

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Livingston S19-25-4N**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 901

API #: 05-014-20756

LAT/LONG: 39.978563, -105.039929
SURFACE HOLE: NWSE S7-T1S-R68W, 2332' FSL, 1474' FEL
BOTTOM HOLE: S19-T1S-R68W, 460' FSL, 1301' FWL

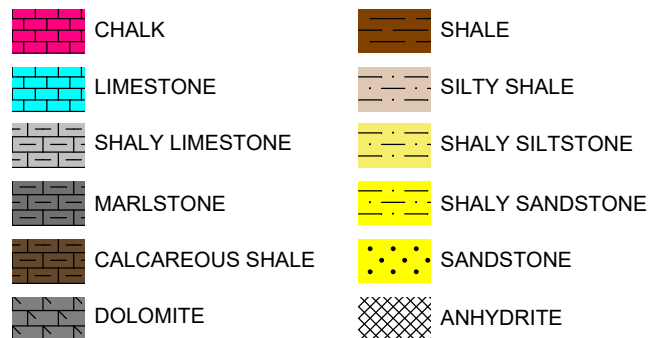


Earth Science Agency, LLC

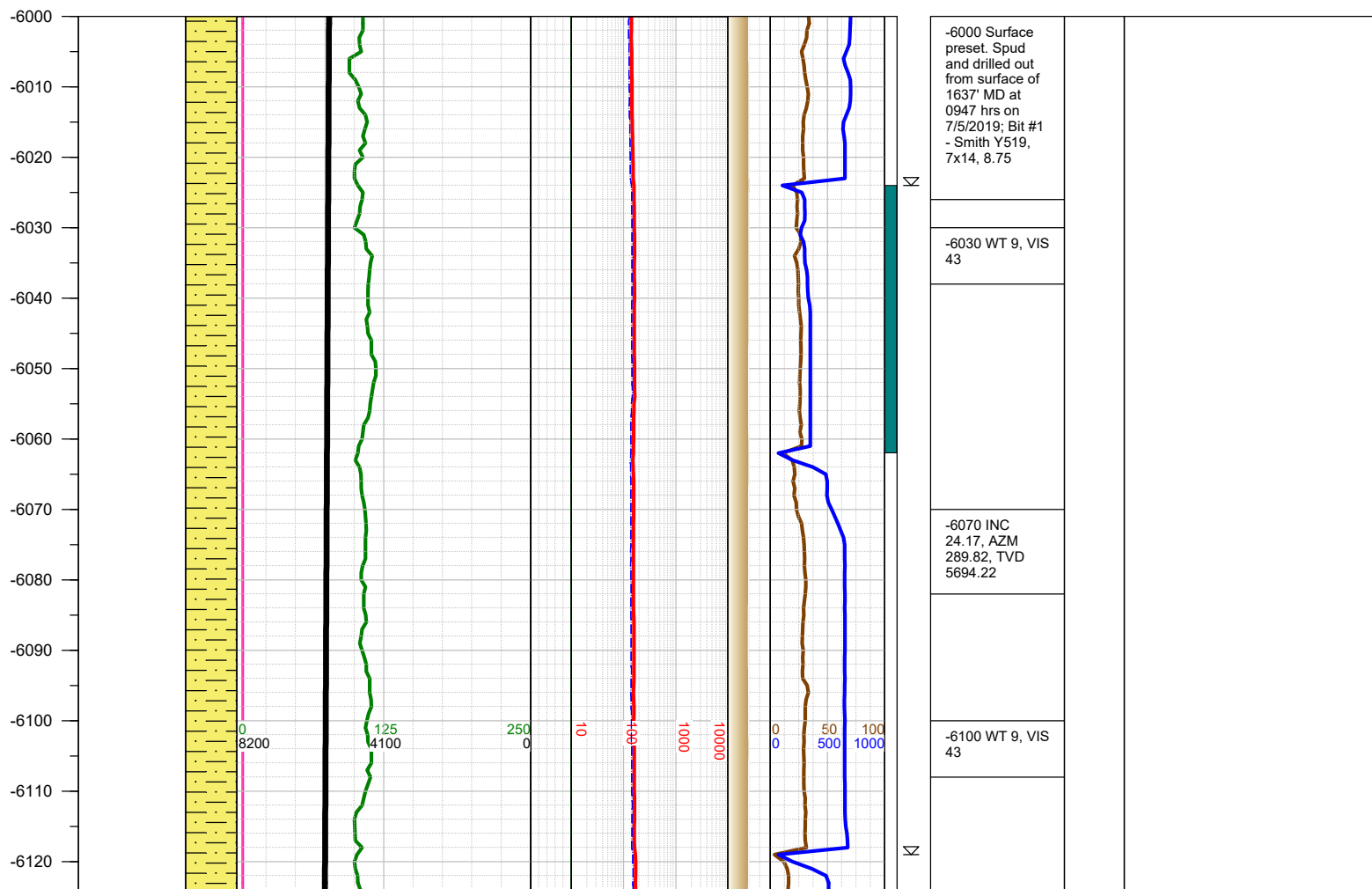
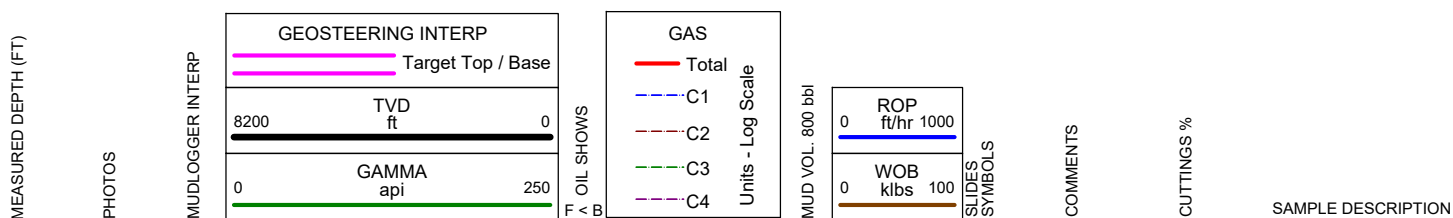
COUNTY: Broomfield
STATE: Colorado
GROUND ELEVATION: 5318'
KELLY BUSHING: 5347'
DRILLING FLUID: OBM
TVD VS. MD: 8110' / 21250'
SPUD DATE: July 5, 2019
TD DATE: July 9, 2019

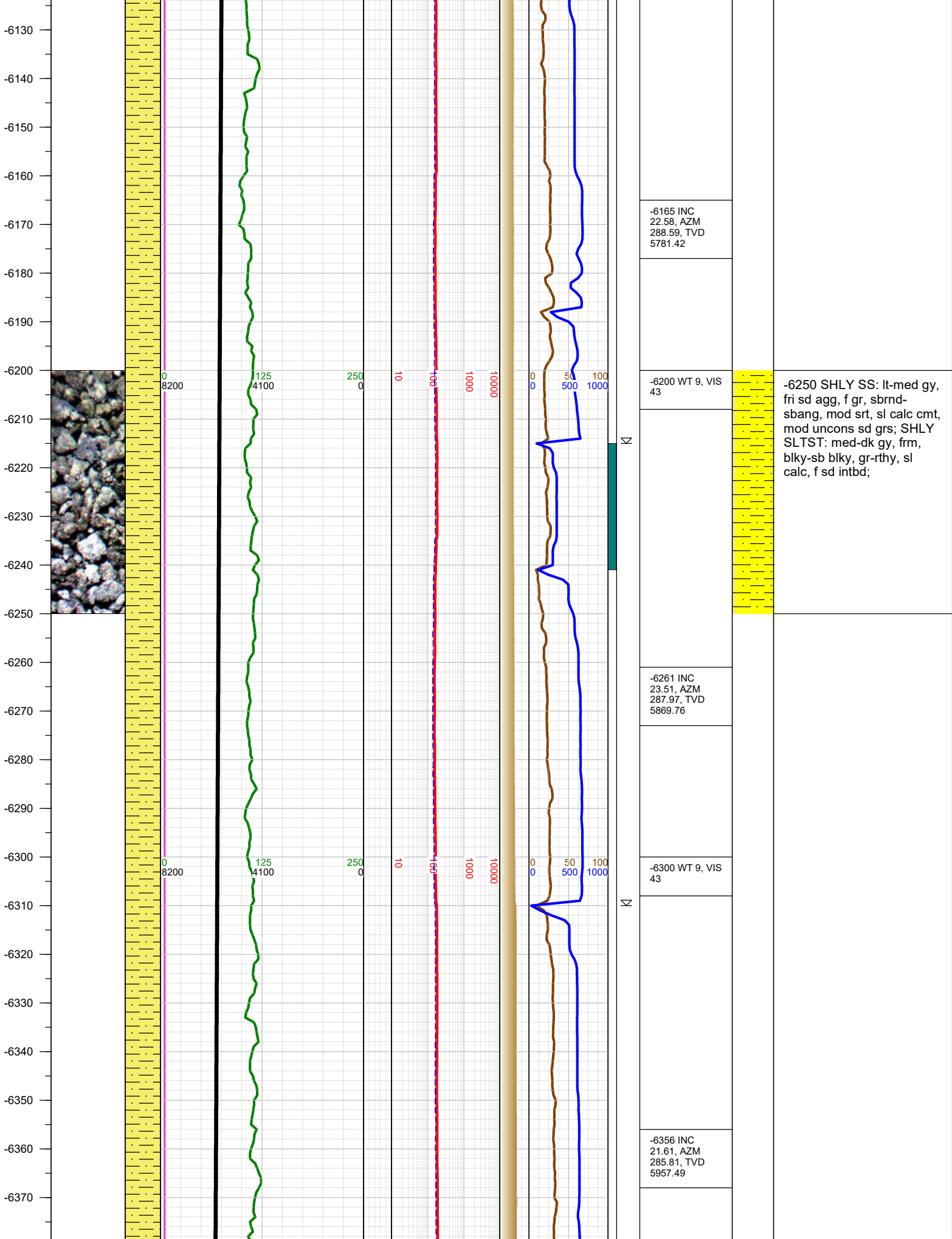
DEPTHS LOGGED: 6000' - 21250'
DATES LOGGED: July 5, 2019 - July 9, 2019
GEOLOGISTS: Dominic Pitre, Madison Miller
SCALE: 5" = 100'

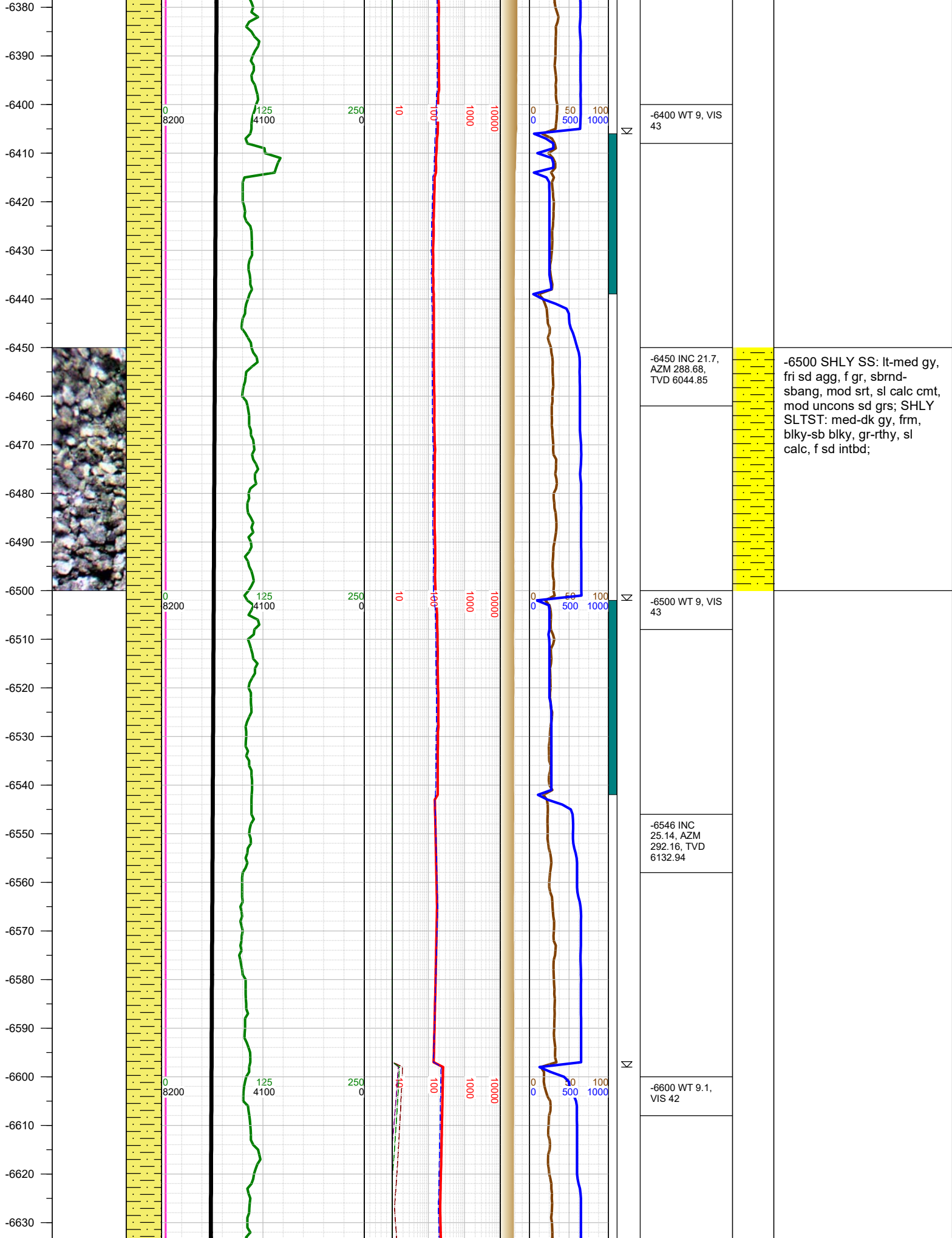
LEGEND

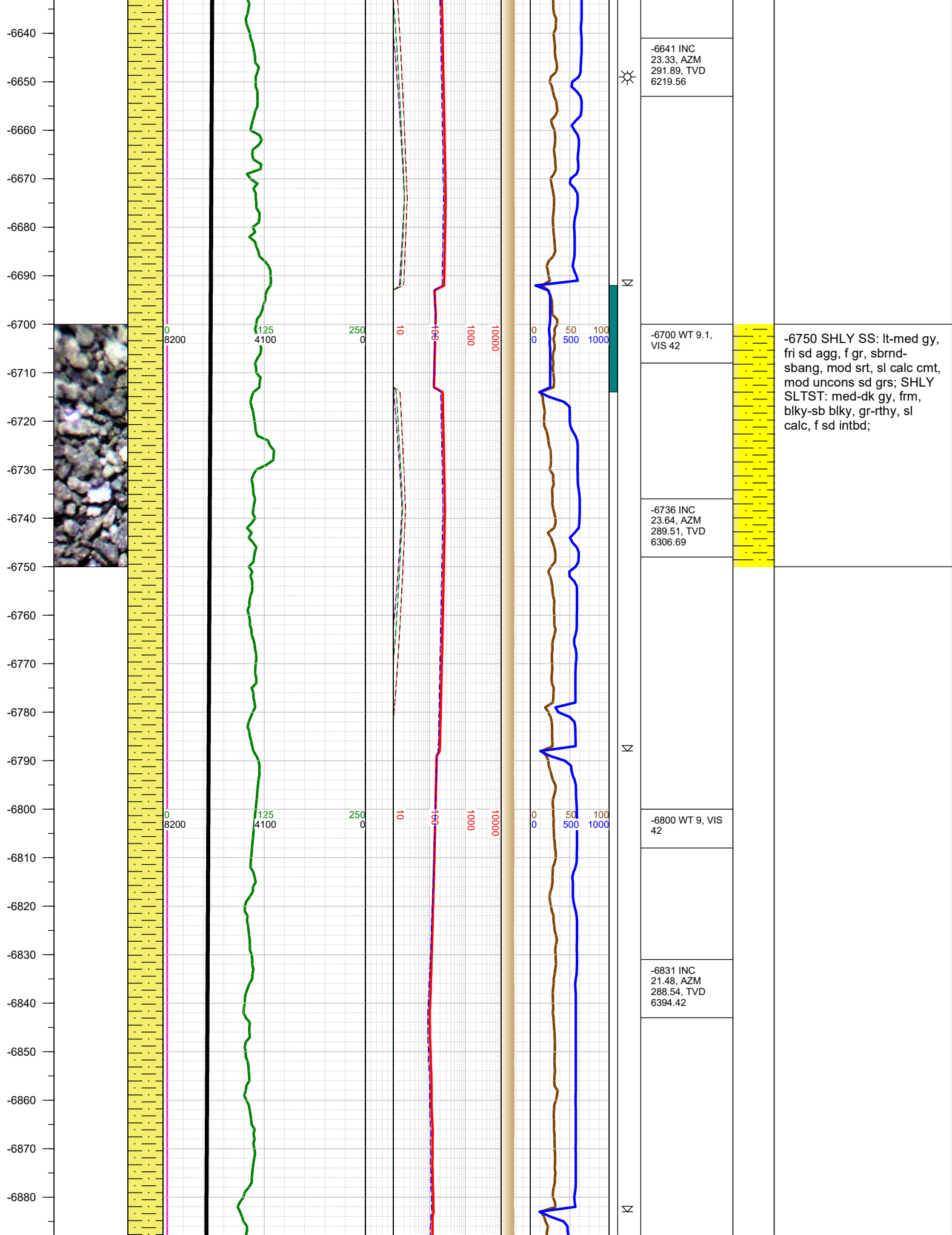


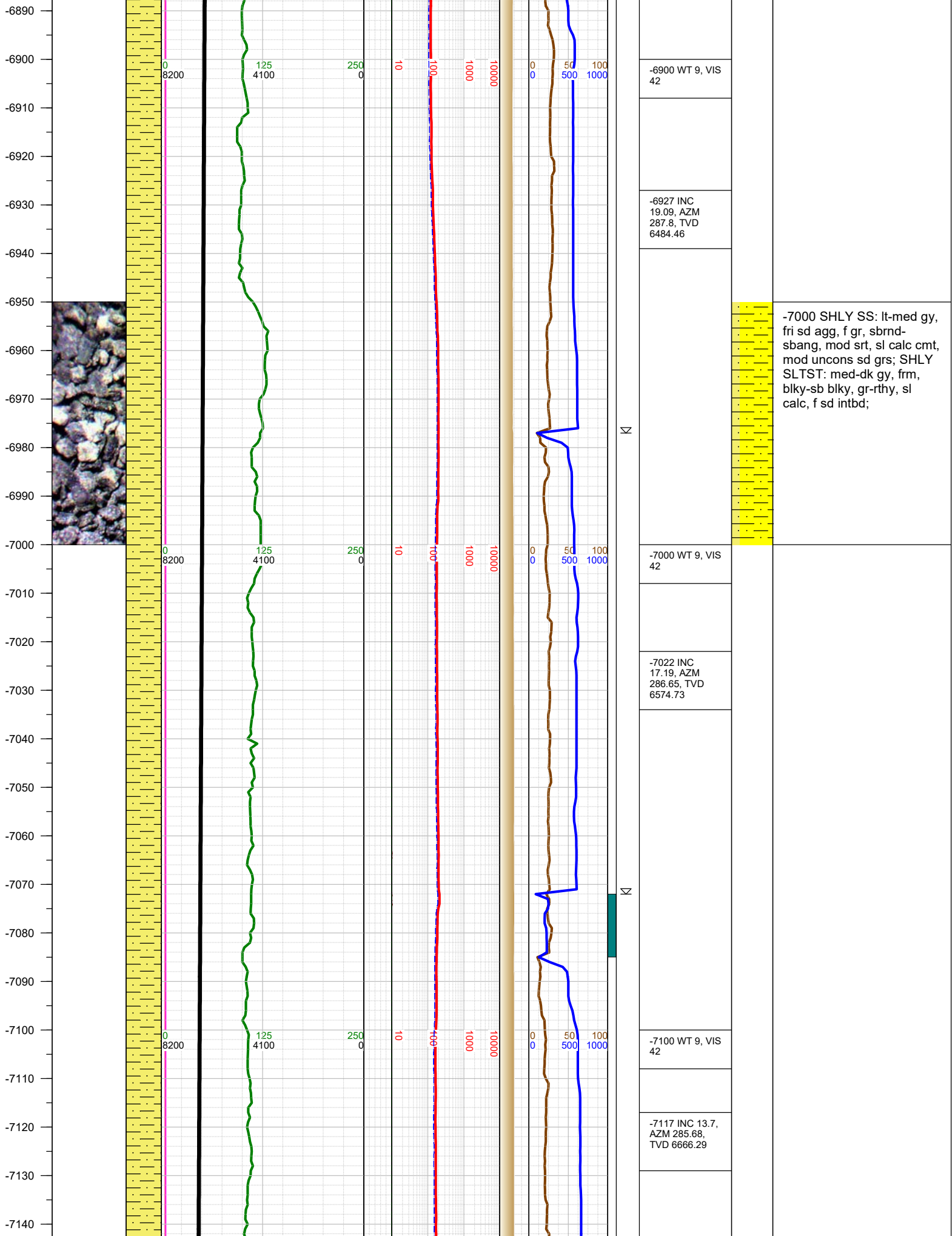
FORMATION CONNECTION MIDNIGHT NEW BIT GAS SHOW FAULT

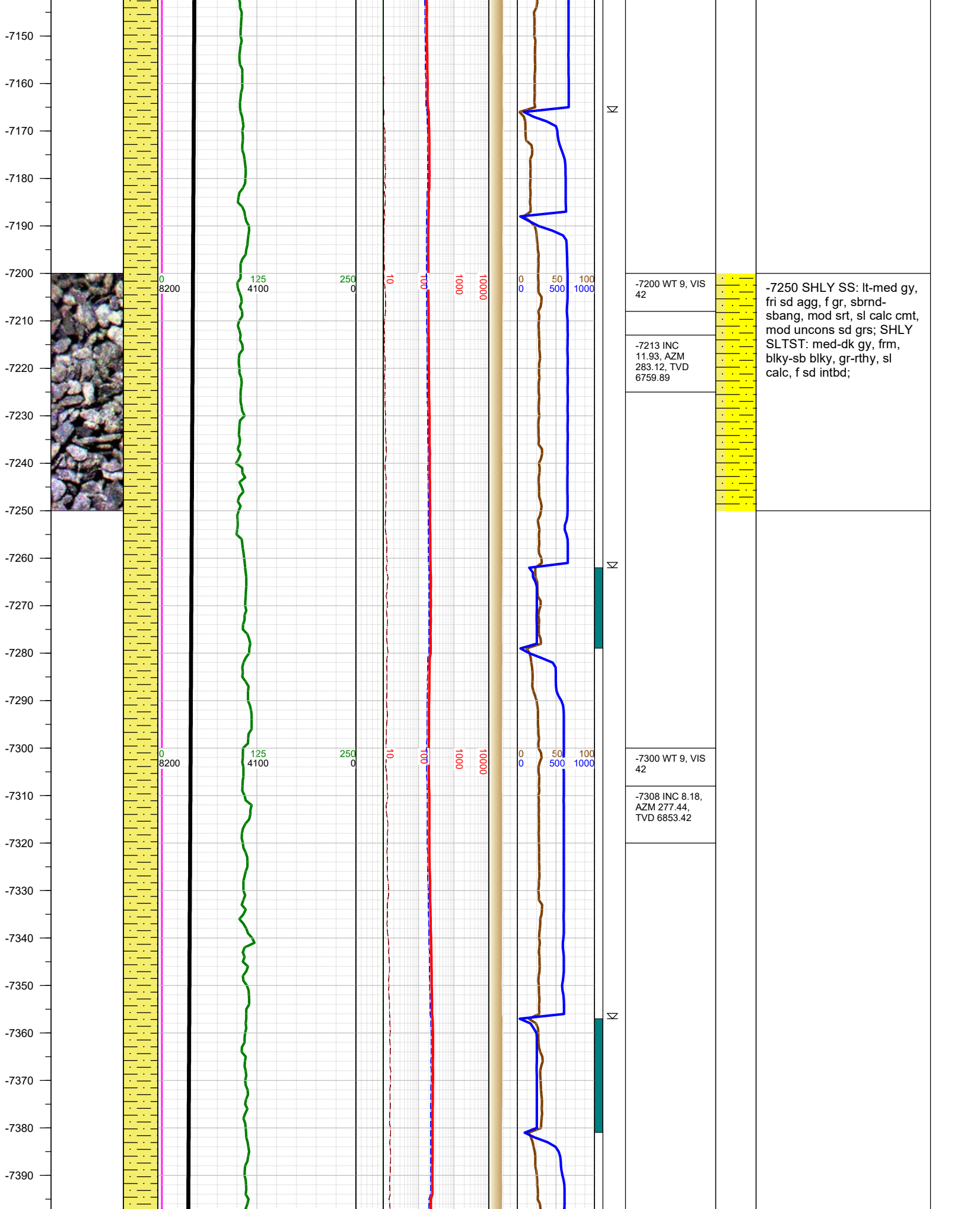


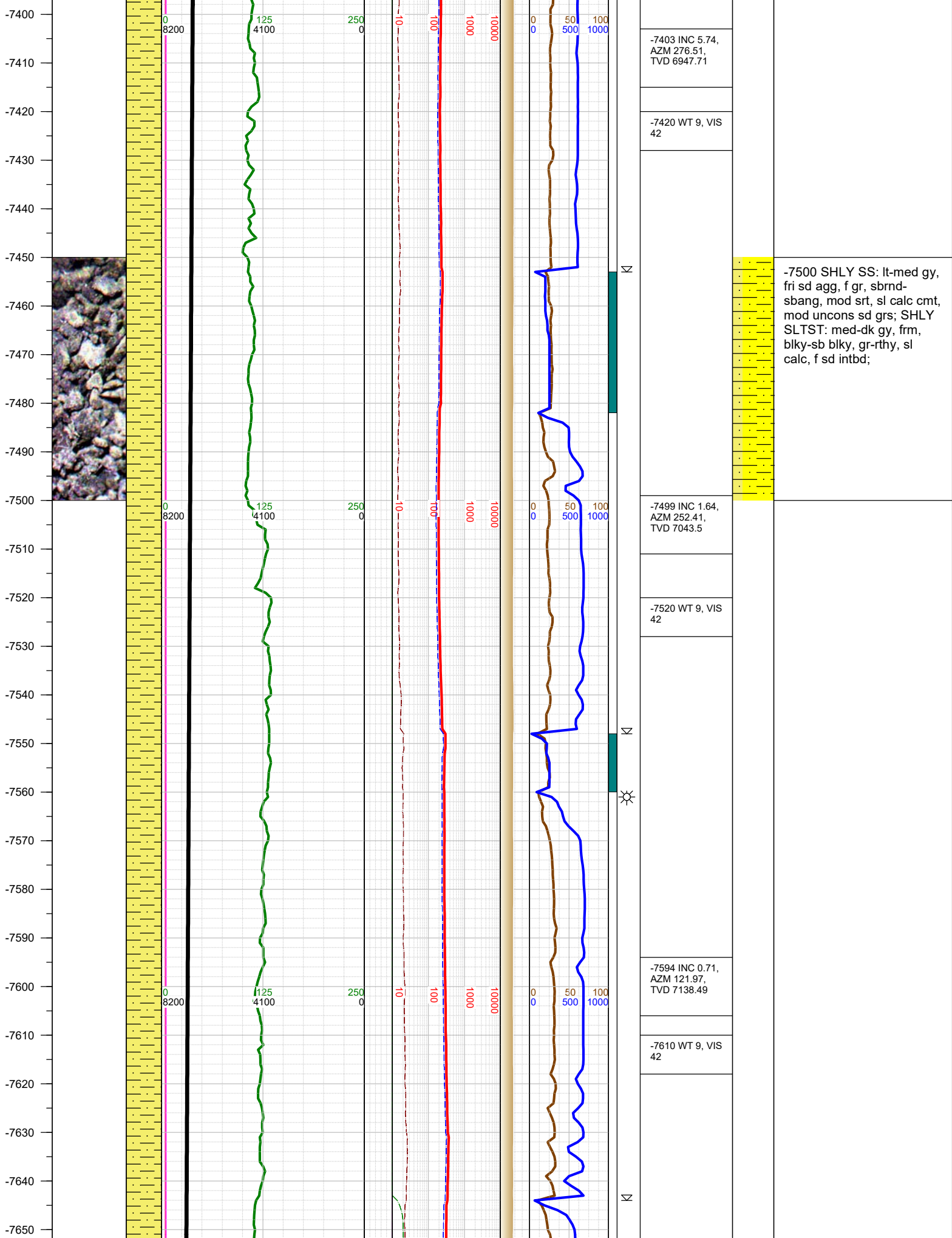


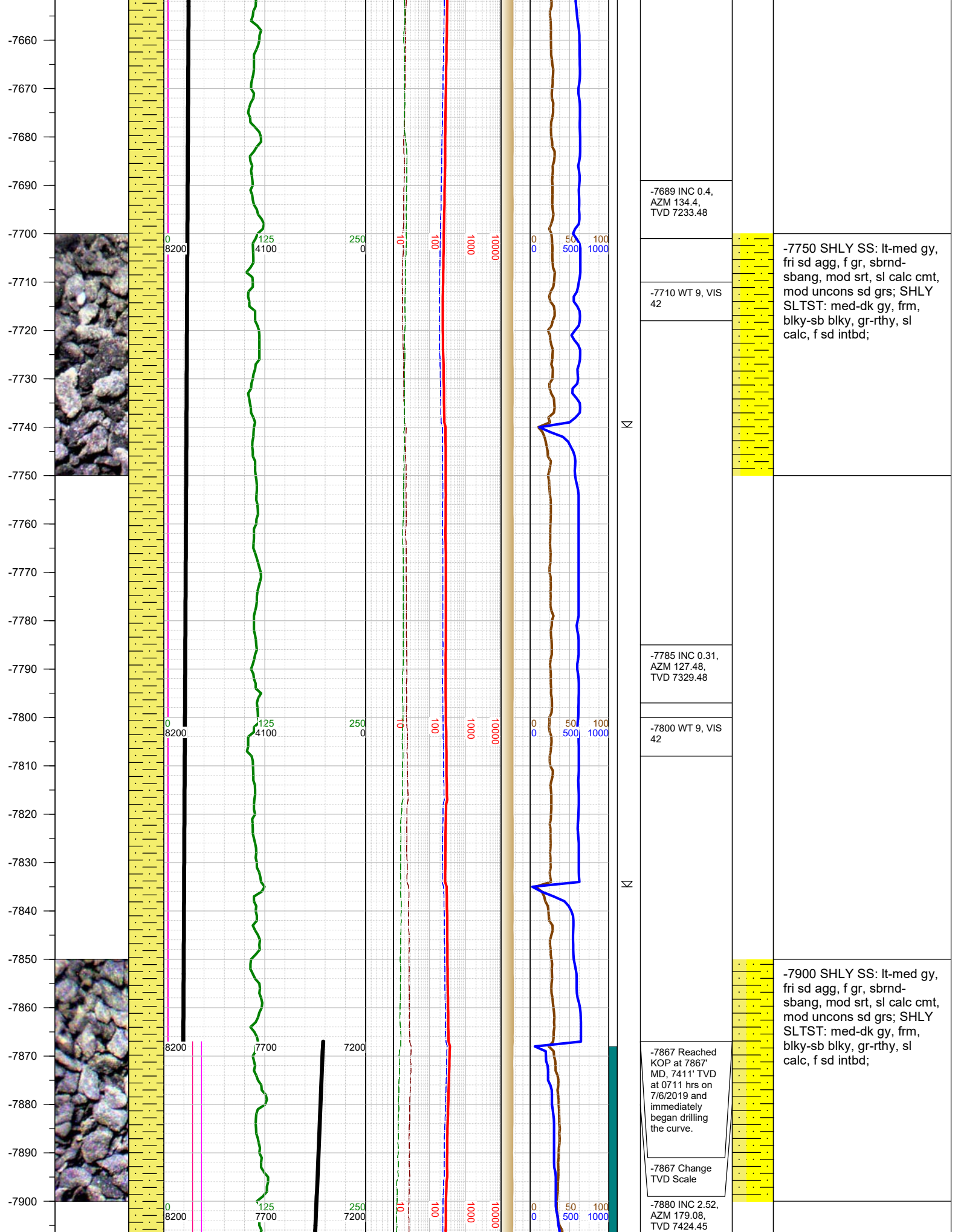


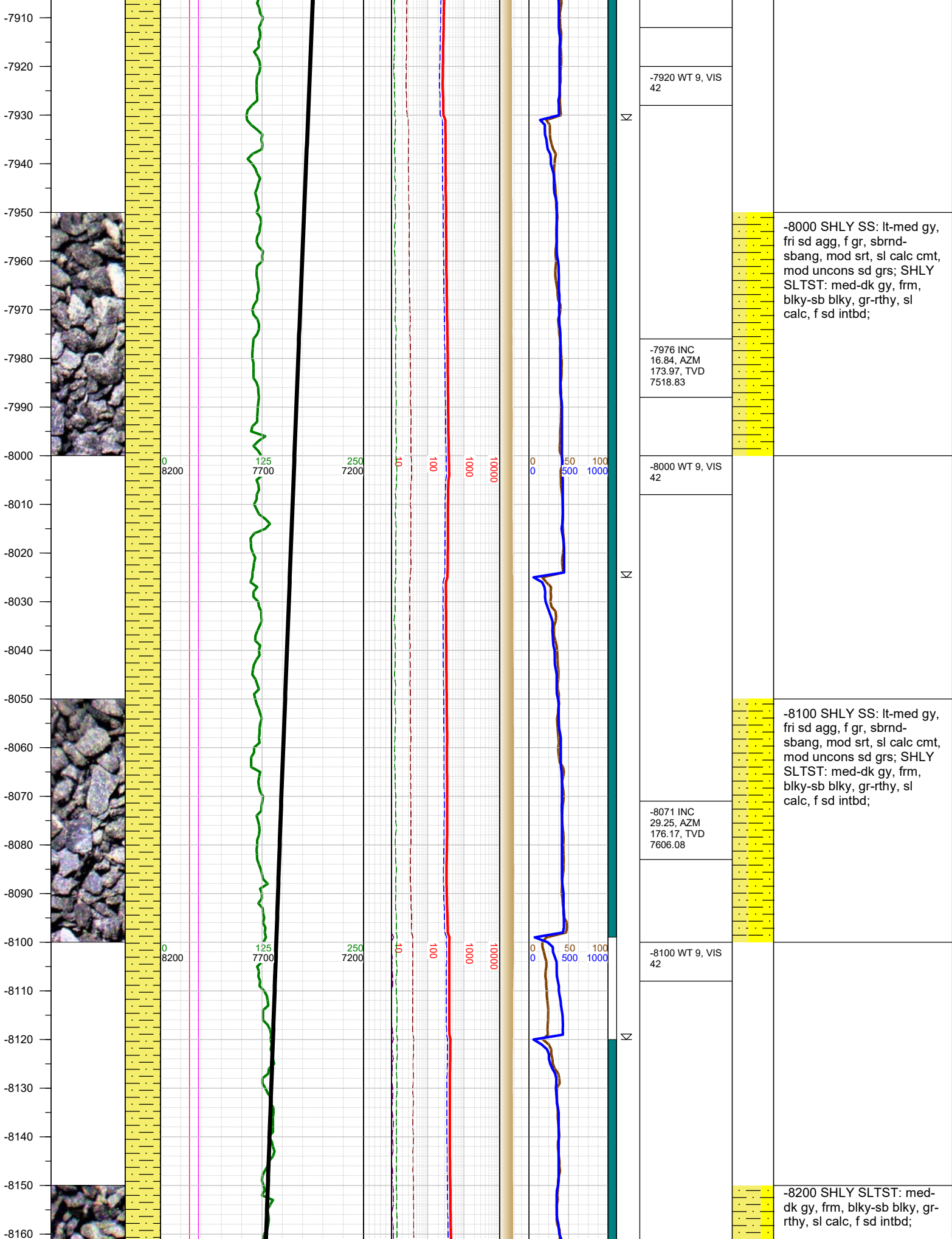


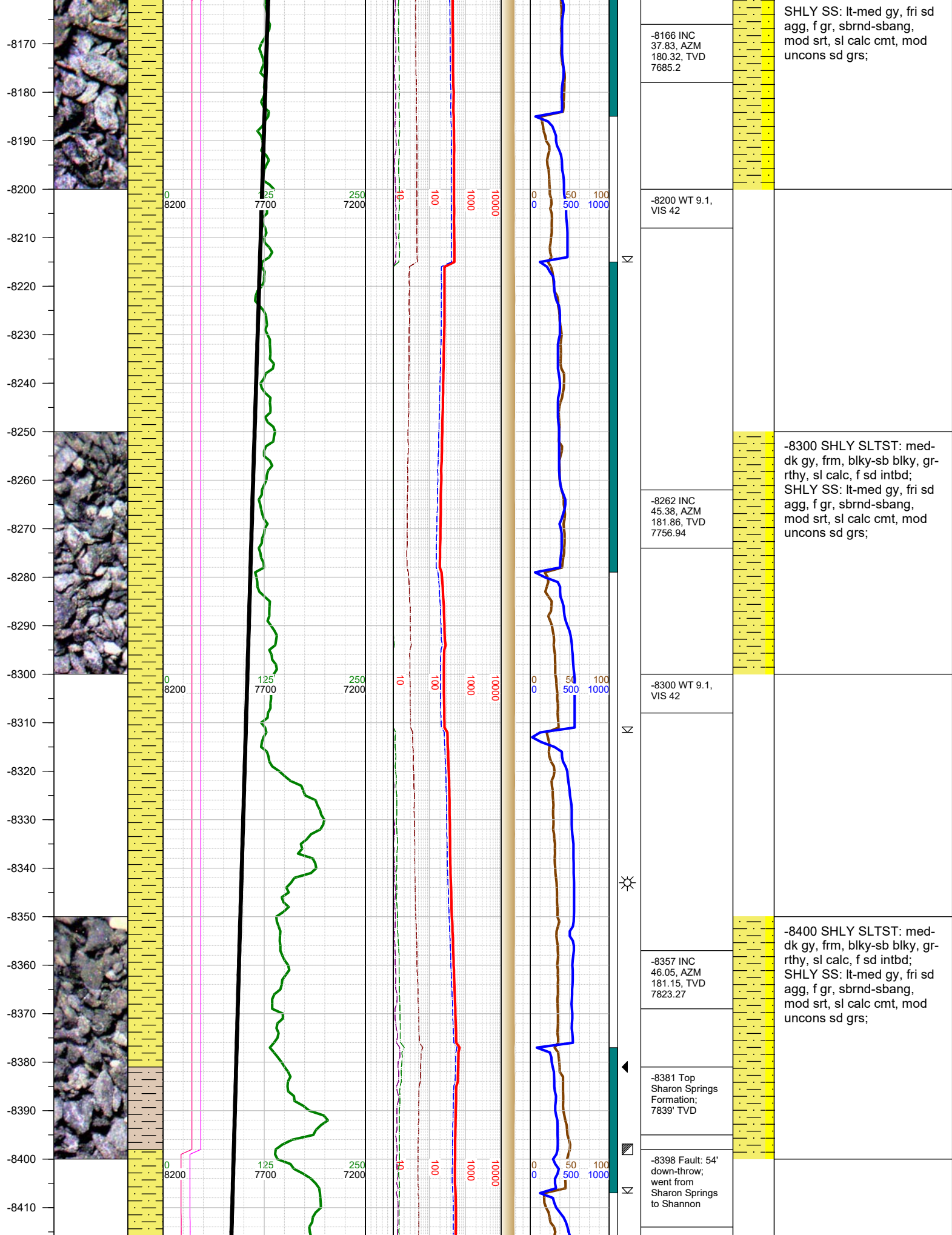


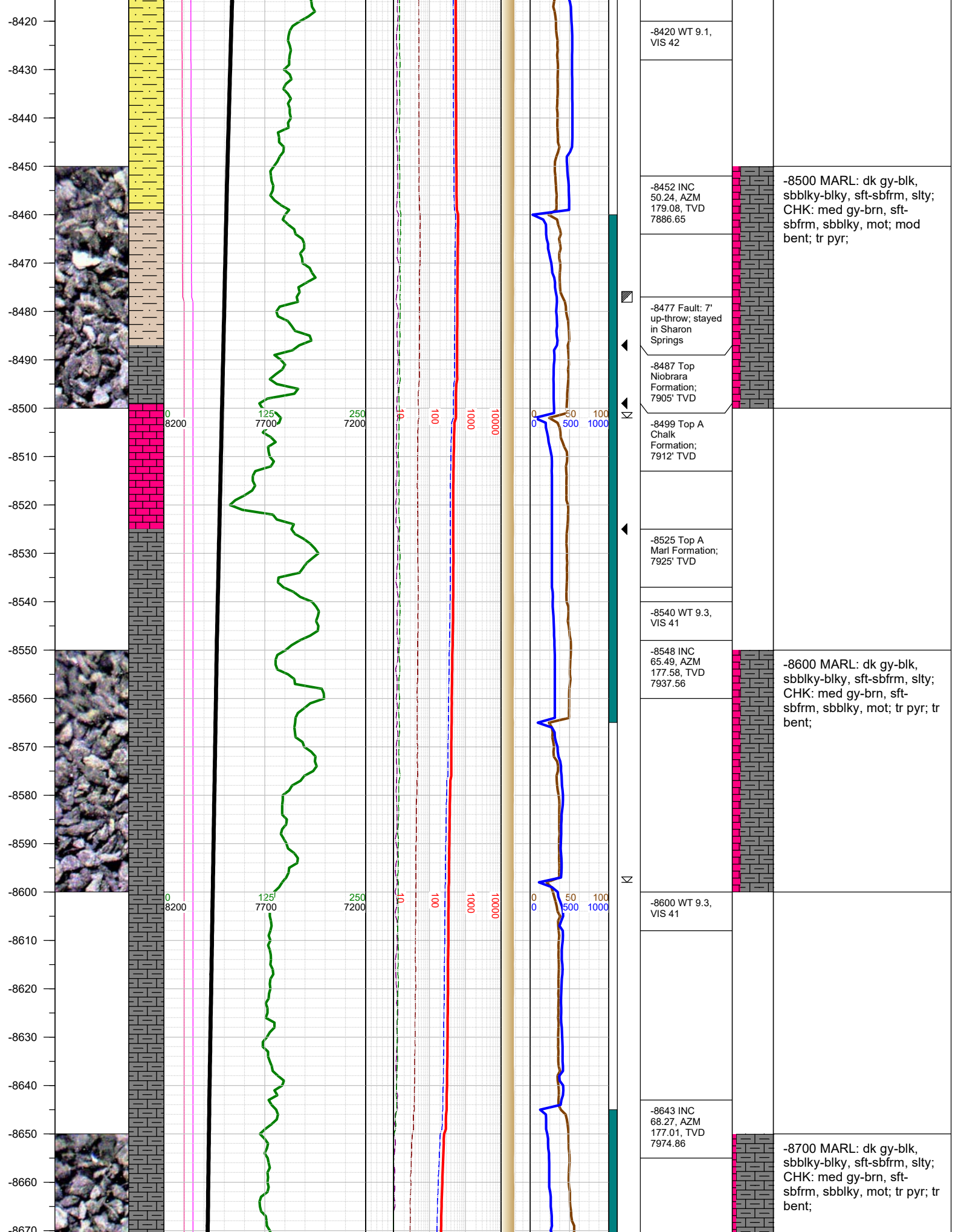


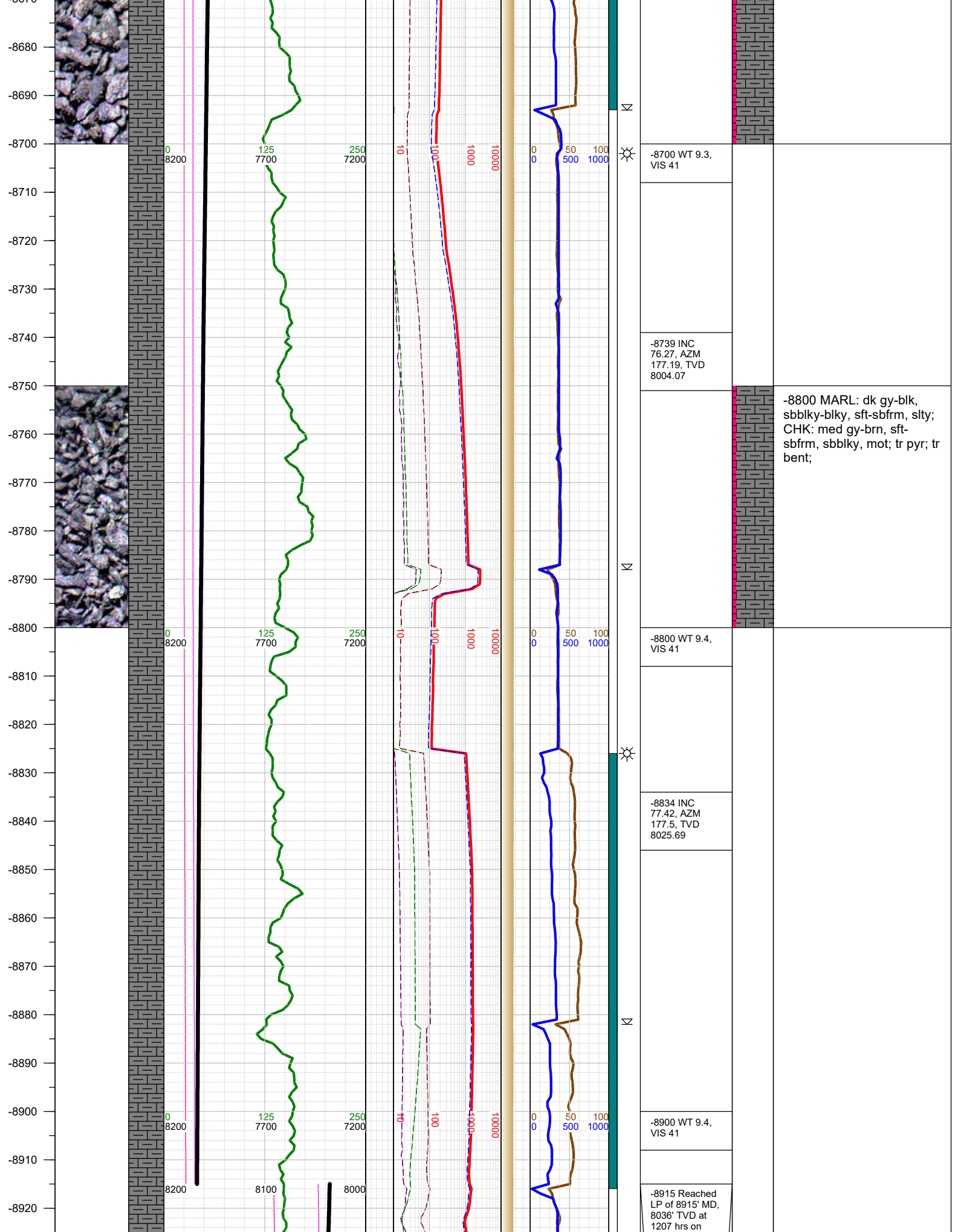


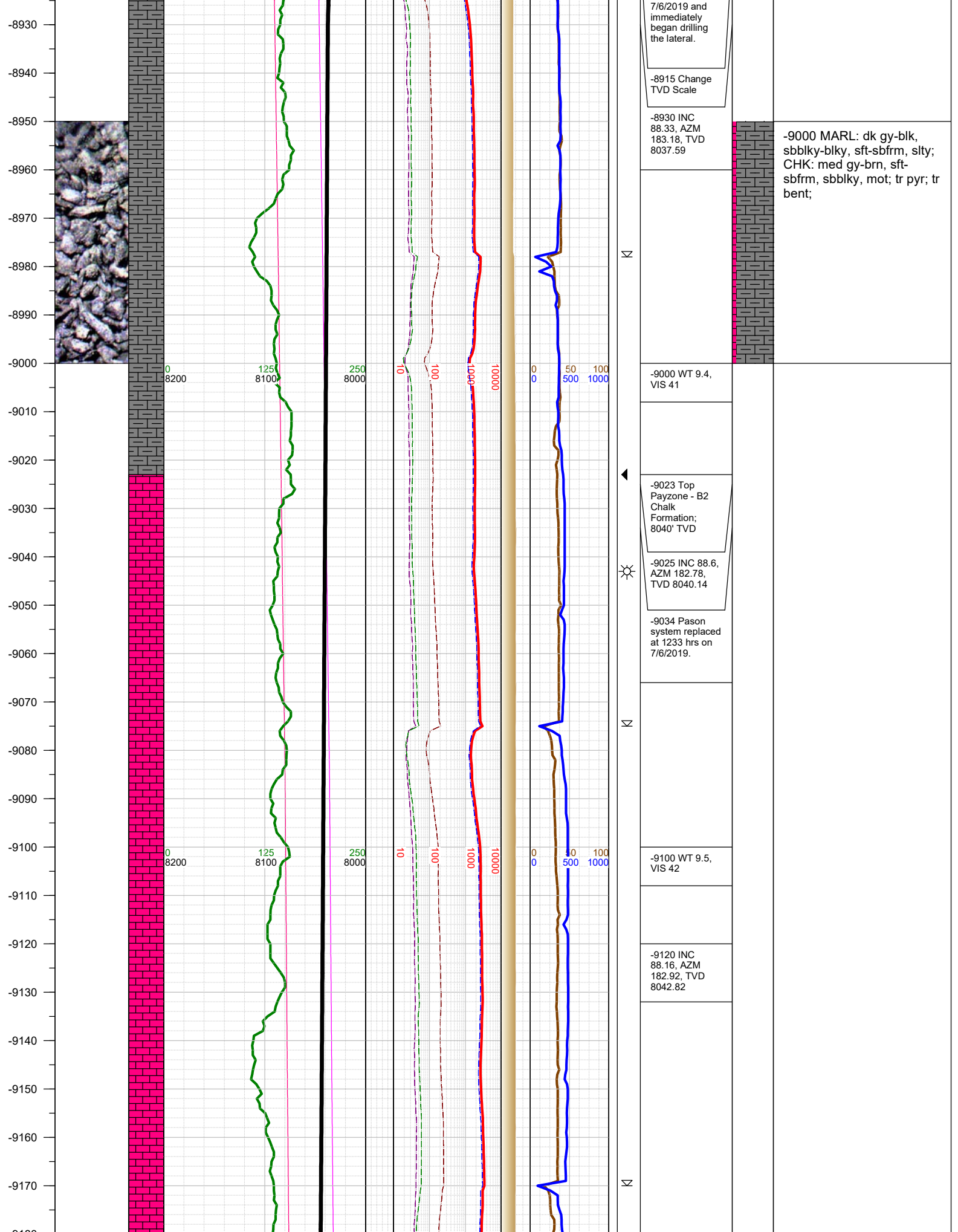


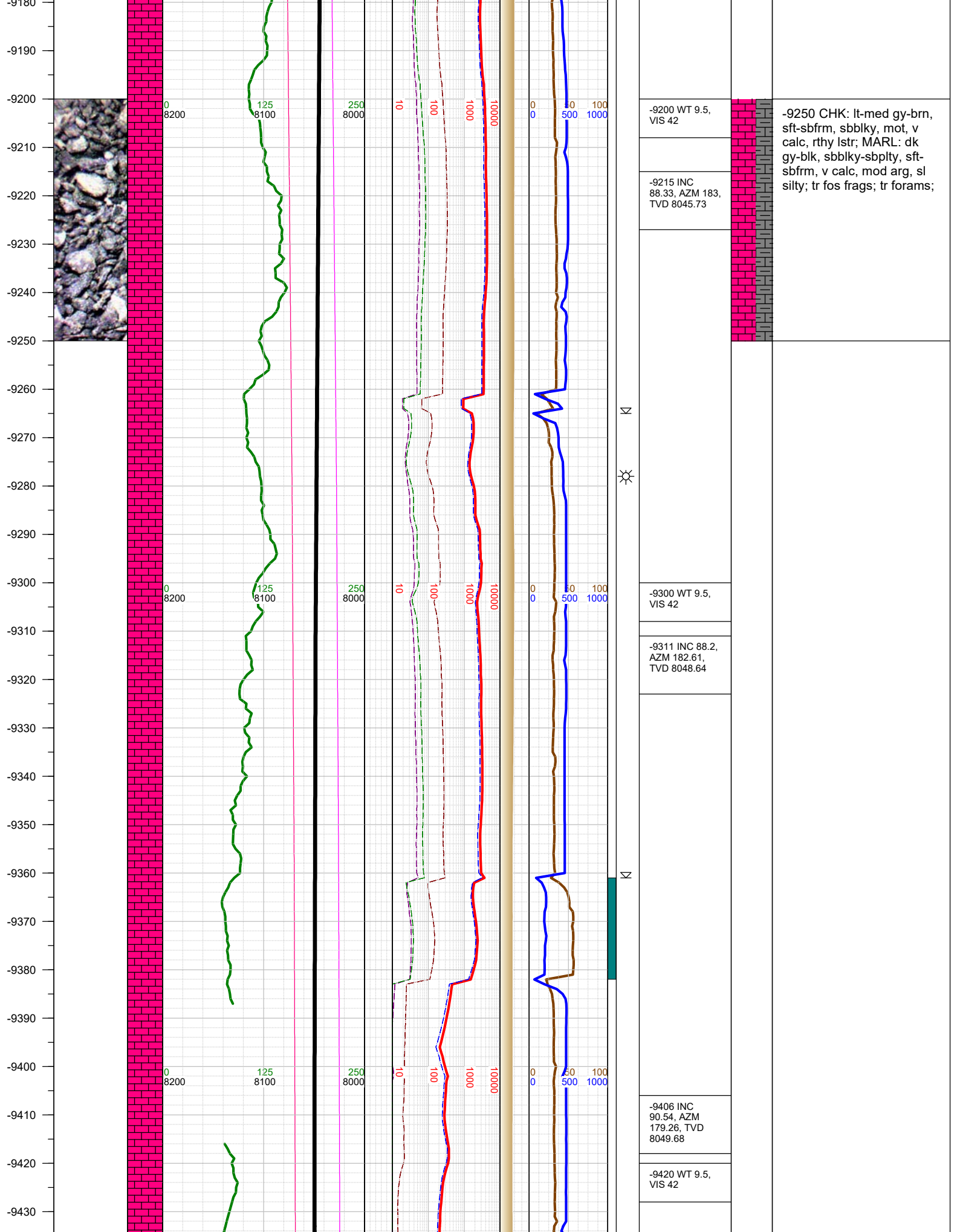


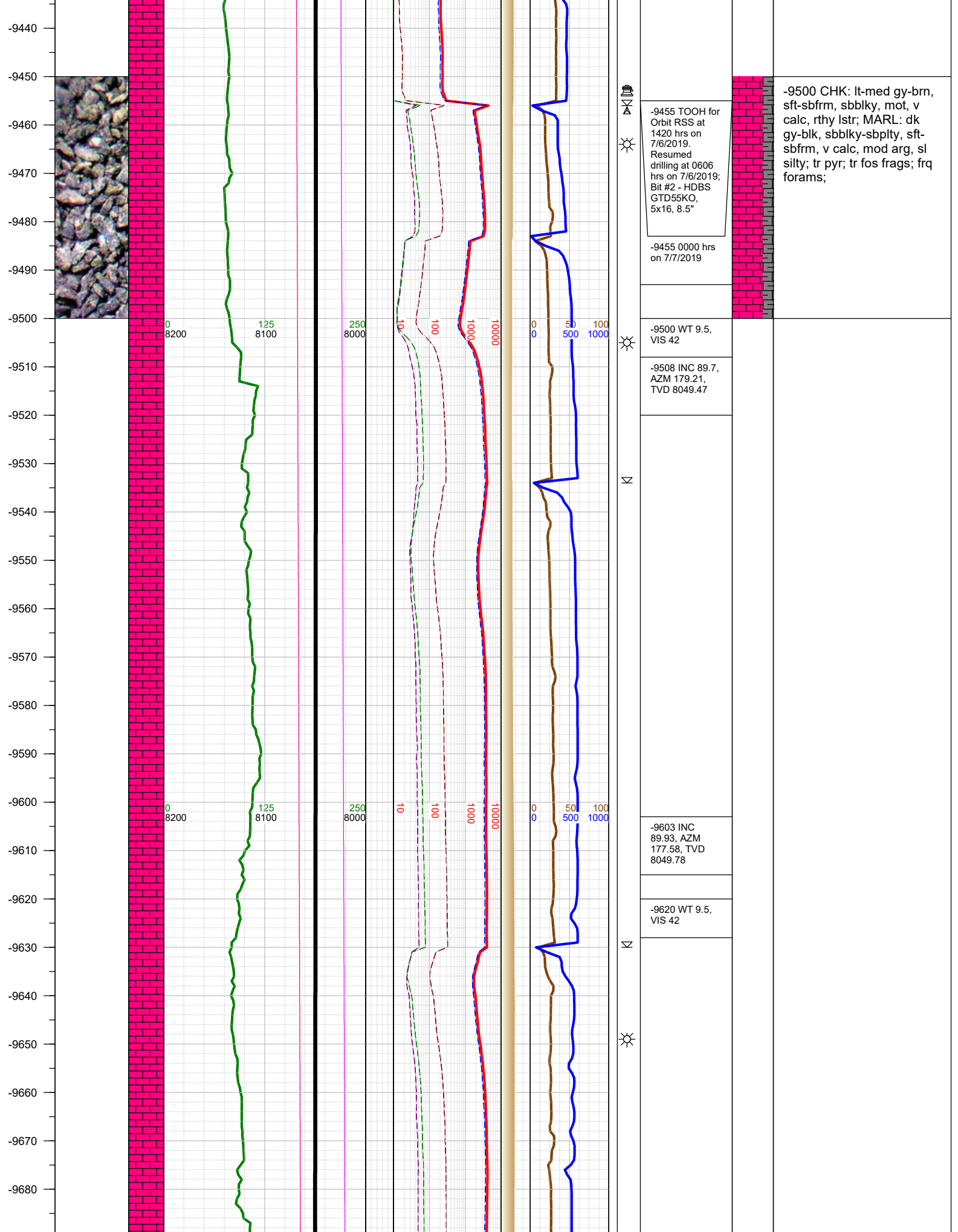


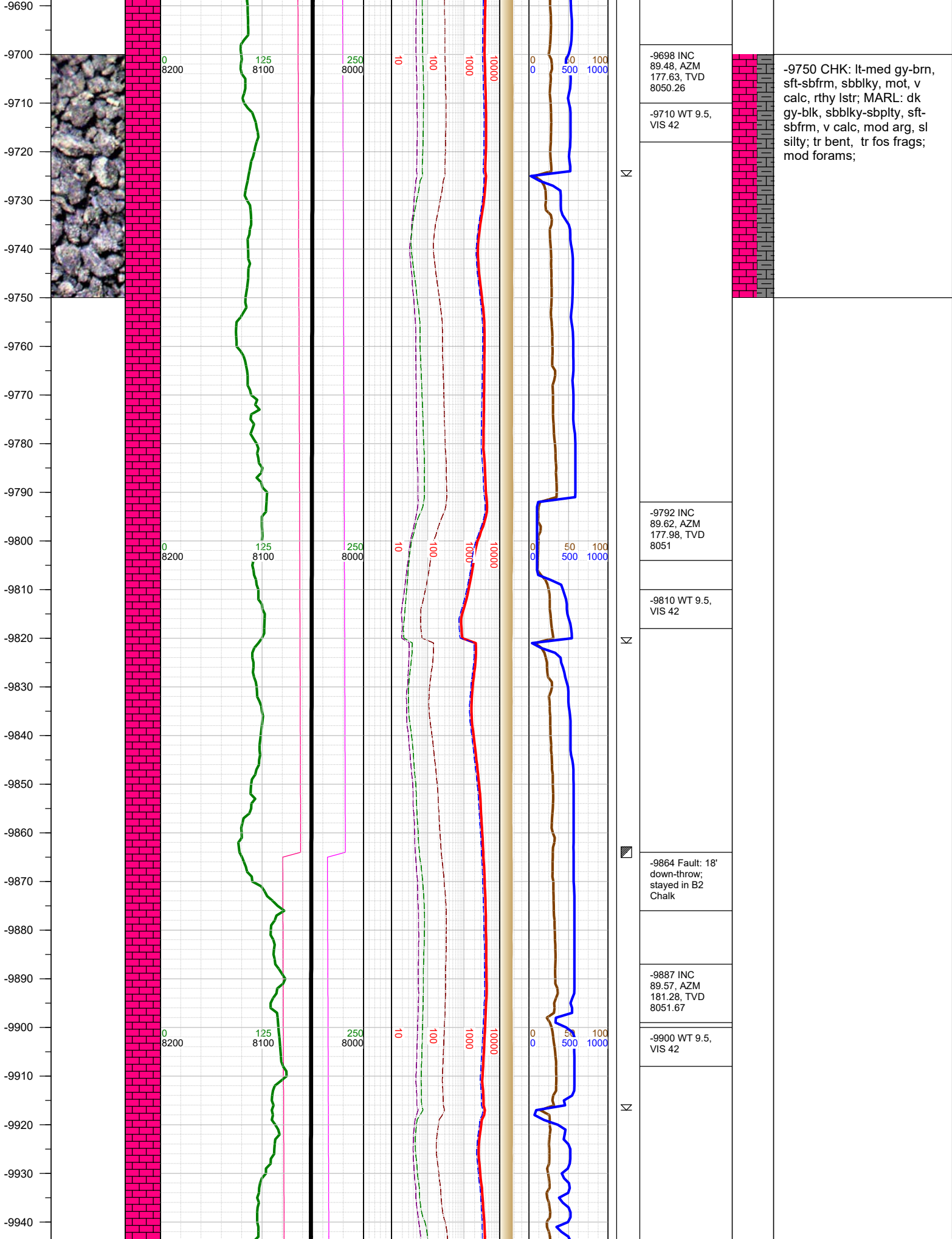


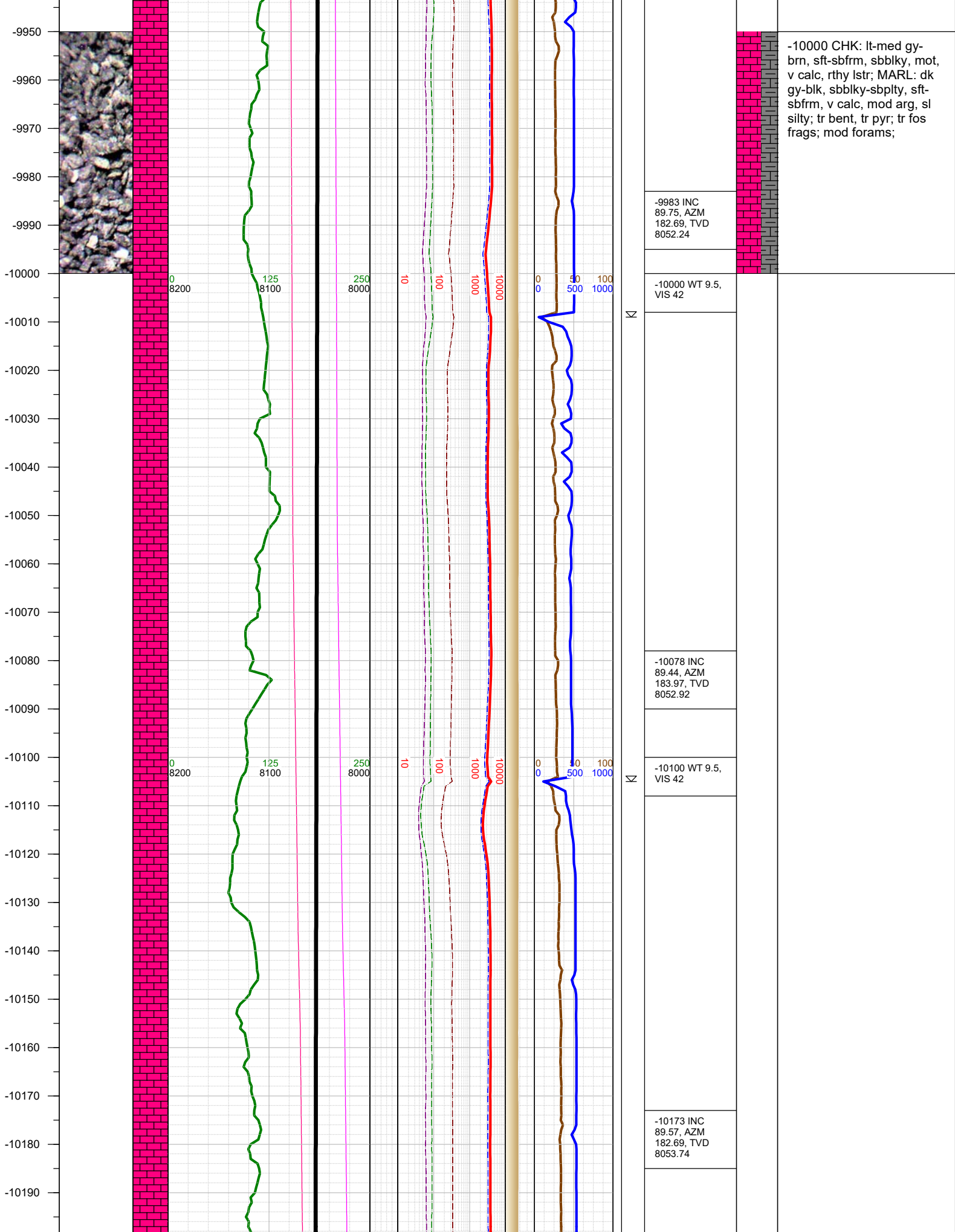


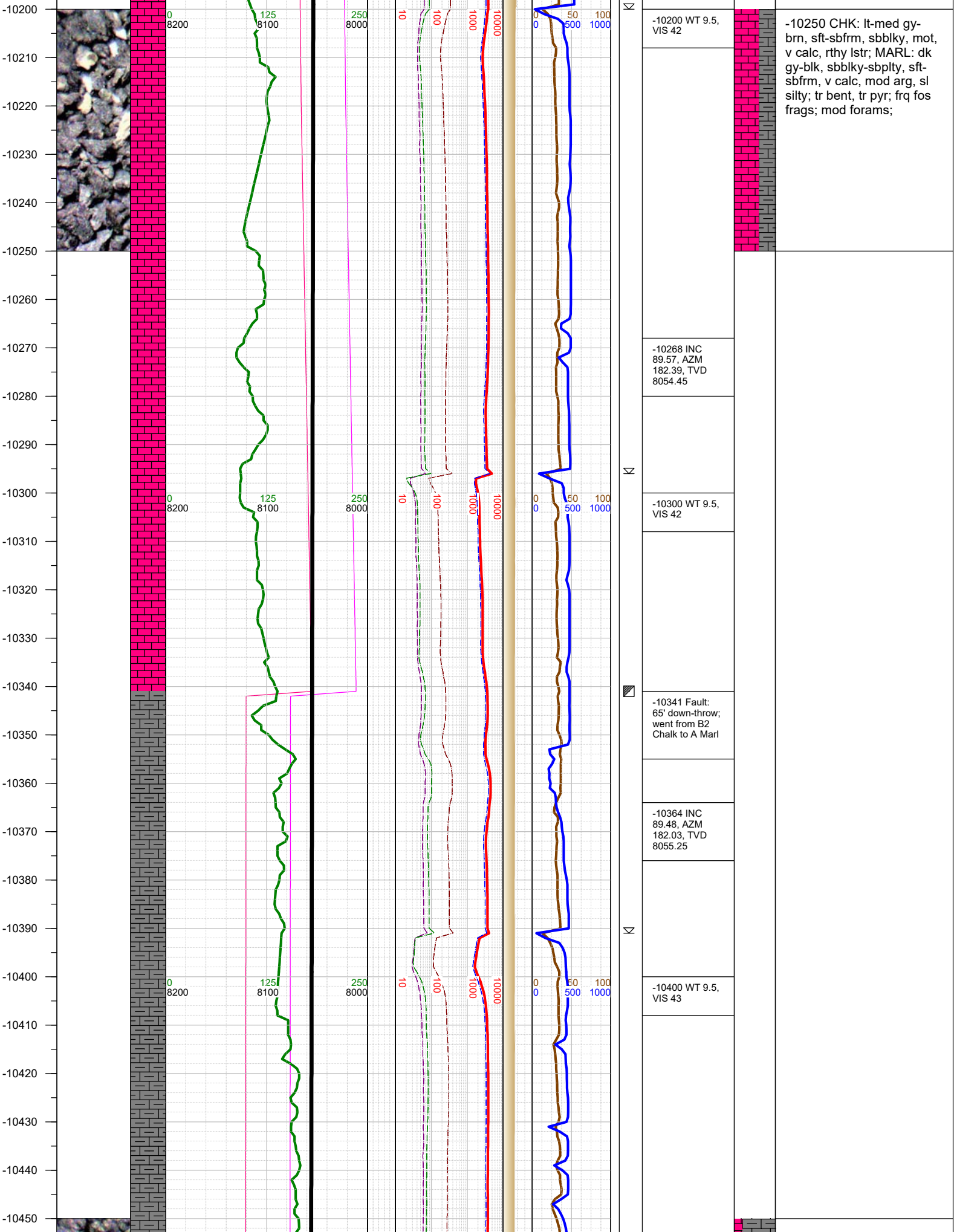


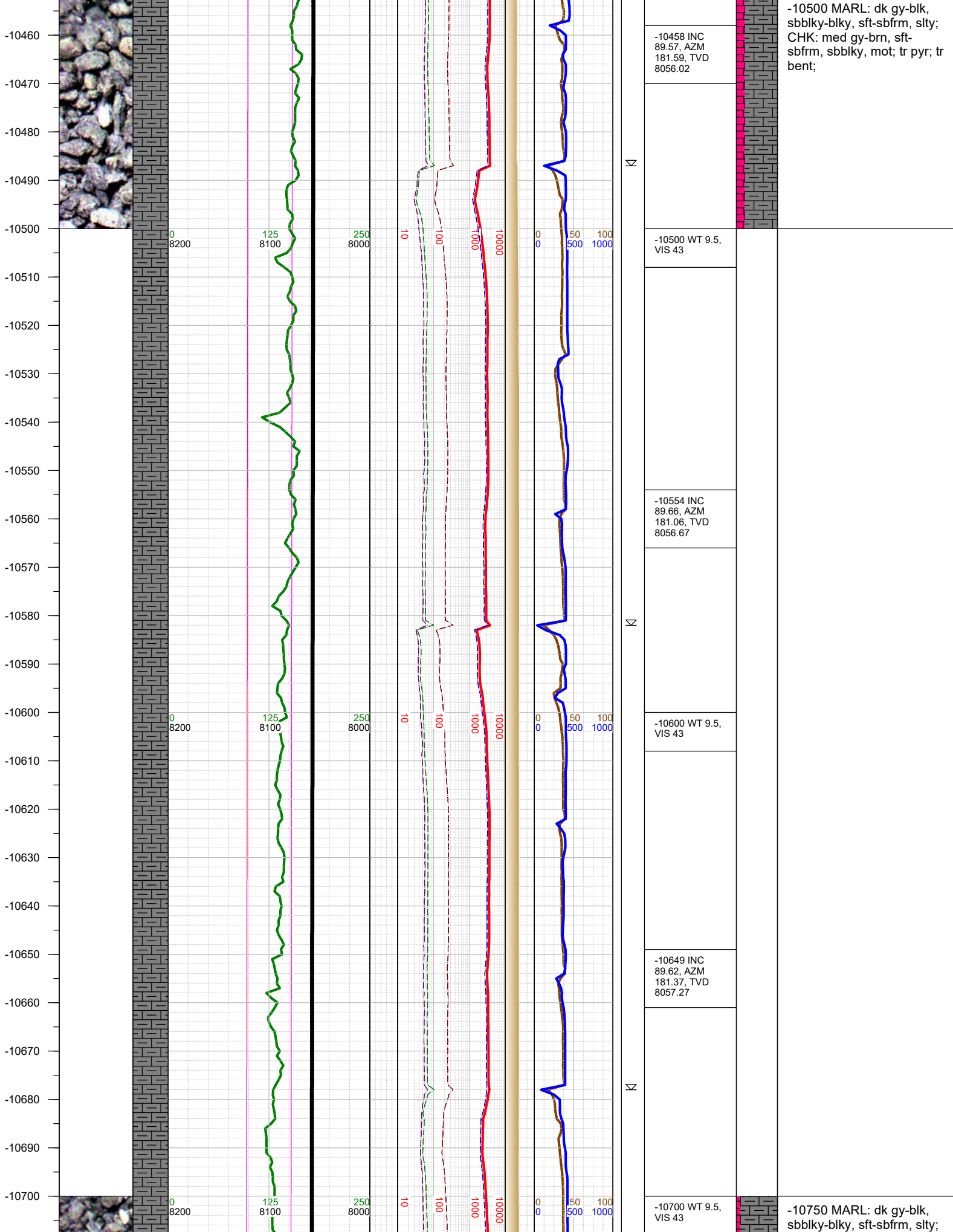


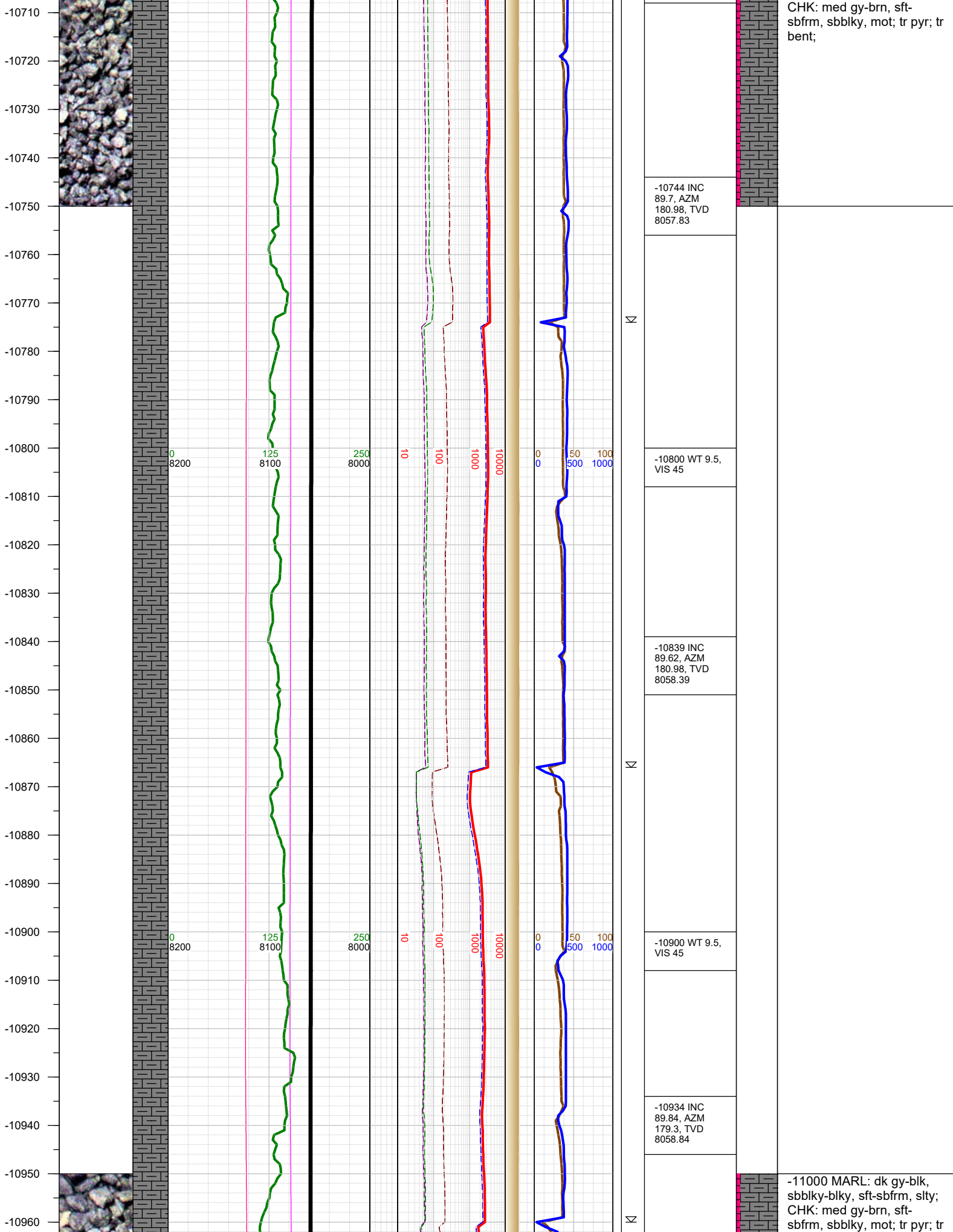


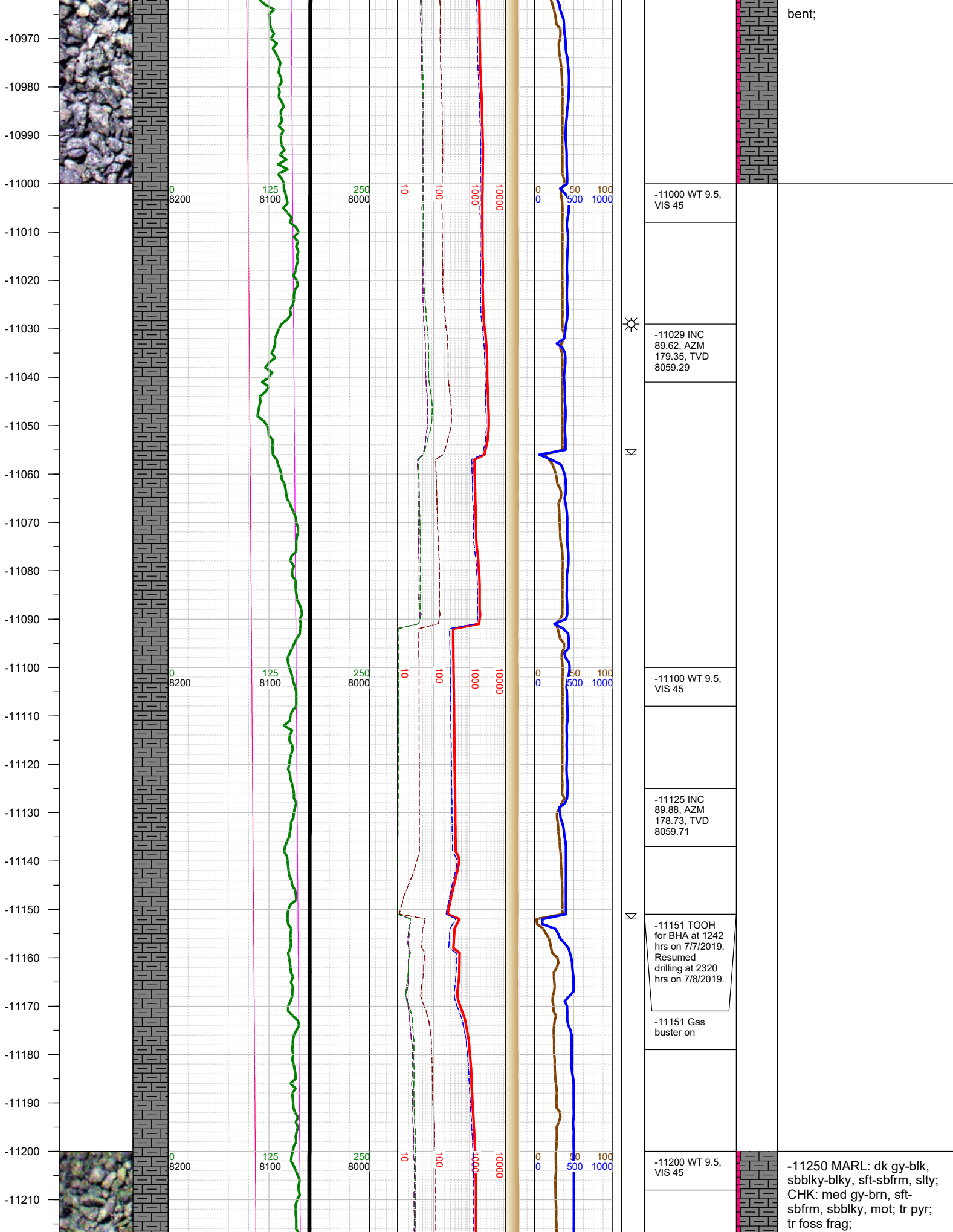




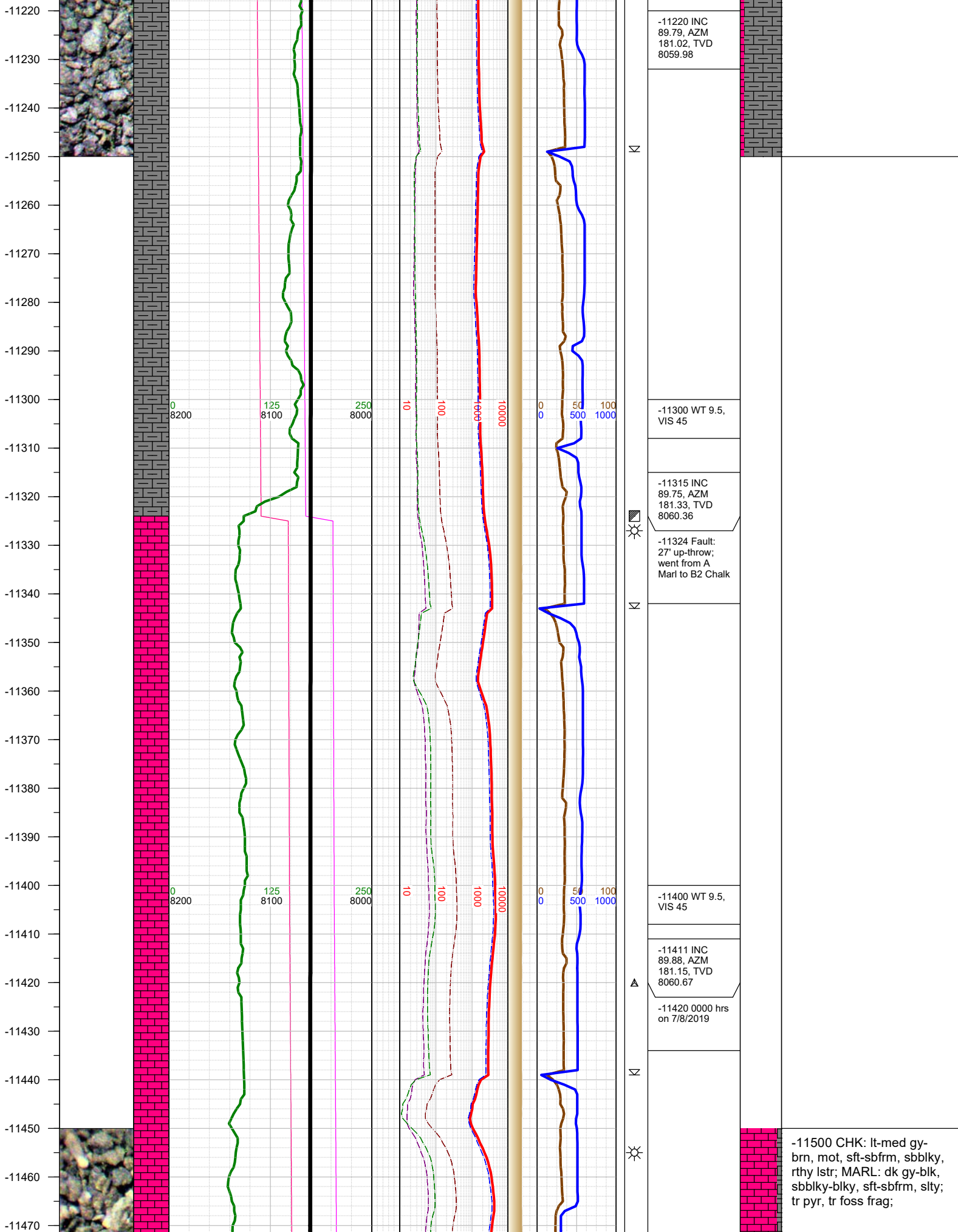




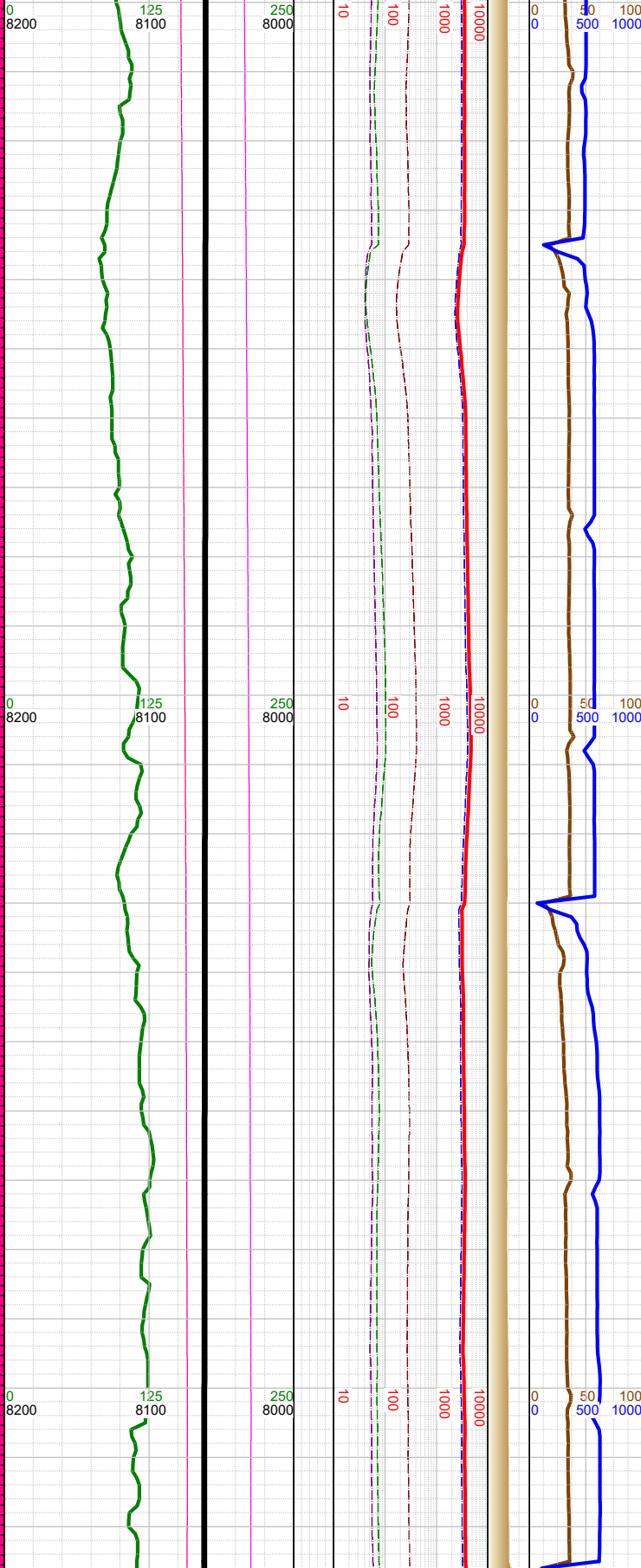
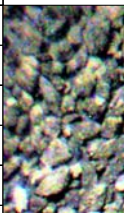




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-11505 INC
89.79, AZM
180.62, TVD
8060.94

-11520 WT 9.5,
VIS 45

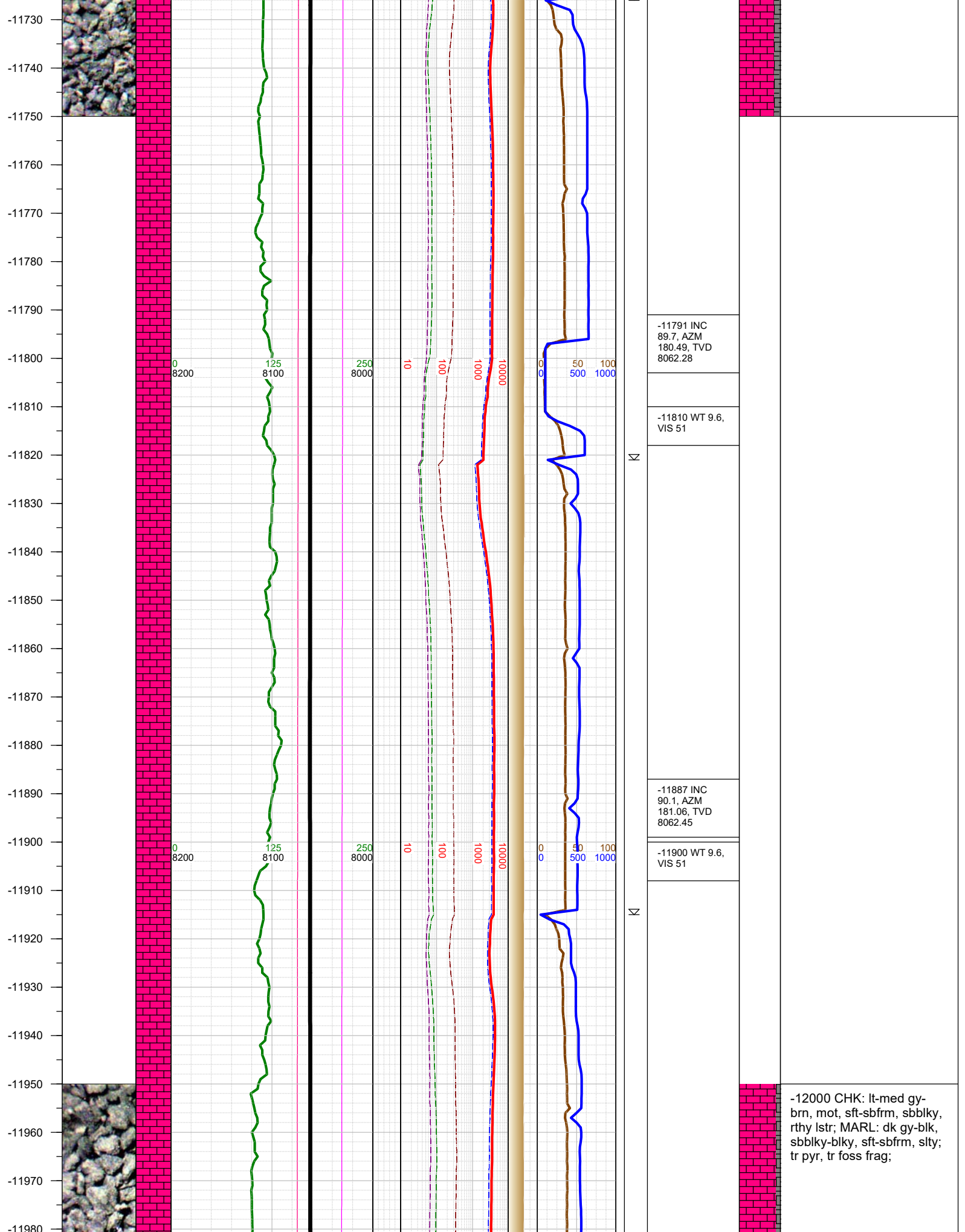
-11601 INC
89.7, AZM
181.02, TVD
8061.37

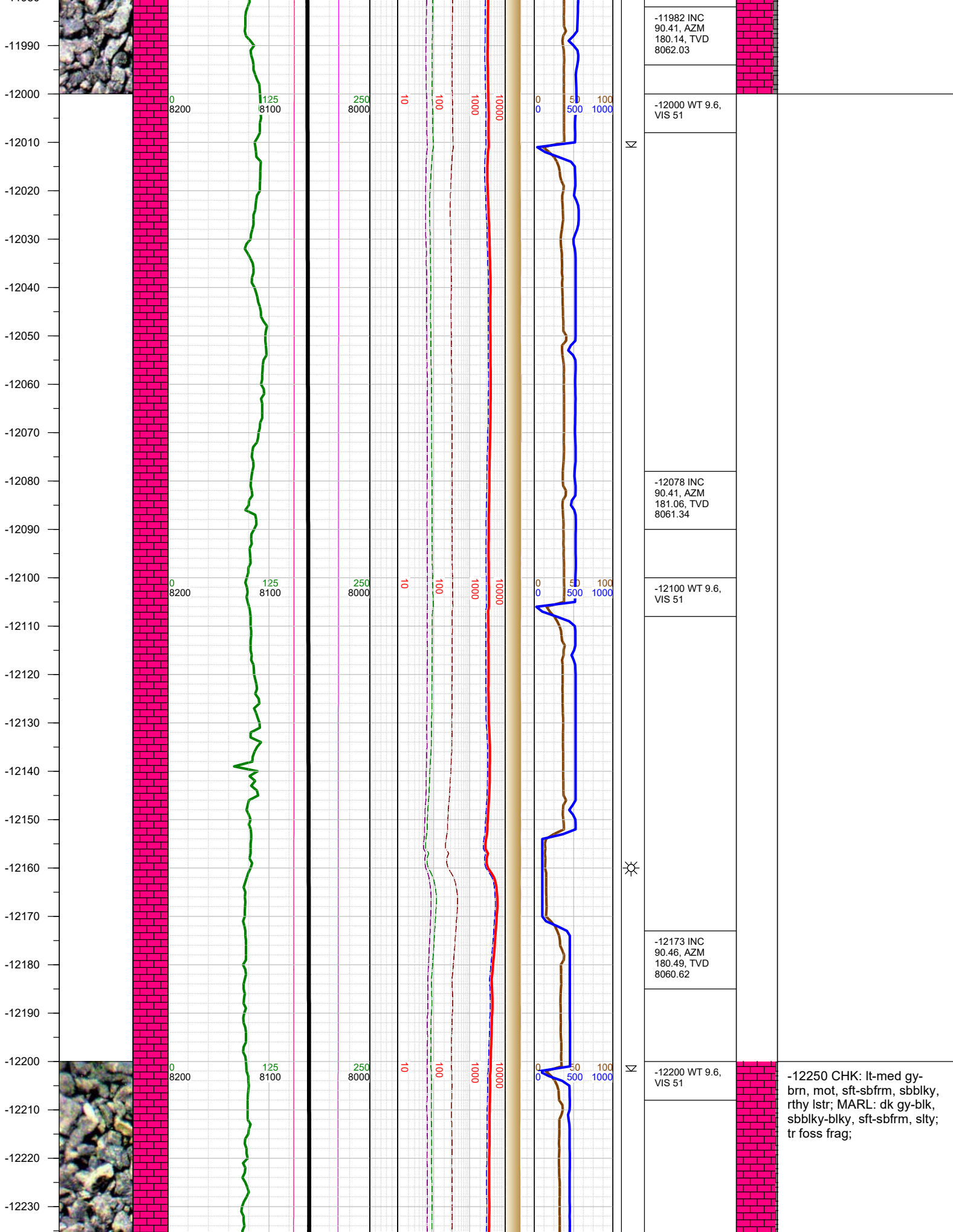
-11620 WT 9.5,
VIS 45

-11696 INC
89.75, AZM
181.02, TVD
8061.83

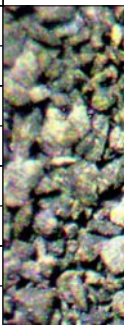
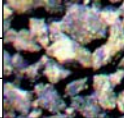
-11710 WT 9.6,
VIS 51

-11750 CHK: lt-med gy-
brn, mot, sft-sbfrm, sbblky,
rthy lstr; MARL: dk gy-blk,
sbblky-blky, sft-sbfrm, slty;
tr pyr, tr foss frag;





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-12269 INC
90.46, AZM
177.76, TVD
8059.85

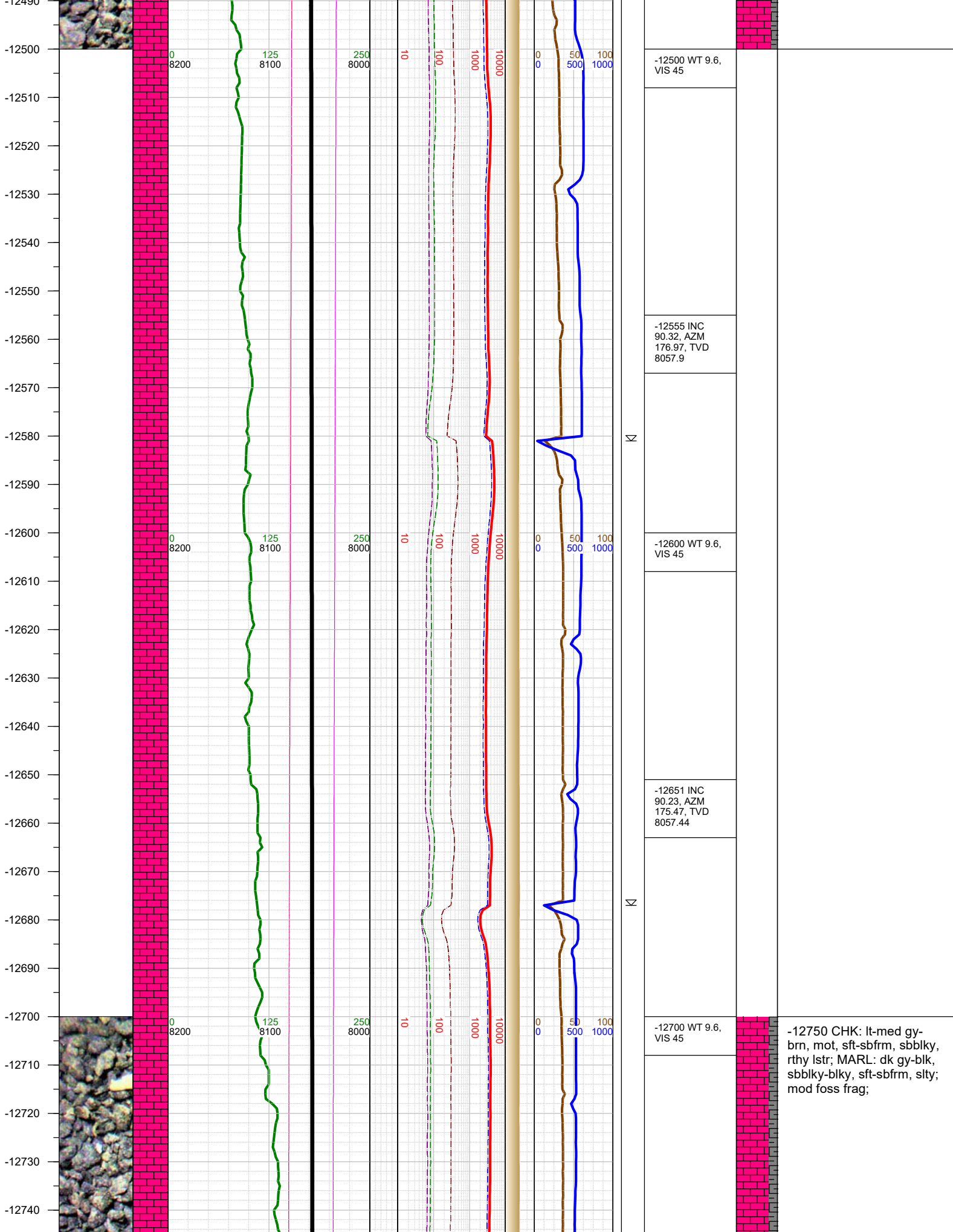
-12300 WT 9.6,
VIS 46

-12364 INC
90.41, AZM
177.58, TVD
8059.13

-12400 WT 9.6,
VIS 46

-12460 INC
90.37, AZM
177.1, TVD
8058.47

-12500 CHK: lt-med gy-
brn, mot, sft-sbfrm, sbblky,
rthy lstr; MARL: dk gy-blk,
sbblky-blky, sft-sbfrm, slty;
mod foss frag;



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-12747 INC
90.19, AZM
176.04, TVD
8057.09

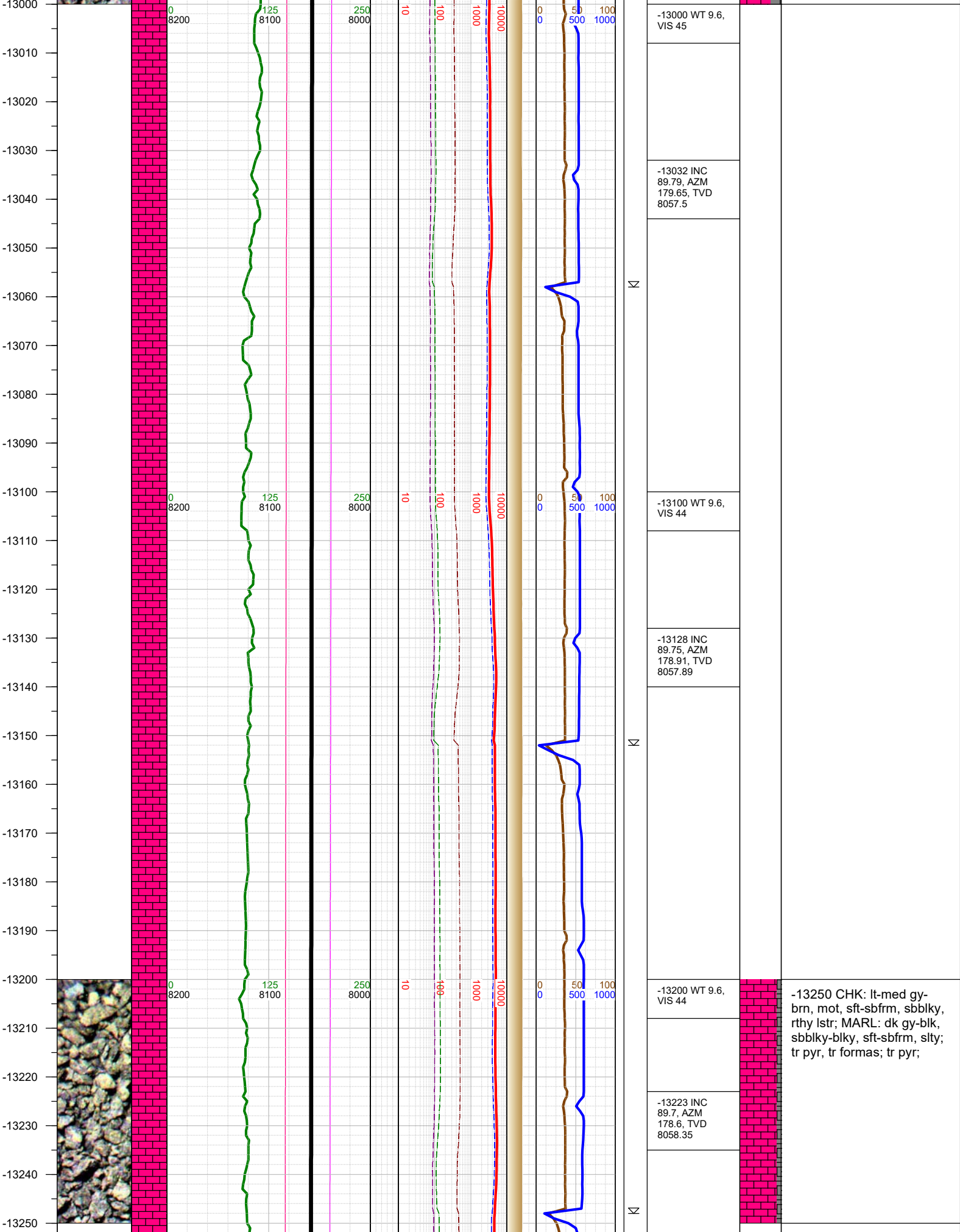
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VIS 45

-12842 INC
90.06, AZM
178.07, TVD
8056.88

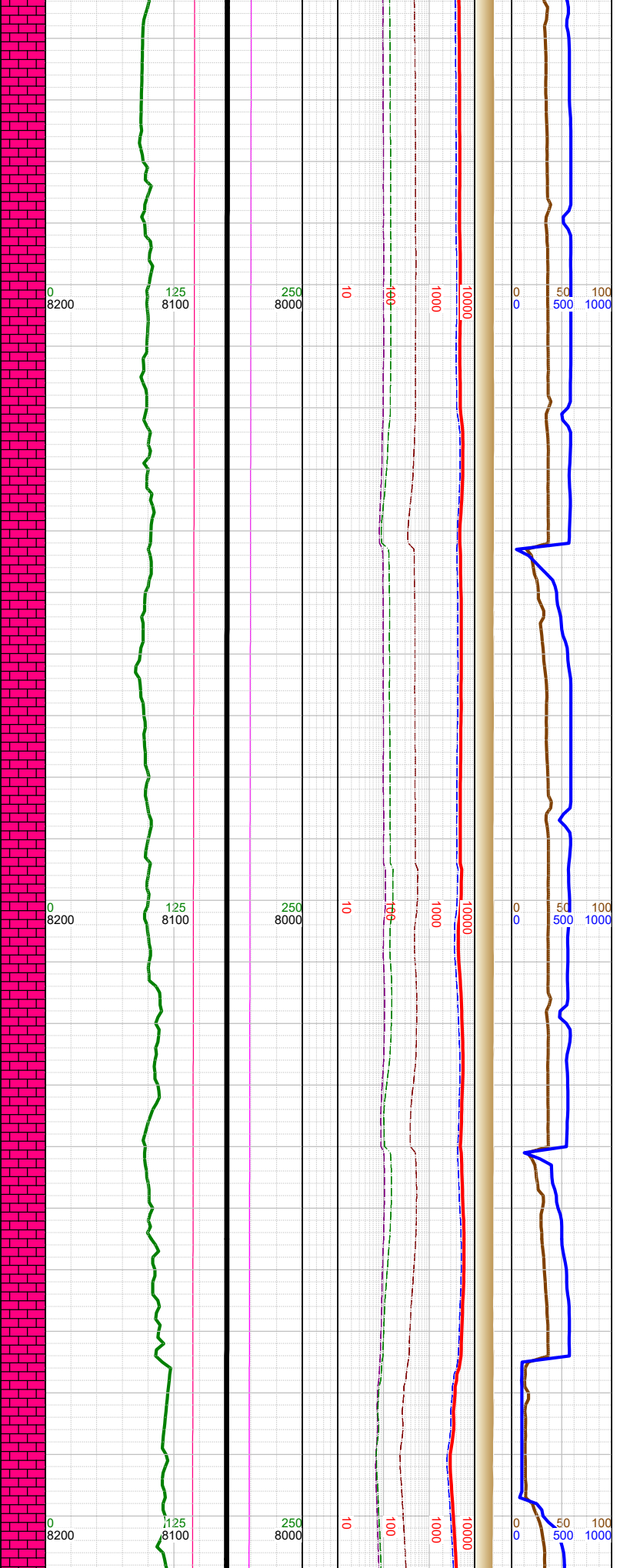
-12900 WT 9.6,
VIS 45

-12937 INC
89.7, AZM
179.48, TVD
8057.08

-13000 CHK: lt-med gy-
brn, mot, sft-sbfrm, sbblky,
rthy lstr; MARL: dk gy-blk,
sbblky-blky, sft-sbfrm, silty;
tr foss frag;



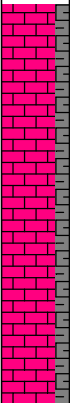
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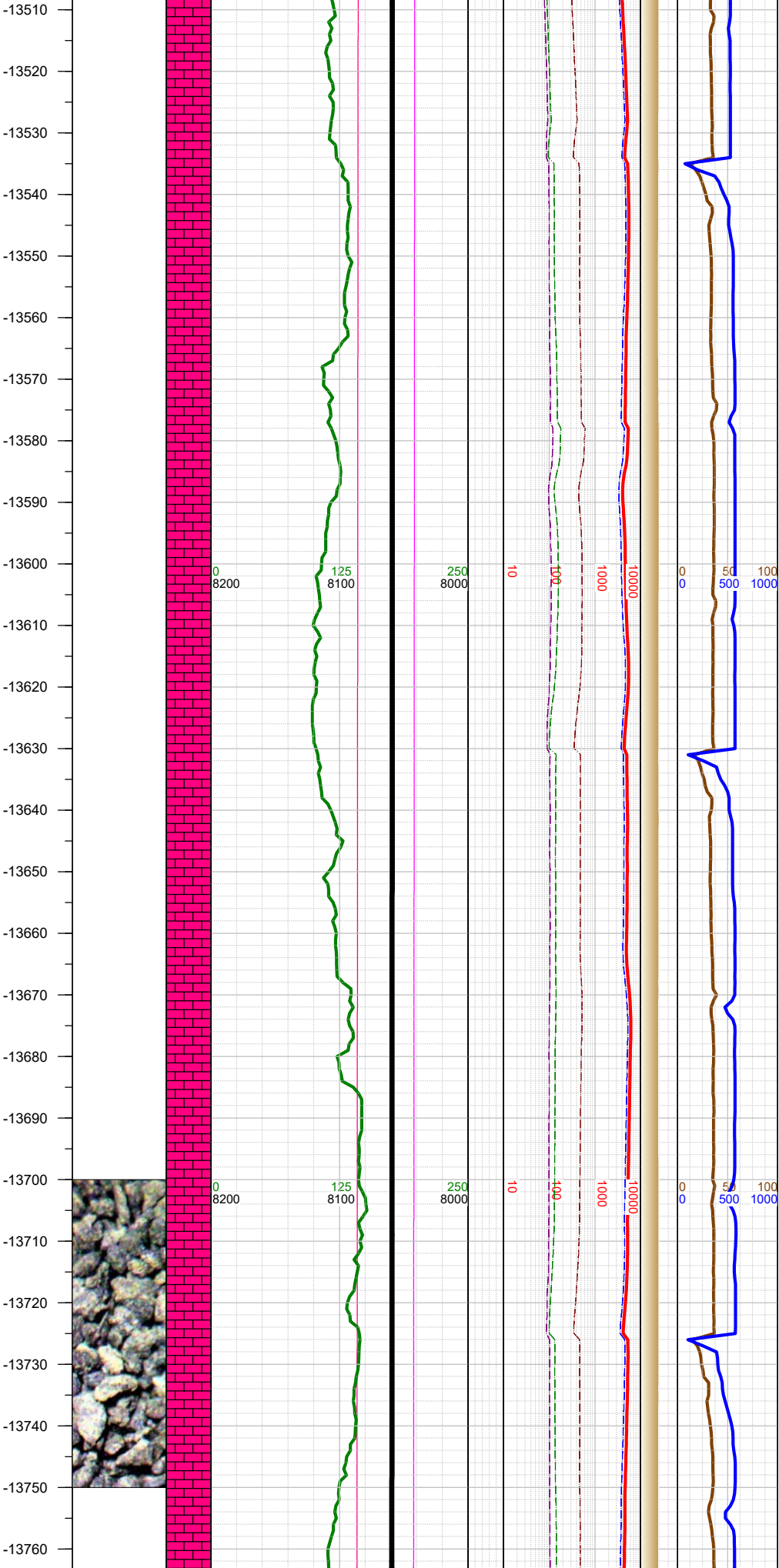
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	-13300 WT 9.6, VIS 44
	-13319 INC 89.88, AZM 179.17, TVD 8058.7
	-13400 WT 9.7, VIS 47
	-13415 INC 89.88, AZM 176.97, TVD 8058.9
	-13500 WT 9.7, VIS 47

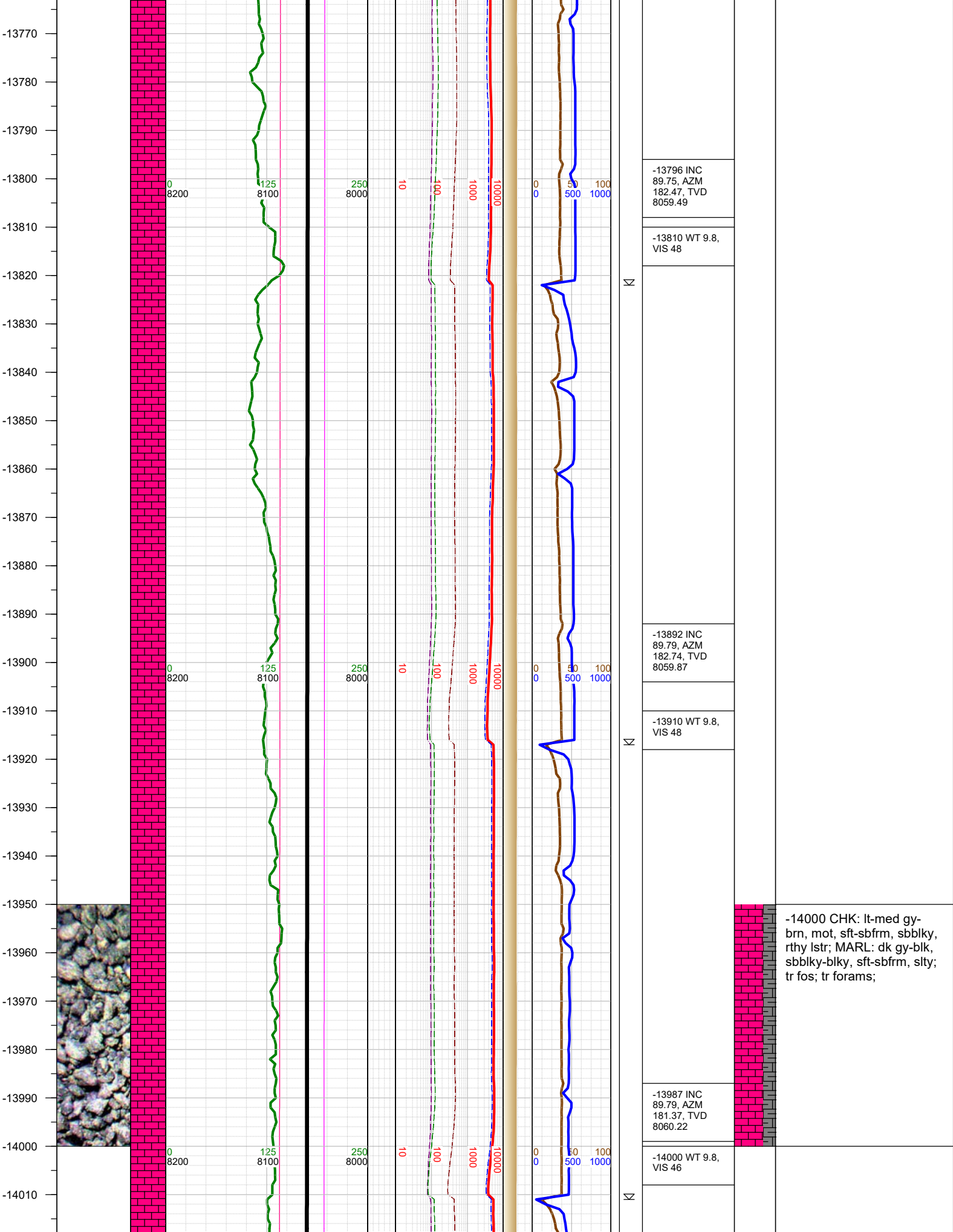


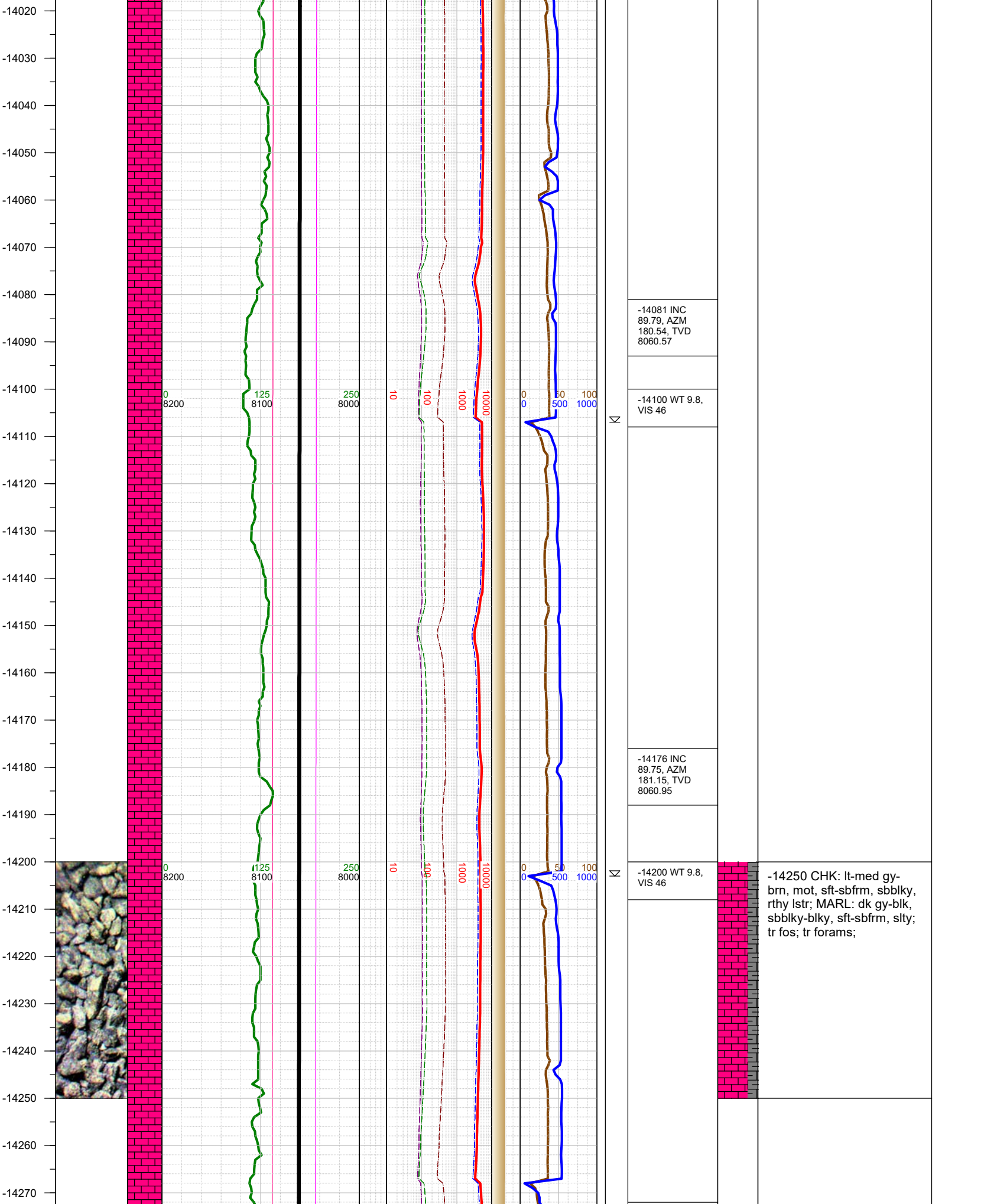
-13500 CHK: lt-med gy-brn, mot, sft-sbfrm, sbblky, rthy lstr; MARL: dk gy-blk, sbblky-blky, sft-sbfrm, slty;

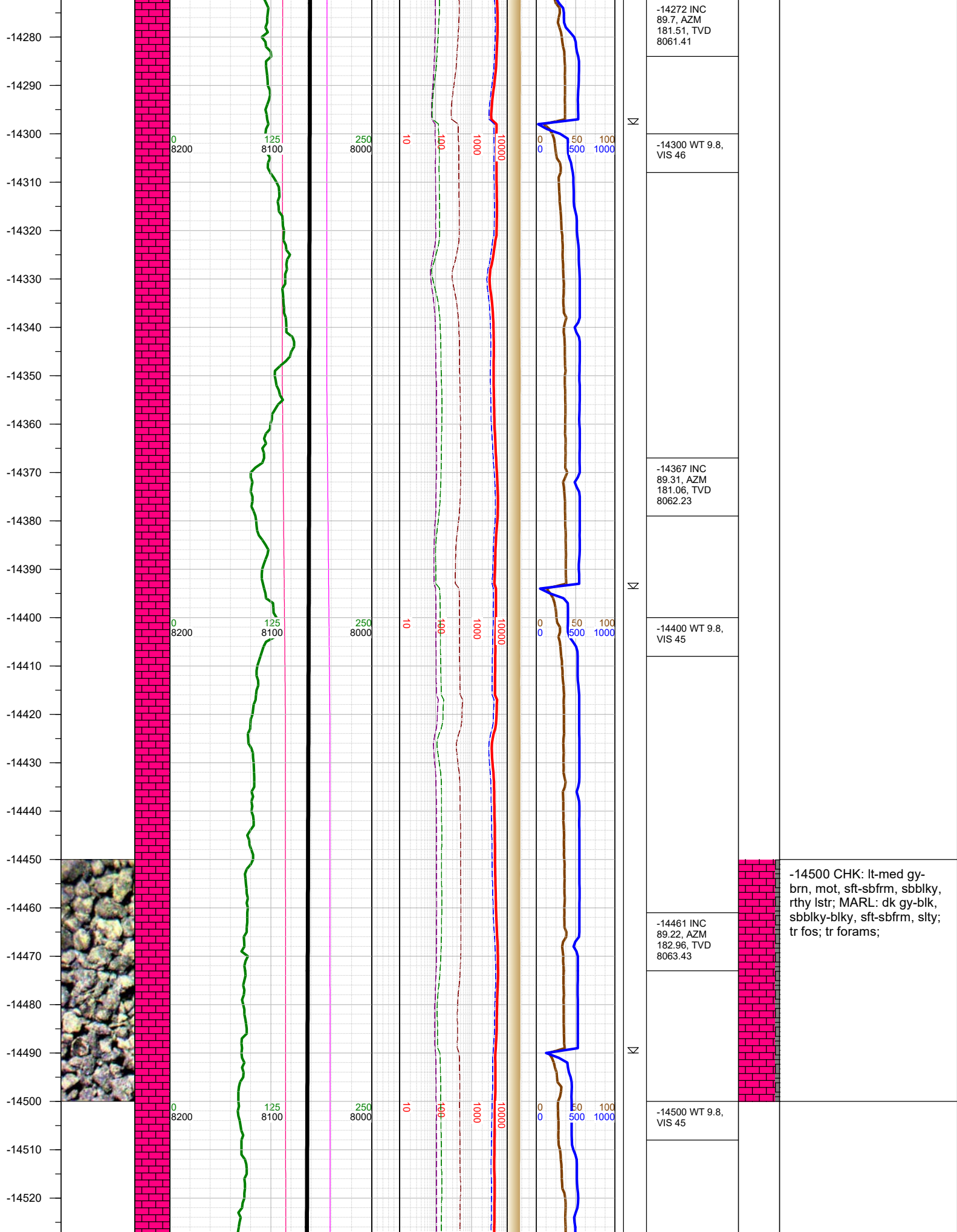


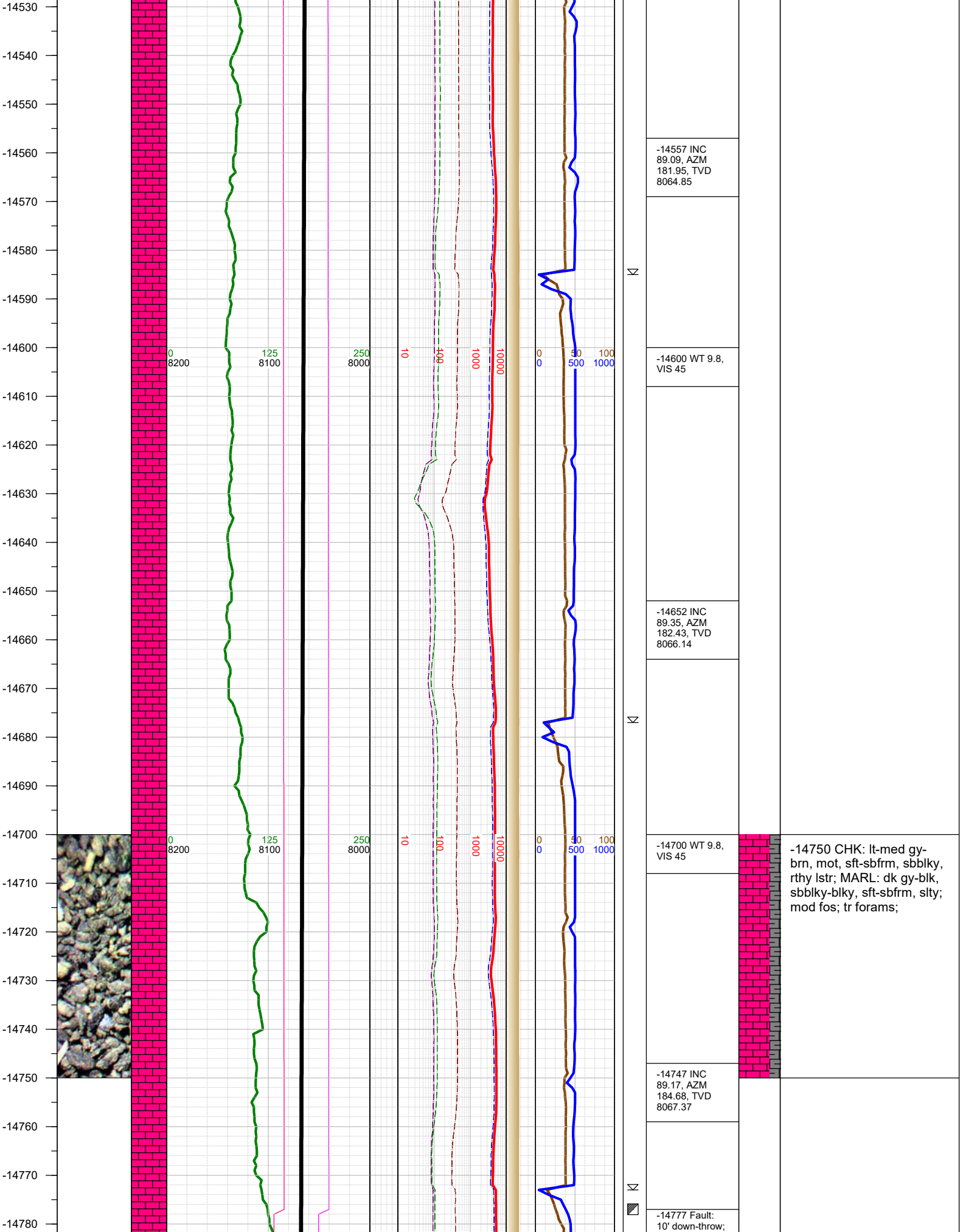
N	-13510 INC 89.97, AZM 177.85, TVD 8059.02		
	-13605 INC 89.93, AZM 180.67, TVD 8059.11		
	-13620 WT 9.7, VIS 47		
N			
	-13701 INC 89.93, AZM 181.33, TVD 8059.22		
	-13720 WT 9.8, VIS 48		

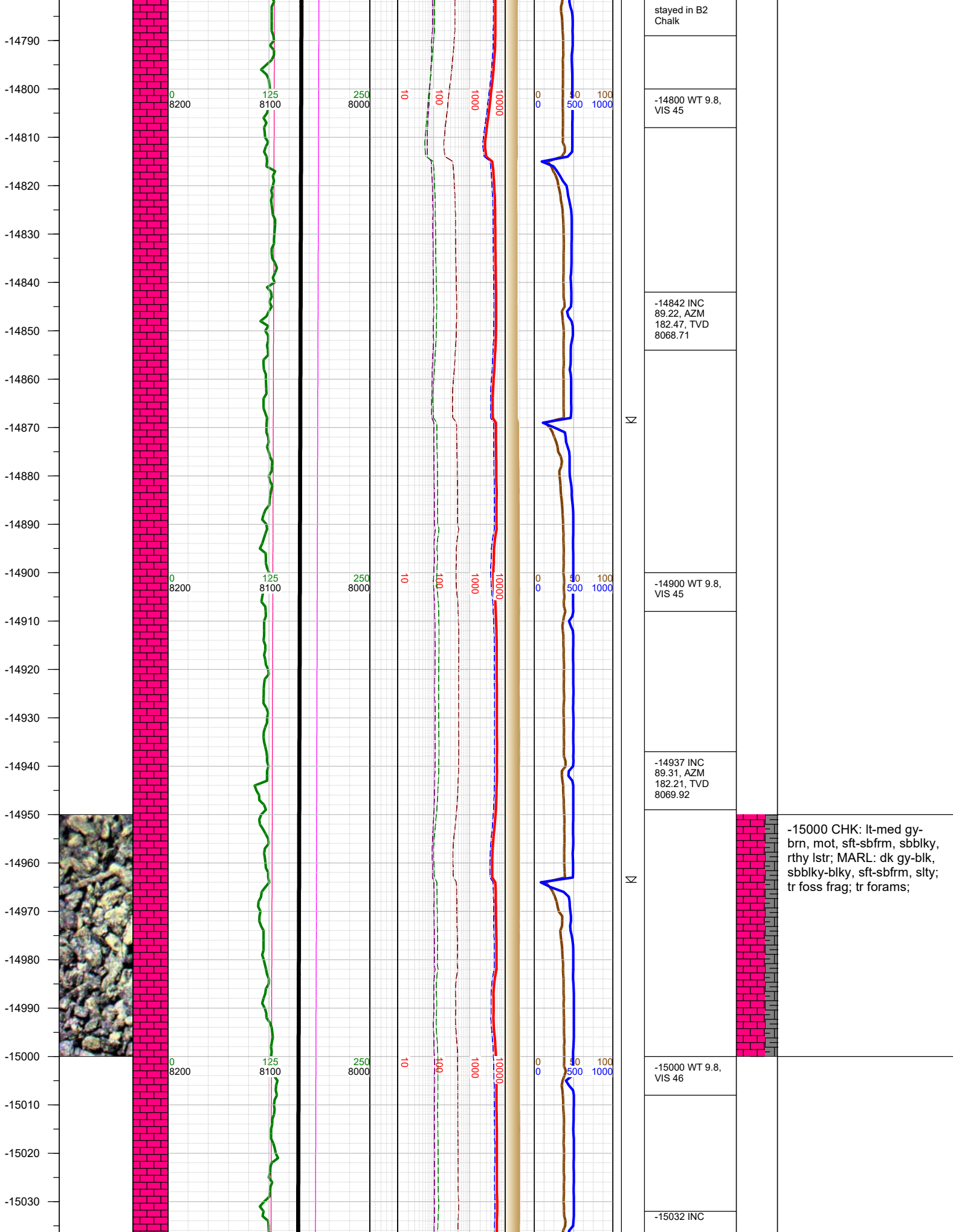
-13750 CHK: lt-med gy-brn, mot, sft-sbfrm, sbblky, rthy lstr; MARL: dk gy-blk, sbblky-blky, sft-sbfrm, sity;

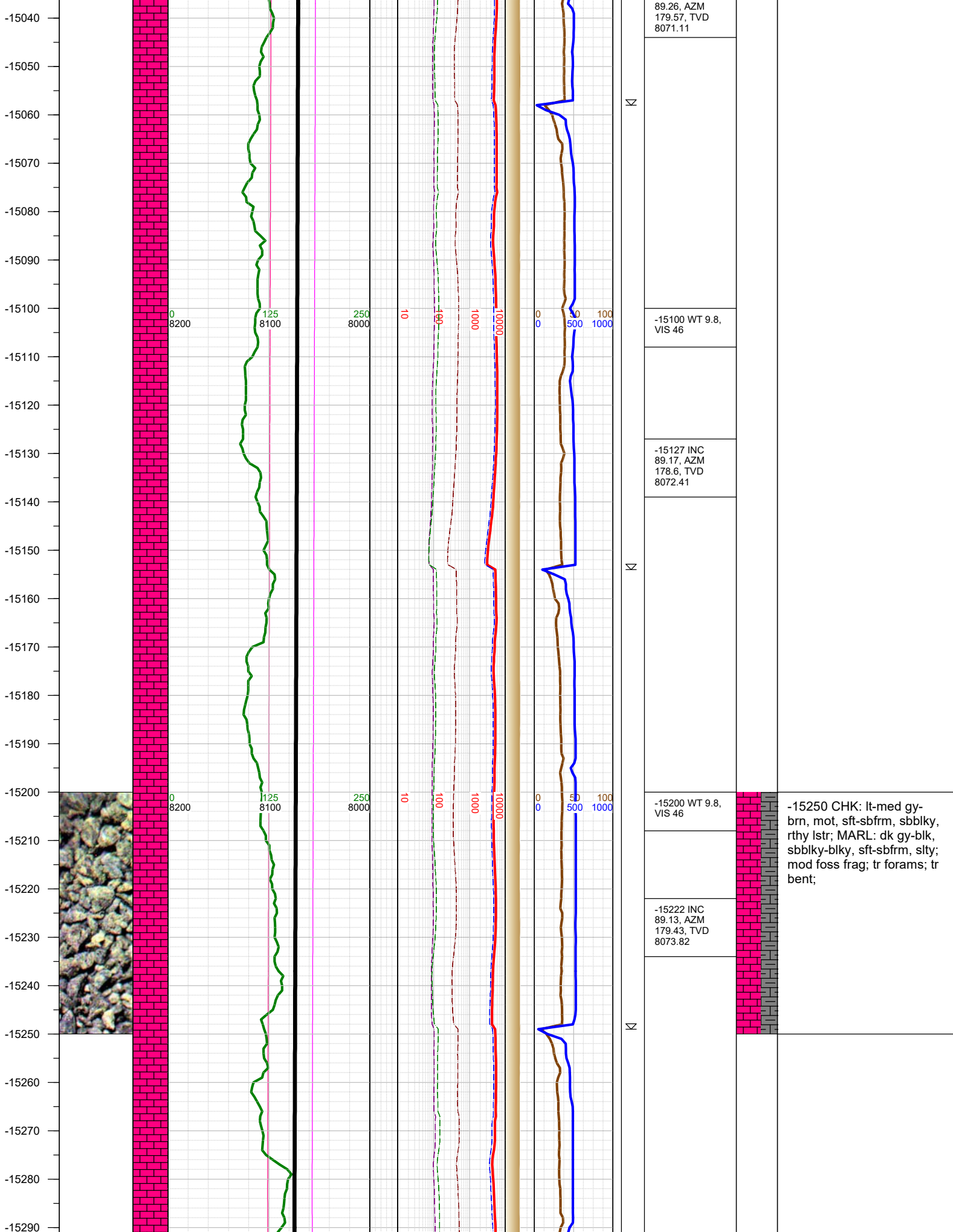


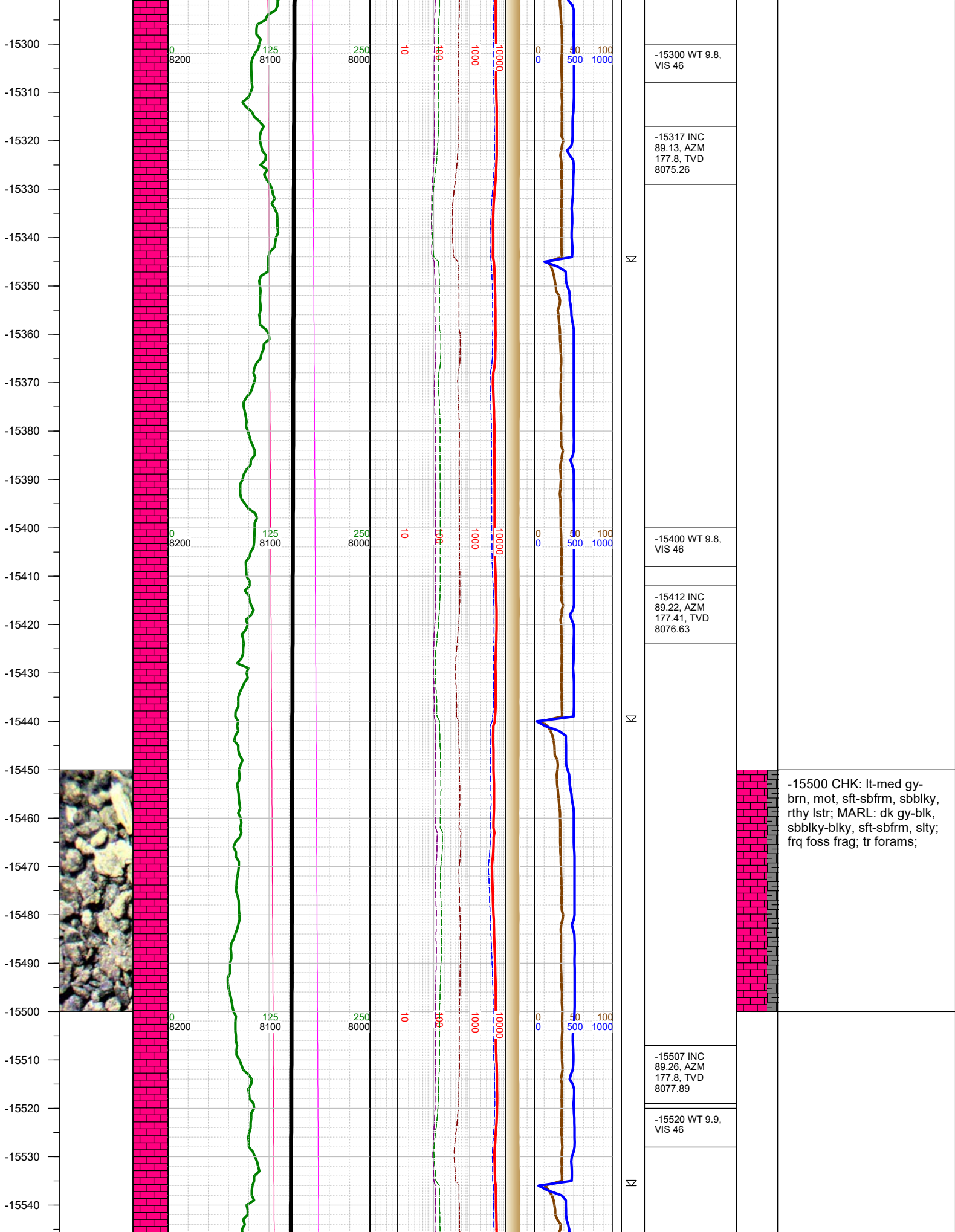




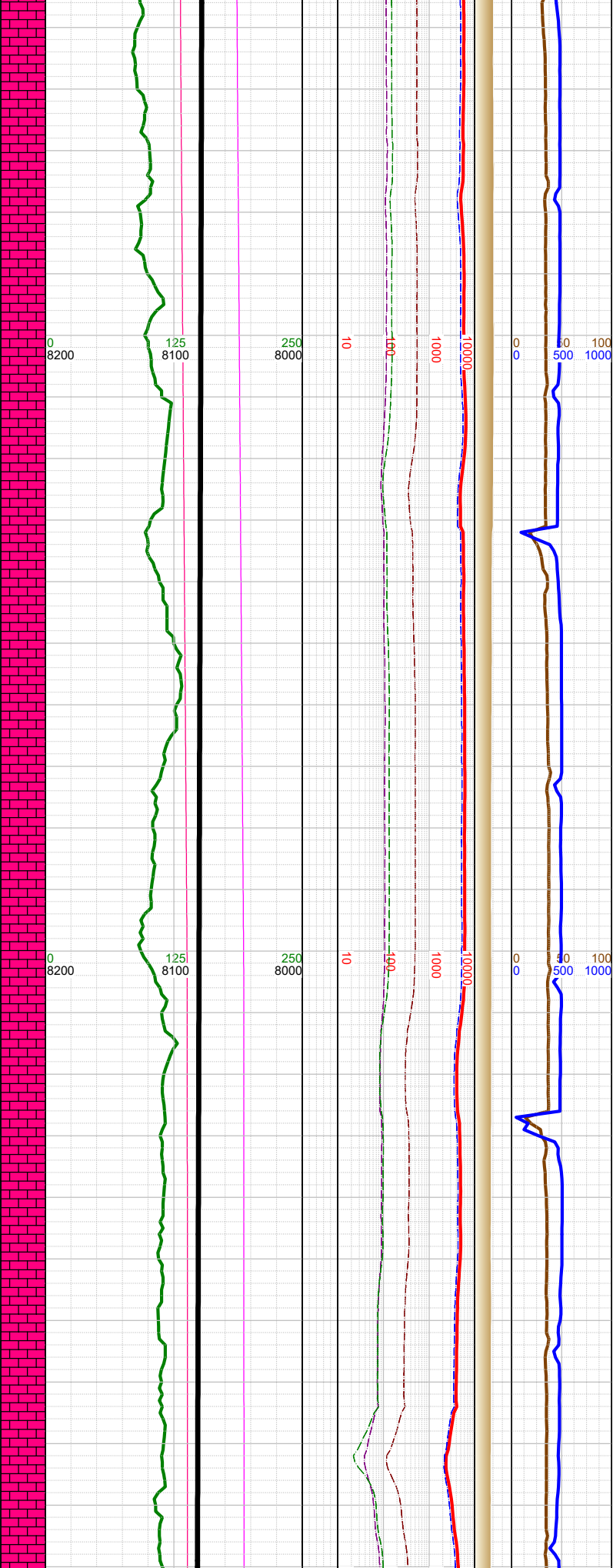








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-15602 INC
89.22, AZM
177.94, TVD
8079.15

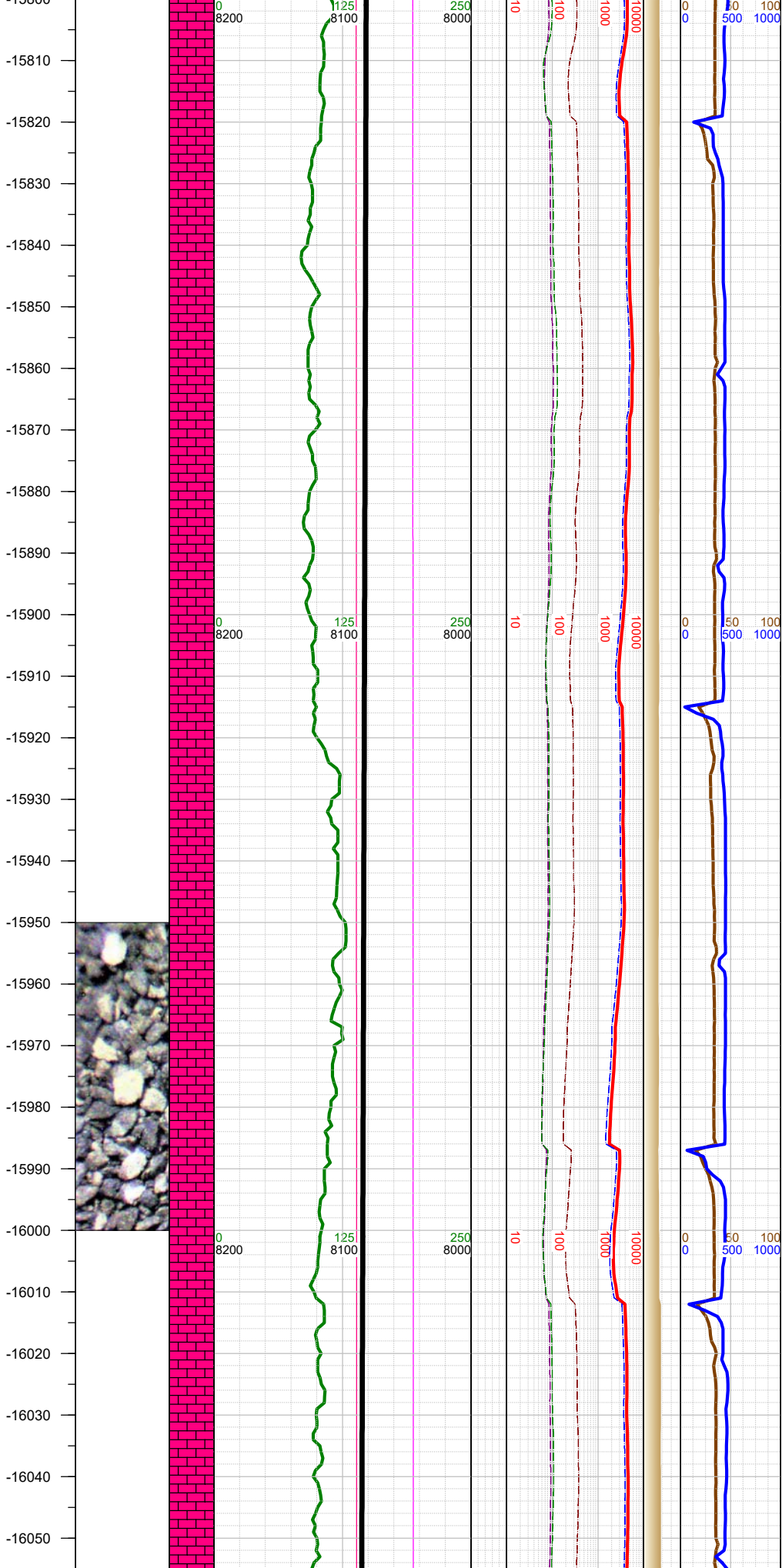
-15620 WT 9.9,
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-15698 INC
89.22, AZM
176.97, TVD
8080.46

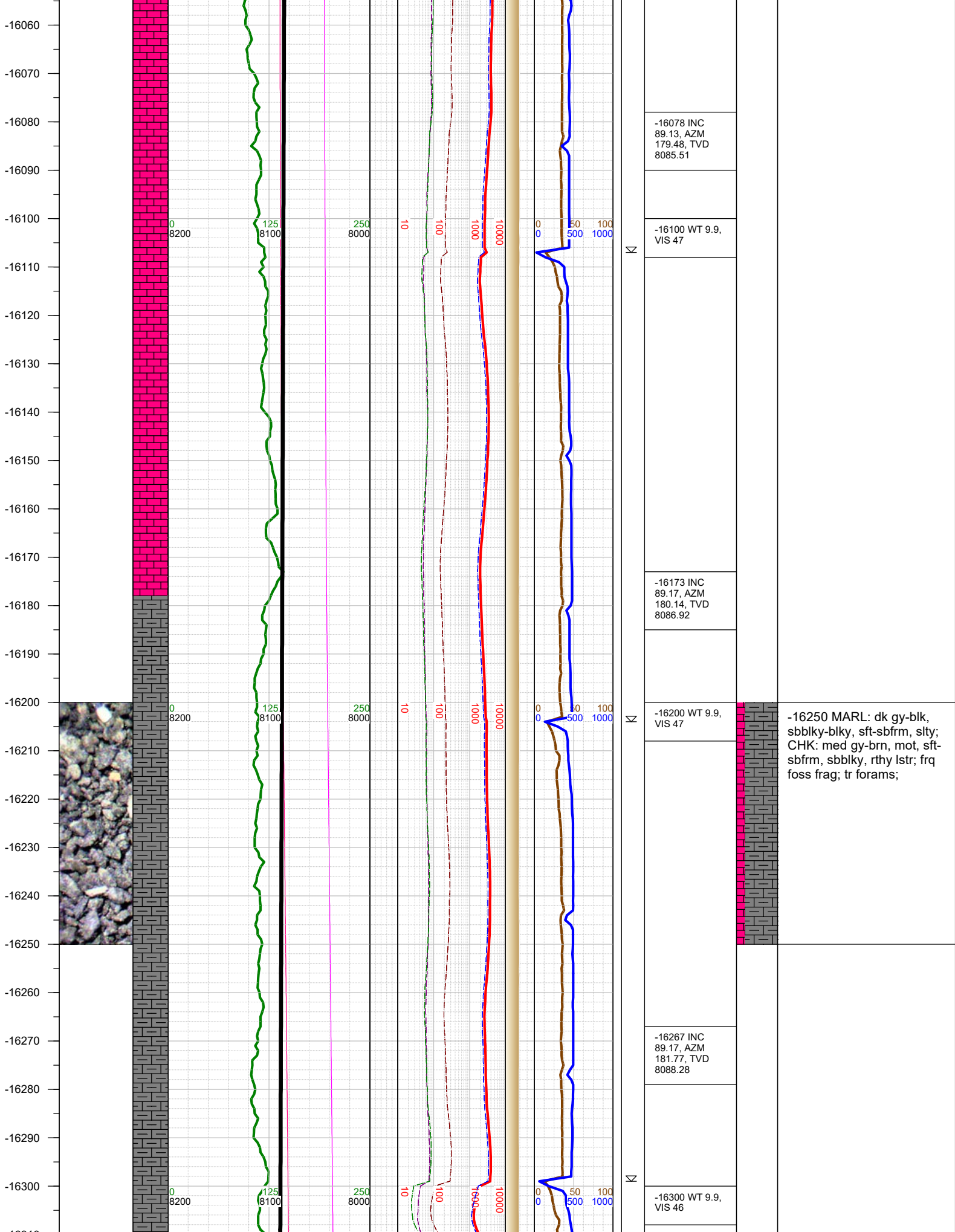
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VIS 46

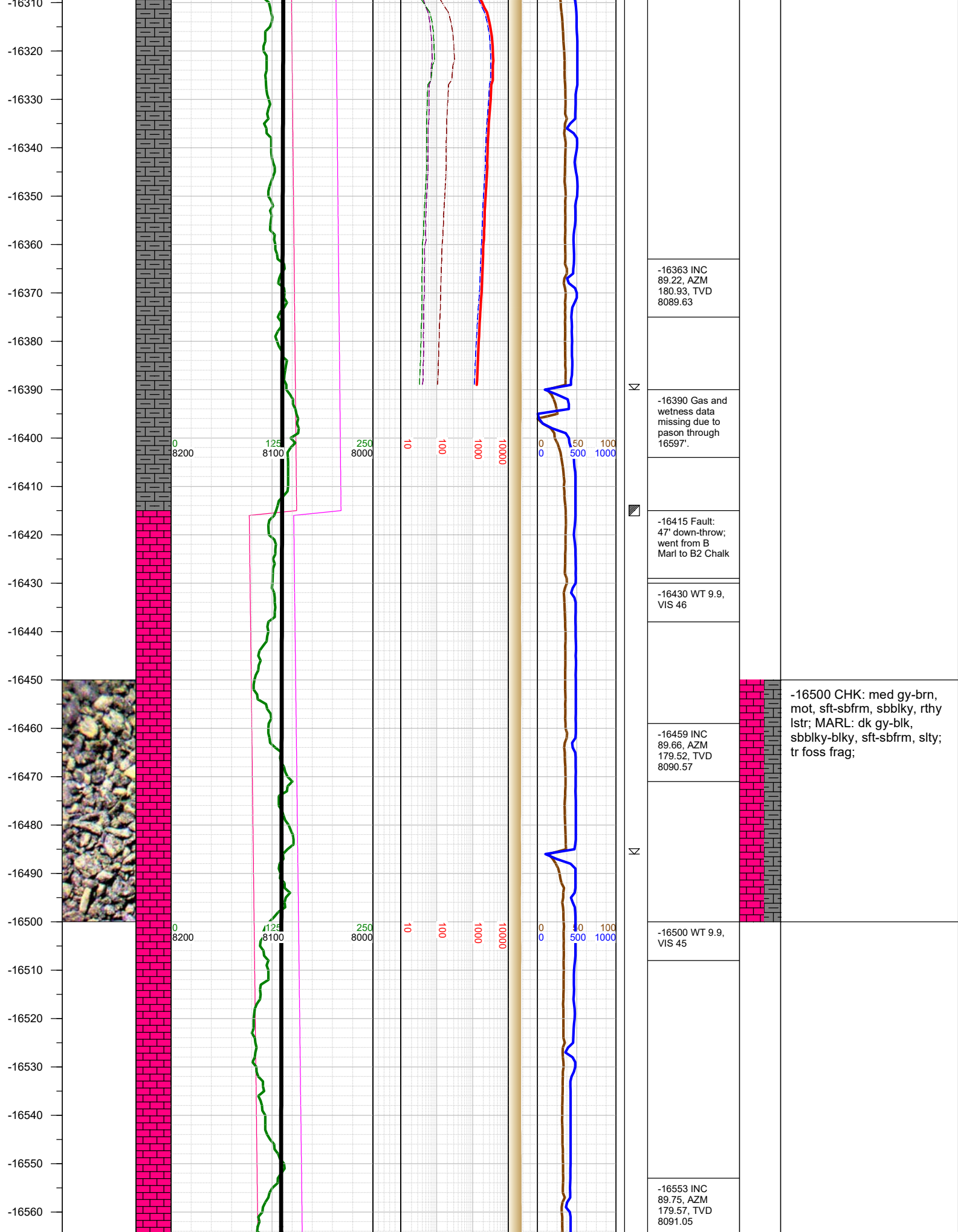
-15793 INC
89.35, AZM
179.39, TVD

-15750 CHK: lt-med gy-
brn, mot, sft-sbfrm, sbblky,
rthy lstr; MARL: dk gy-blk,
sbblky-blky, sft-sbfrm, slty;
frq foss frag; tr forams;

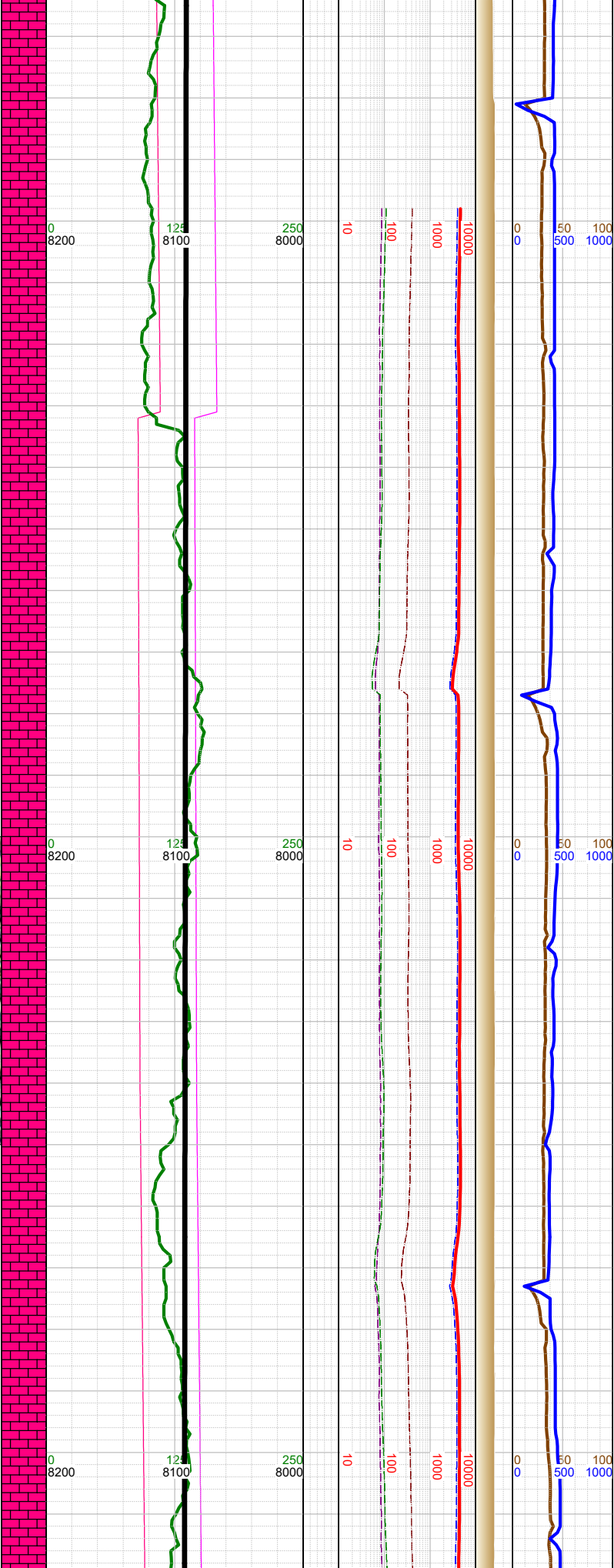
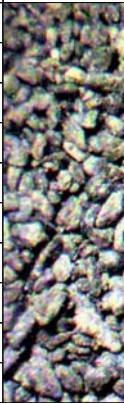


N	8081.64	
	-15810 WT 9.9, VIS 46	
N	-15888 INC 89.26, AZM 178.33, TVD 8082.8	
	-15900 WT 9.9, VIS 46	
N	-15983 INC 89.17, AZM 177.5, TVD 8084.1	
	-16000 WT 9.9, VIS 46	
		-16000 CHK: lt-med gy-brn, mot, sft-sbfrm, sbblky, rthy lstr; MARL: dk gy-blk, sbblky-blky, sft-sbfrm, silty; frq foss frag; tr forams;

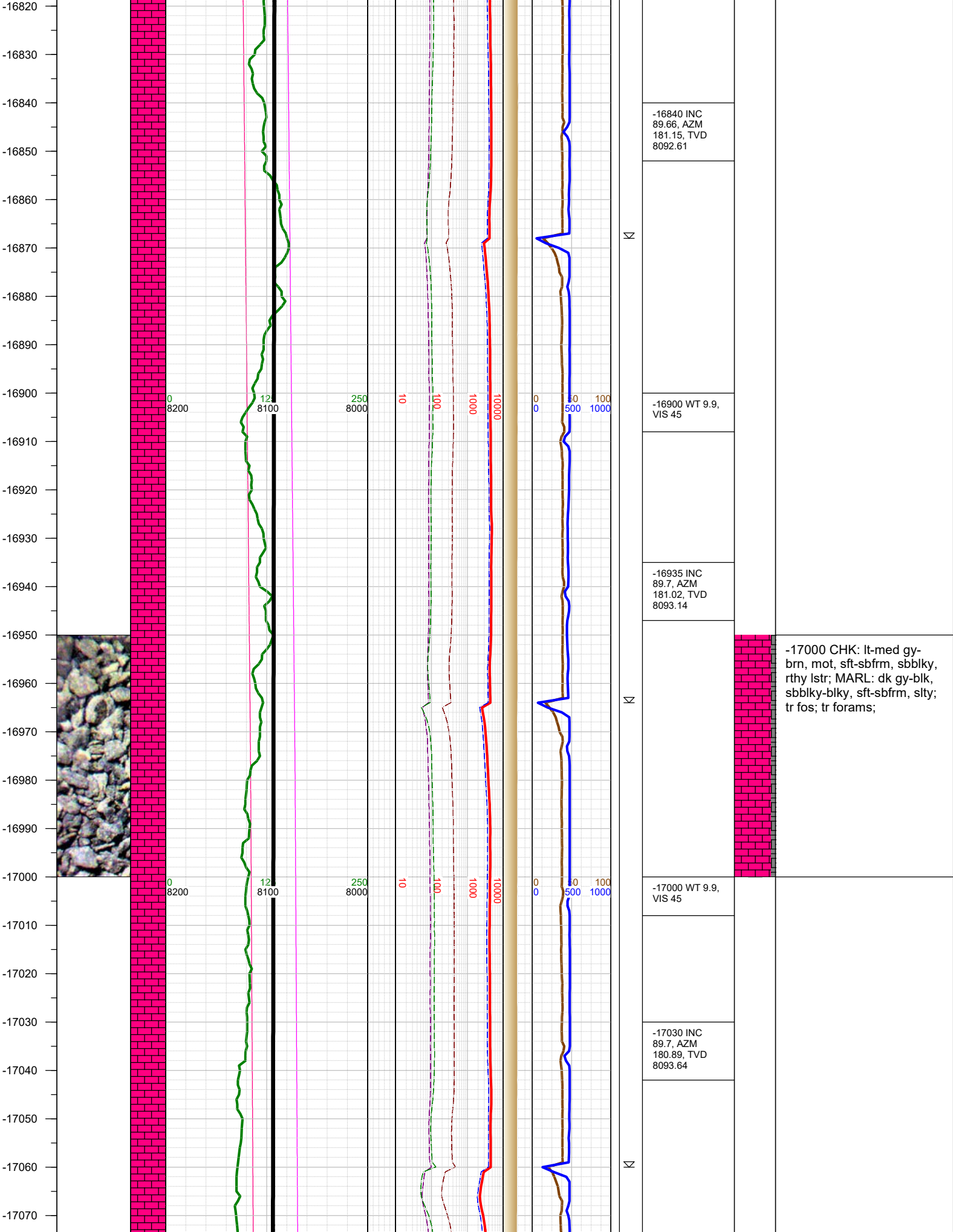


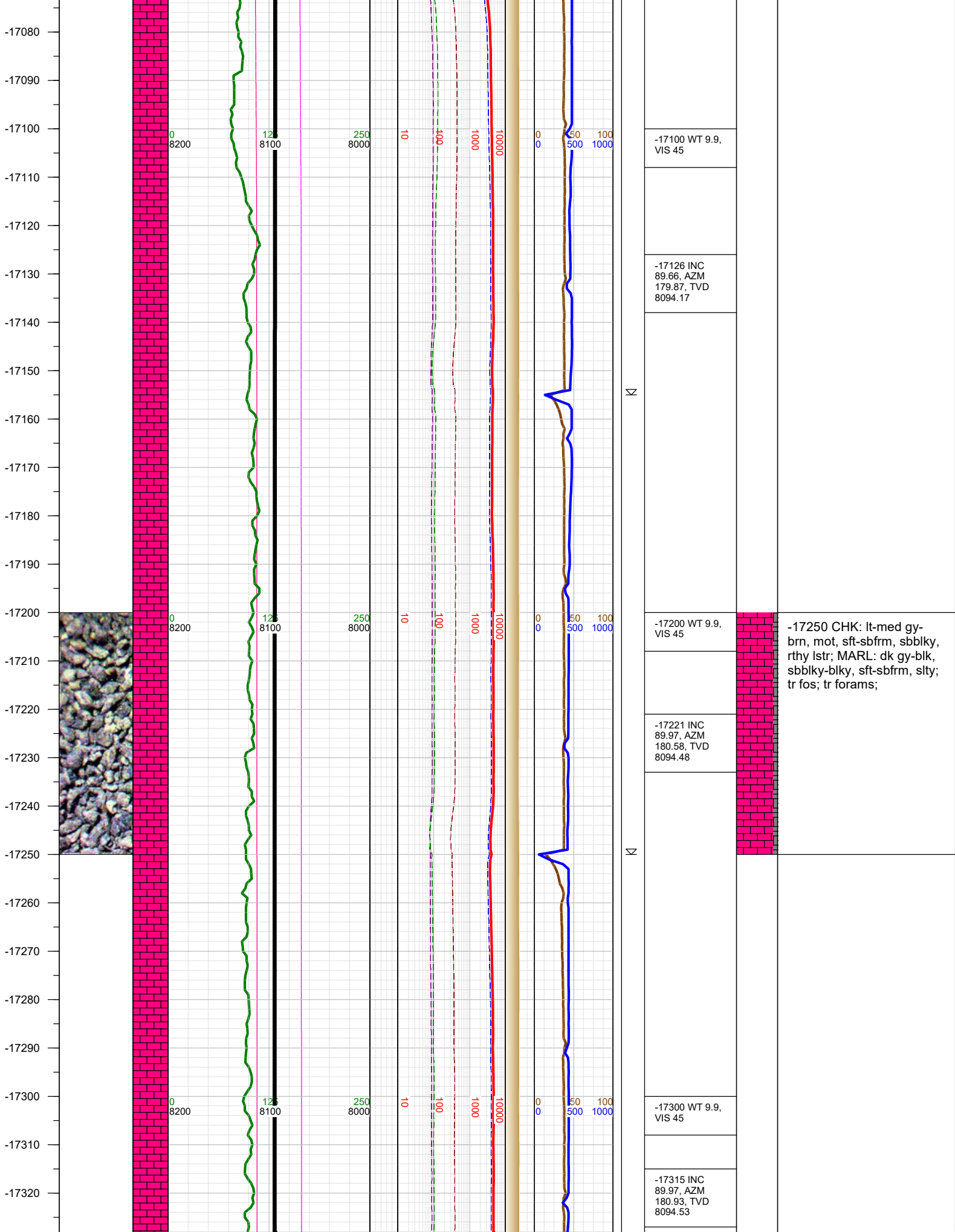


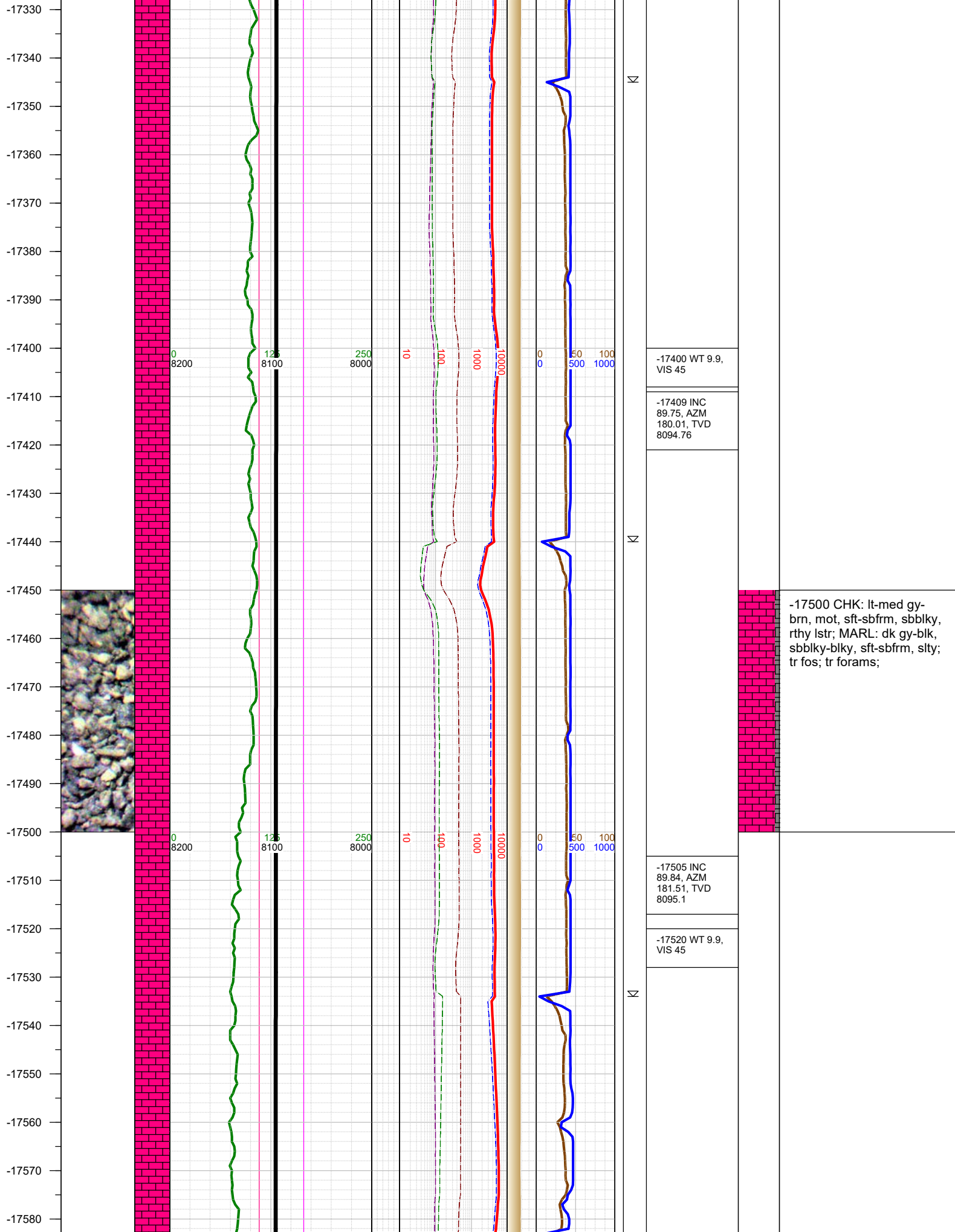
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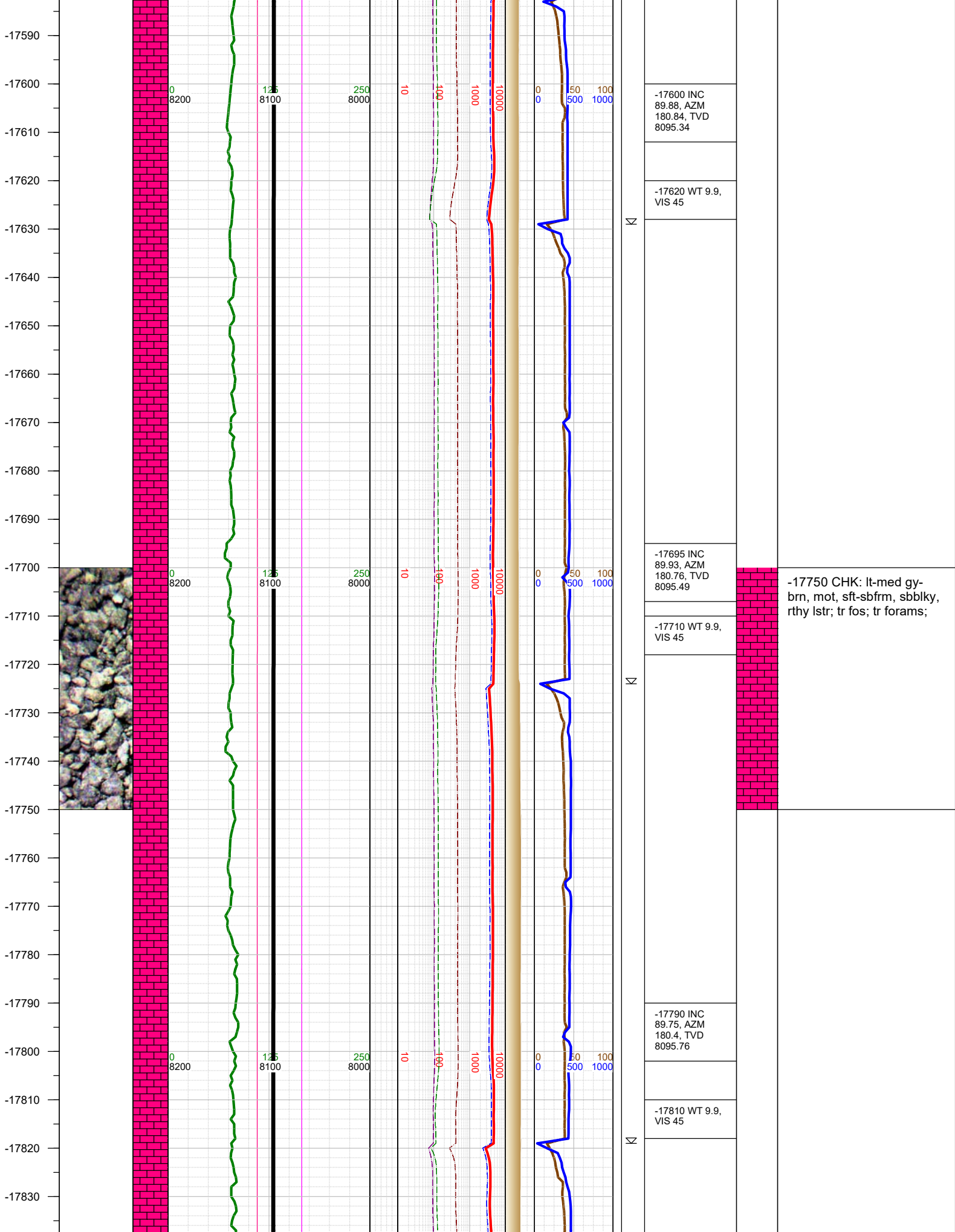


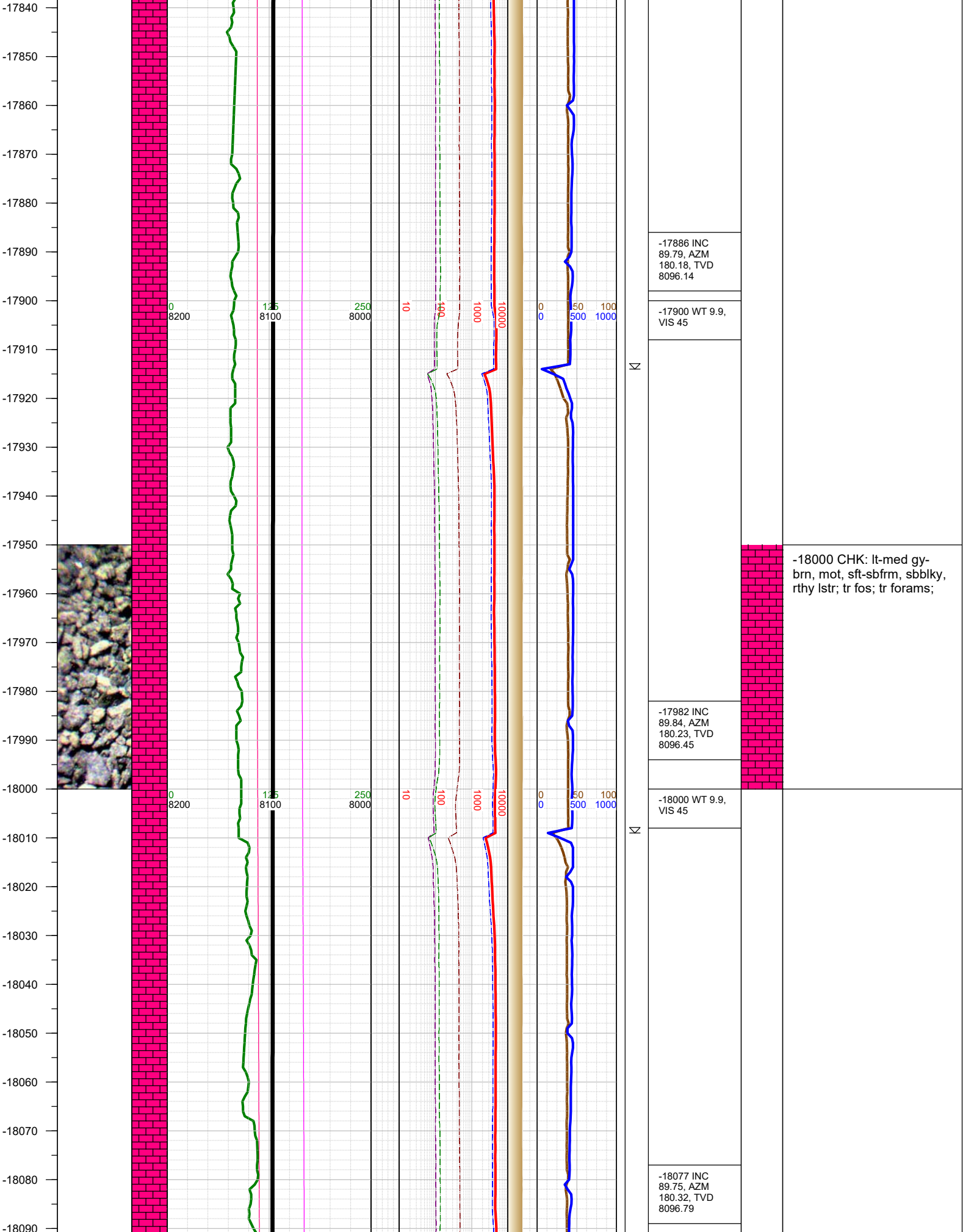
N			-16600 WT 9.9, VIS 45
N	▨	-16631 Fault: 17' down-throw; stayed in B2 Chalk	
		-16649 INC 89.66, AZM 181.2, TVD 8091.54	
N		-16700 WT 9.9, VIS 45	-16750 CHK: med gy, mot, sft-sbfrm, sbblky, rthy lstr; MARL: dk gy-blk, sbblky-blky, sft-sbfrm, slty;
		-16744 INC 89.7, AZM 180.98, TVD 8092.07	
N		-16800 WT 9.9, VIS 45	

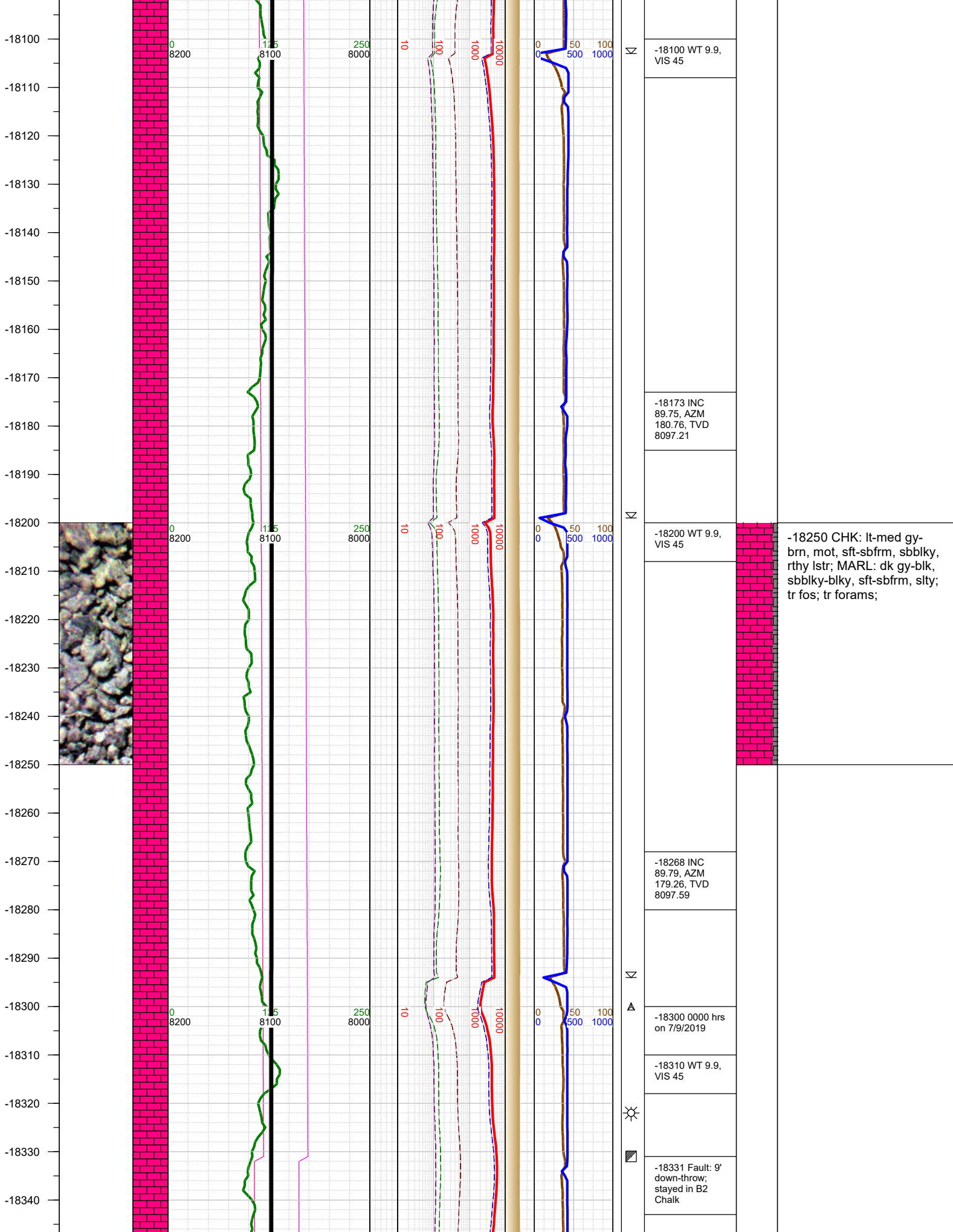


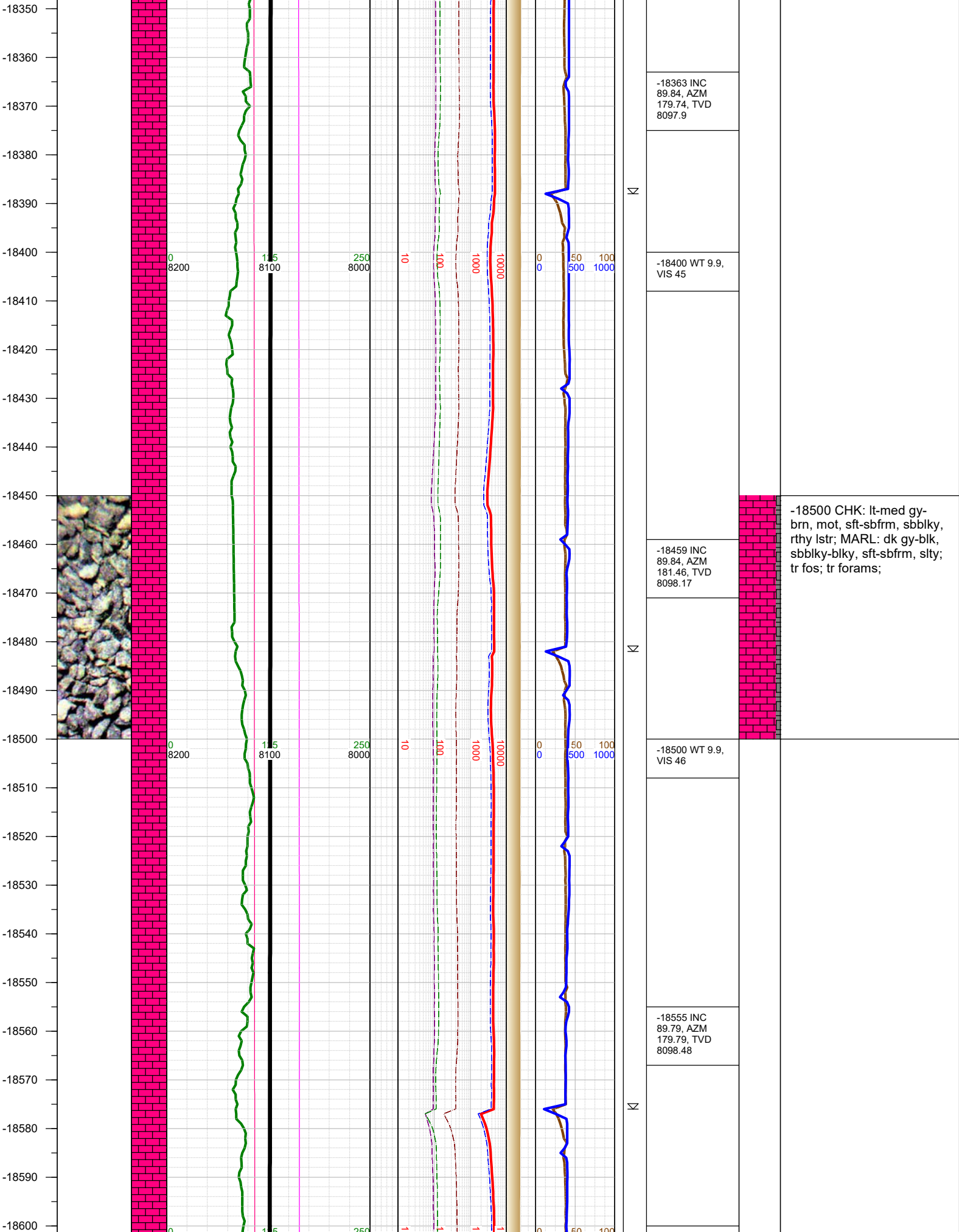


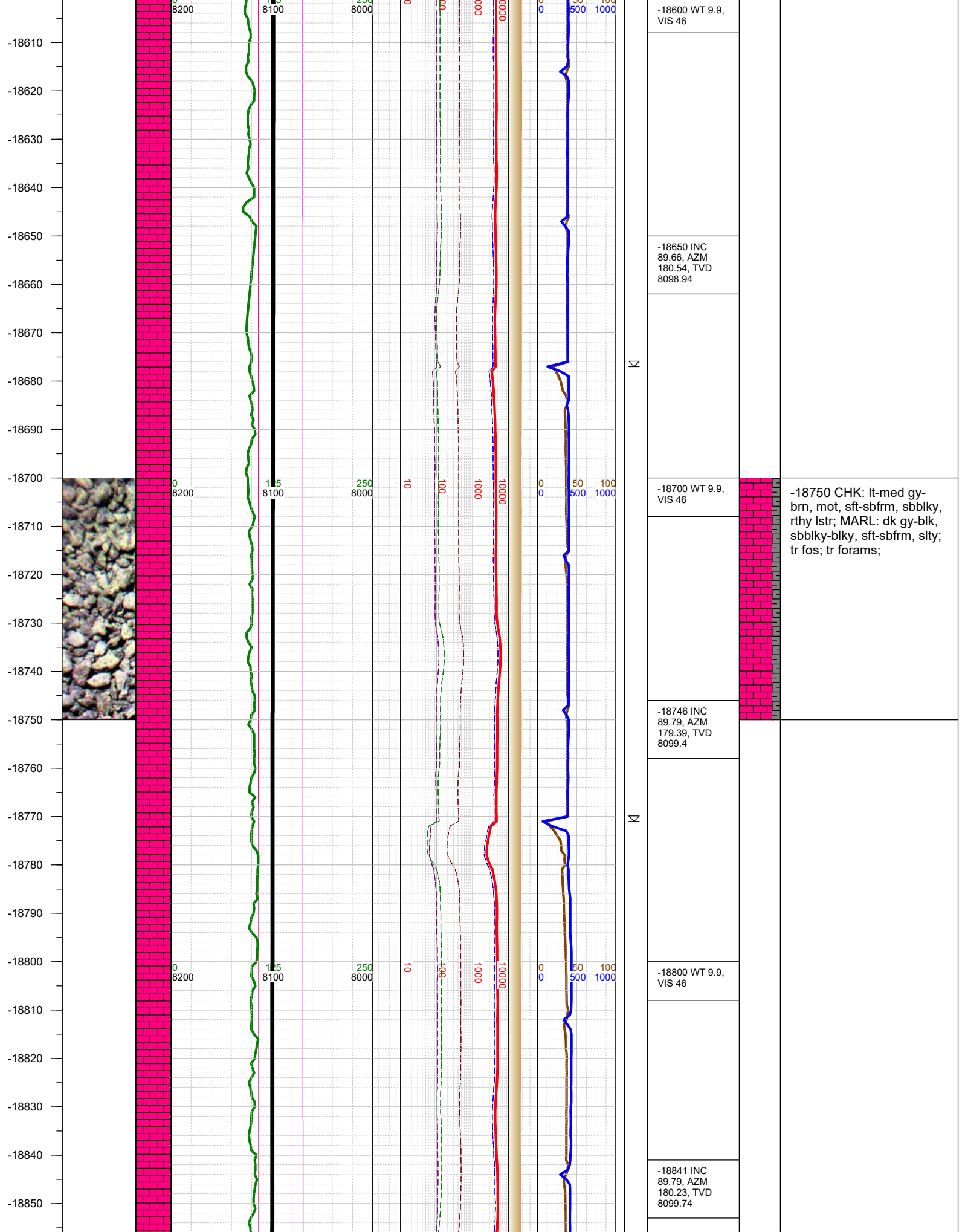




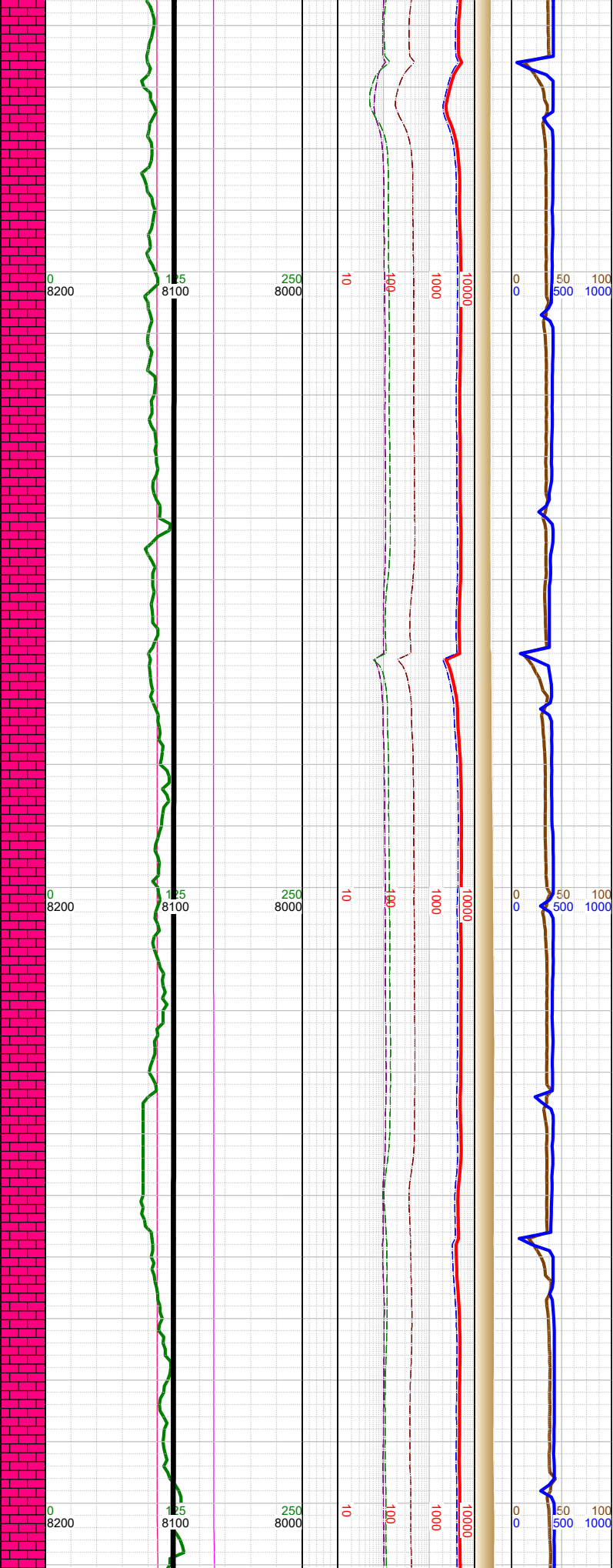
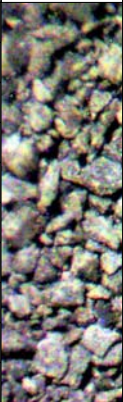






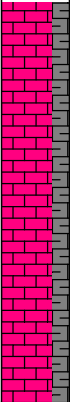


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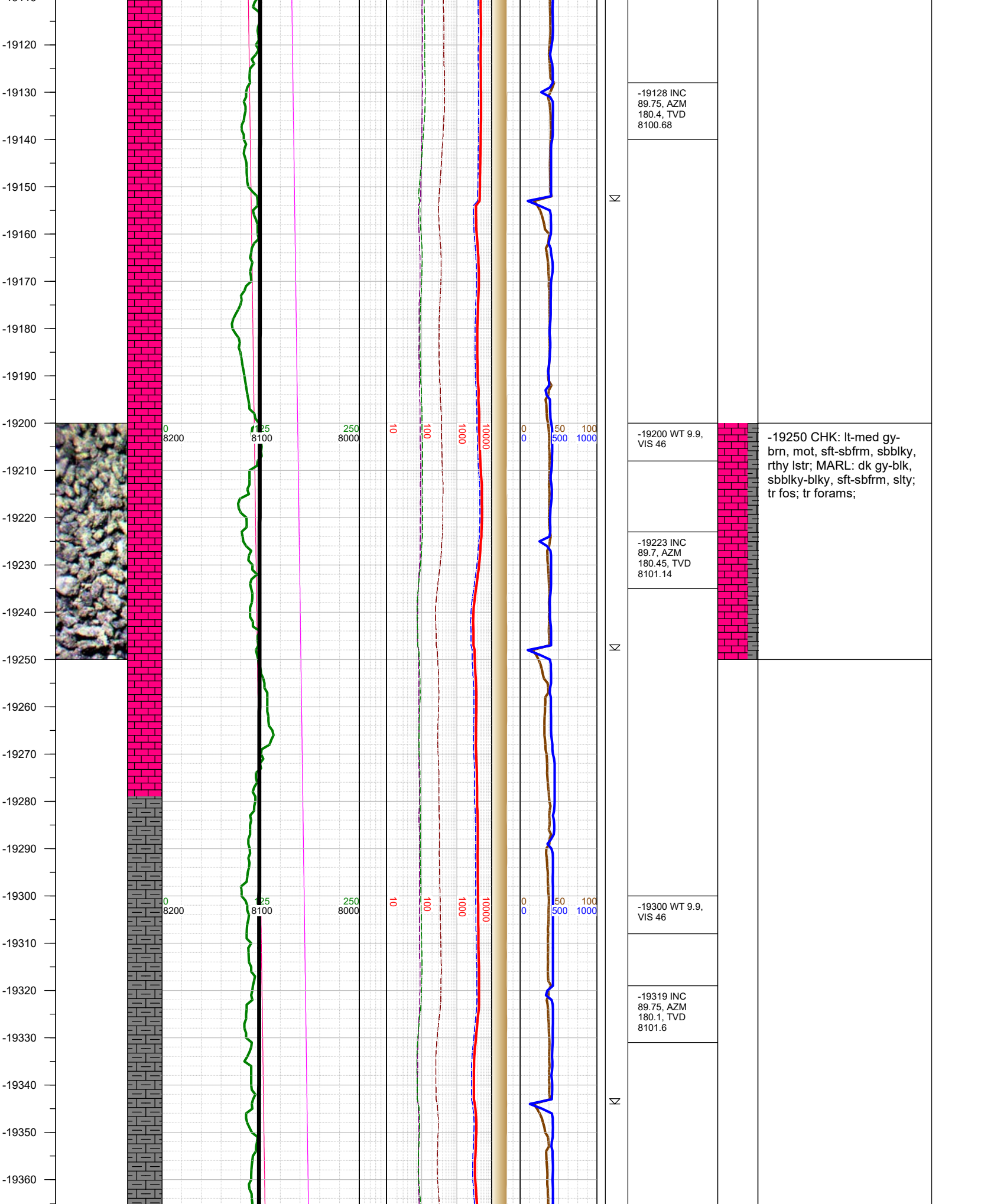


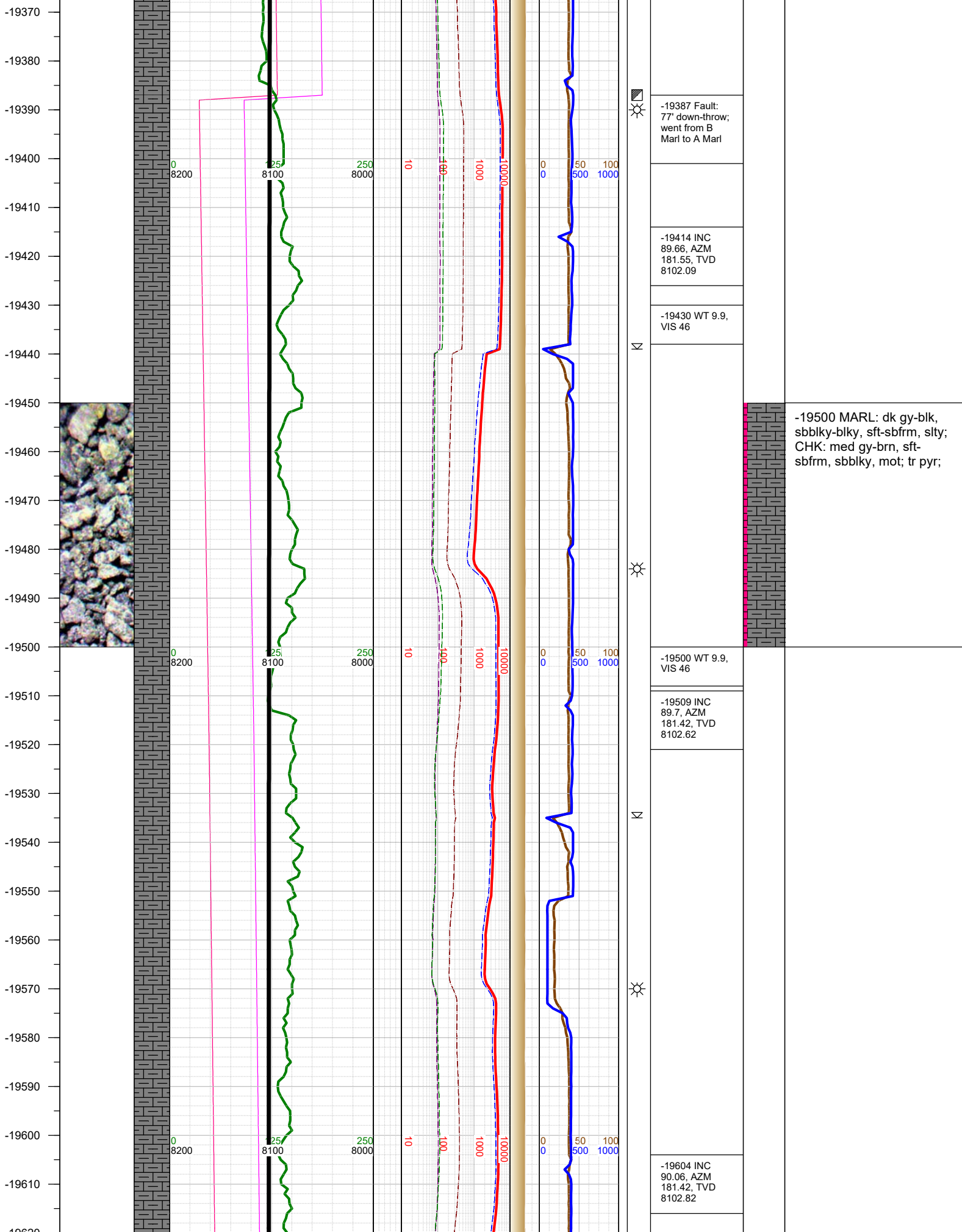
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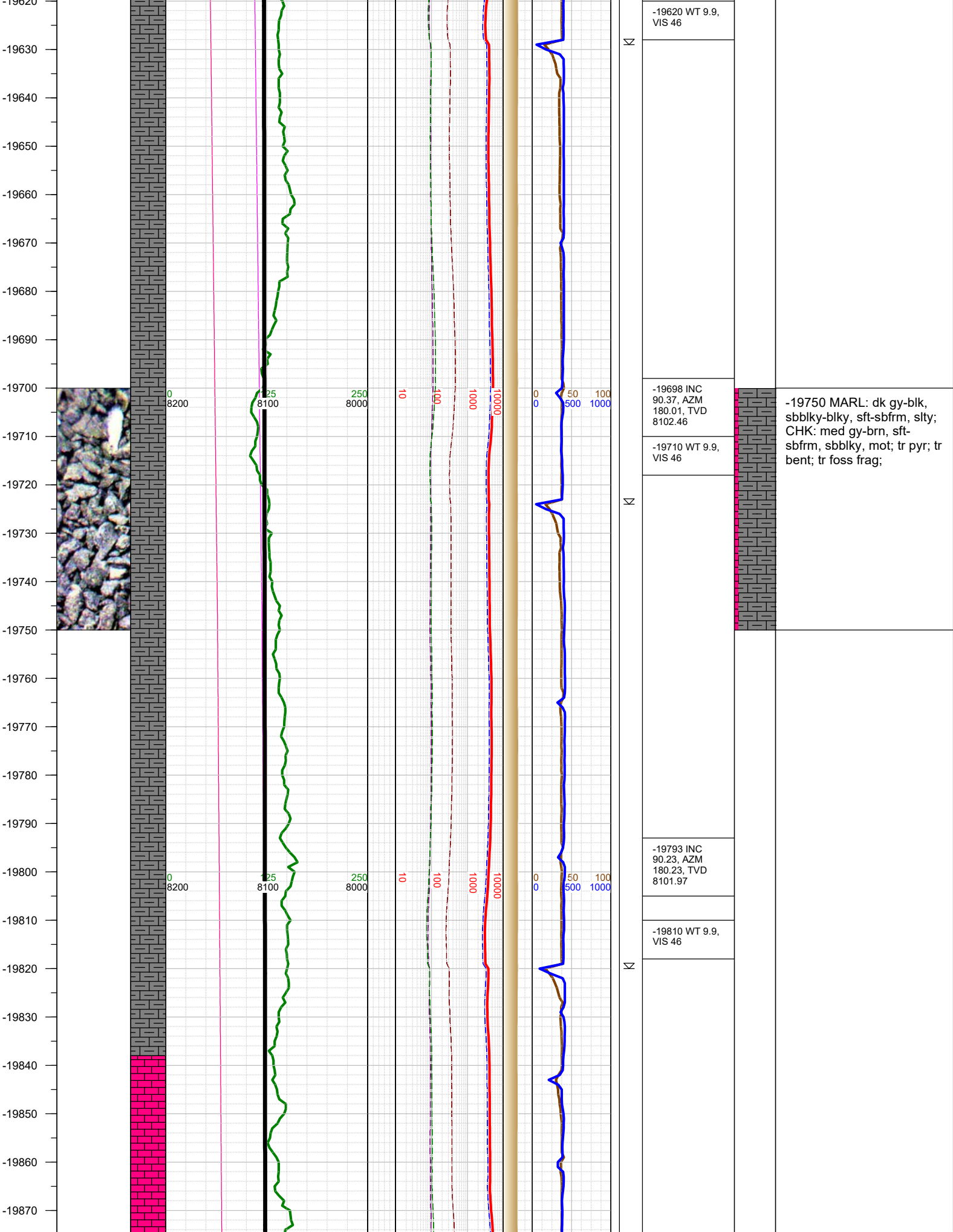
	-18900 WT 9.9, VIS 46
	-18936 INC 89.88, AZM 179.61, TVD 8100.02
	-19000 WT 9.9, VIS 46
	-19032 INC 89.79, AZM 181.06, TVD 8100.29
	-19100 WT 9.9, VIS 46

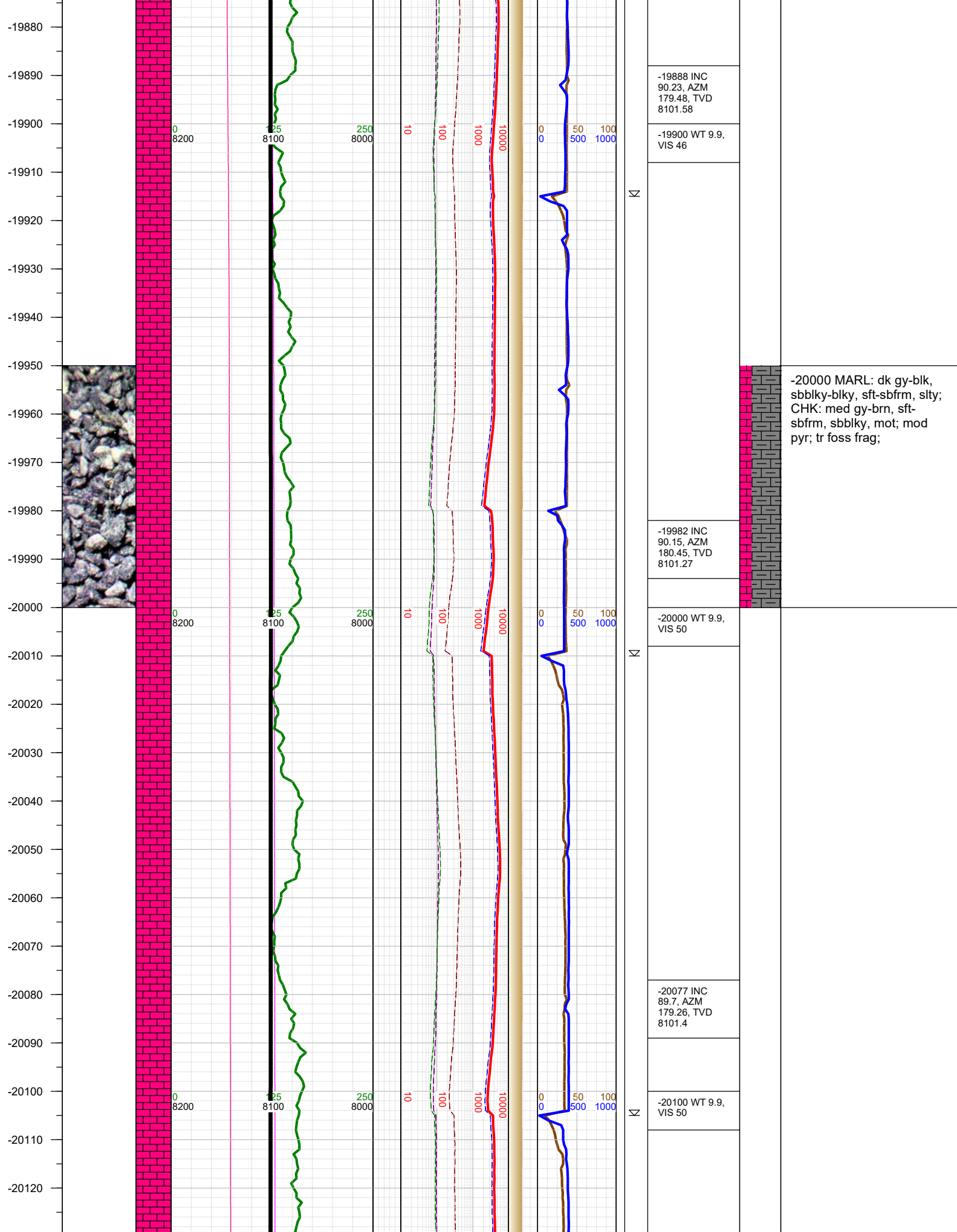


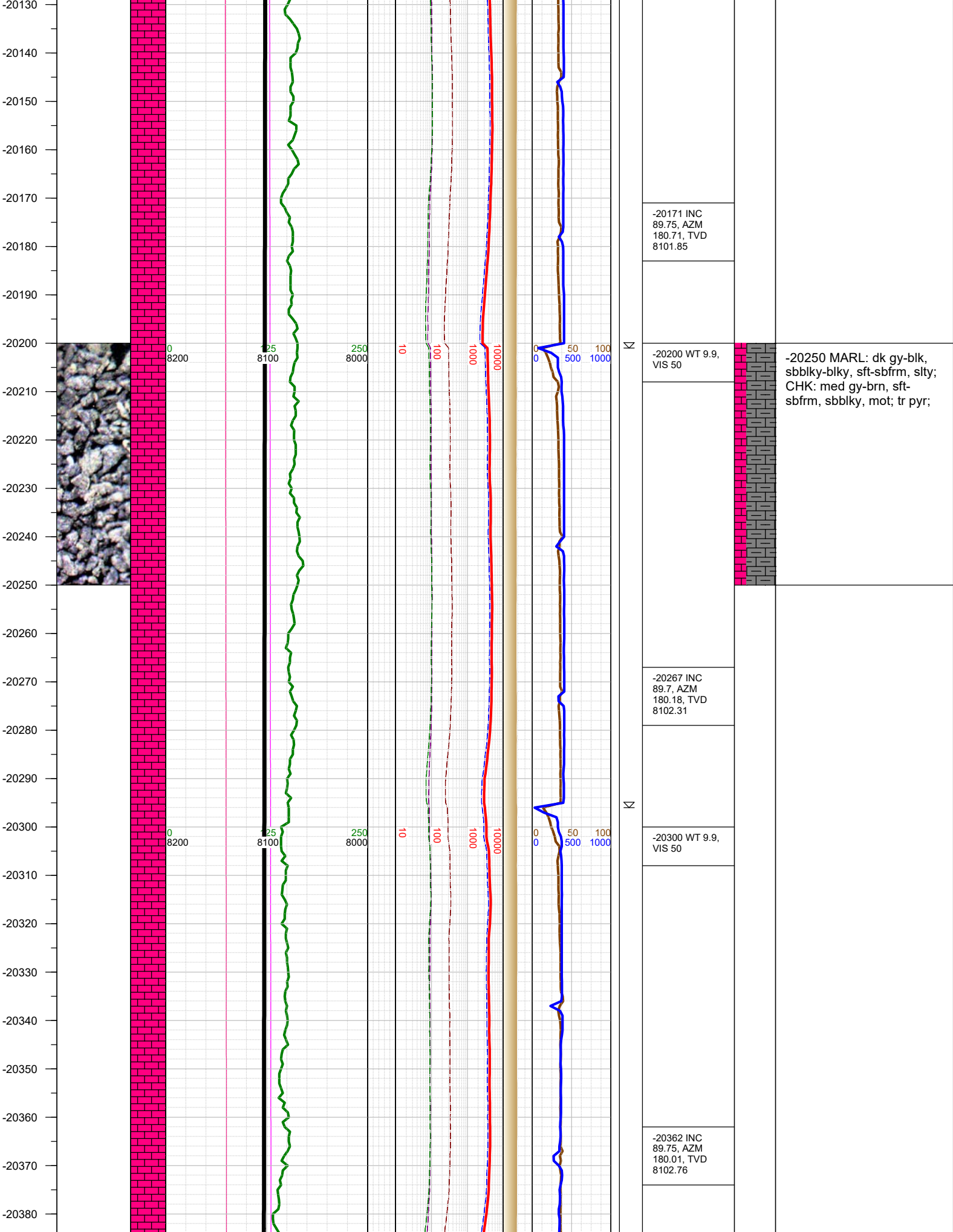
-19000 CHK: lt-med gy-
brn, mot, sft-sbfrm, sbblky,
rthy lstr; MARL: dk gy-blk,
sbblky-blky, sft-sbfrm, silty;
tr fos; tr forams;

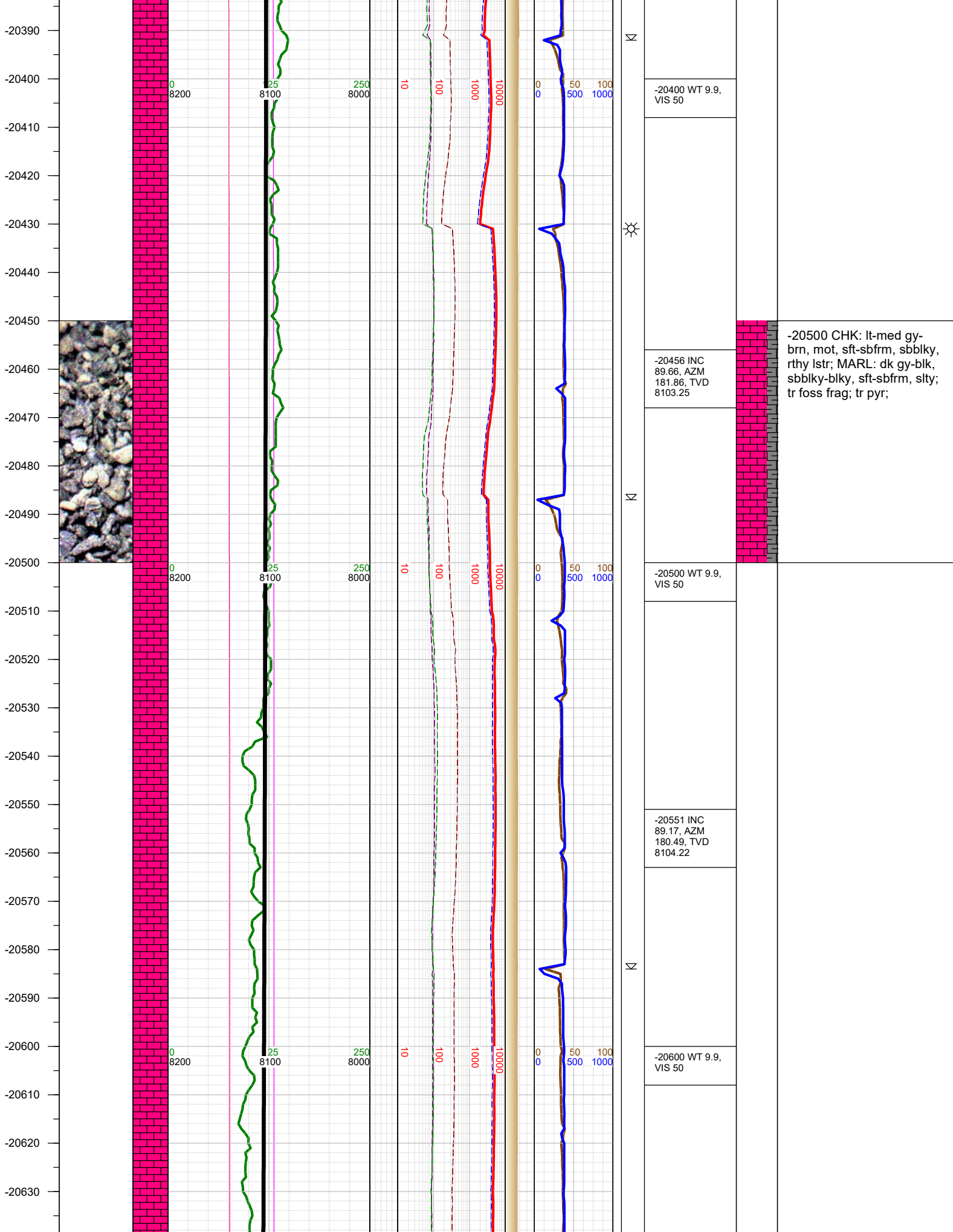


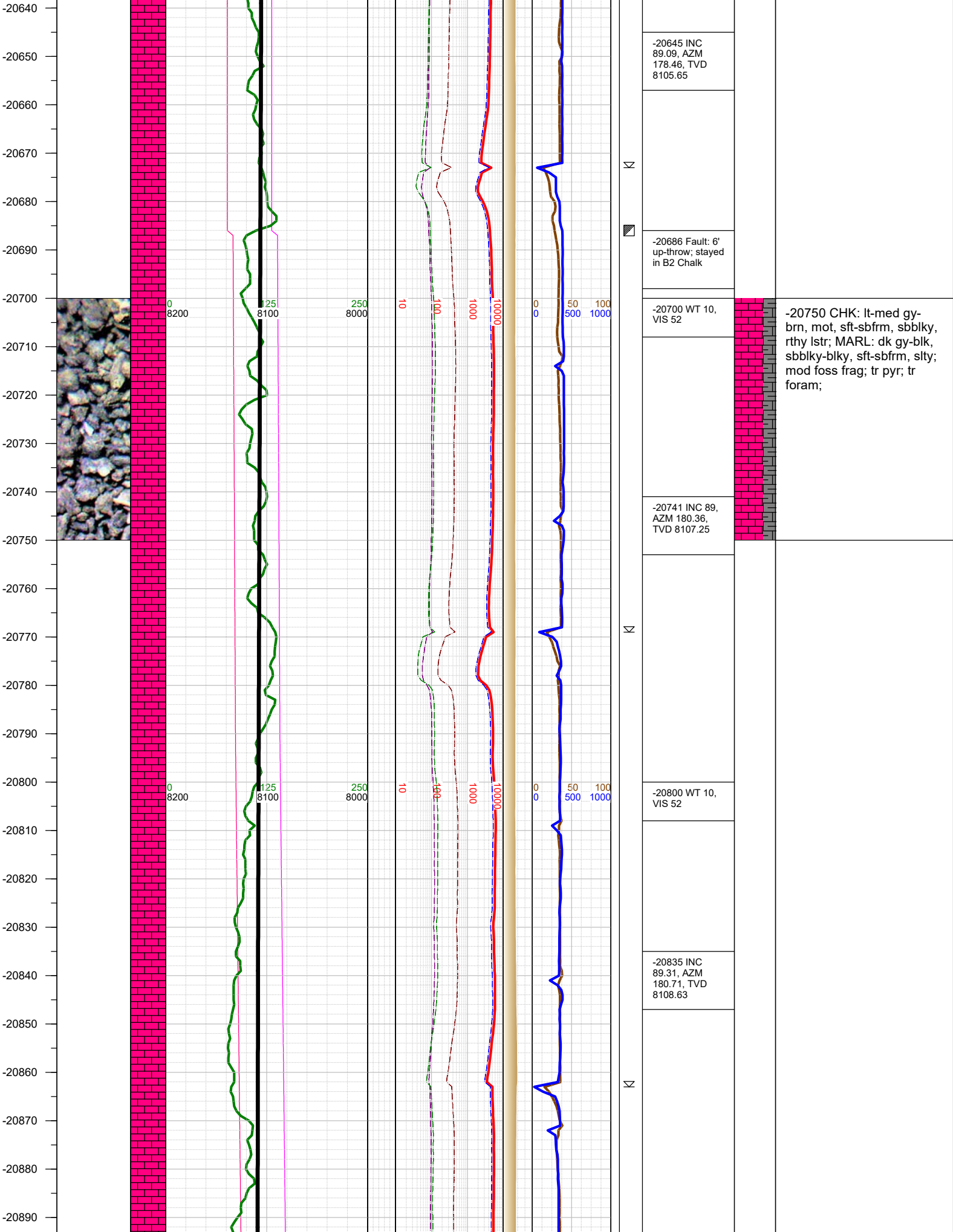


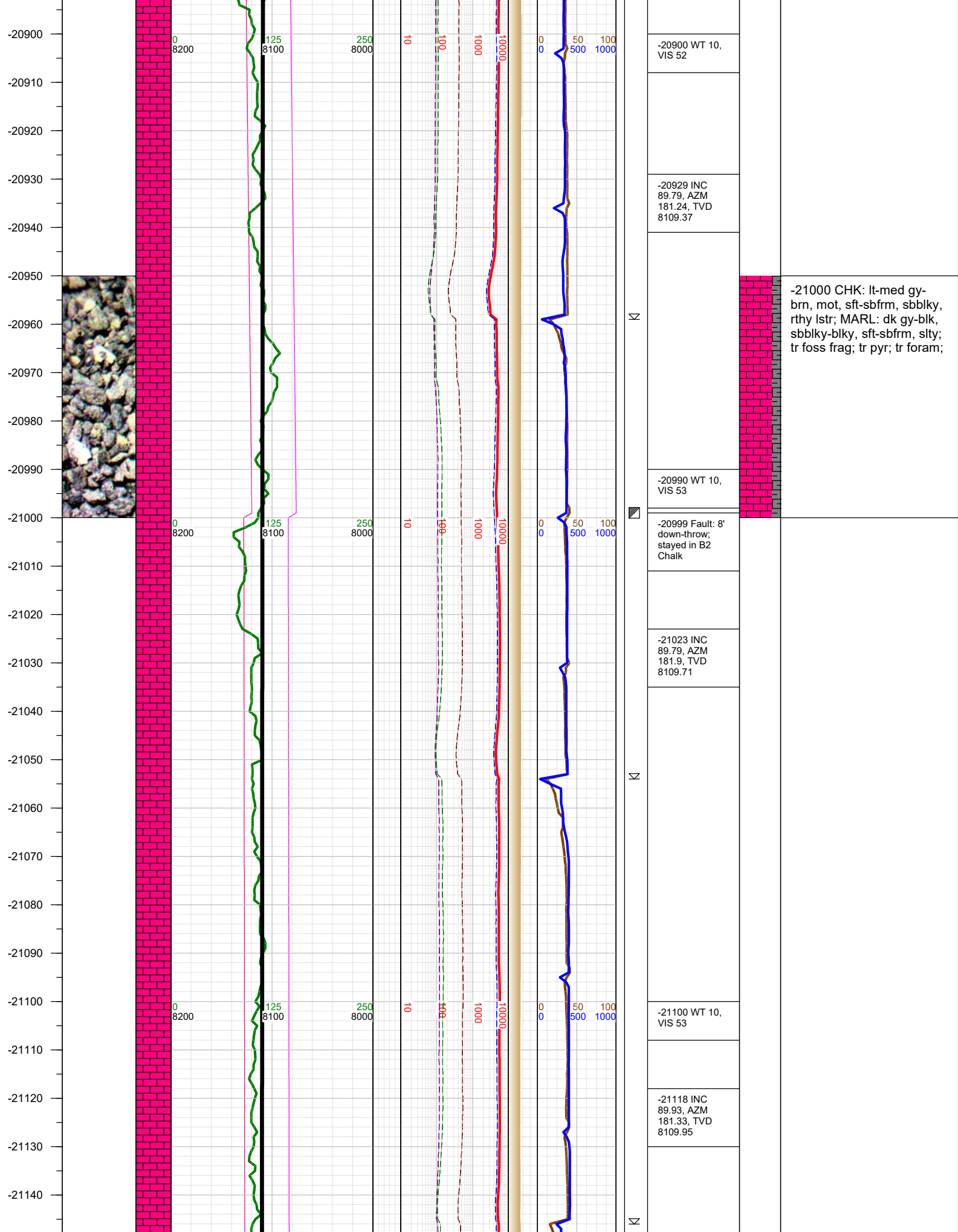


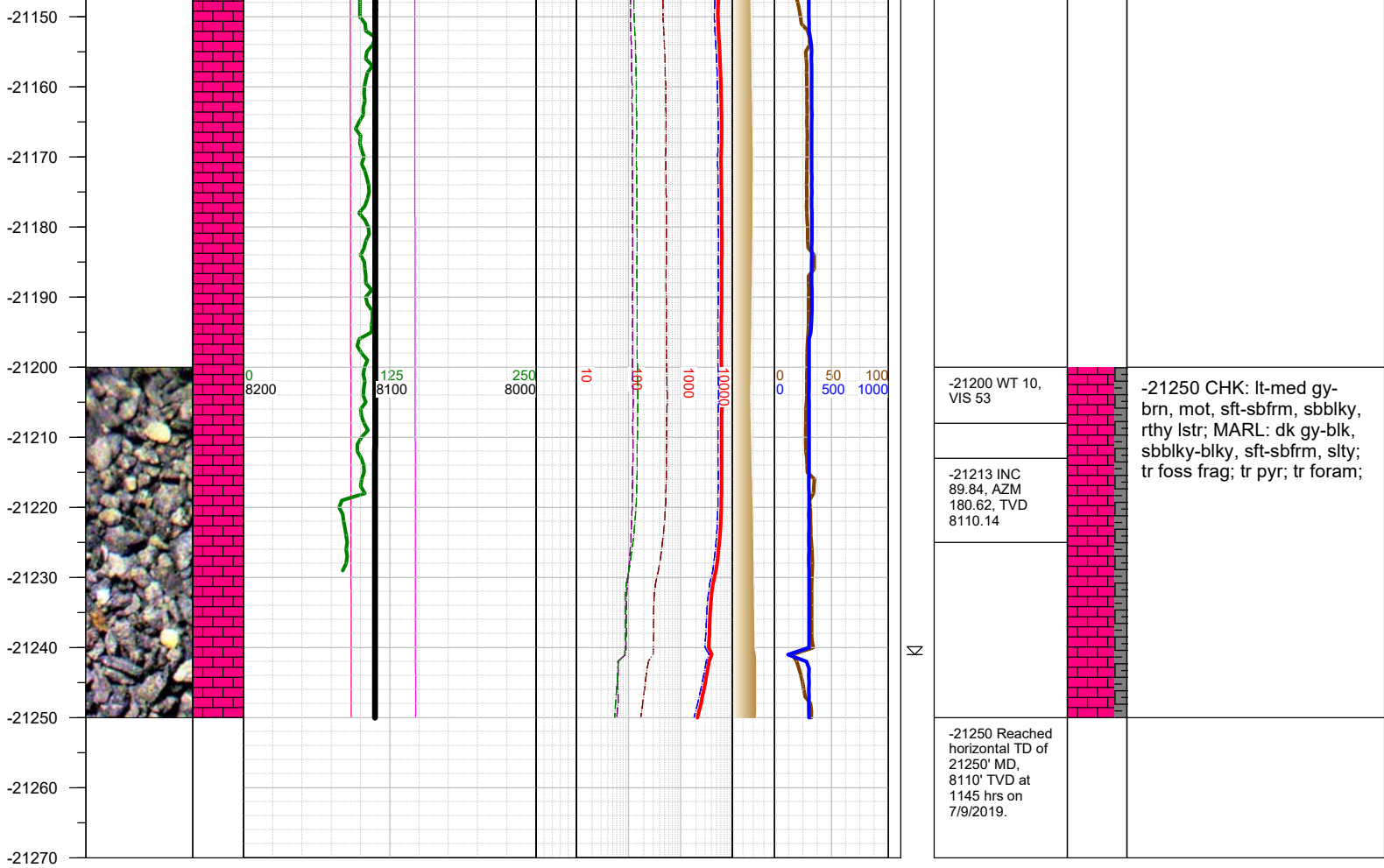












TOTAL DEPTH = 21250'

Thank you for using Earth Science Agency