

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **VTS ALLES 1-16-18**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 901

API #: 05-123-44415

LAT/LONG: 40.40125, -104.65723

SURFACE HOLE: SWNW S15-T5N-R65W, 1907' FNL, 459' FWL

BOTTOM HOLE: S18-T5N-R65W, 2332' FNL, 460' FWL

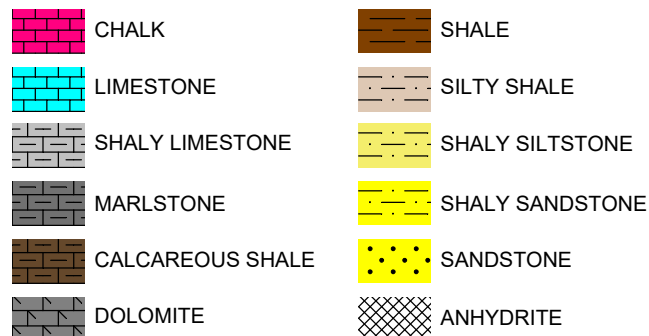


Earth Science Agency, LLC

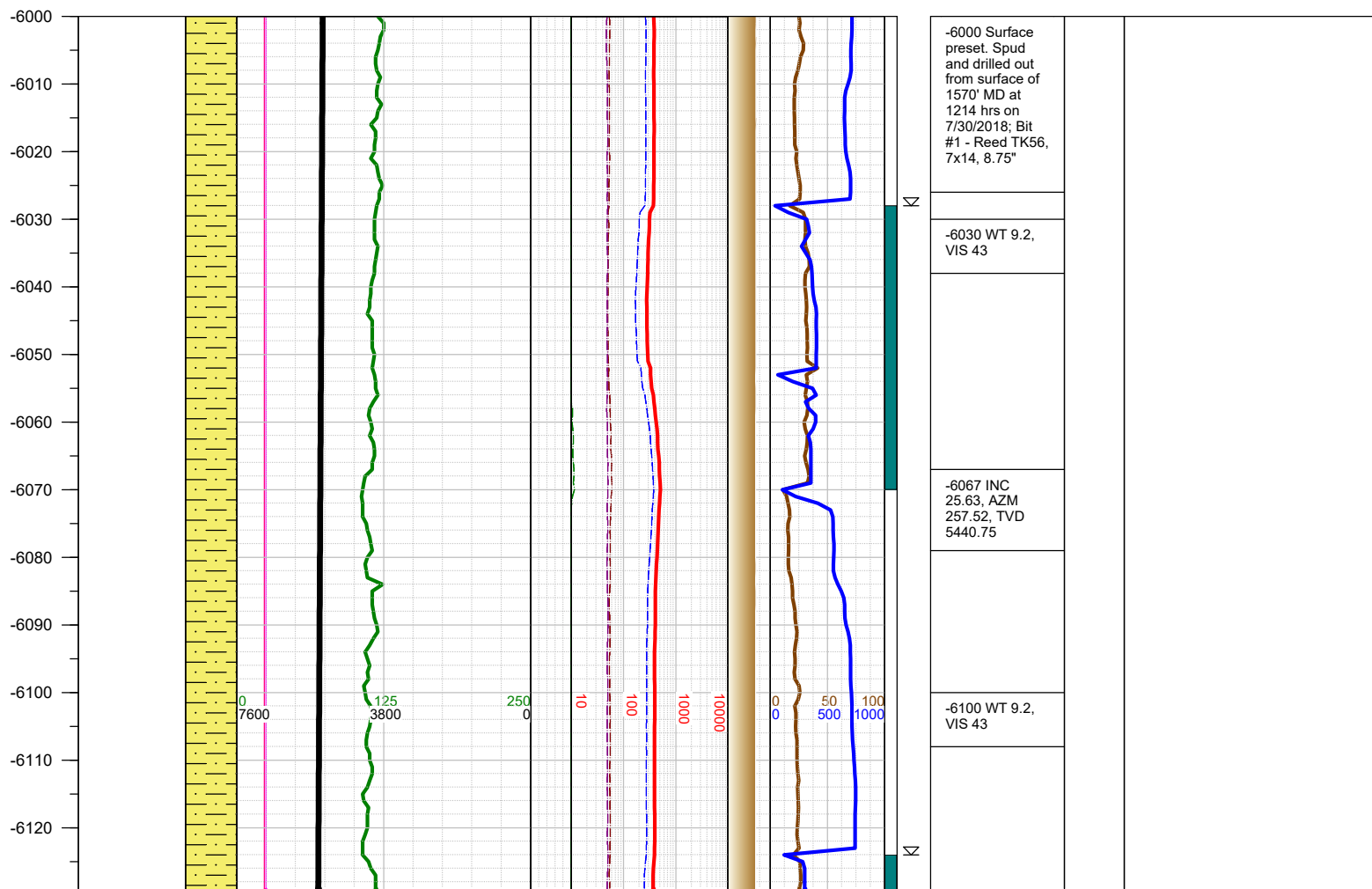
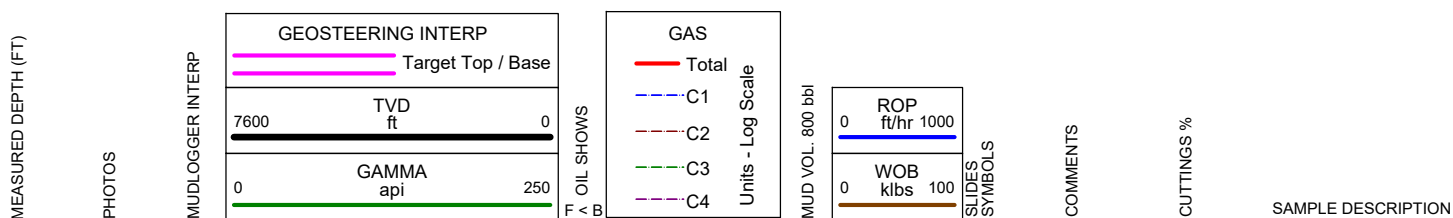
COUNTY: Weld  
STATE: Colorado  
GROUND ELEVATION: 4647'  
KELLY BUSHING: 4676'  
DRILLING FLUID: OBM  
TVD VS. MD: 6858' / 20150'  
SPUD DATE: July 30, 2018  
TD DATE: August 2, 2018

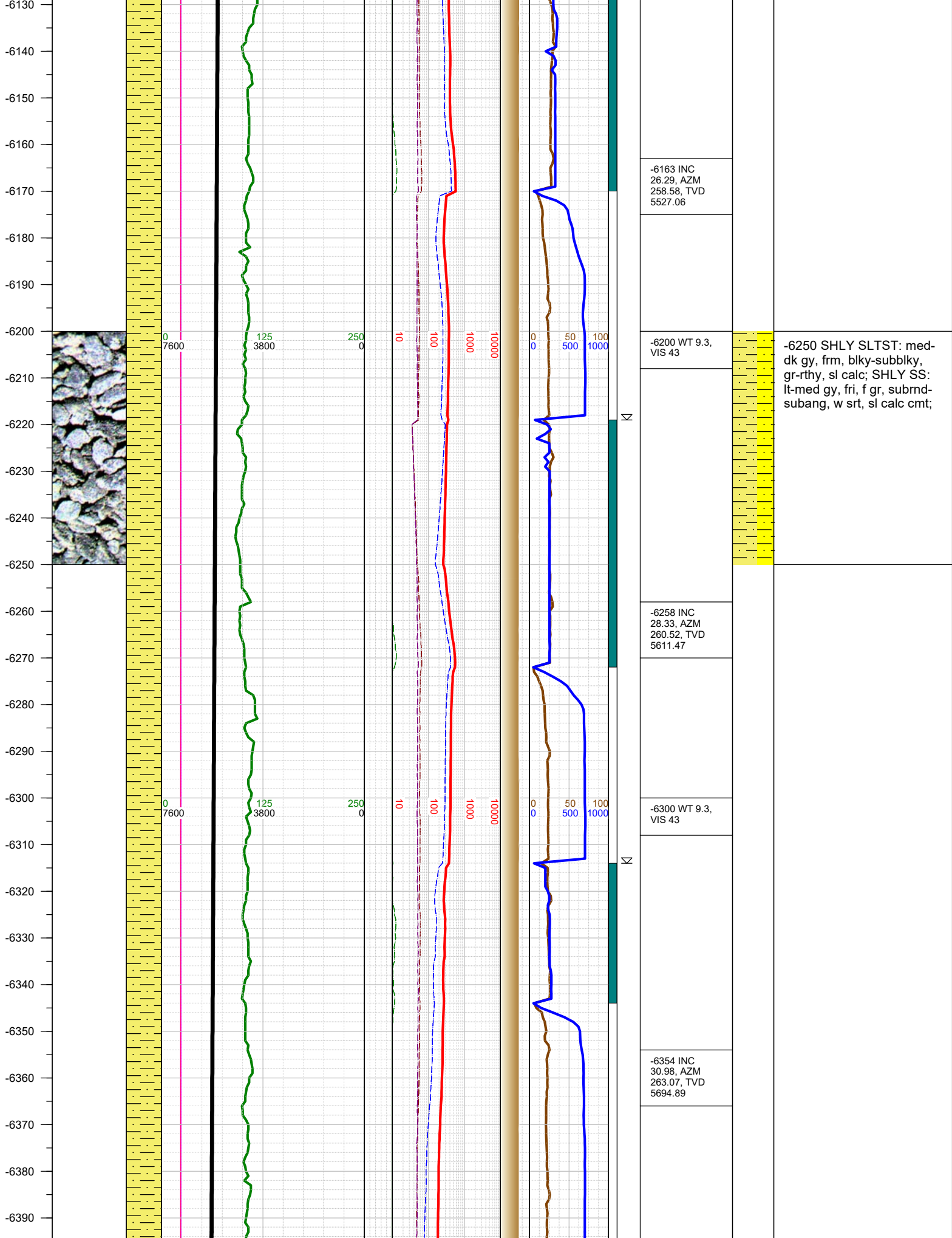
DEPTHS LOGGED: 6000' - 20150'  
DATES LOGGED: July 30, 2018 - August 2, 2018  
GEOLOGISTS: Blake Eatherton, Dan Jacobs  
SCALE: 5" = 100'

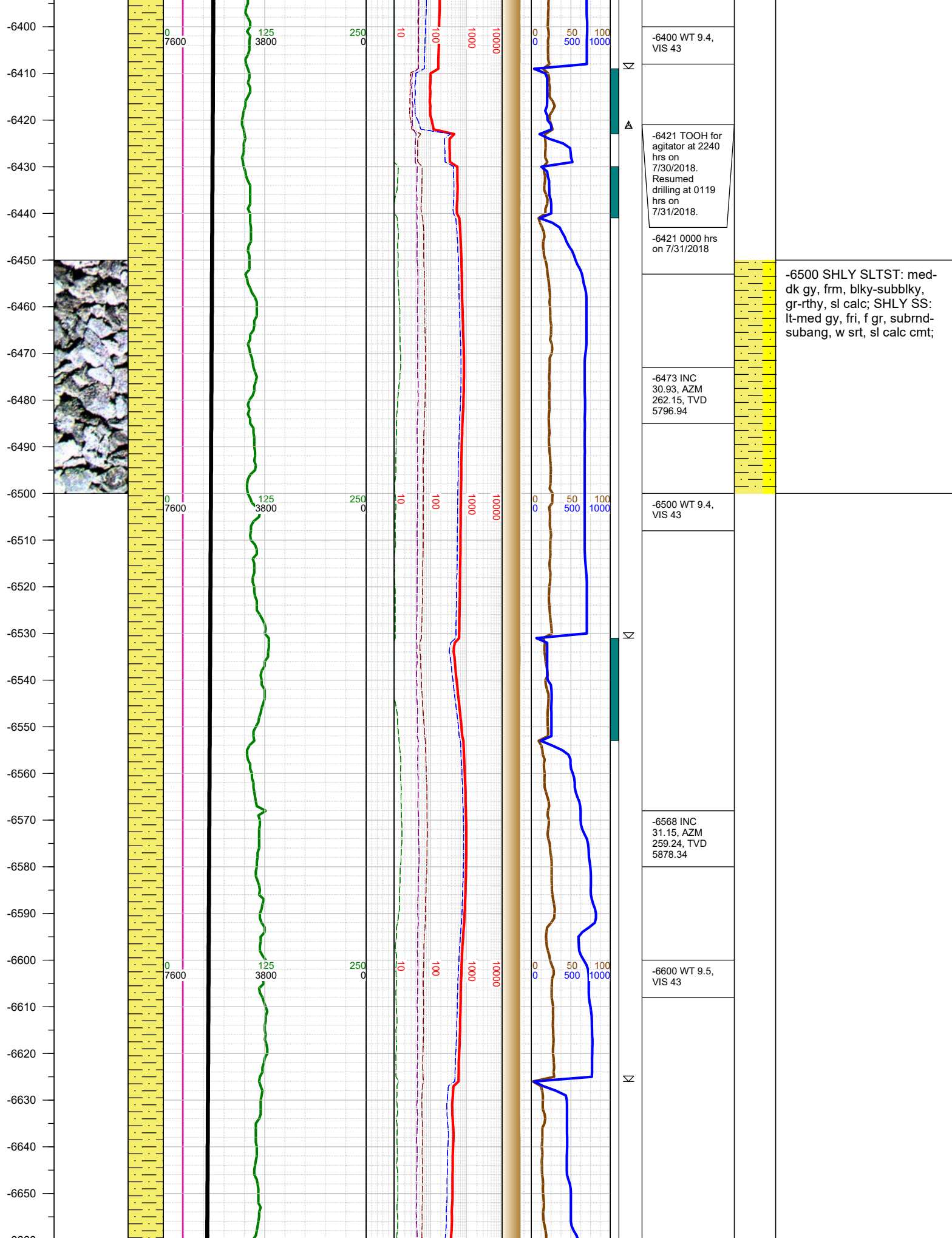
#### LEGEND

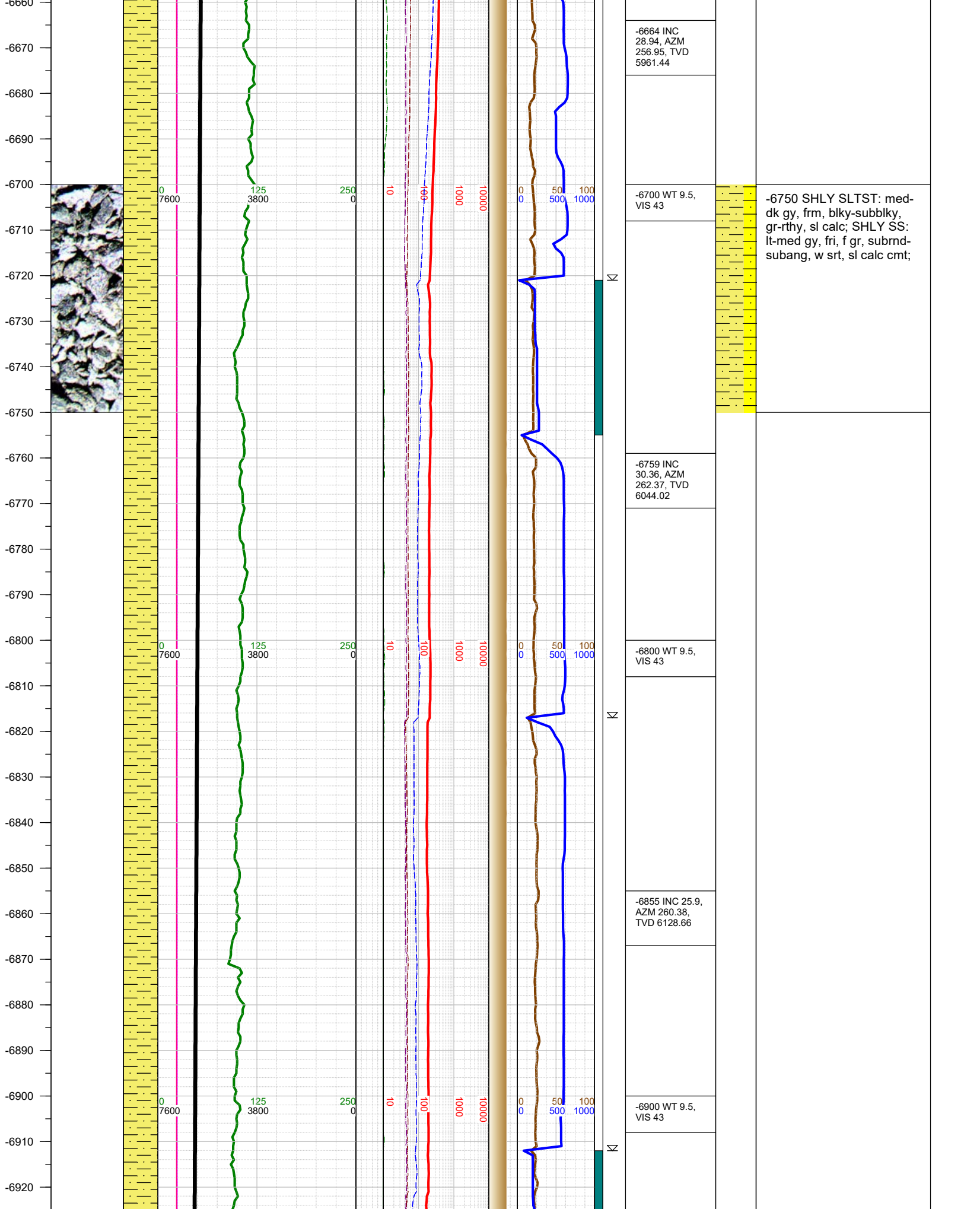


FORMATION  $\approx$  CONNECTION  $\Delta$  MIDNIGHT NEW BIT GAS SHOW FAULT

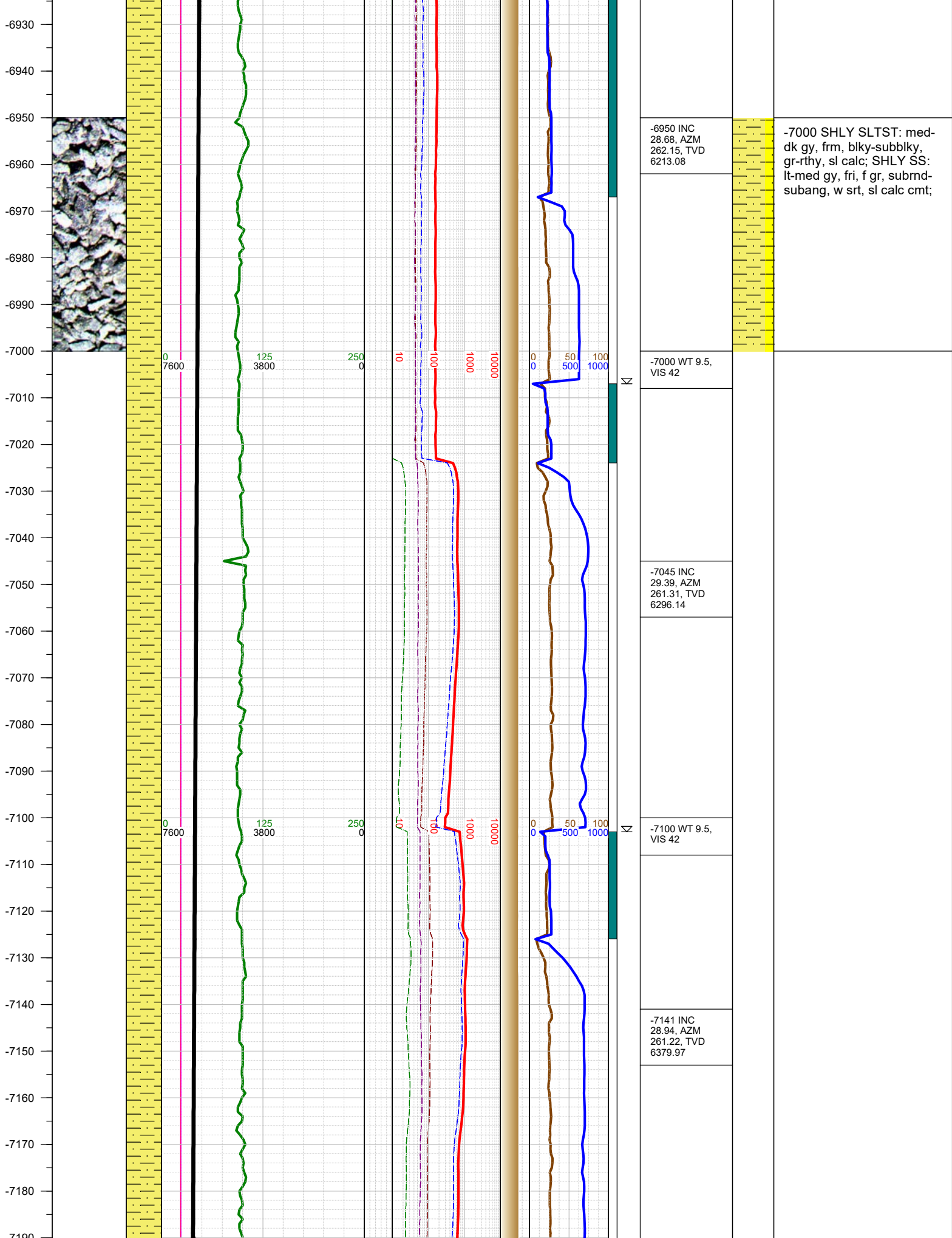


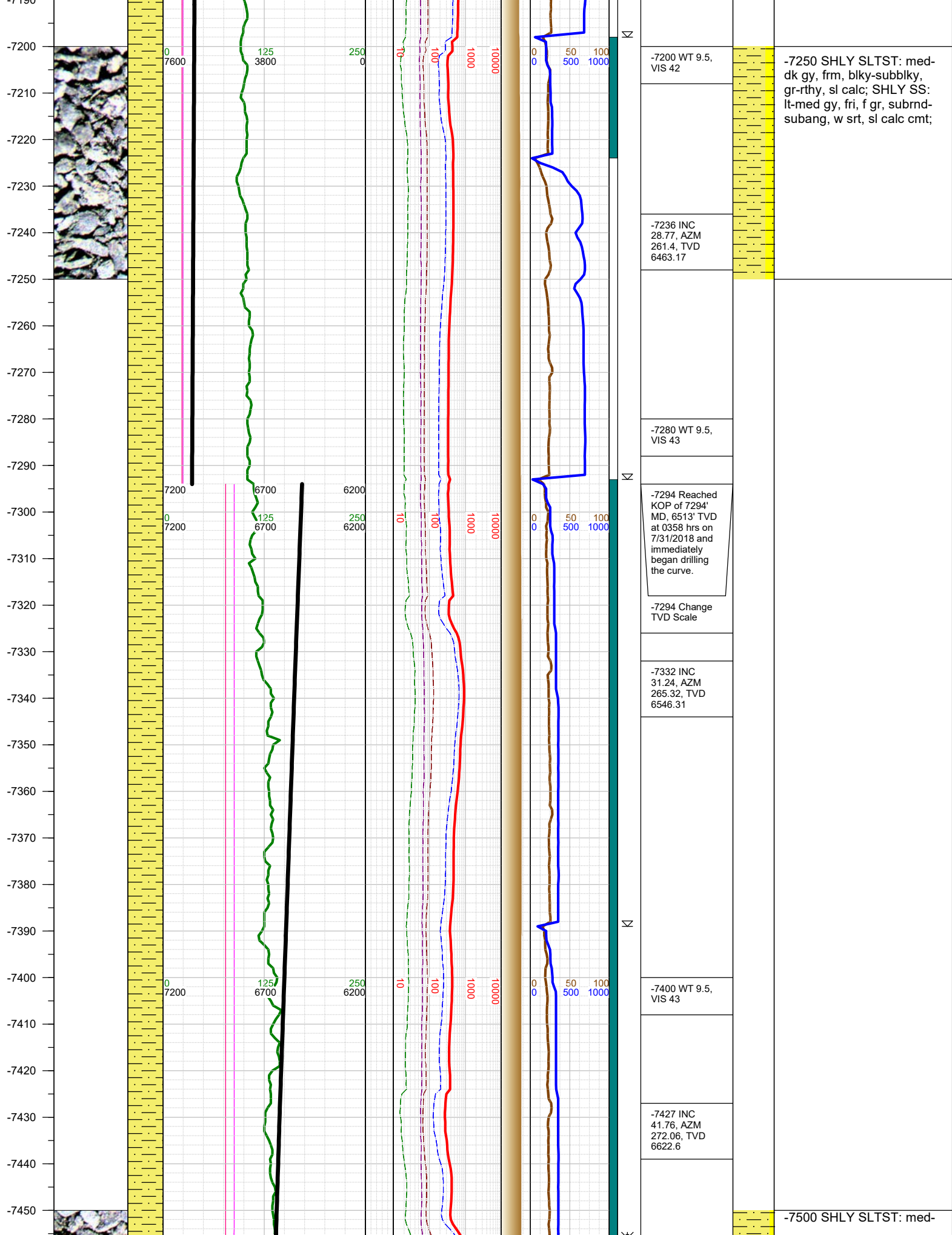


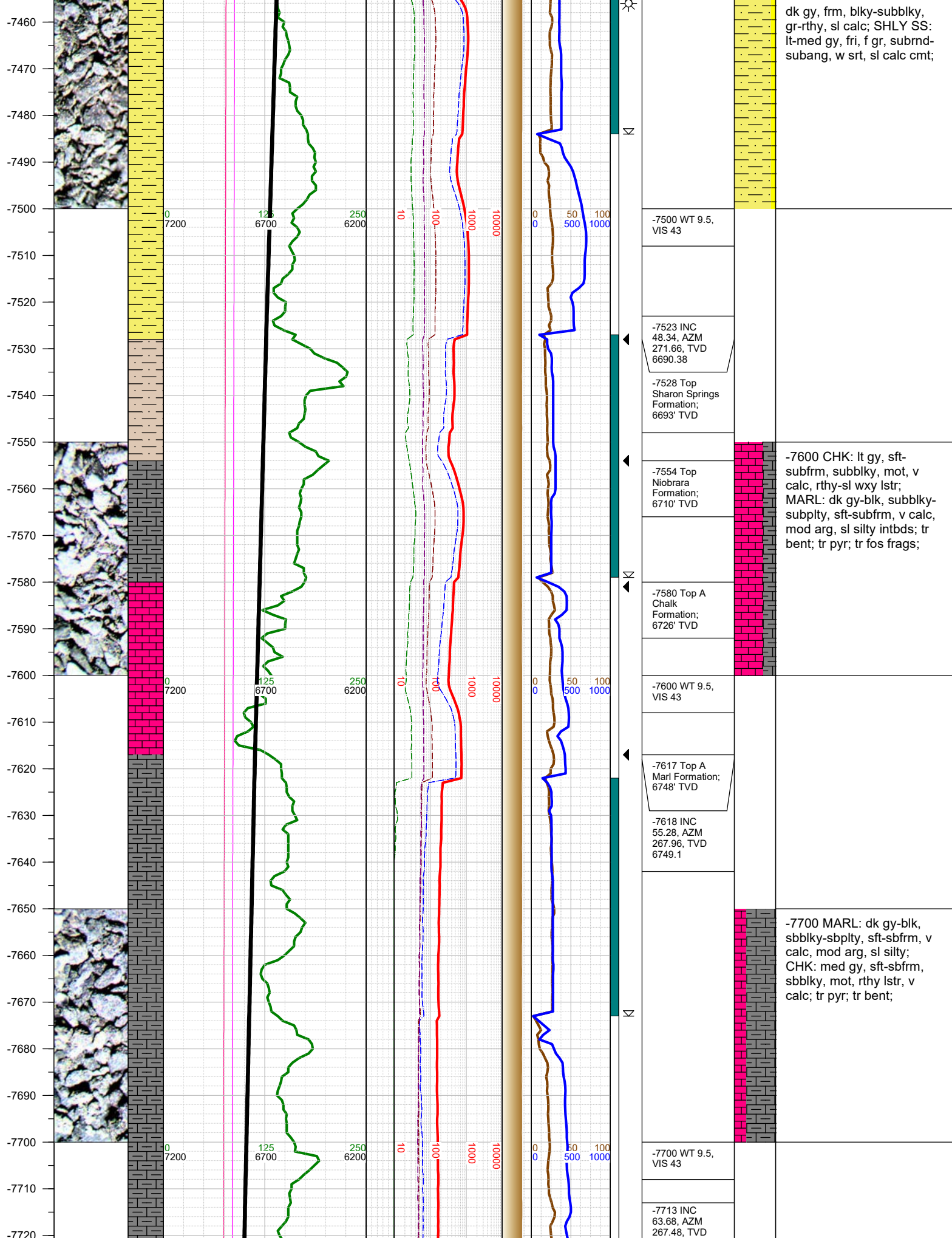




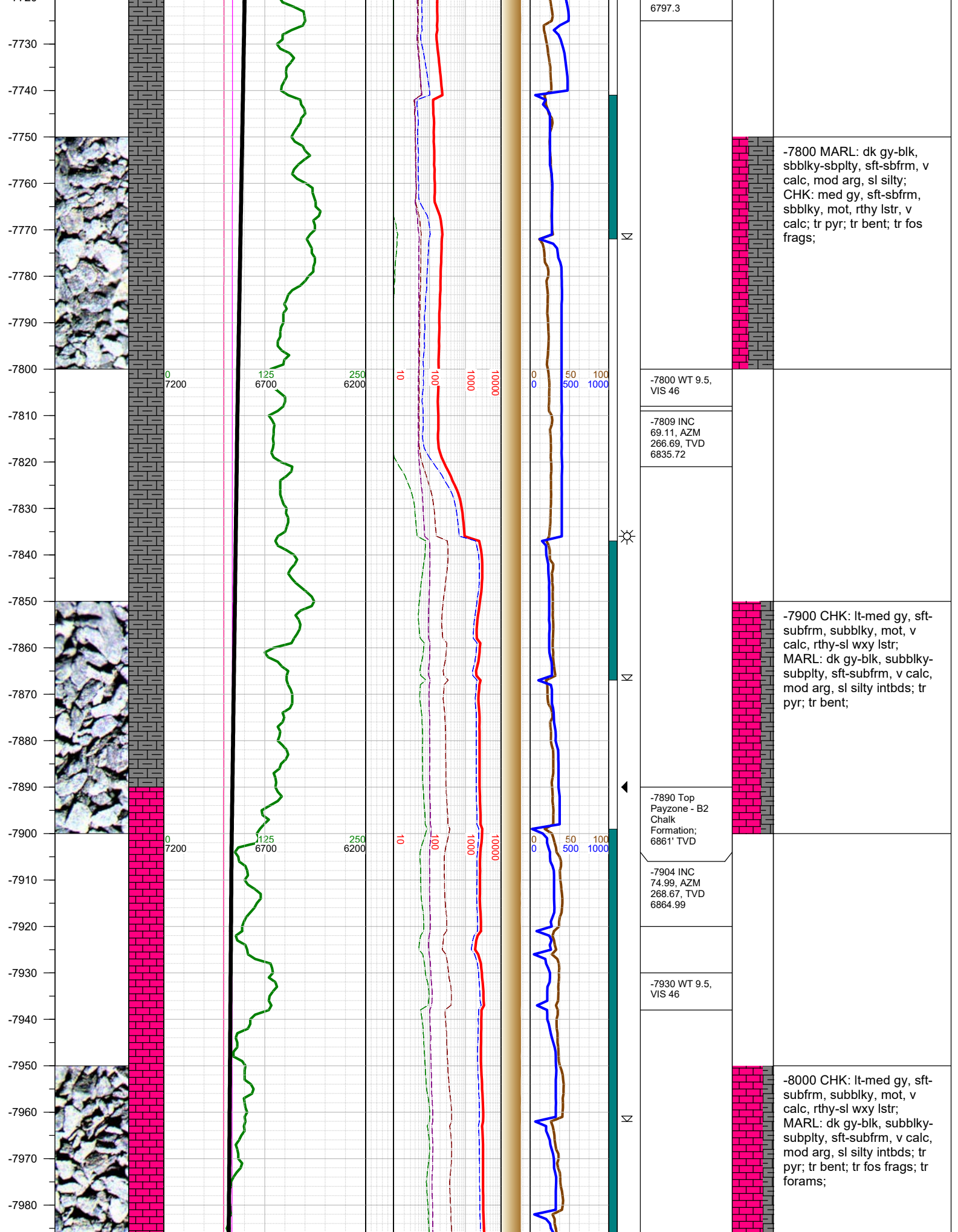




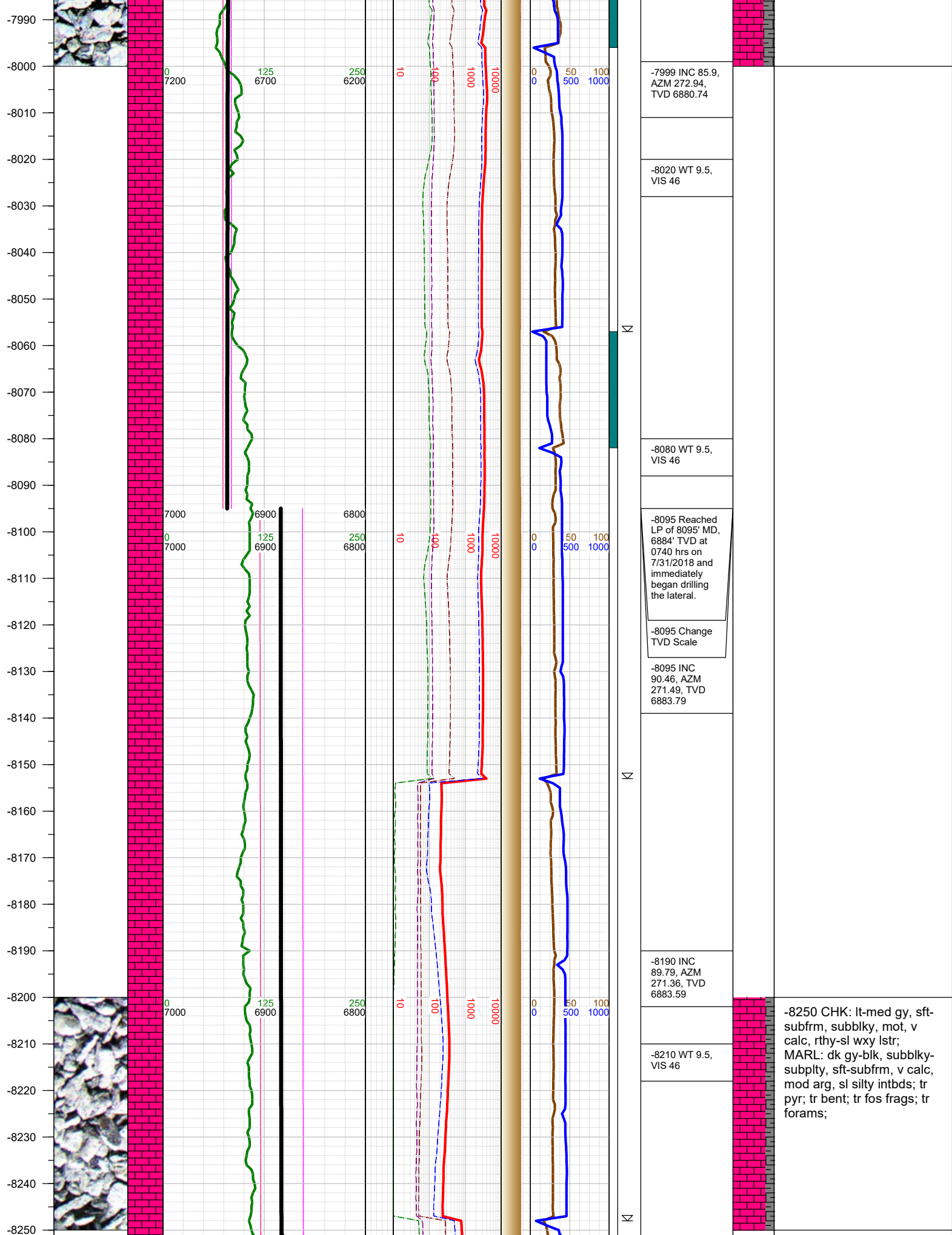


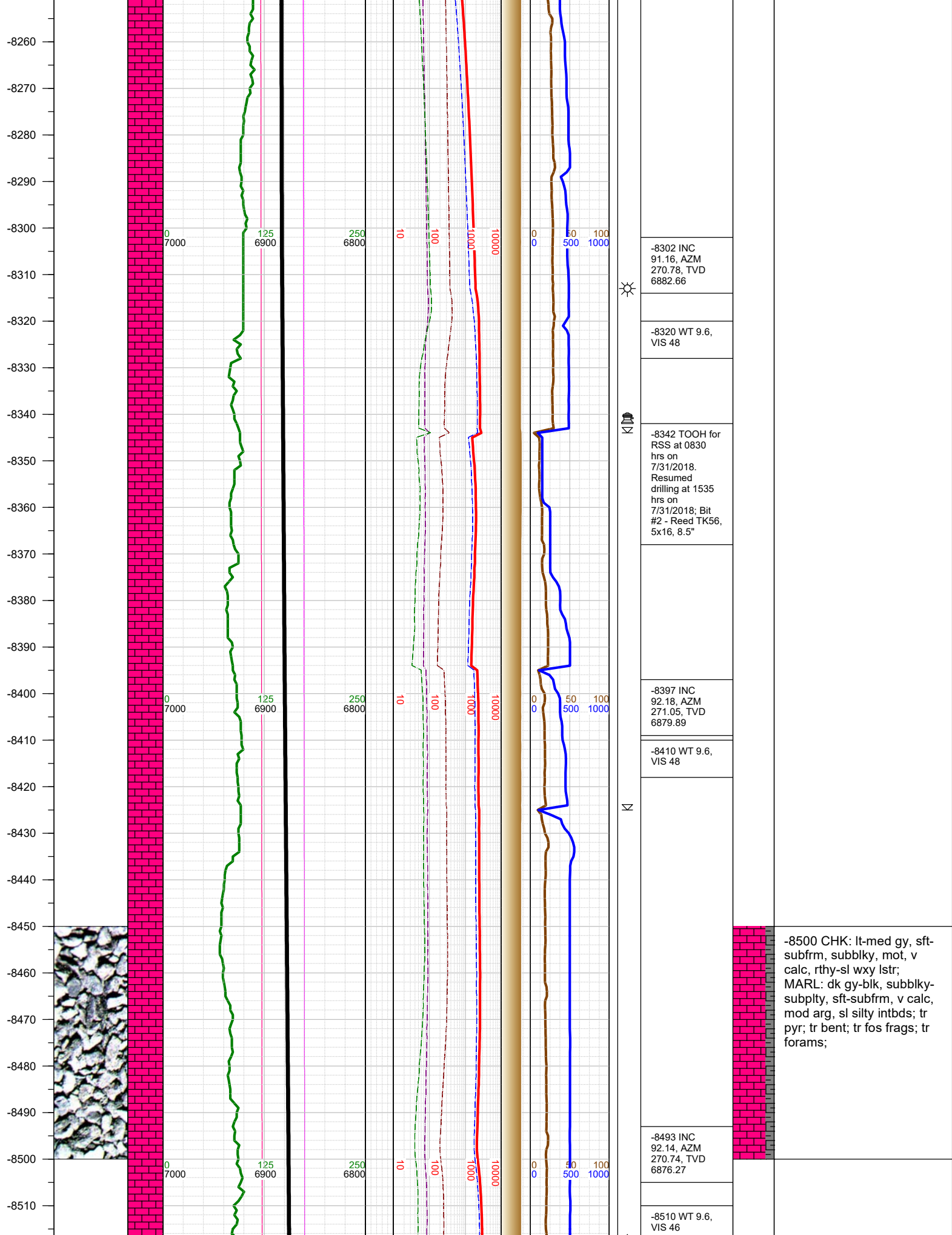




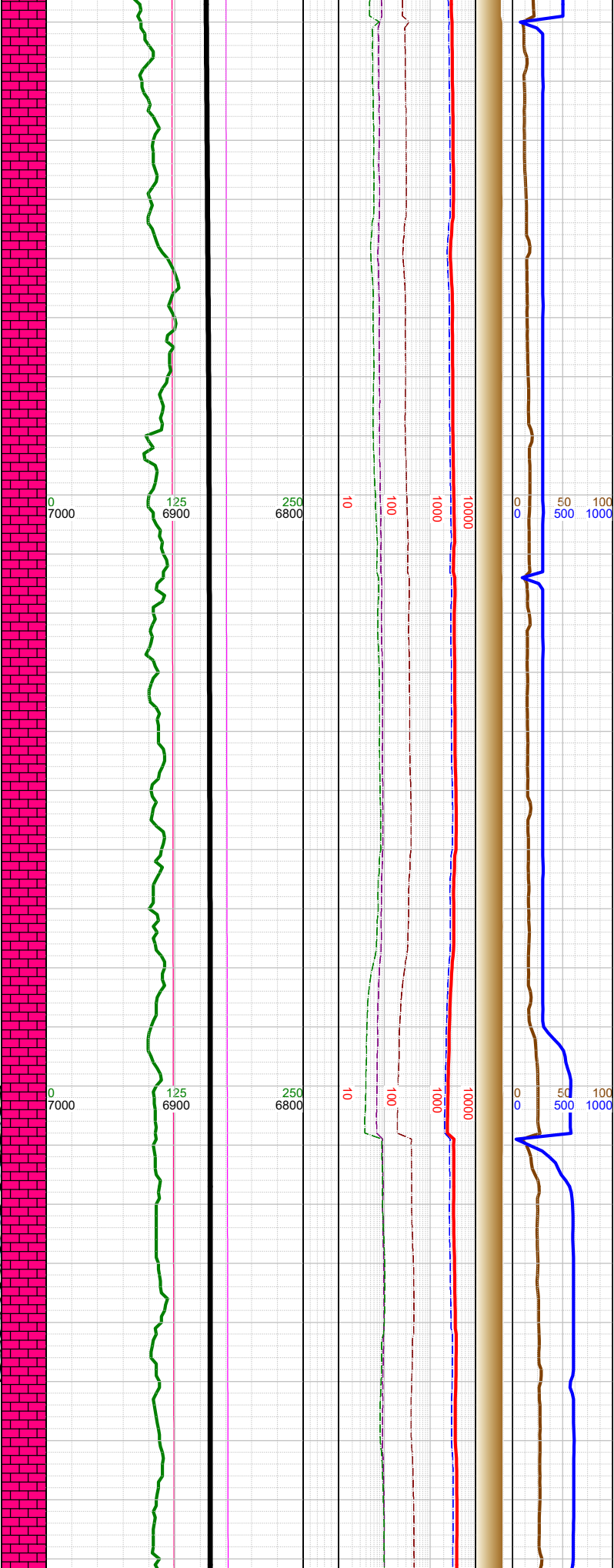
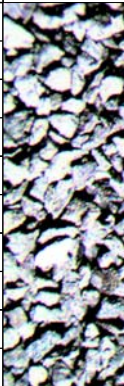




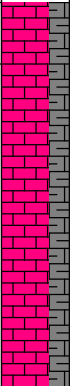




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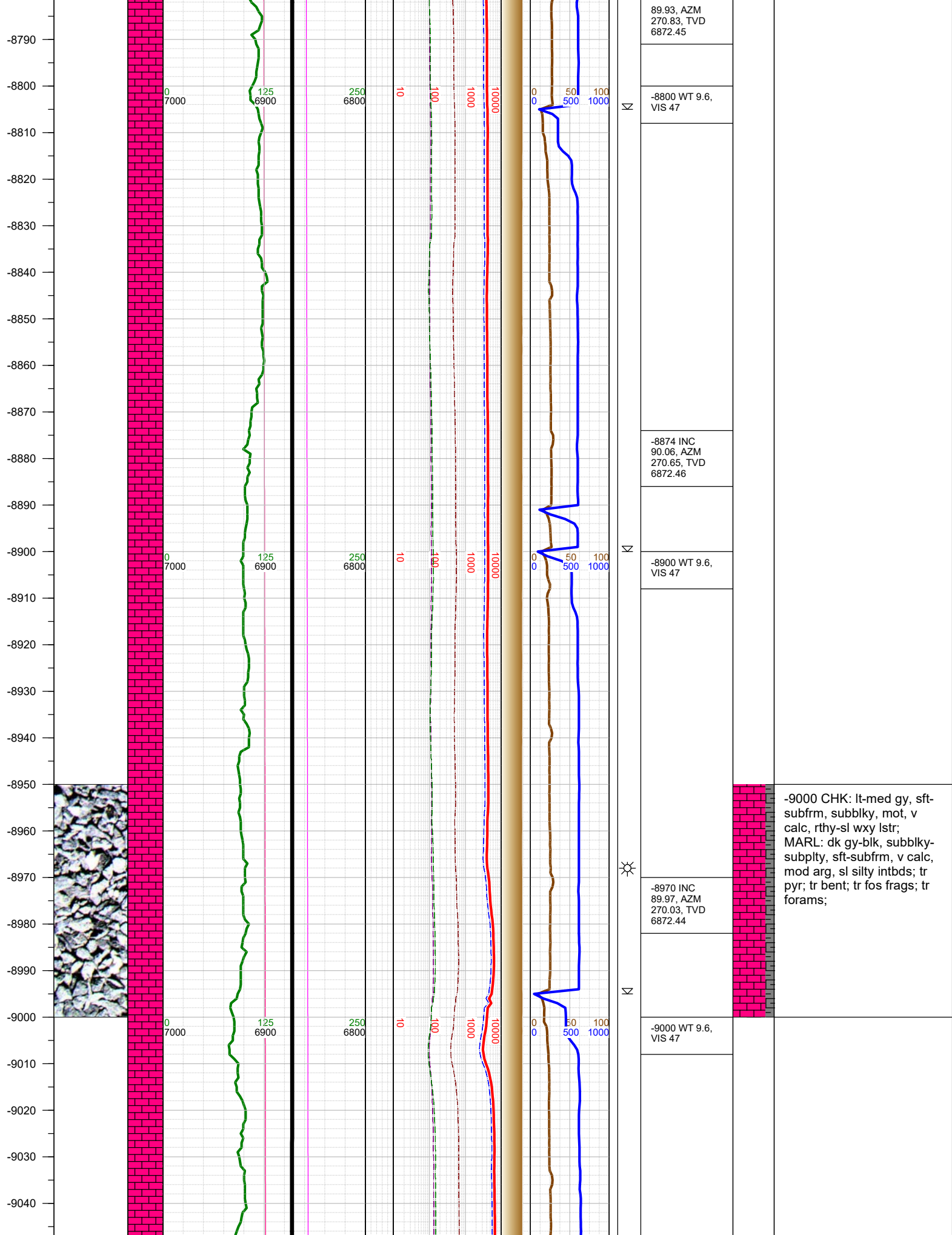


Δ	-8518 TOOH for RSS at 1735 hrs on 7/31/2018. Resumed drilling at 0046 hrs on 8/1/2018.
	-8518 0000 hrs on 8/1/2018
	-8518 Gas buster on
	-8588 INC 91.25, AZM 270.56, TVD 6873.46
	-8600 WT 9.6, VIS 46
N	
	-8684 INC 90.01, AZM 270.7, TVD 6872.4
N	-8700 WT 9.6, VIS 46
	-8779 INC

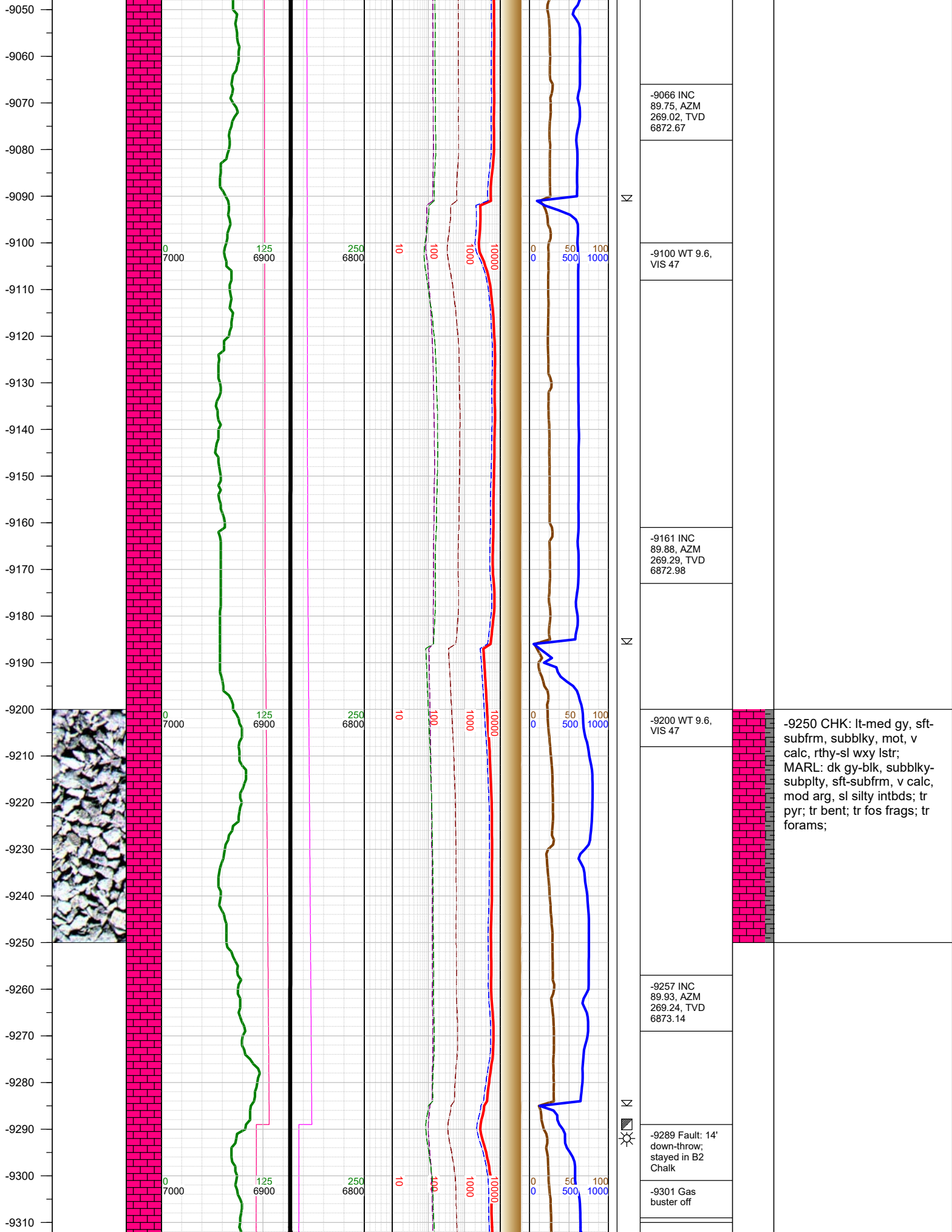


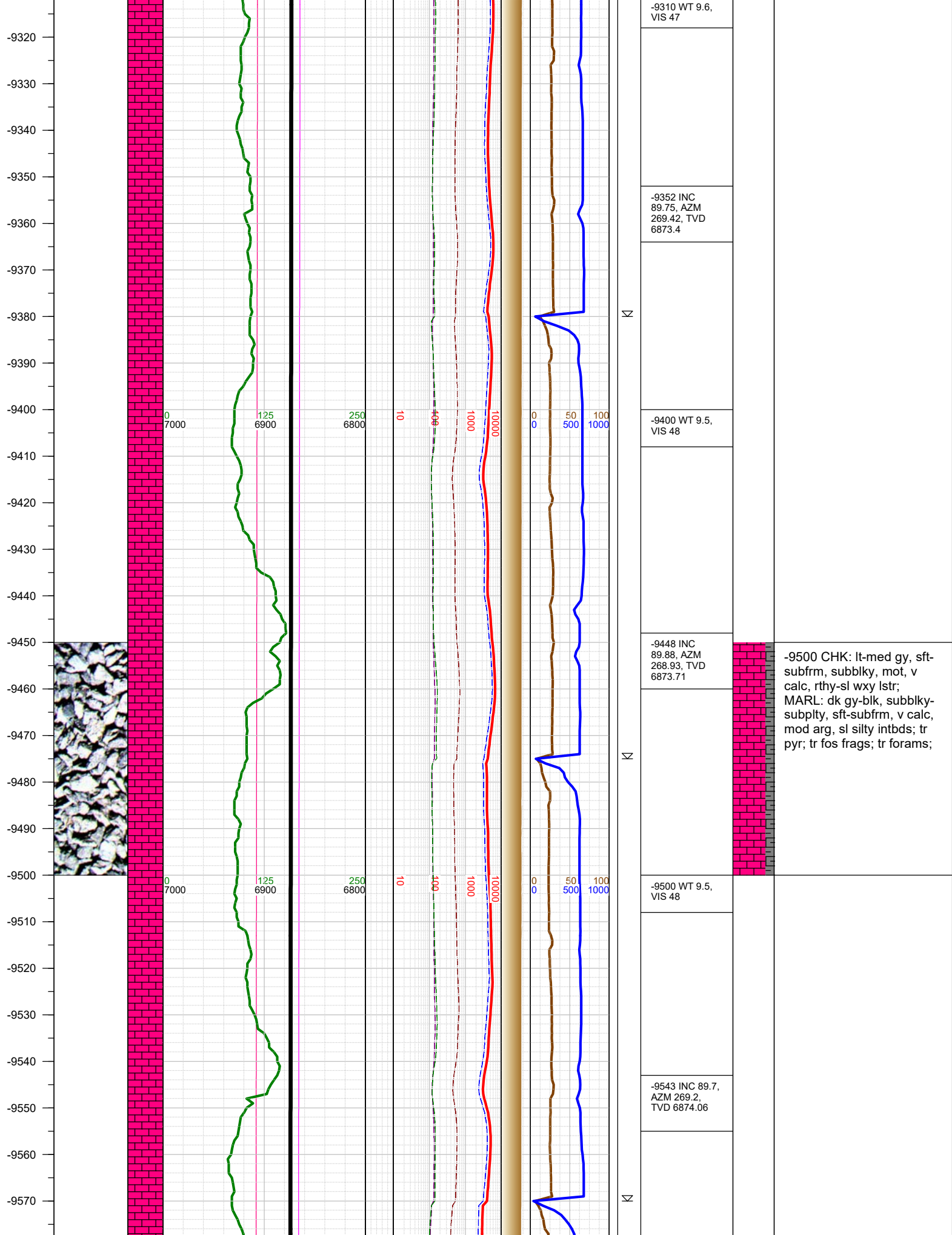
-8750 CHK: lt-med gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subply, sft-subfrm, v calc, mod arg, sl silty intbds; tr pyr; tr bent; tr fos frags; tr forams;











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-9600 WT 9.5,  
VIS 48

-9639 INC  
89.62, AZM  
269.37, TVD  
6874.63

-9649 Fault: 37'  
down-throw;  
went from B2  
Chalk to B1  
Chalk/Marl

-9700 WT 9.5,  
VIS 49

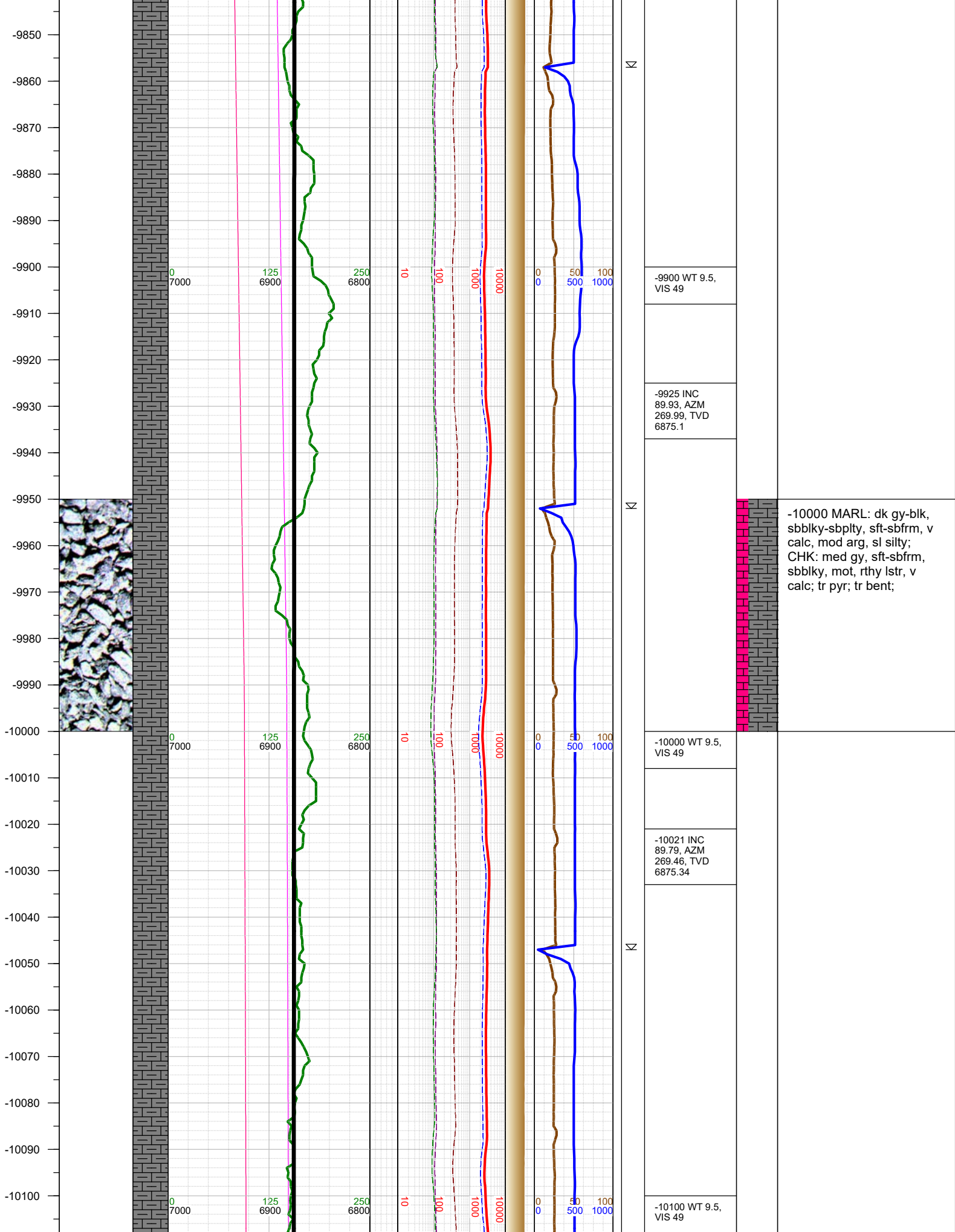
-9734 INC  
89.97, AZM  
269.9, TVD  
6874.97

-9800 WT 9.5,  
VIS 49

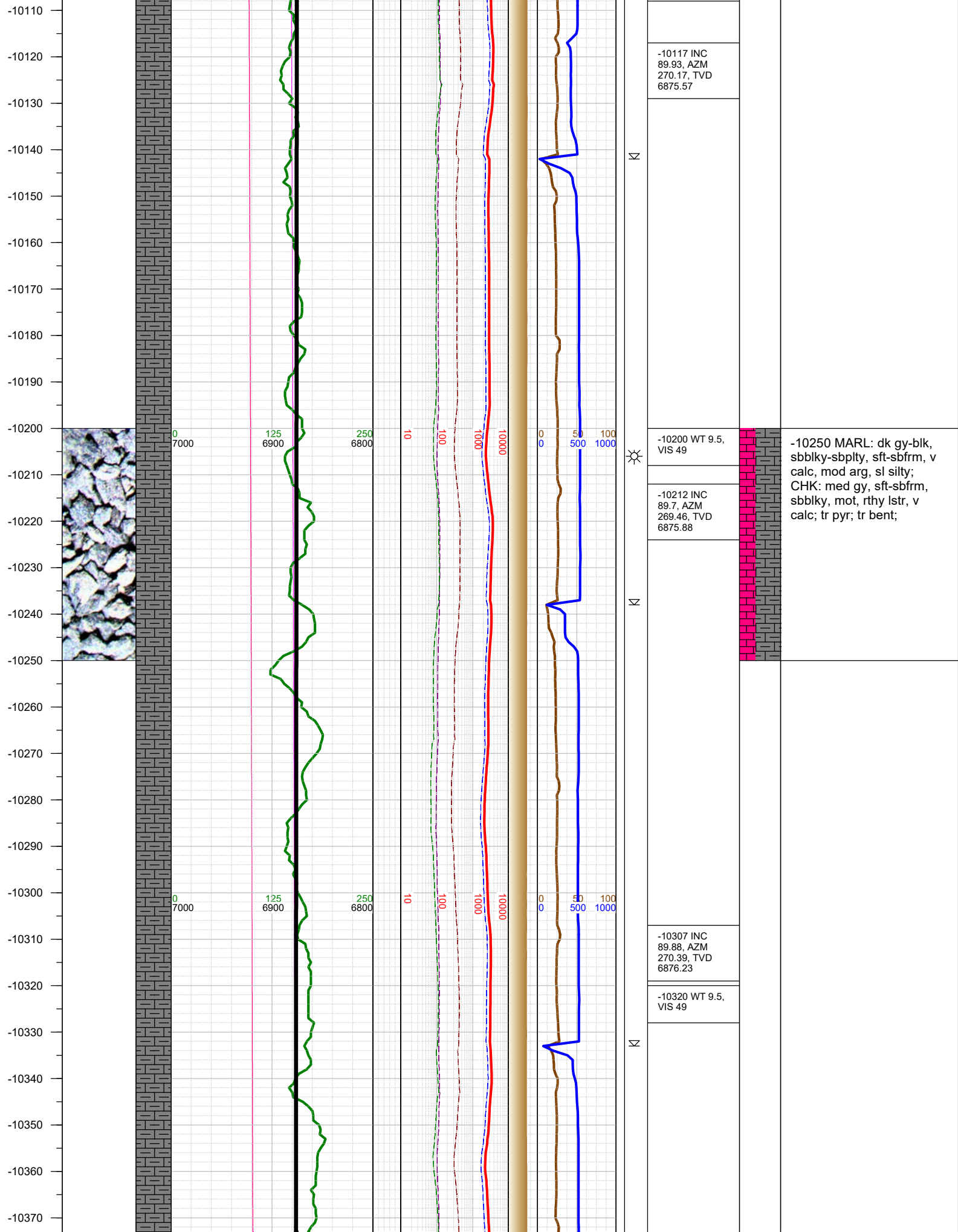
-9830 INC  
89.97, AZM  
270.12, TVD  
6875.02

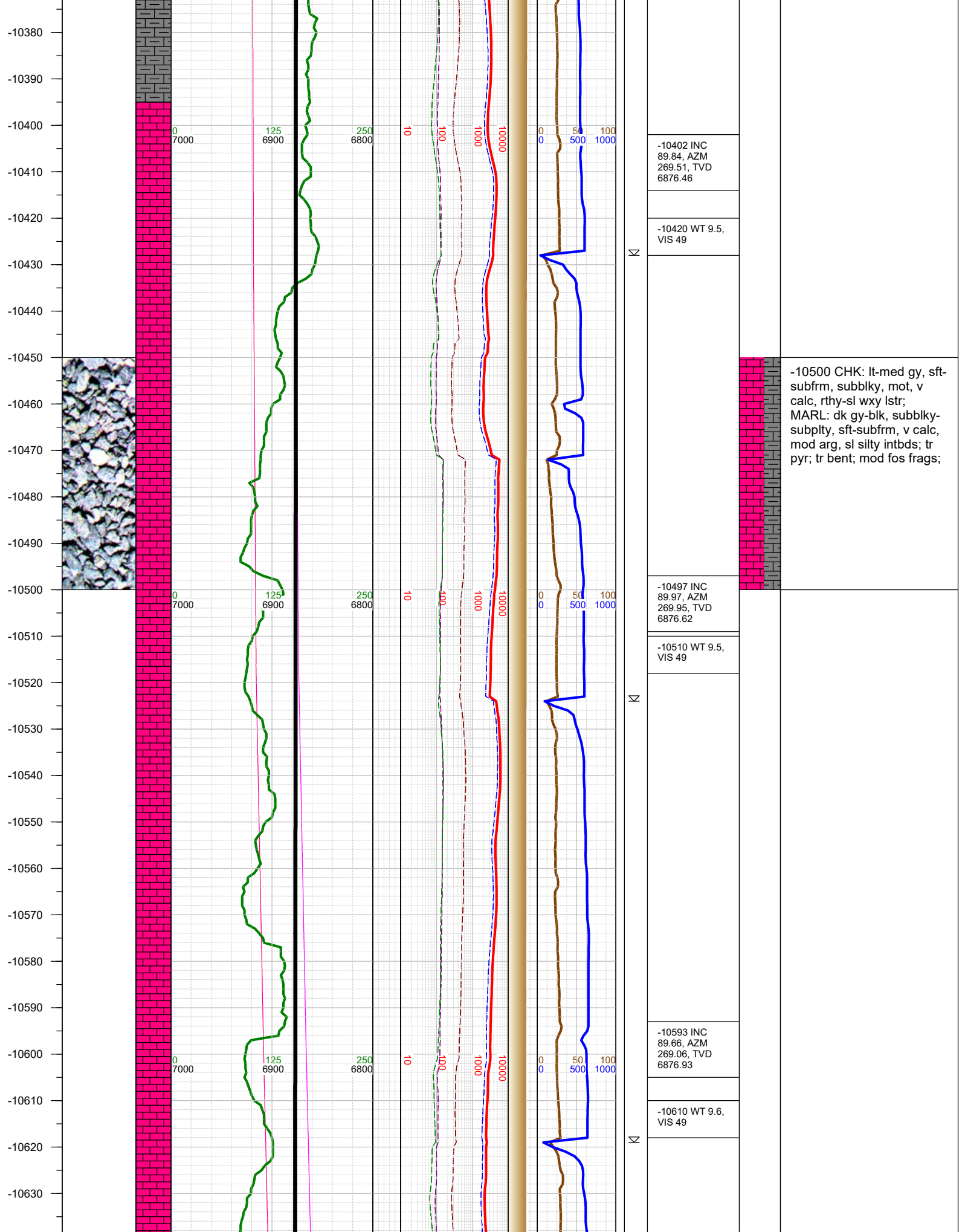
-9750 MARL: dk gy-blk,  
sbbkly-sbplty, sft-sbfrm, v  
calc, mod arg, sl silty;  
CHK: med gy, sft-sbfrm,  
sbbkly, mot, rthy lstr, v  
calc; tr pyr; tr bent;

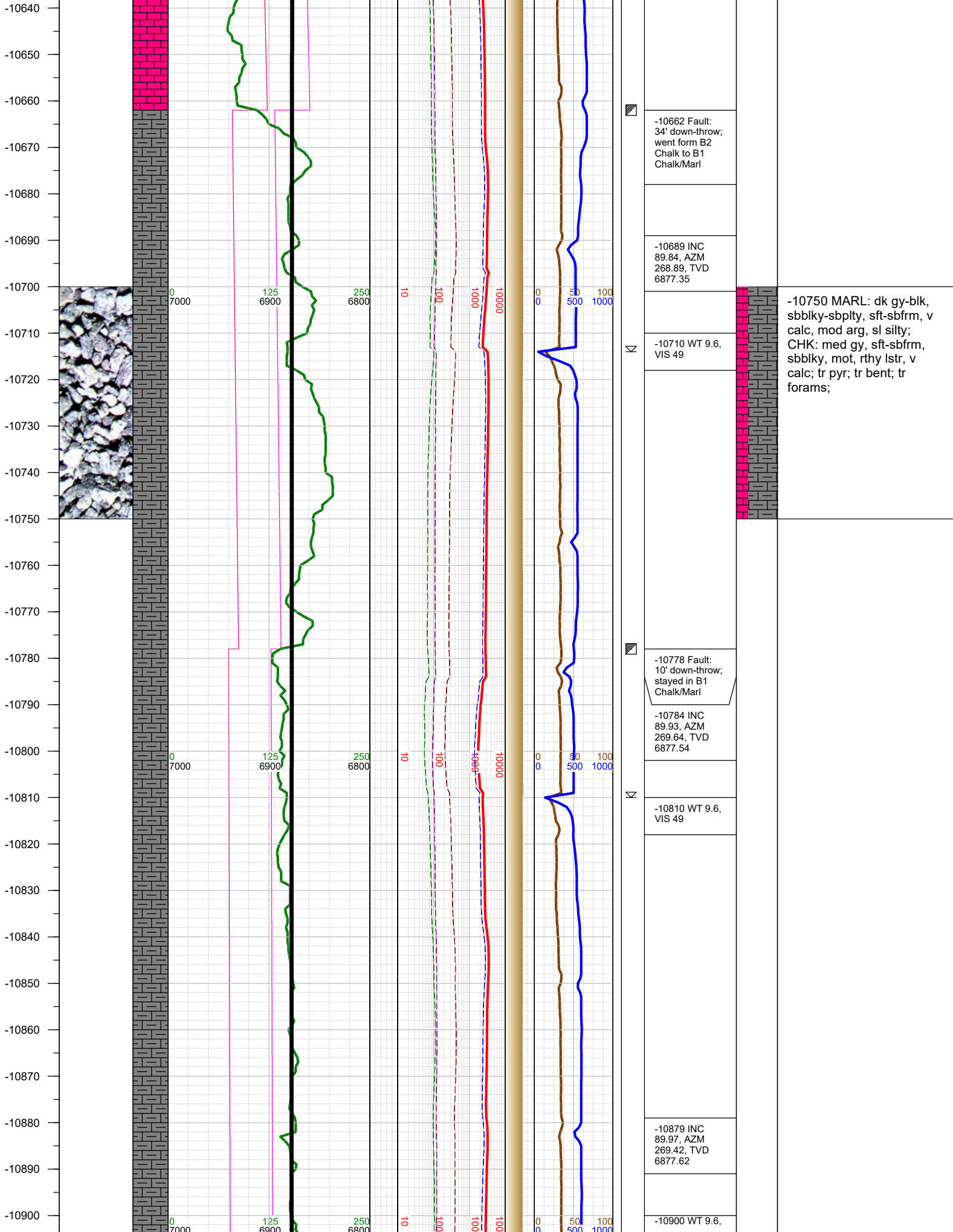






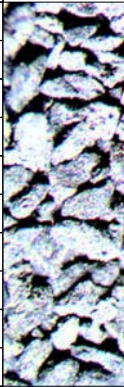








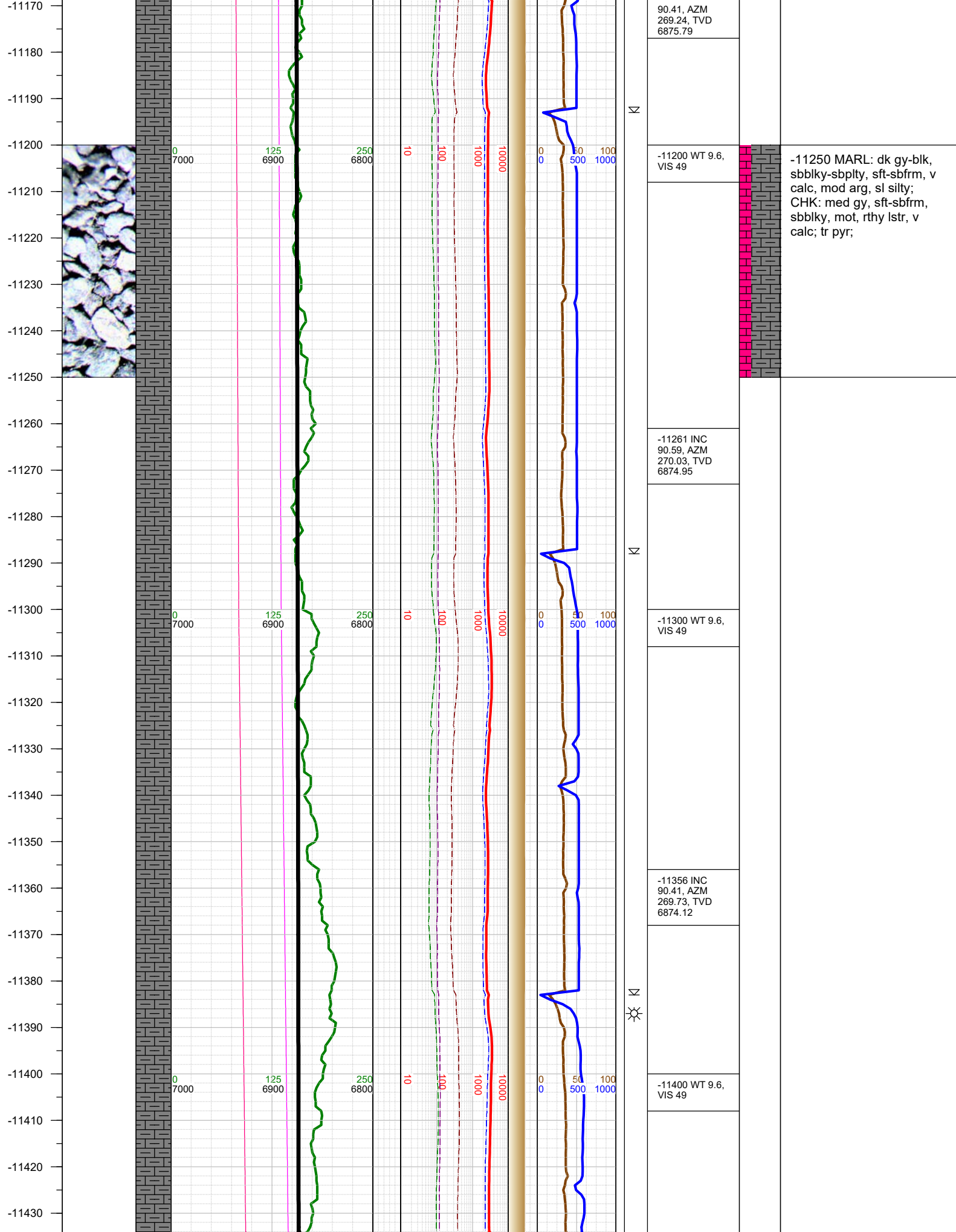
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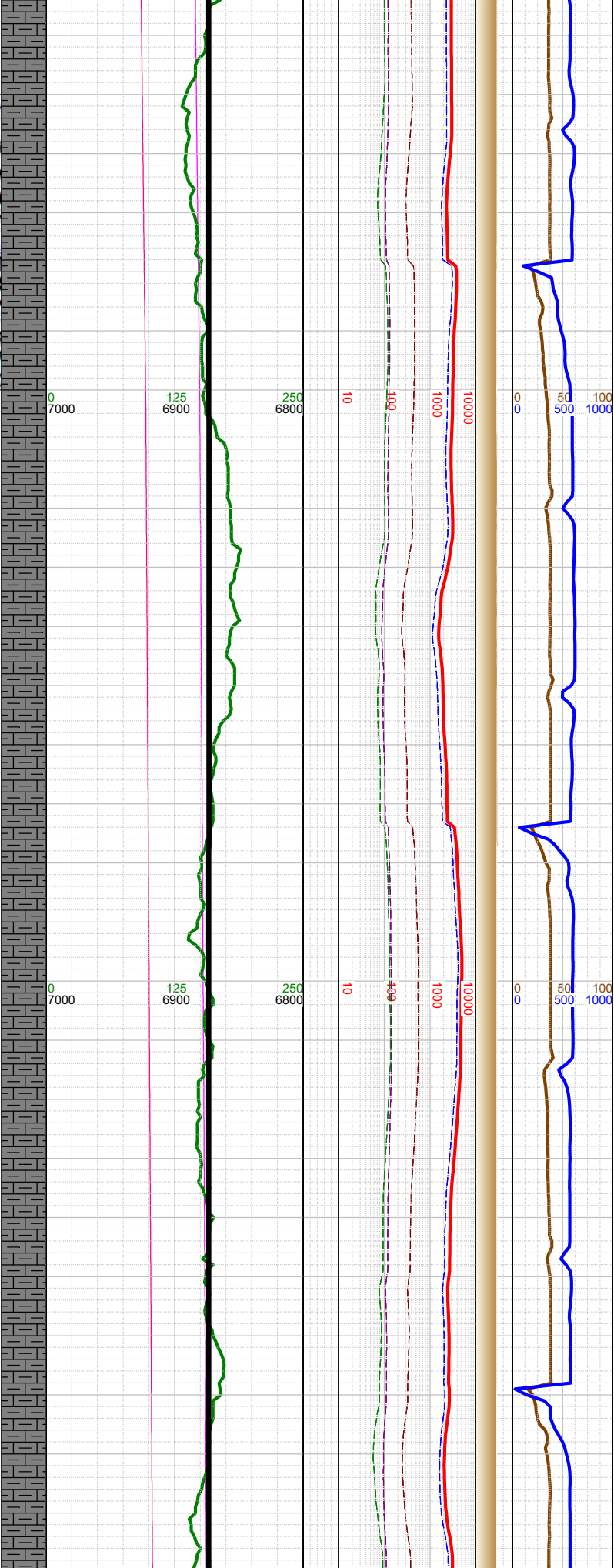
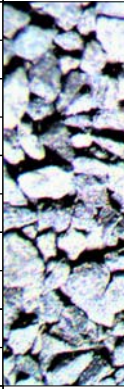
VIS 49		
-10974 INC 90.37, AZM 269.42, TVD 6877.34		
-11000 WT 9.6, VIS 49		
-11070 INC 90.54, AZM 269.95, TVD 6876.58		
-11100 WT 9.6, VIS 49		
-11165 INC		

-11000 MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, mod arg, sl silty; CHK: med gy, sft-sbfrm, sbbly, mot, rthy lstr, v calc; tr pyr; tr bent;





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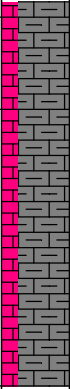
-11452 INC  
90.23, AZM  
270.17, TVD  
6873.59

-11500 WT 9.6,  
VIS 49

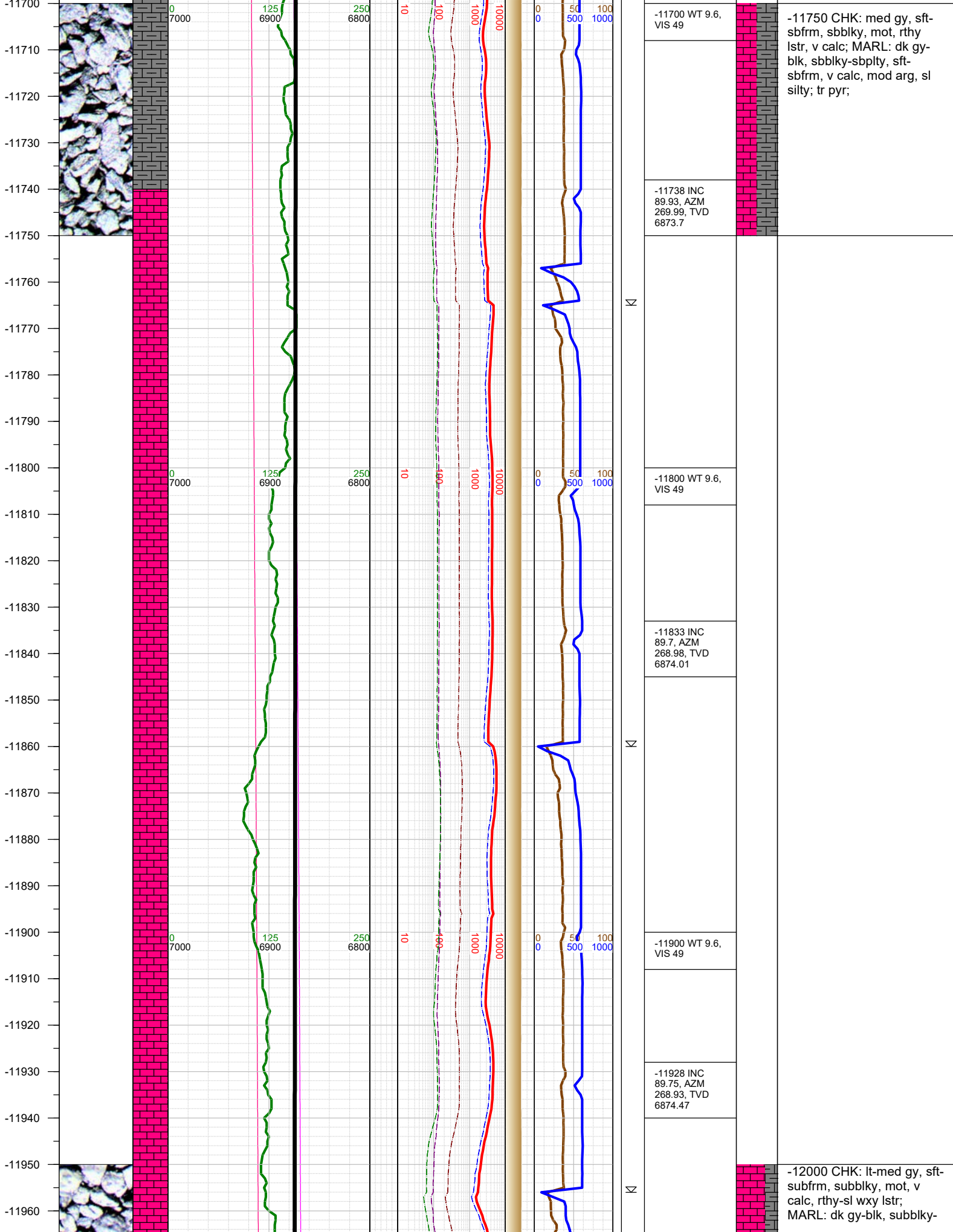
-11547 INC  
89.88, AZM  
269.2, TVD  
6873.49

-11600 WT 9.6,  
VIS 49

-11643 INC  
89.97, AZM  
269.95, TVD  
6873.62

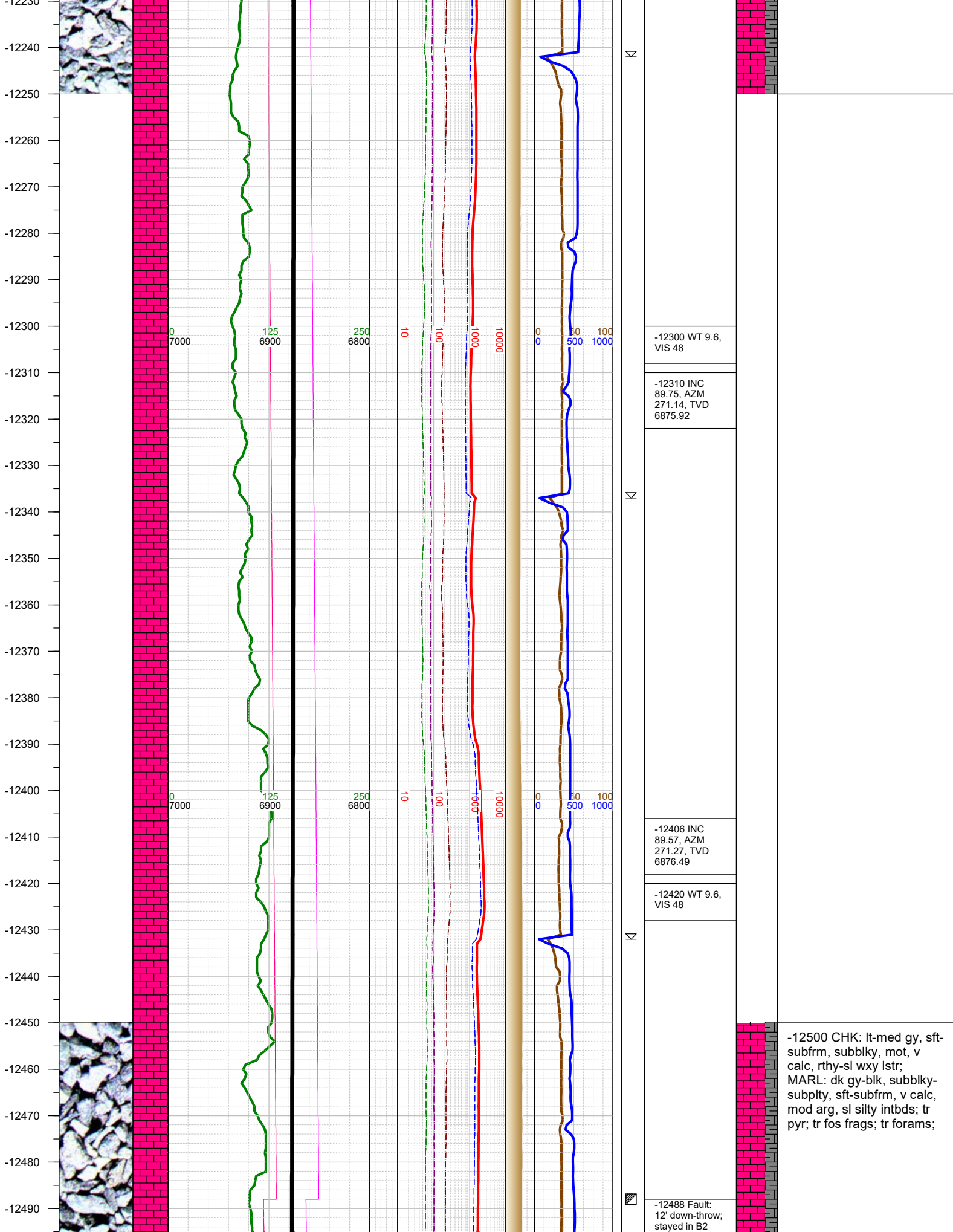


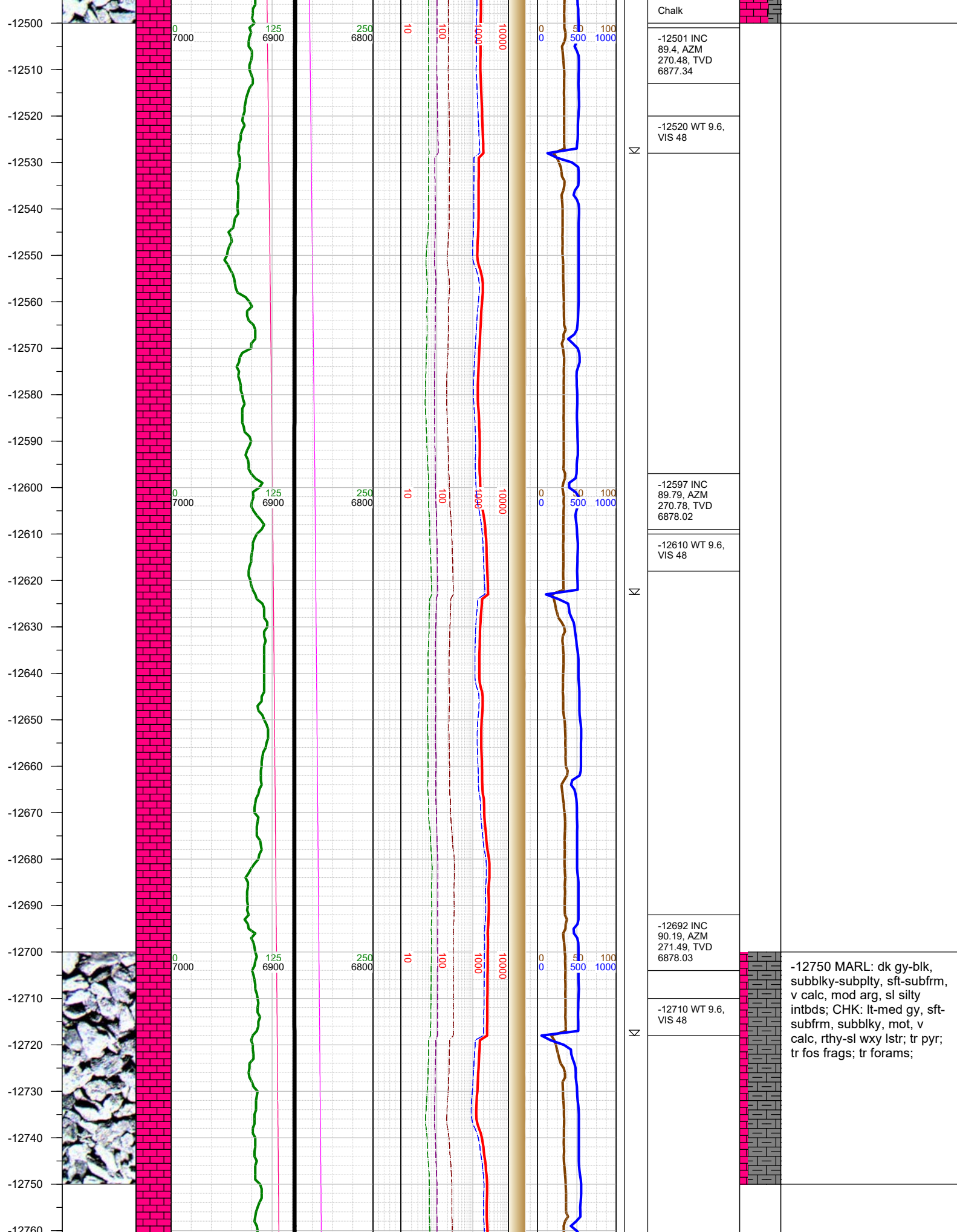
-11500 MARL: dk gy-blk,  
sbbly-sbply, sft-sbfrm, v  
calc, mod arg, sl silty;  
CHK: med gy, sft-sbfrm,  
sbbly, mot, rthy lstr, v  
calc; tr pyr;



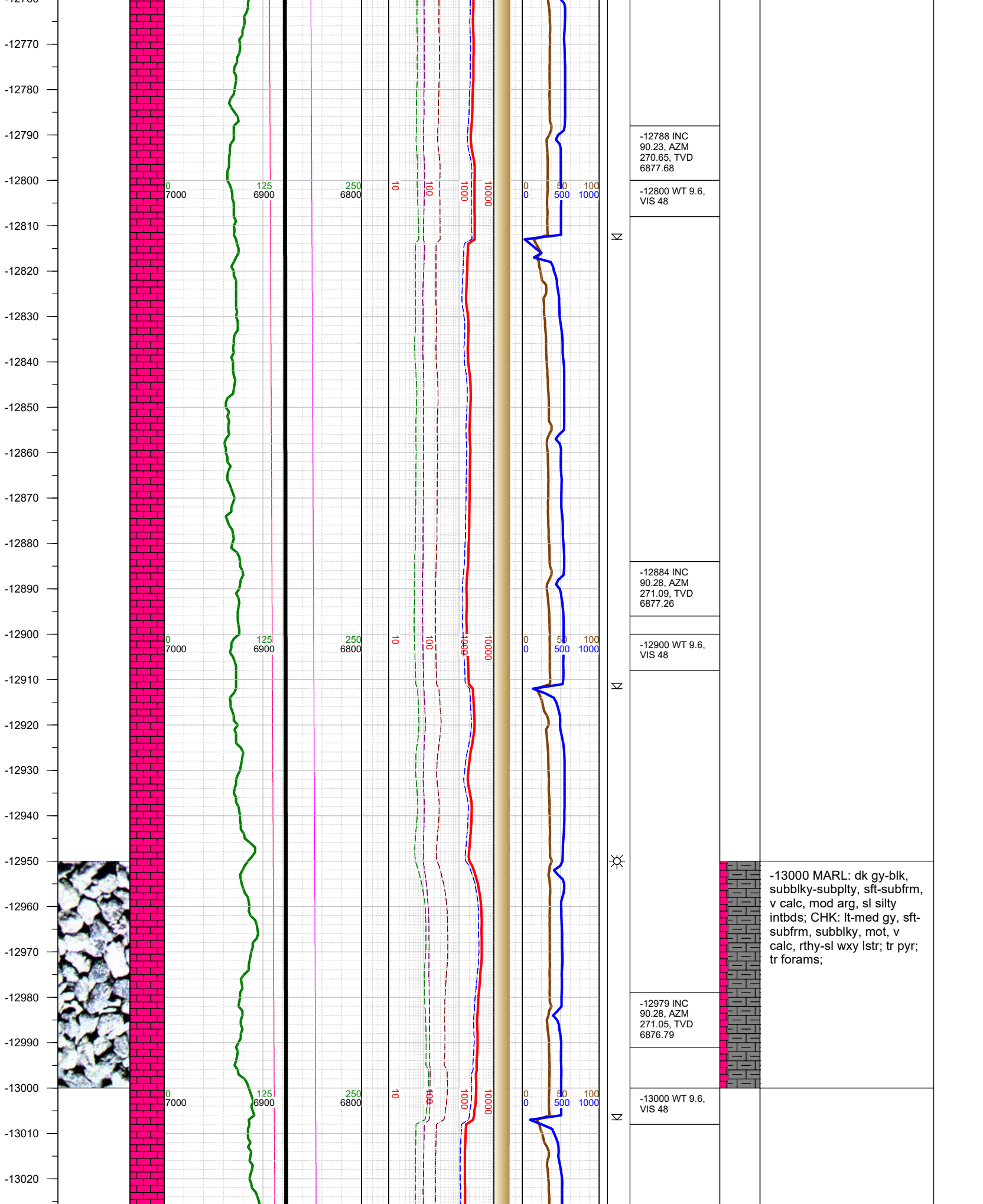




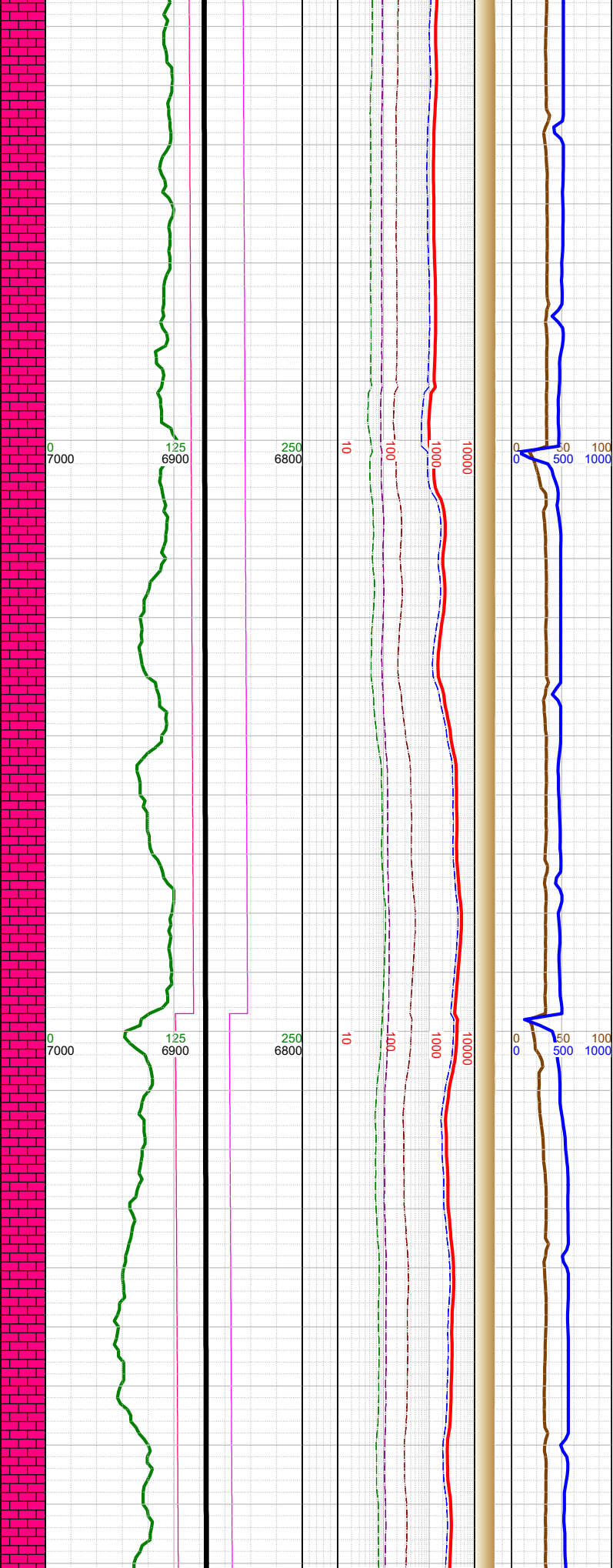




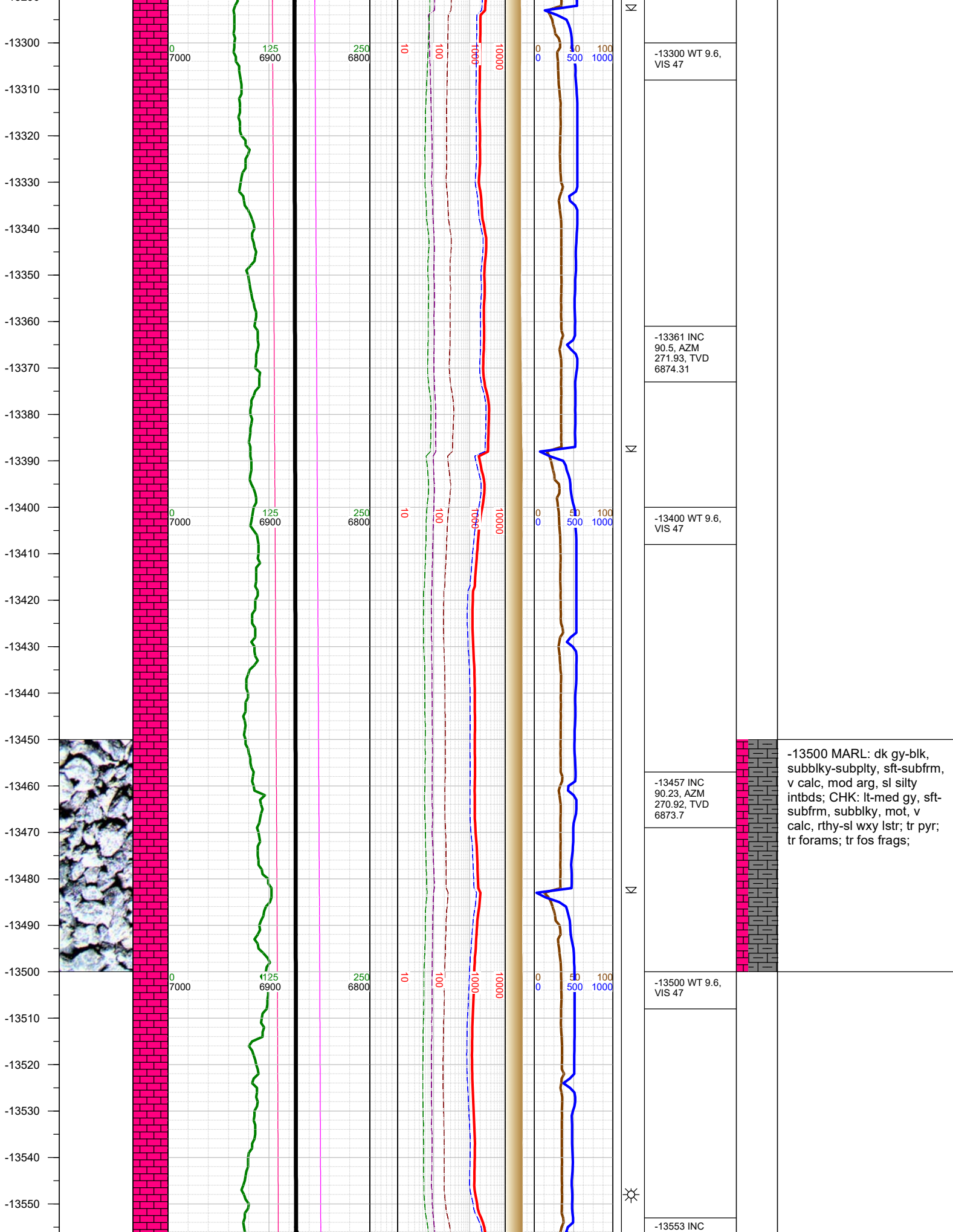




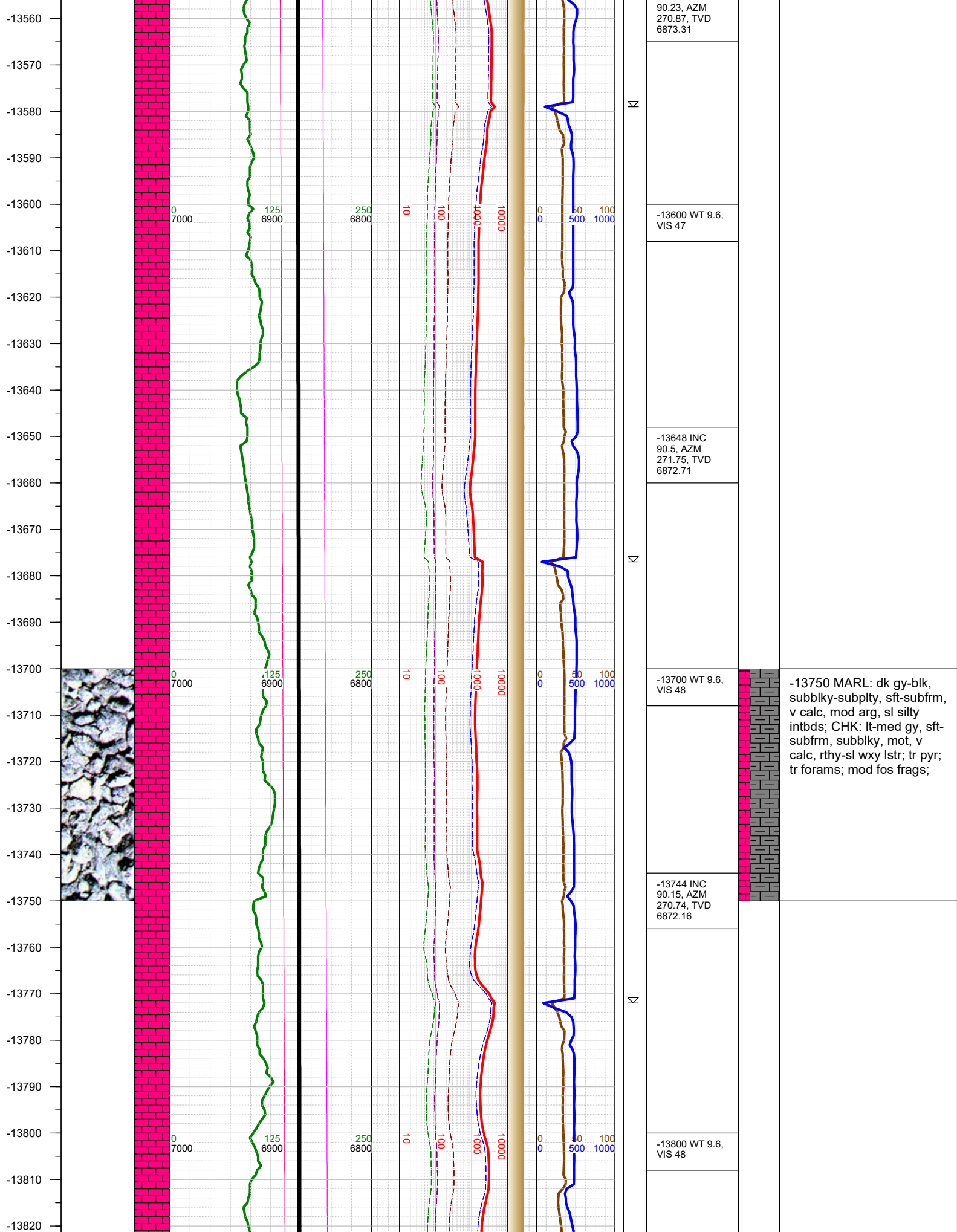
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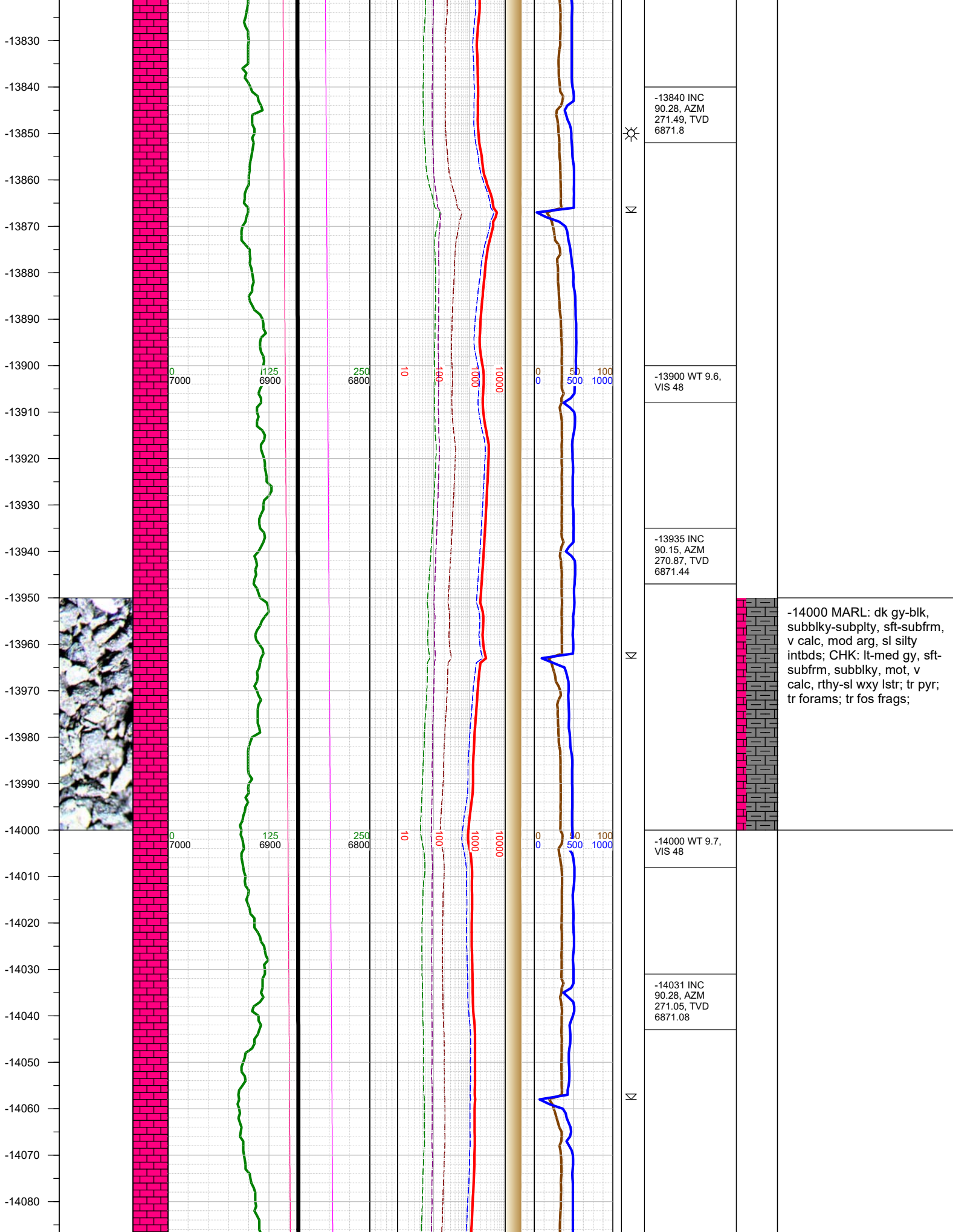


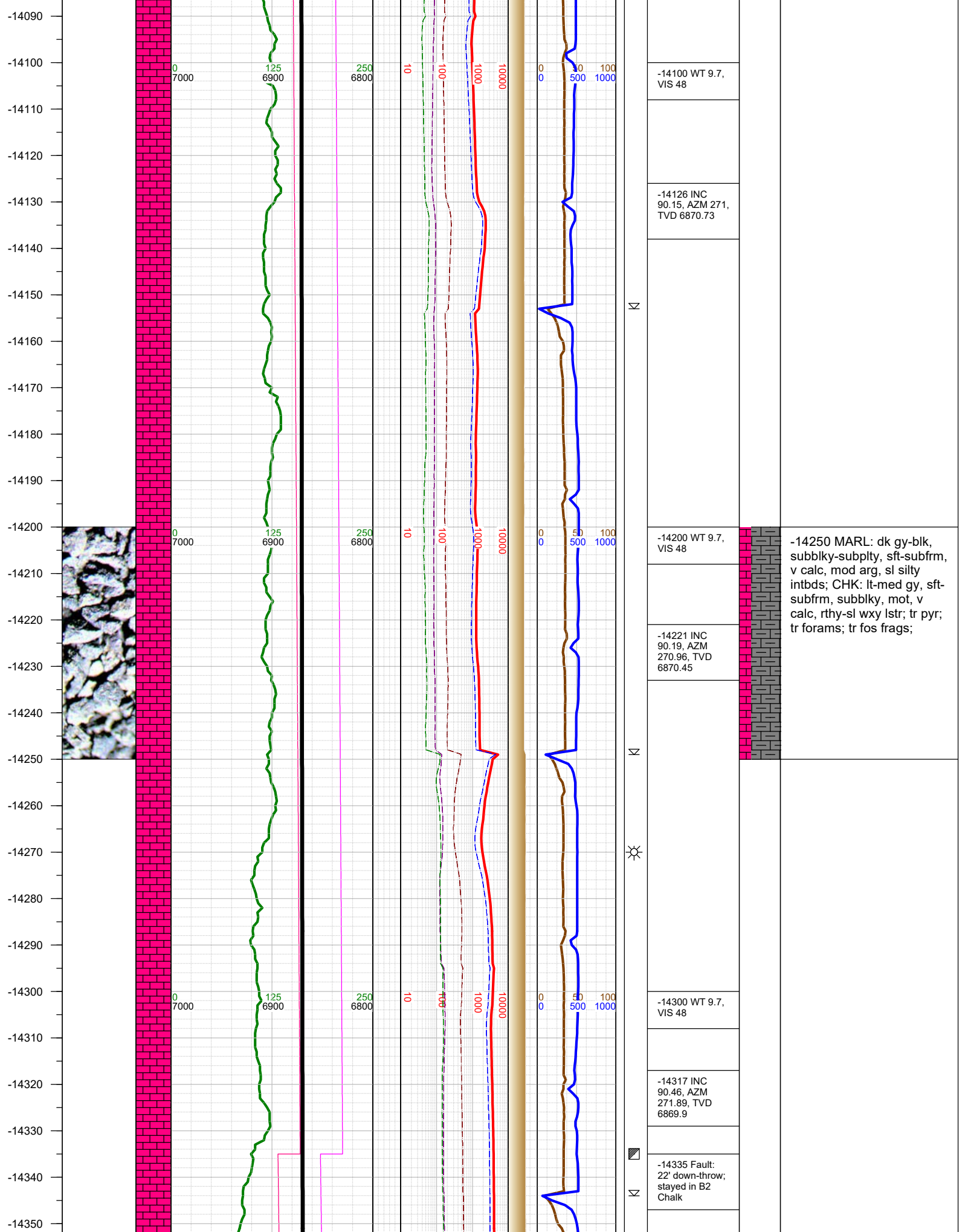
N	-13075 INC 90.37, AZM 271.93, TVD 6876.25	
	-13100 WT 9.6, VIS 47	
N	-13170 INC 90.41, AZM 272.11, TVD 6875.6	
	-13197 Fault: 14' down-throw; stayed in B2 Chalk	-13250 MARL: dk gy-blk, subblky-subplty, sft-subfrm, v calc, mod arg, sl silty intbds; CHK: lt-med gy, sft- subfrm, subblky, mot, v calc, rthy-sl wxy lstr; tr pyr; tr forams; tr fos frags;
	-13210 WT 9.6, VIS 47	
N	-13265 INC 90.32, AZM 271.09, TVD 6874.99	



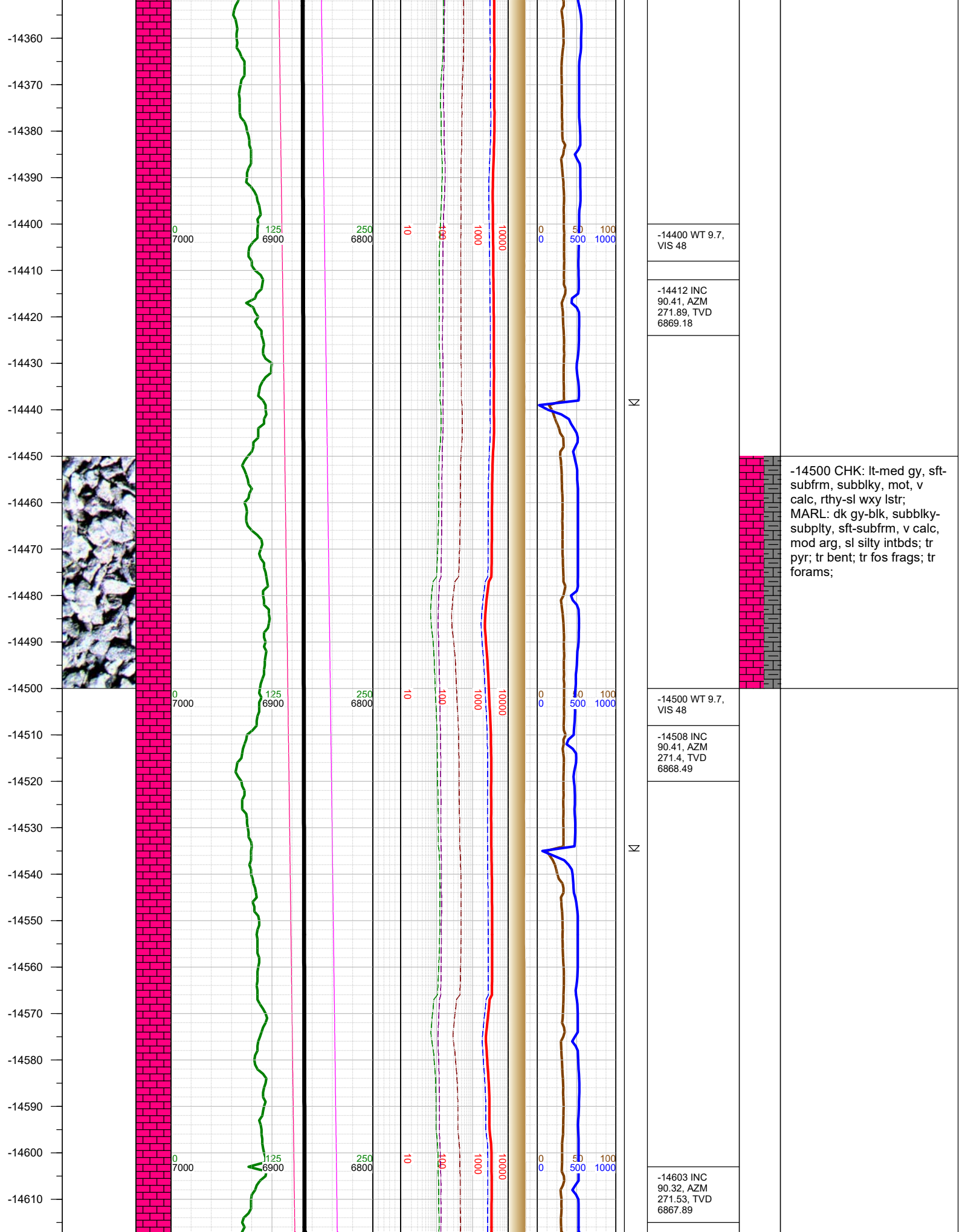




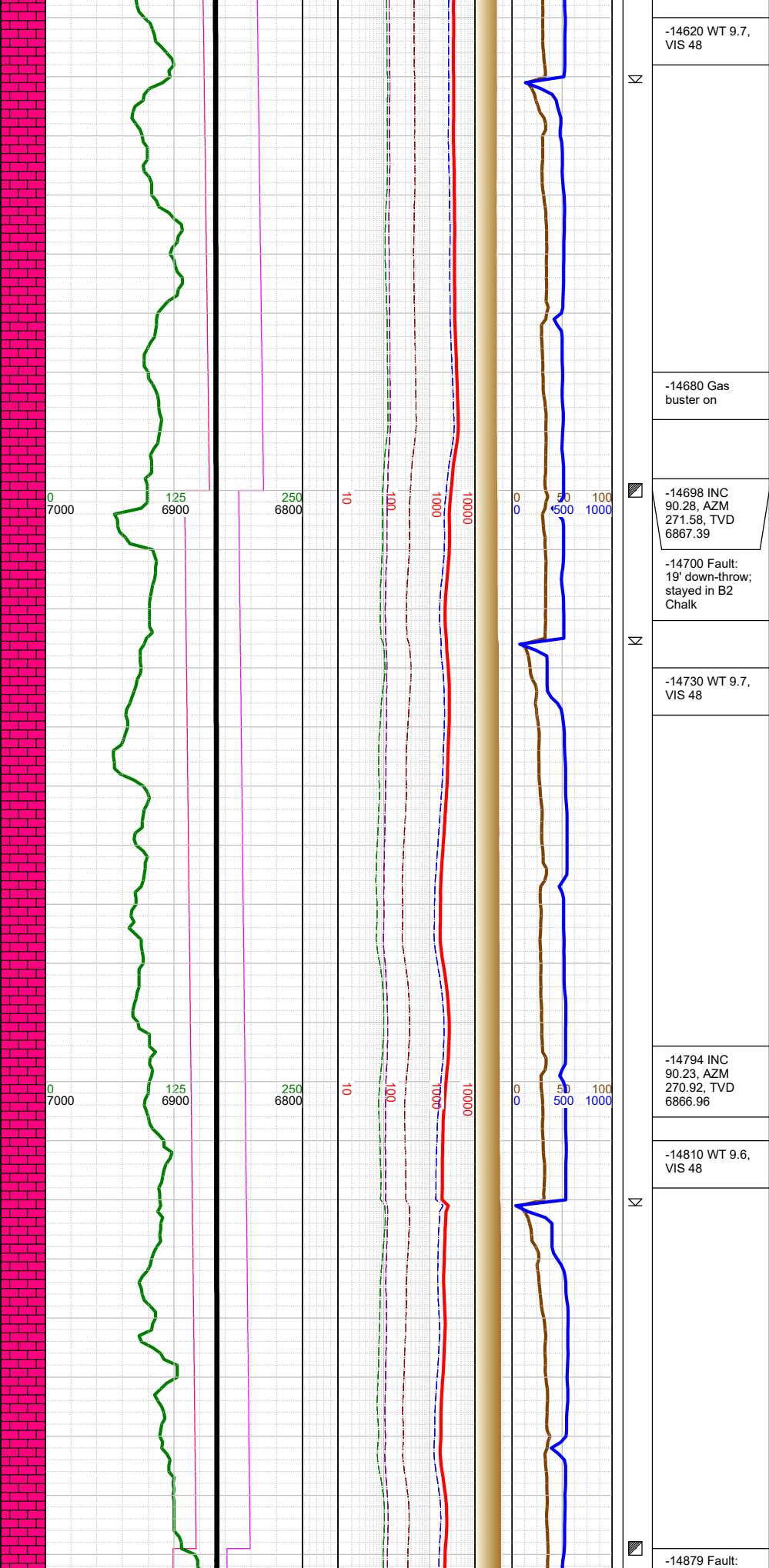








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-14620 WT 9.7,  
VIS 48

-14680 Gas  
buster on

-14698 INC  
90.28, AZM  
271.58, TVD  
6867.39

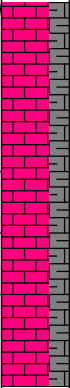
-14700 Fault:  
19' down-throw;  
stayed in B2  
Chalk

-14730 WT 9.7,  
VIS 48

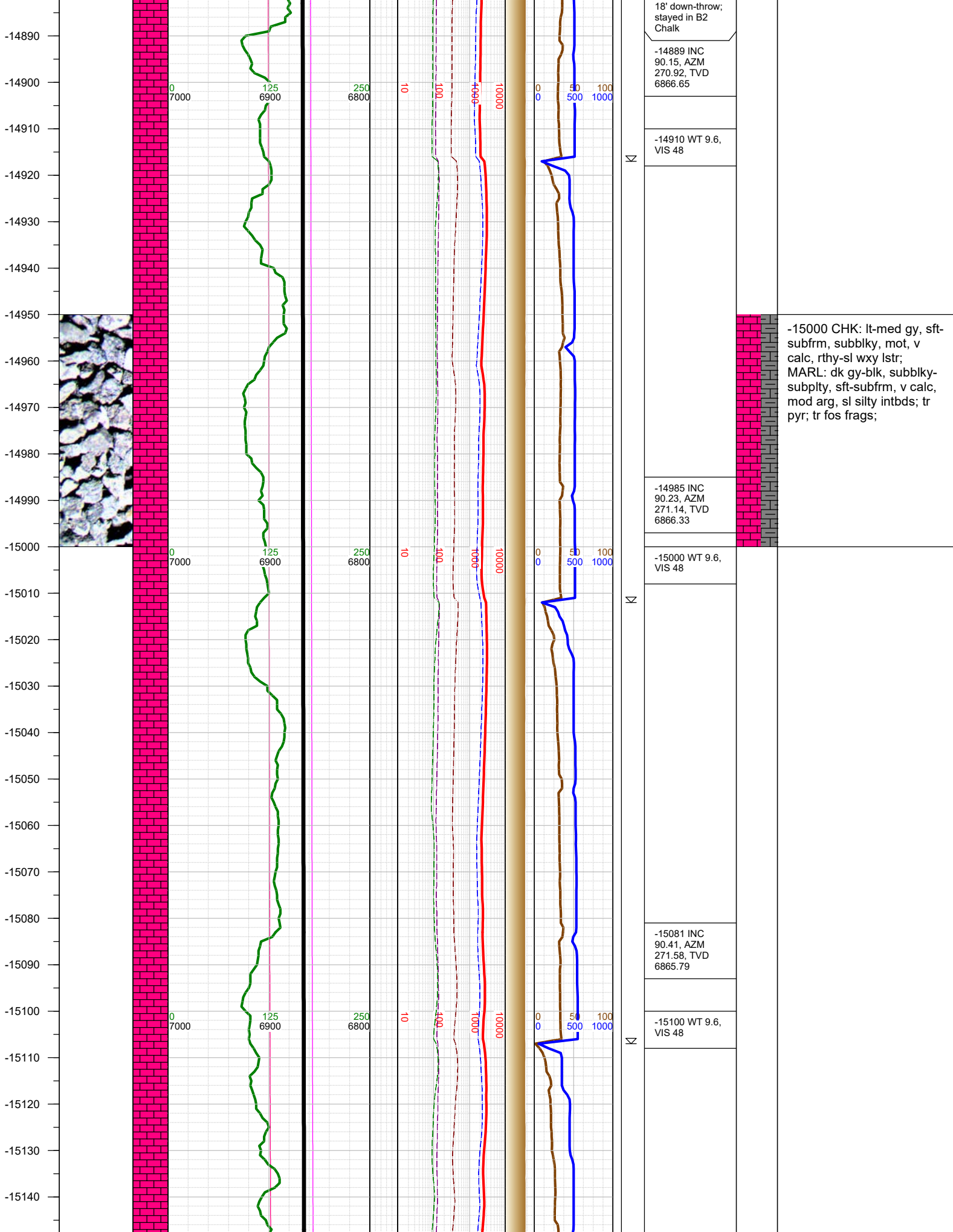
-14794 INC  
90.23, AZM  
270.92, TVD  
6866.96

-14810 WT 9.6,  
VIS 48

-14879 Fault:

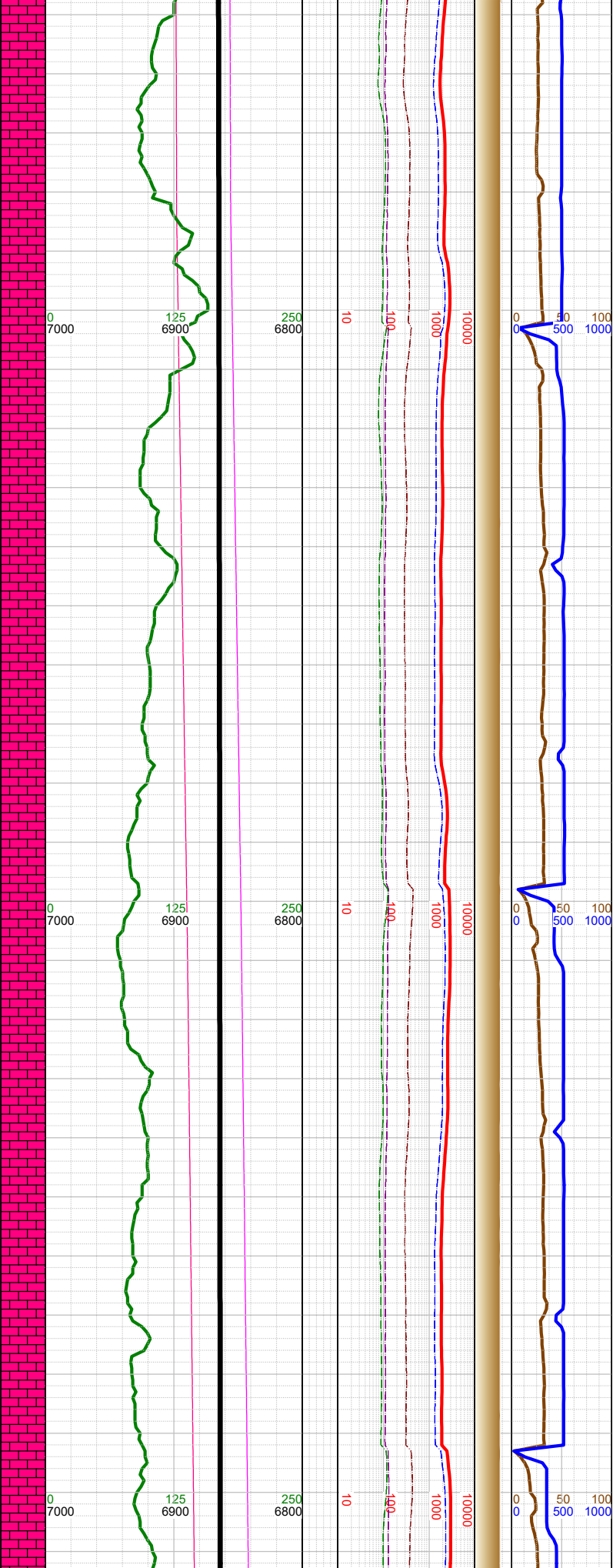
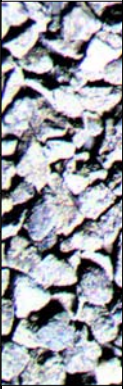


-14750 CHK: lt-med gy, sft-  
subfrm, subblky, mot, v  
calc, rthy-sl wxy lstr;  
MARL: dk gy-blk, subblky-  
subply, sft-subfrm, v calc,  
mod arg, sl silty intbds; tr  
pyr; tr fos frags;

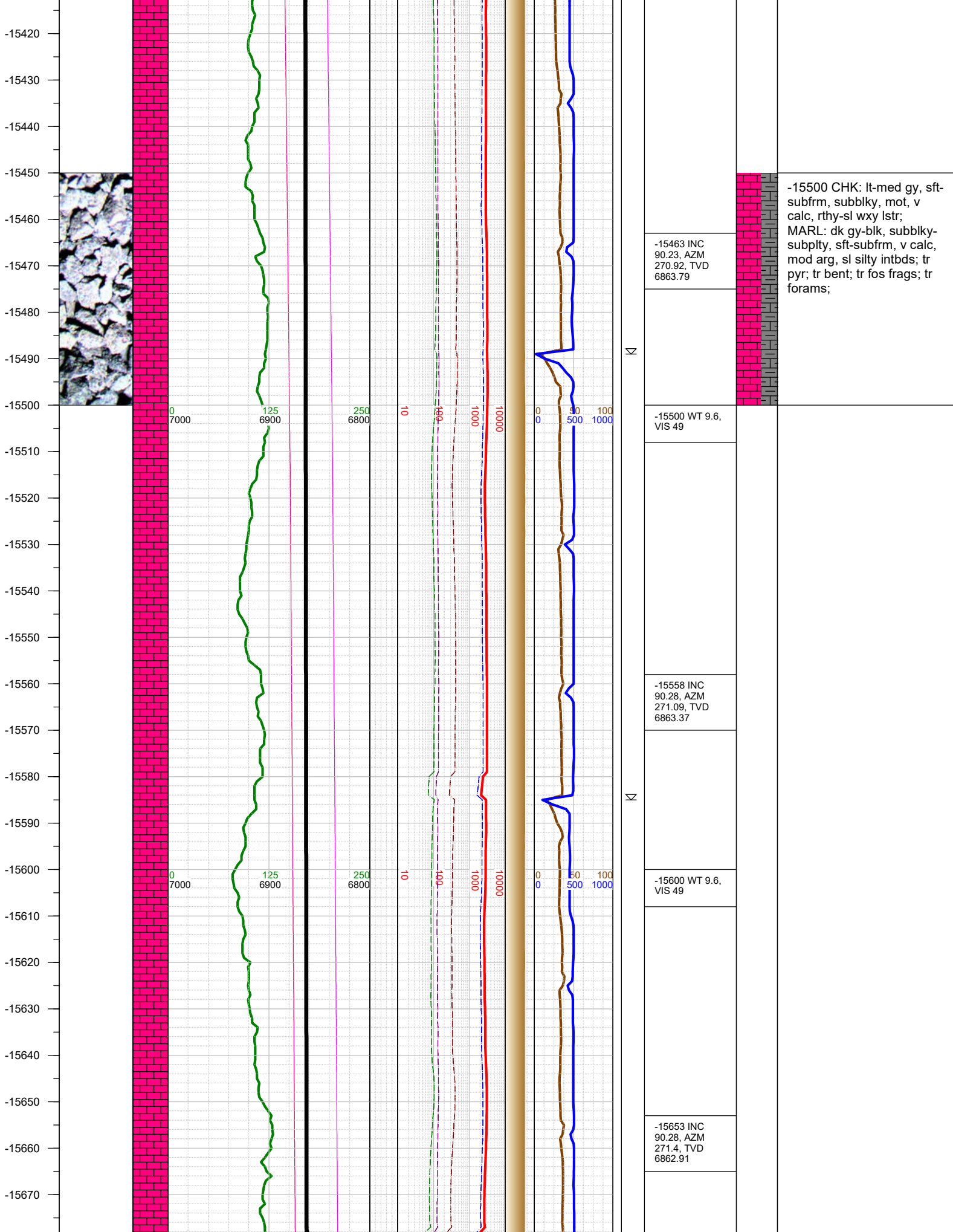


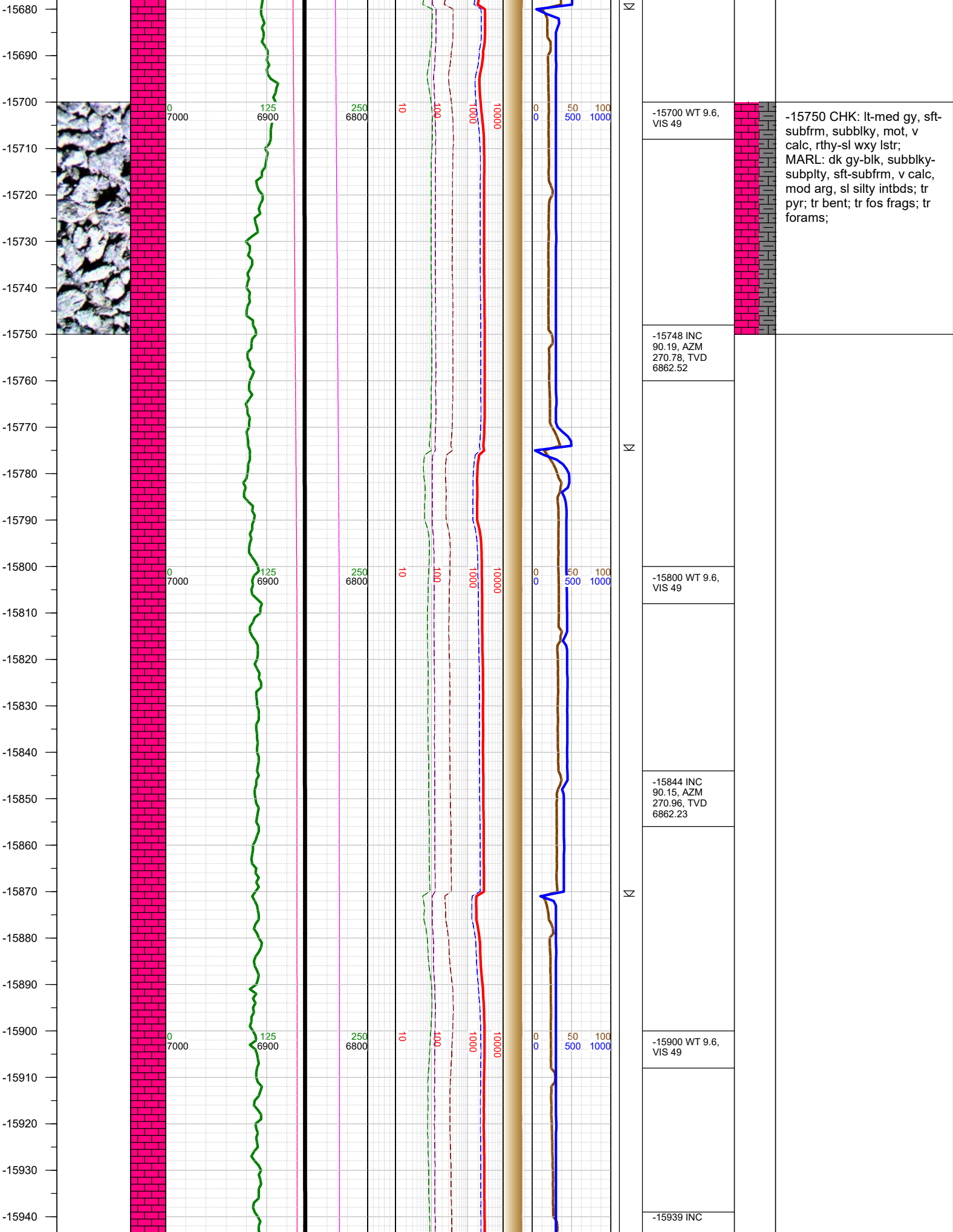


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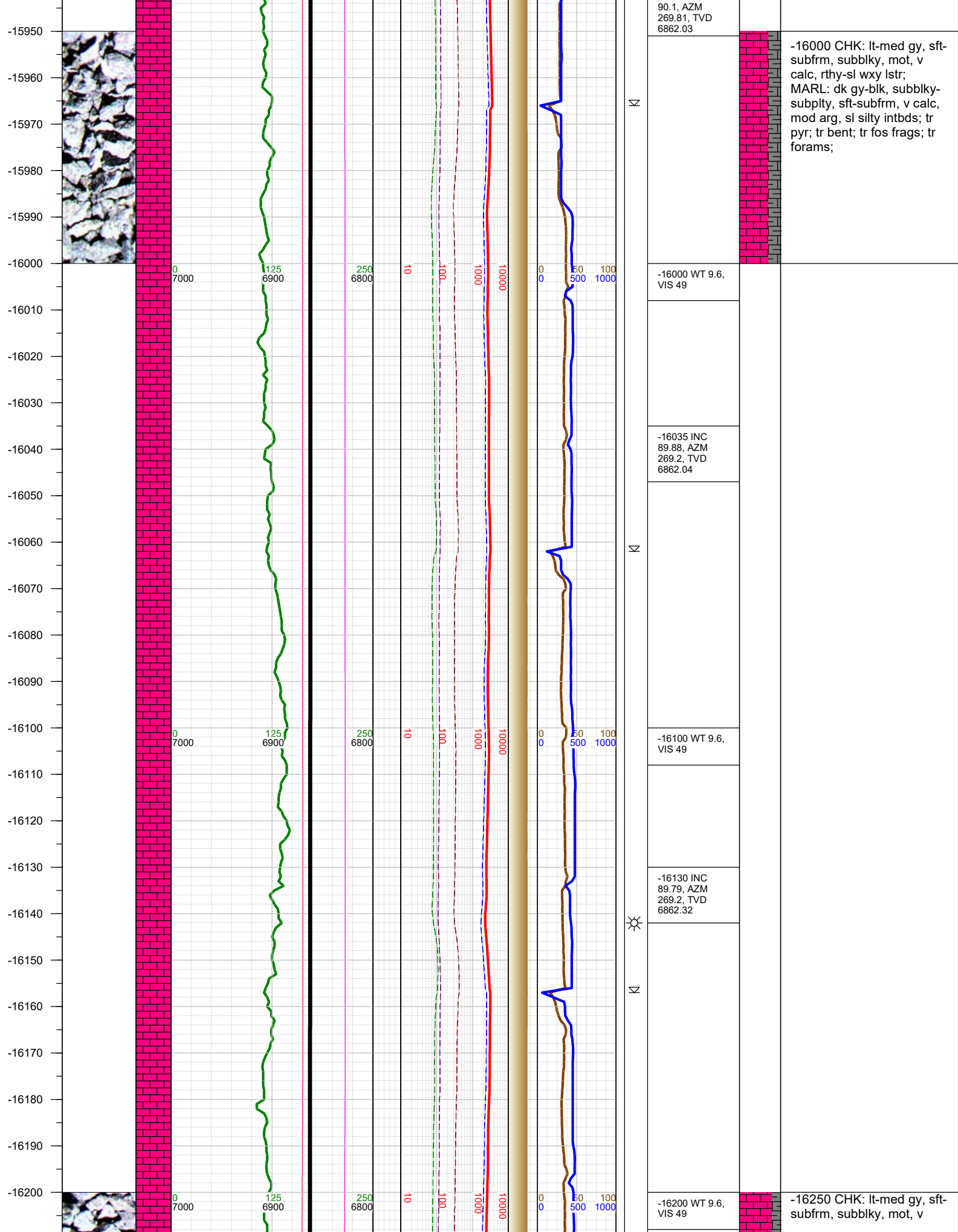


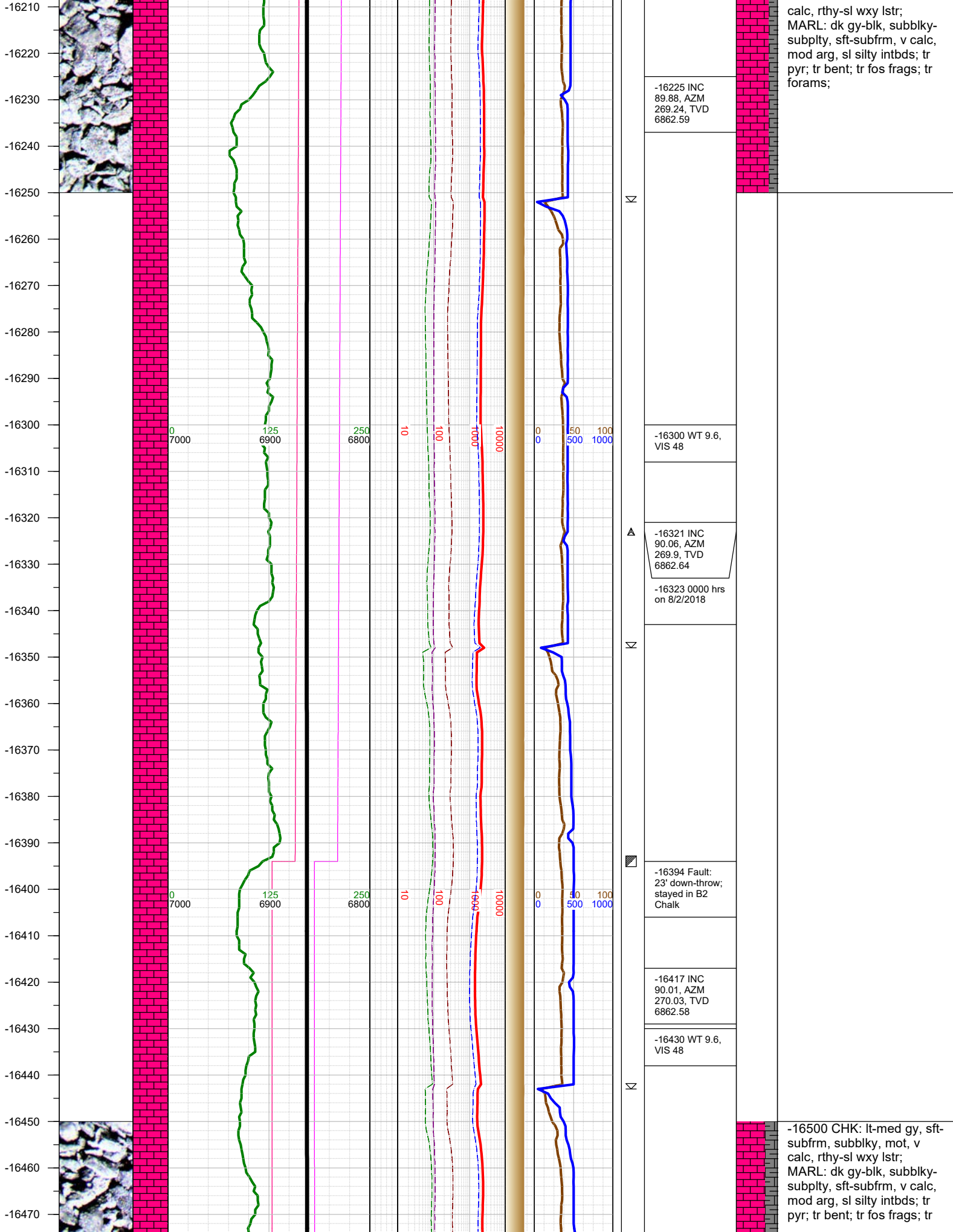
N	-15150 Gas buster off		
N	-15176 INC 90.41, AZM 271.49, TVD 6865.11		
N	-15200 WT 9.6, VIS 49		-15250 CHK: lt-med gy, sft- subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky- subply, sft-subfrm, v calc, mod arg, sl silty intbds; tr pyr; tr fos frags;
N	-15272 INC 90.28, AZM 271.4, TVD 6864.54		
N	-15300 WT 9.6, VIS 49		
N	-15367 INC 90.19, AZM 270.74, TVD 6864.15		
N	-15400 WT 9.6, VIS 49		



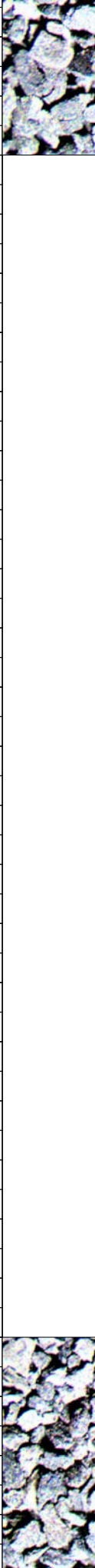








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-16500 WT 9.6,  
VIS 48

-16512 INC  
90.46, AZM  
270.17, TVD  
6862.19

-16607 INC  
89.88, AZM  
269.11, TVD  
6861.91

-16620 WT 9.6,  
VIS 48

-16690 WT 9.6,  
VIS 48

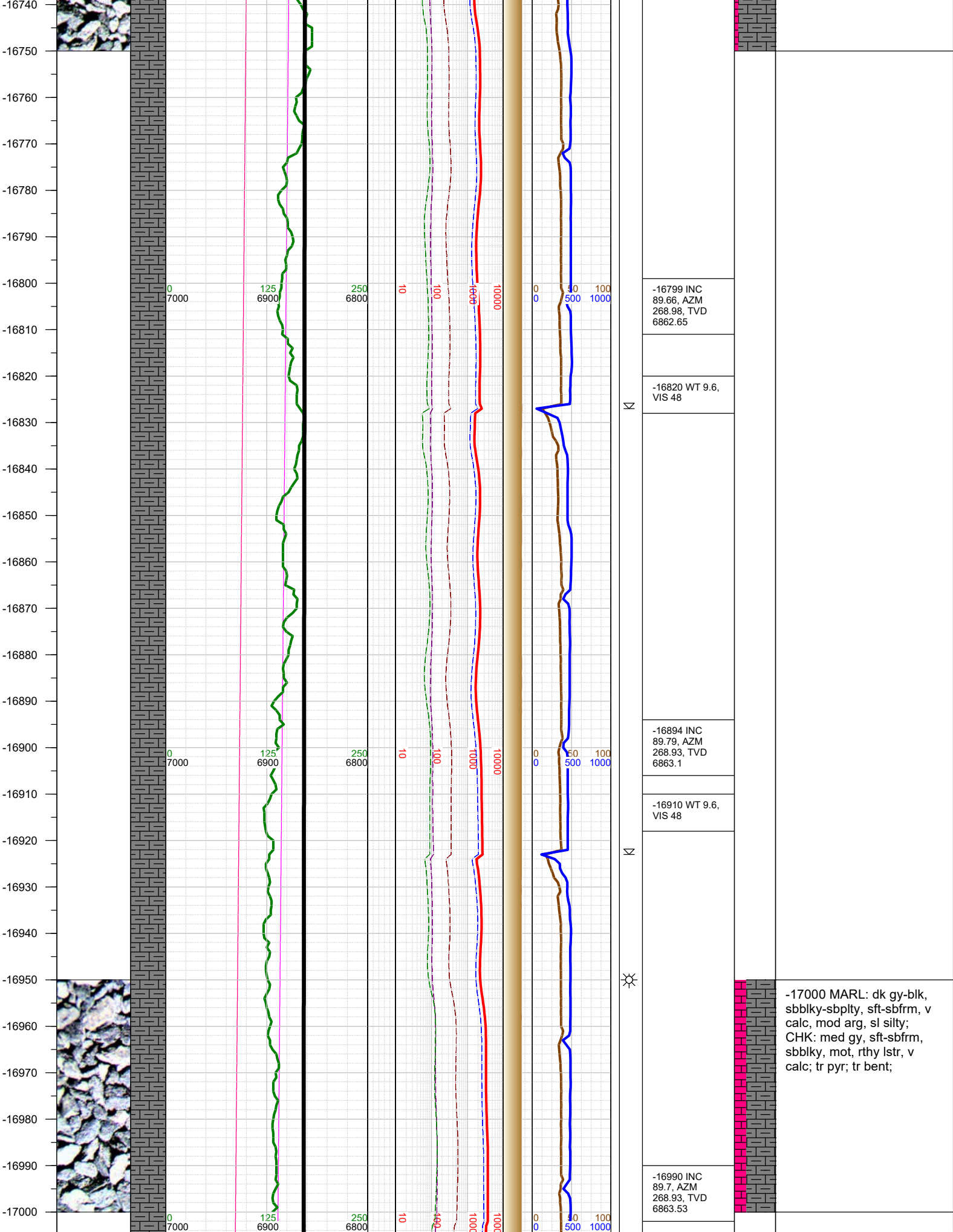
-16703 INC  
89.79, AZM  
269.46, TVD  
6862.19

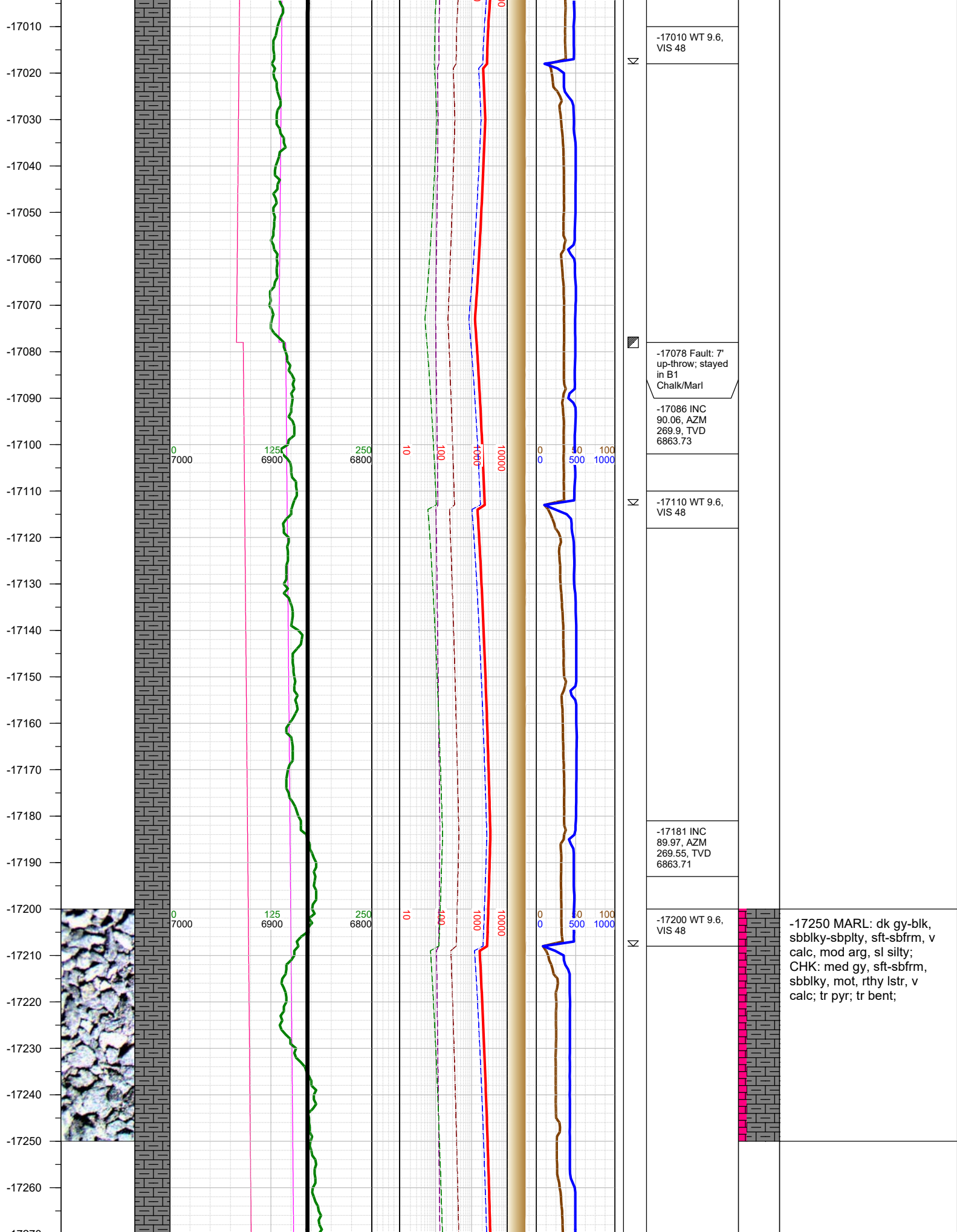
-16722 Fault:  
24' down-throw;  
went from B2  
Chalk to B1  
Chalk/Marl

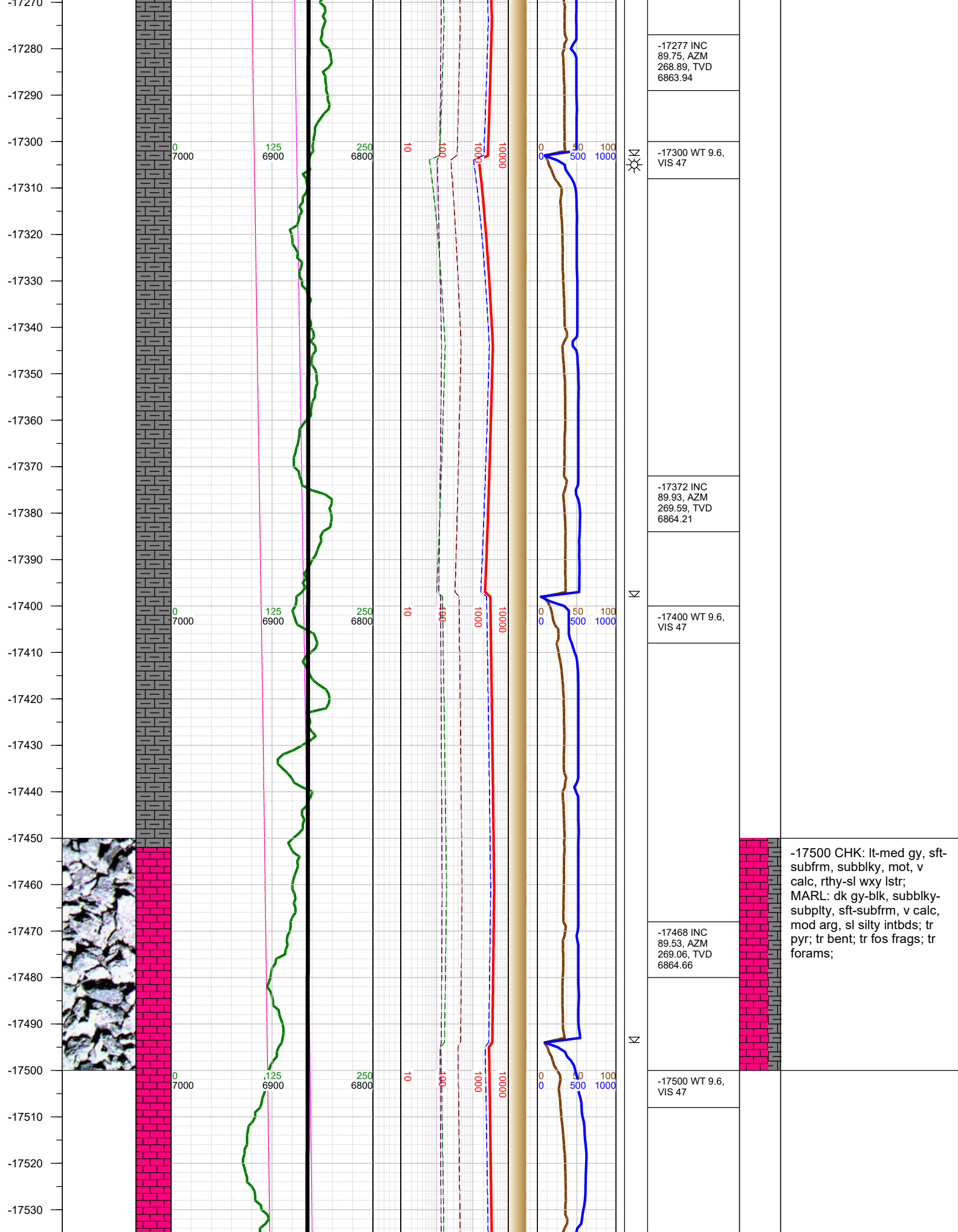
forams;

-16750 MARL: dk gy-blk,  
sbbiky-sbplty, sft-sbfrm, v  
calc, mod arg, sl silty;  
CHK: med gy, sft-sbfrm,  
sbbiky, mot, rthy lstr, v  
calc; tr pyr; tr bent;



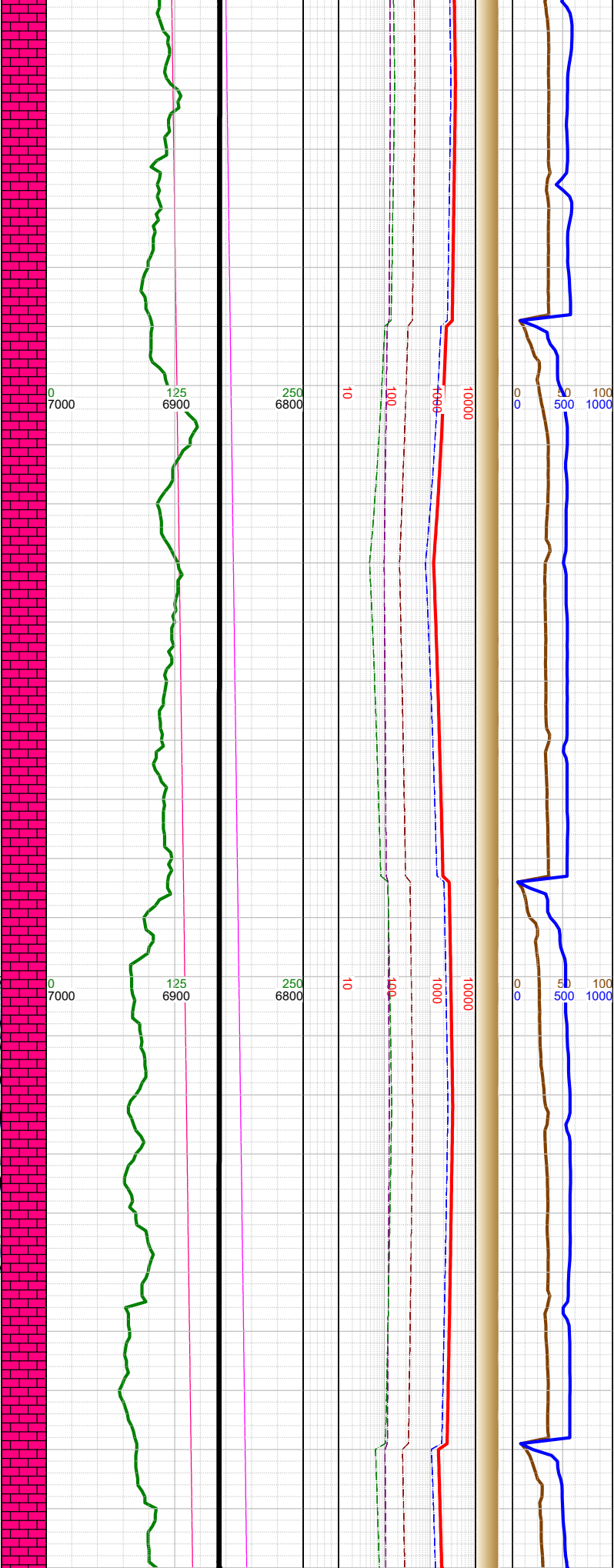








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-17563 INC  
89.88, AZM  
269.64, TVD  
6865.15

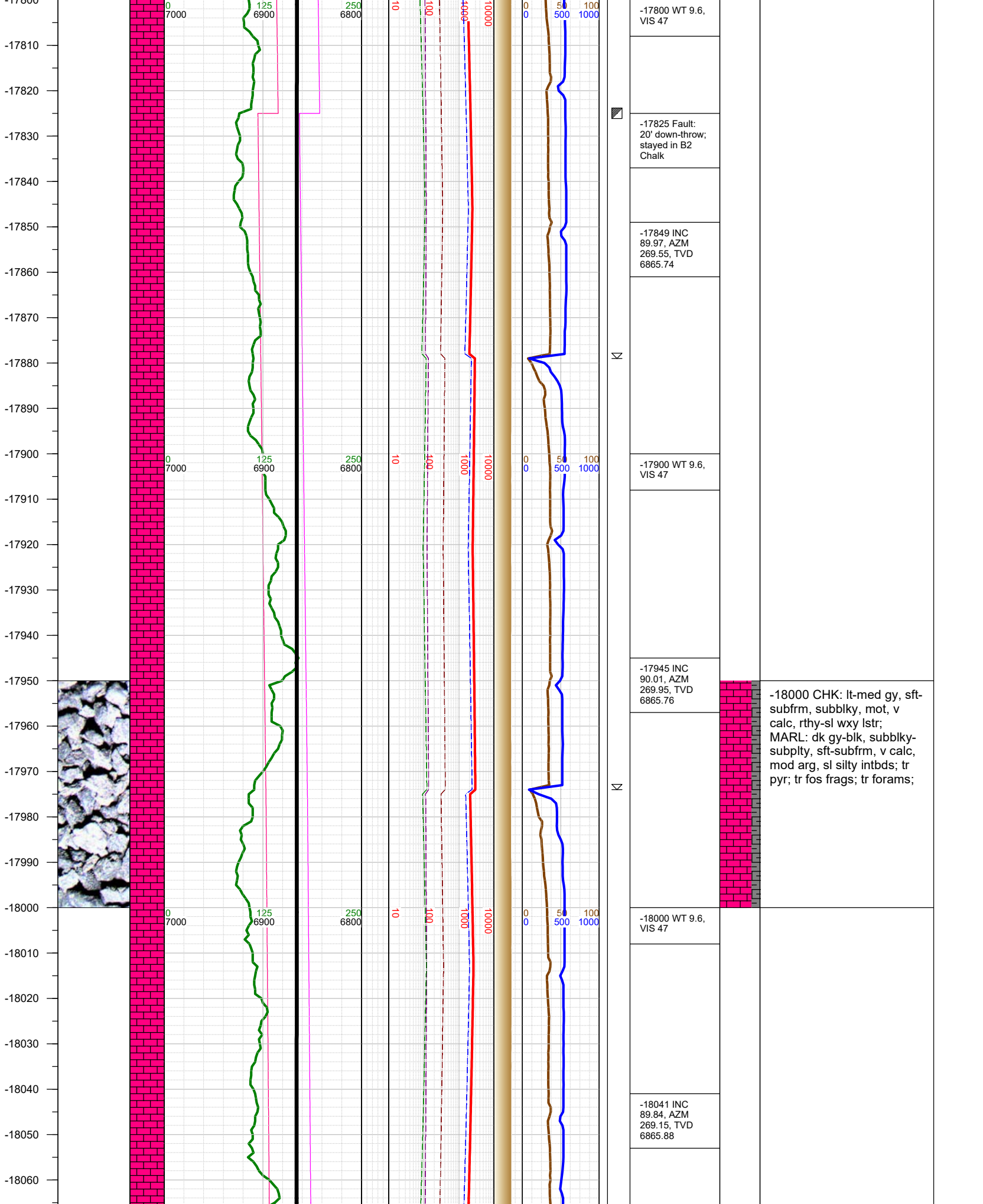
-17600 WT 9.6,  
VIS 47

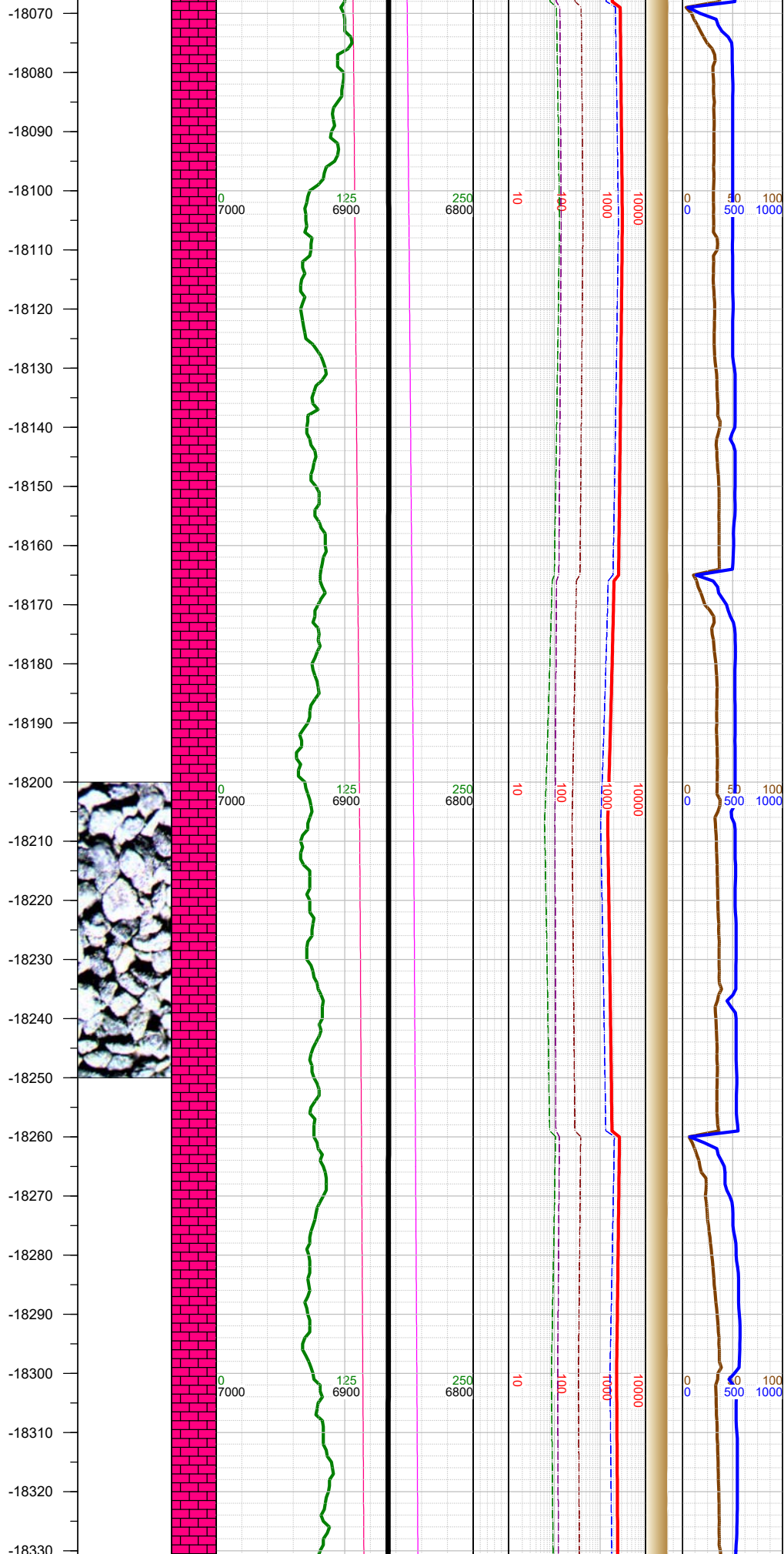
-17658 INC  
89.93, AZM  
269.51, TVD  
6865.31

-17700 WT 9.6,  
VIS 47

-17754 INC  
89.79, AZM  
268.98, TVD  
6865.54

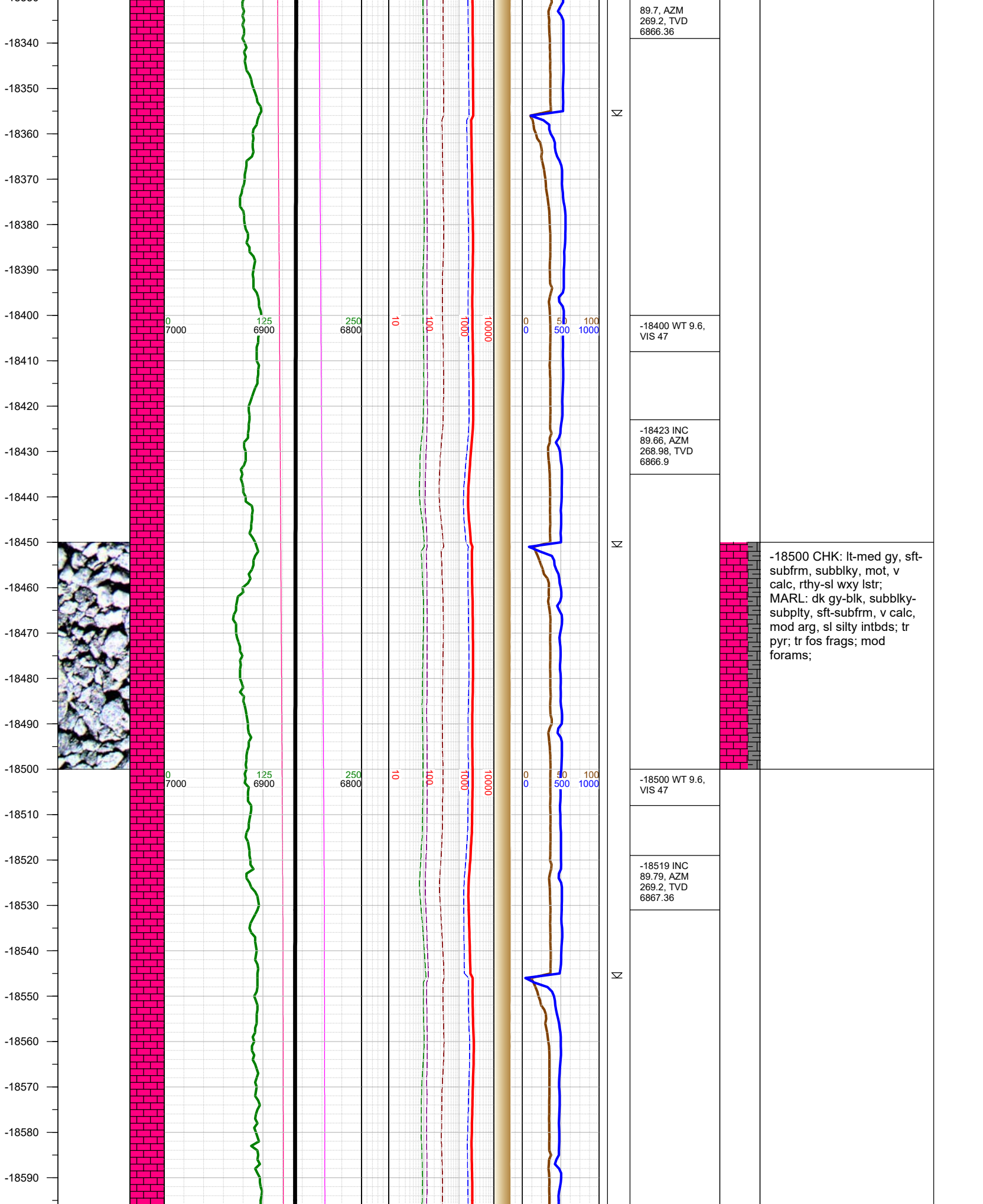
-17750 CHK: lt-med gy, sft-  
subfrm, subblky, mot, v  
calc, rthy-sl wxy lstr;  
MARL: dk gy-blk, subblky-  
subplty, sft-subfrm, v calc,  
mod arg, sl silty intbds; tr  
pyr; tr bent; tr fos frags; tr  
forams;

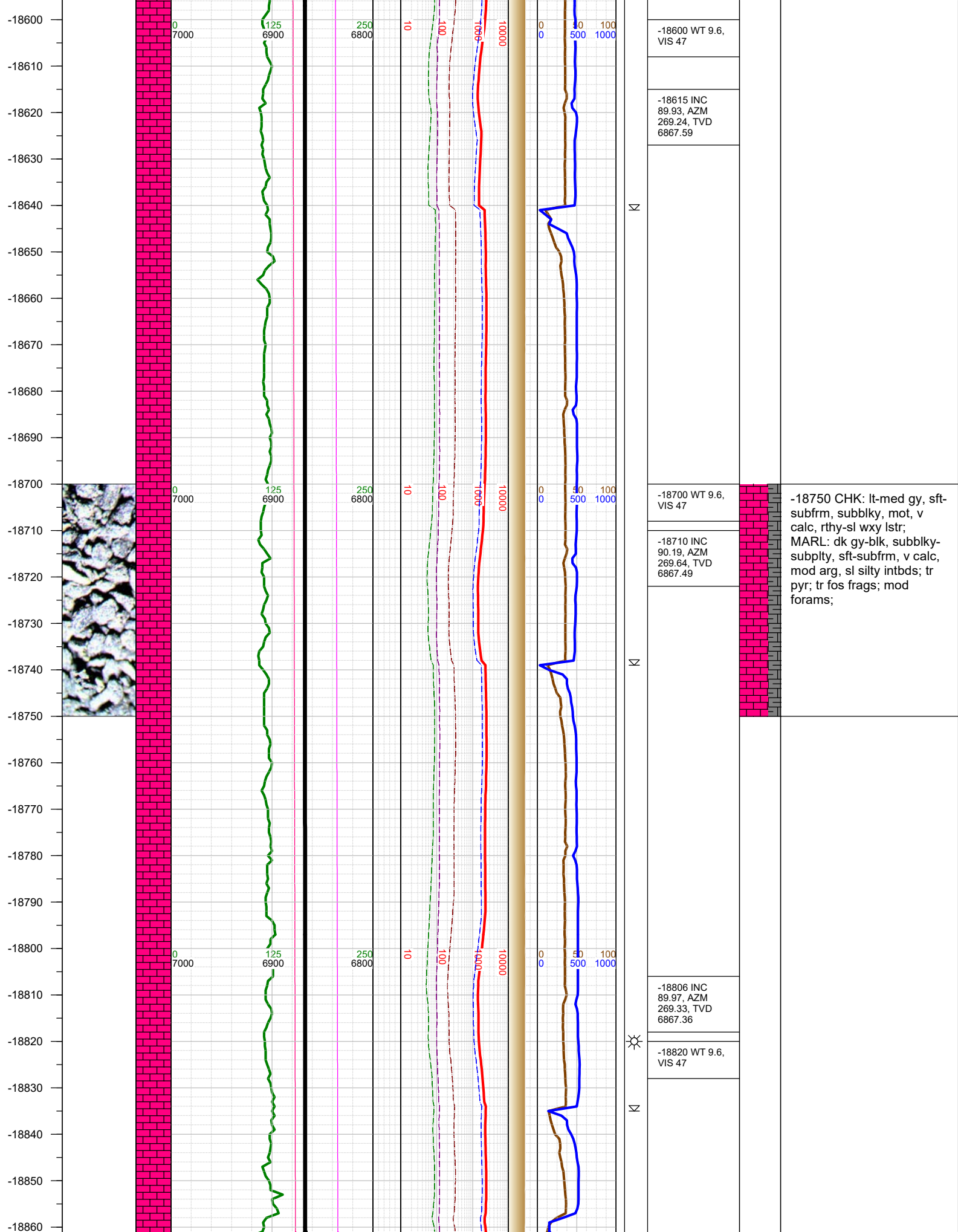




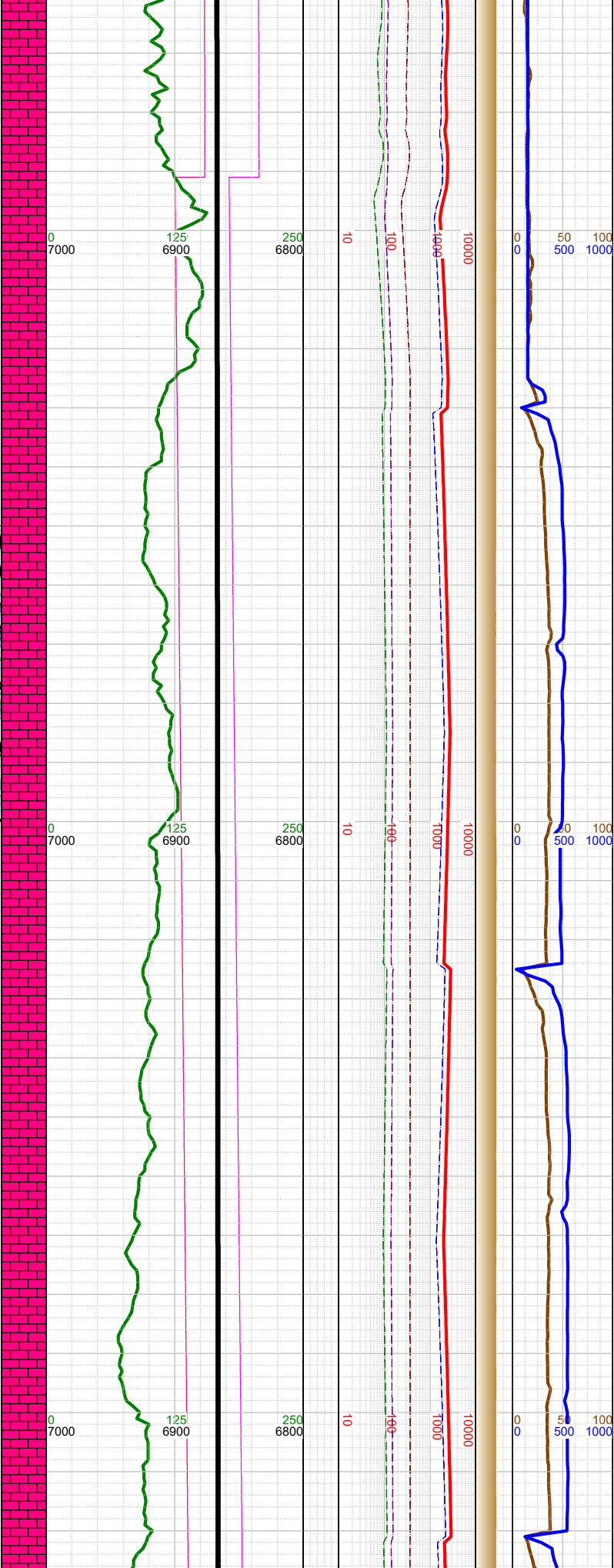
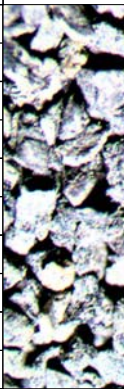
N			-18100 WT 9.6, VIS 47	
			-18137 INC 90.19, AZM 269.73, TVD 6865.86	
N				
			-18200 WT 9.6, VIS 47	-18250 CHK: lt-med gy, sft- subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky- subply, sft-subfrm, v calc, mod arg, sl silty intbds; tr forams;
			-18232 INC 89.75, AZM 269.02, TVD 6865.91	
N				
			-18300 WT 9.6, VIS 47	
			-18327 INC	







-18870  
-18880  
-18890  
-18900  
-18910  
-18920  
-18930  
-18940  
-18950  
-18960  
-18970  
-18980  
-18990  
-19000  
-19010  
-19020  
-19030  
-19040  
-19050  
-19060  
-19070  
-19080  
-19090  
-19100  
-19110  
-19120



-18891 Fault:  
24' down-throw;  
stayed in B2  
Chalk

-18901 INC  
90.32, AZM  
270.3, TVD  
6867.12

-18920 WT 9.6,  
VIS 47



-19000 CHK: lt-med gy, sft-  
subfrm, subblky, mot, v  
calc, rthy-sl wxy lstr;  
MARL: dk gy-blk, subblky-  
subplty, sft-subfrm, v calc,  
mod arg, sl silty intbds; tr  
pyr; tr fos frags; tr forams;

-18997 INC  
90.23, AZM  
270.12, TVD  
6866.66

-19010 WT 9.6,  
VIS 47

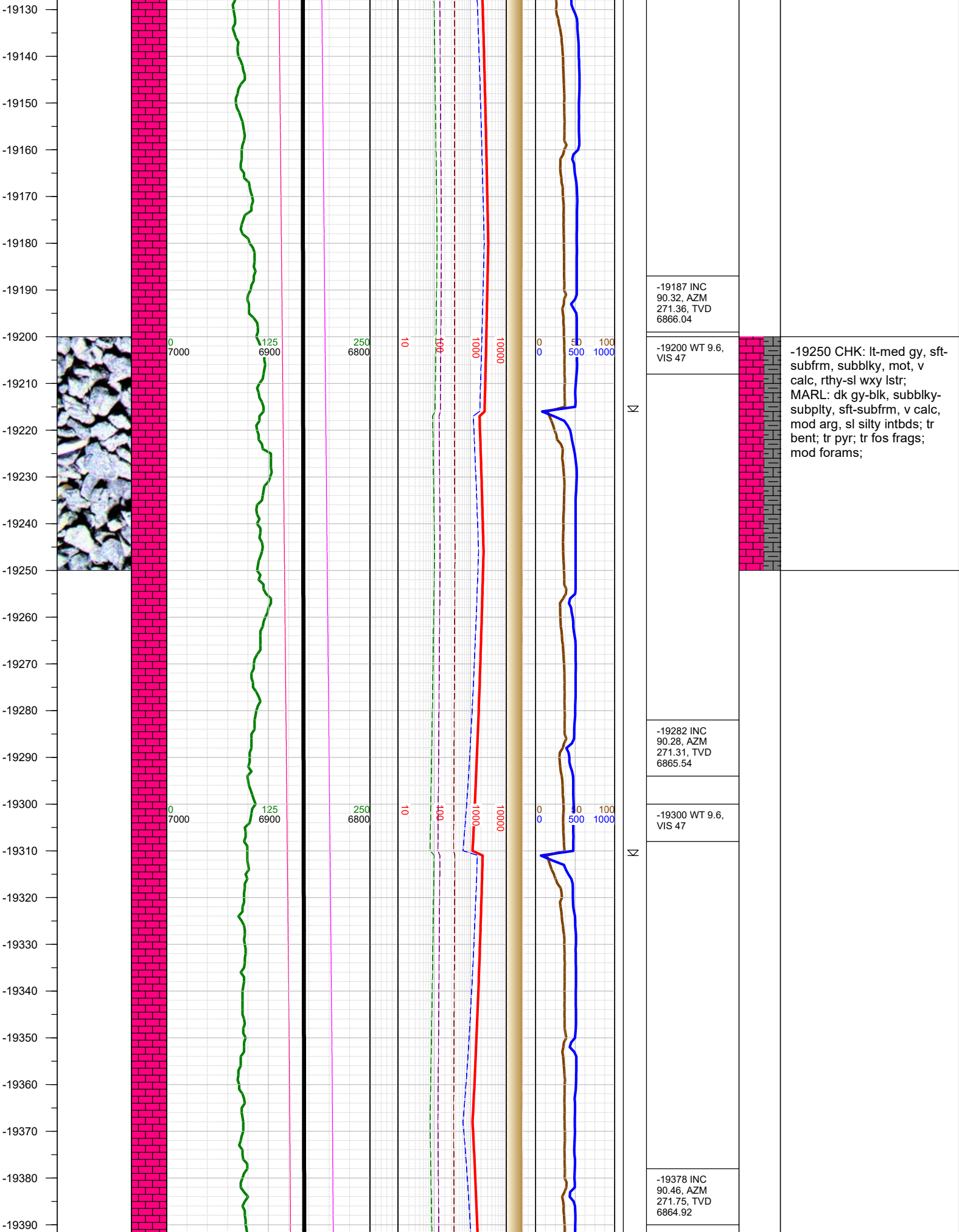


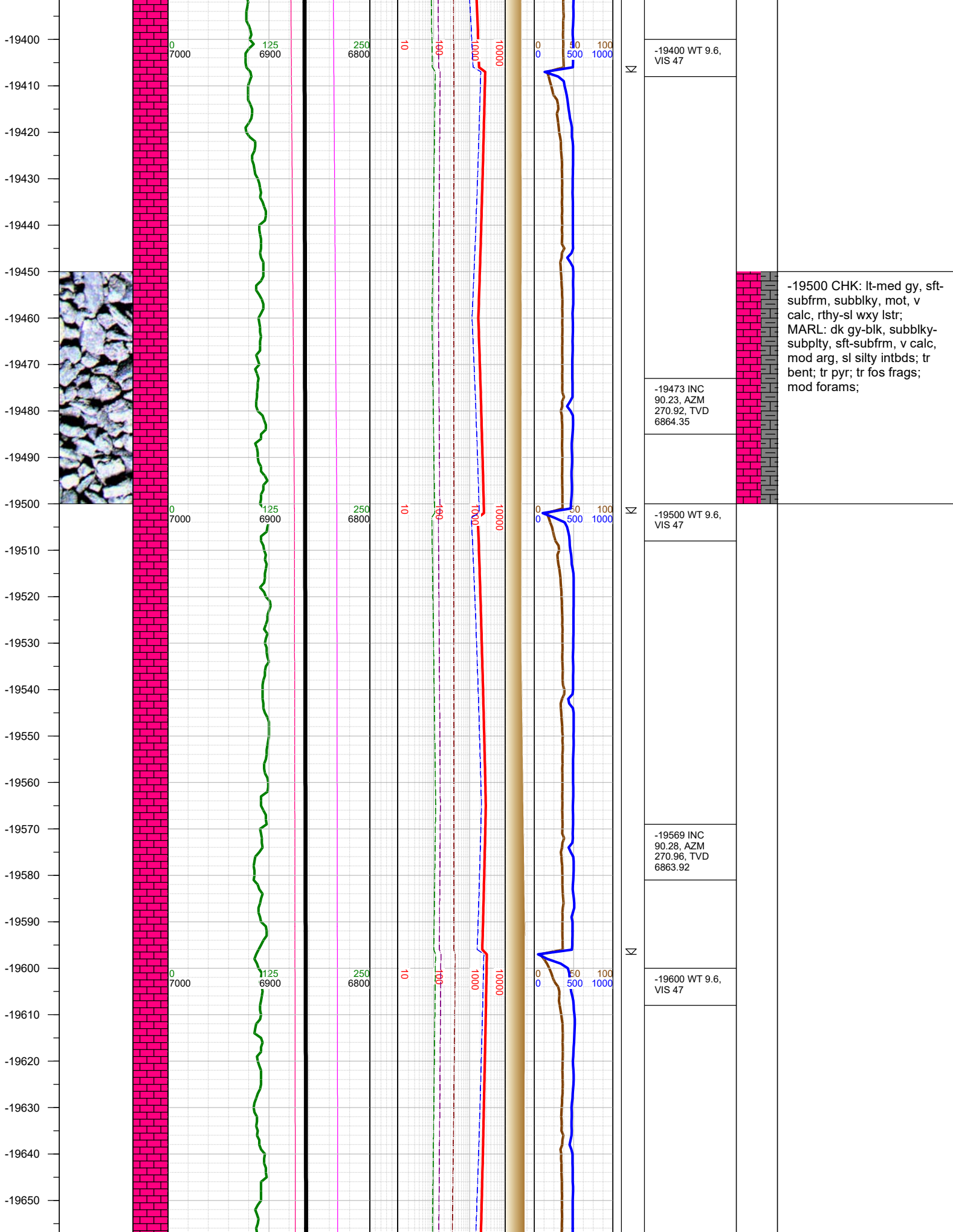
-19091 INC  
90.1, AZM  
270.39, TVD  
6866.39

-19110 WT 9.6,  
VIS 47

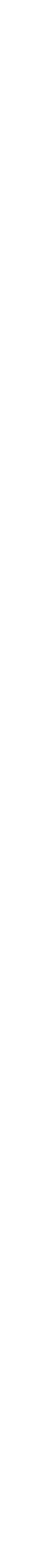
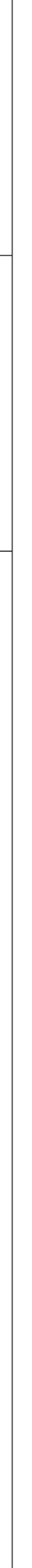
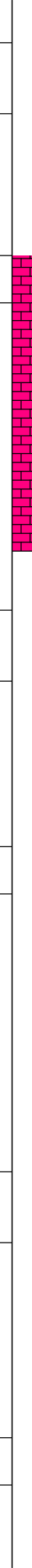
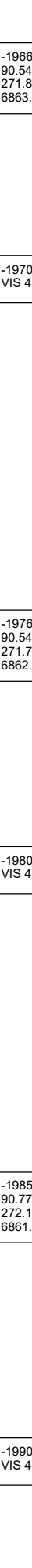
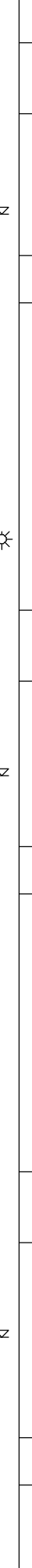
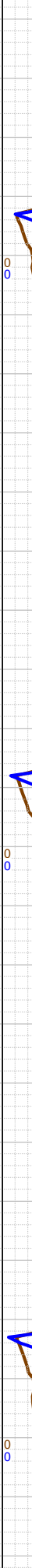
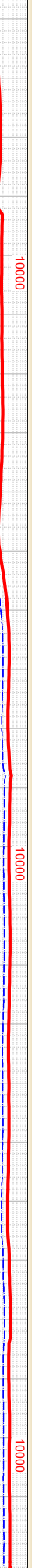
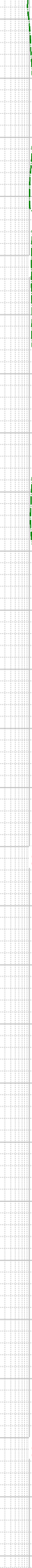








-19660  
-19670  
-19680  
-19690  
-19700  
-19710  
-19720  
-19730  
-19740  
-19750  
-19760  
-19770  
-19780  
-19790  
-19800  
-19810  
-19820  
-19830  
-19840  
-19850  
-19860  
-19870  
-19880  
-19890  
-19900  
-19910  
-19920



-19664 INC  
90.54, AZM  
271.89, TVD  
6863.24

-19700 WT 9.6,  
VIS 47

-19760 INC  
90.54, AZM  
271.75, TVD  
6862.33

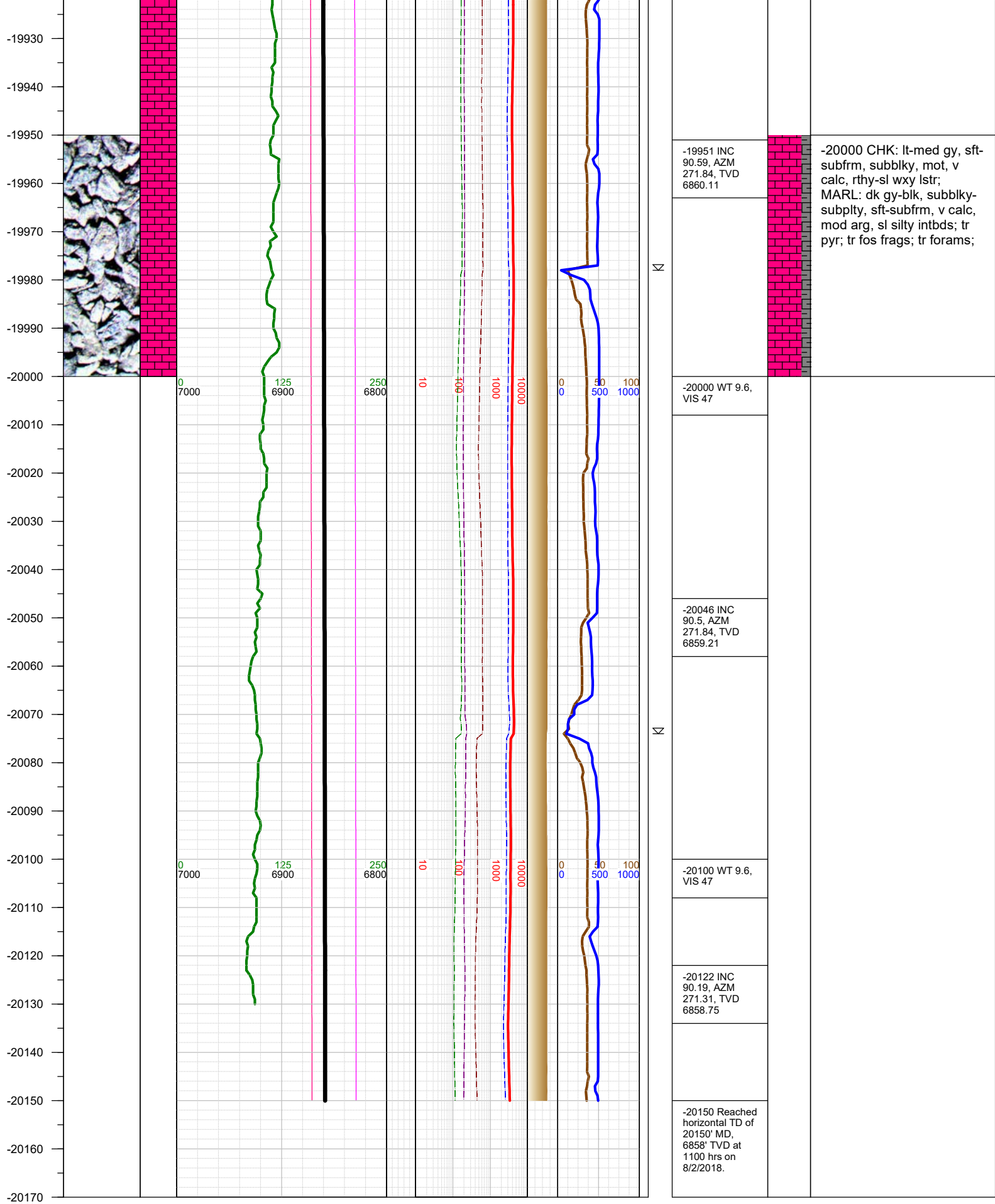
-19800 WT 9.6,  
VIS 47

-19855 INC  
90.77, AZM  
272.19, TVD  
6861.25

-19900 WT 9.6,  
VIS 47

-19750 CHK: lt-med gy, sft-  
subfrm, subblky, mot, v  
calc, rthy-sl wxy lstr;  
MARL: dk gy-blk, subblky-  
subplty, sft-subfrm, v calc,  
mod arg, sl silty intbds; tr  
pyr; tr fos frags; tr forams;





TOTAL DEPTH = 20150'

Thank you for using Earth Science Agency