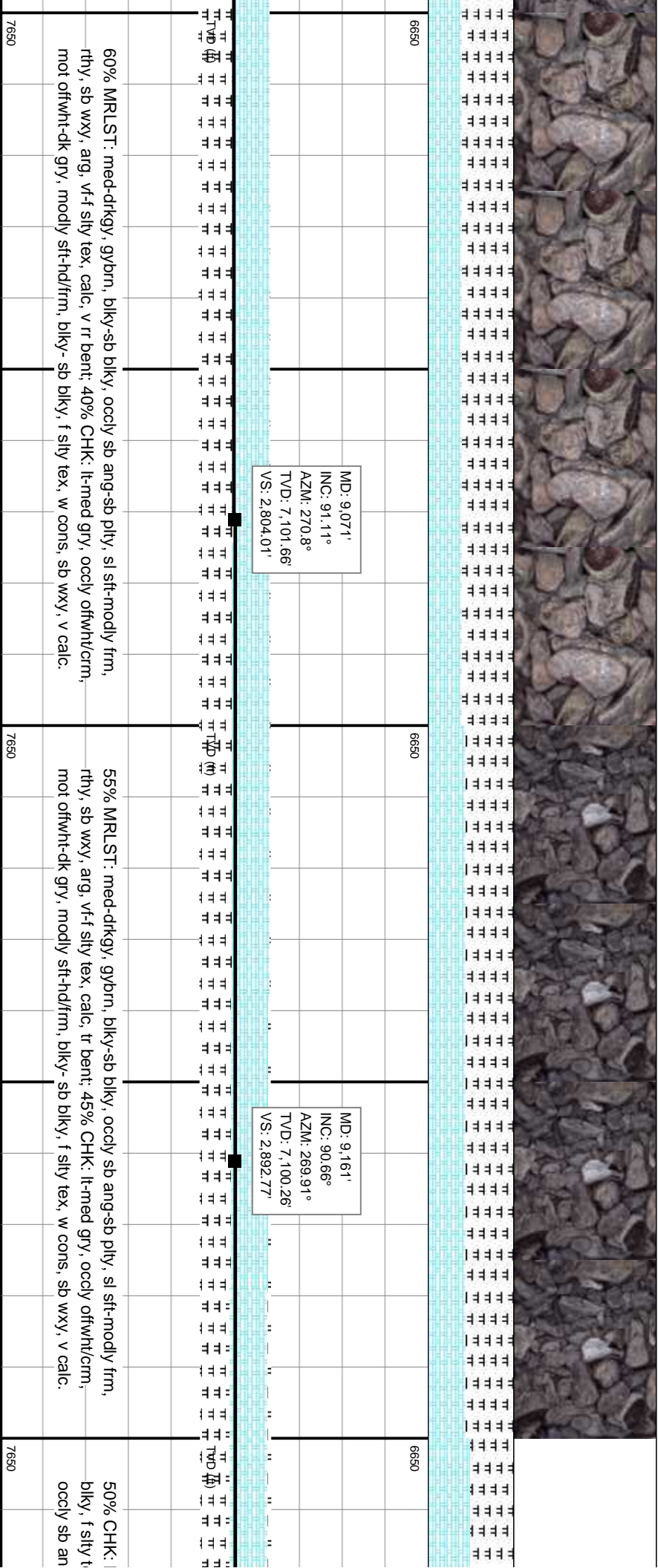
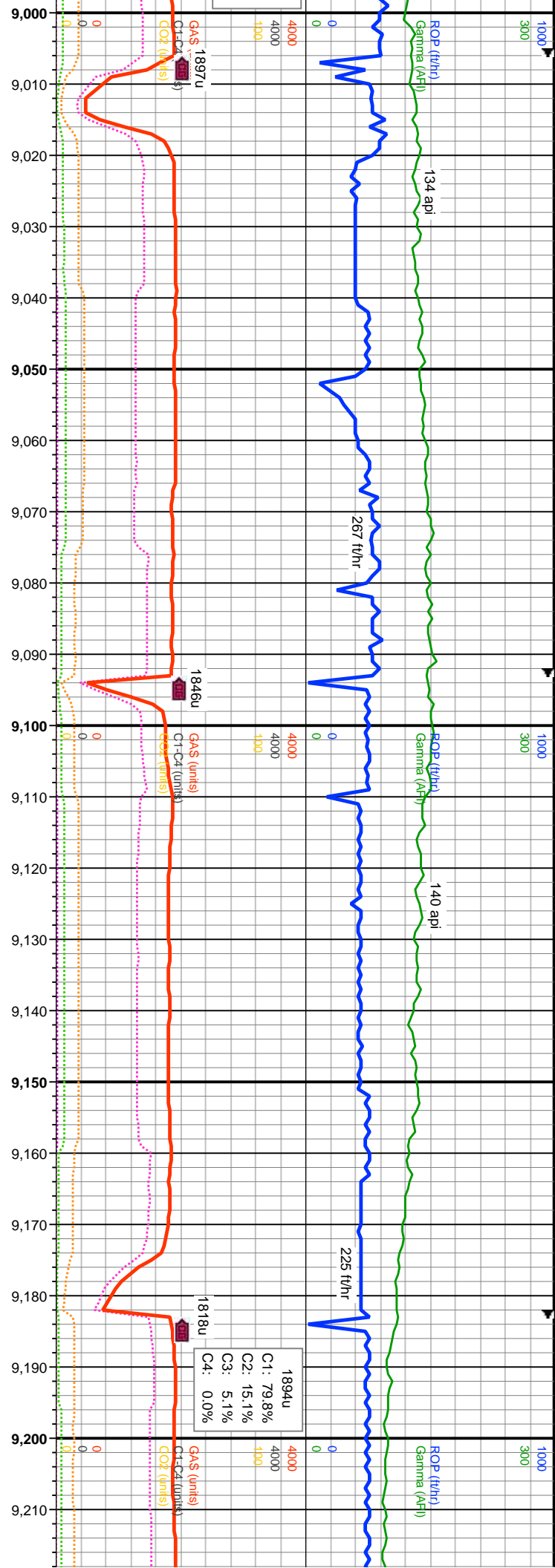
60% MRLST: med-dkgy, gybrn, biky-sb biky, oocly sb ang-sb pily, sl sft-modly frm, rthy, sb wxy, arg, v-f silty tex, calc, tr bent, 40% CHK: lt-med gry, oocly offwht/crm, mot offwht-dk gry, modly sft-hd/frm, biky-sb biky, f silty tex, w cons, sb wxy, v calc.

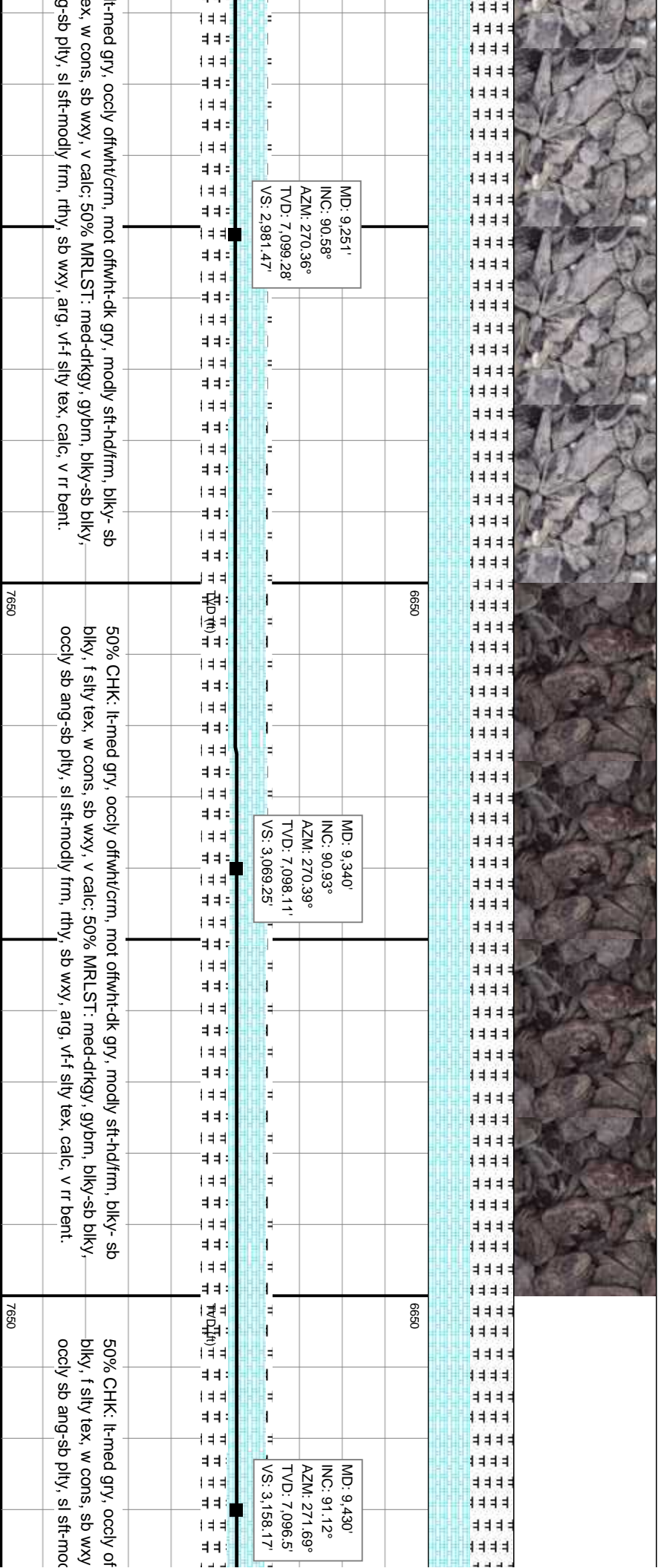
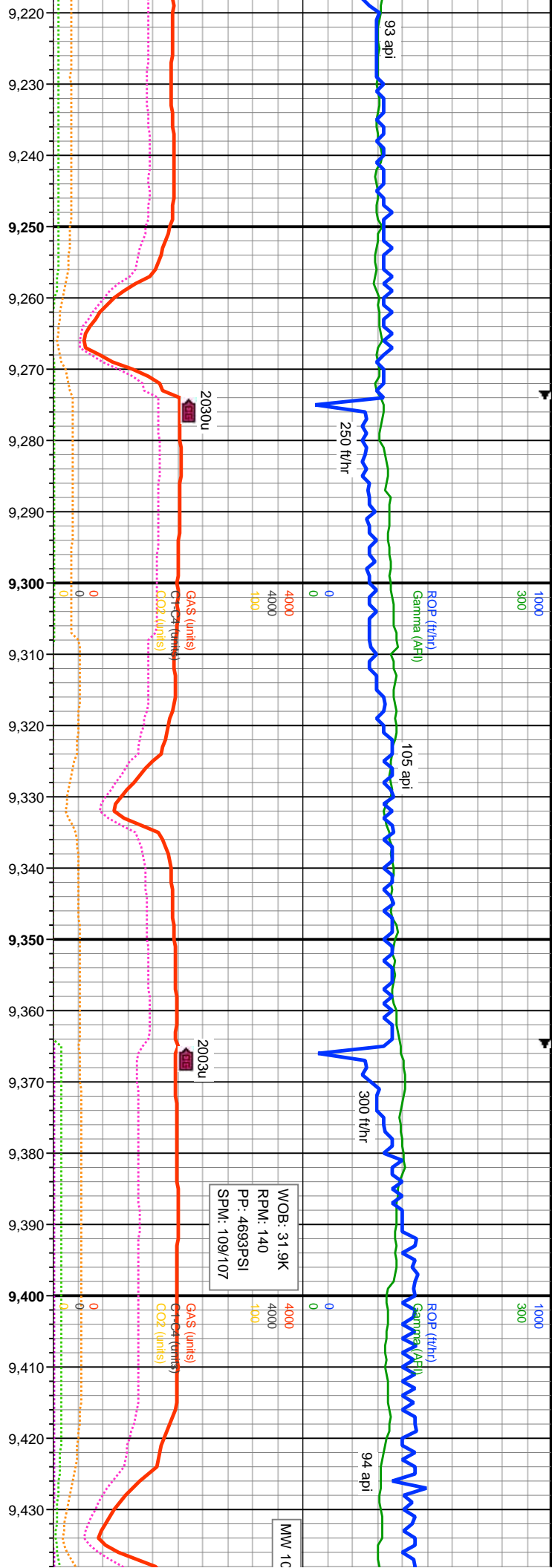
65% MRLST: med-dkgy, gybrn, biky-sb biky, oocly sb ang-sb pily, sl sft-modly frm, rthy, sb wxy, arg, v-f silty tex, calc, tr bent, 40% CHK: lt-med gry, oocly offwht/crm, mot offwht-dk gry, modly sft-hd/frm, biky-sb biky, f silty tex, w cons, sb wxy, v calc.

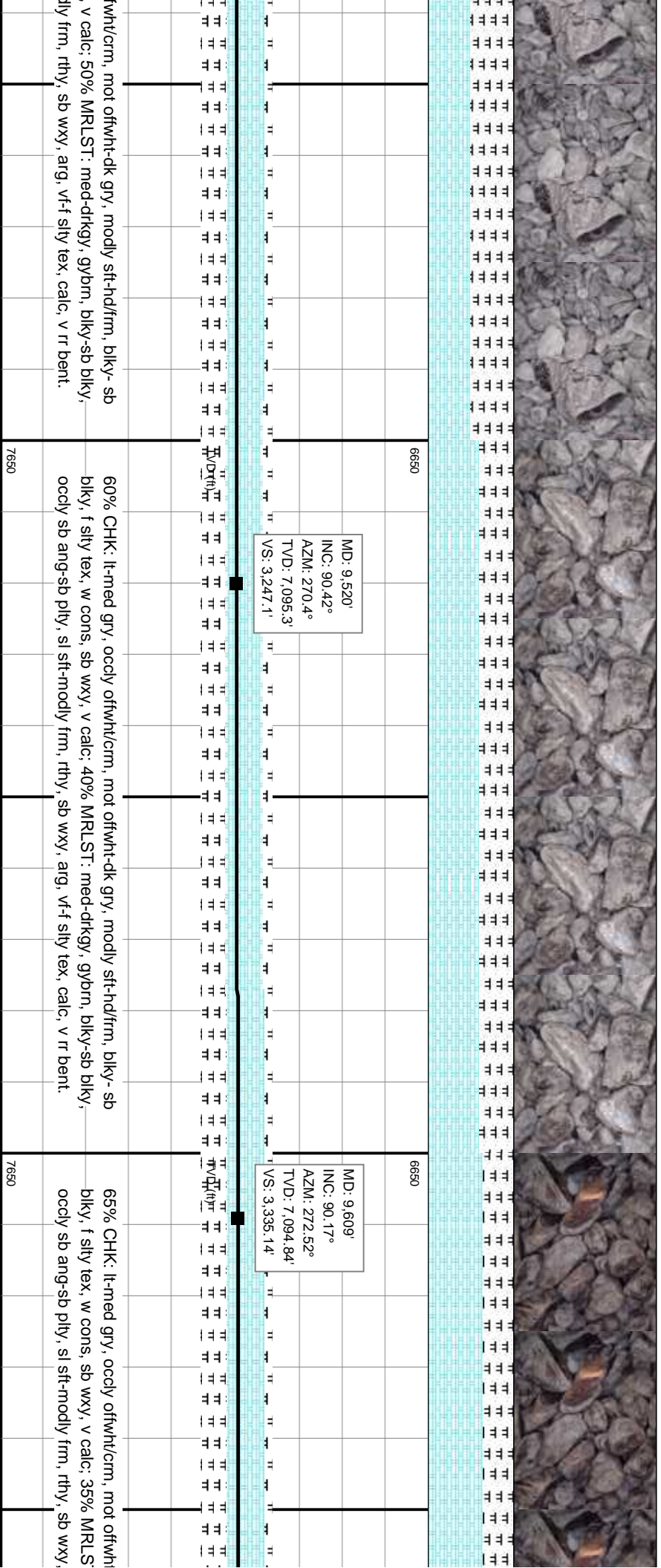
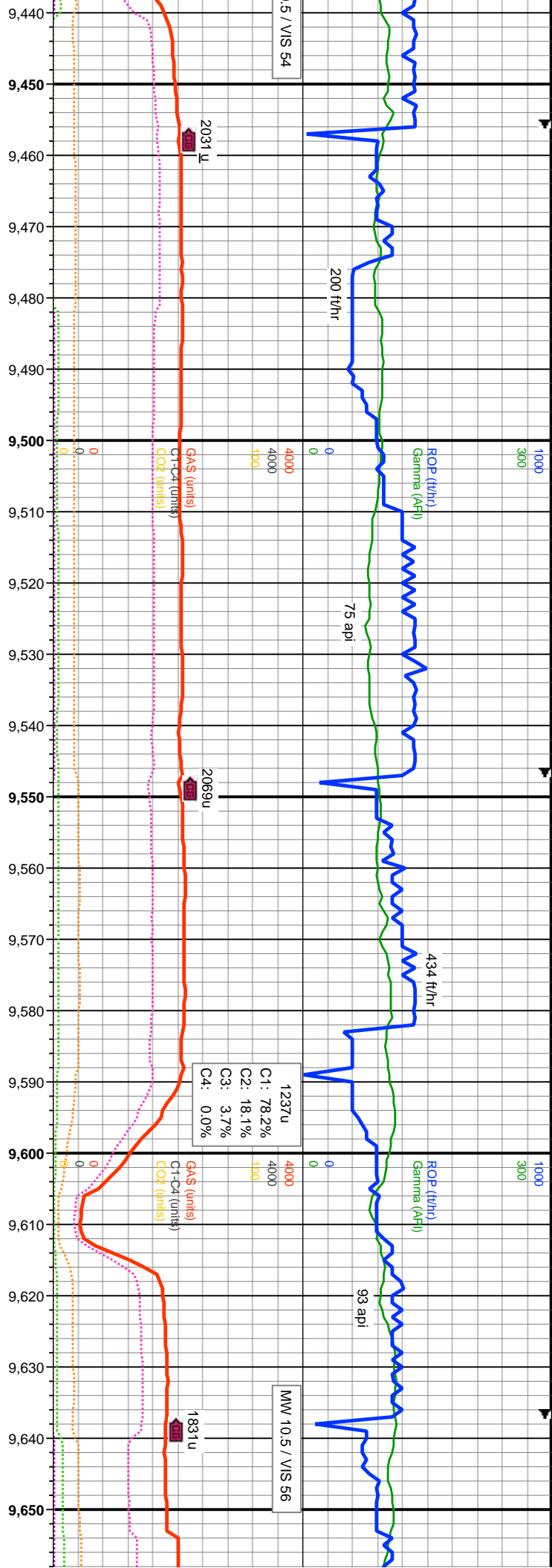


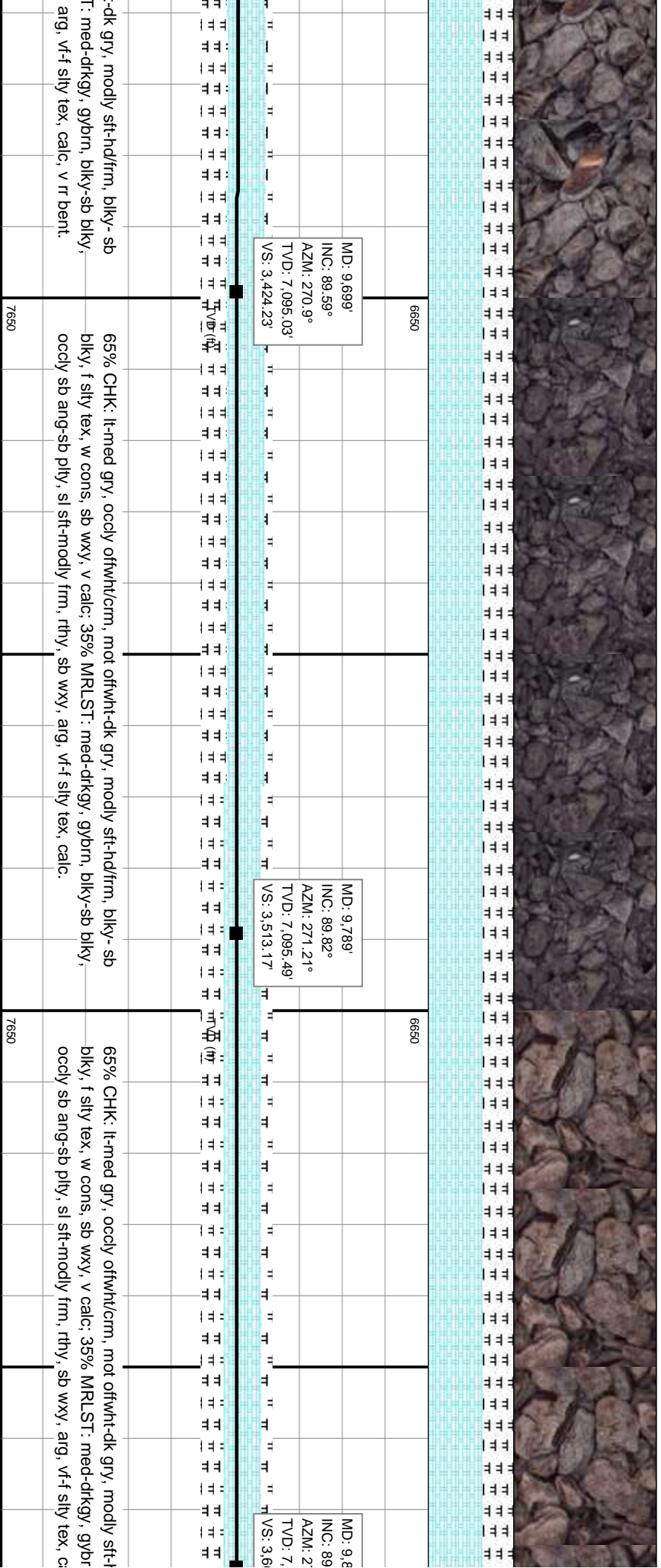
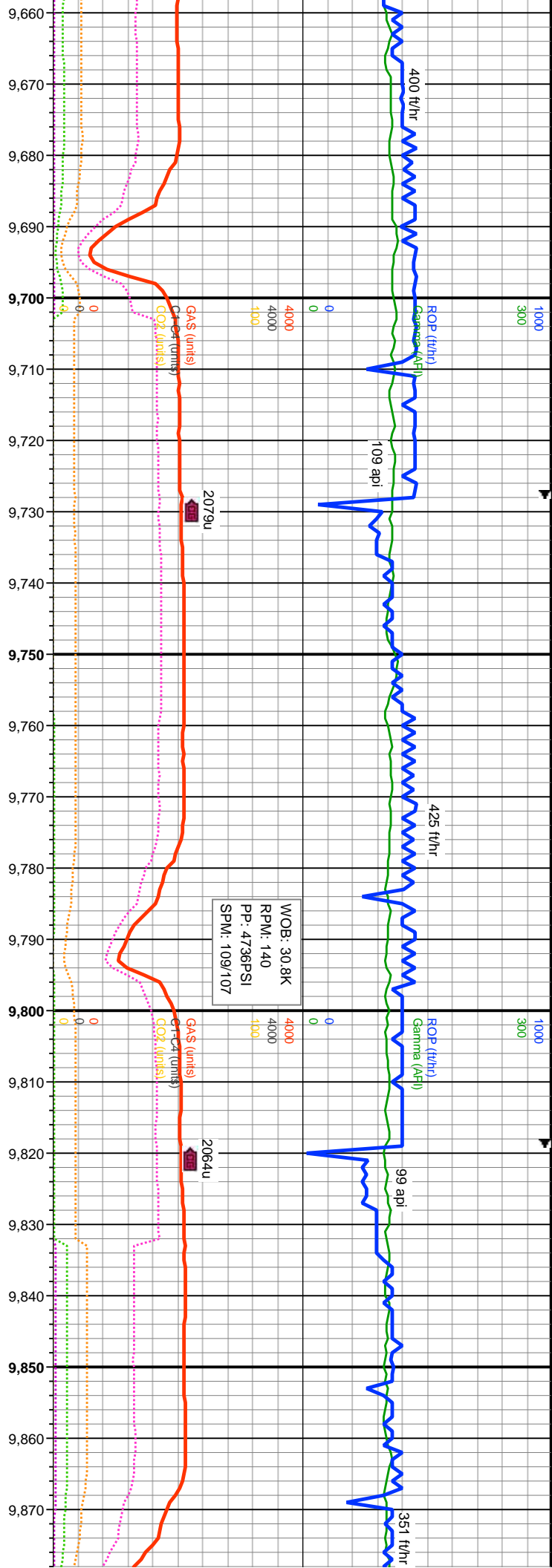


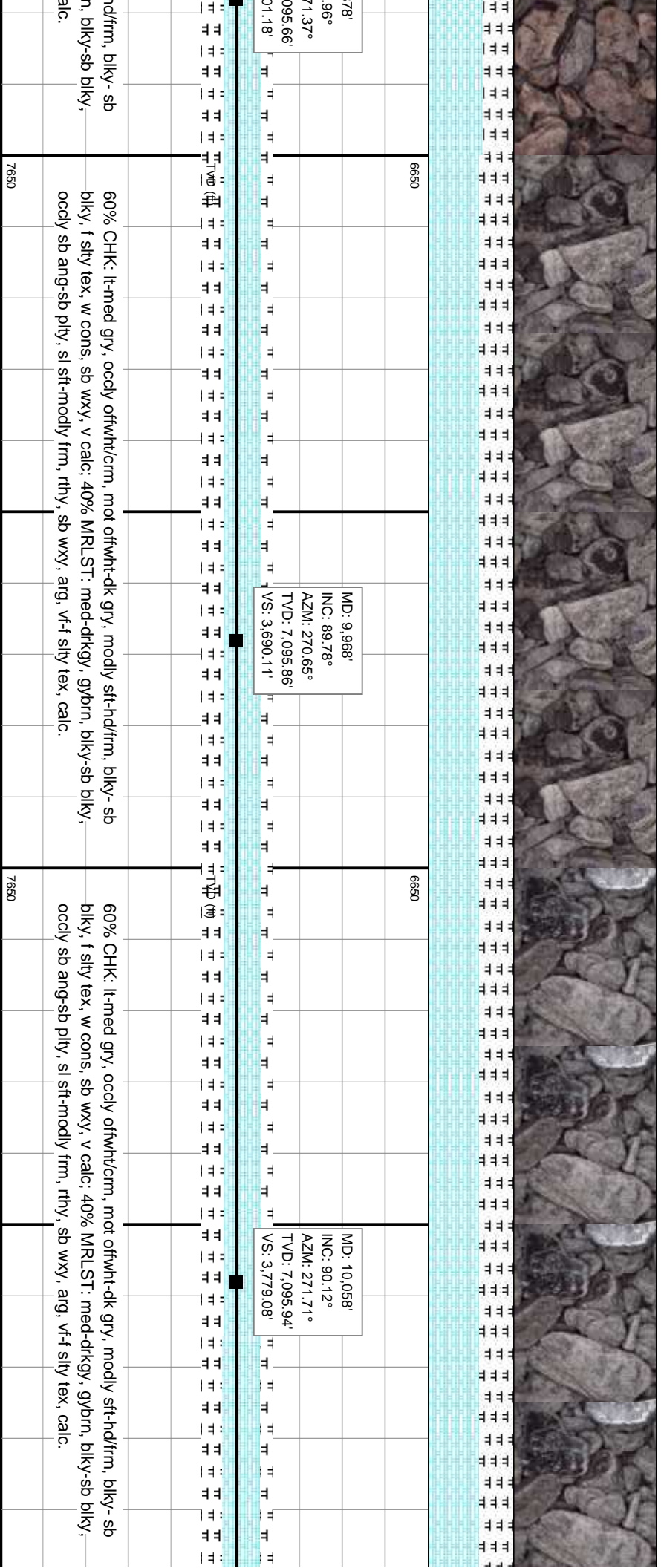
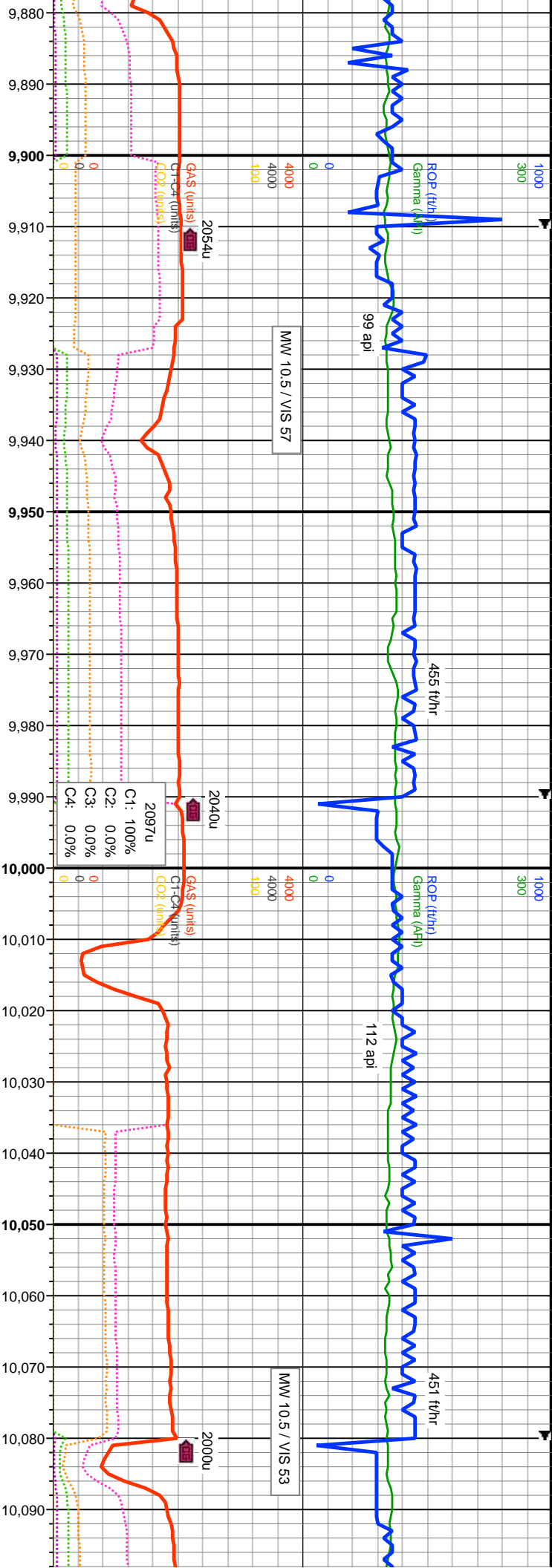


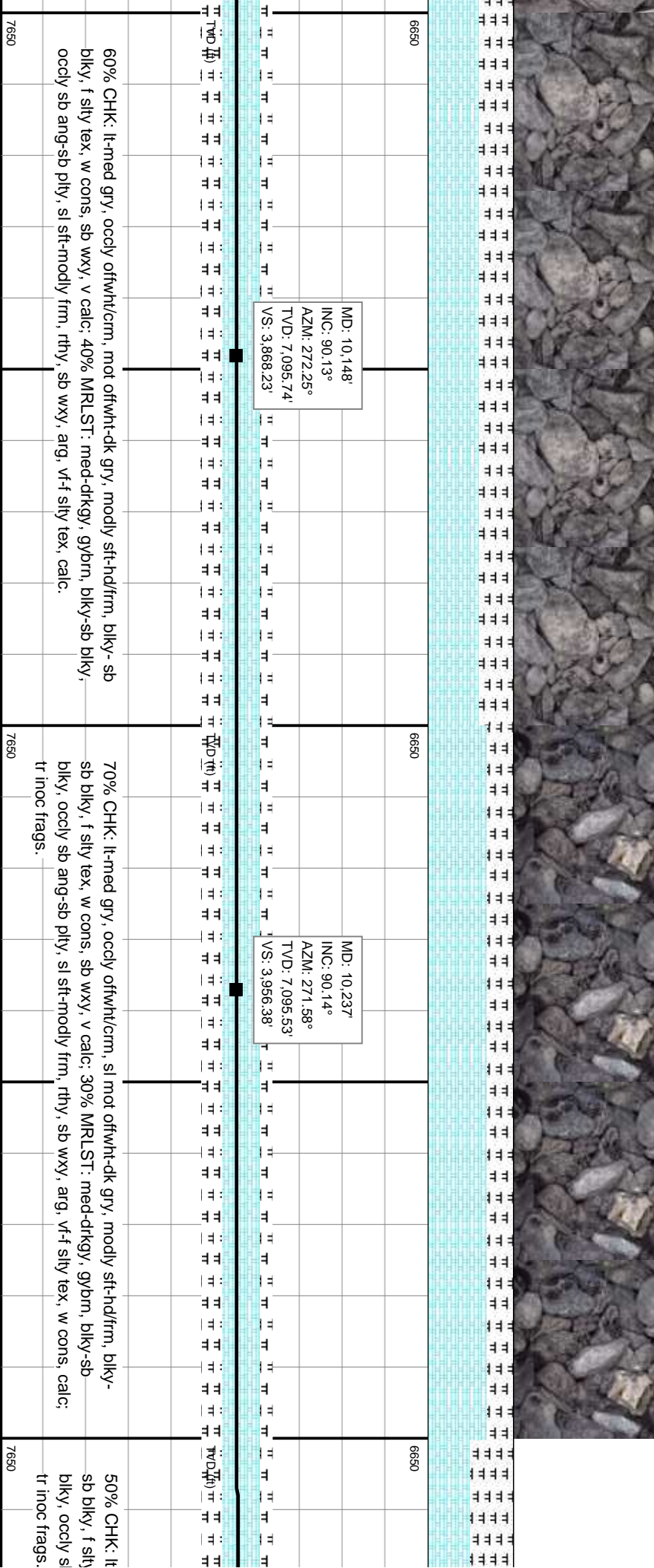
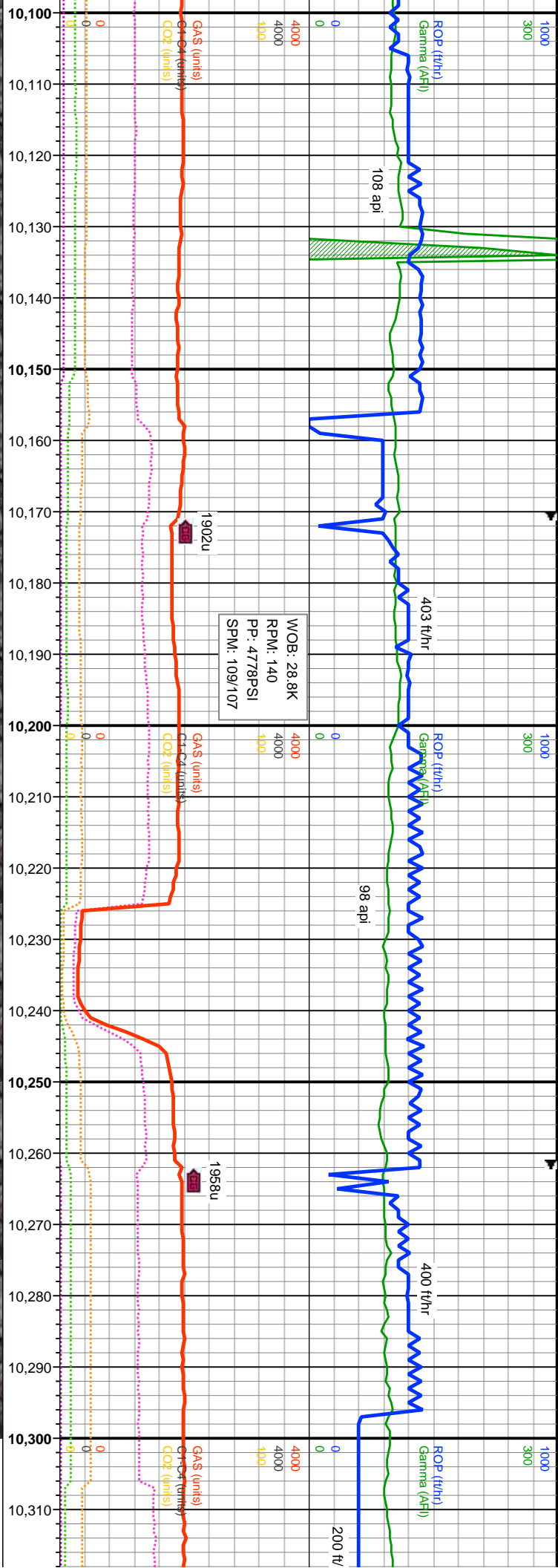


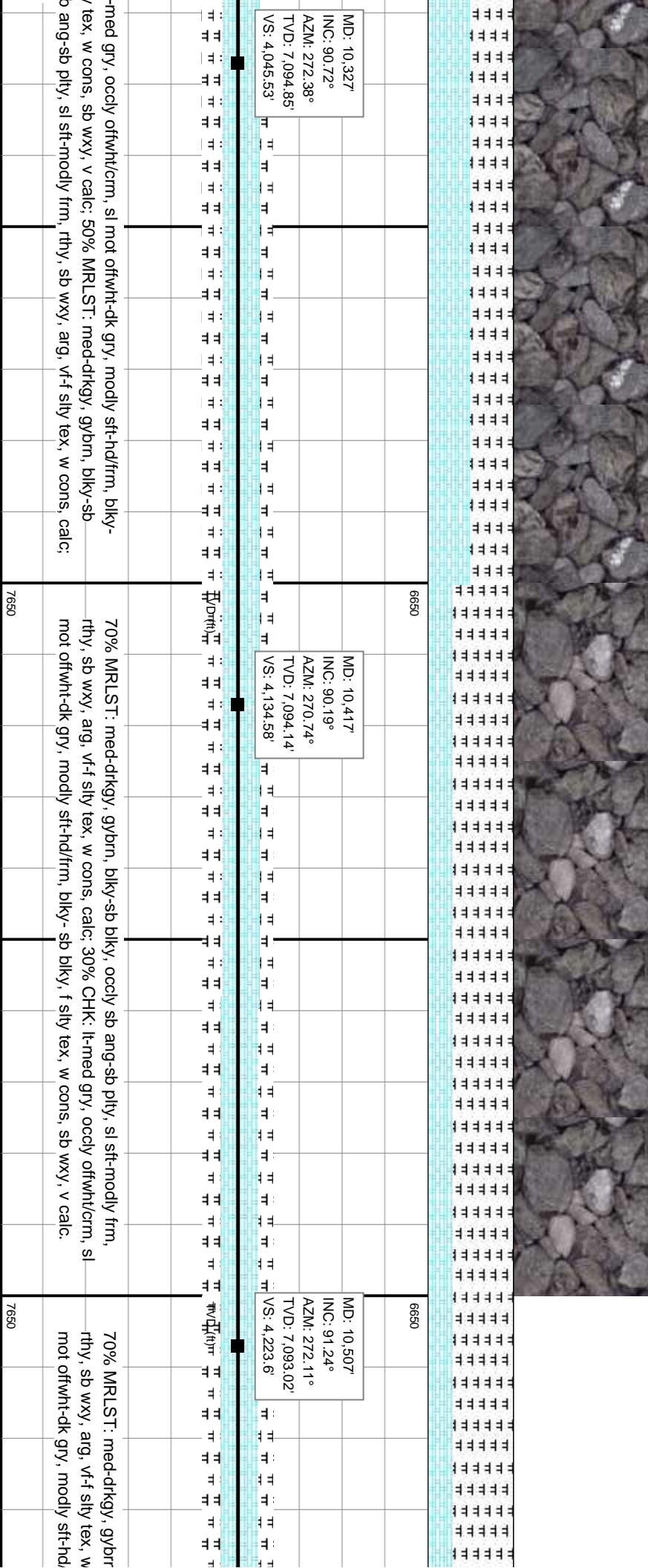
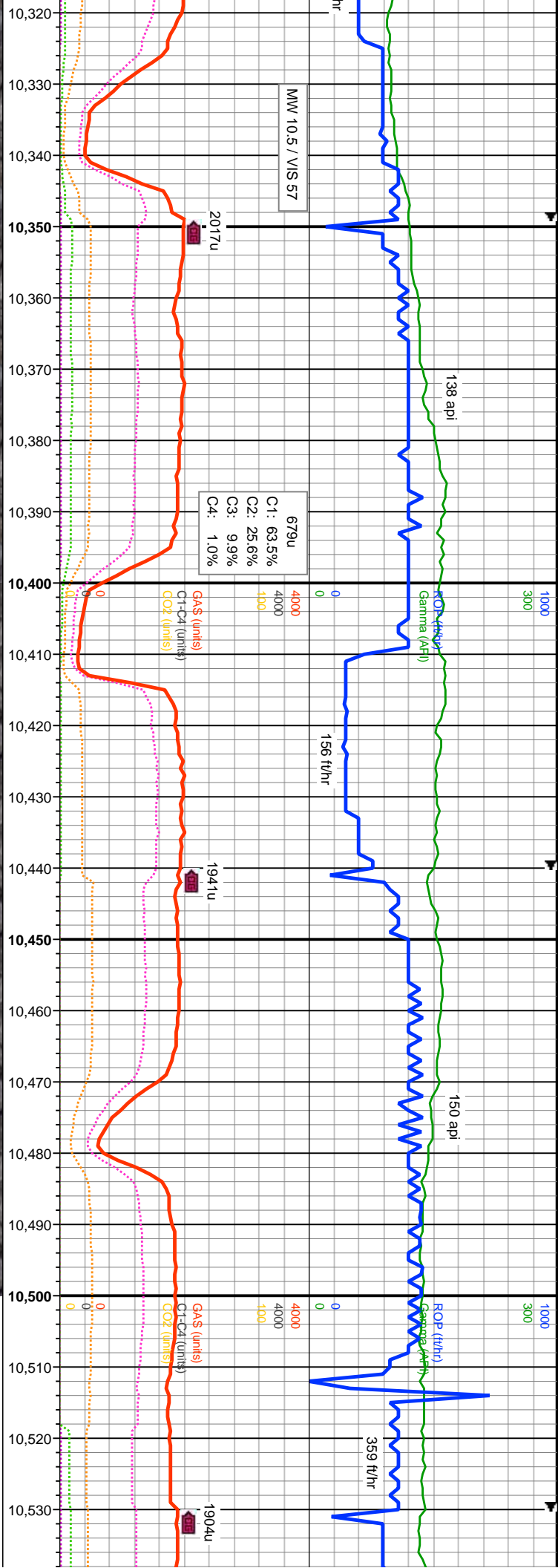


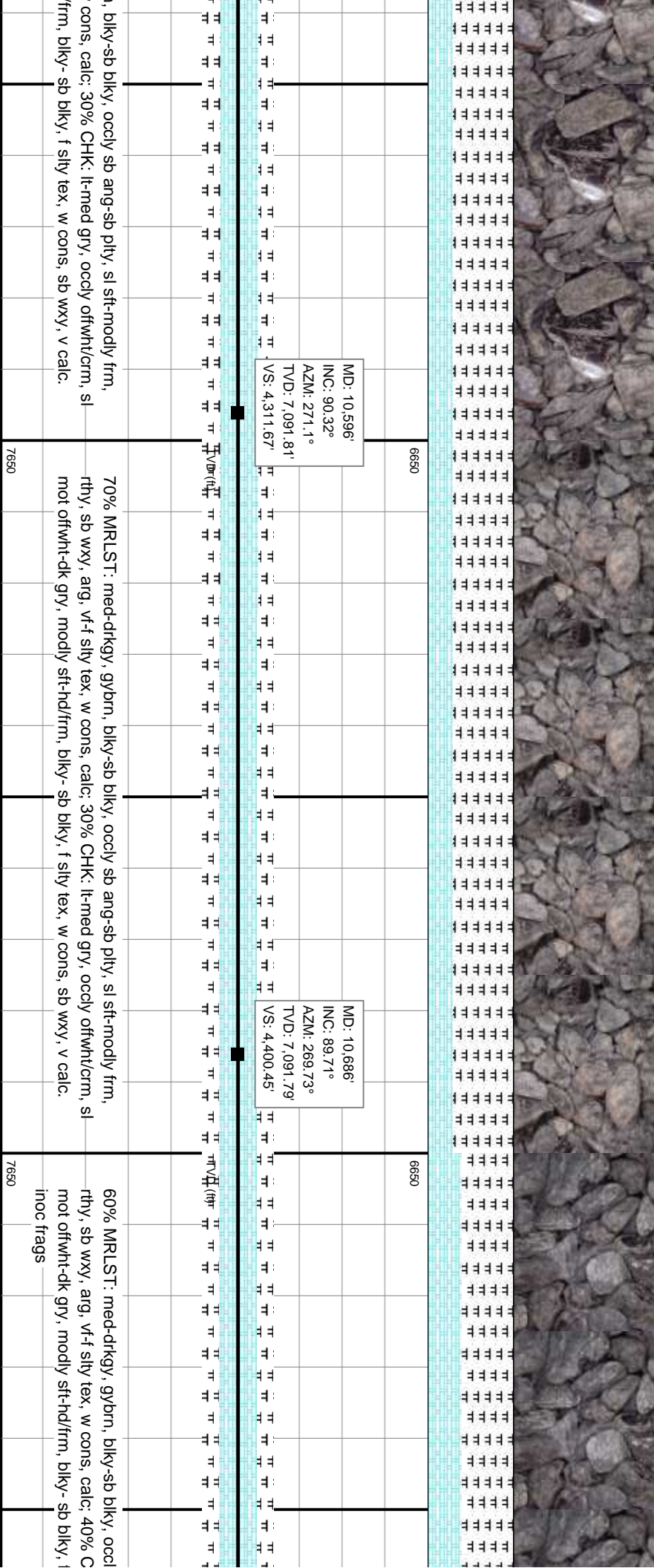
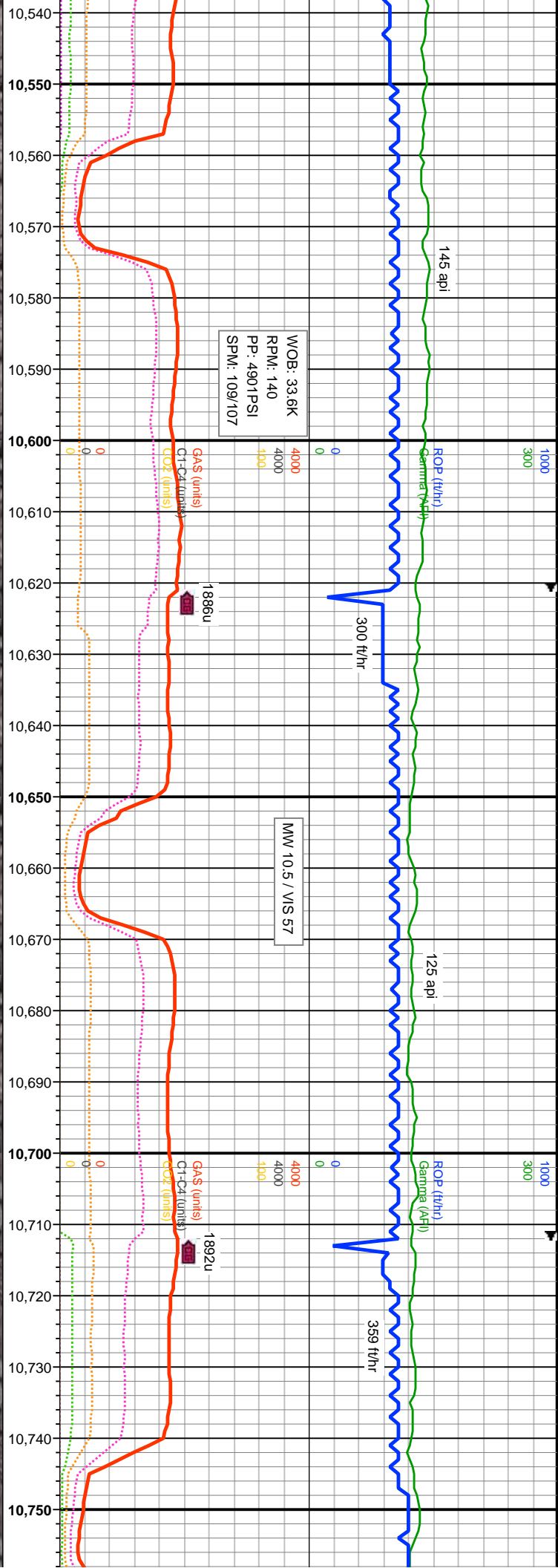


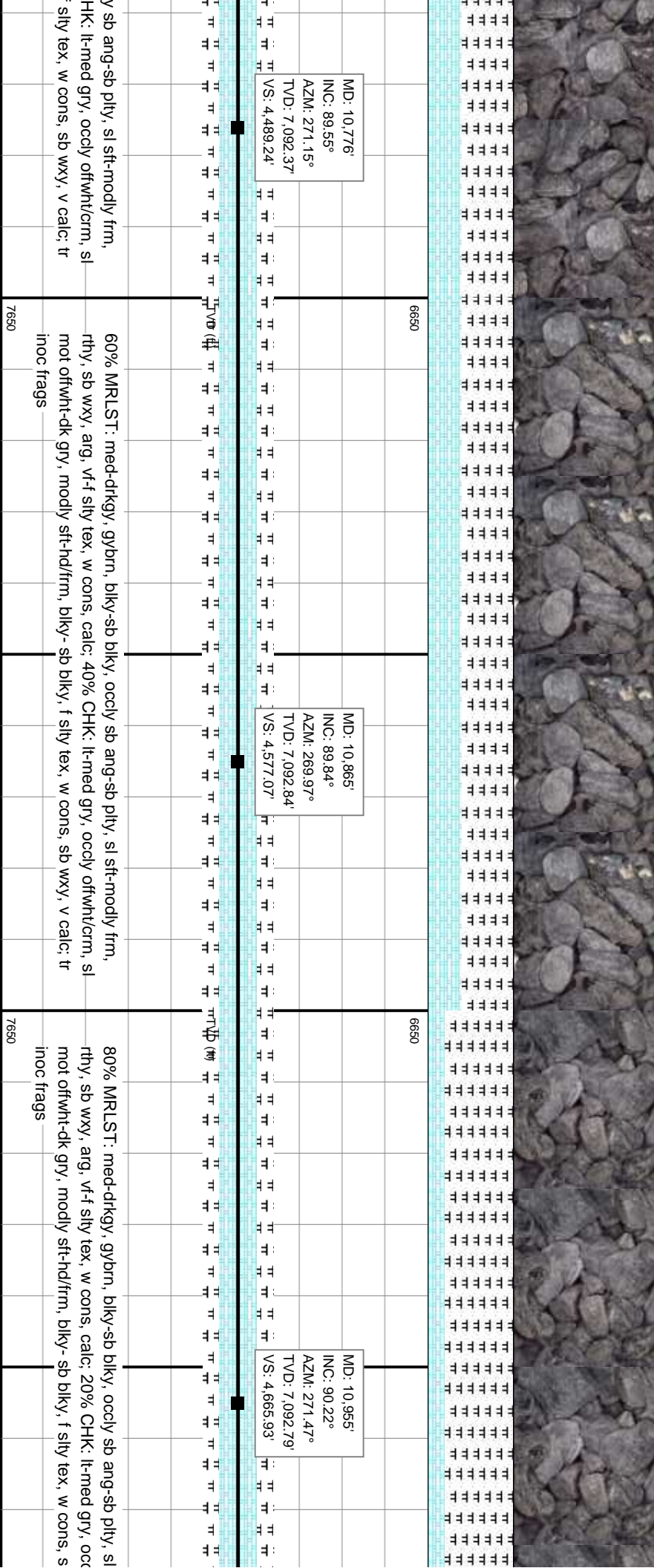
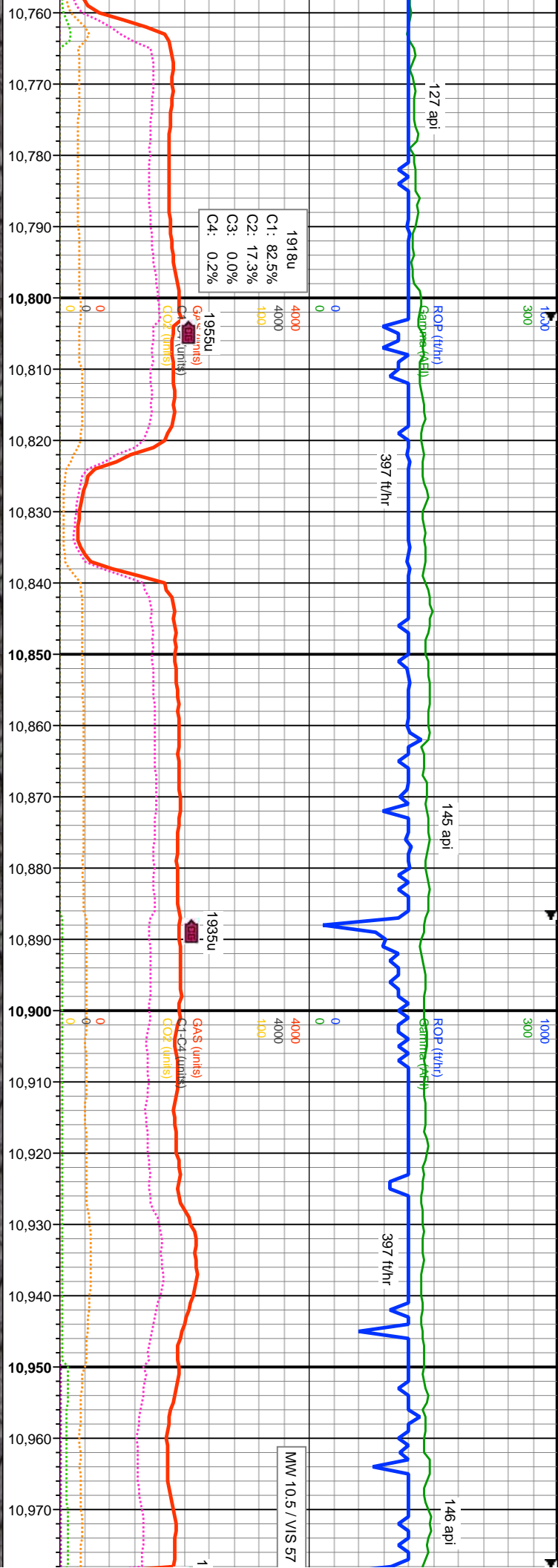


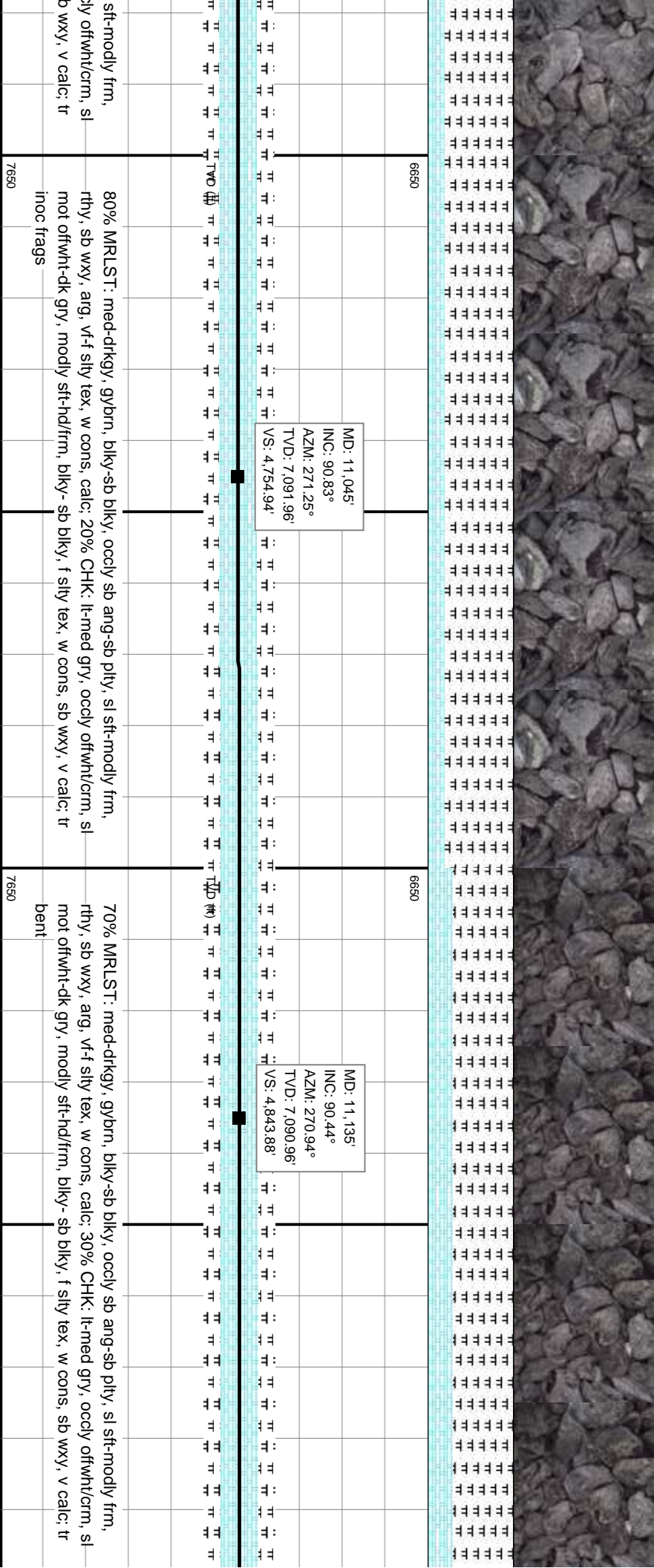
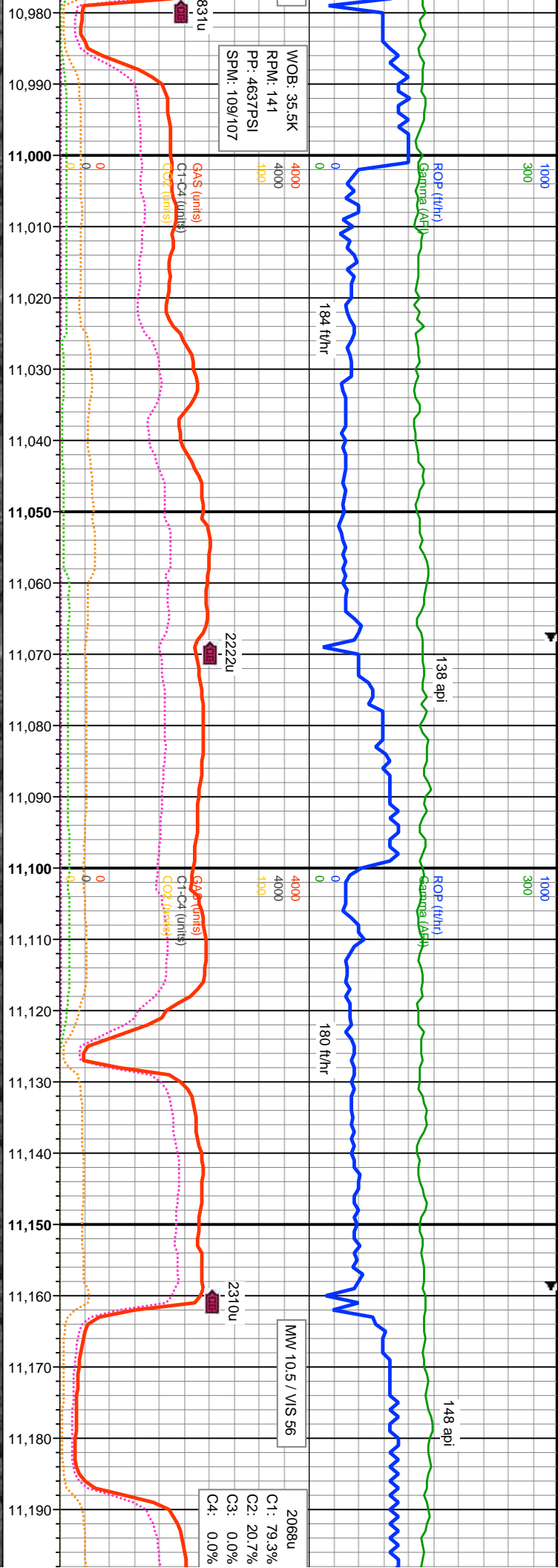


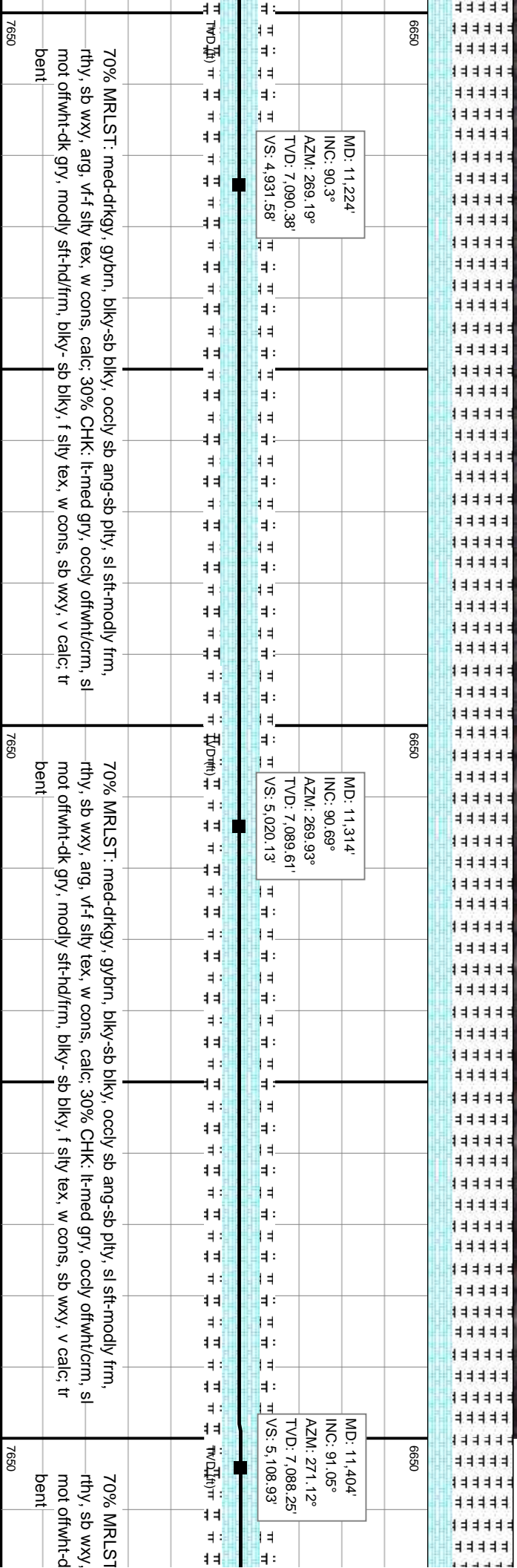
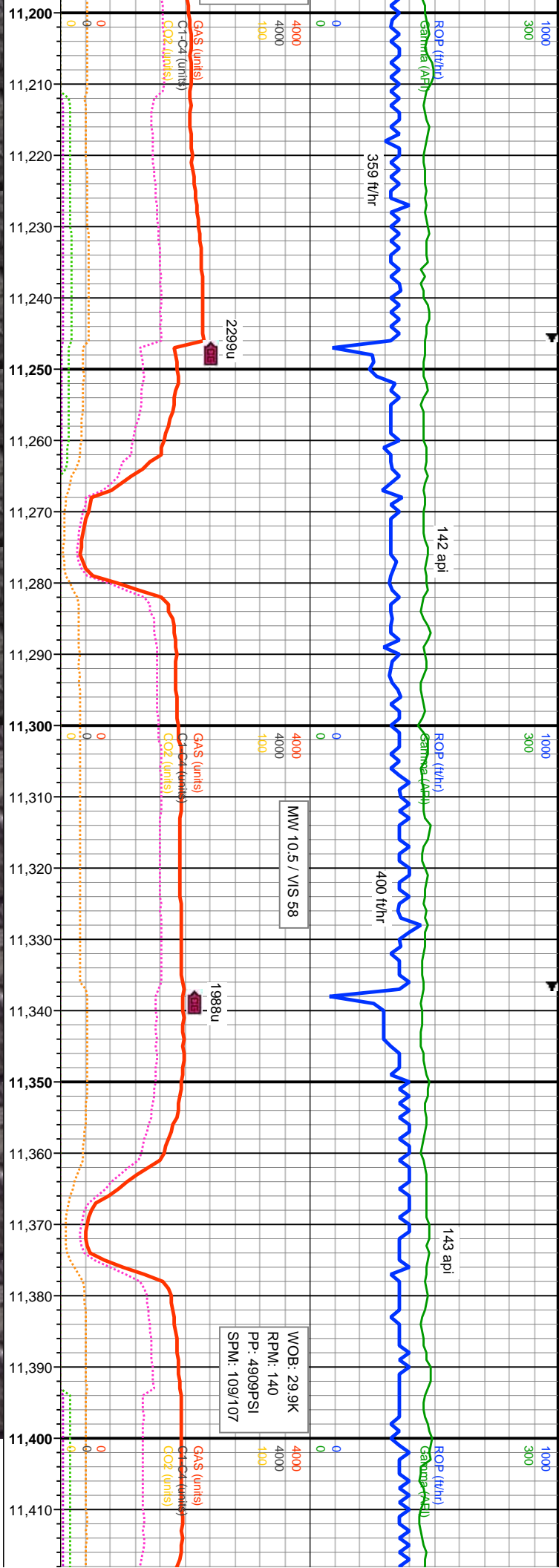


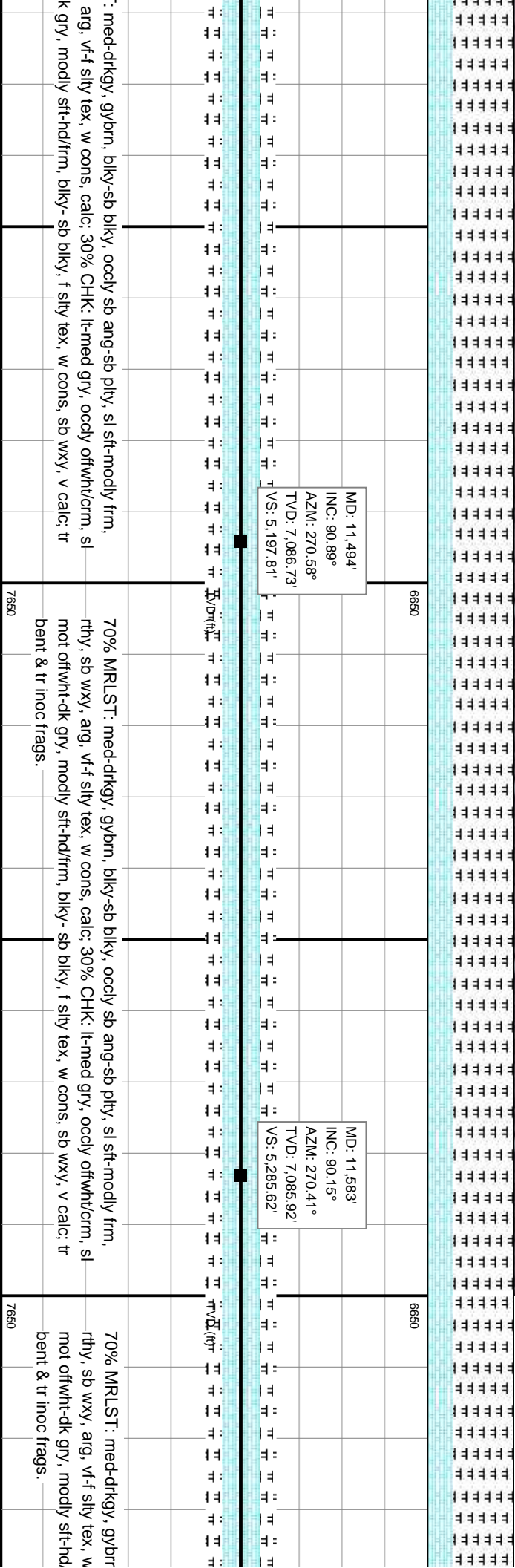
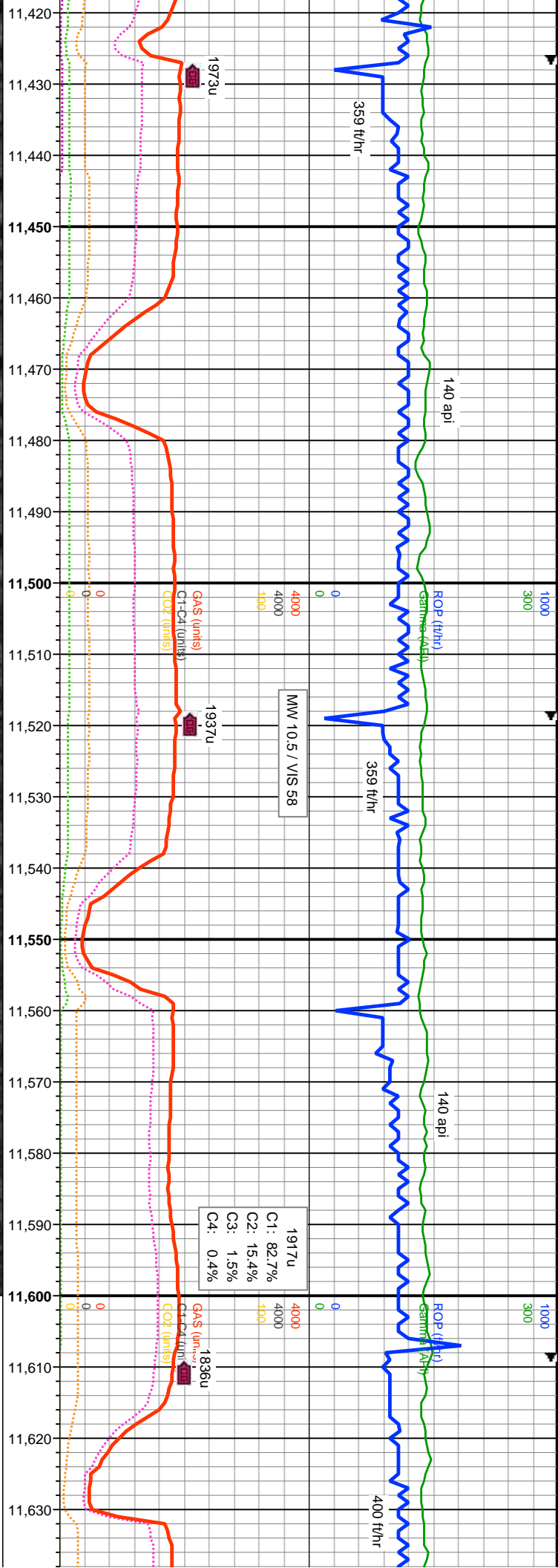


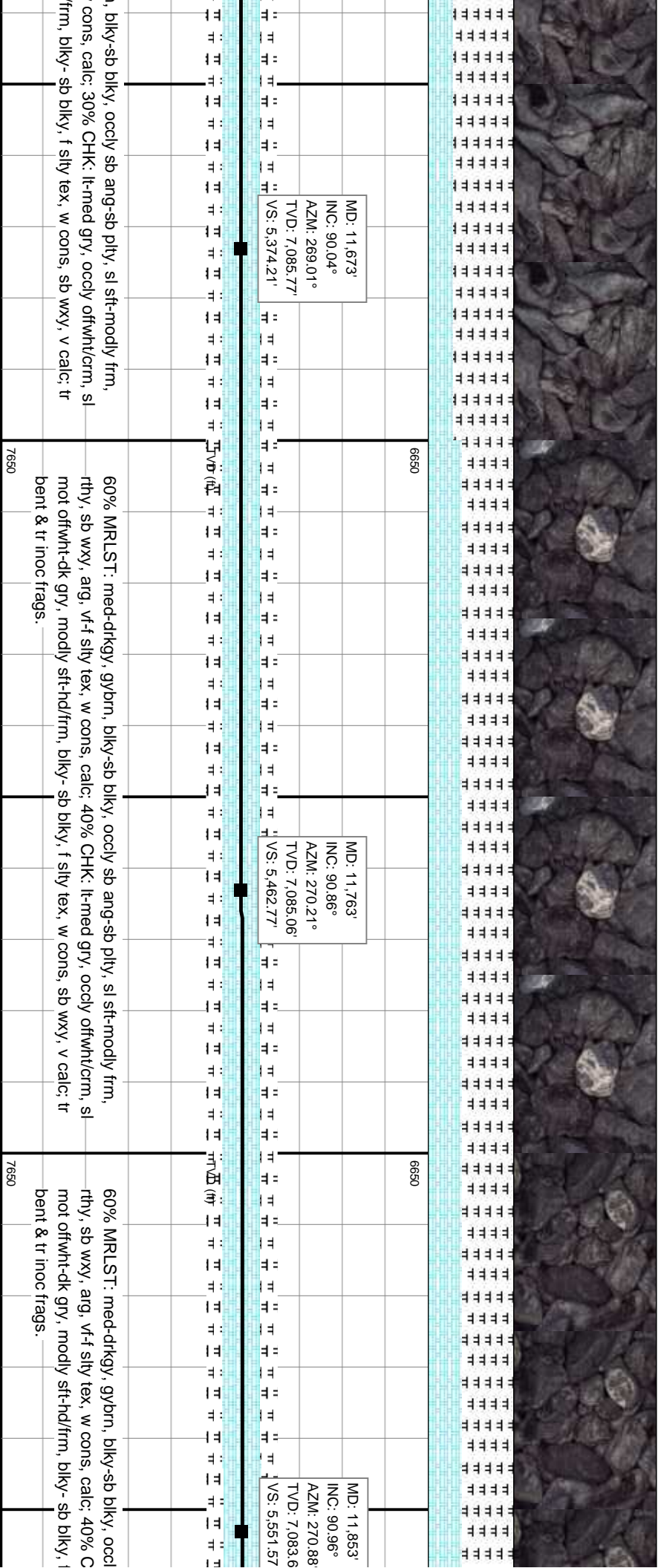
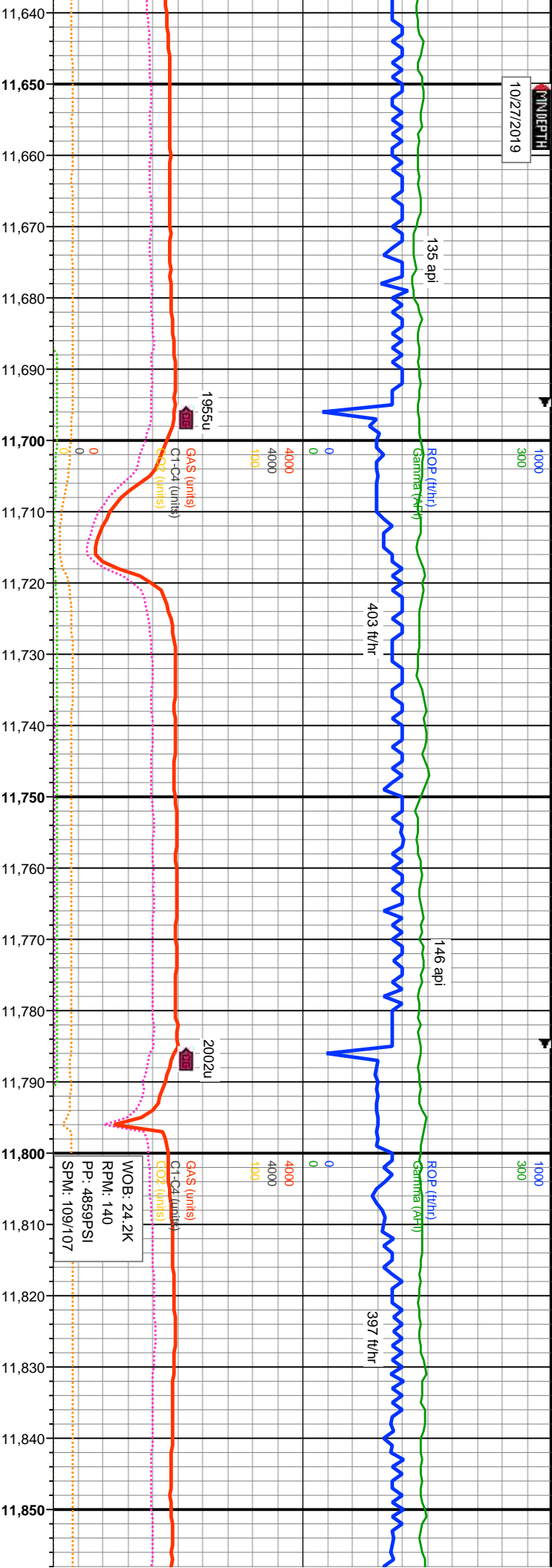


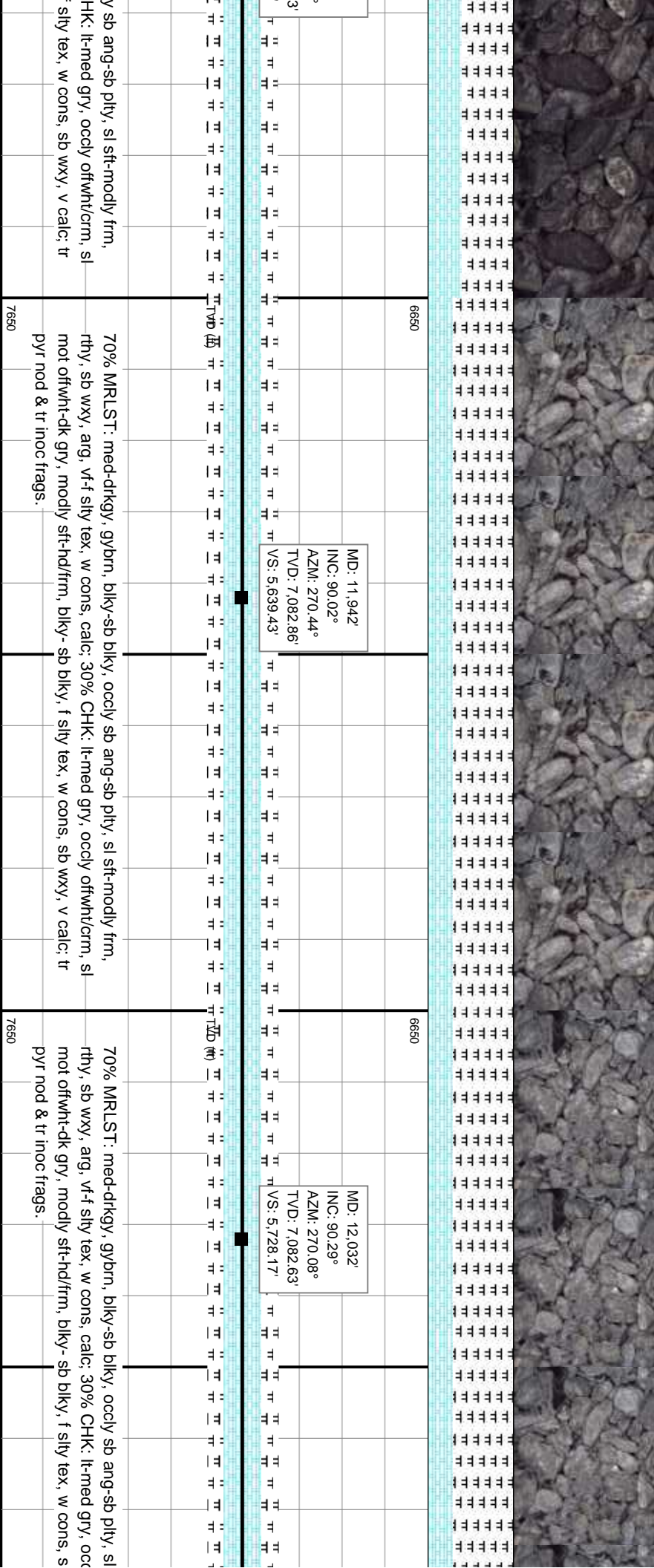
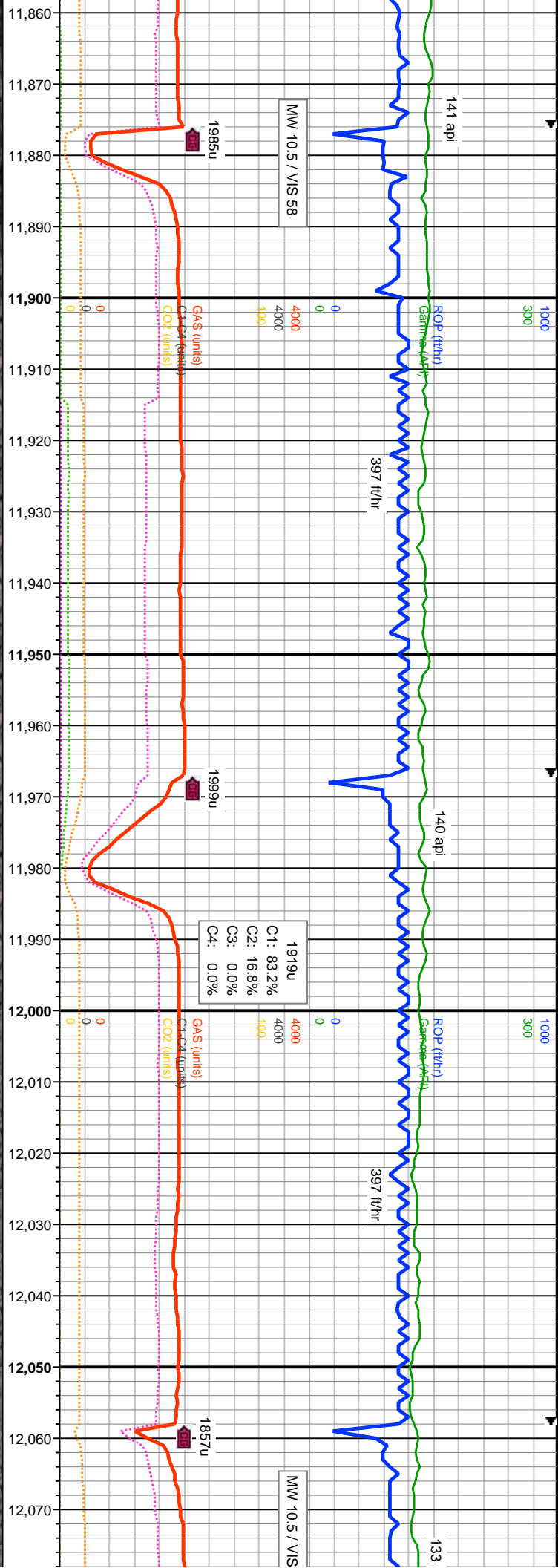


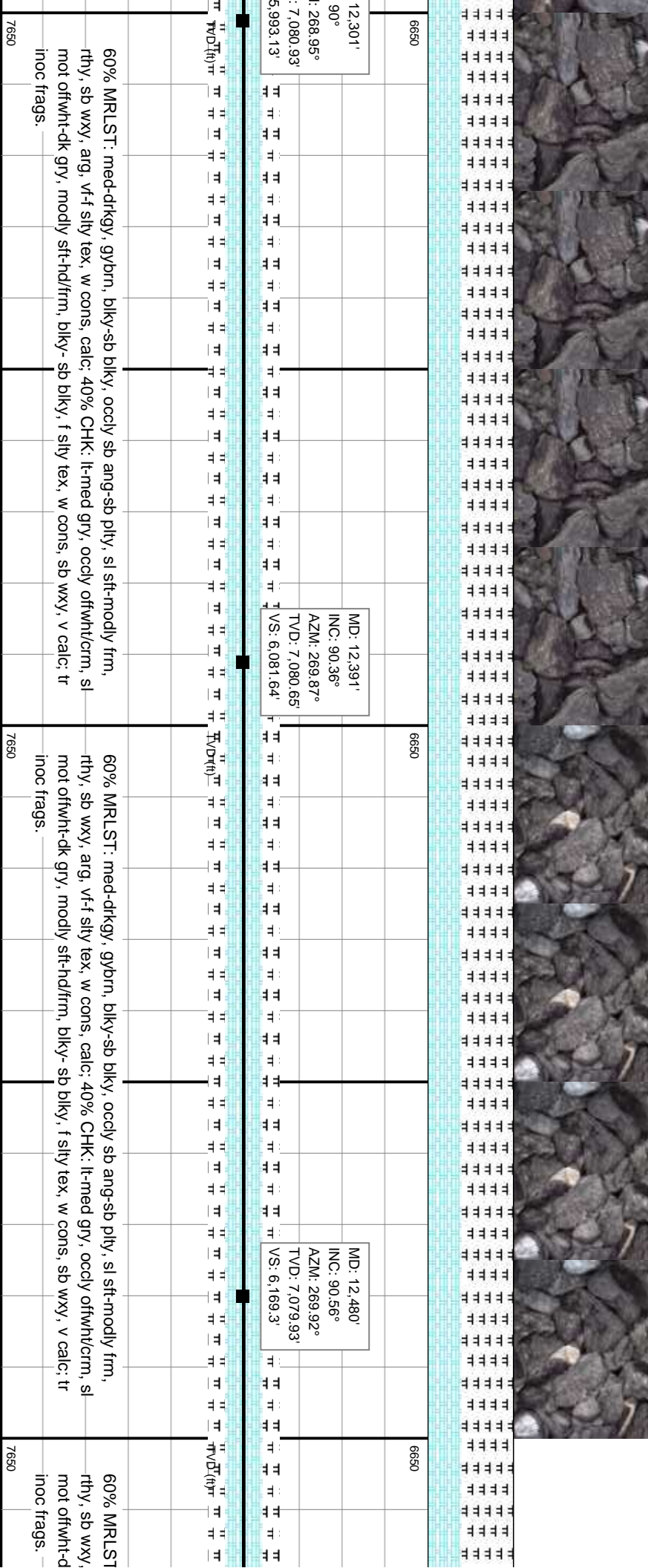
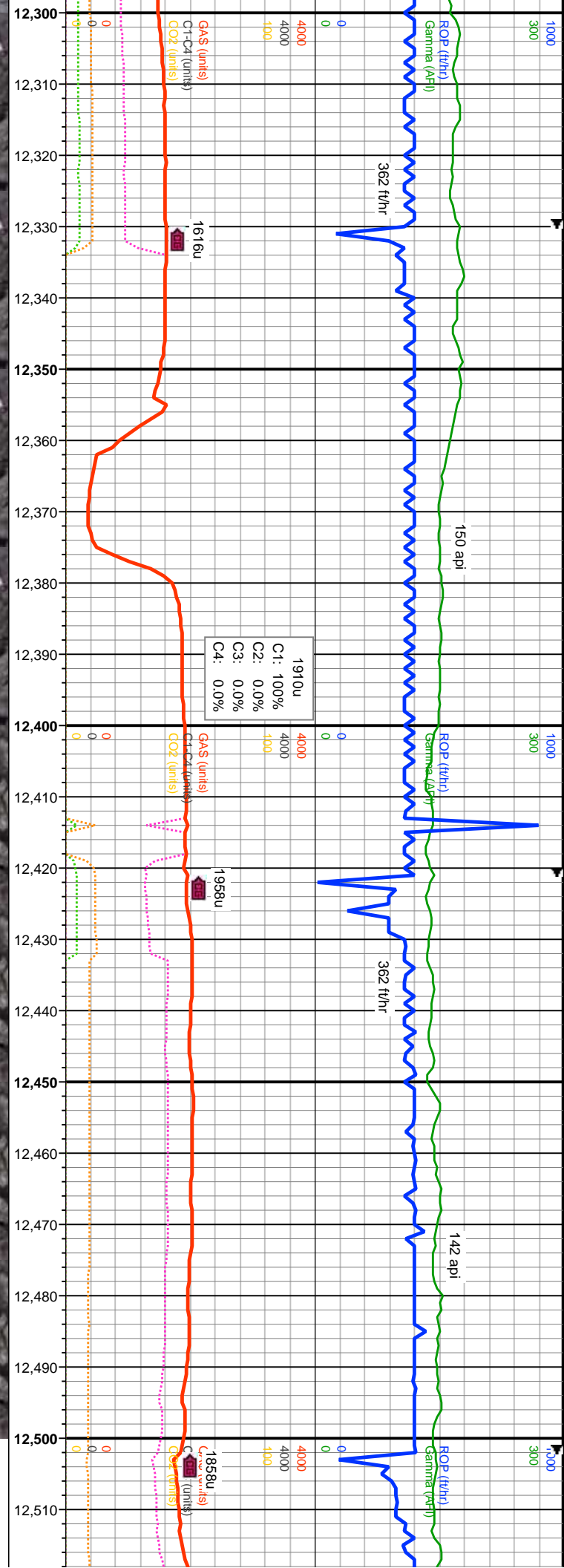


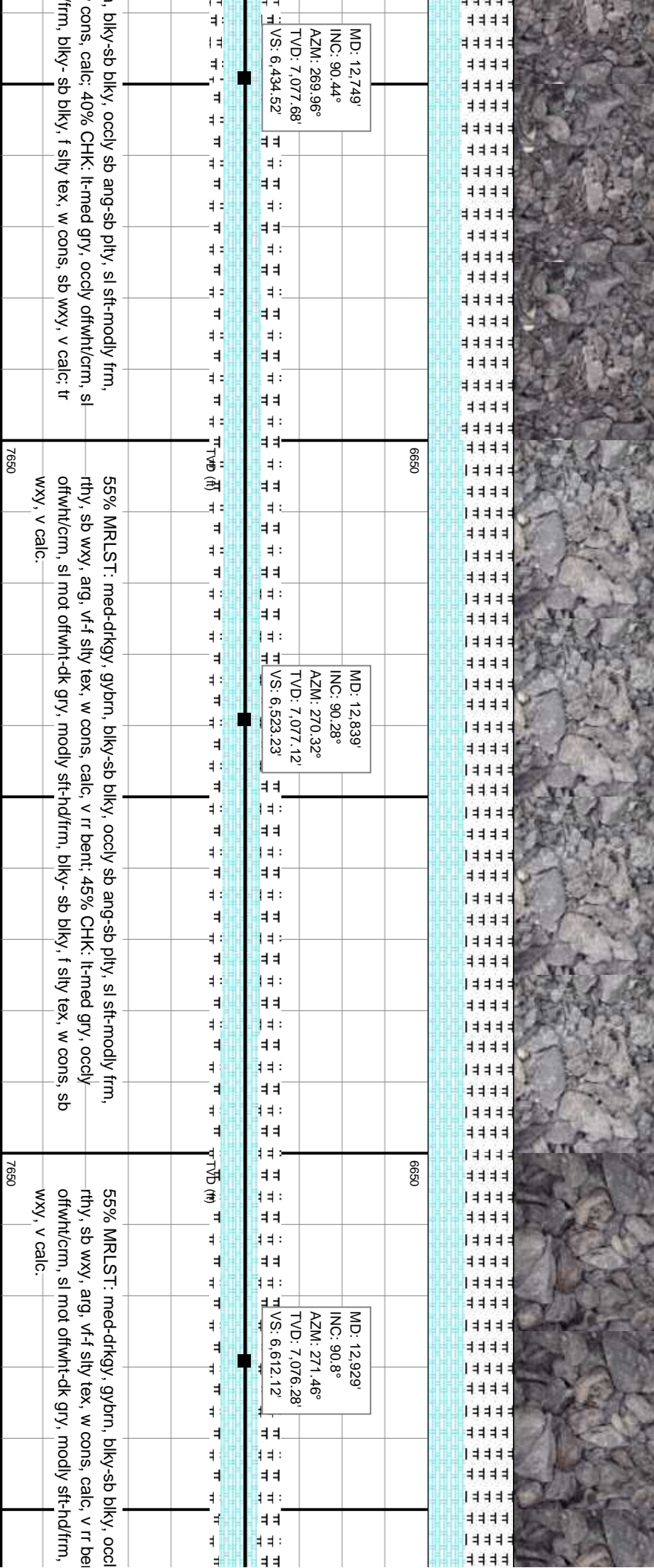
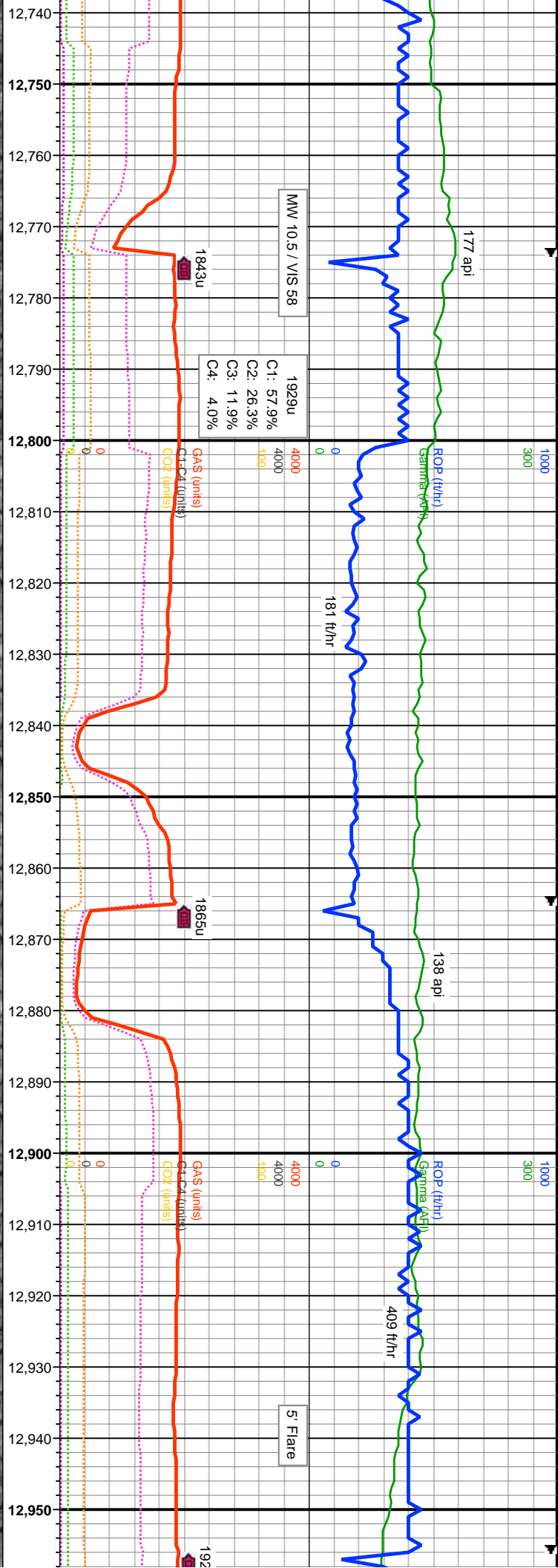


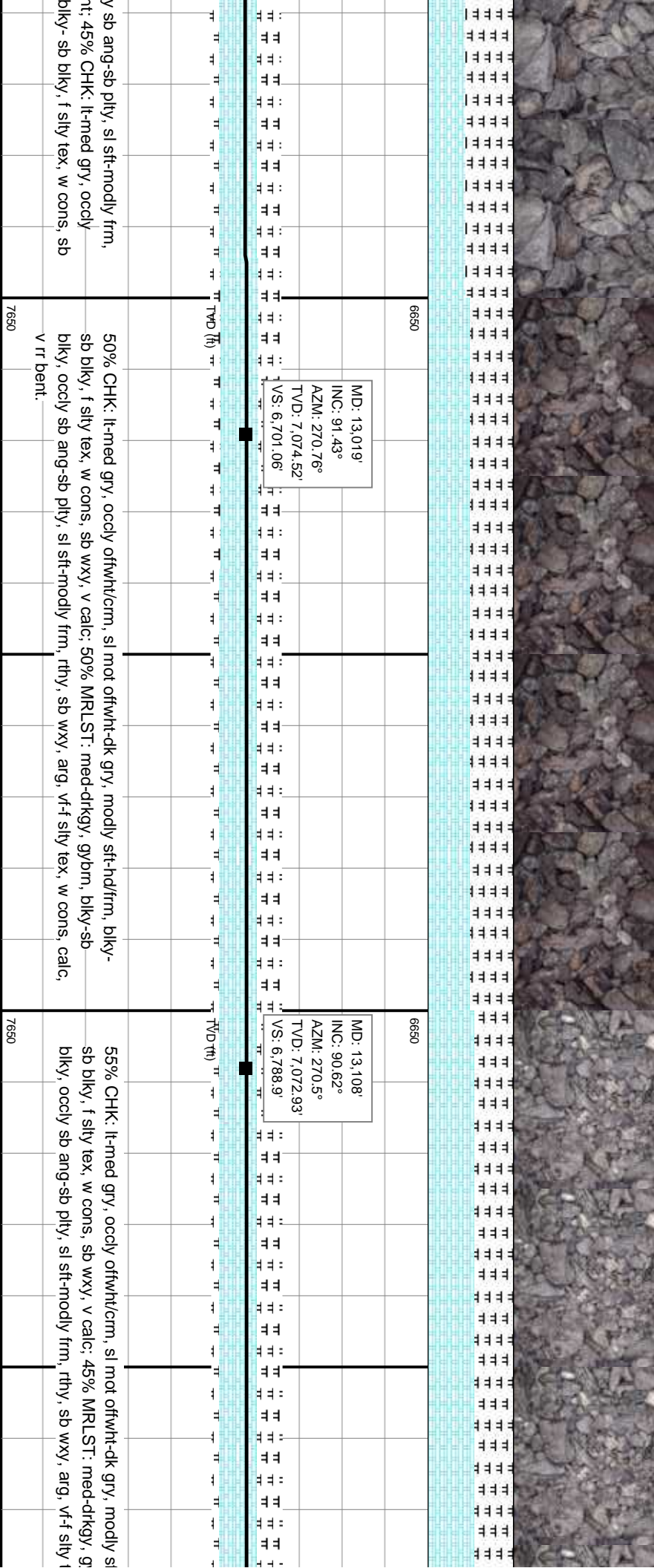
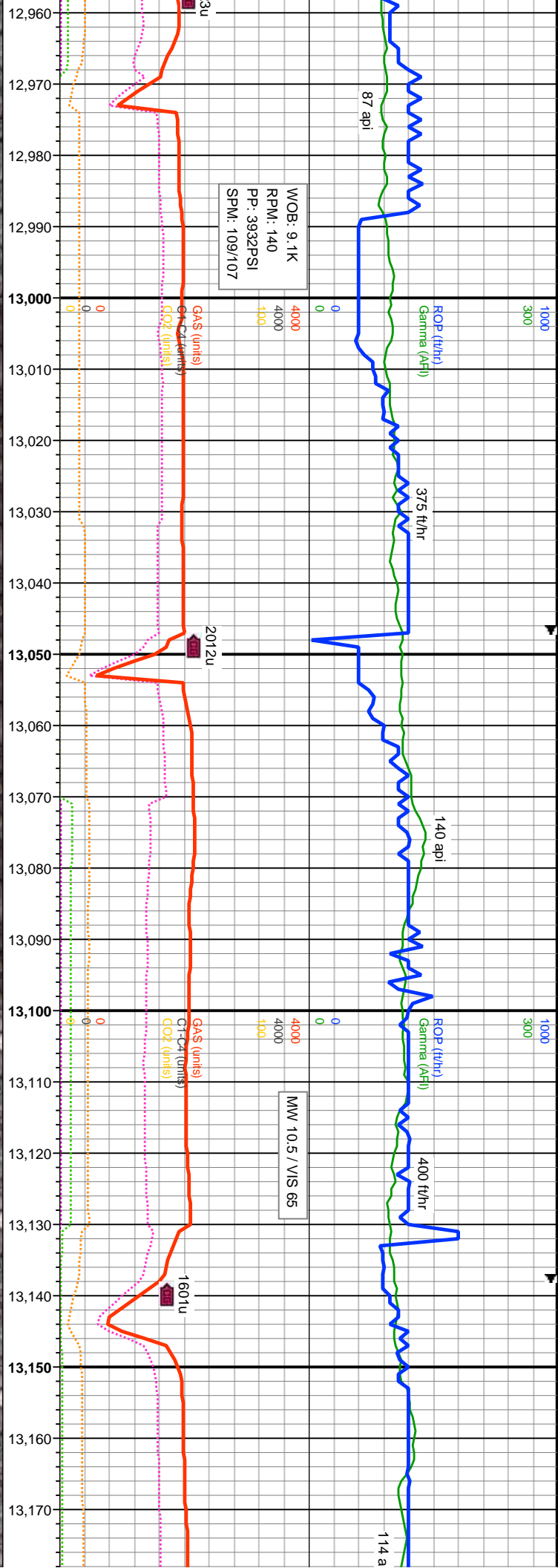


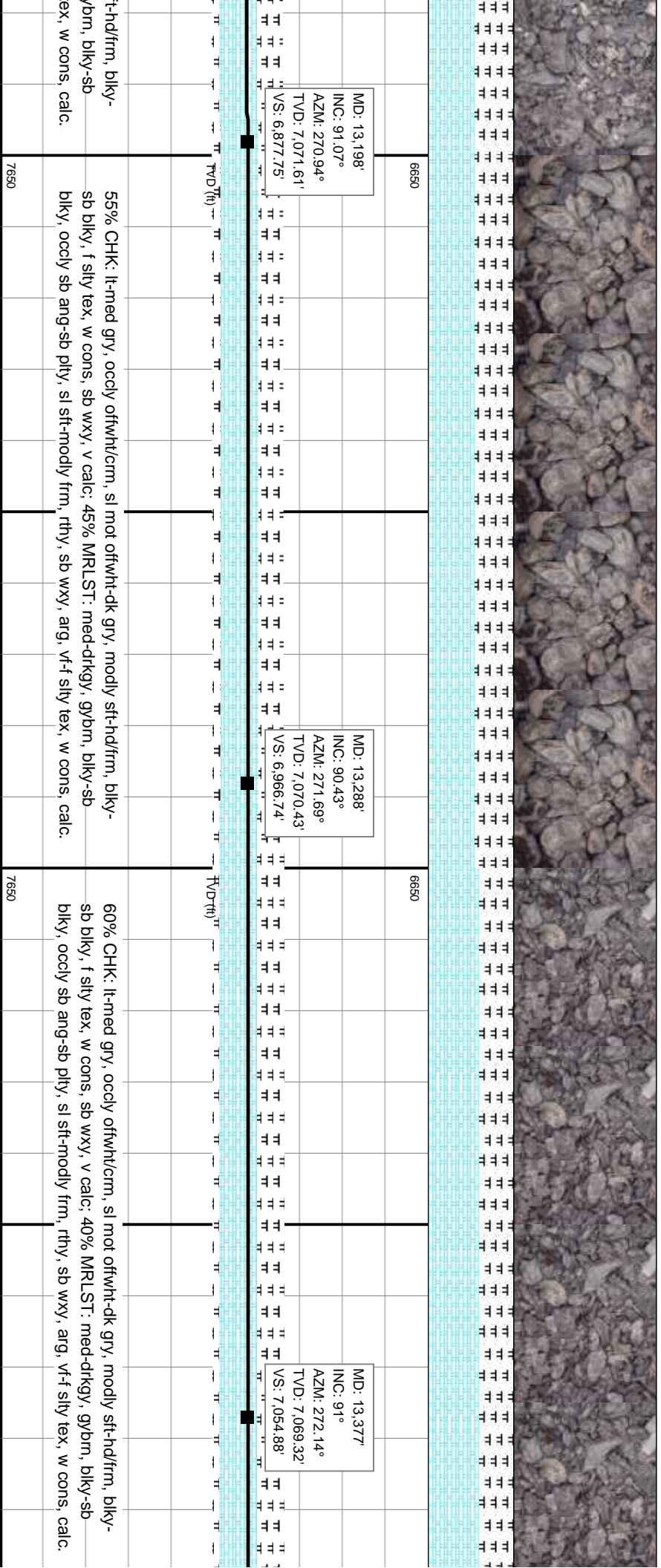
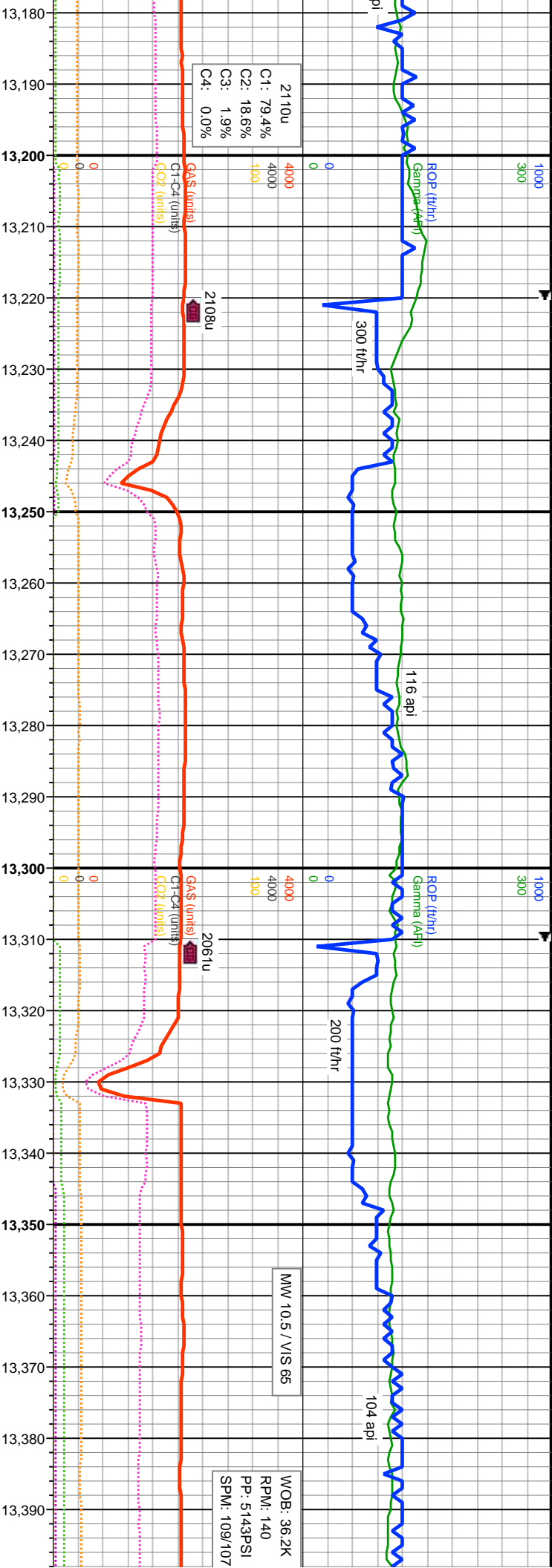


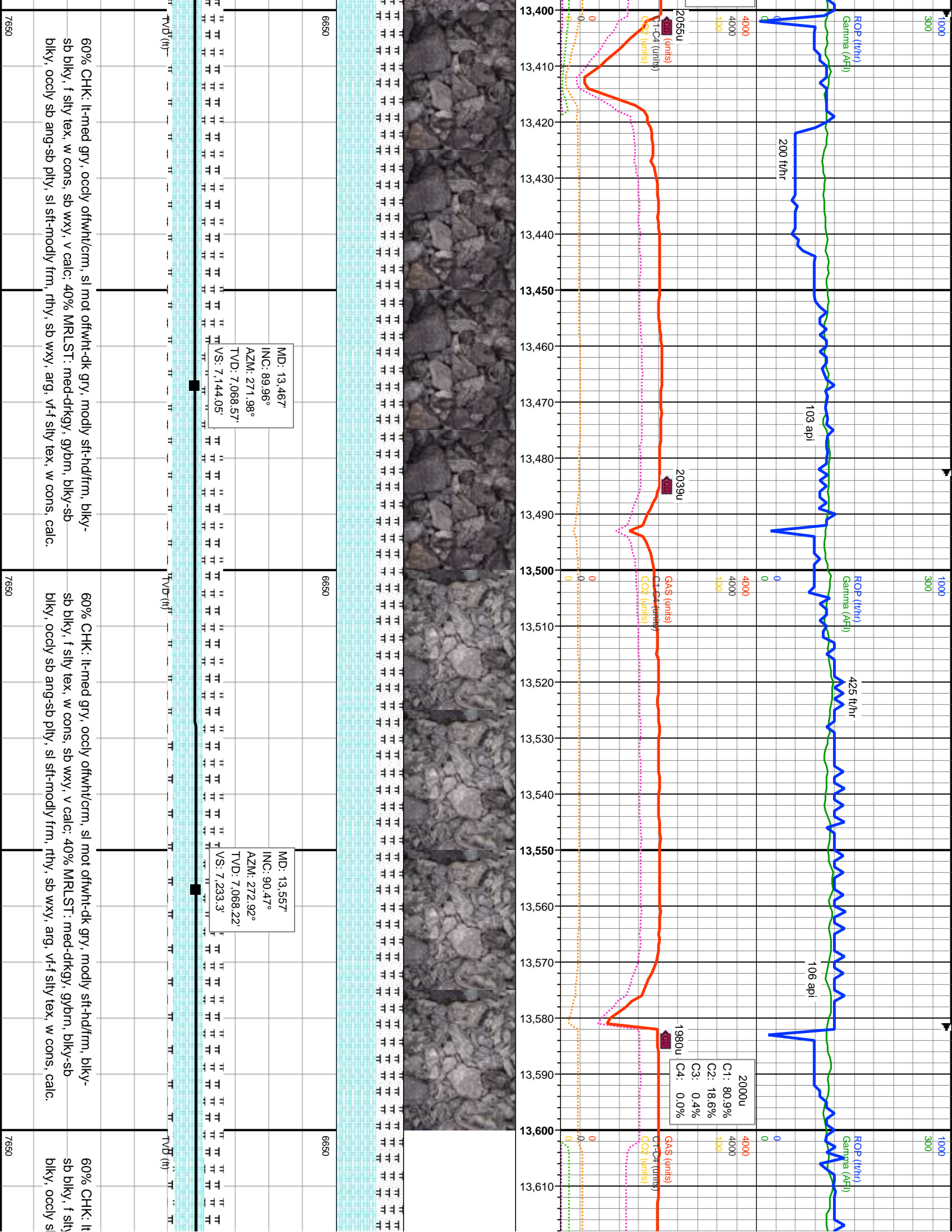


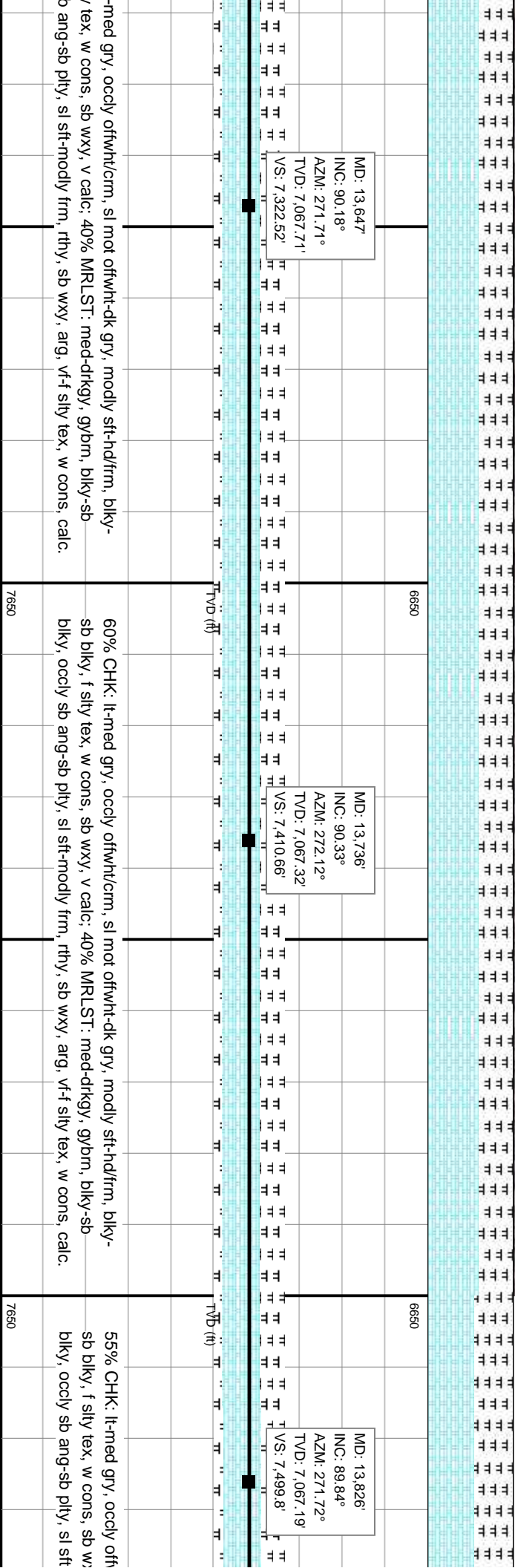
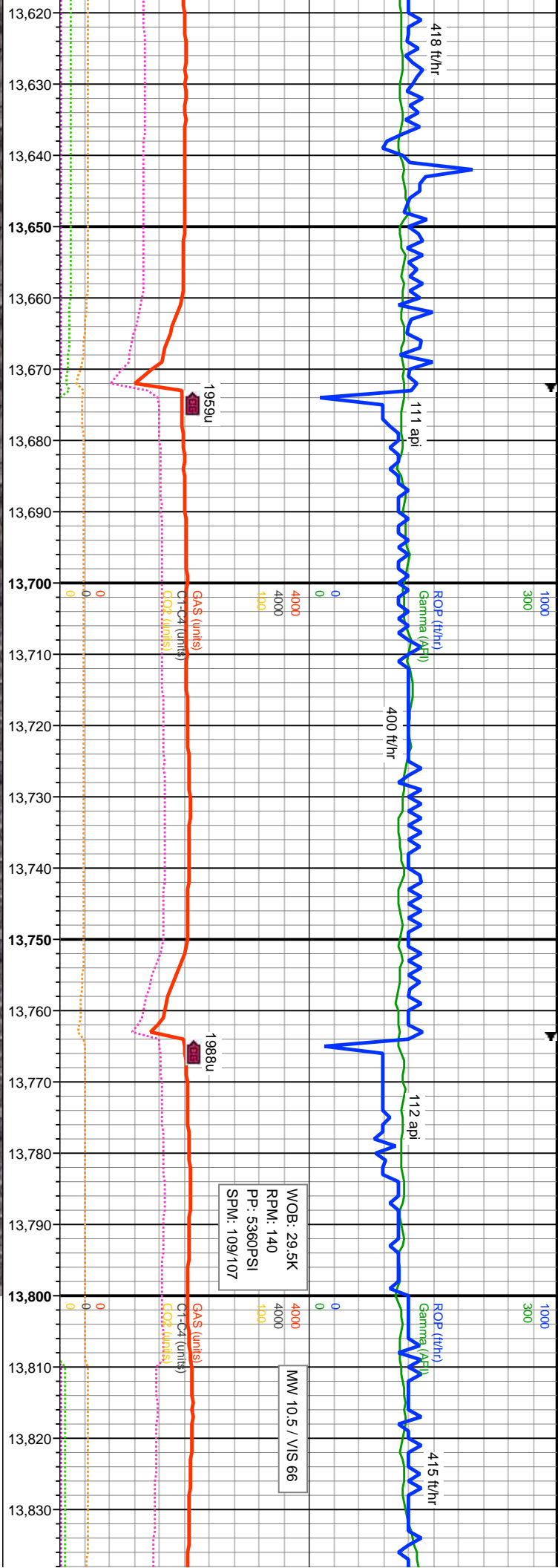


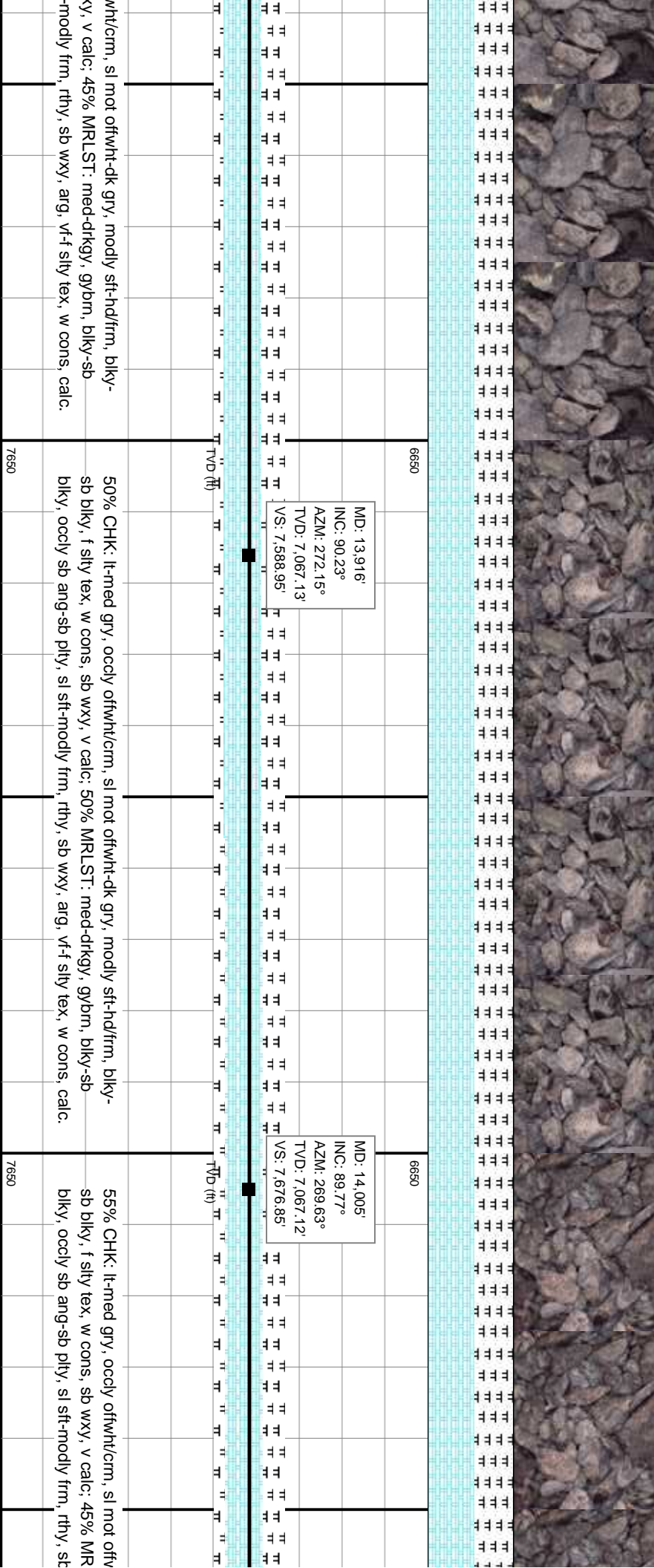
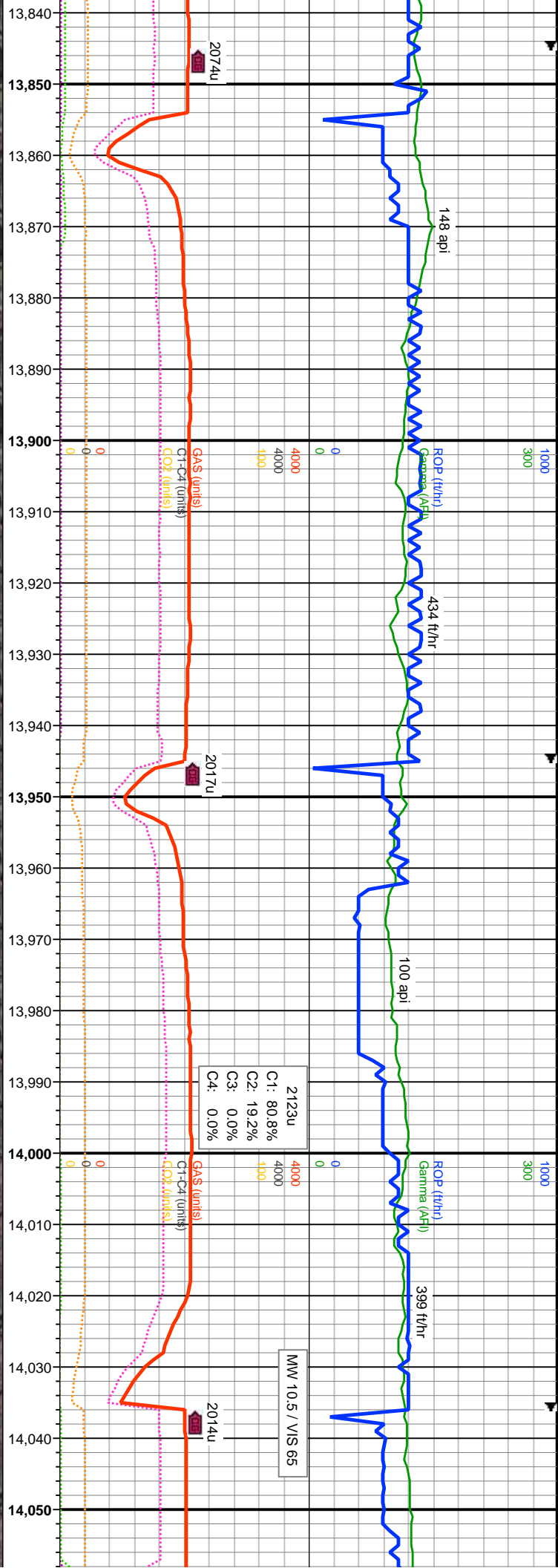


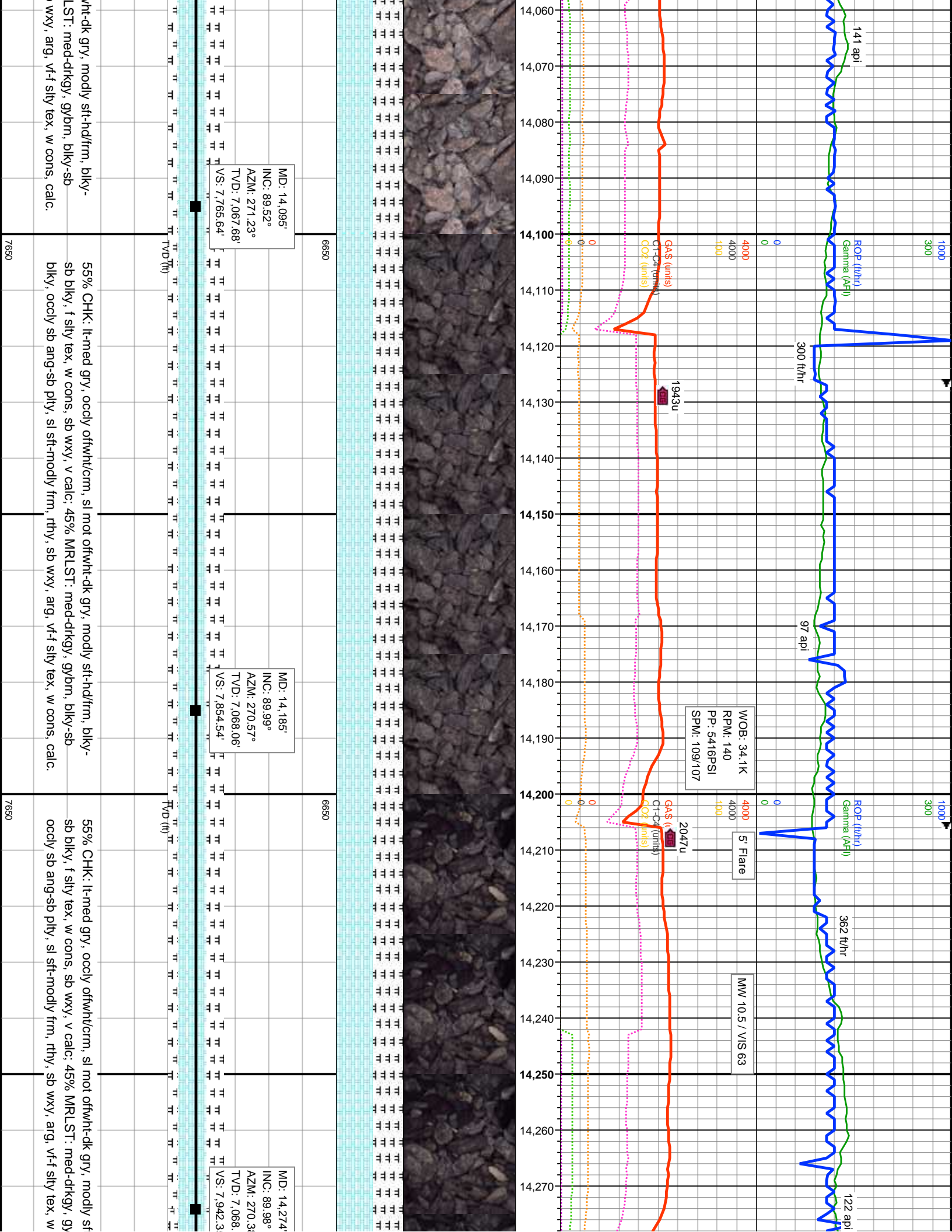


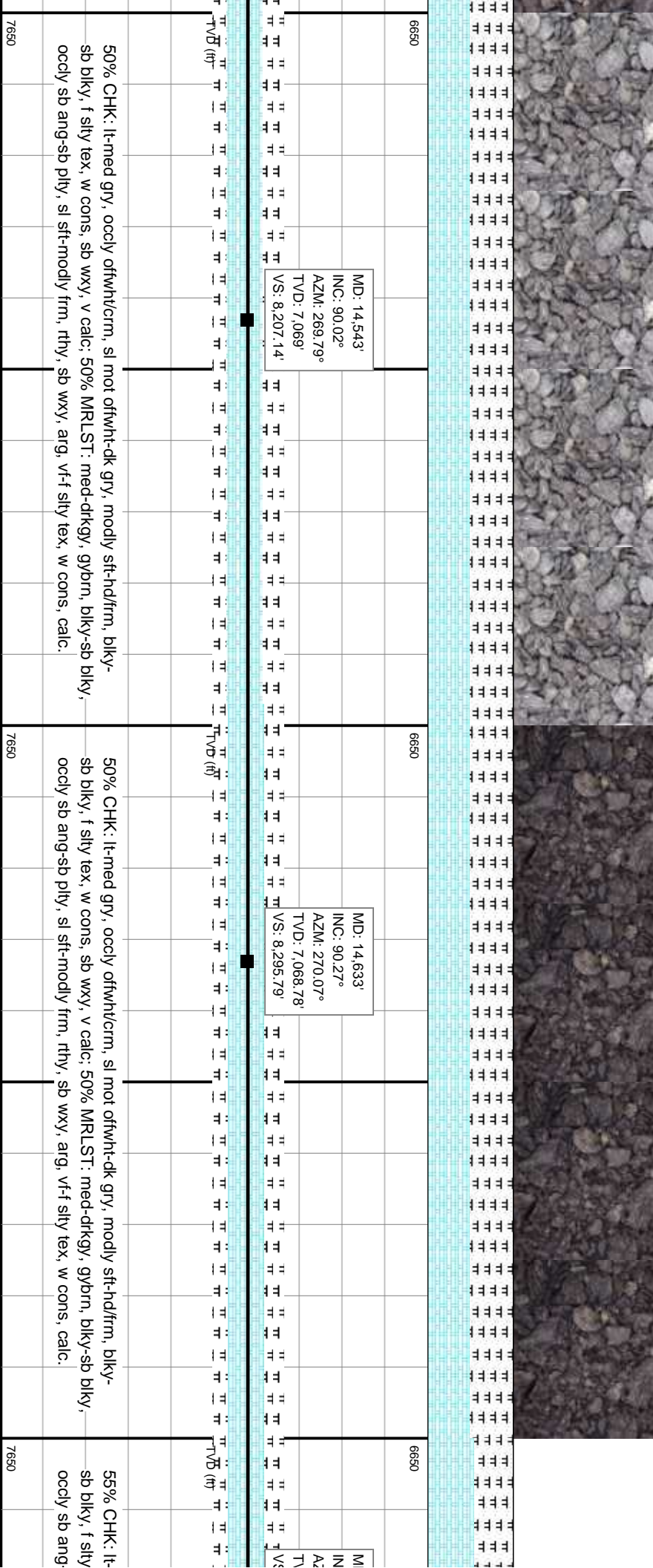
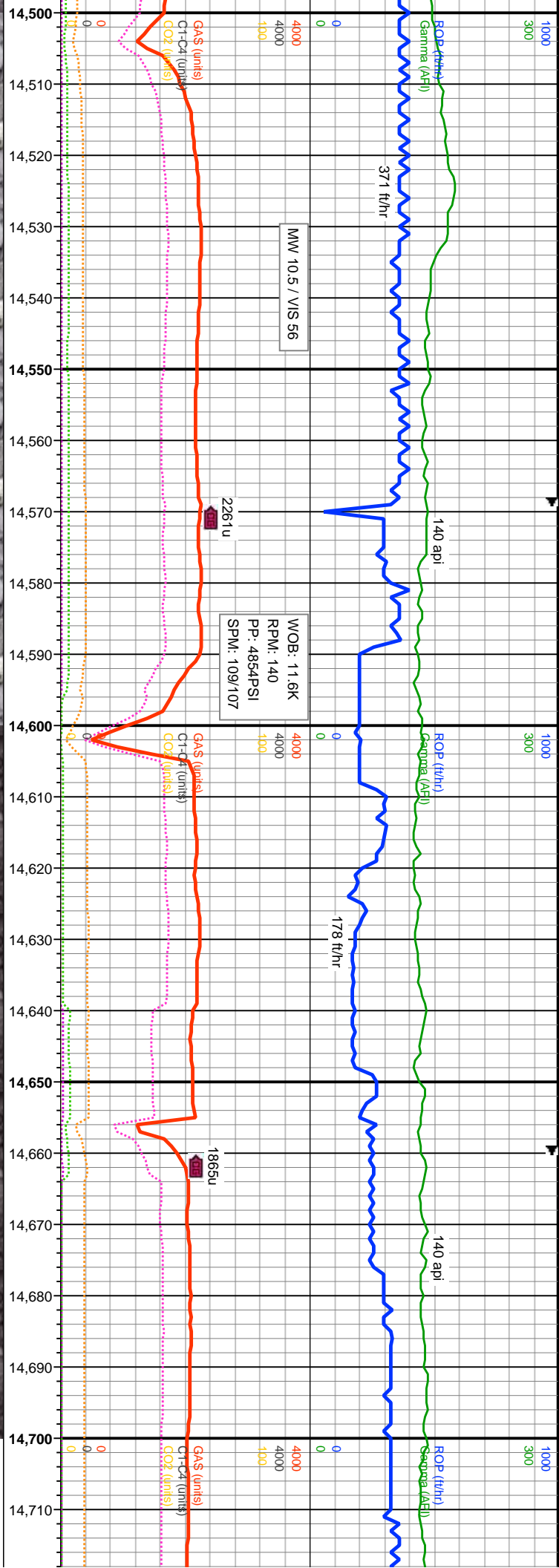


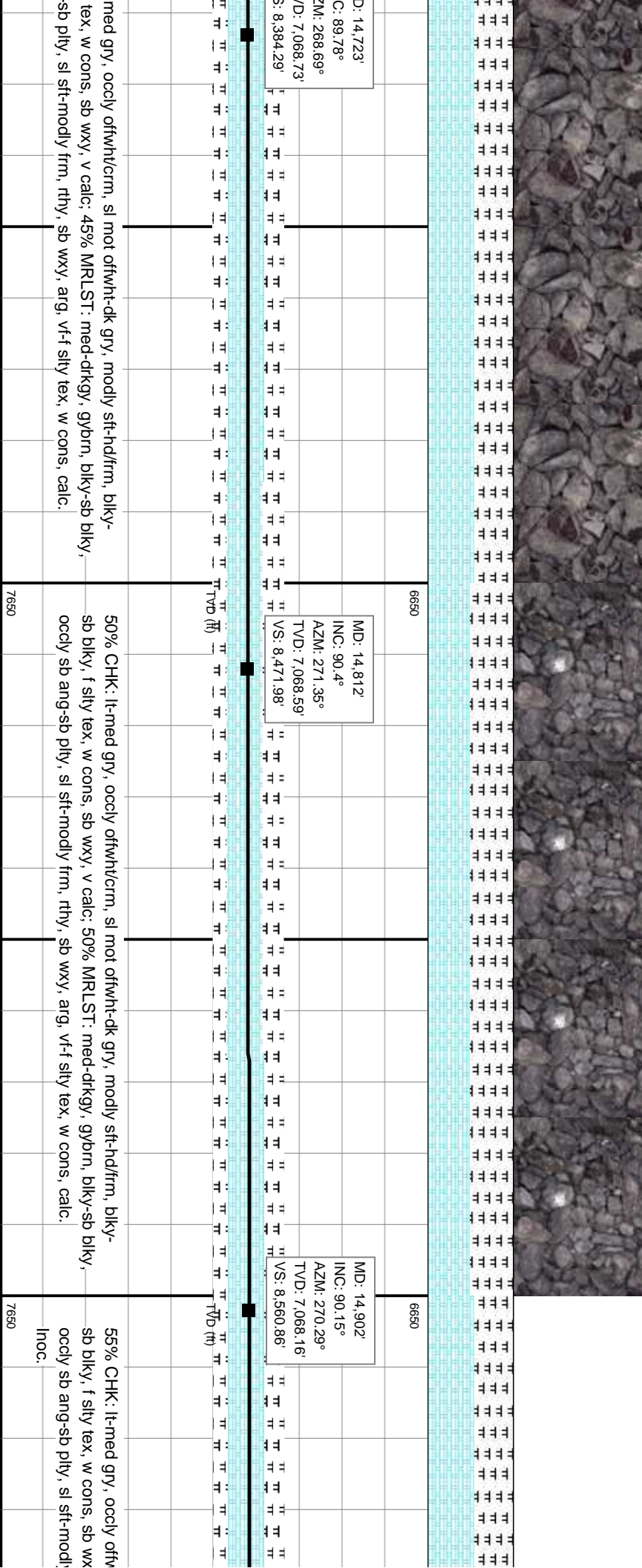
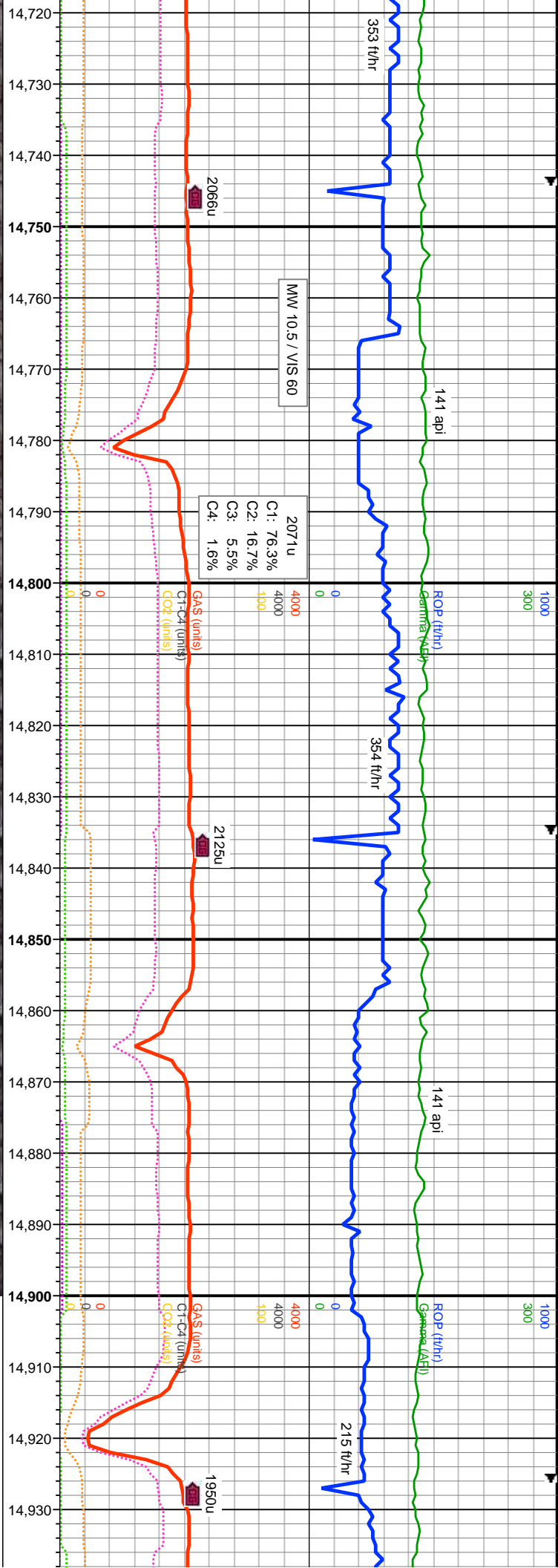


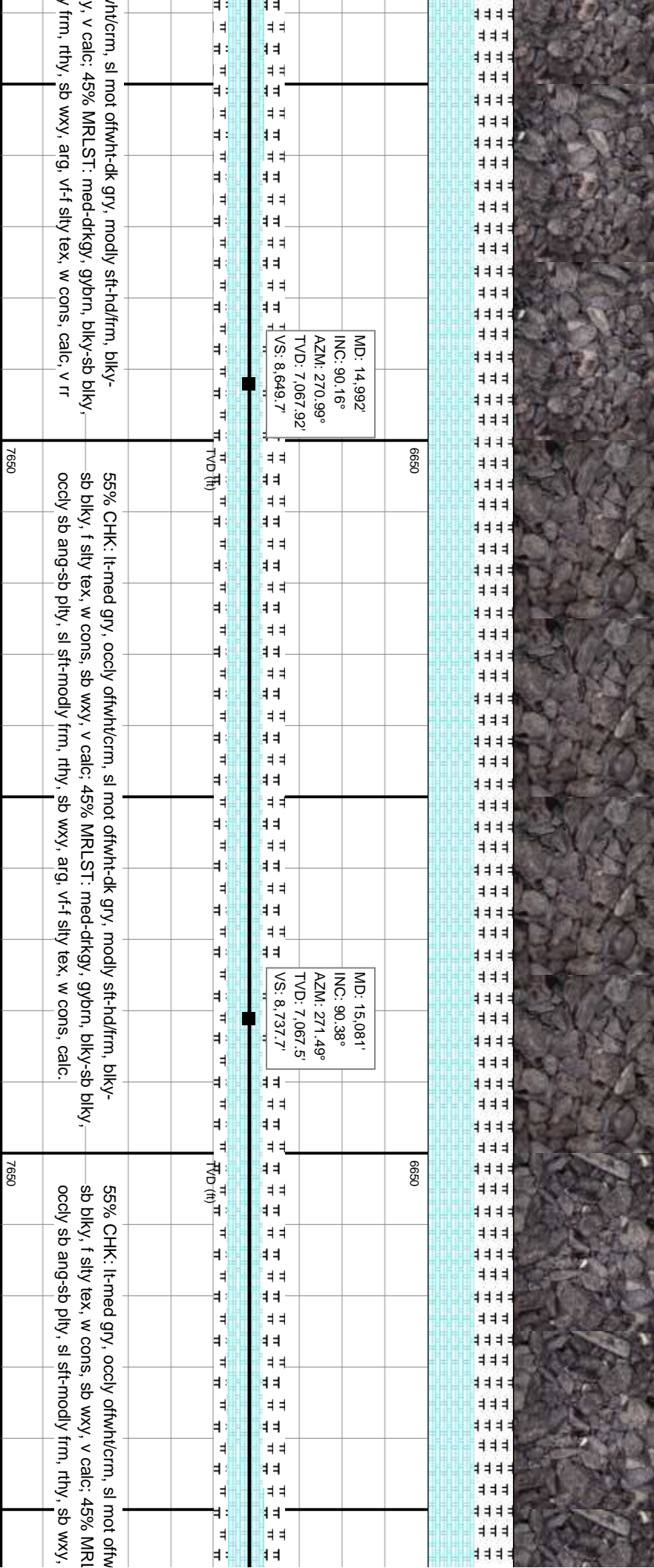
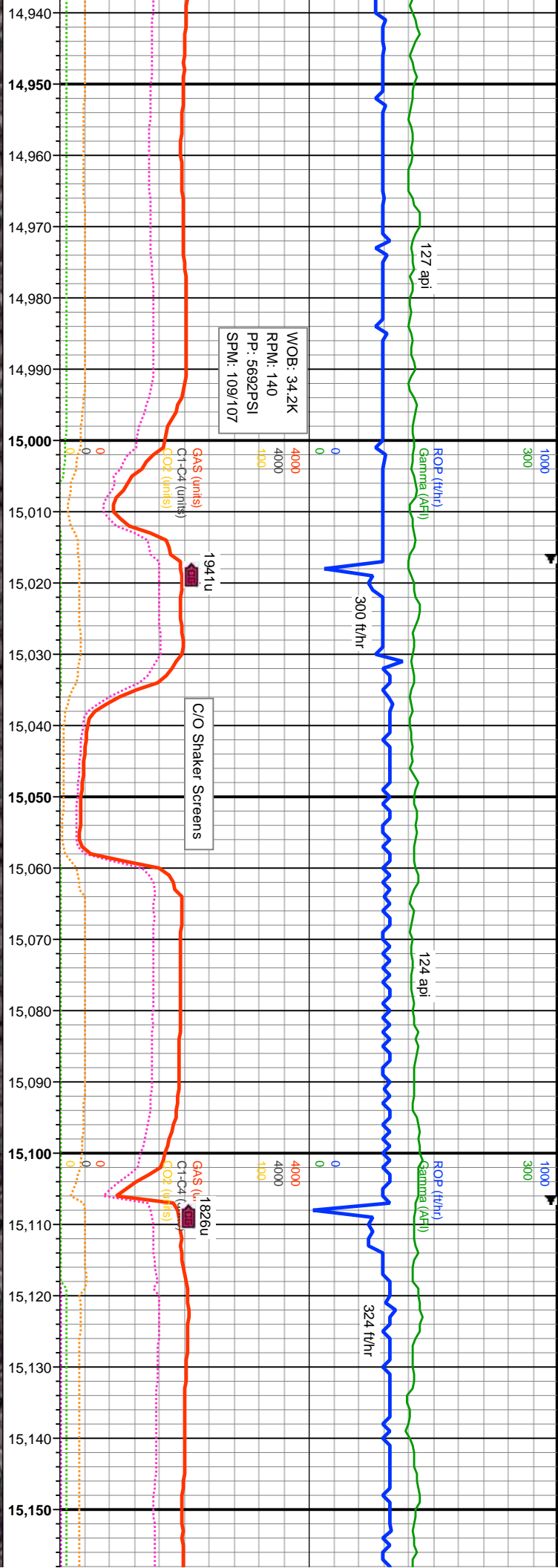


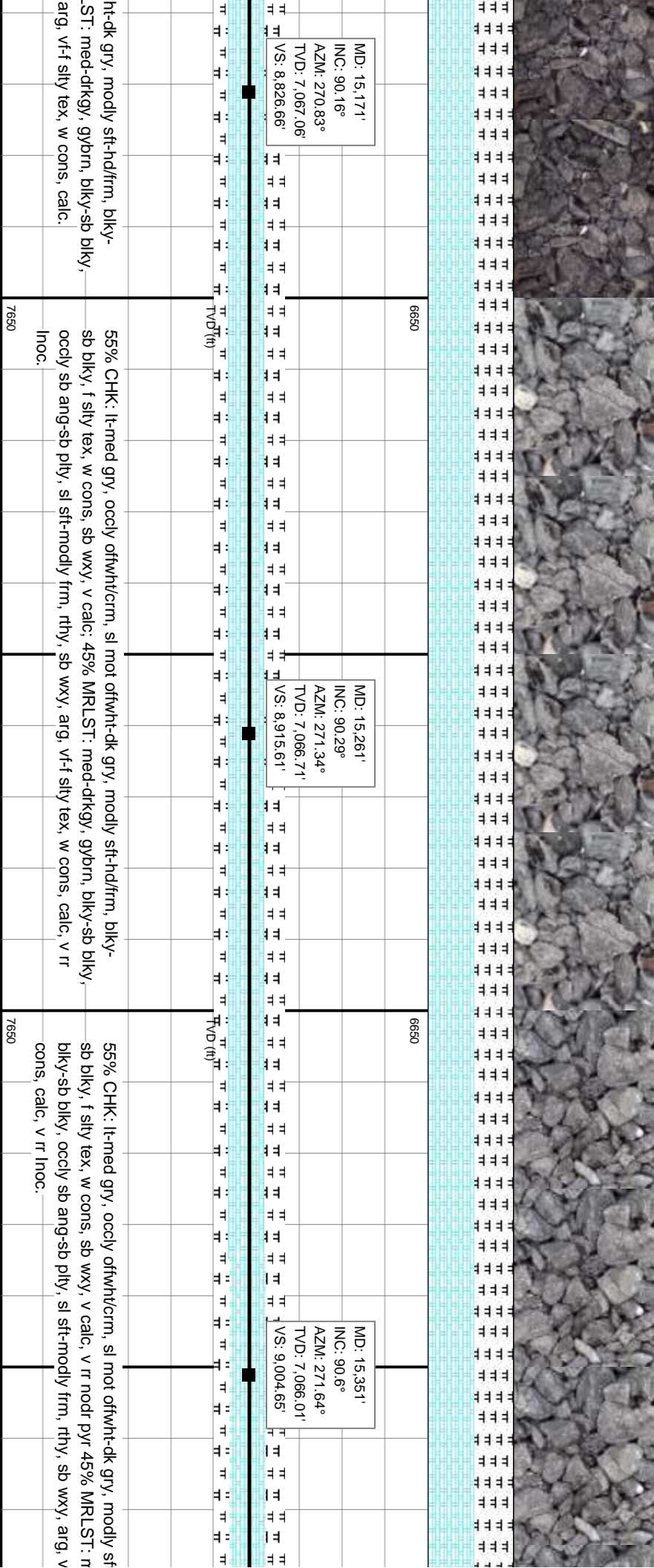
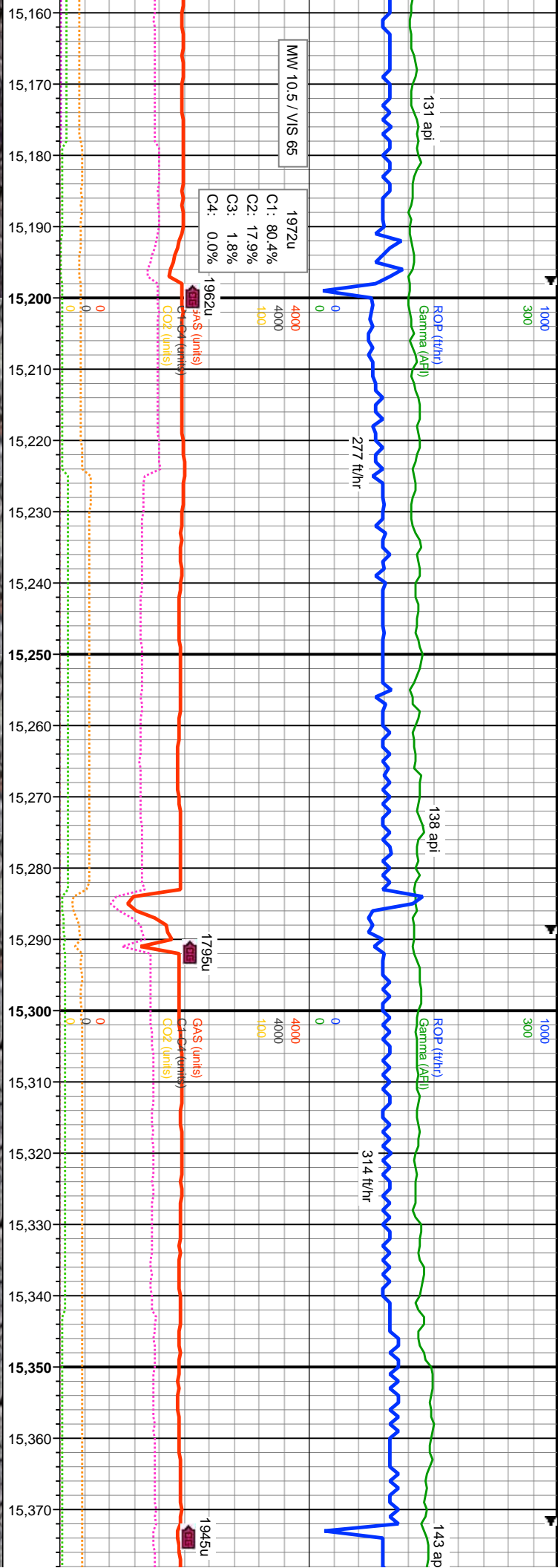


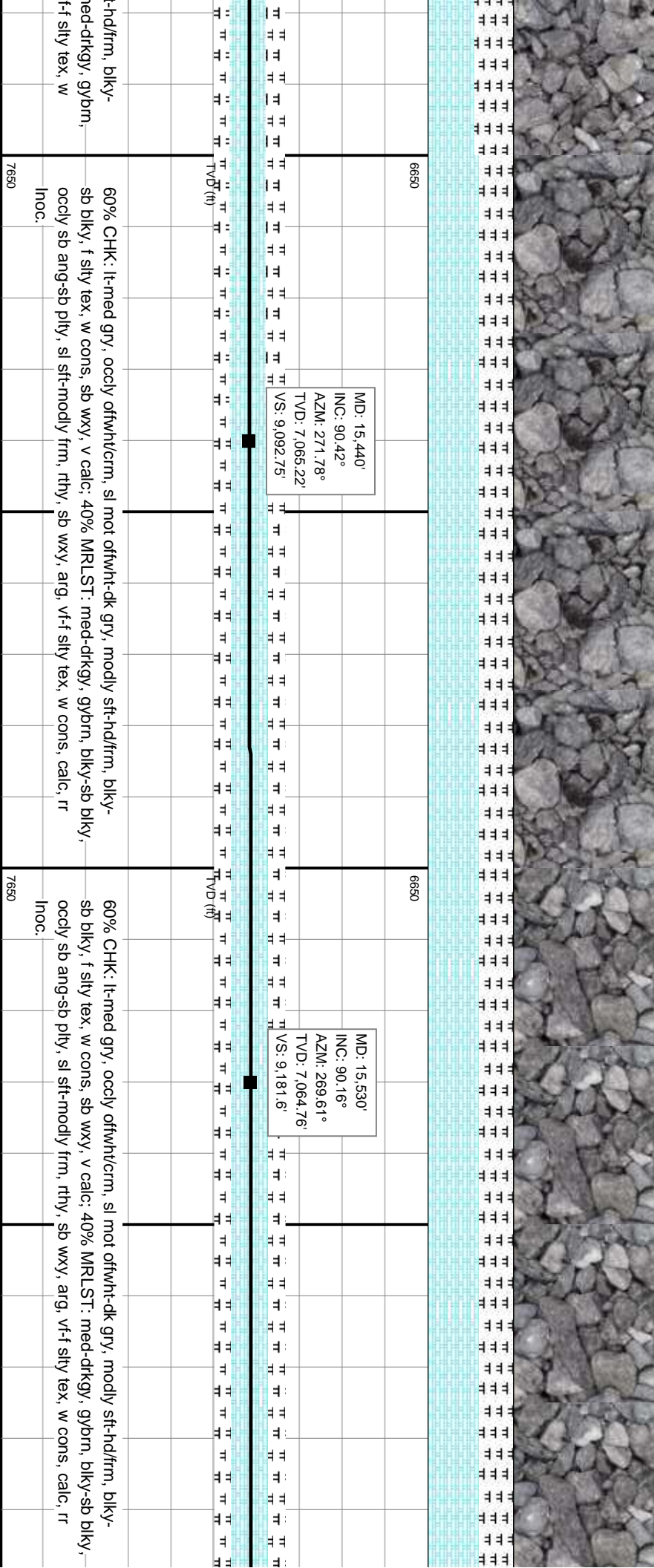
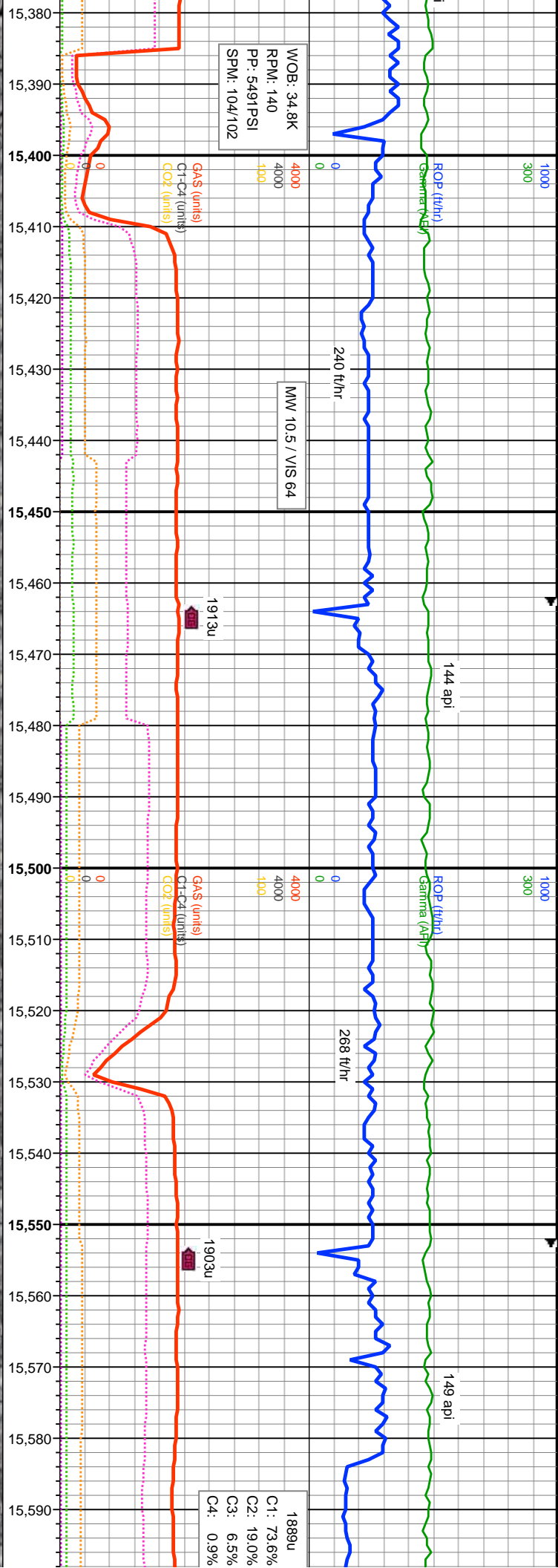


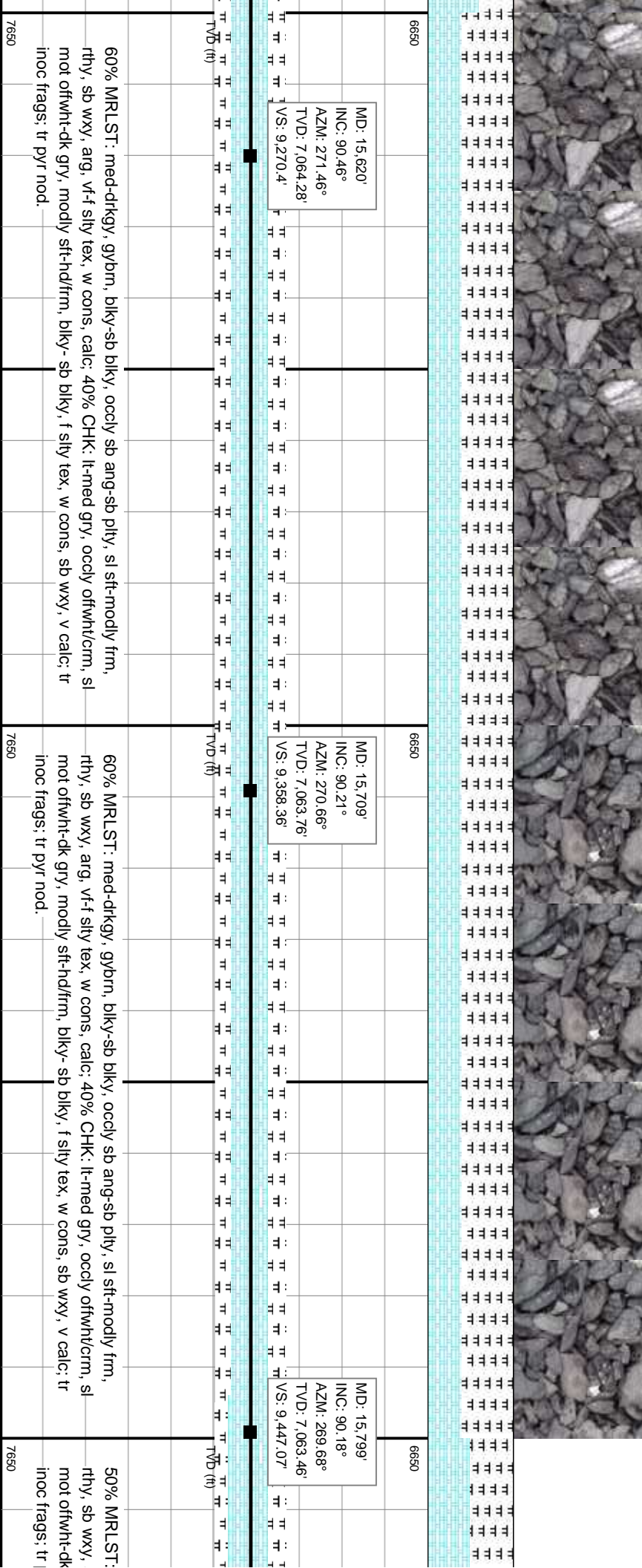
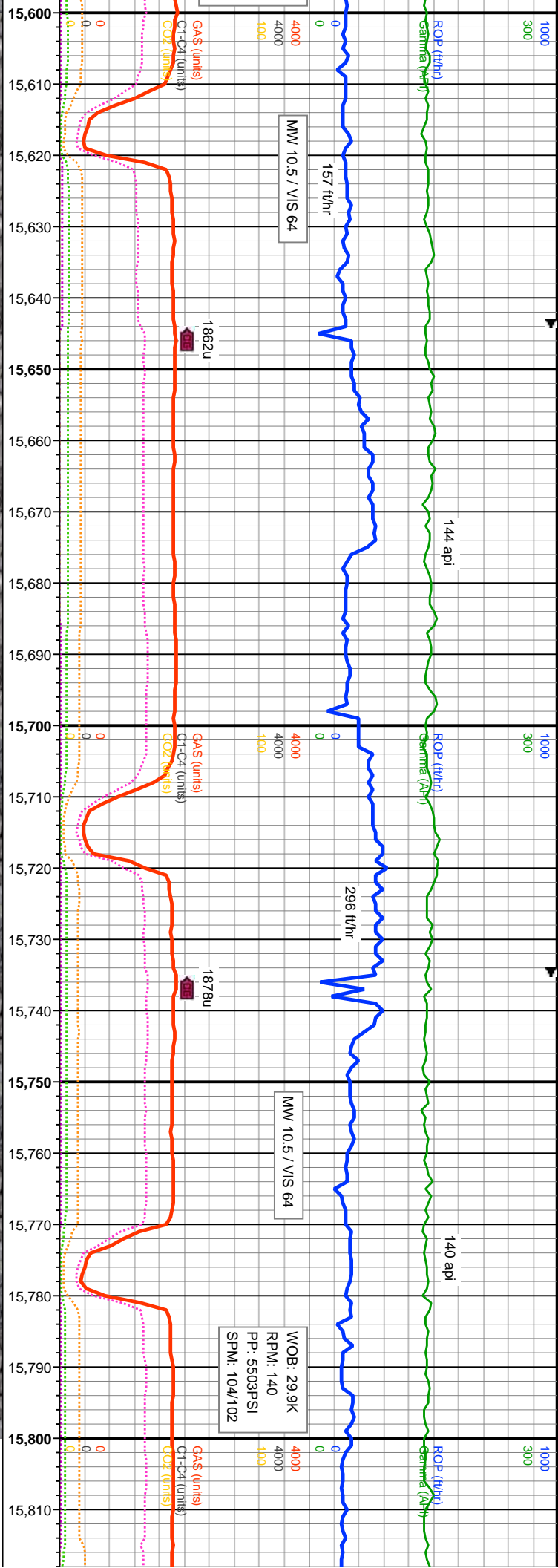


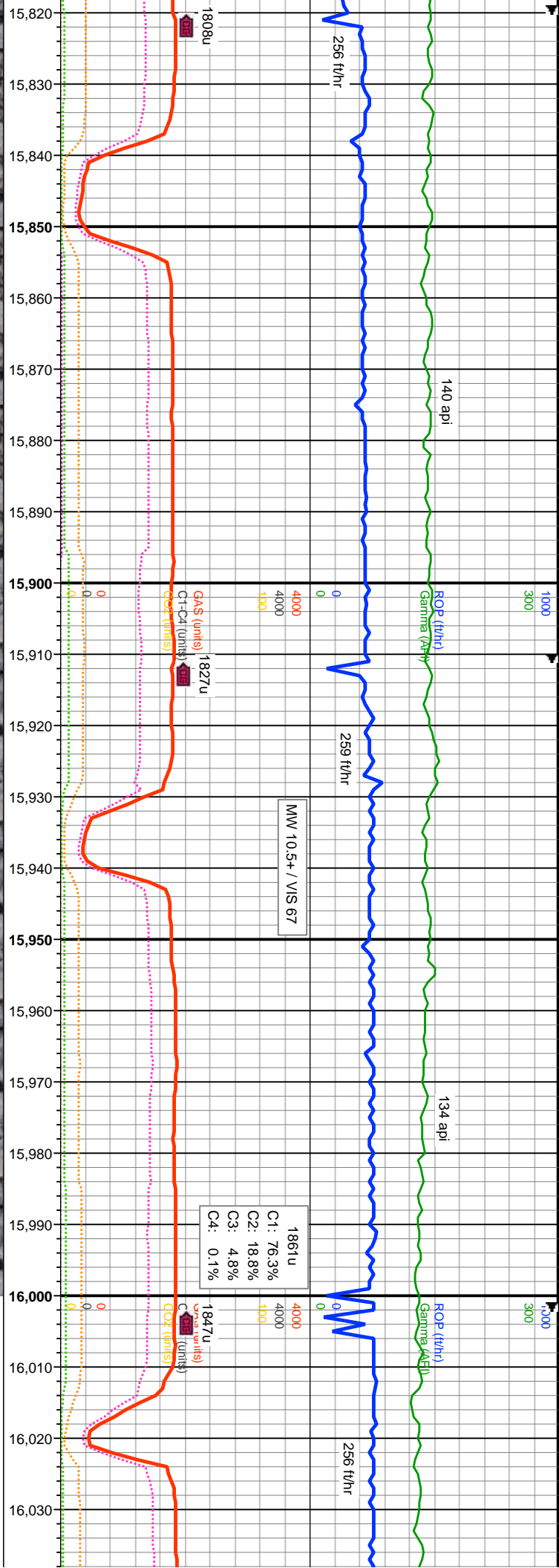












MD: 15,889'
INC: 90.54°
AZM: 271.48°
TVD: 7,062.9'
VS: 9.535.89

MD: 15,978'
INC: 90.17°
AZM: 270.01°
TVD: 7,062.35'
VS: 9.623.77

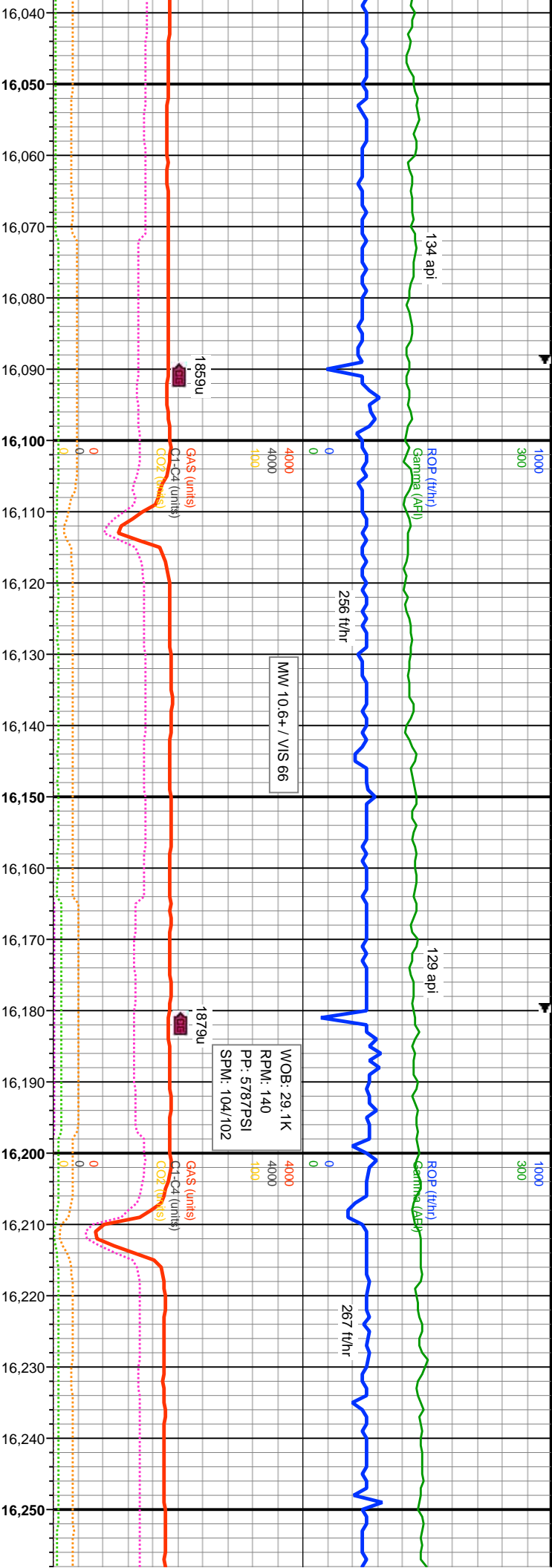
TVD (ft)

TVD (ft)

med-dkgy, gybrn, blyk-sb blyk, oocly sb ang-sb pily, sl sft-modly frm, arg, vf-f silty tex, w cons, calc; 50% CHK: lt-med gry, oocly ofwht/crm, sl gry, modly sft-hd/frn, blyk-sb blyk, f silty tex, w cons, sb wxy, v calc; tr pyr nod.

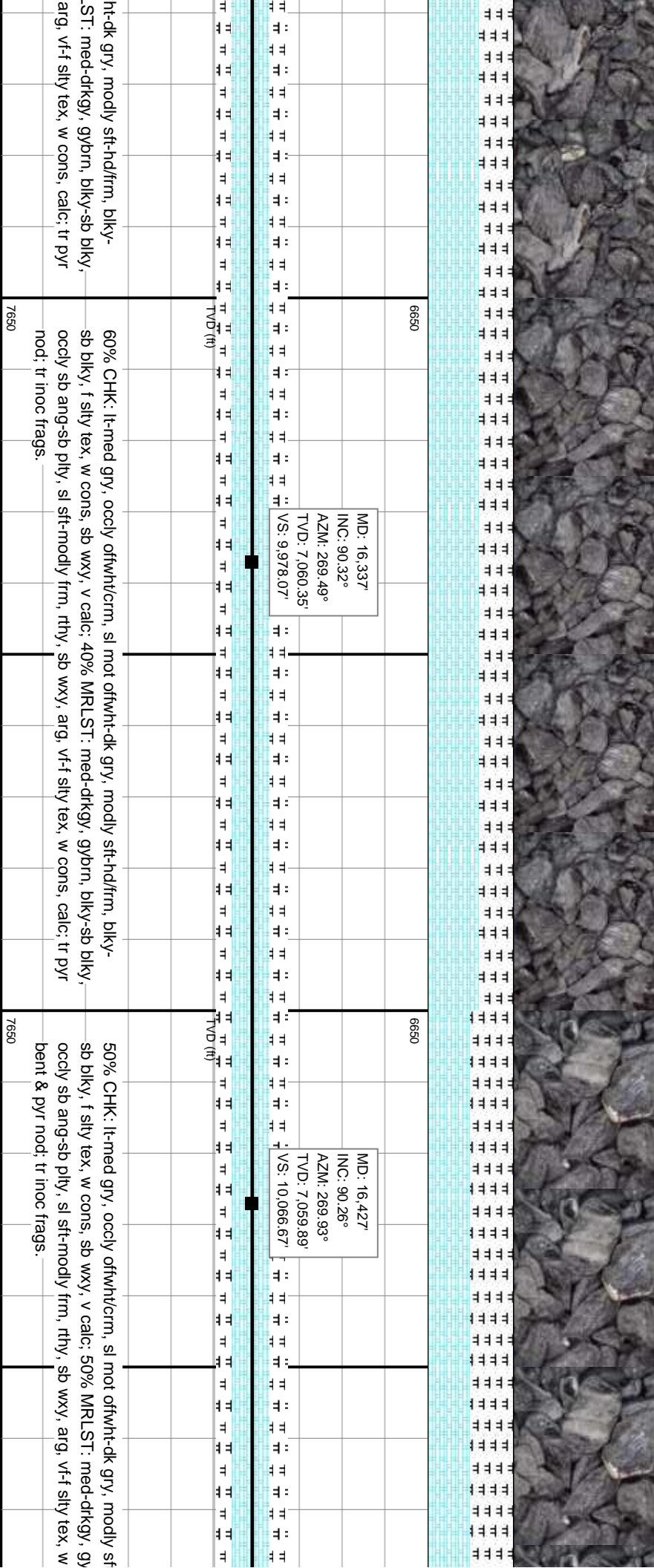
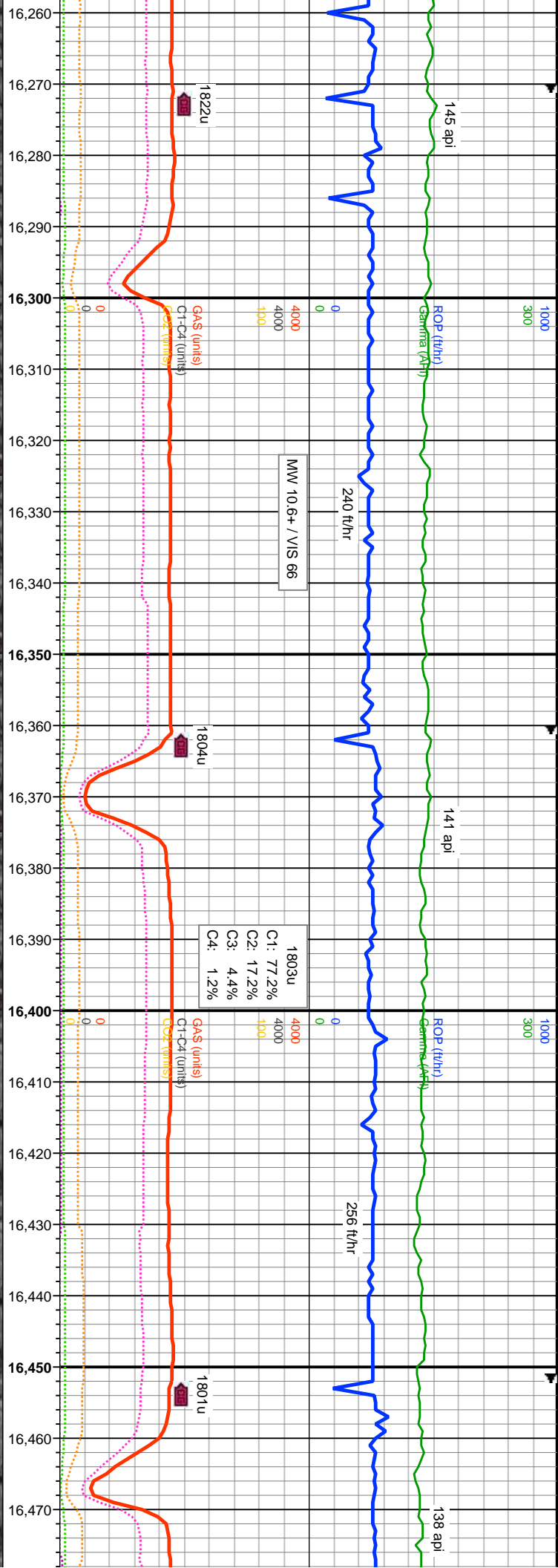
50% MRIST: med-dkgy, gybrn, blyk-sb blyk, oocly sb ang-sb pily, sl sft-modly frm, rthy, sb wxy, arg, vf-f silty tex, w cons, calc; 50% CHK: lt-med gry, oocly ofwht/crm, sl mot ofwht-dk gry, modly sft-hd/frn, blyk-sb blyk, f silty tex, w cons, sb wxy, v calc; tr inoc frags; tr pyr nod.

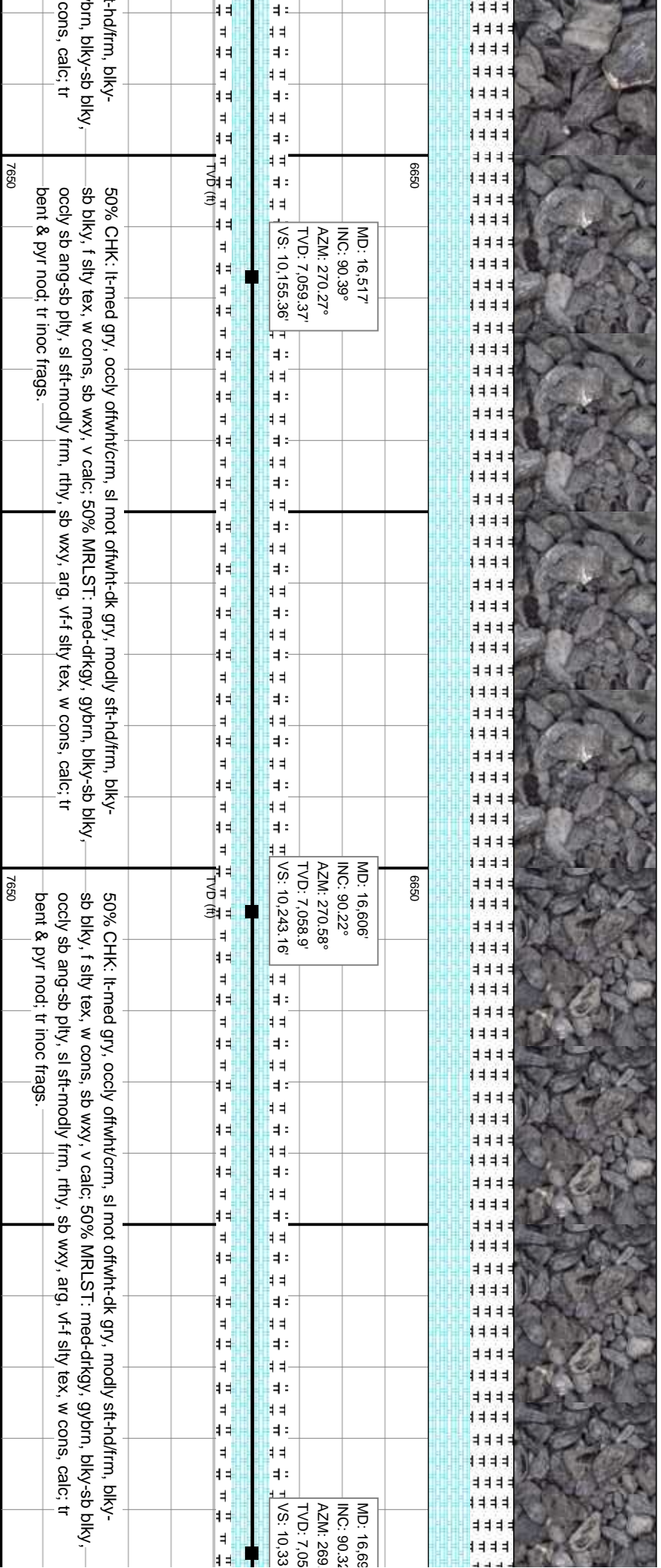
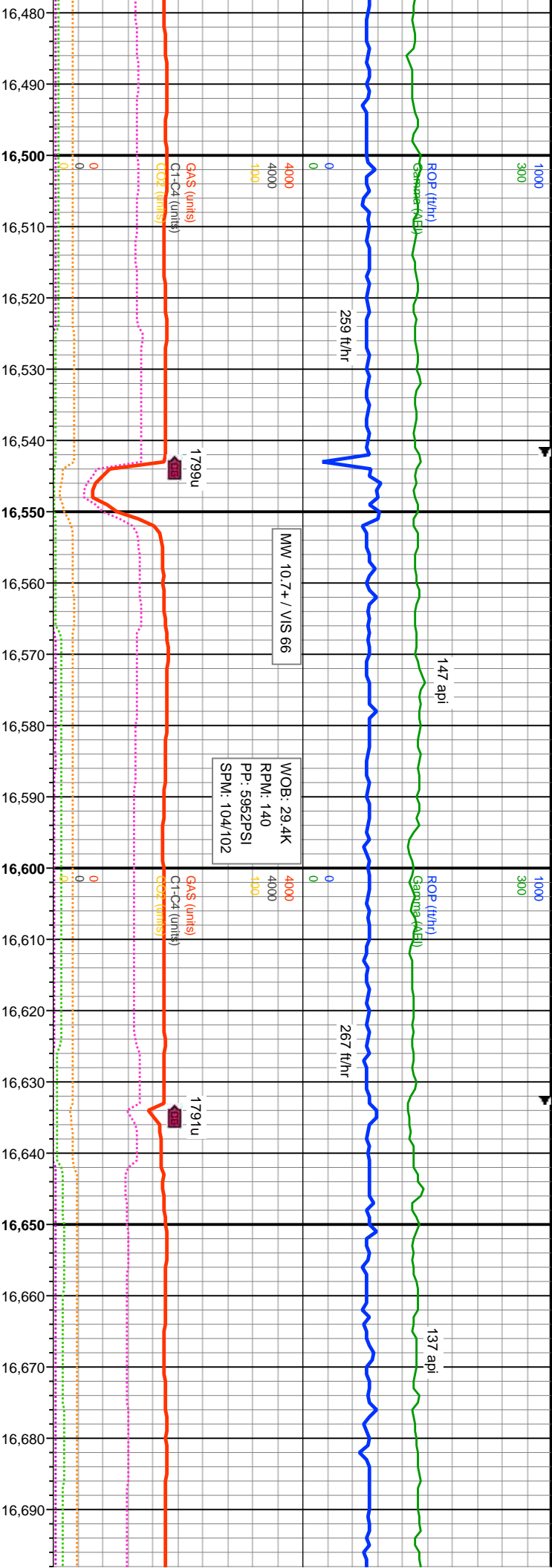
60% CHK: lt-med gry, oocly ofwht sb blyk, f silty tex, w cons, sb wxy oocly sb ang-sb pily, sl sft-modly nod; tr inoc frags.

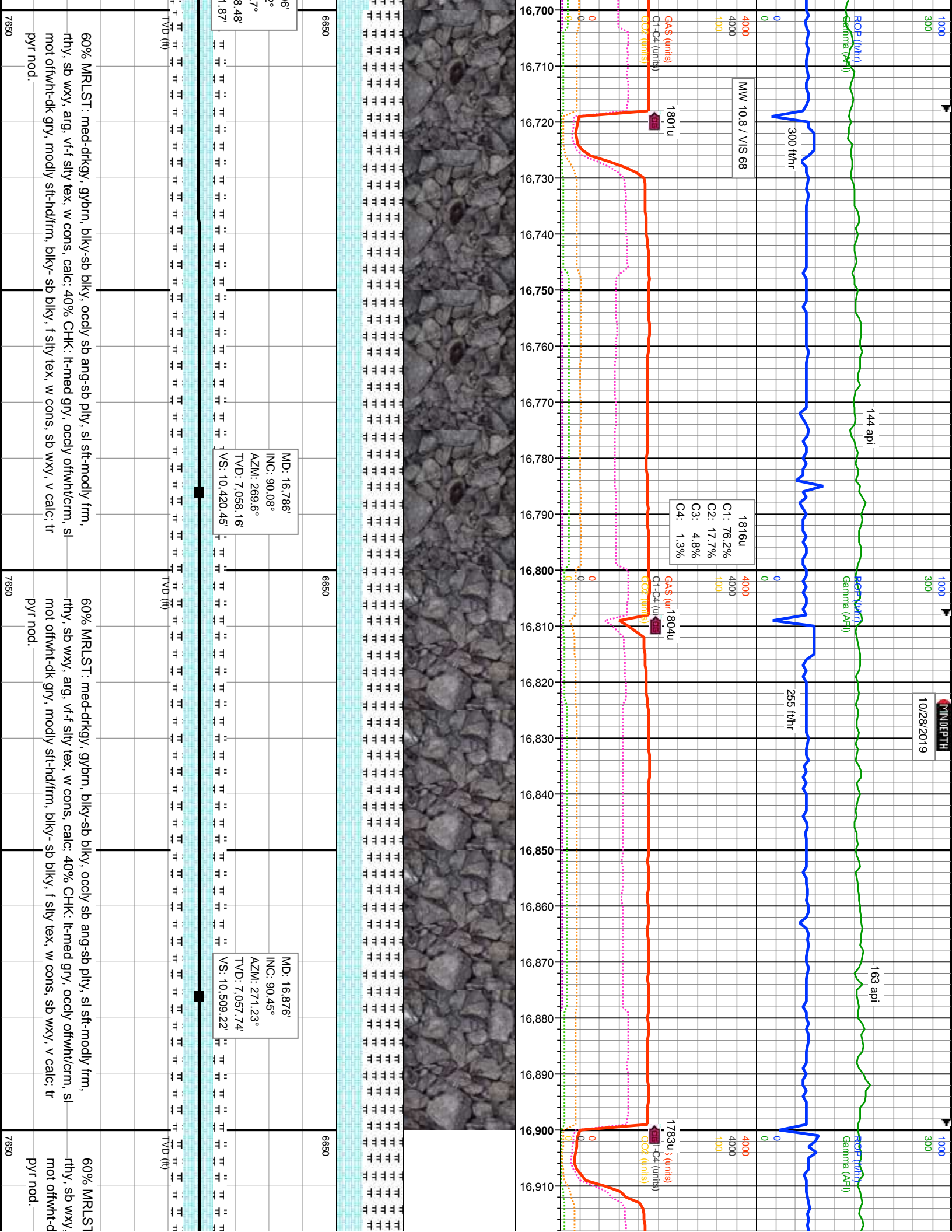


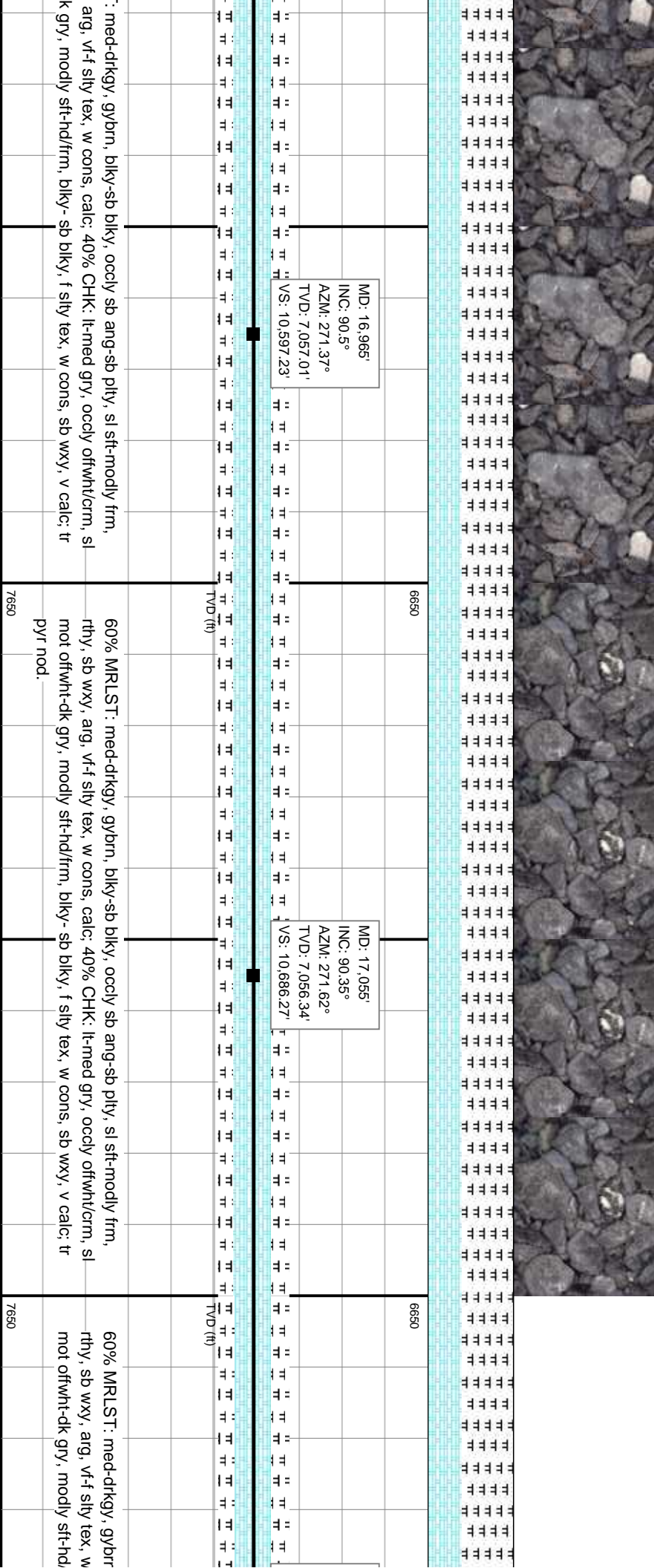
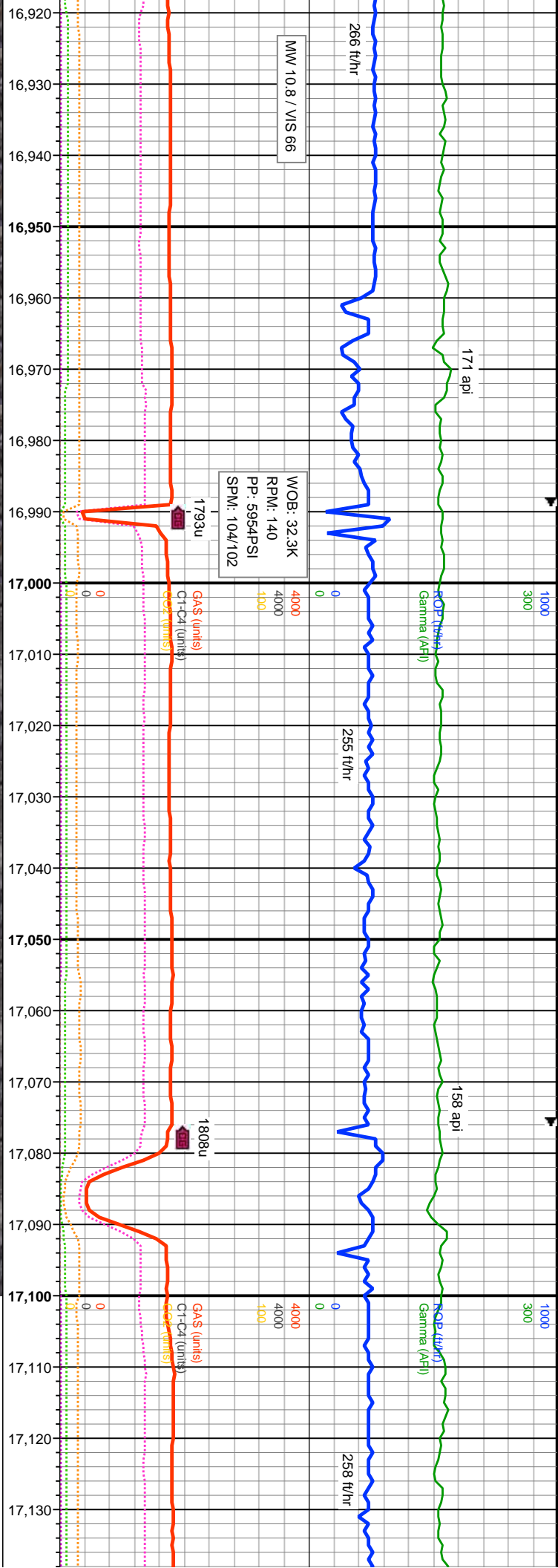
MD: 16,068' INC: 90.26° AZM: 270.06° TVD: 7,062.02' VS: 9,712.45'		MD: 16,158' INC: 90.37° AZM: 271.22° TVD: 7,061.52' VS: 9,801.28'		MD: 16,247' INC: 90.4° AZM: 271.37° TVD: 7,060.92' VS: 9,889.29'	
6650		6650		6650	
7650		7650		7650	

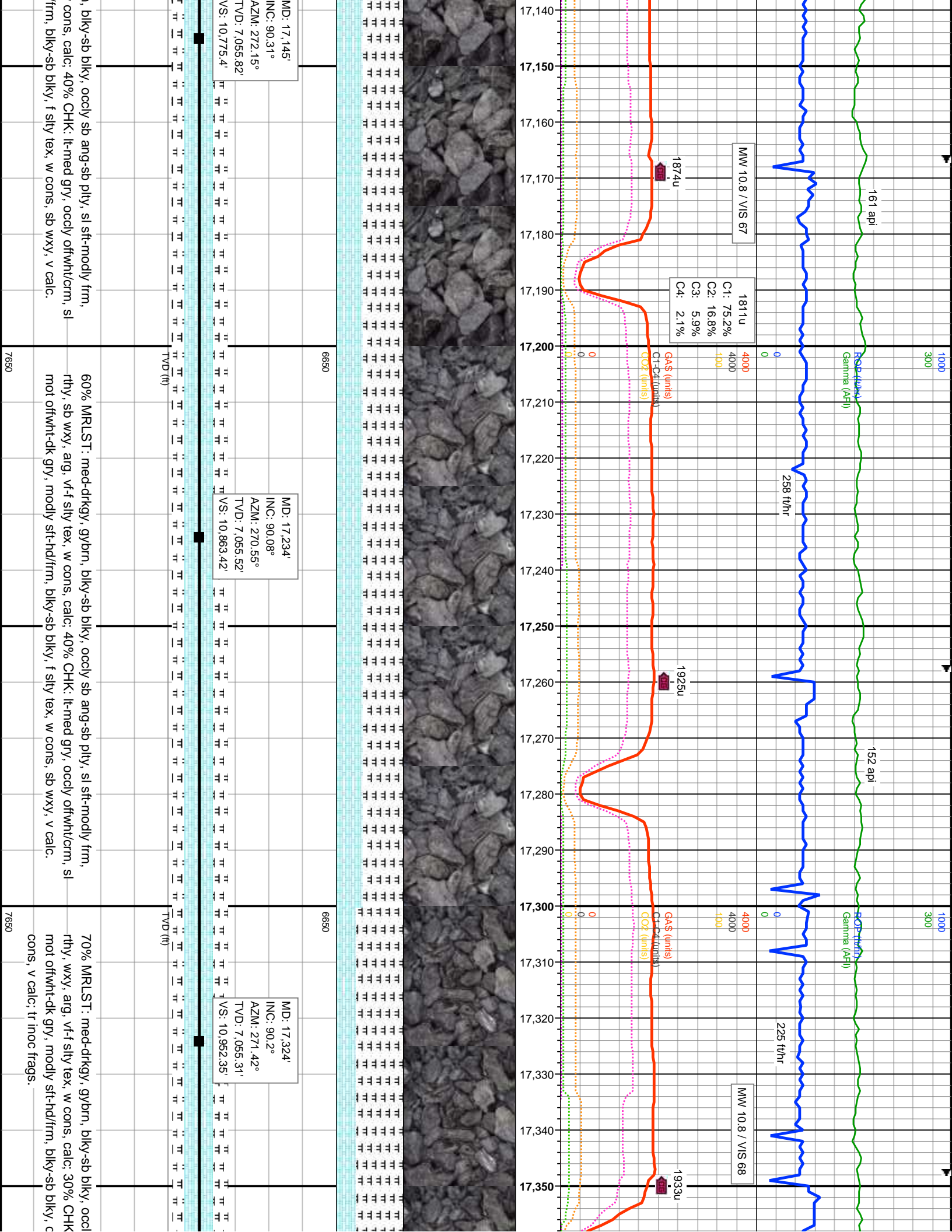
60% CHK: lt-med gry, oocly ofwht/crm, sl mot ofwht-dk gry, modly sft-hd/frn, blkly-sb blkly, f silty tex, w cons, sb wxy, v calc; 40% MRLST: med-drkgy, gybrn, blkly-sb blkly, oocly sb ang-sb ply, sl sft-modly frn, rthy, sb wxy, arg, vt-f silty tex, w cons, calc; tr pyr nod; tr inoc frags.

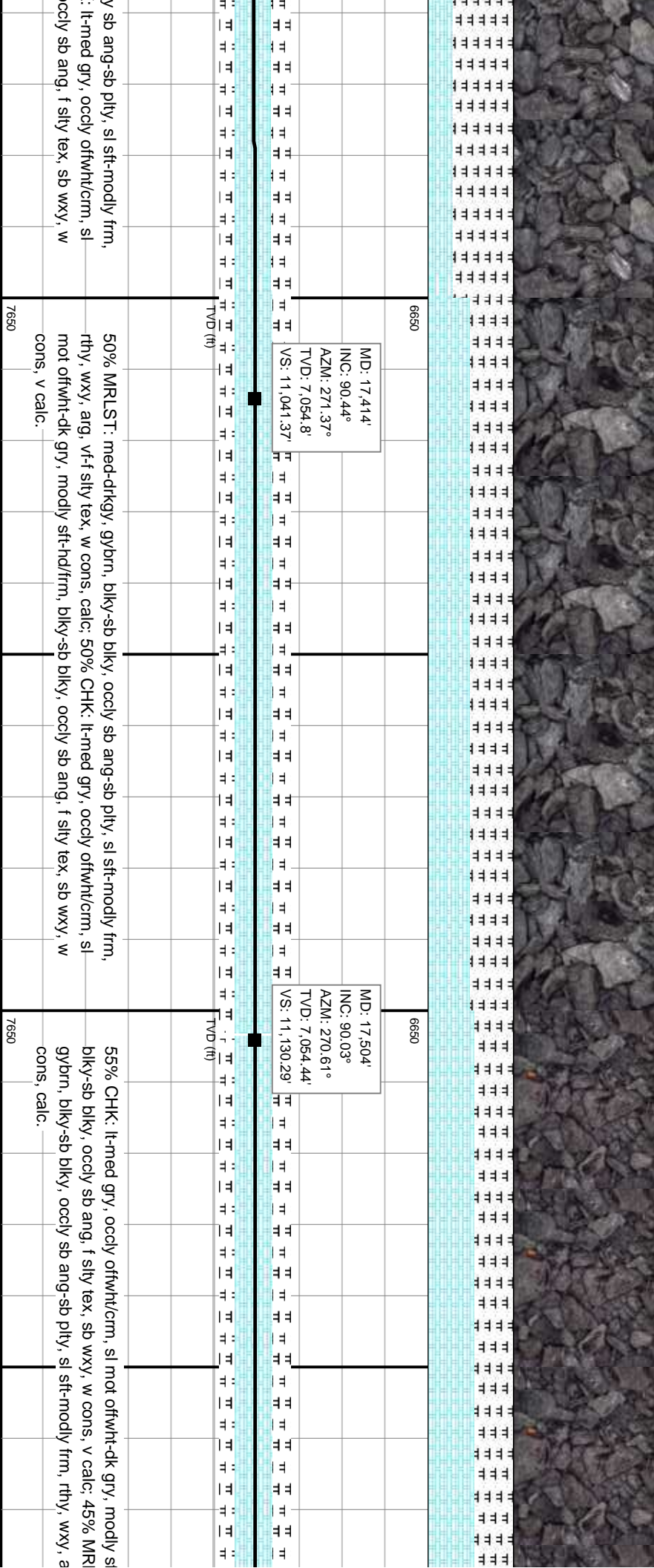
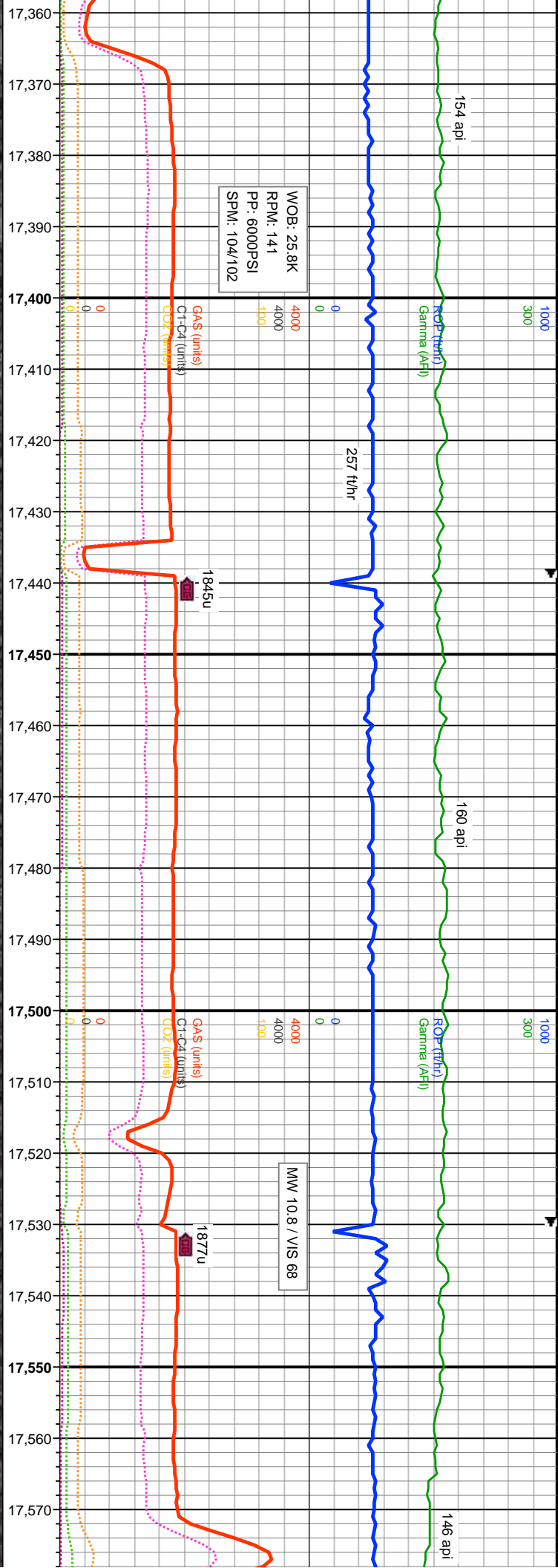


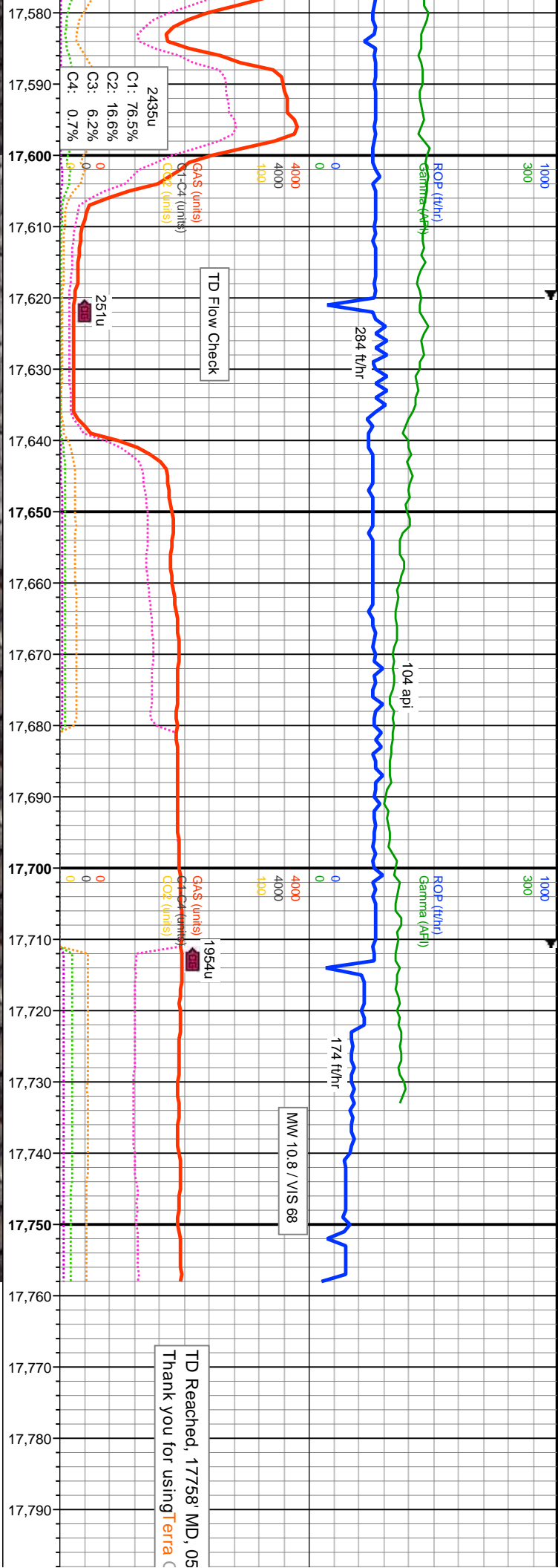












MD: 17,593'
INC: 90.27°
AZM: 271.46°
TVD: 7,054.22'
VS: 11,218.24'

MD: 17,683'
INC: 90.21°
AZM: 271.89°
TVD: 7,053.84'
VS: 11,307.32'

MD: 17,733'
INC: 89.94°
AZM: 270.69°
TVD: 7,053.78'
VS: 11,356.76'

MD: 17,758'
INC: 89.94°
AZM: 270.69°
TVD: 7,053.8'
VS: 11,381.44'

Projection to Bit

It-hd/frm, ST: med-dkgy, arg, vr-f slty tex, w	55% CHK: lt-med gry, occly offwh/ctm, sl mot offwh/ct-dk gry, modly sft-hd/frm, bkly-sb bkly, occly sb ang, f slty tex, sb wxy, w cons, v calc; 45% MRLST: med-dkgy, gybrn, bkly-sb bkly, occly sb ang-sb plty, sl sft-modly frm, rthy, wxy, arg, vr-f slty tex, w cons, calc.	60% CHK: lt-med gry, occly offwh/ctm, sl mot offwh/ct-dk gry, modly sft-hd/frm, bkly-sb bkly, occly sb ang, f slty tex, sb wxy, w cons, v calc, v r r diss pyr; 40% MRLST: med-dkgy, gybrn, bkly-sb bkly, occly sb ang-sb plty, sl sft-modly frm, rthy, wxy, arg, vr-f slty tex, w cons, calc.	FM Name	726
			Sharon Springs	726
			Niobrara	738
			Ft Hays	
			Codell	
			Carlile	
			Greenhorn	

