

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Duck Club 12W-20-11N**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 901

API #: 05-001-10156

LAT/LONG: 39.97868, -104.73097

SURFACE HOLE: NWSW S12-T1S-R66W, 2324' FSL, 682' FWL

BOTTOM HOLE: S10-T1S-R66W, 856' FSL, 2177' FEL

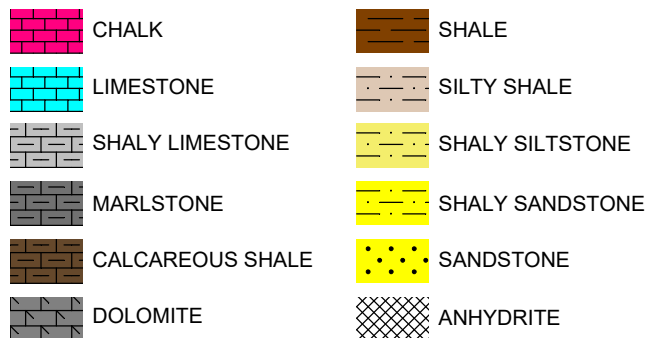


Earth Science Agency, LLC

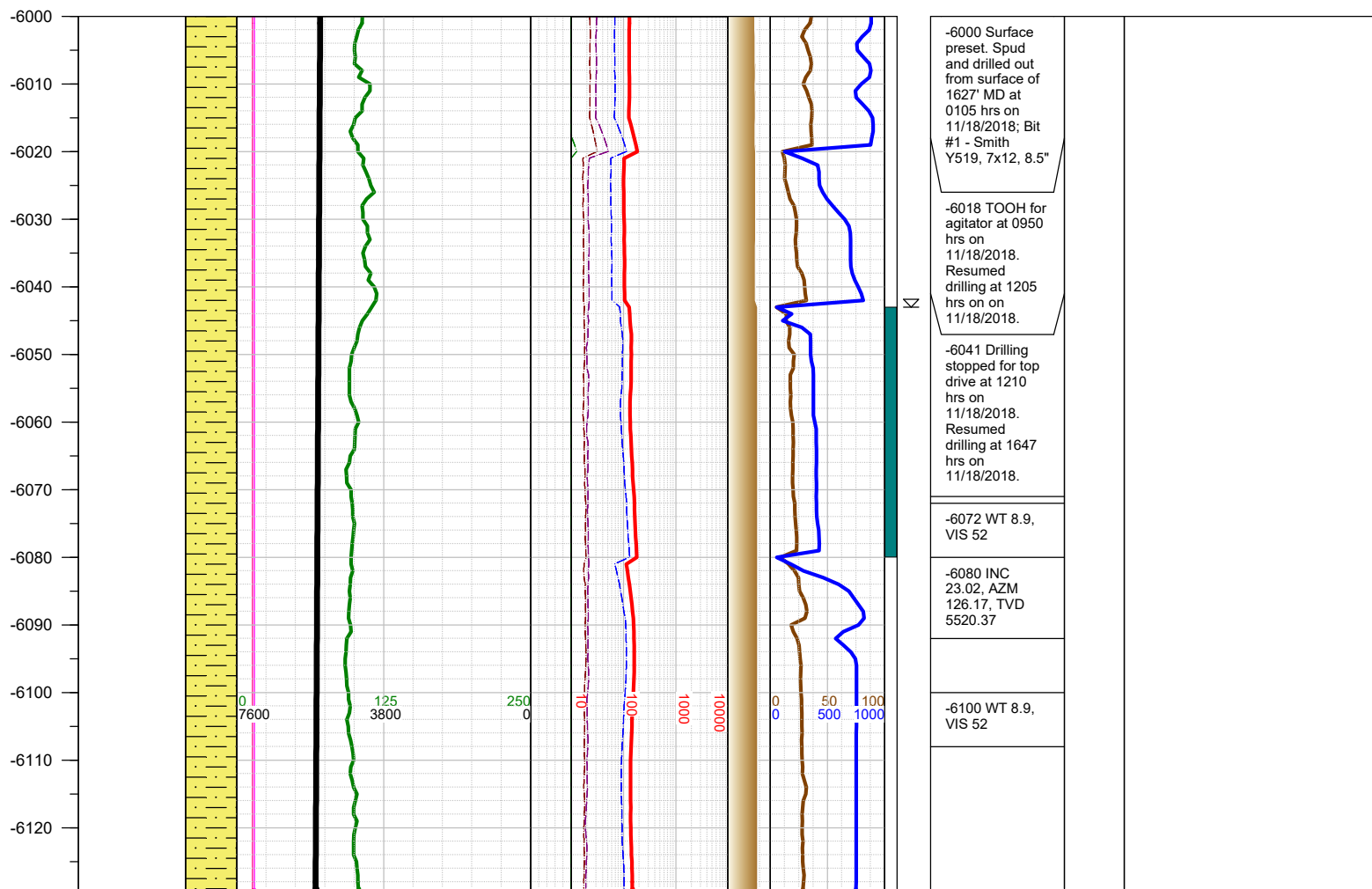
COUNTY: Adams
STATE: Colorado
GROUND ELEVATION: 5037'
KELLY BUSHING: 5066'
DRILLING FLUID: OBM
TVD VS. MD: 7258' / 17655'
SPUD DATE: November 18, 2018
TD DATE: November 20, 2018

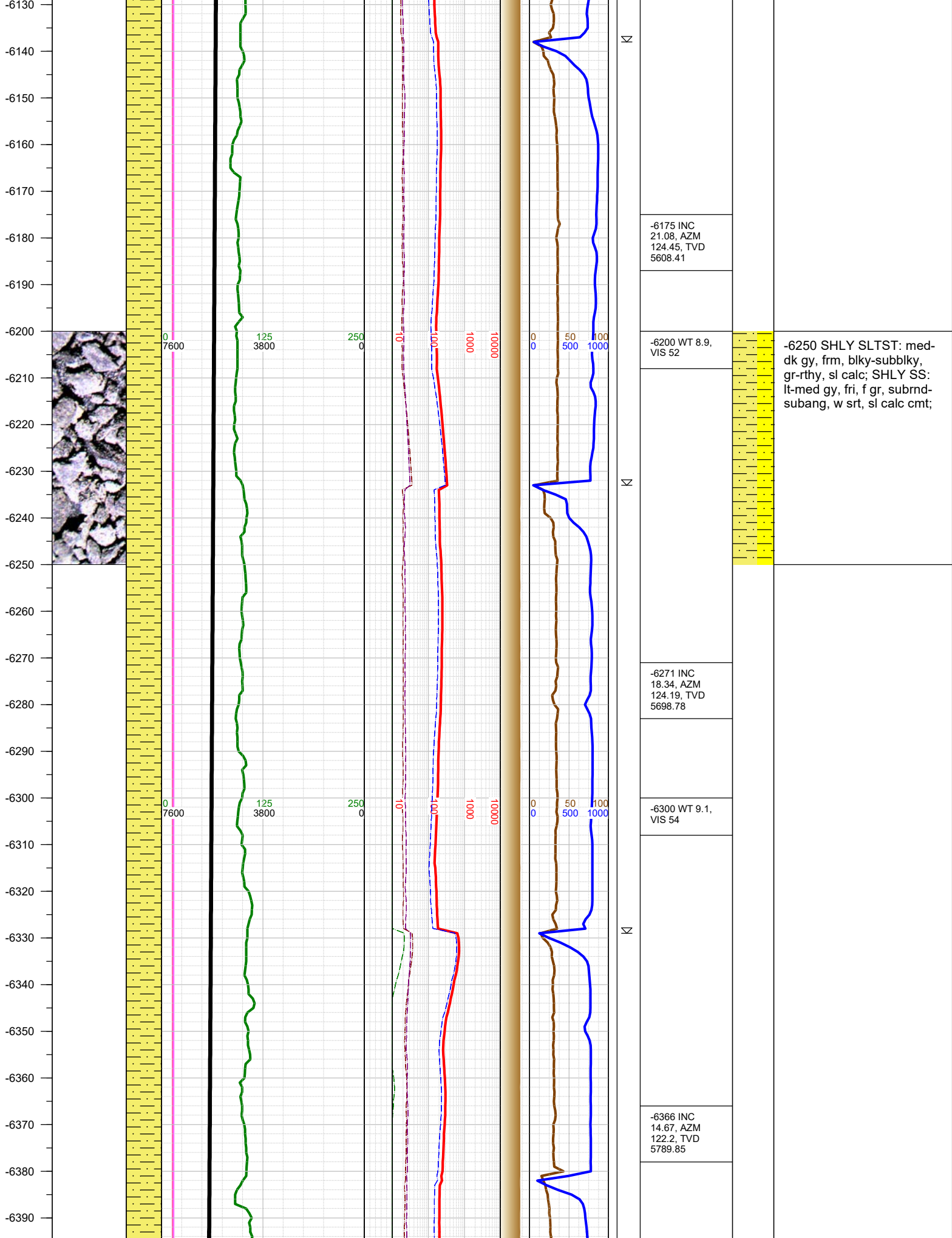
DEPTHS LOGGED: 6000' - 17655'
DATES LOGGED: November 18, 2018 - November 20, 2018
GEOLOGISTS: Dan Jacobs, Mitch Weller
SCALE: 5" = 100'

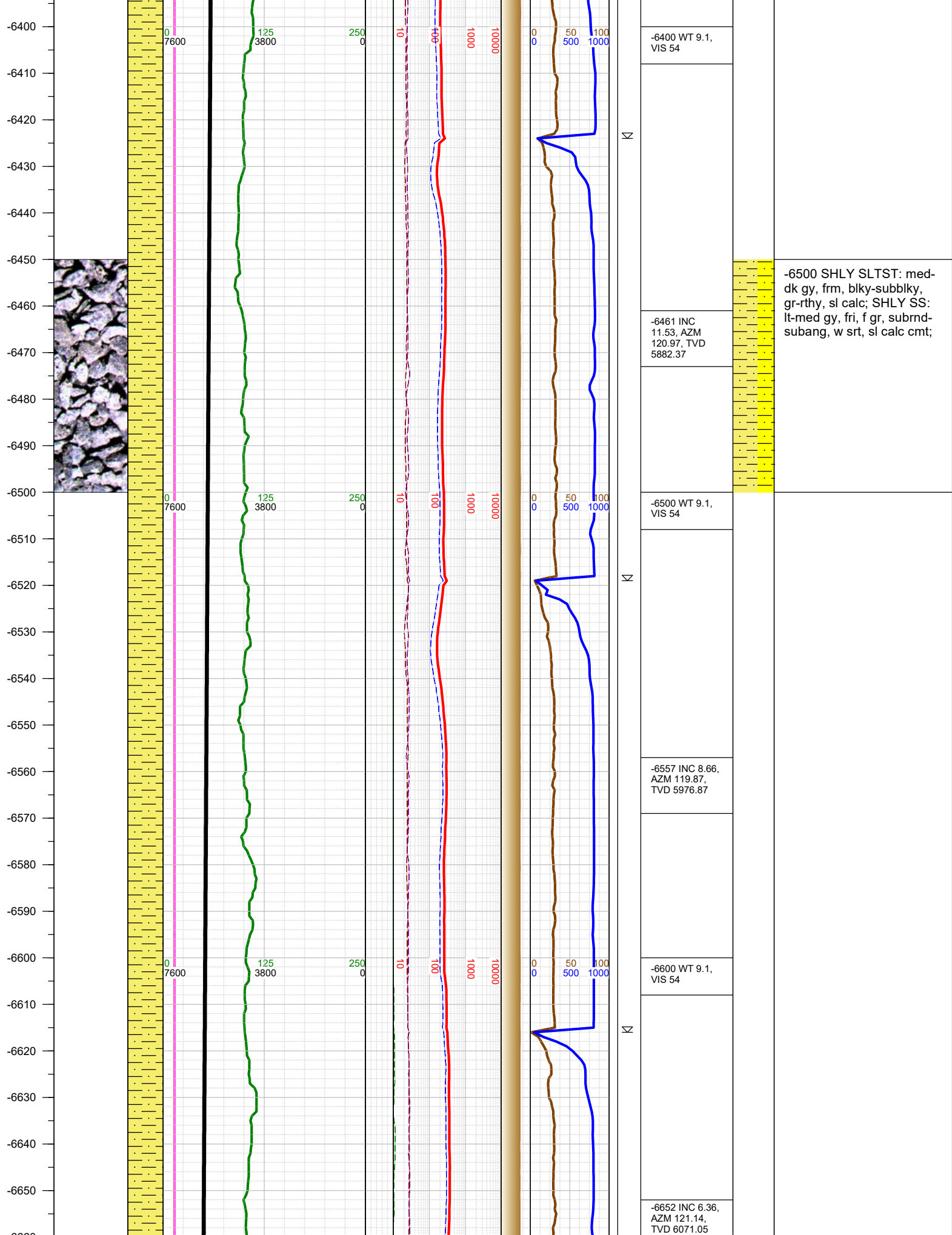
LEGEND



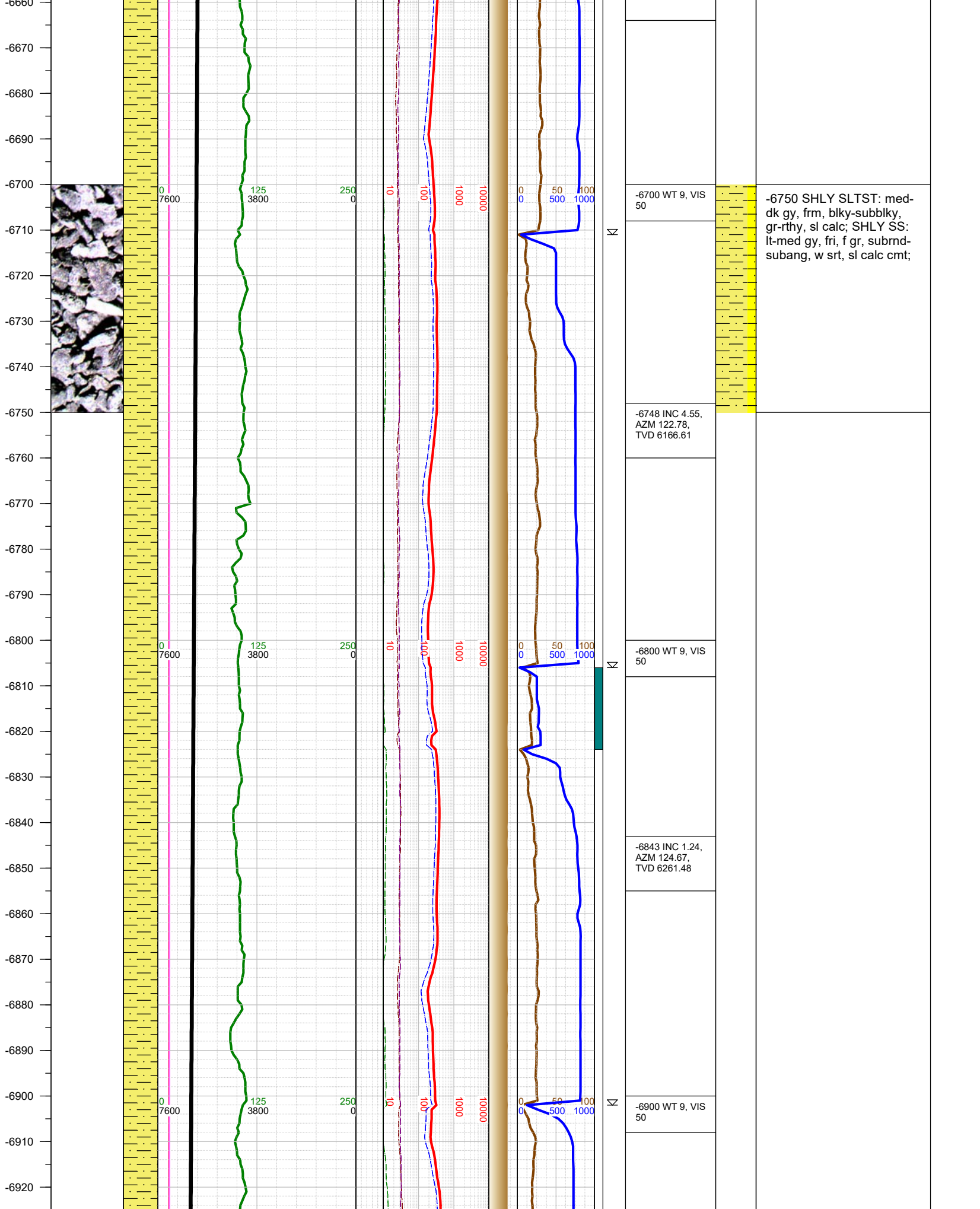
FORMATION CONNECTION MIDNIGHT NEW BIT GAS SHOW FAULT

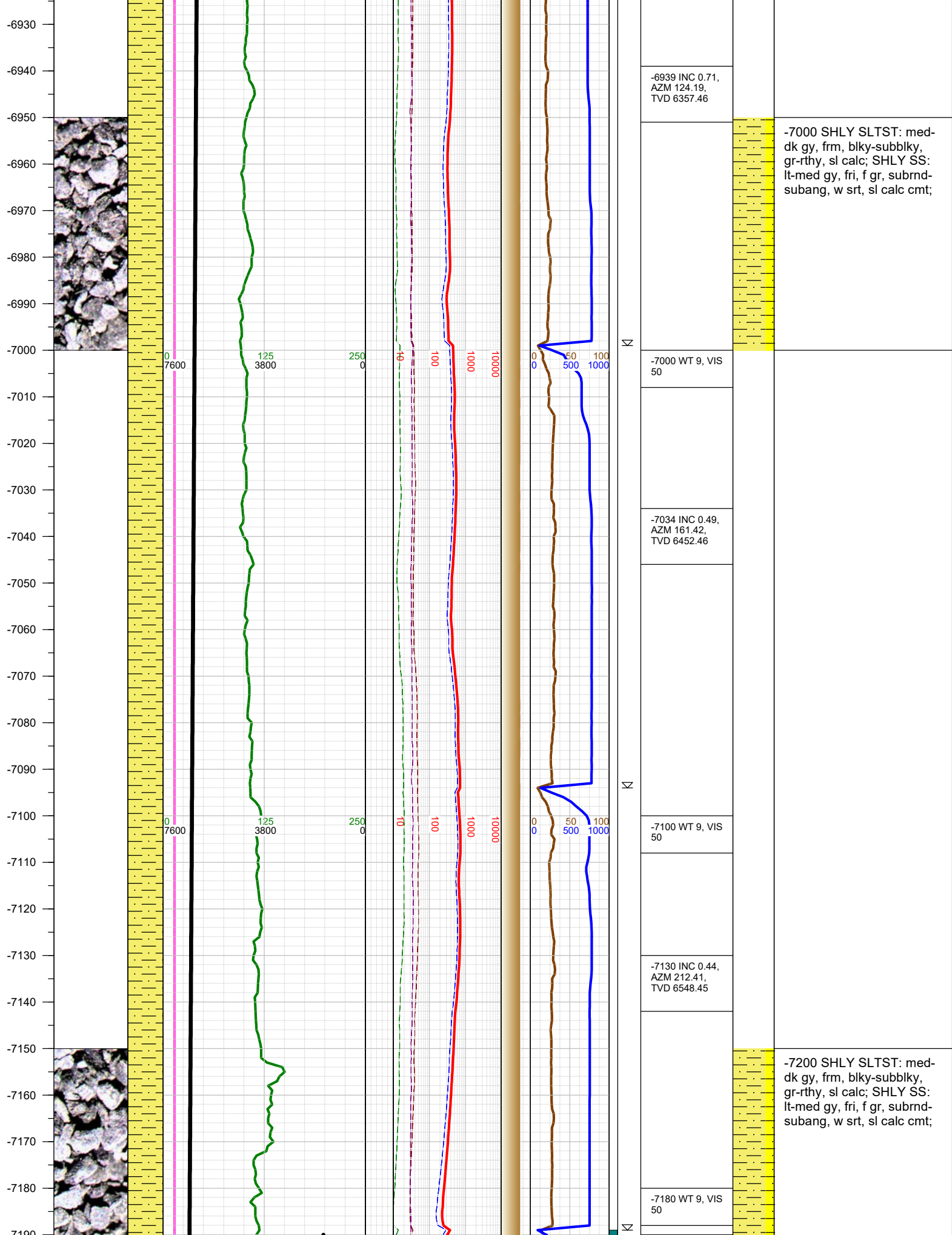


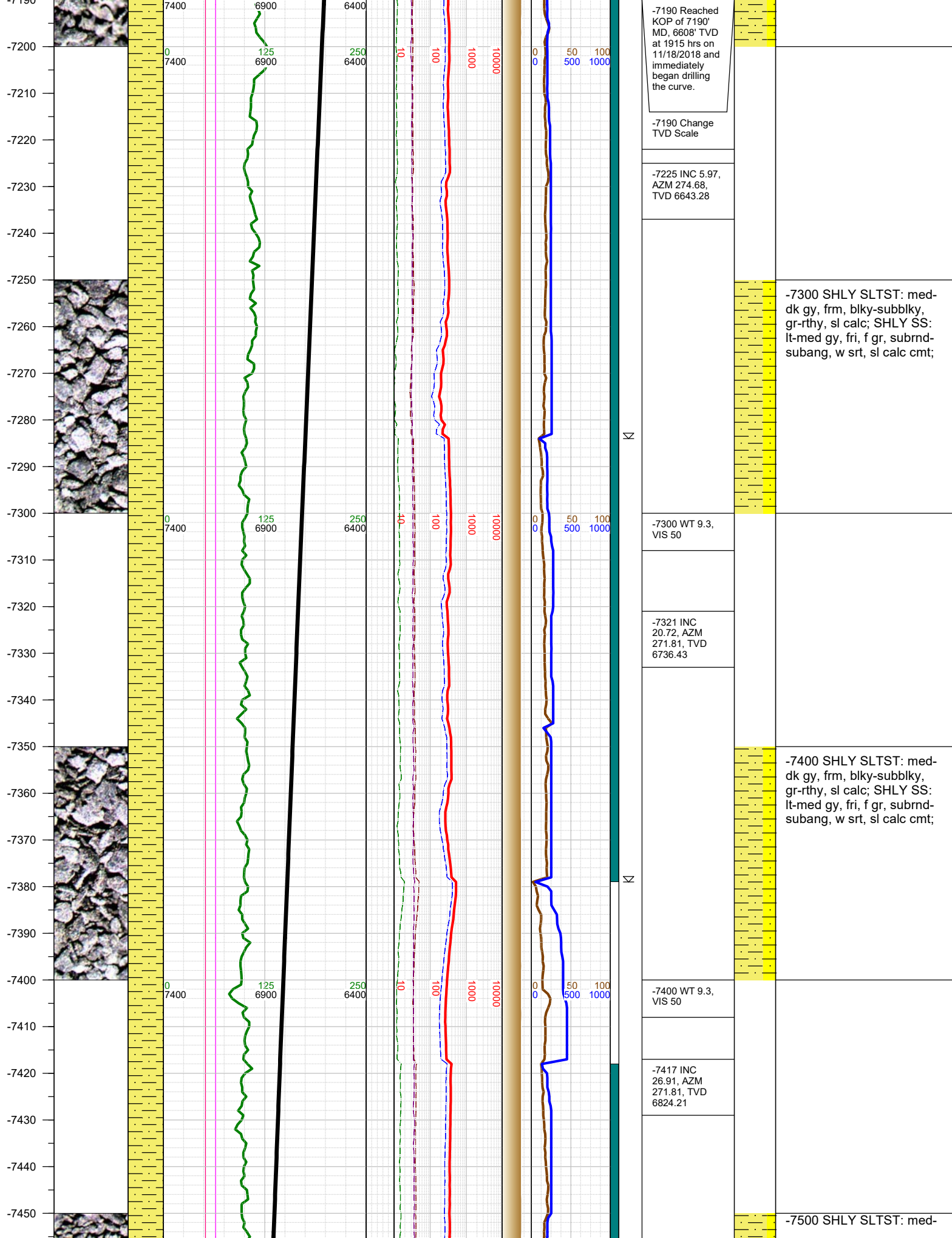


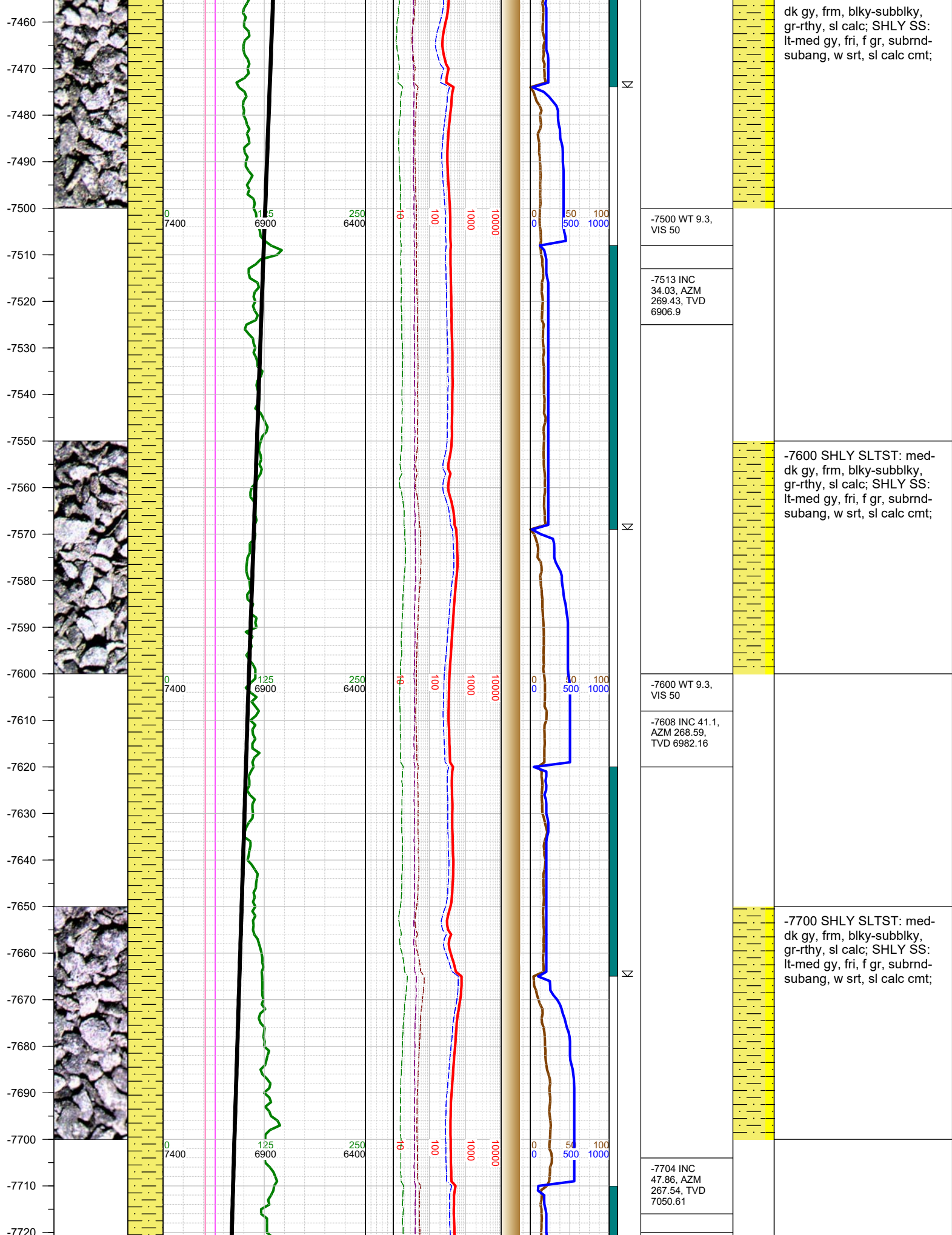


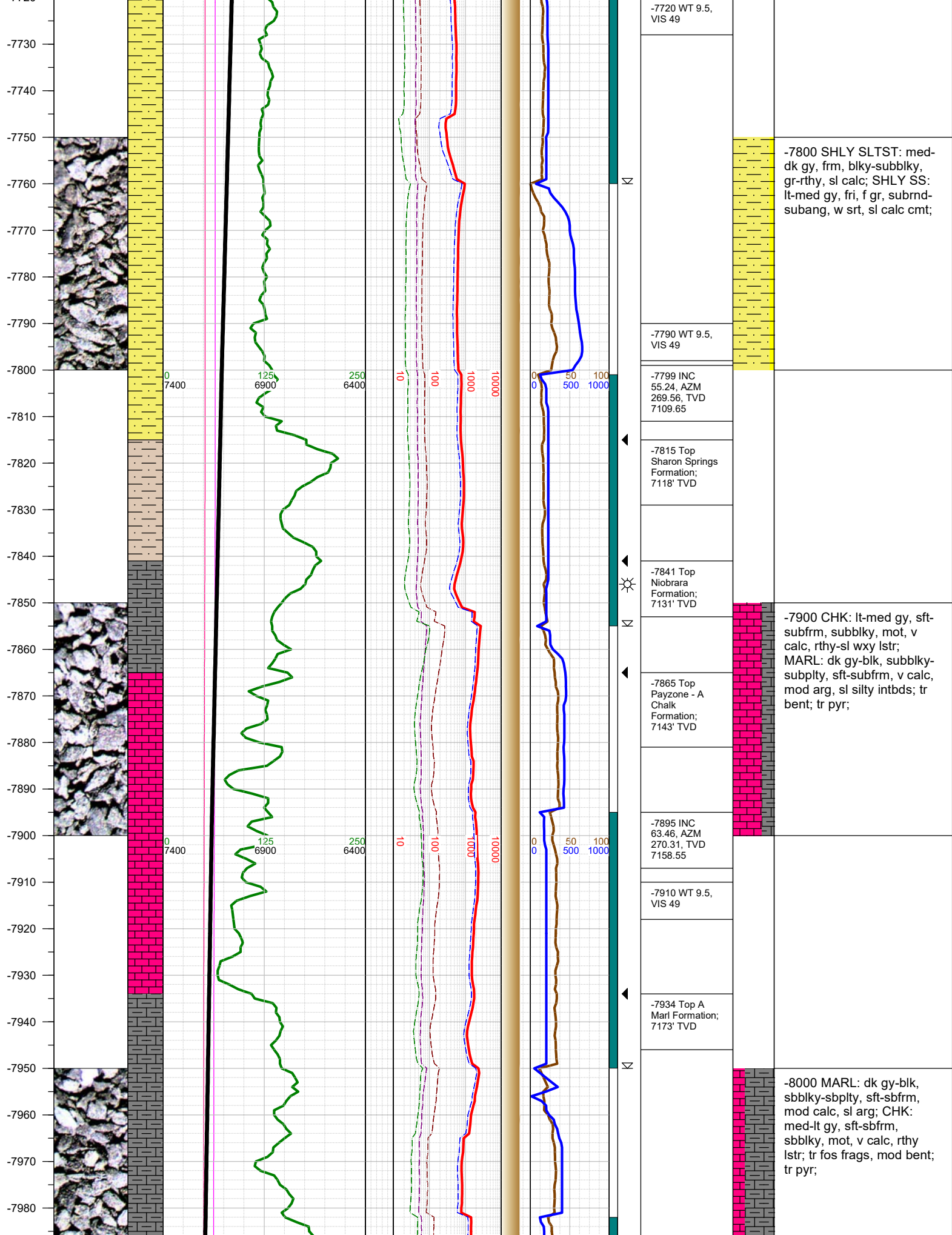
-6500 SHLY SLTST: med-
dk gy, frm, blk-subblky,
gr-rthy, sl calc; SHLY SS:
lt-med gy, fri, f gr, subrnd-
subang, w srt, sl calc cmt;

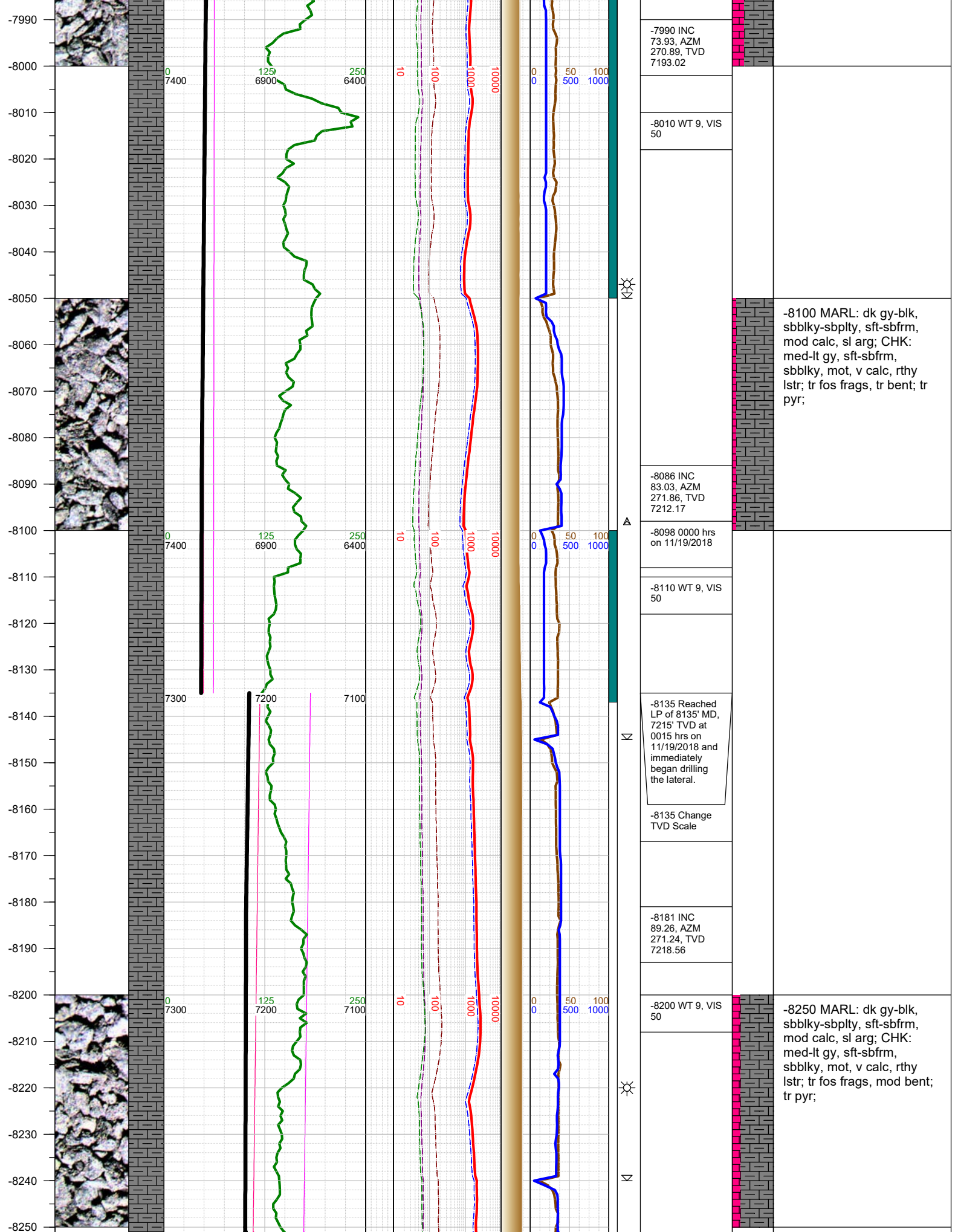


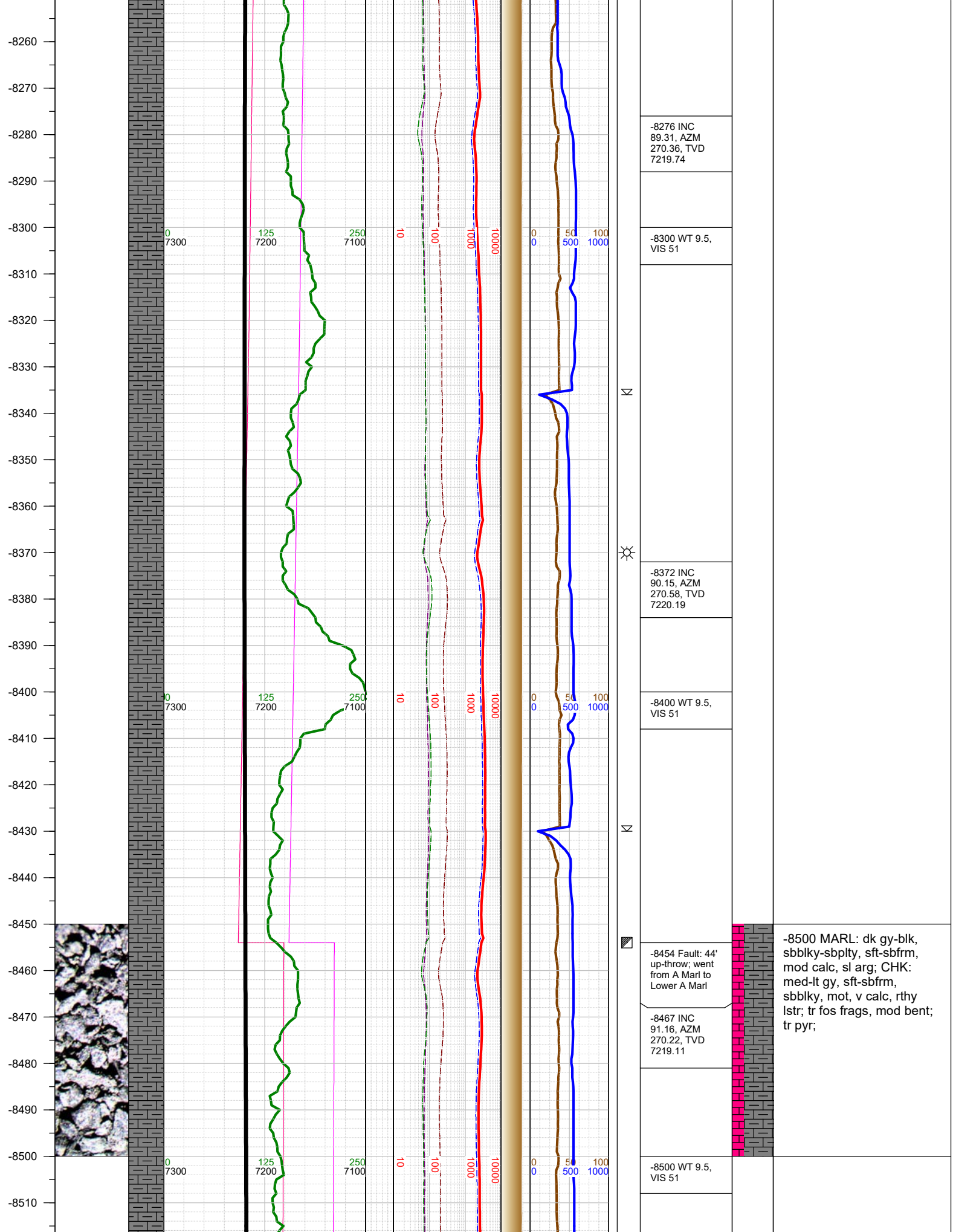




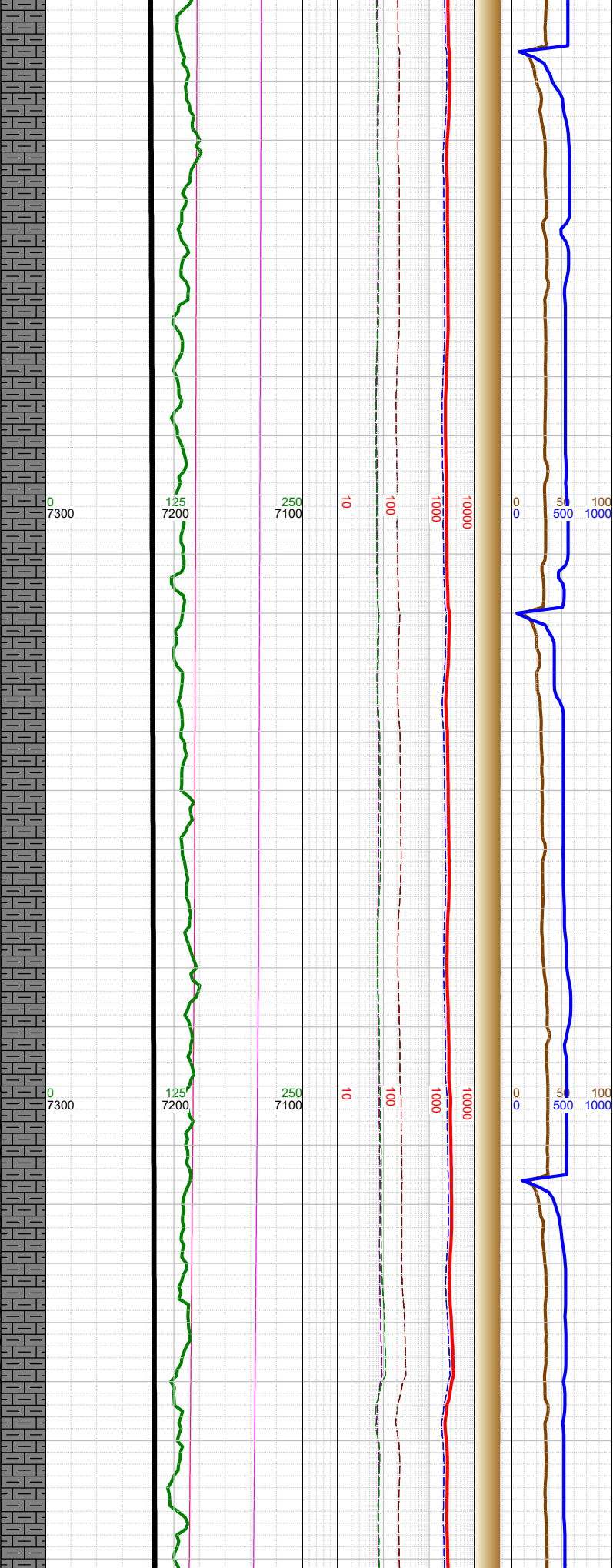
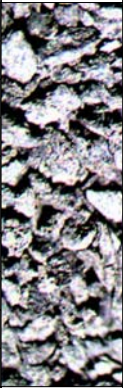






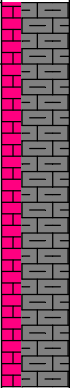


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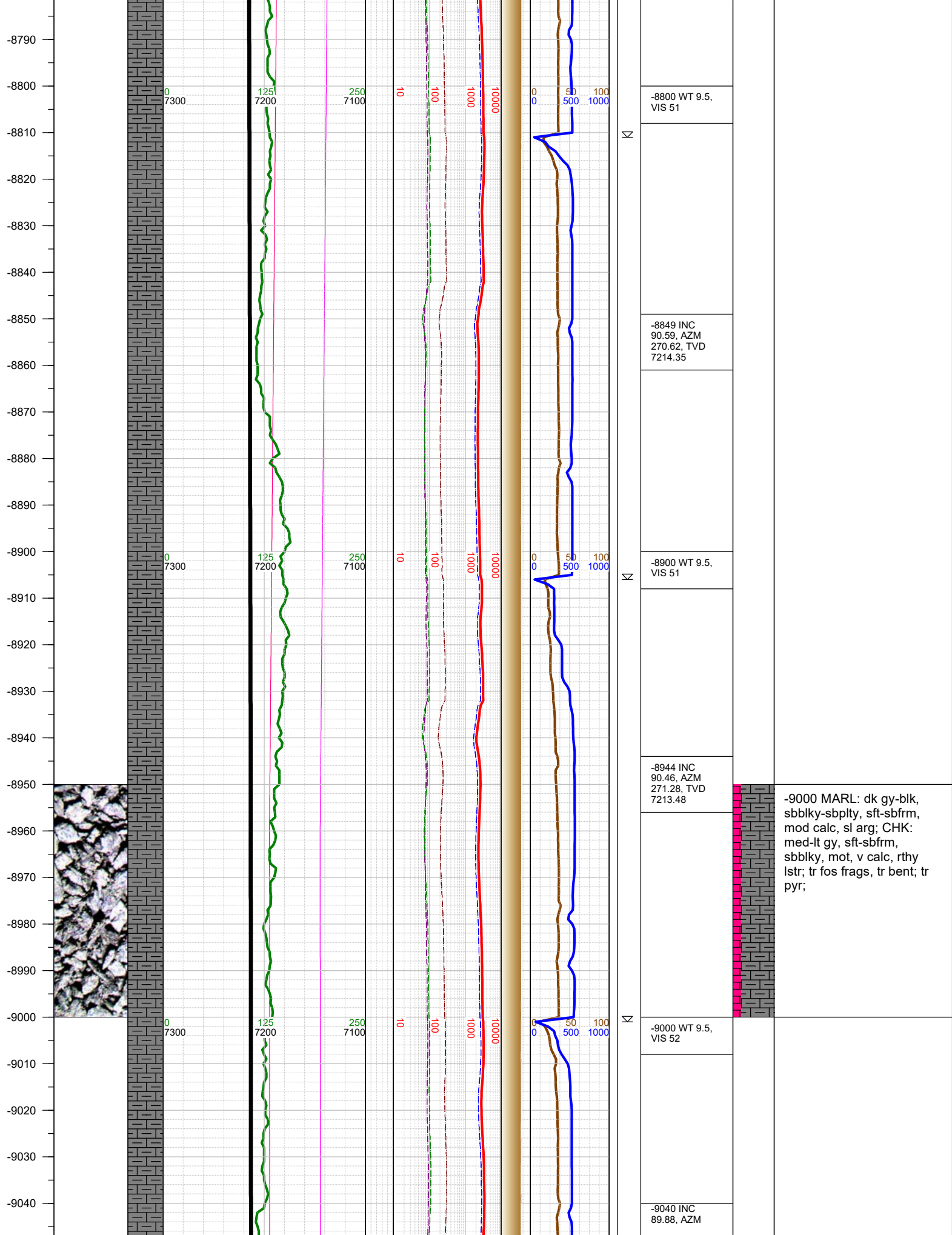


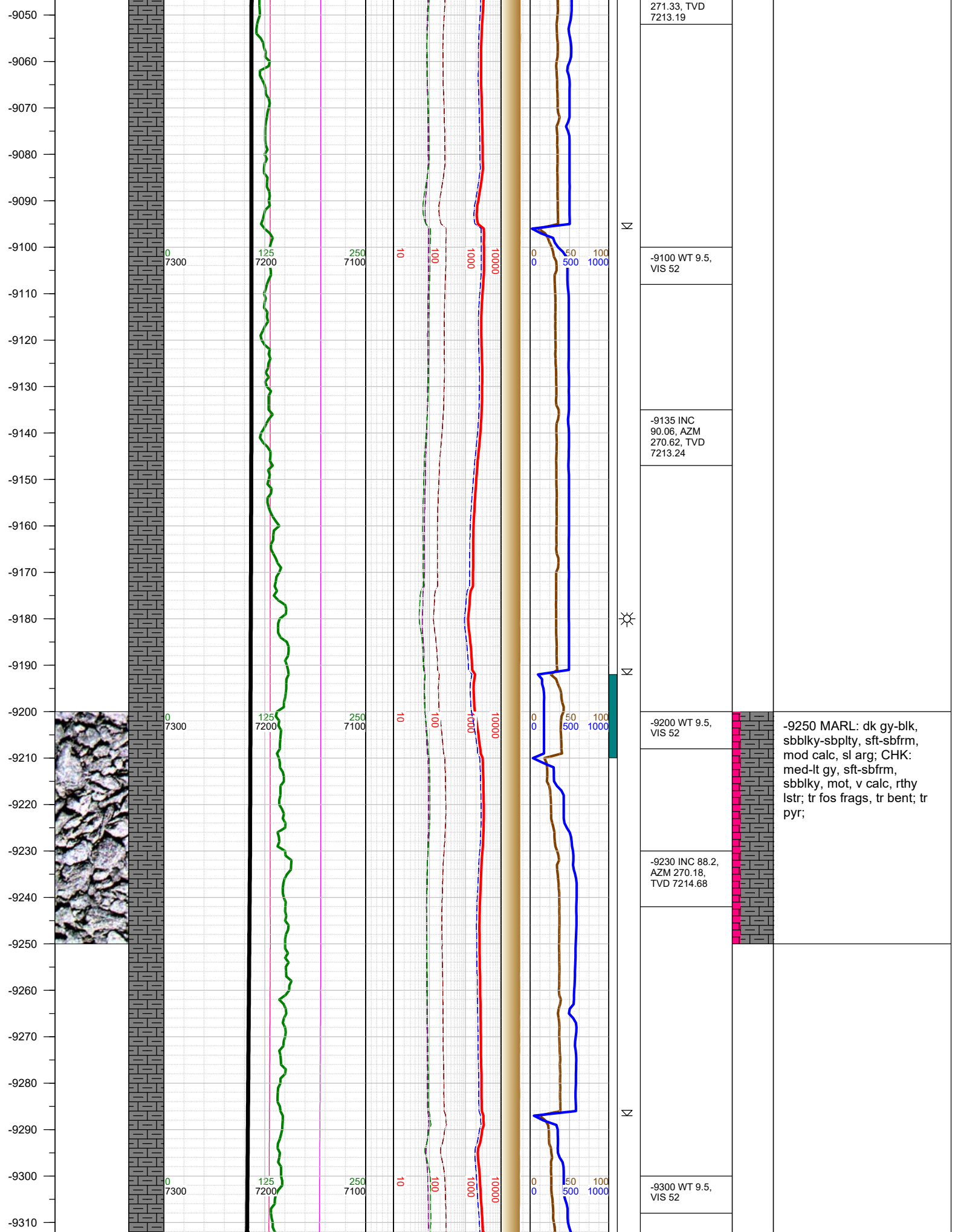
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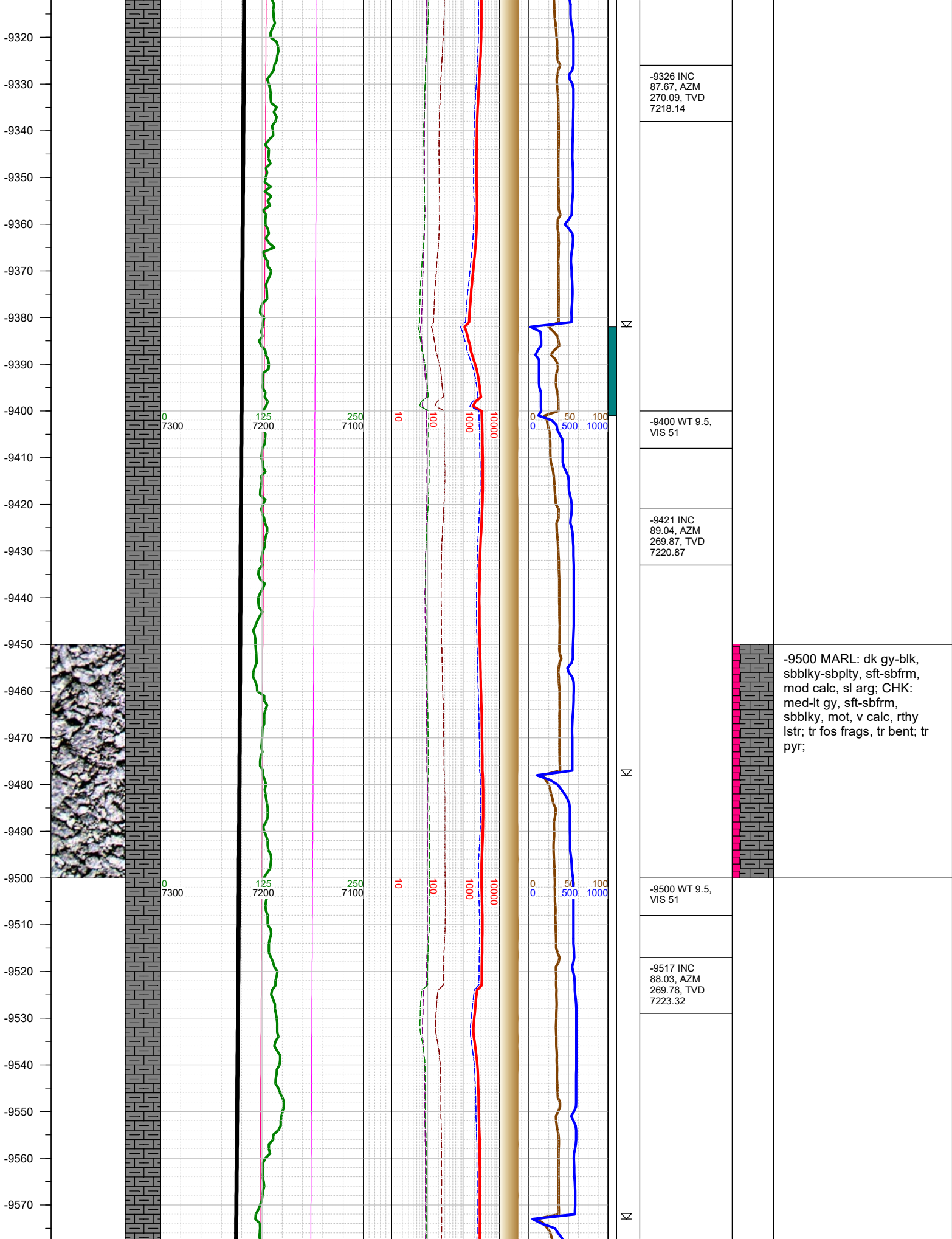
	-8563 INC 90.85, AZM 270.27, TVD 7217.42	
	-8600 WT 9.5, VIS 51	
	-8658 INC 90.59, AZM 270.45, TVD 7216.23	
	-8700 WT 9.5, VIS 51	
	-8753 INC 90.54, AZM 270.14, TVD 7215.29	

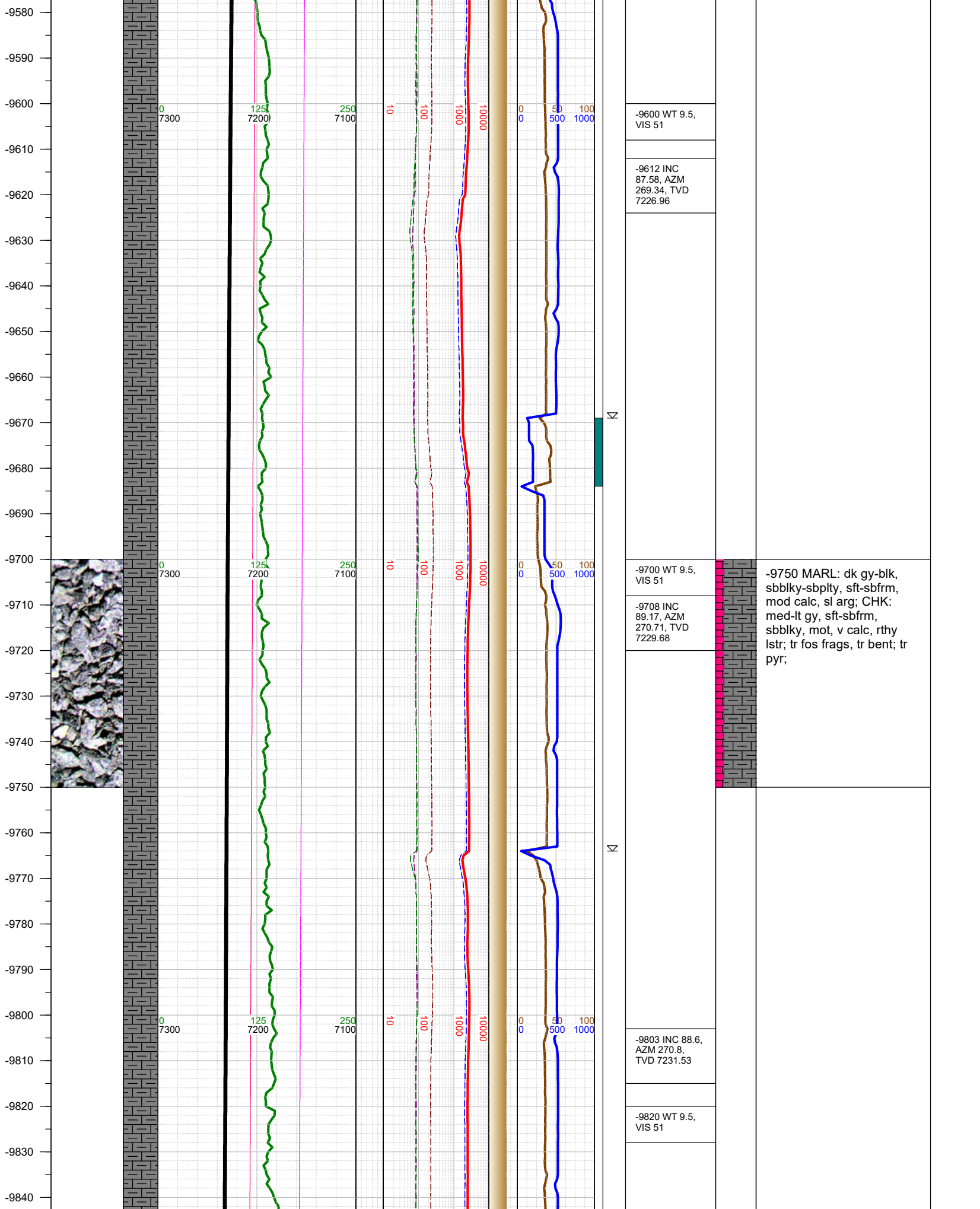


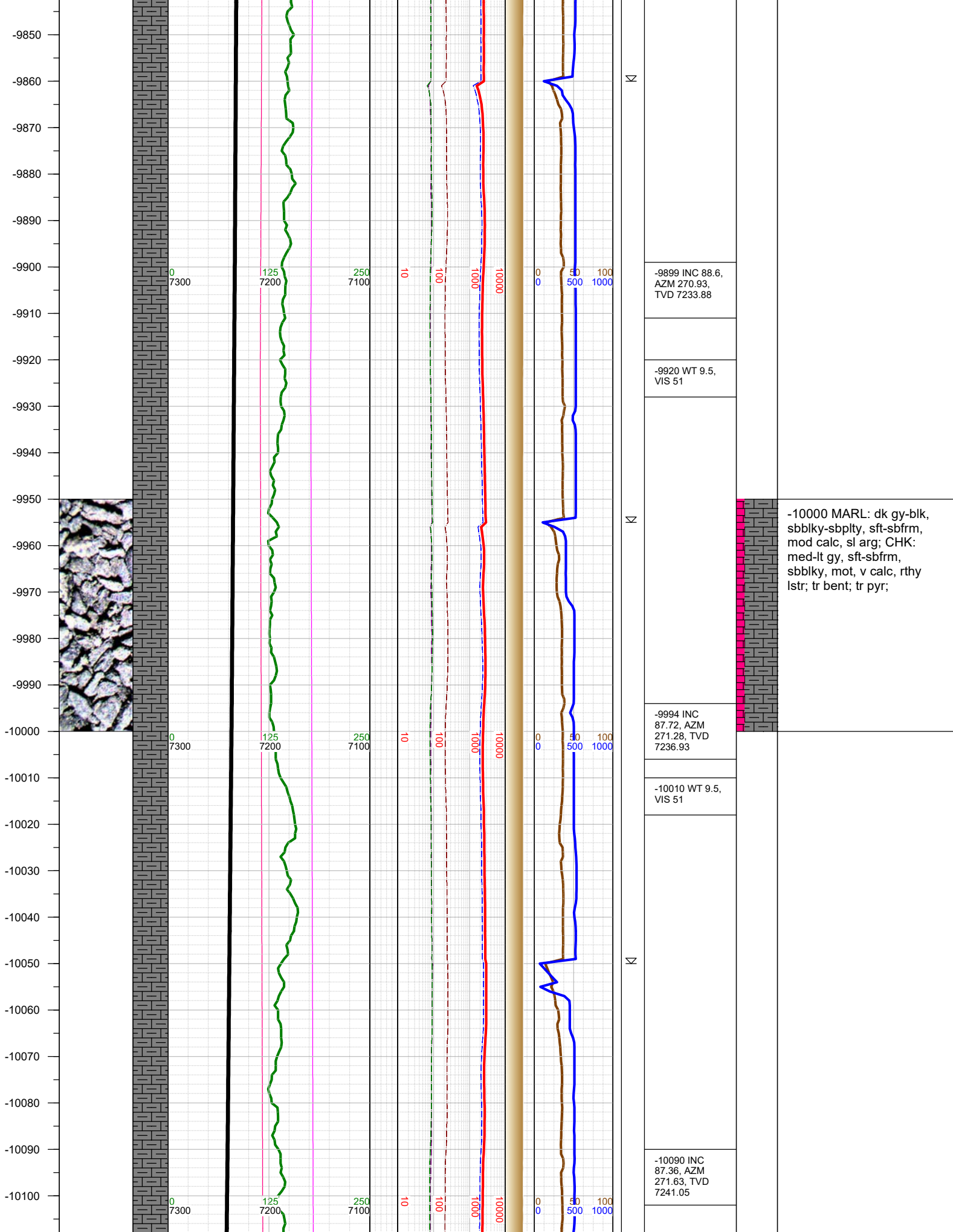
-8750 MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, mod calc, sl arg; CHK: med-lt gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr; tr fos frags, mod bent; tr pyr;

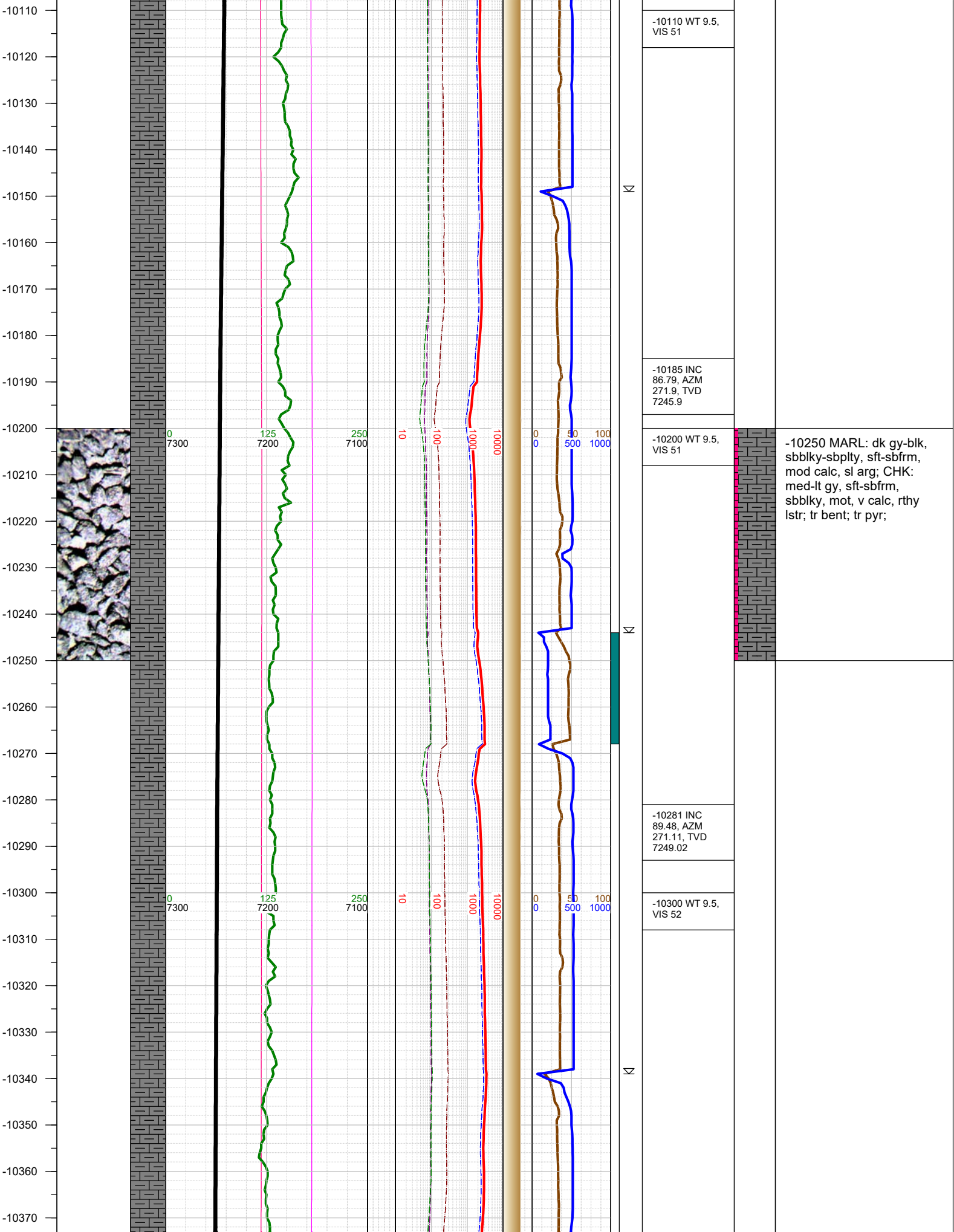


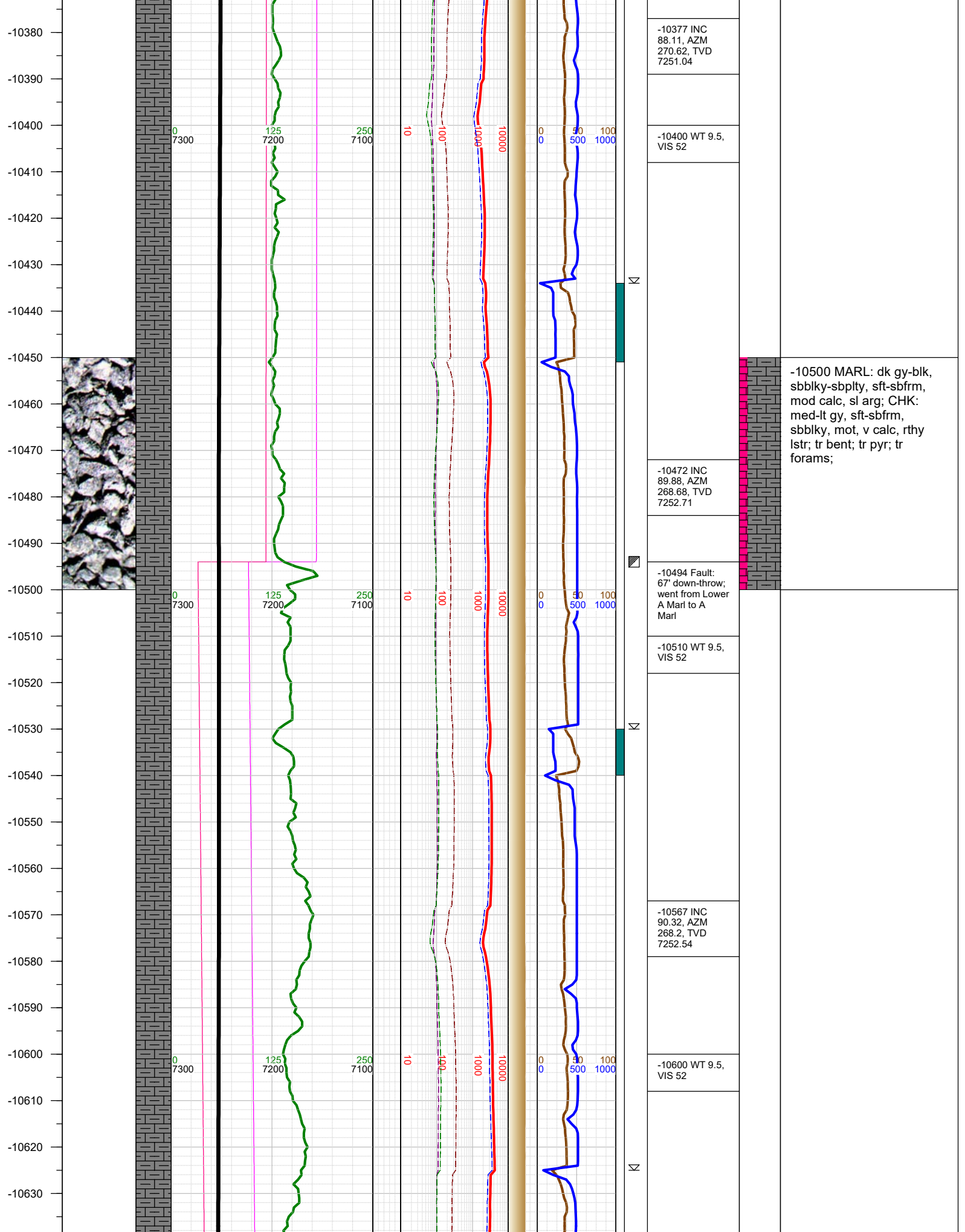


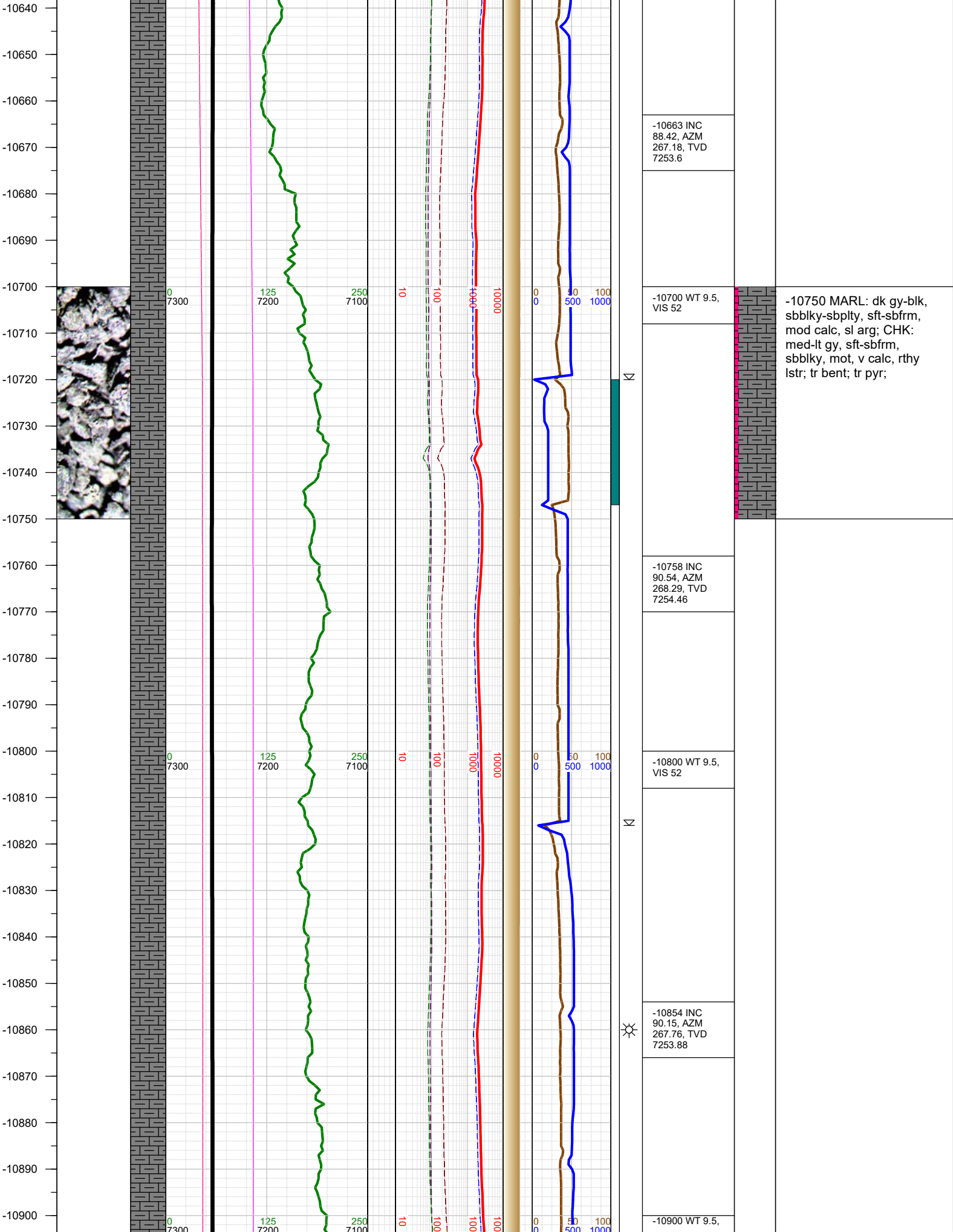


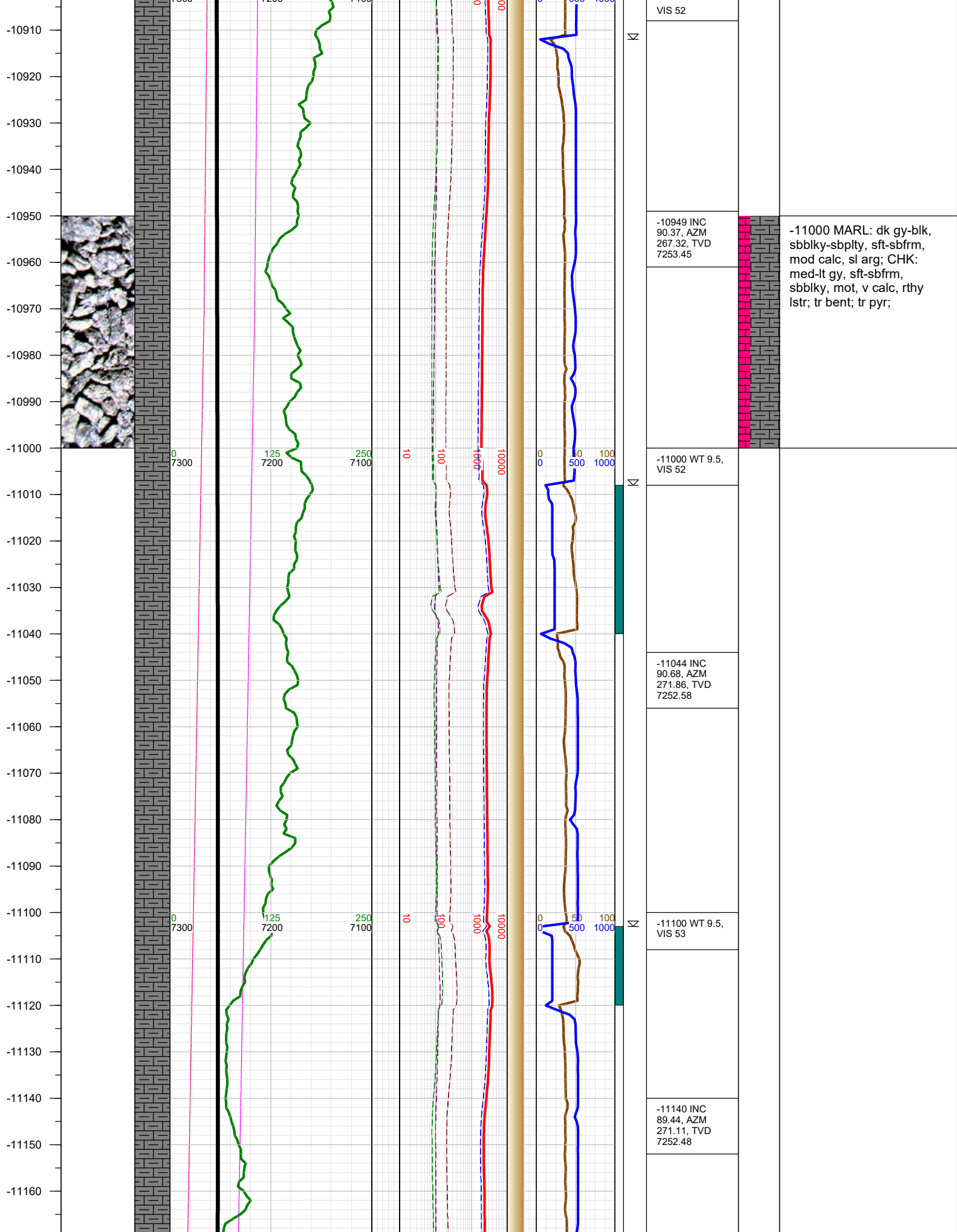


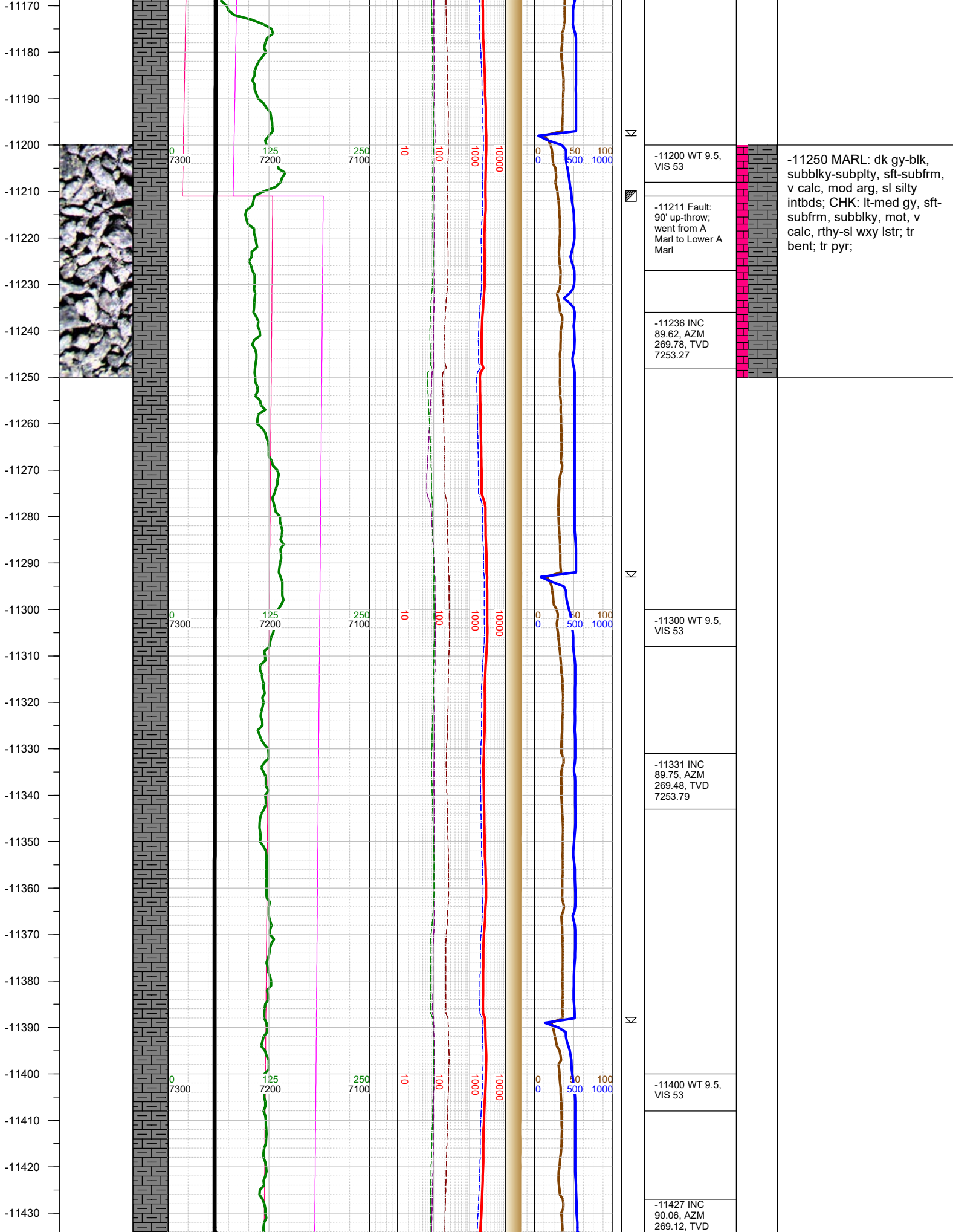












-11250 MARL: dk gy-blk, subblky-subplty, sft-subfrm, v calc, mod arg, sl silty intbds; CHK: lt-med gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; tr bent; tr pyr;

-11200 WT 9.5, VIS 53

-11211 Fault: 90' up-throw; went from A Marl to Lower A Marl

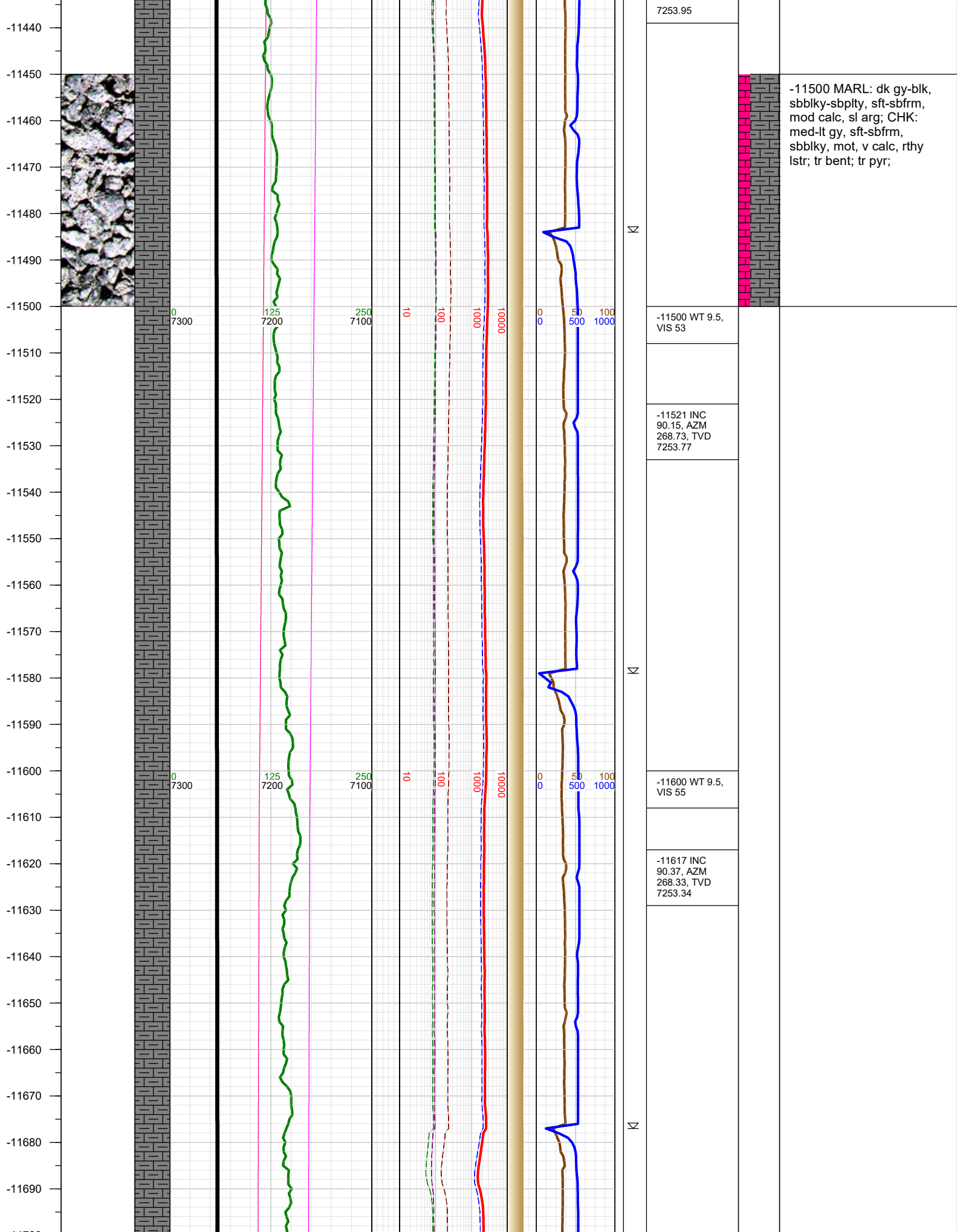
-11236 INC 89.62, AZM 269.78, TVD 7253.27

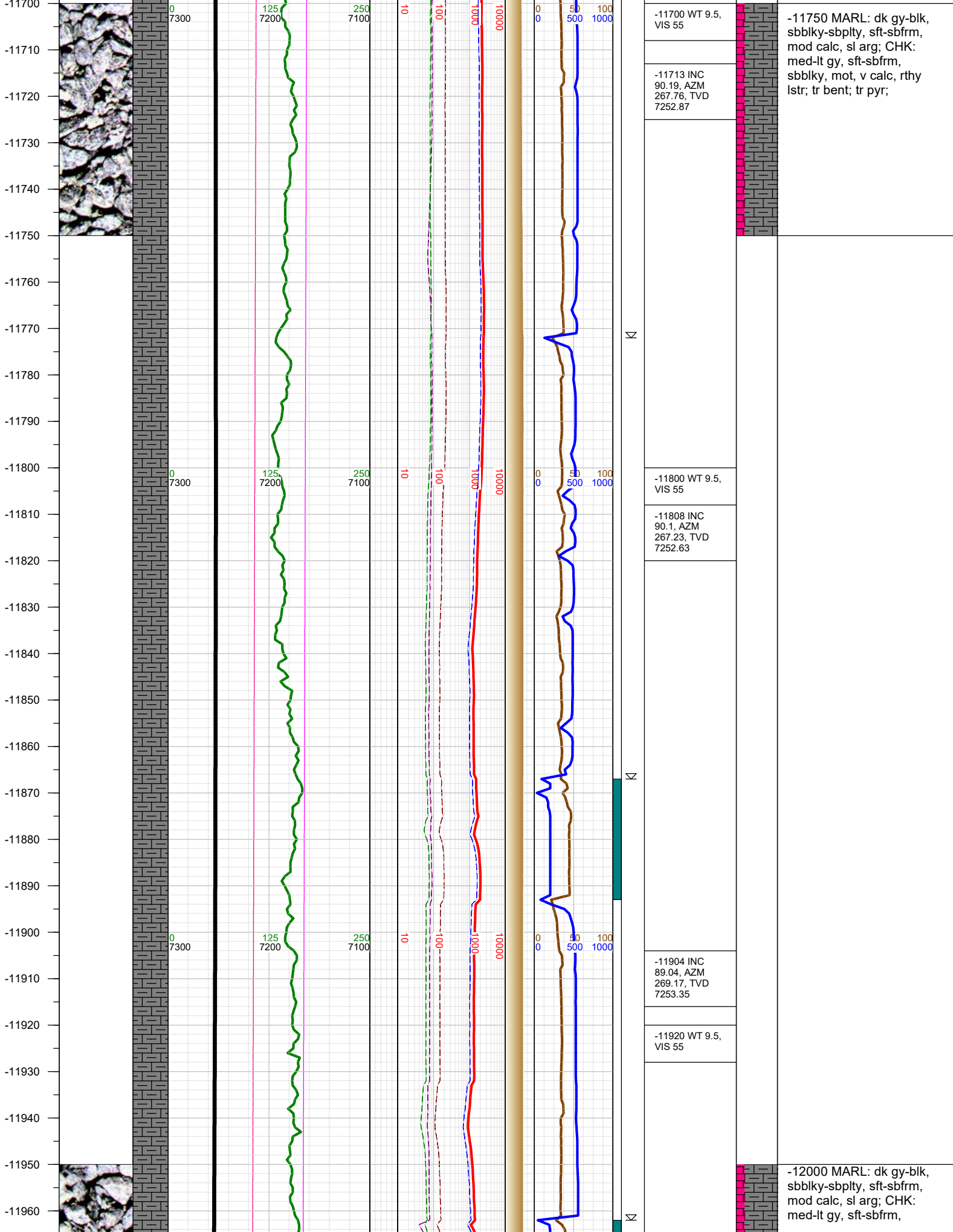
-11300 WT 9.5, VIS 53

-11331 INC 89.75, AZM 269.48, TVD 7253.79

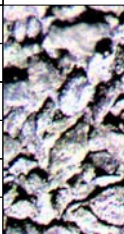
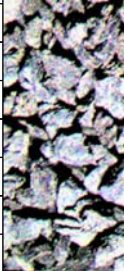
-11400 WT 9.5, VIS 53

-11427 INC 90.06, AZM 269.12, TVD





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-11999 INC
88.95, AZM
271.72, TVD
7255.02

-12020 WT 9.5,
VIS 55

-12095 INC
88.82, AZM
272.56, TVD
7256.88

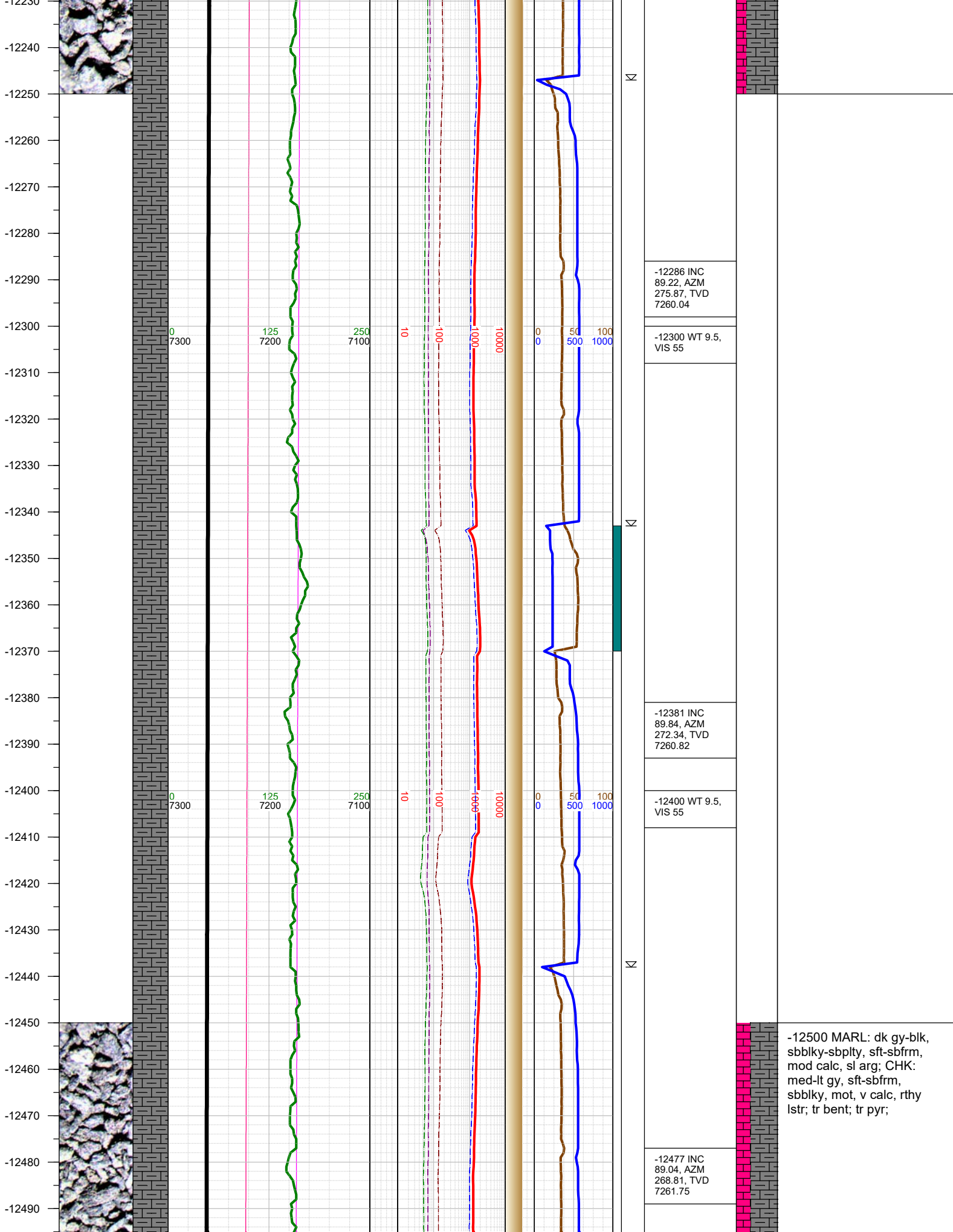
-12110 WT 9.5,
VIS 55

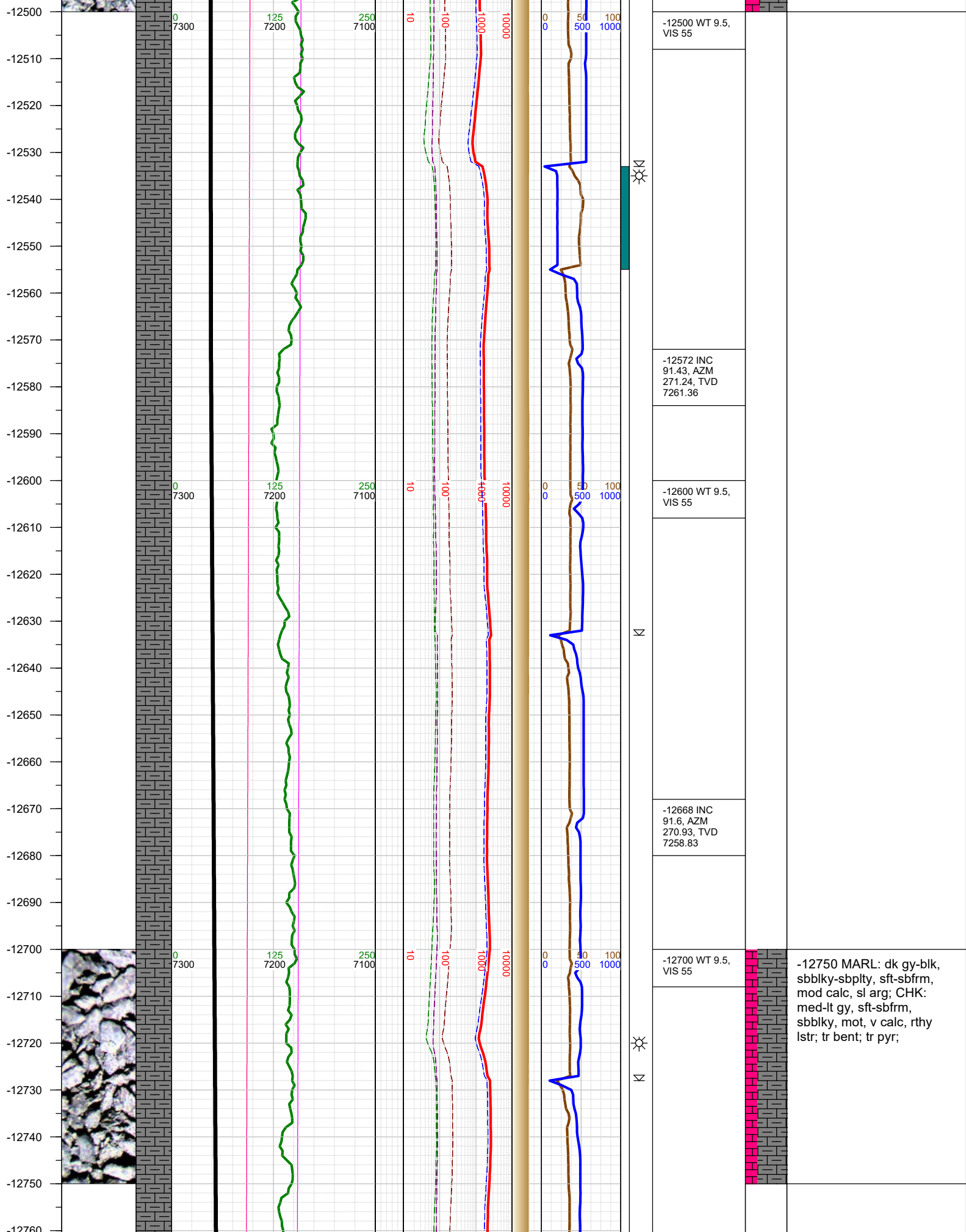
-12191 INC
89.09, AZM
274.85, TVD
7258.64

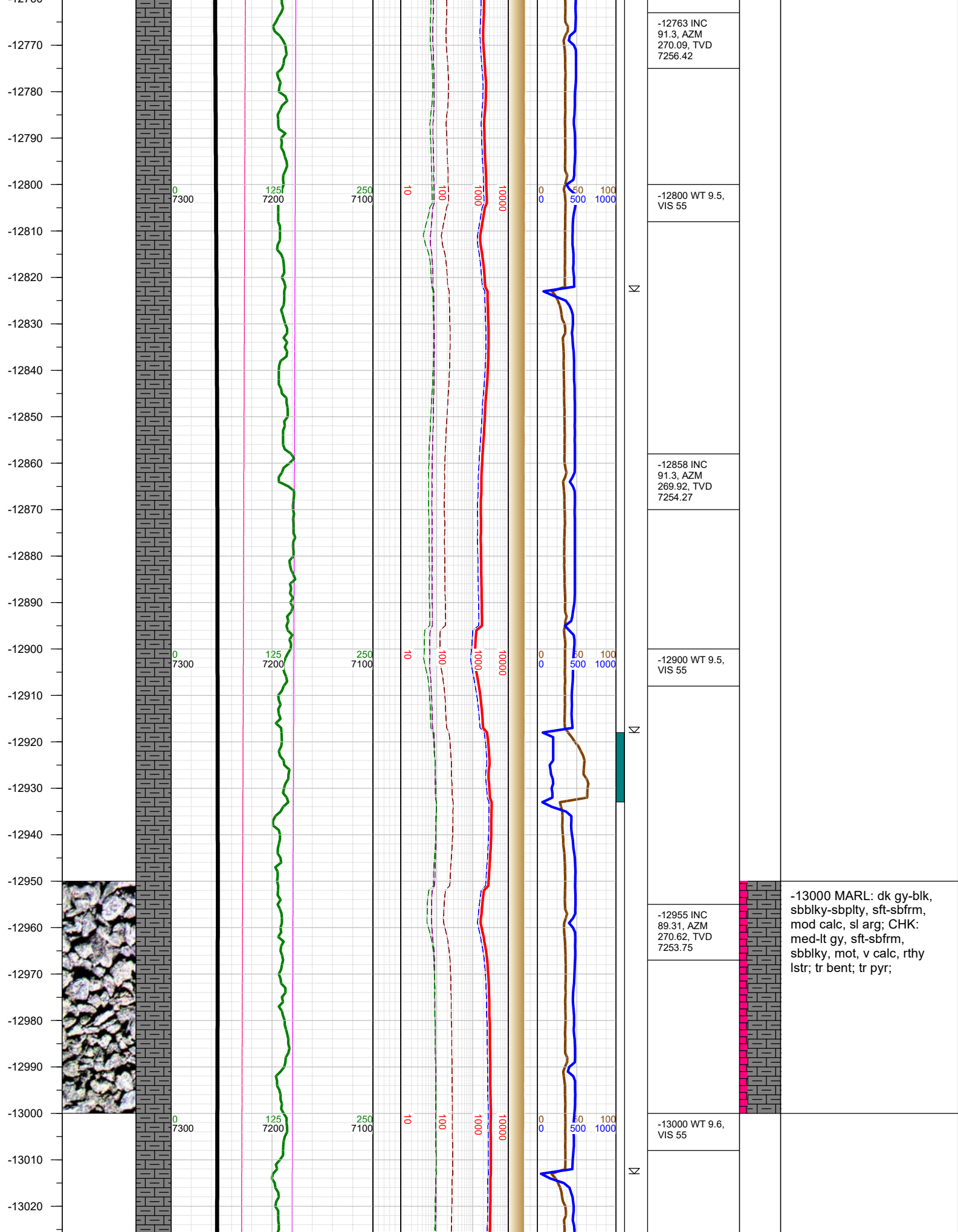
-12210 WT 9.5,
VIS 55

sbblky, mot, v calc, rthy
lstr; tr bent; tr pyr;

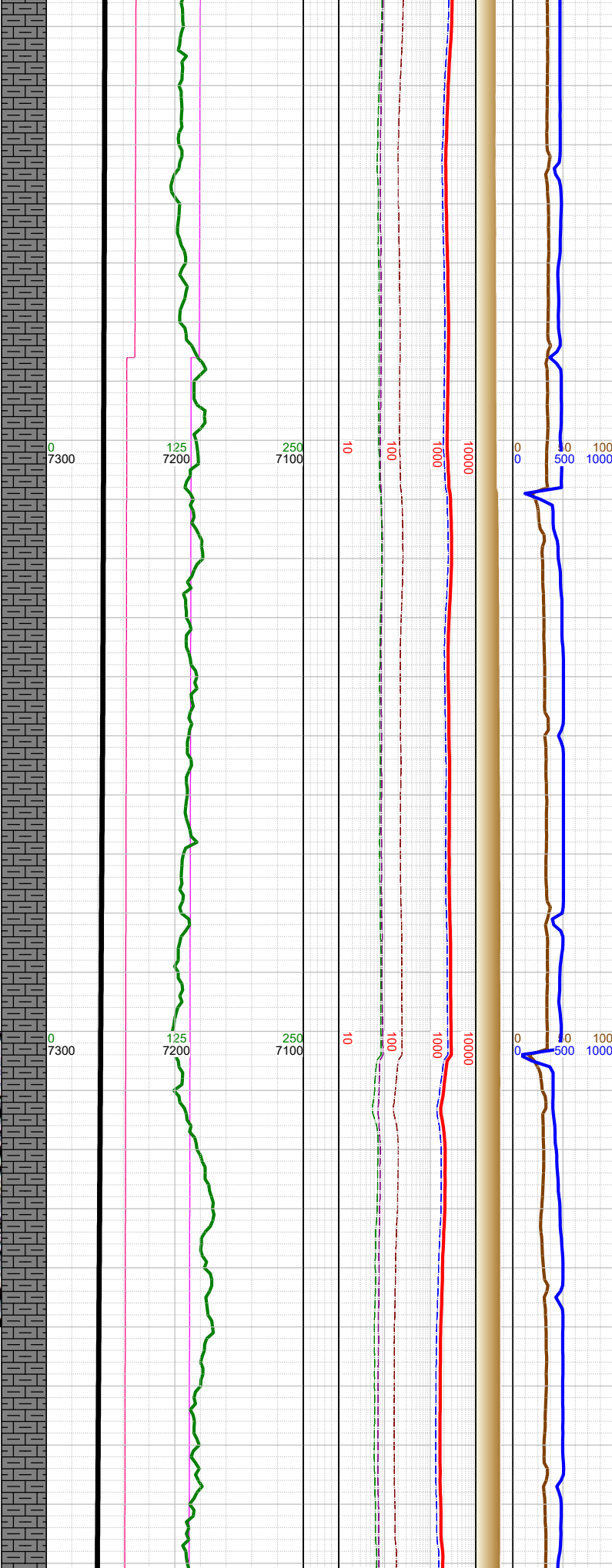
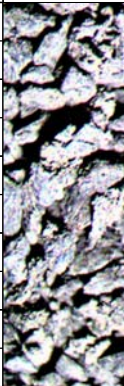
-12250 MARL: dk gy-blk,
sbblky-sbplty, sft-sbfrm,
mod calc, sl arg; CHK:
med-lt gy, sft-sbfrm,
sbblky, mot, v calc, rthy
lstr; tr bent; tr pyr;



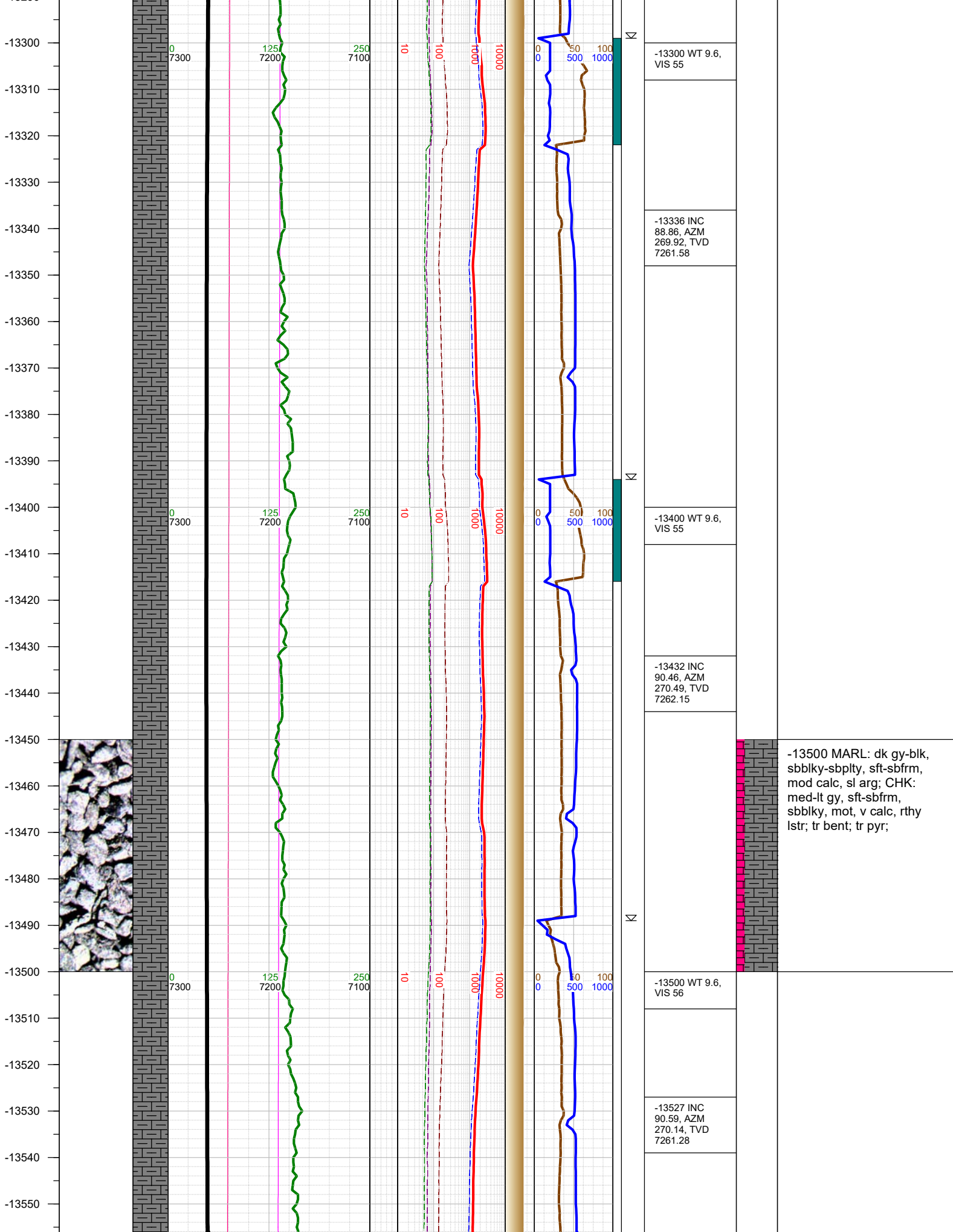


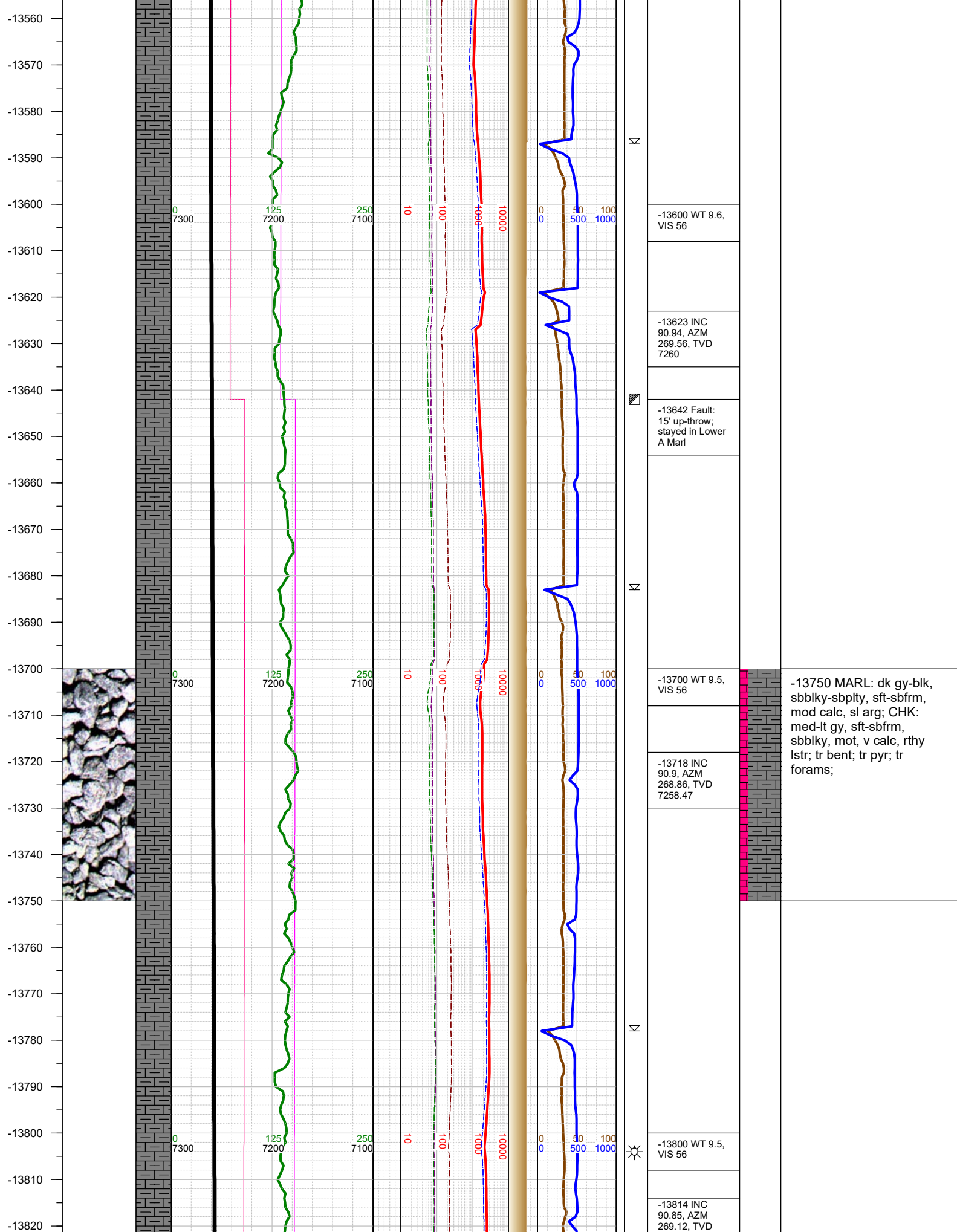


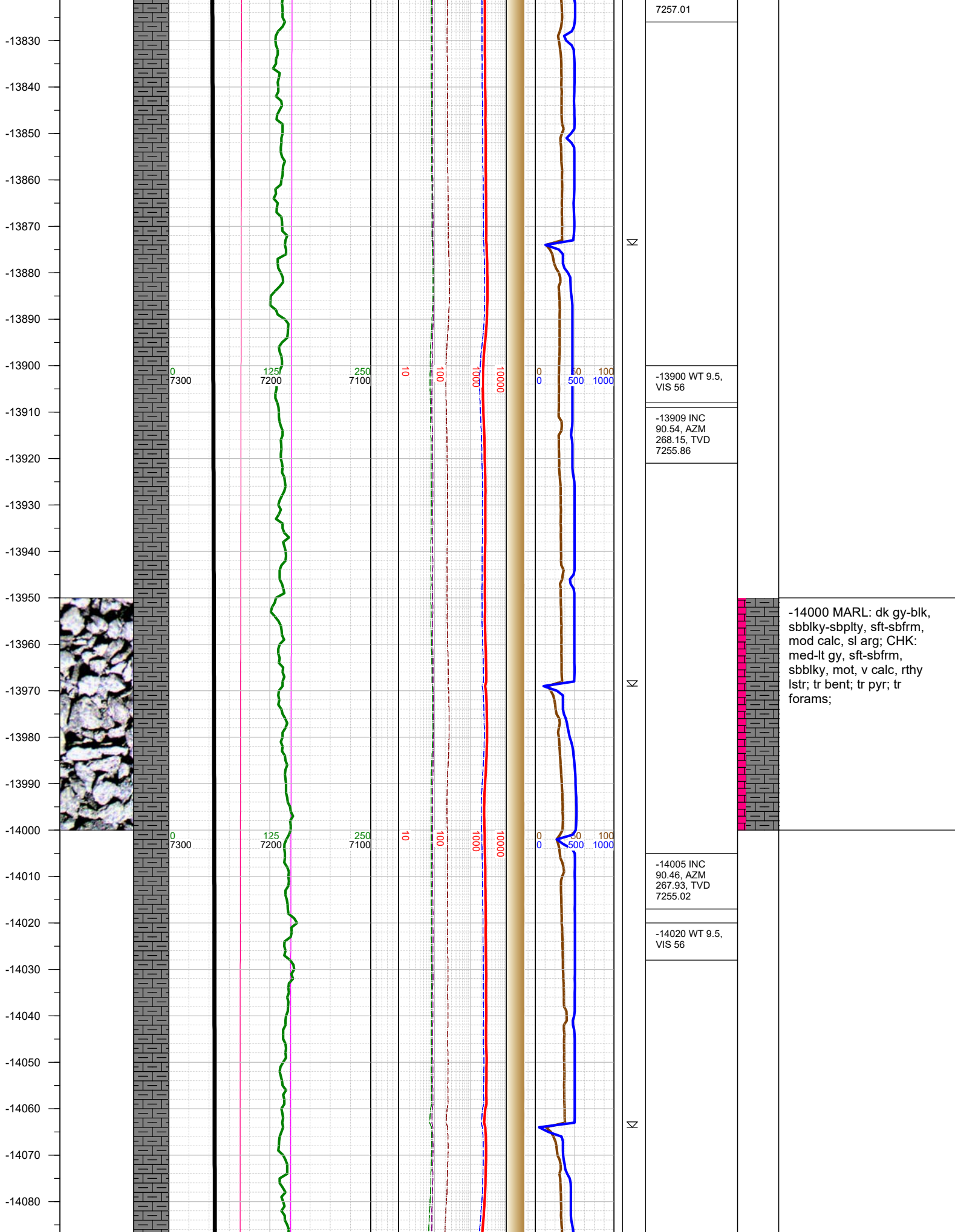
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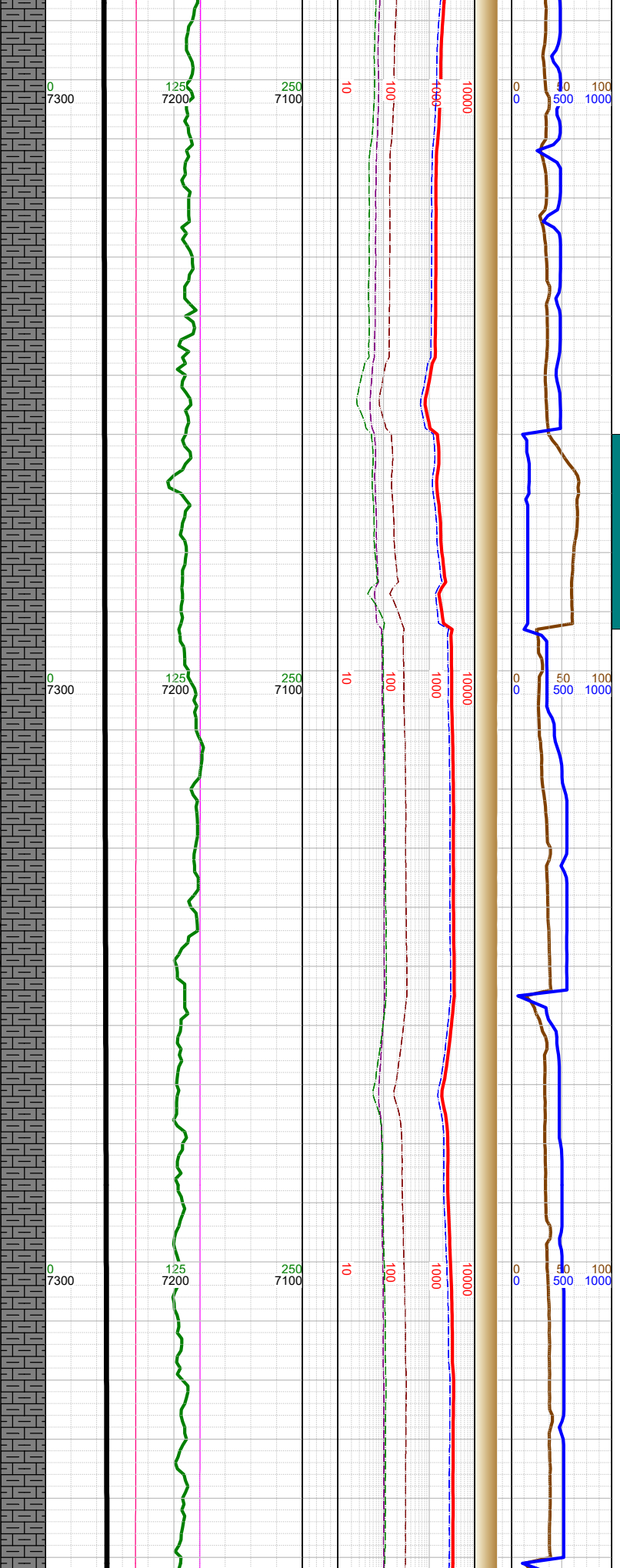
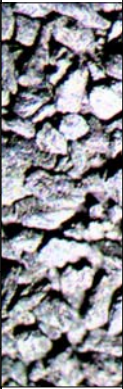
-13050 INC 89.53, AZM 270.53, TVD 7254.71	
-13086 Fault: 6' down-throw; stayed in Lower A Marl	
-13100 WT 9.6, VIS 55	
-13146 INC 88.82, AZM 270.05, TVD 7256.09	
-13200 WT 9.6, VIS 55	-13250 MARL: dk gy-blk, sbbiky-sbplty, sft-sbfrm, mod calc, sl arg; CHK: med-lt gy, sft-sbfrm, sbbiky, mot, v calc, rthy lstr; tr bent; tr pyr;
-13241 INC 87.85, AZM 269.12, TVD 7258.86	







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-14101 INC
90.28, AZM
267.36, TVD
7254.4

-14120 WT 9.5,
VIS 56

-14196 INC
90.46, AZM
271.5, TVD
7253.78

-14210 WT 9.5,
VIS 56

-14291 INC
90.77, AZM
271.59, TVD
7252.77

-14310 WT 9.5,
VIS 56

-14250 MARL: dk gy-blk,
sbbkly-sbplty, sft-sbfrm,
mod calc, sl arg; CHK:
med-lt gy, sft-sbfrm,
sbbkly, mot, v calc, rthy
lstr; tr bent; tr pyr; tr
forams;

