

OPERATOR: **Cub Creek Energy**

WELL NAME: **Markham 3**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Xtreme 18

API #: 05-123-43249

LAT/LONG: 40.26871, -105.02313

SURFACE HOLE: NWSE S32-T4N-R68W, 2357' FSL, 1515' FEL

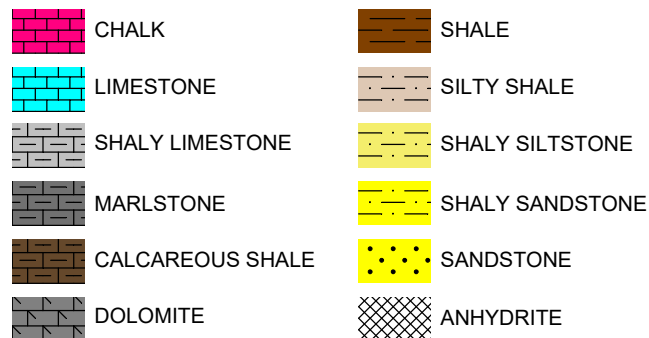
BOTTOM HOLE: SWSW S32-T4N-R68W, 495' FSL, 460' FWL



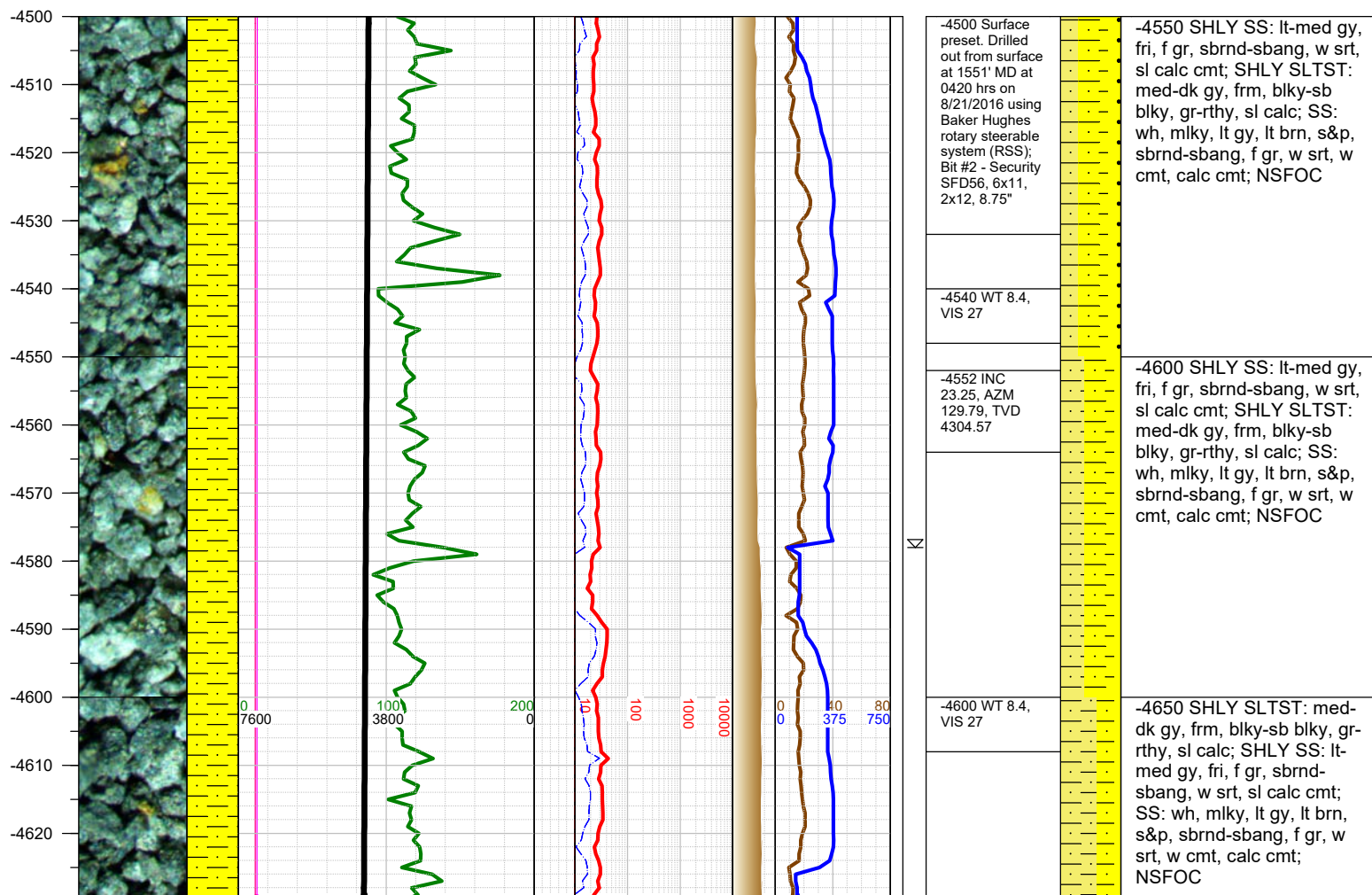
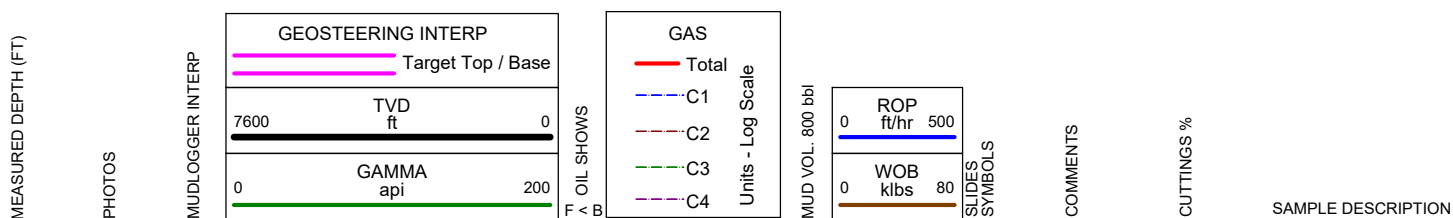
Earth Science Agency, LLC

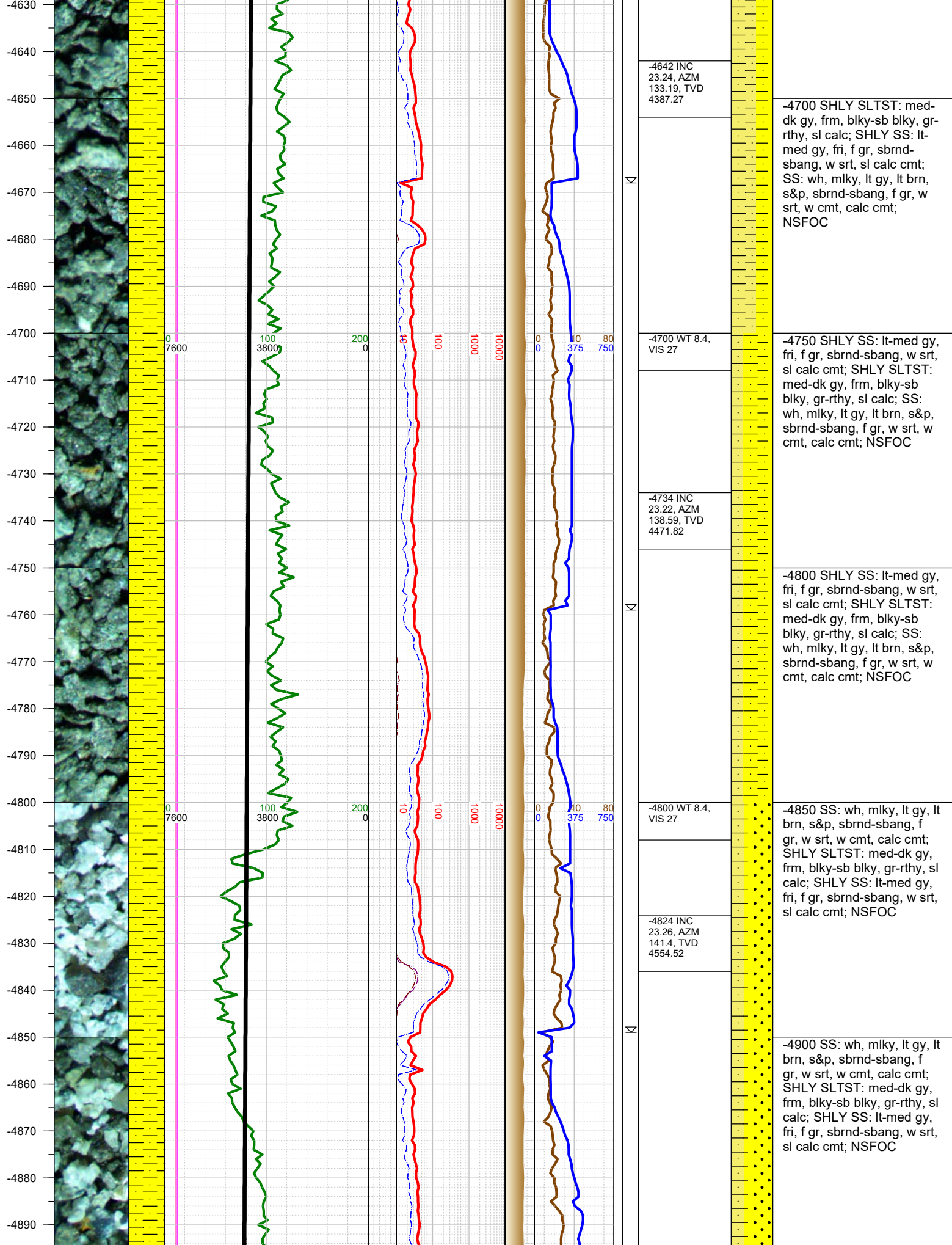
COUNTY: Weld  
STATE: Colorado  
GROUND ELEVATION: 5042'  
KELLY BUSHING: 5059'  
DRILLING FLUID: WBM  
TVD VS. MD: 7064' / 12106'  
SPUD DATE: August 21, 2016  
TD DATE: August 25, 2016  
  
DEPTHS LOGGED: 4500' - 12106'  
DATES LOGGED: August 21, 2016 - August 25, 2016  
GEOLOGISTS: Blue Spikes, Curtis Magnino, Blake Eatherton  
SCALE: 5" = 100'

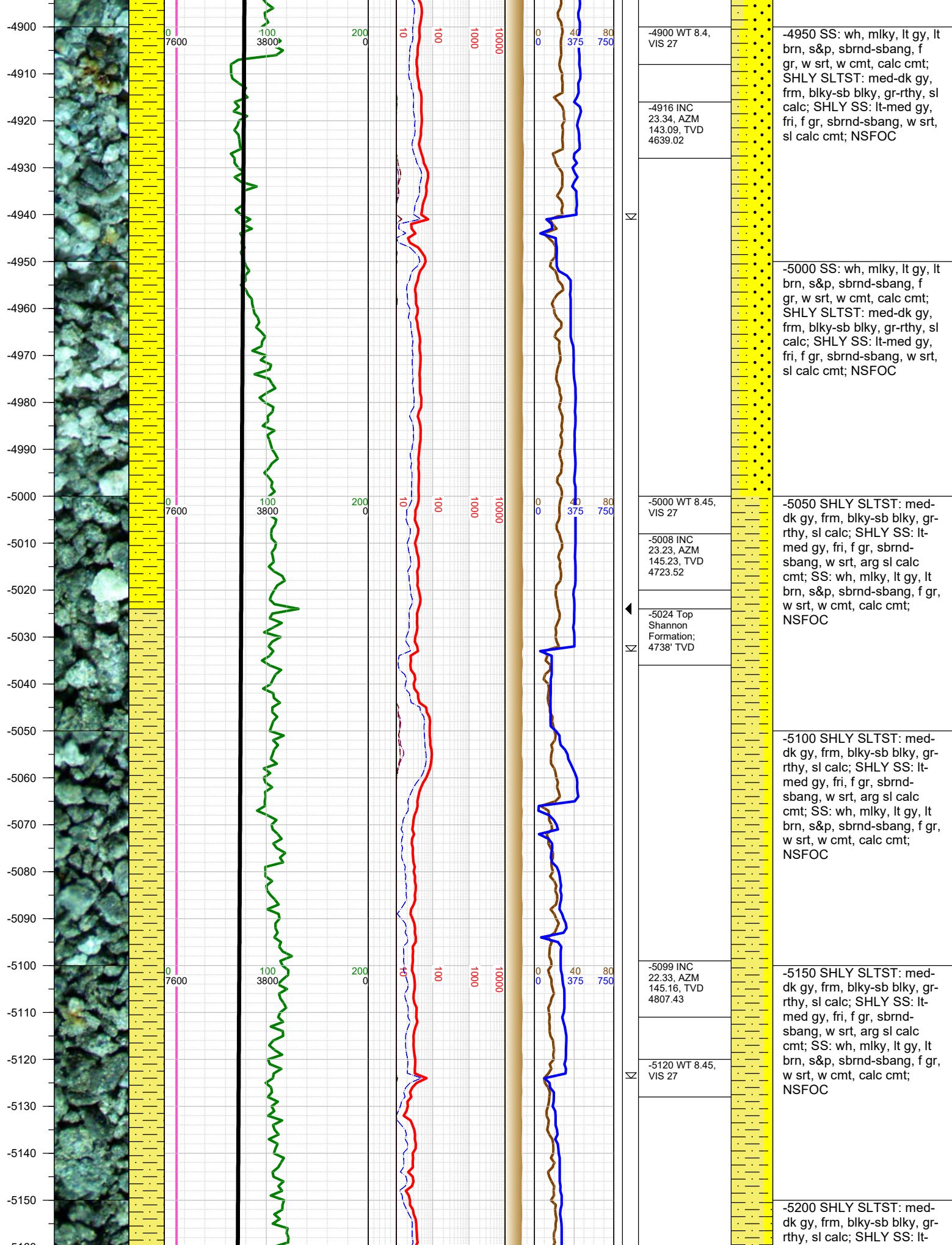
#### LEGEND

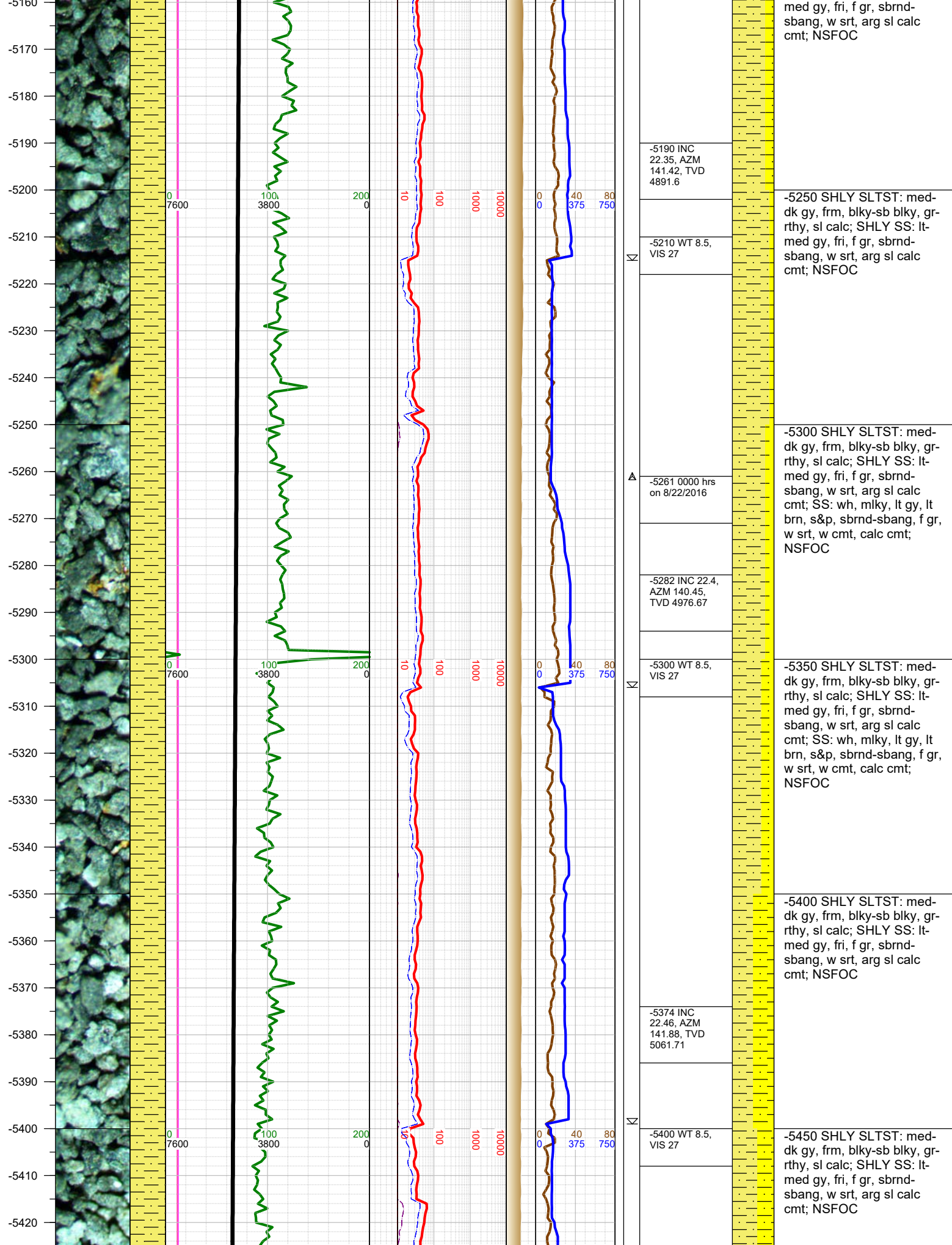


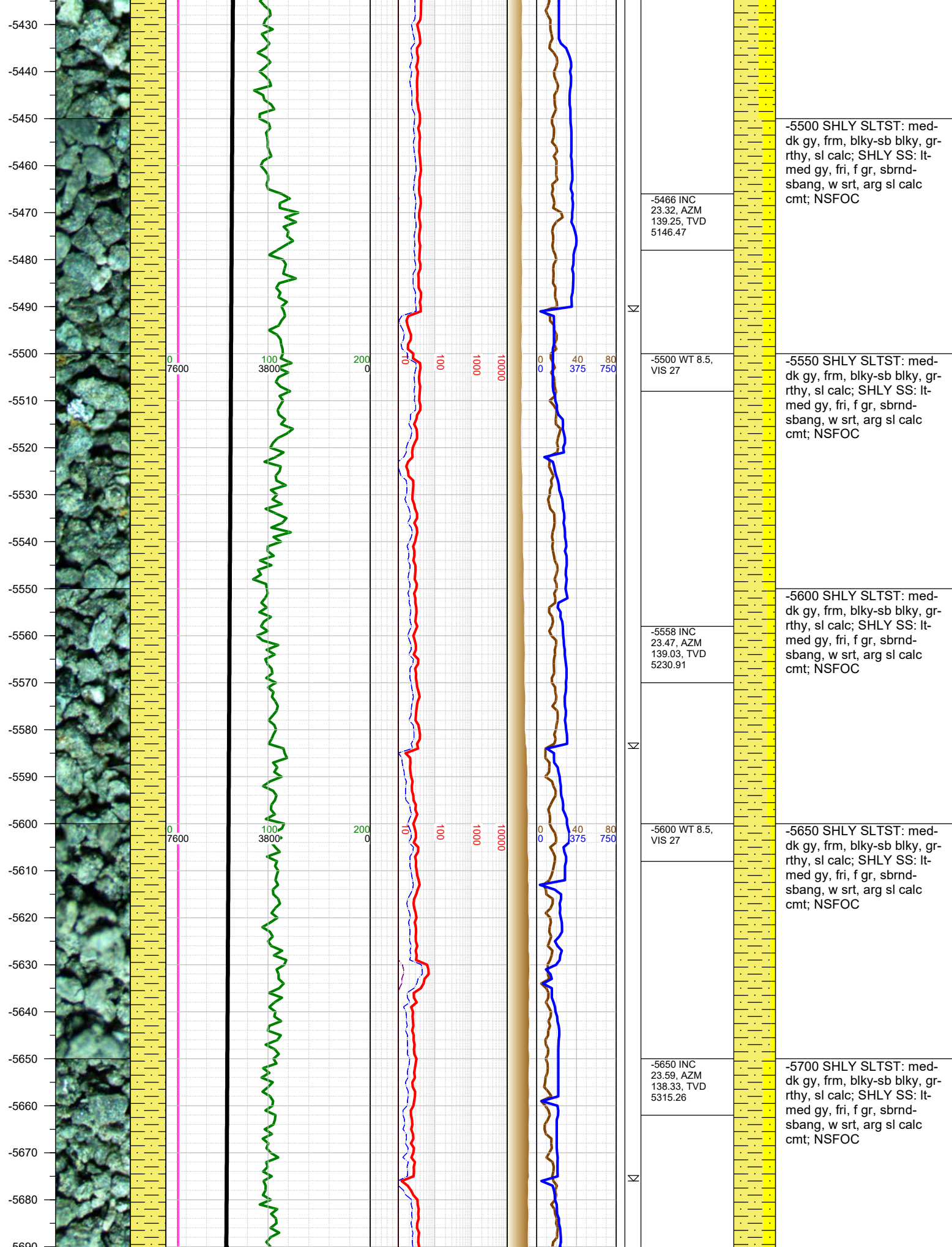
FORMATION CONNECTION MIDNIGHT NEW BIT GAS SHOW FAULT

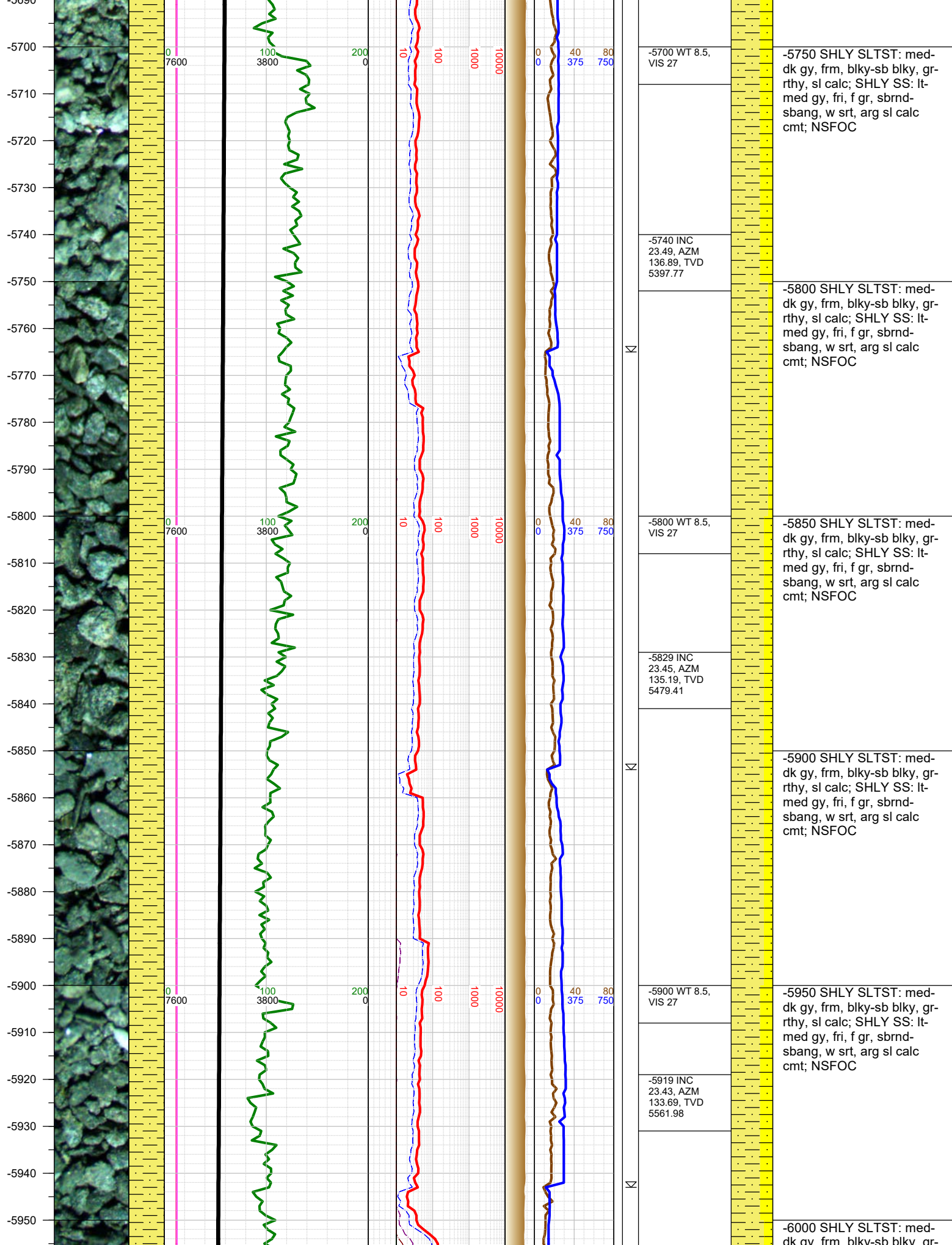


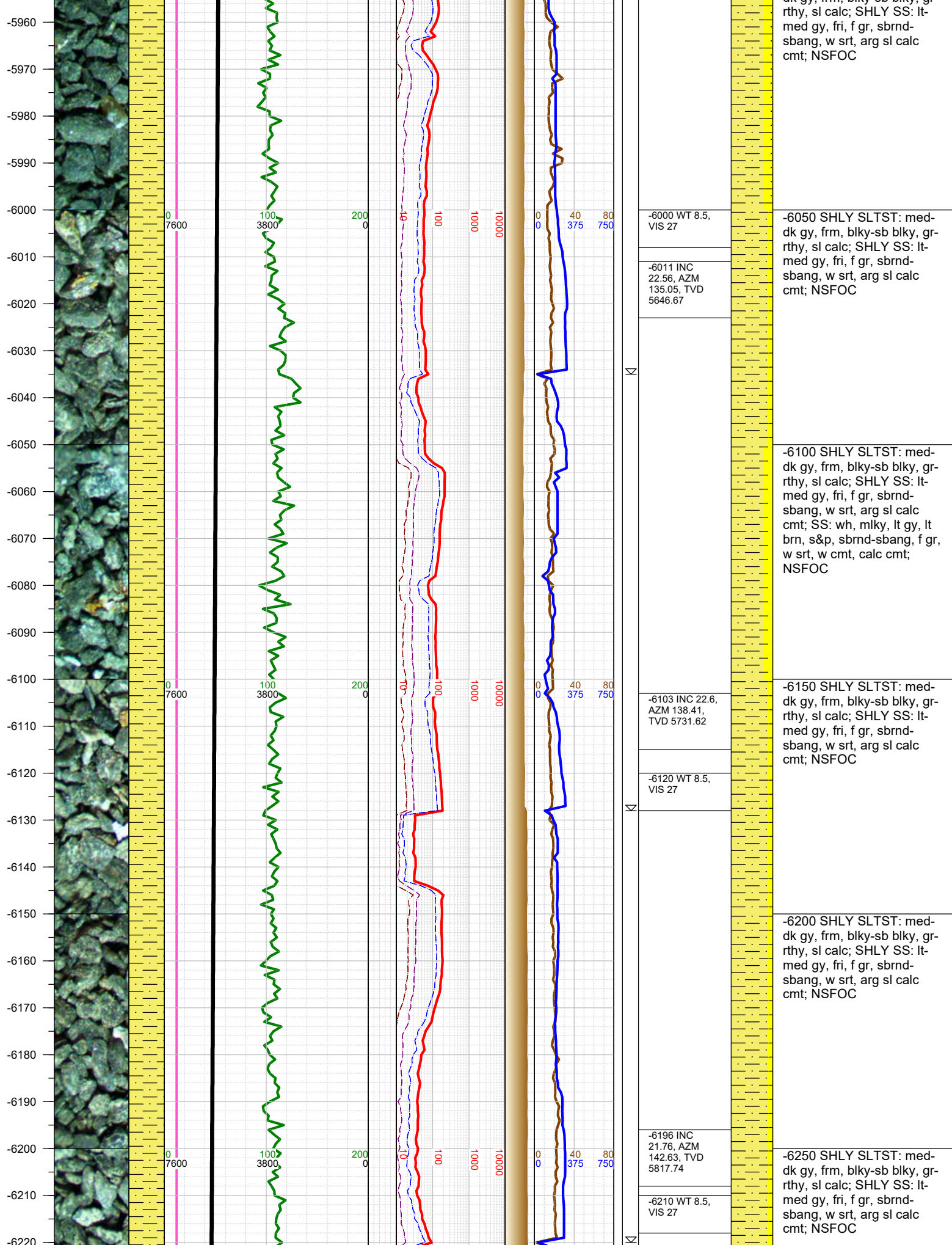


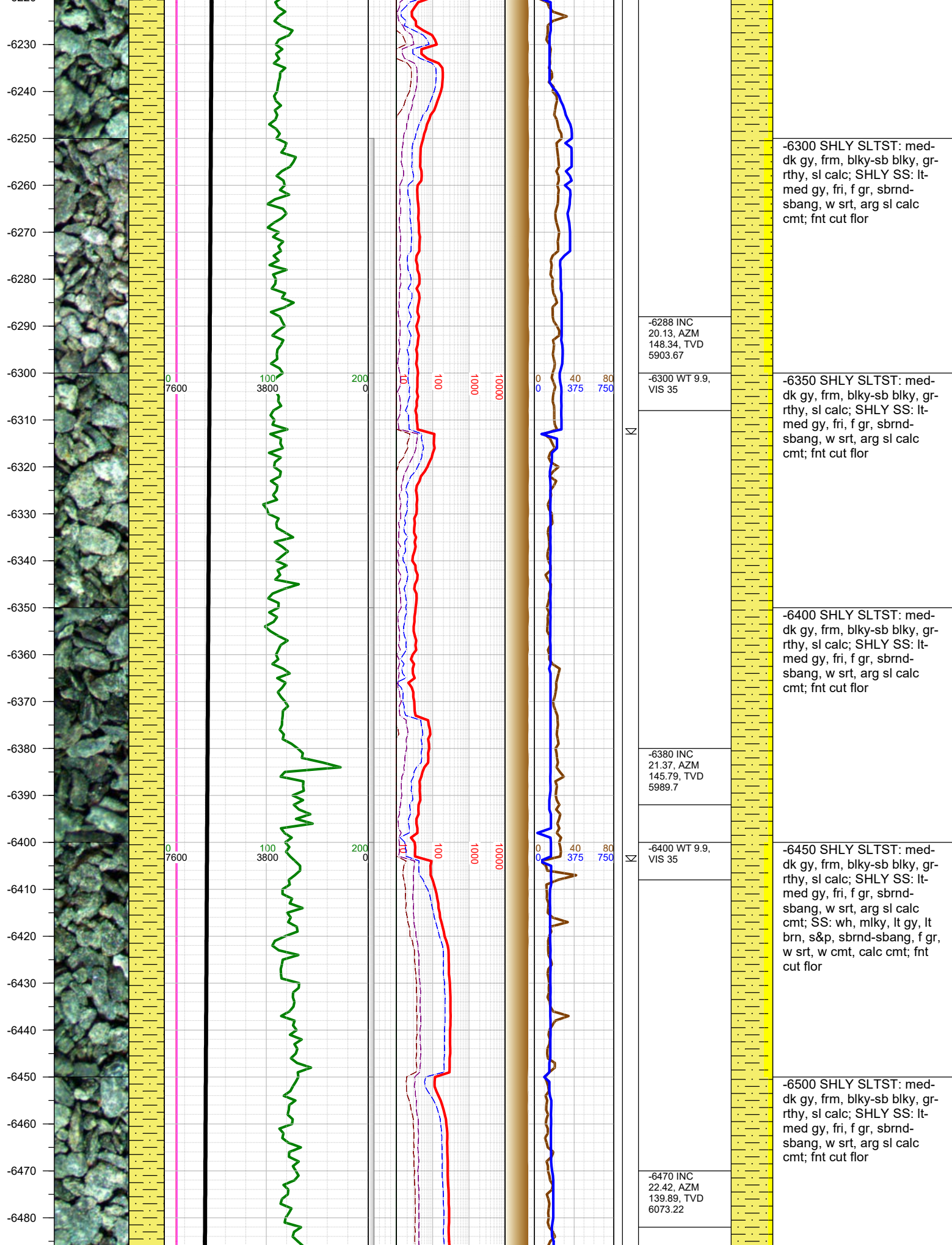


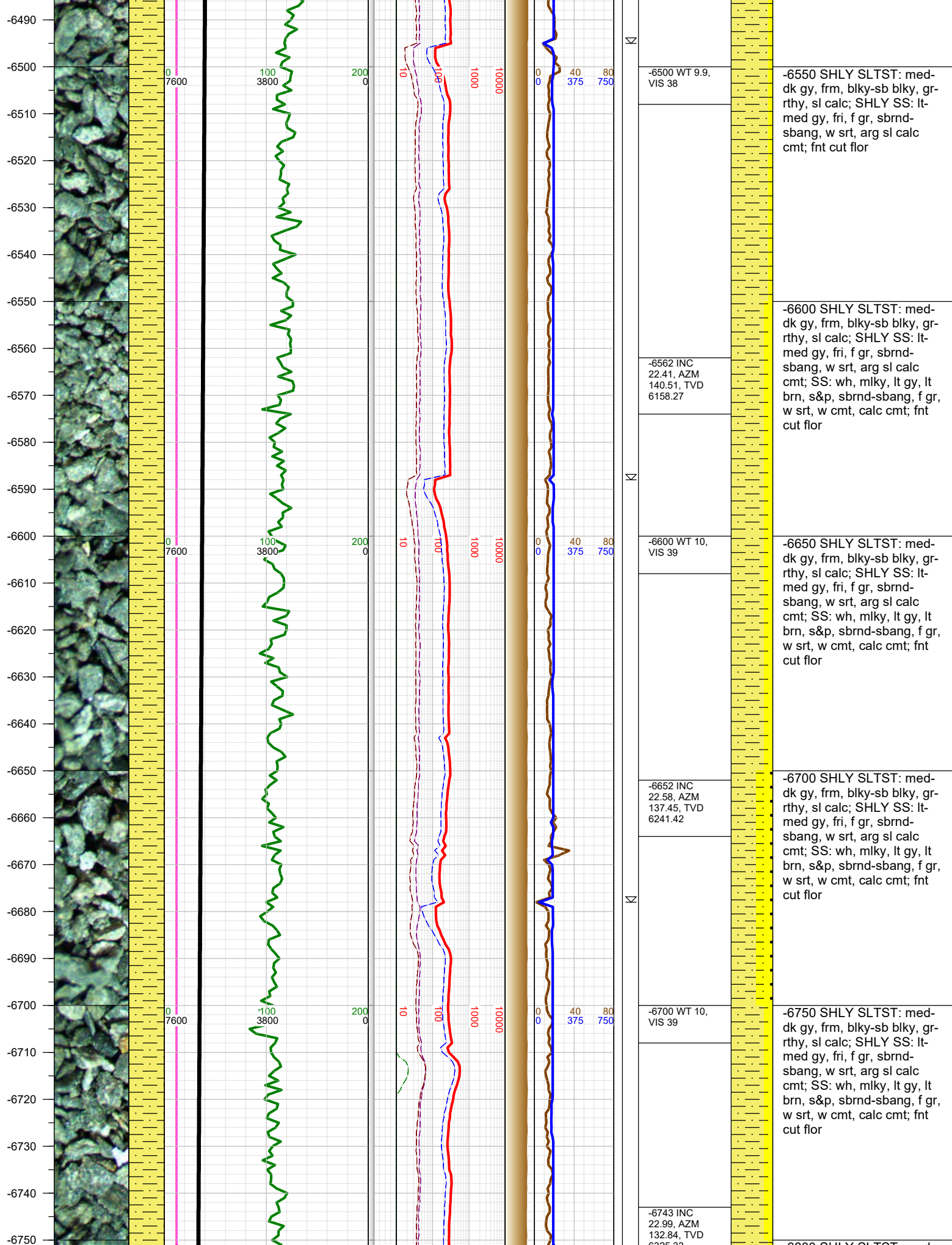


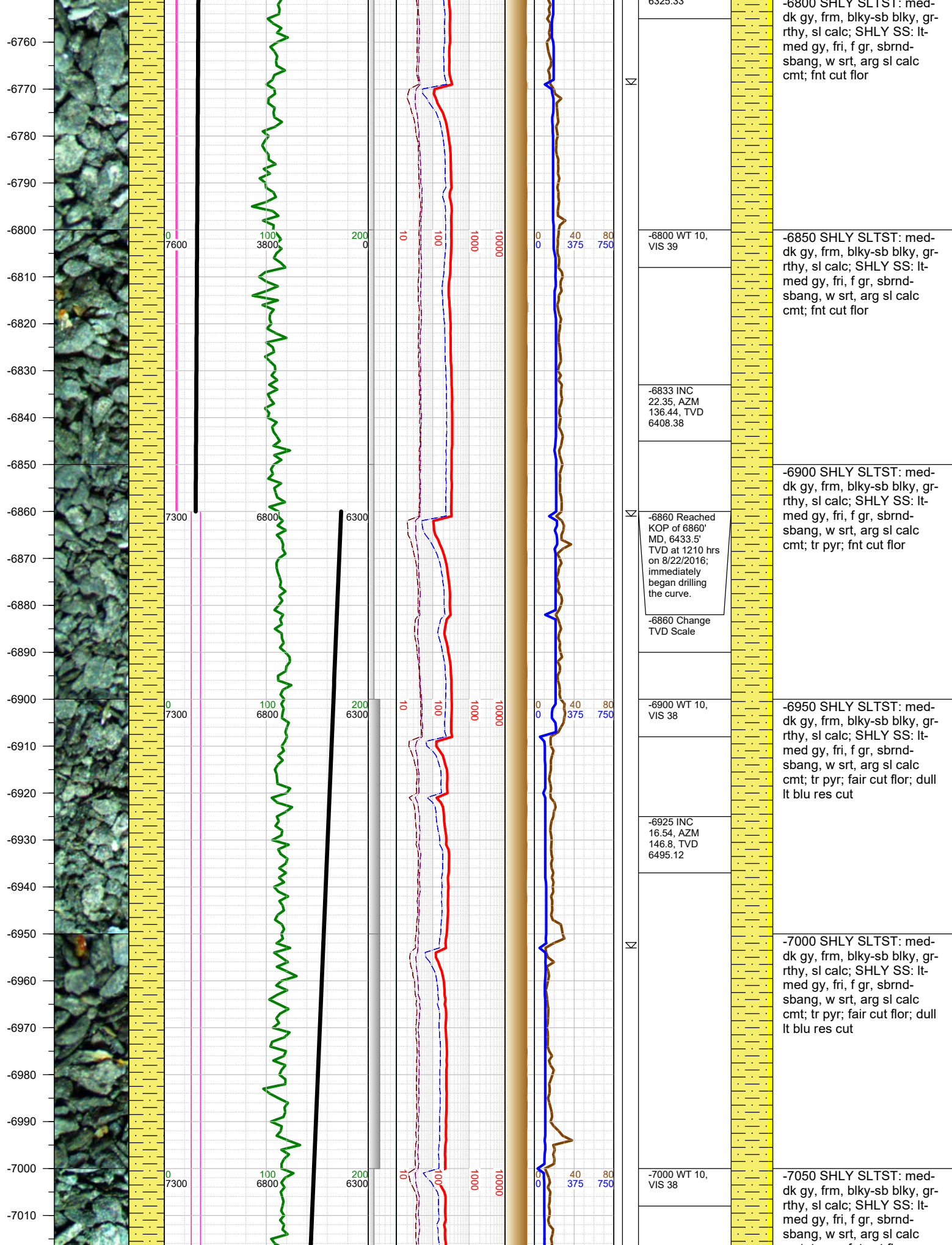




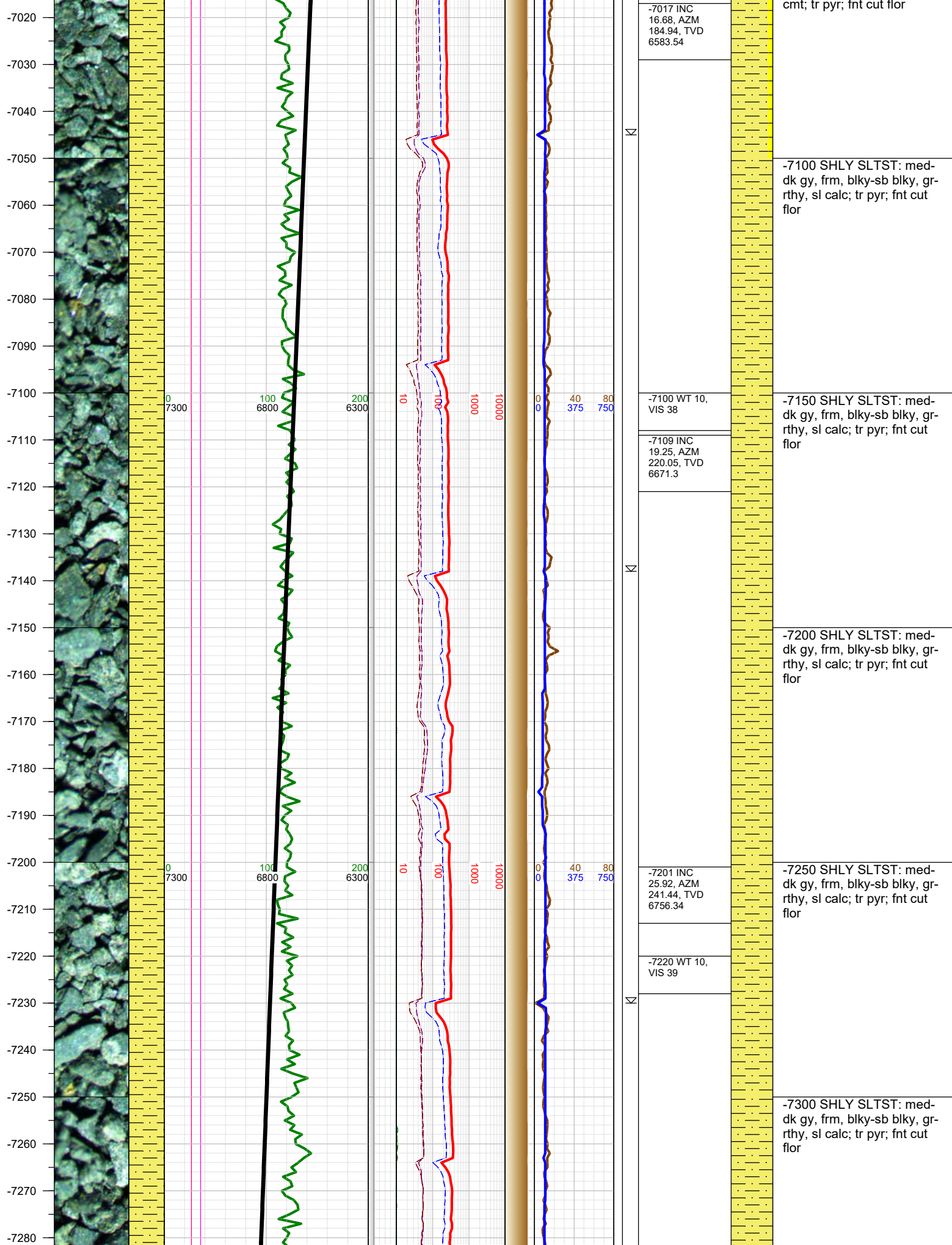


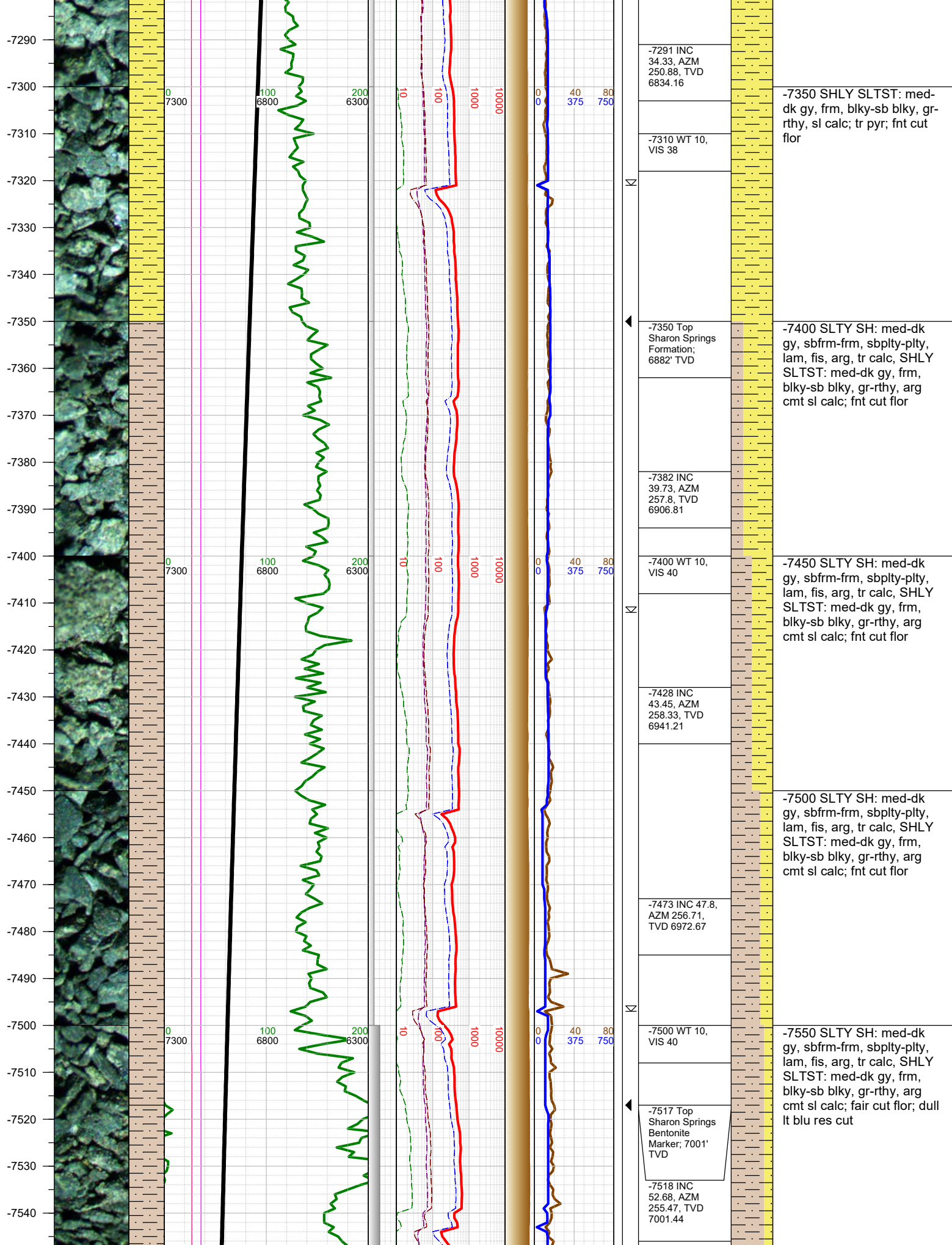


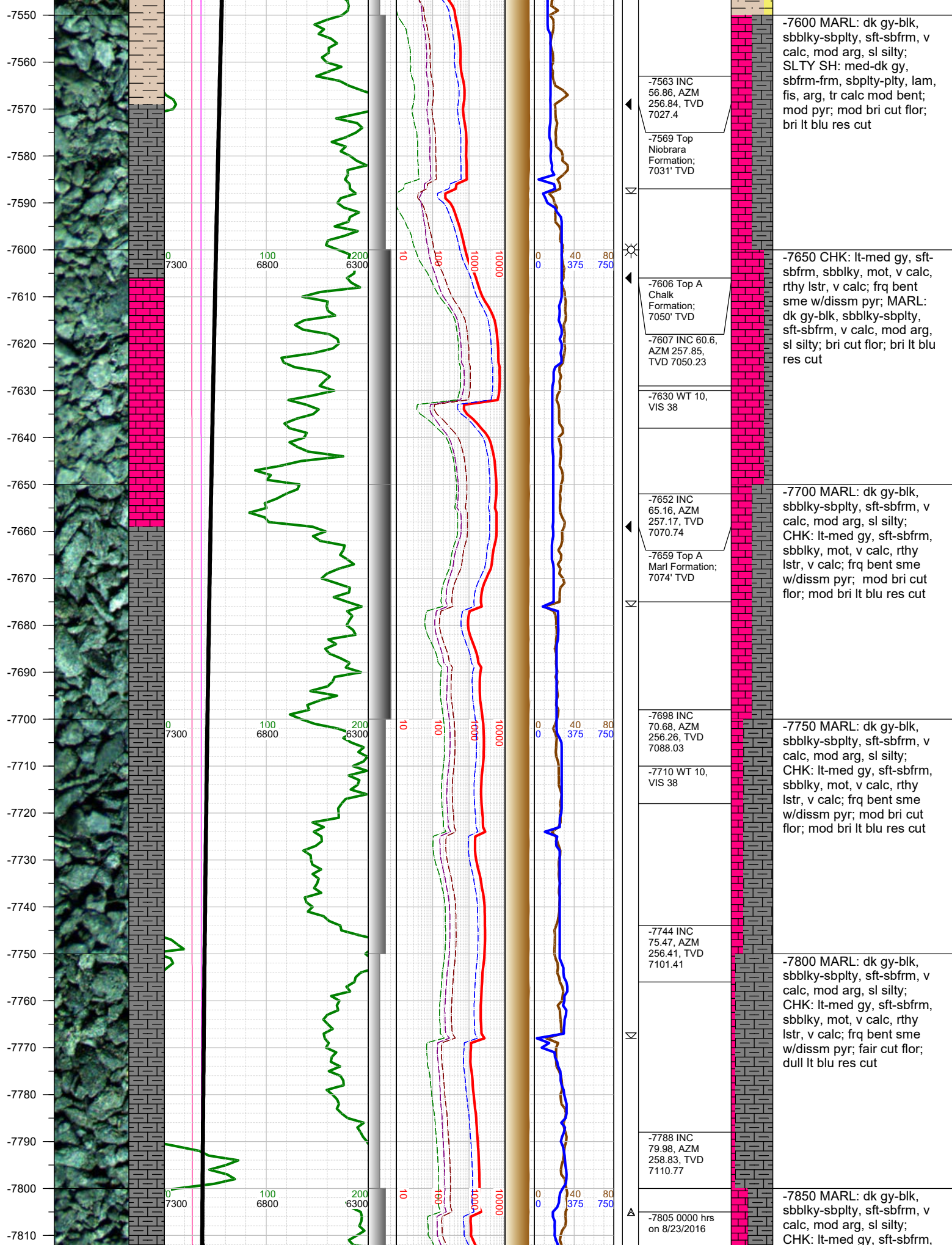


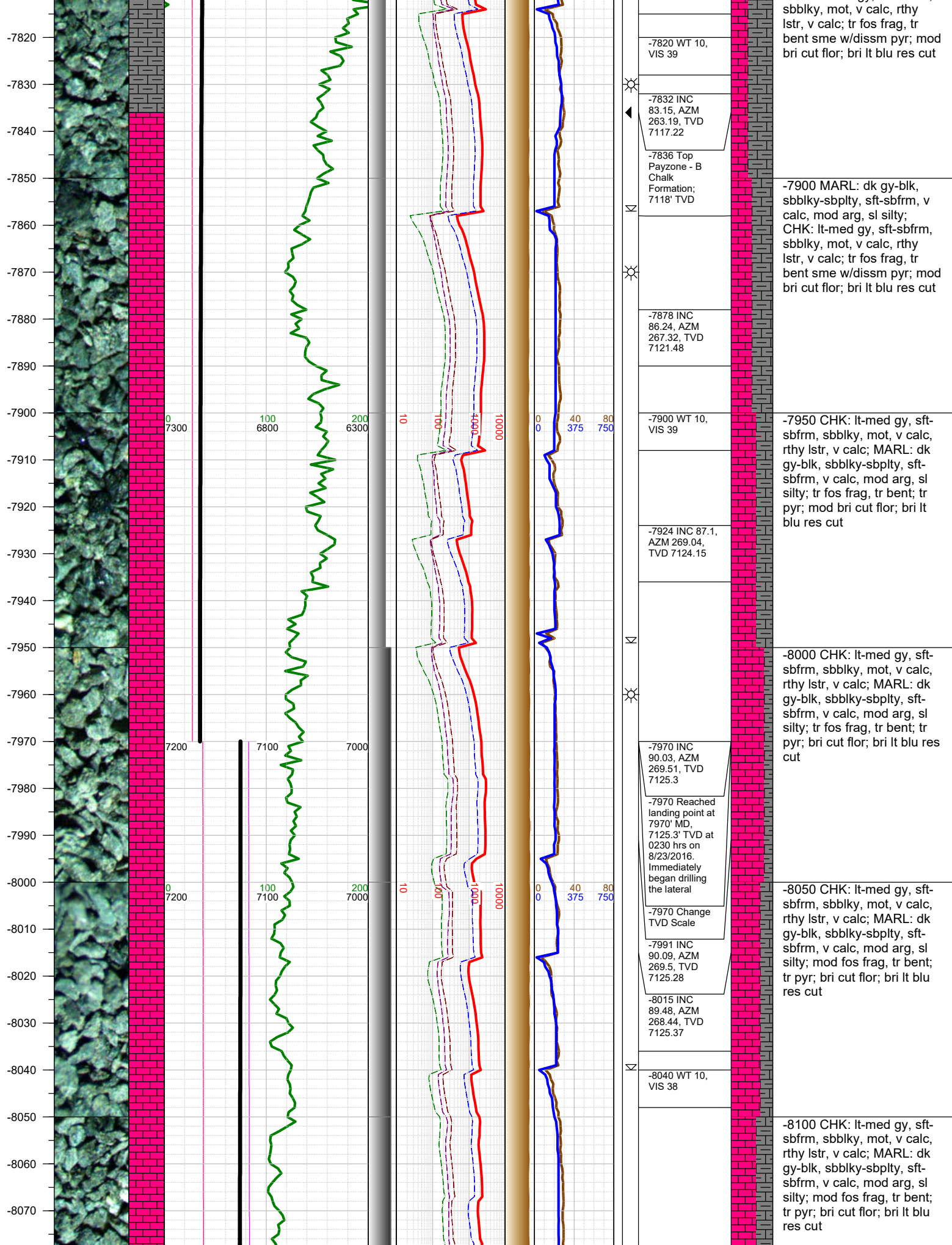


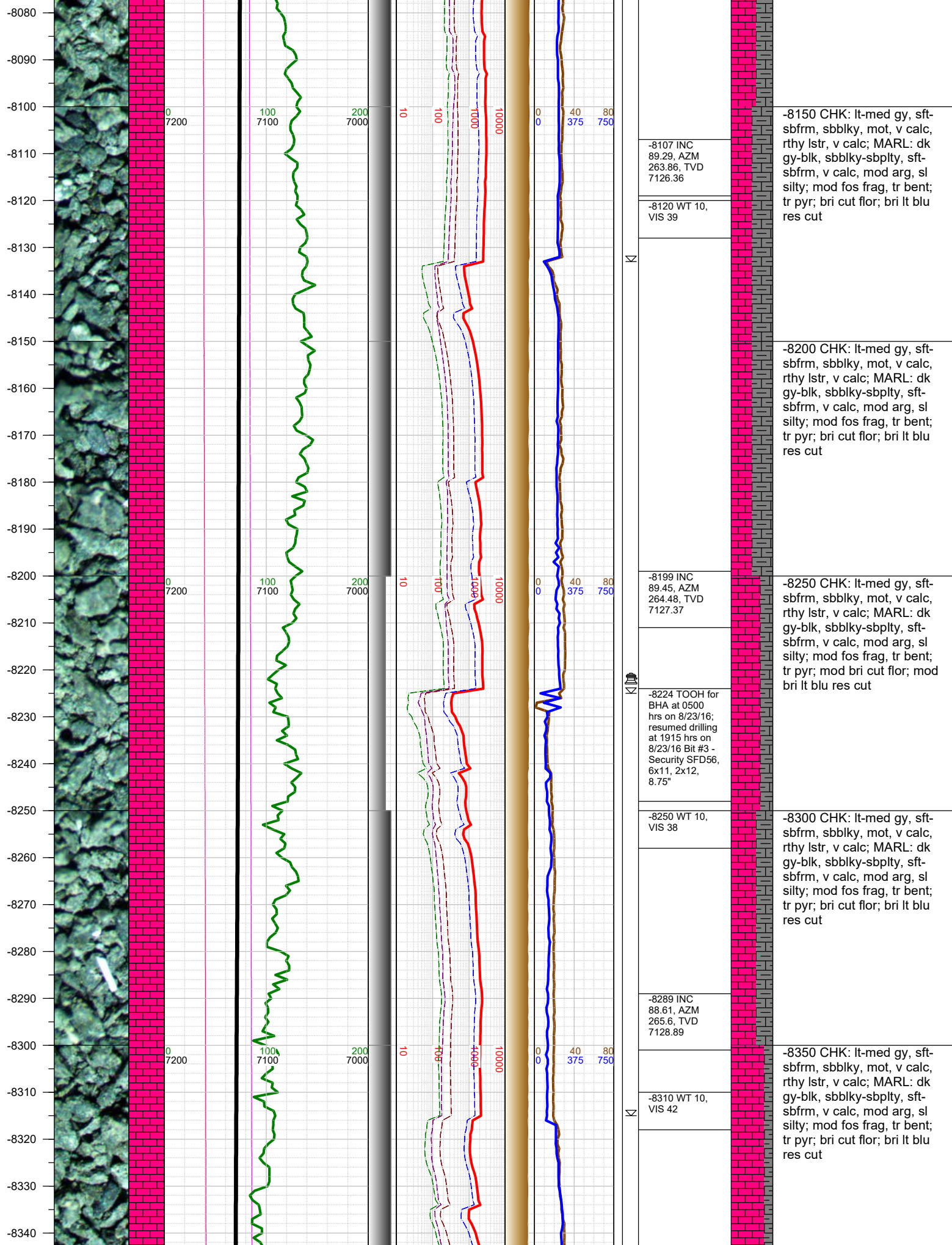
6325.33	-6800 SHLY SLTST: med- dk gy, frm, blkysb blkys, gr- rthy, sl calc; SHLY SS: lt- med gy, fri, f gr, sbrnd- sbang, w srt, arg sl calc cmt; fnt cut flor
-6800 WT 10, VIS 39	-6850 SHLY SLTST: med- dk gy, frm, blkysb blkys, gr- rthy, sl calc; SHLY SS: lt- med gy, fri, f gr, sbrnd- sbang, w srt, arg sl calc cmt; fnt cut flor
-6833 INC 22.35, AZM 136.44, TVD 6408.38	
-6860 Reached KOP of 6860' MD, 6433.5' TVD at 1210 hrs on 8/22/2016; immediately began drilling the curve. -6860 Change TVD Scale	-6900 SHLY SLTST: med- dk gy, frm, blkysb blkys, gr- rthy, sl calc; SHLY SS: lt- med gy, fri, f gr, sbrnd- sbang, w srt, arg sl calc cmt; tr pyr; fnt cut flor
-6900 WT 10, VIS 38	-6950 SHLY SLTST: med- dk gy, frm, blkysb blkys, gr- rthy, sl calc; SHLY SS: lt- med gy, fri, f gr, sbrnd- sbang, w srt, arg sl calc cmt; tr pyr; fair cut flor; dull lt blu res cut
-6925 INC 16.54, AZM 146.8, TVD 6495.12	
-7000 WT 10, VIS 38	-7050 SHLY SLTST: med- dk gy, frm, blkysb blkys, gr- rthy, sl calc; SHLY SS: lt- med gy, fri, f gr, sbrnd- sbang, w srt, arg sl calc











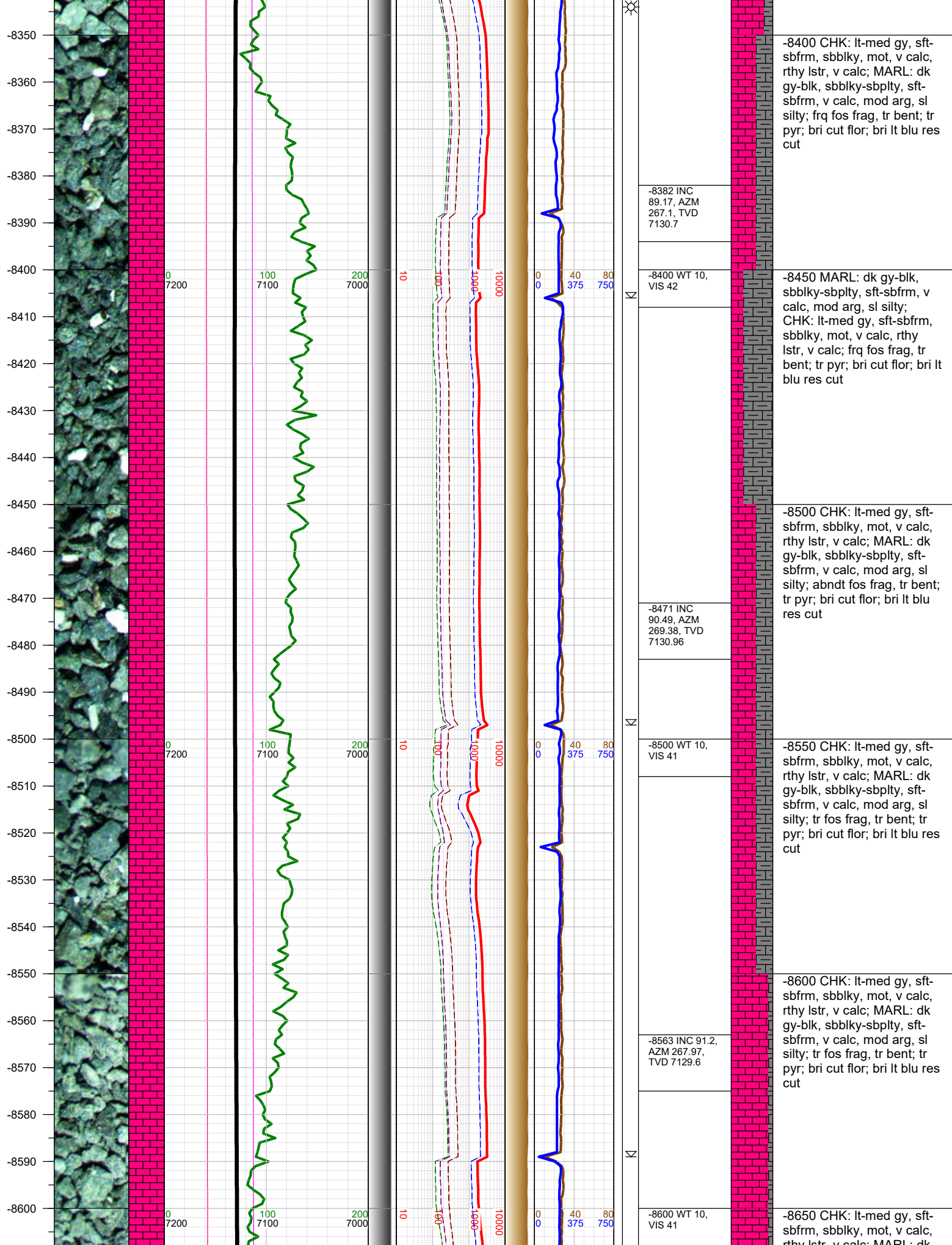
-8150 CHK: lt-med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr bent; tr pyr; bri cut flor; bri lt blu res cut

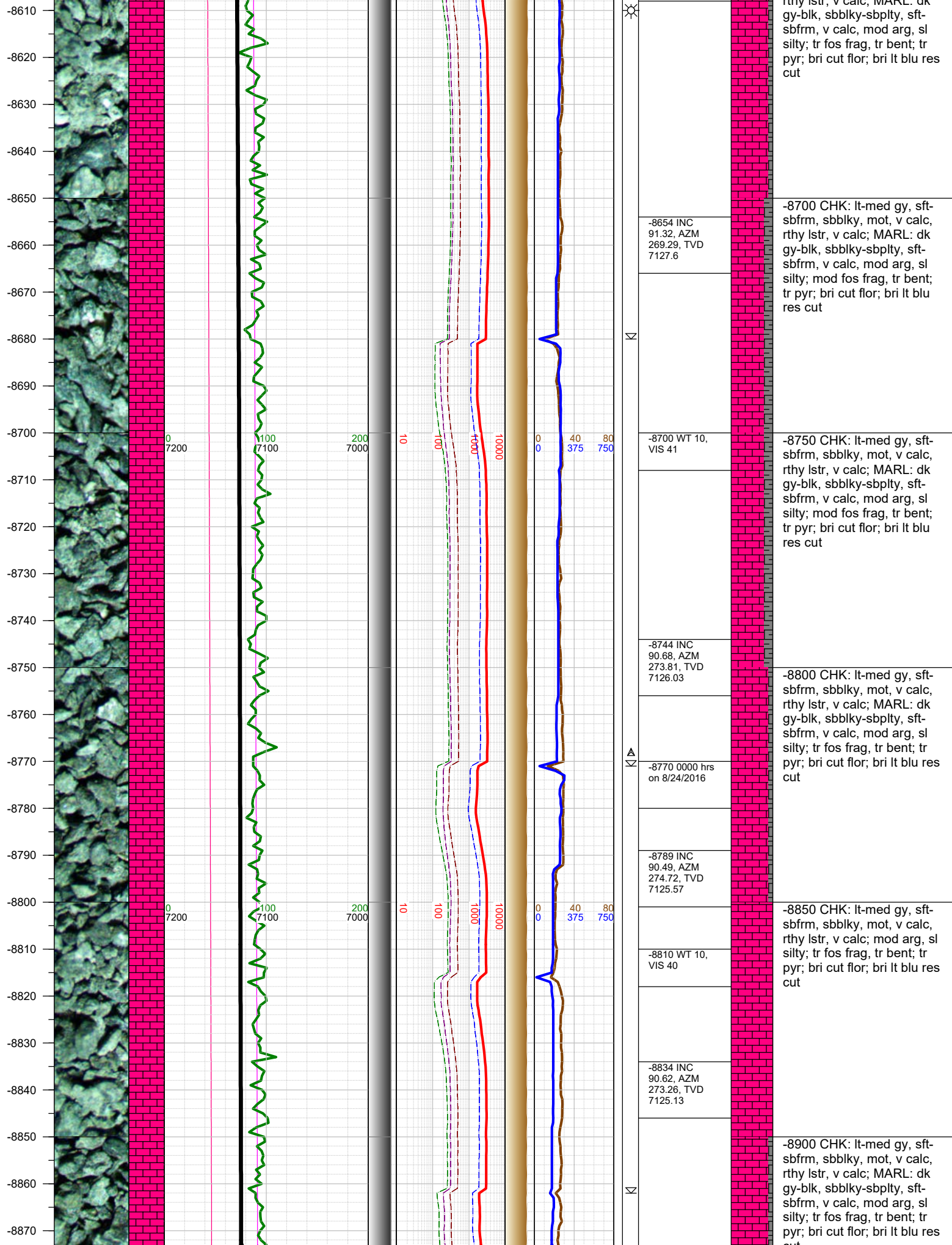
-8200 CHK: lt-med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr bent; tr pyr; bri cut flor; bri lt blu res cut

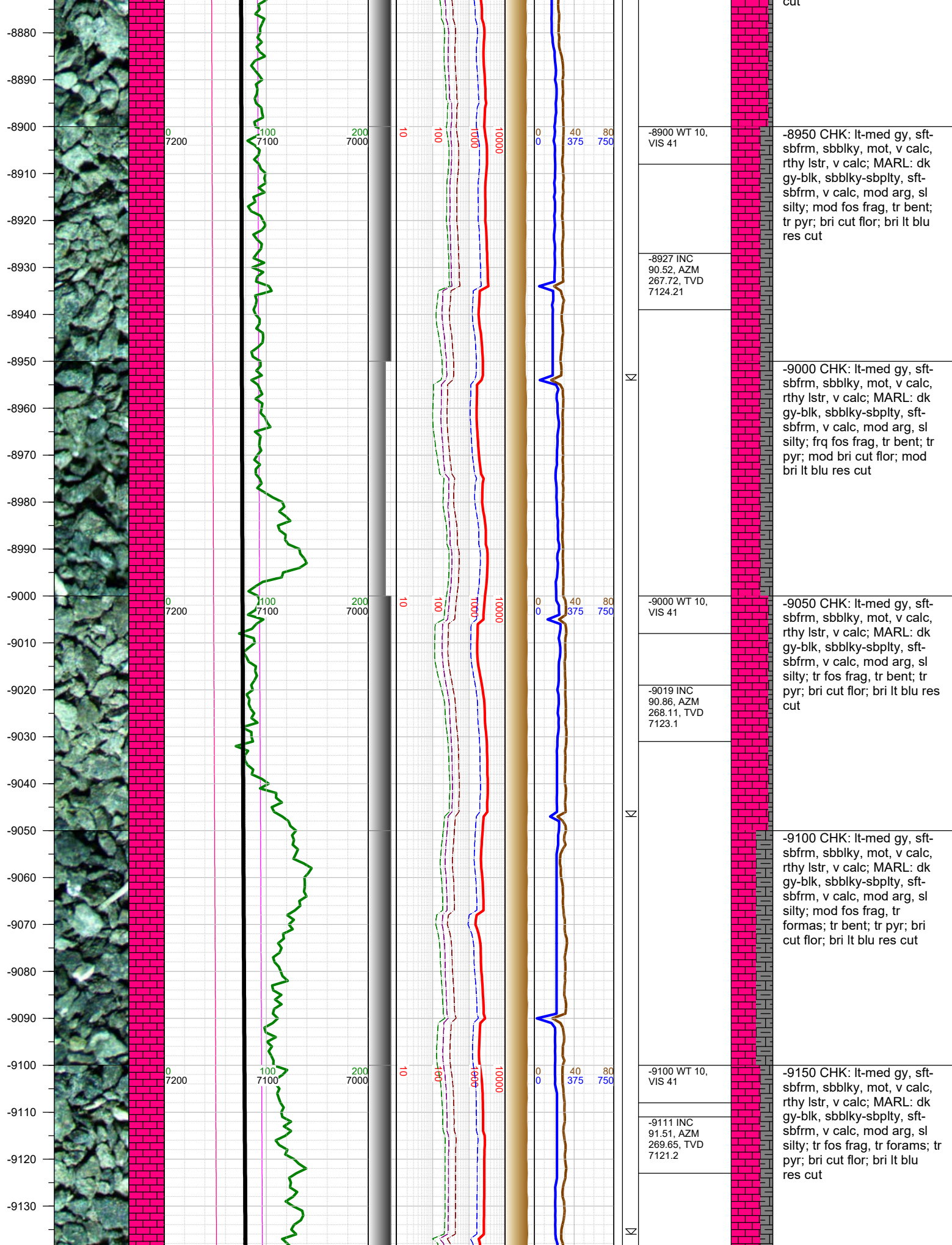
-8250 CHK: lt-med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr bent; tr pyr; mod bri cut flor; mod bri lt blu res cut

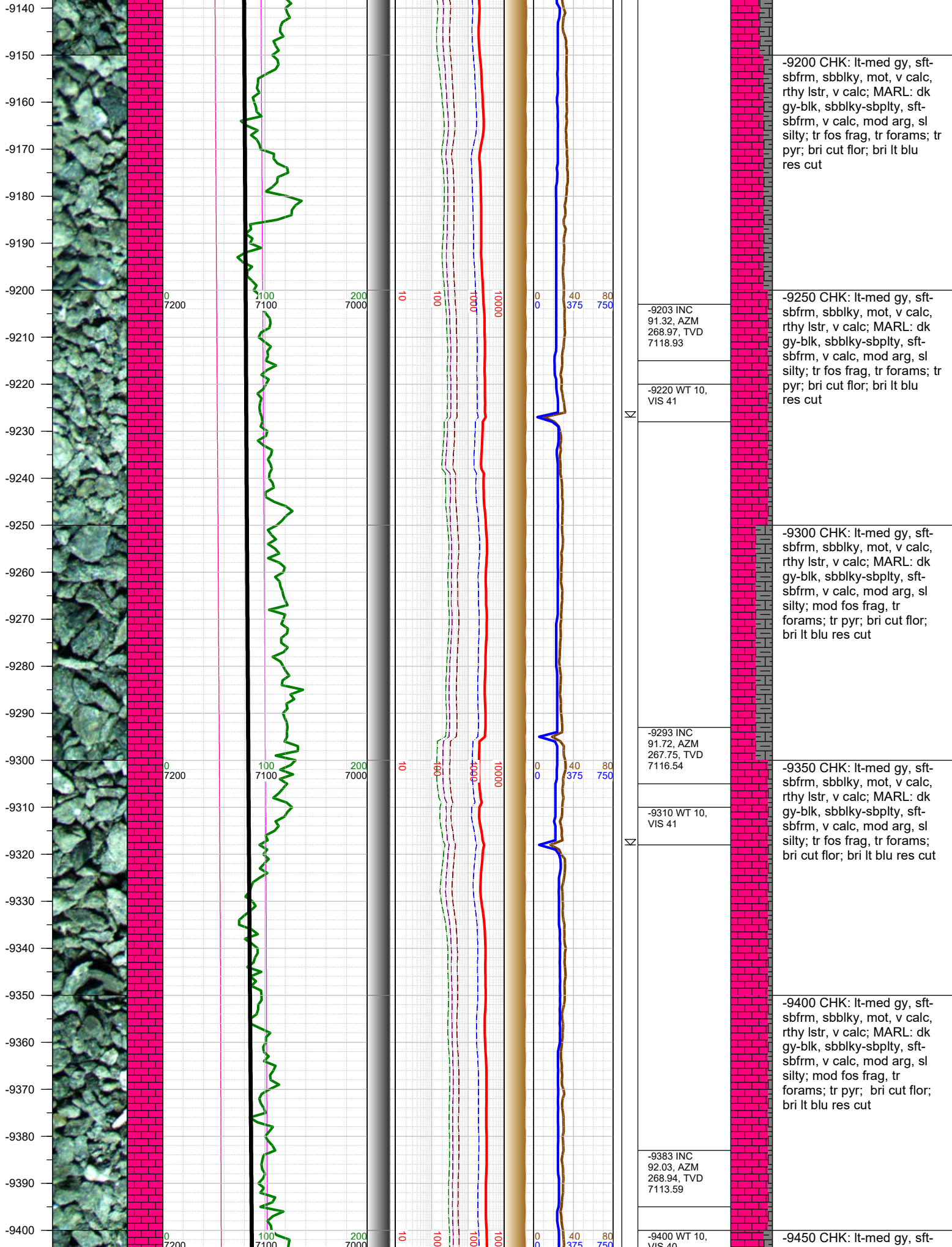
-8300 CHK: lt-med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr bent; tr pyr; bri cut flor; bri lt blu res cut

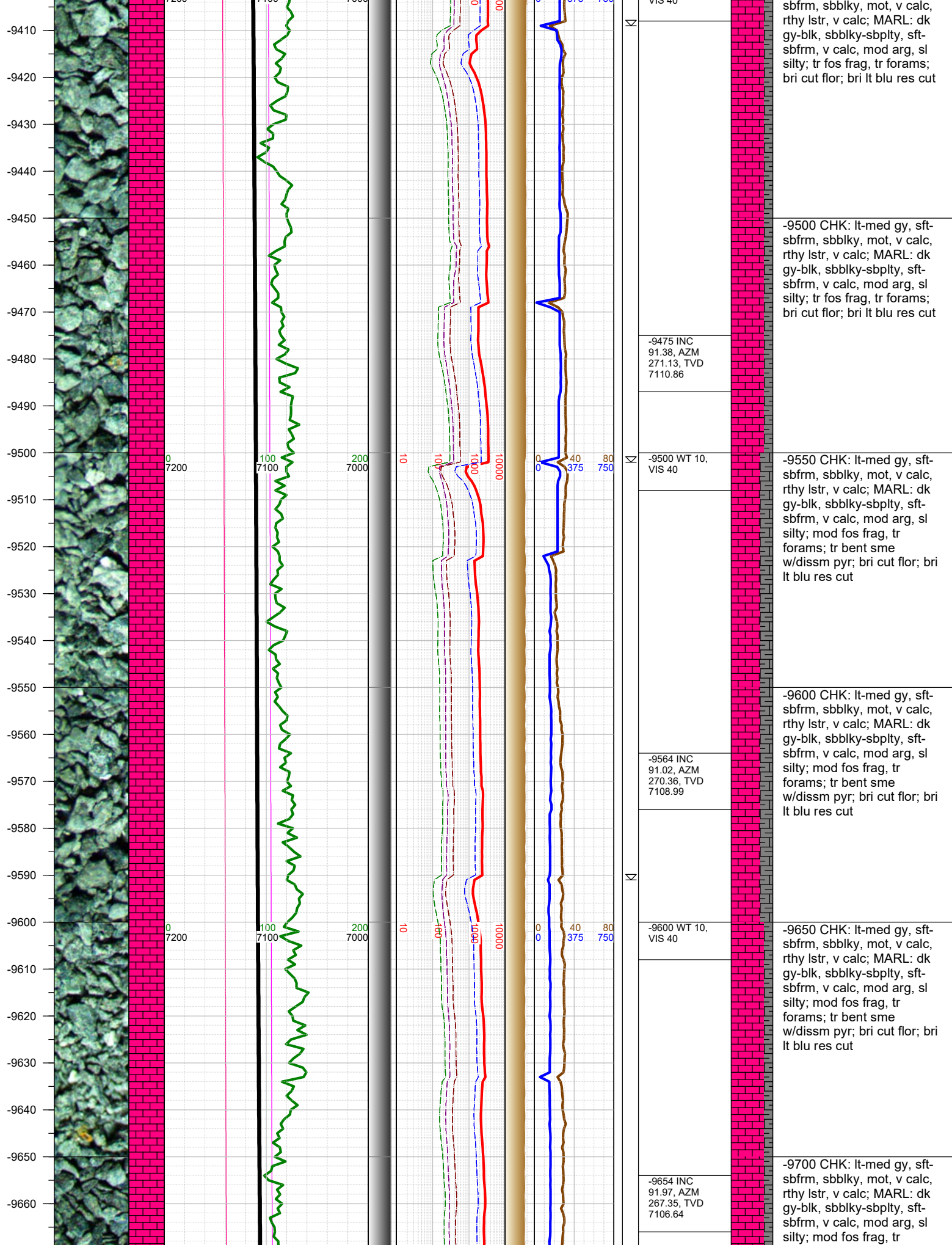
-8350 CHK: lt-med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr bent; tr pyr; bri cut flor; bri lt blu res cut

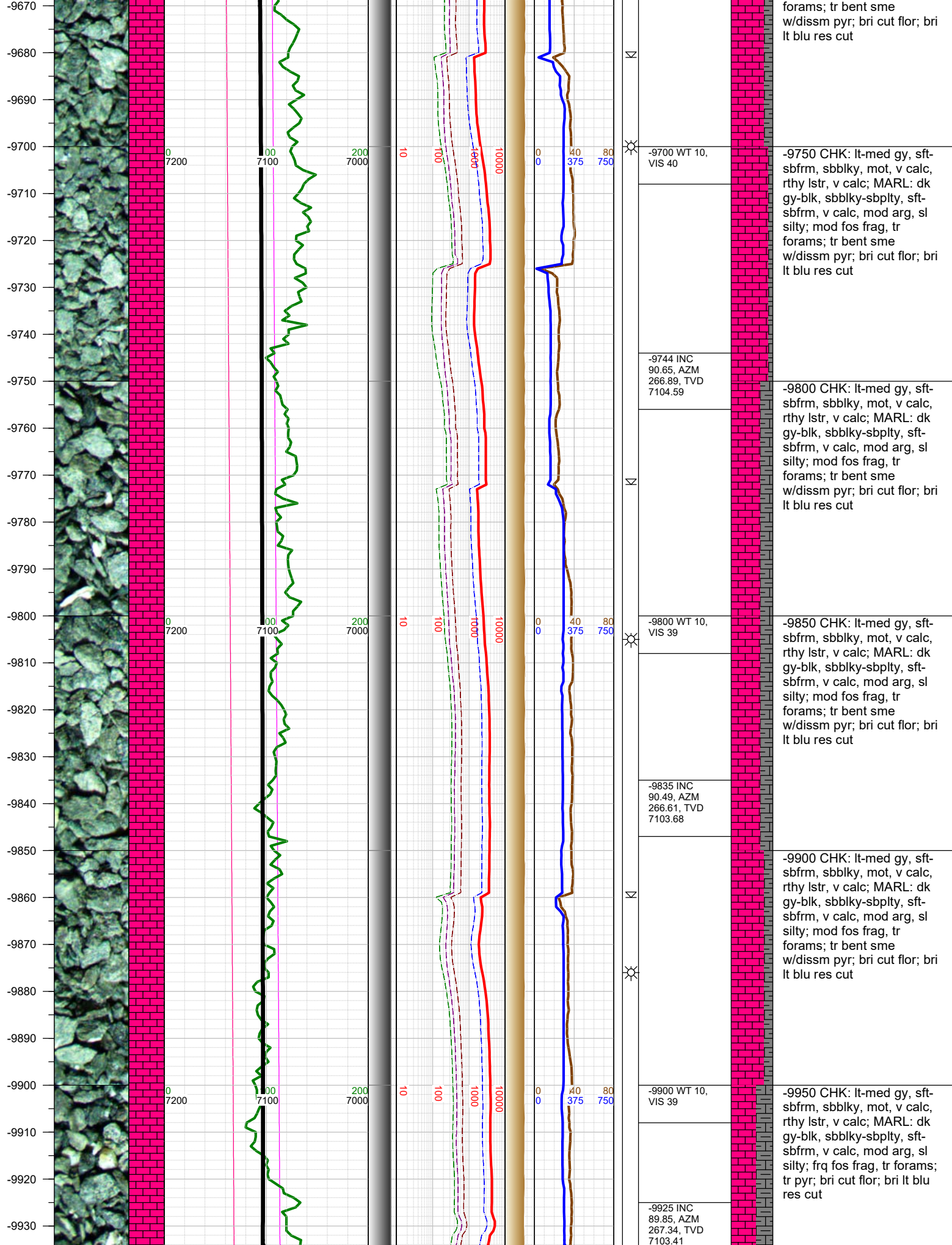


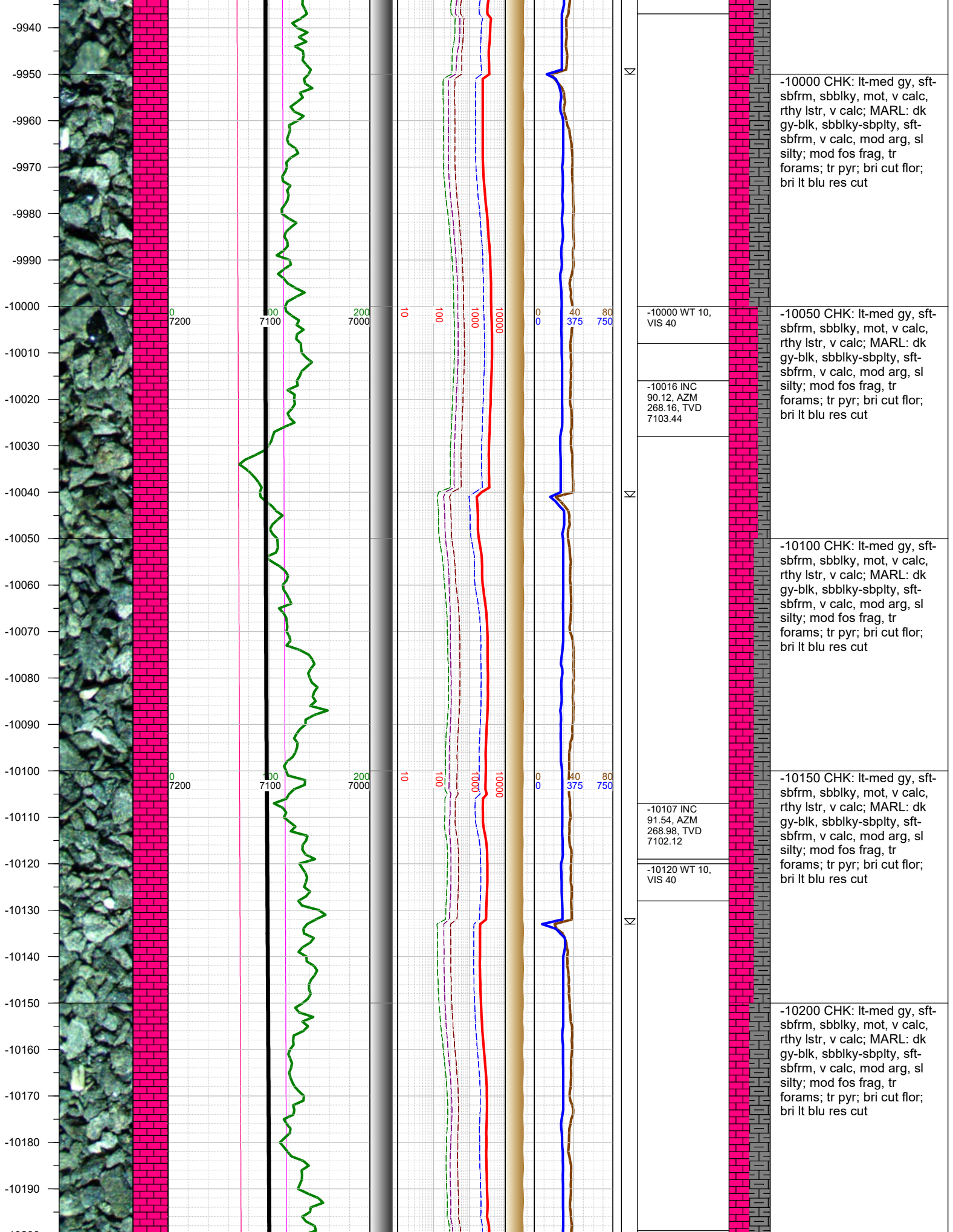












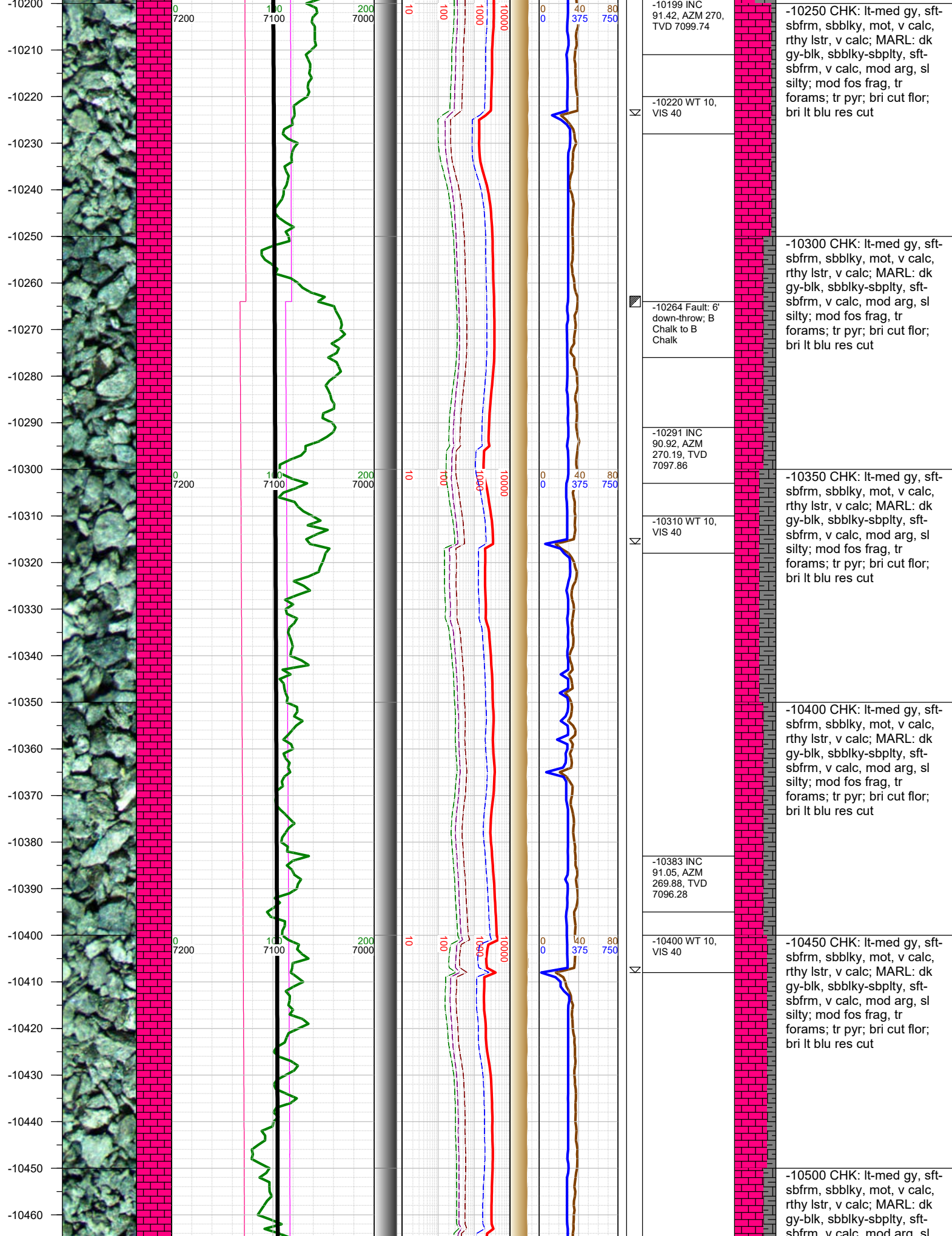
-10000 CHK: lt-med gy, sft-sbfrm, sbbly, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr forams; tr pyr; bri lt blu res cut

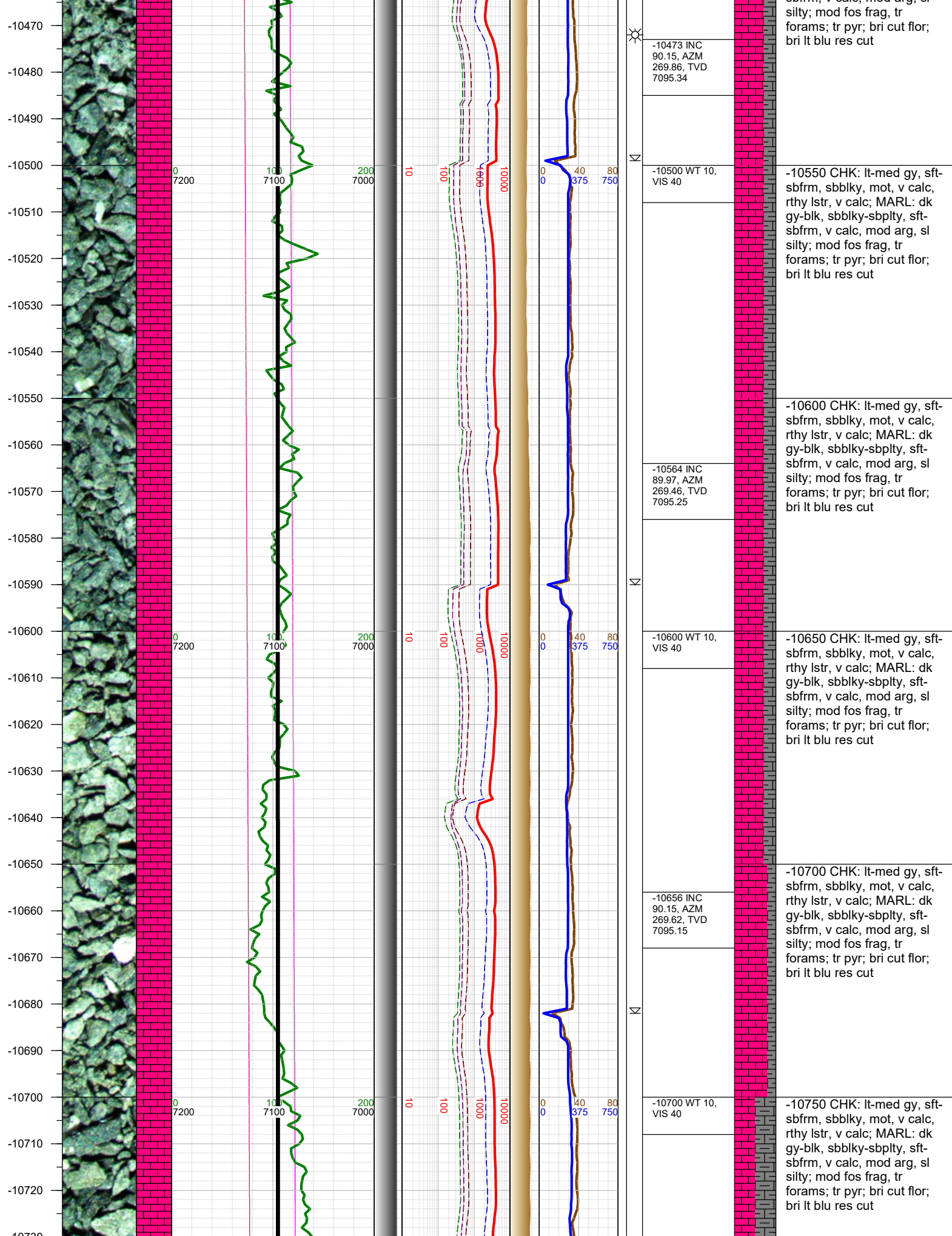
-10050 CHK: lt-med gy, sft-sbfrm, sbbly, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr forams; tr pyr; bri cut flor; bri lt blu res cut

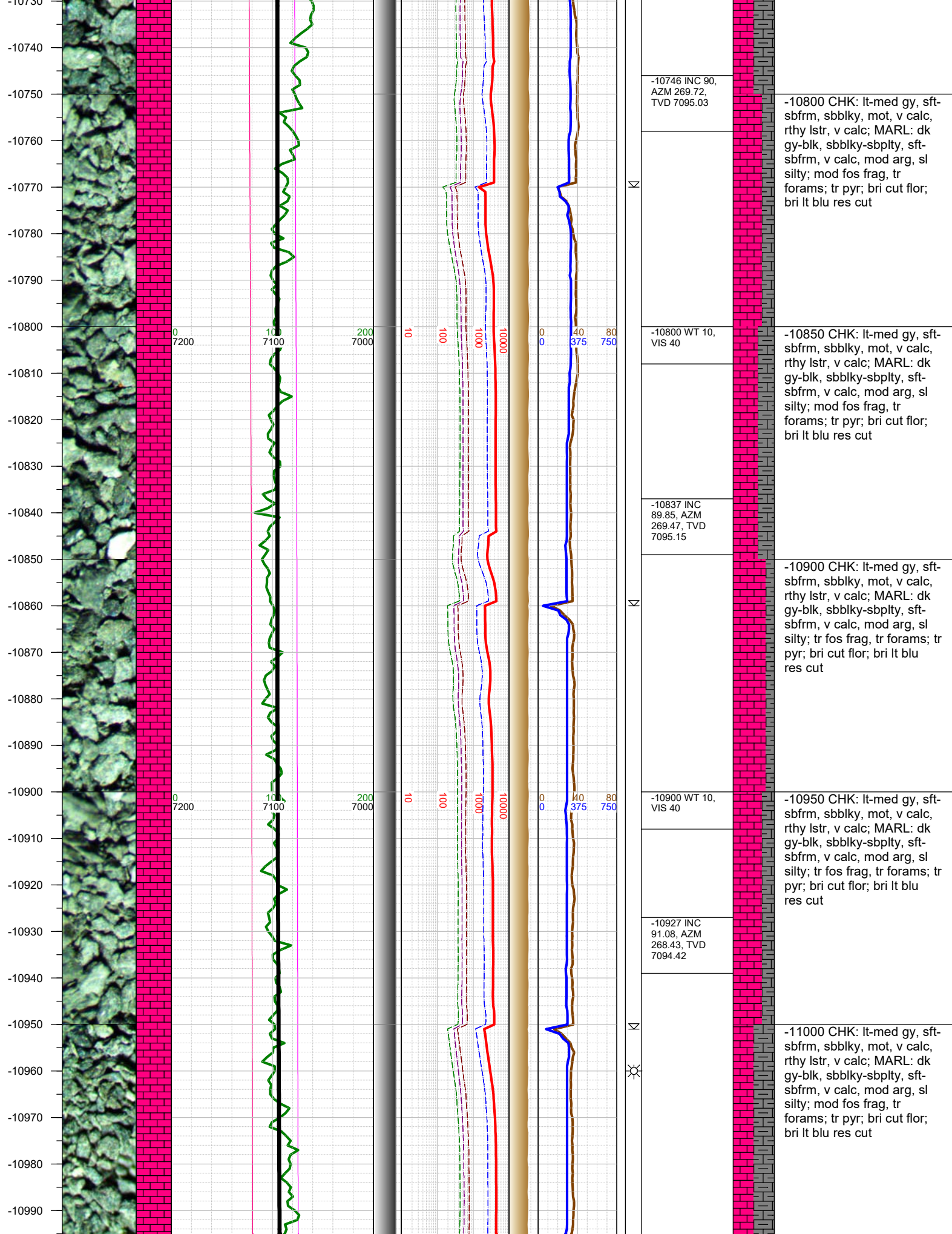
-10100 CHK: lt-med gy, sft-sbfrm, sbbly, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr forams; tr pyr; bri cut flor; bri lt blu res cut

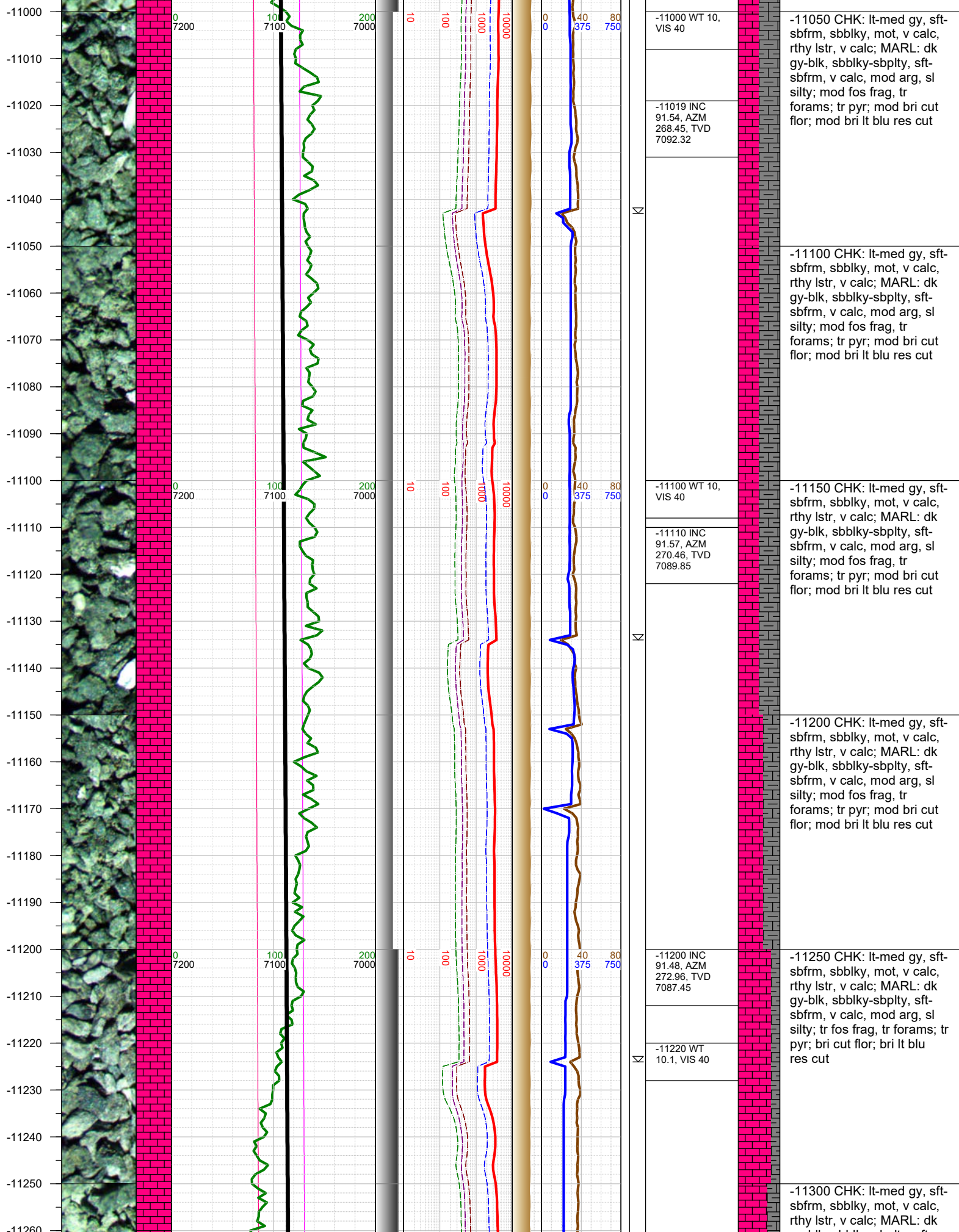
-10150 CHK: lt-med gy, sft-sbfrm, sbbly, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr forams; tr pyr; bri cut flor; bri lt blu res cut

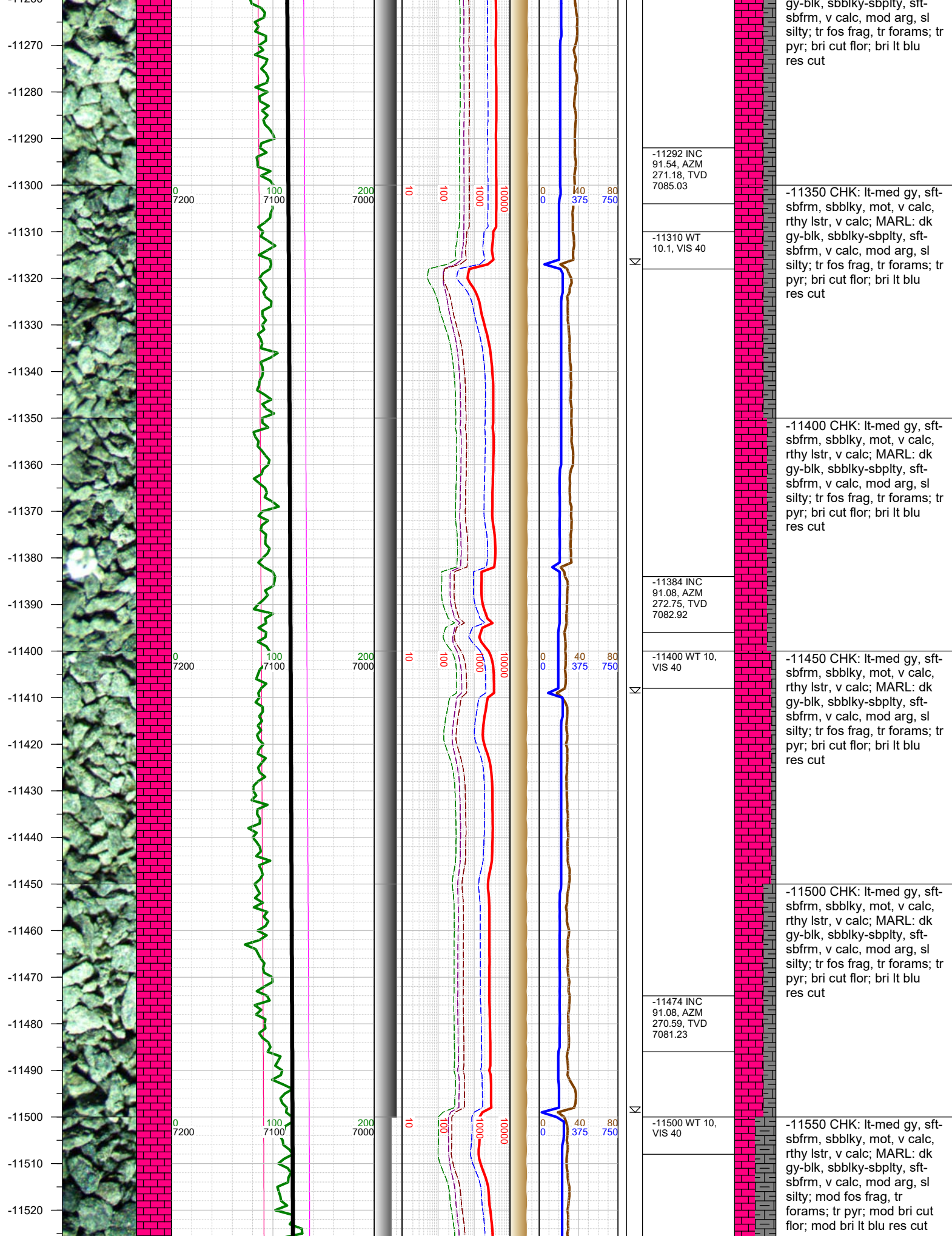
-10200 CHK: lt-med gy, sft-sbfrm, sbbly, mot, v calc, rthy lstr, v calc; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, mod arg, sl silty; mod fos frag, tr forams; tr pyr; bri cut flor; bri lt blu res cut

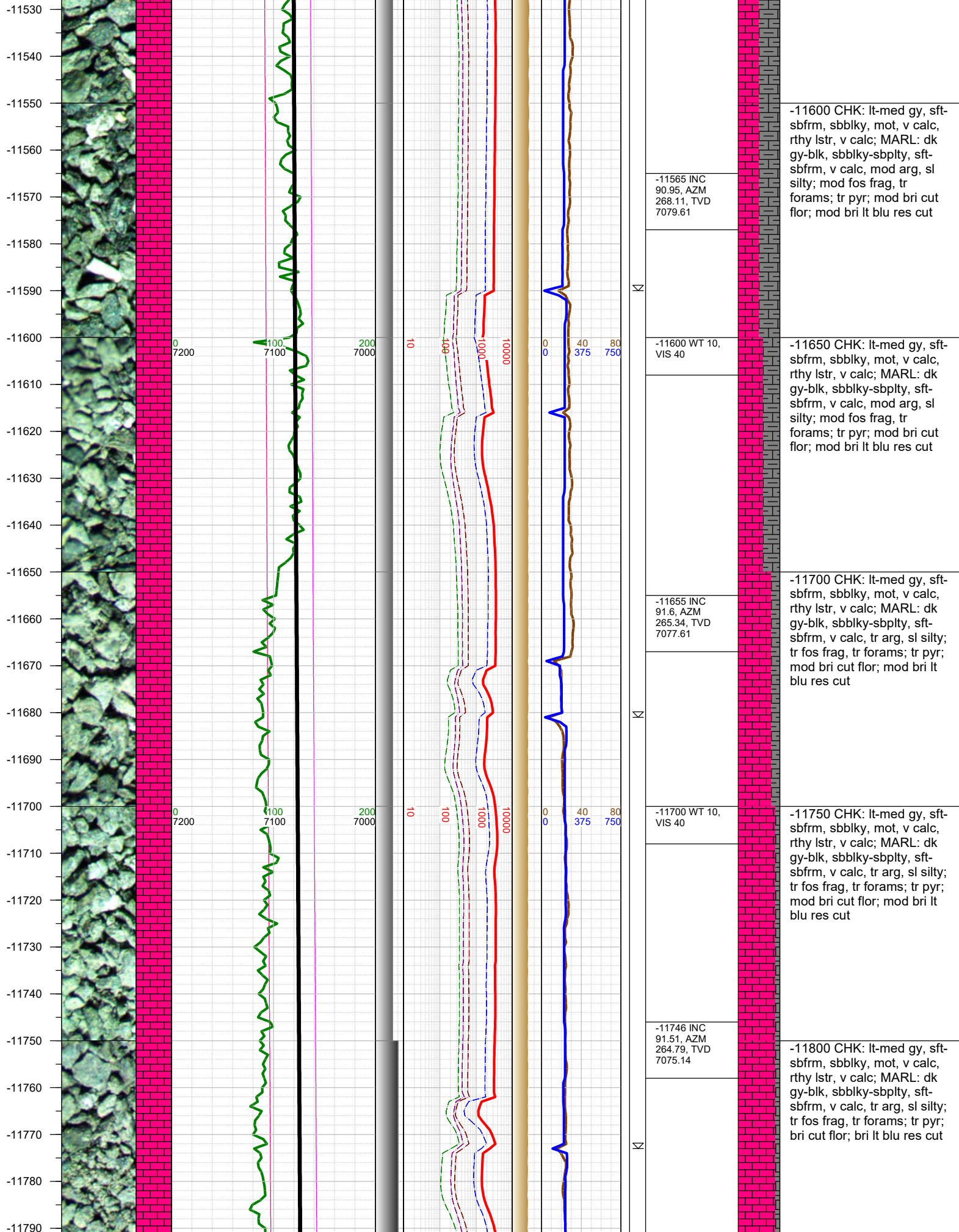


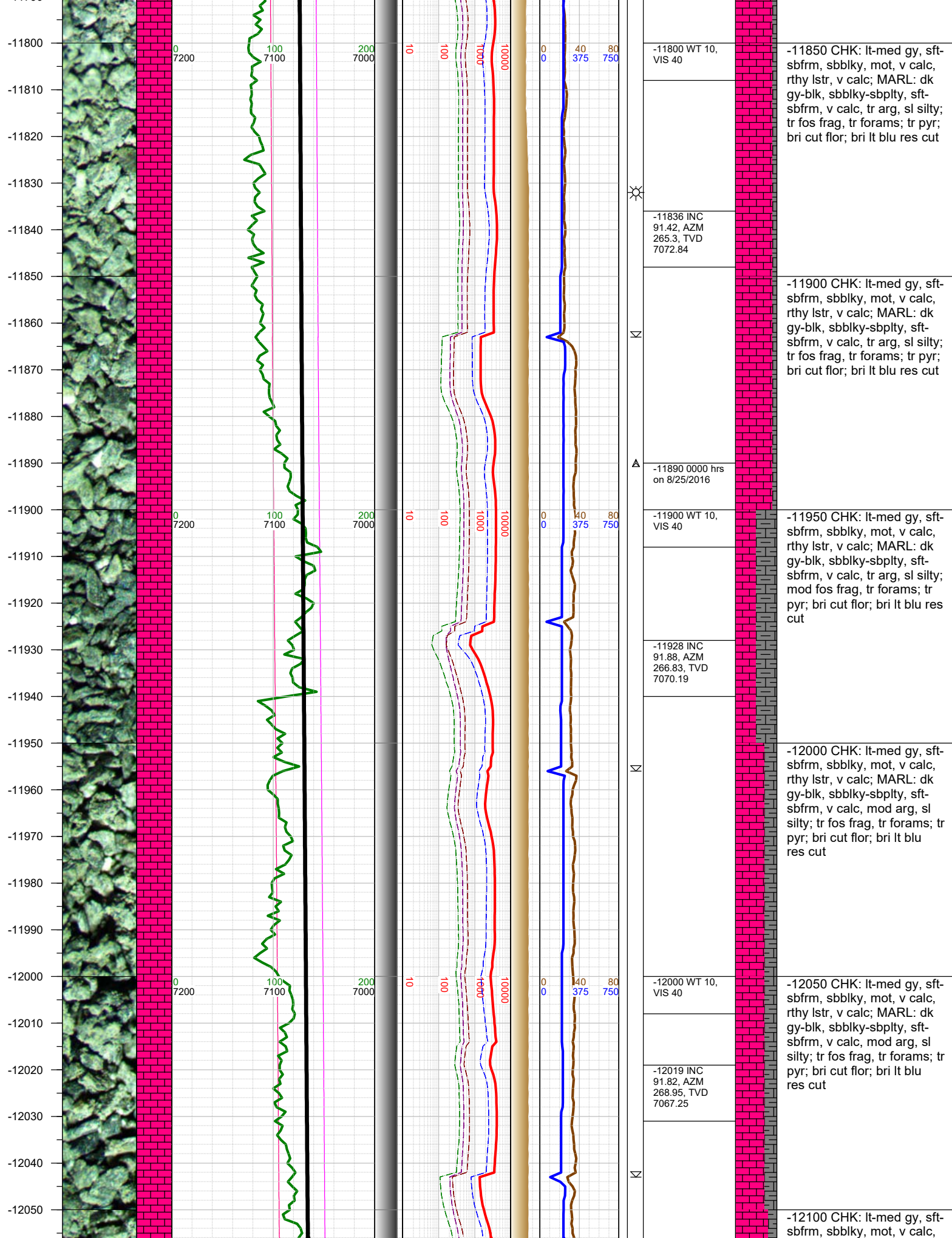


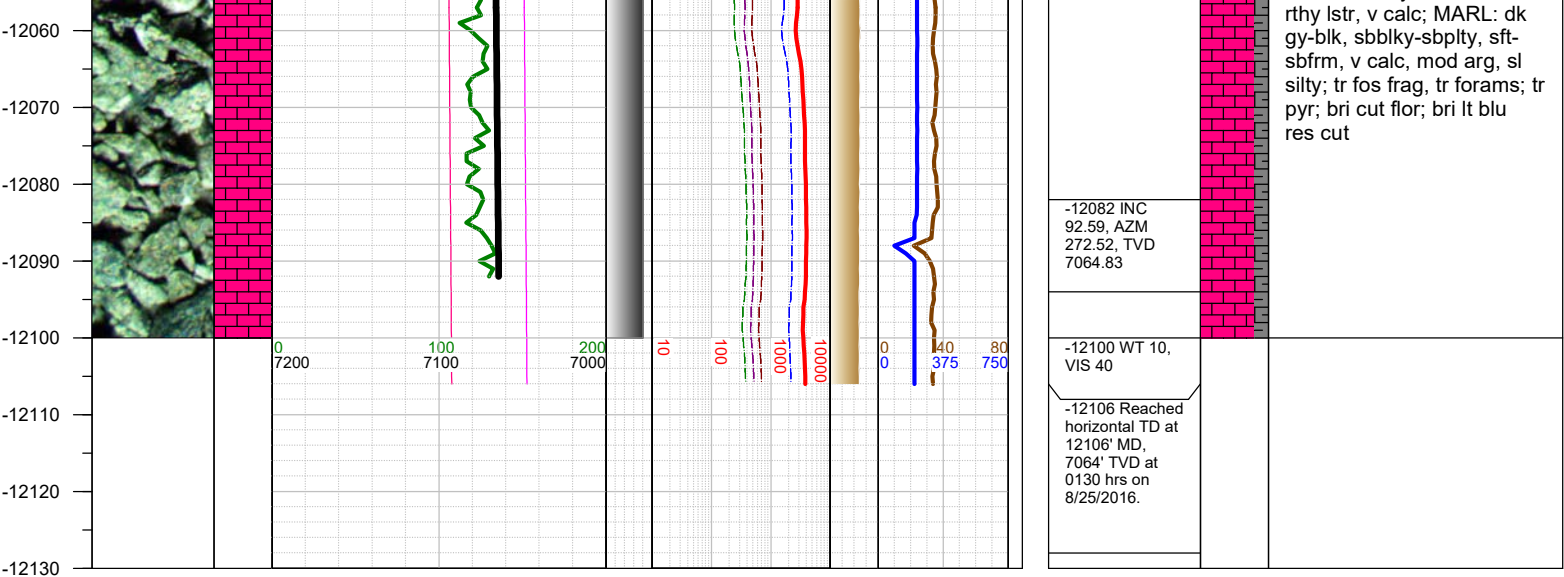












TOTAL DEPTH = 12106'

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